



## NOAA Atlas 14



# Precipitation-Frequency Atlas of the United States

Volume 12 Version 2.0: Interior Northwest  
Idaho, Montana, Wyoming

Carl Trypaluk, Dale Unruh, Michael St. Laurent, Austin Jordan,  
Rama Sesha Sridhar Mantripragada, Sandra Pavlovic,  
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U.S. Department  
of Commerce

National Oceanic  
and Atmospheric  
Administration

National Weather  
Service

Silver Spring,  
Maryland, 2024



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## **1. Abstract**

NOAA Atlas 14 contains precipitation frequency estimates for the United States and U.S. affiliated territories with associated lower and upper bounds of the 90% confidence interval and supplementary information on temporal distribution of heavy precipitation, analysis of seasonality and trends in annual maximum series data, etc. It includes pertinent information on development methodologies and intermediate results. The results are published through the [Precipitation Frequency Data Server \(PFDS\)](#).

The Atlas is divided into volumes based on geographic sections of the country. It is intended as the U.S. Government source of precipitation frequency estimates and associated information for the United States and U.S. affiliated territories.

## 2. Preface to Volume 12

NOAA Atlas 14 Volume 12 contains precipitation frequency estimates for selected durations and frequencies with associated lower and upper bounds of the 90% confidence interval and supplementary information on the temporal distribution of heavy precipitation, analysis of seasonality and trends in annual maximum series data, etc., for the states of Montana, Idaho and Wyoming. The results are published through the [PFDS](#).

NOAA Atlas 14 Volume 12 was developed by the Hydrometeorological Design Studies Center within the Office of Water Prediction of the National Oceanic and Atmospheric Administration's National Weather Service. Any use of trade names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government.

**Citation and version history.** This documentation and associated artifacts such as maps, grids, and point-and-click results from the PFDS are part of a whole with a single version number and can be referenced as:

Carl Trypaluk, Dale Unruh, Michael St. Laurent, Austin Jordan, Rama Sesha Sridhar Mantripragada, Sandra Pavlovic, Greg Fall, Fernando Salas (2024). NOAA Atlas 14 Volume 12 Version 2, *Precipitation-Frequency Atlas of the United States, Interior Northwest*. NOAA, National Weather Service, Silver Spring, MD.

The version number has the format P.S, where P is a primary version number representing a number of successive releases of primary information. Primary information is essentially the data. S is a secondary version number representing successive releases of secondary information. Secondary information includes documentation and metadata. S reverts to zero (or nothing; i.e., Version 2 and Version 2.0 are equivalent) when P is incremented. When documentation is completed and added without changing any prior information, the version number is not incremented.

The primary version number is stamped on the artifact or is included as part of the filename where the format does not allow for a version stamp (for example, files with gridded precipitation frequency estimates). All location-specific output from the PFDS is stamped with the version number and date of download.

Table 2.1 lists the version history associated with the NOAA Atlas 14 Volume 12 precipitation frequency project and indicates the nature of changes made.

*Table 2.1. Version history of NOAA Atlas 14 Volume 12.*

| Version   | Release date   | Notes                          |
|-----------|----------------|--------------------------------|
| Version 1 | October 2023   | Draft data used in peer review |
| Version 2 | September 2024 | Final data released            |

### 3. Introduction

#### 3.1. Objective

NOAA Atlas 14 Volume 12 provides precipitation frequency estimates for durations of 5-minute through 60-day at average recurrence intervals of 1-year through 1,000-year for the states of Montana, Idaho and Wyoming. The estimates and associated upper and lower bounds of the 90% confidence interval are provided at 30-arc second resolution. The Atlas also includes information on temporal distributions for heavy precipitation amounts for selected durations and seasonal information for annual maxima data used in the frequency analysis. In addition, the potential effects of climate change as trends in historic annual maximum series are examined.

The precipitation frequency estimates in NOAA Atlas 14 Volume 12 supersede the estimates published in the following publications:

- a. [\*Short Duration Rainfall Relations for the Western United States\*](#), Preprint Volume of the Conference on Climate and Water Management, American Meteorological Society (Arkell et al., 1986) for 5-minute to 60-minute durations;
- b. [\*NOAA Atlas 2 Volume 1, Precipitation-Frequency Atlas of the Western United States, Montana\*](#) (Miller et al., 1973) for 1-hour to 24-hour durations in Montana;
- c. [\*NOAA Atlas 2 Volume 2, Precipitation-Frequency Atlas of the Western United States, Wyoming\*](#) (Miller et al., 1973) for 1-hour to 24-hour durations in Wyoming;
- d. [\*NOAA Atlas 2 Volume 5, Precipitation-Frequency Atlas of the Western United States, Idaho\*](#) (Miller et al., 1973) for 1-hour to 24-hour durations in Idaho;
- e. [\*Weather Bureau Technical Paper No. 49, Two- to Ten-Day Precipitation for Return Periods of 2 to 100 Years in the Contiguous United States\*](#) (Miller, 1964) for 2-day to 10-day durations.

#### 3.2. Approach and deliverables

Precipitation frequency estimates have been computed for a range of frequencies and durations using a regional frequency analysis approach based on L-moment statistics calculated from annual maximum series. This section provides an overview of the approach; greater detail is provided in Section 4.

The annual maximum series (AMS) were extracted for a range of durations between 15-minute and 60-day from precipitation measurements recorded at variable or constant time increments, from 1-minute to 1-day, obtained from various sources. The tables in Appendix A.1 give detailed information on all stations whose data were used in the frequency analysis. The annual maximum series data were screened for data quality. The 1-day and 1-hour annual maximum series data were also analyzed for potential trends (Appendix A.2).

A region of influence approach was used for the regional L-moments computation at each station across all selected durations. A variety of probability distribution functions were examined for each region and duration and the most suitable distribution was selected. Distribution parameters, and consequently precipitation frequency estimates, were determined based on the mean of the annual maximum series at the station and the regionally determined higher order L-moments. Precipitation frequency estimates were smoothed across durations to ensure consistency. Partial duration series-based precipitation frequency estimates were calculated indirectly from AMS-based precipitation frequency estimates using Langbein's formula.

For areas where snowfall contributes to the precipitation AMS, empirical equations may be developed to produce frequency estimates for rainfall (i.e., liquid precipitation only) from corresponding precipitation frequency estimates. In the NOAA Atlas 14 Volume 12 project area, the contribution of snowfall to AMS

is non trivial due to geo-climatic conditions, therefore a separate rainfall frequency analysis was developed for selected durations up to 24-hours.

A Monte-Carlo simulation approach was used to produce upper and lower bounds of the 90% confidence interval for the precipitation frequency estimates. Confidence limits below 60-minute durations were produced using scaling factors (see Section 4.8.2 - Estimates for 5-minute through 30-minute durations).

Grids of precipitation frequency estimates were determined based on grids of mean annual maxima and at-station precipitation frequency estimates. The mean annual maxima grid for each duration was derived from at-station mean annual maxima using PRISM interpolation methodology (Appendix A.3). The grids of precipitation frequency estimates for all frequencies were then derived in an iterative process using the inherently strong linear relationship that exists between mean annual maxima and precipitation frequency estimates at the 2-year average recurrence interval and between precipitation frequency estimates at consecutive frequencies for a given duration (Section 4.8.2). The resulting grids were examined and adjusted in cases where inconsistencies occurred between durations and frequencies. Both spatially interpolated and point estimates for selected durations and frequencies were subject to external peer review (Appendix A.4). A similar approach was used to derive grids of lower and upper bounds of the 90% confidence interval.

Climate regions were delineated based on characteristics of annual maximum data. The regions were used in the extraction and seasonality analysis of annual maxima and calculations of temporal distributions of heavy precipitation. Temporal distributions, expressed in probability terms as cumulative percentages of precipitation totals, were computed for precipitation magnitudes exceeding precipitation frequency estimates for the 2-year average recurrence interval for selected durations (Appendix A.5). The seasonality analysis was done by tabulating the number of annual maxima exceeding precipitation frequency estimates for several selected threshold frequencies (Appendix A.6).

NOAA Atlas 14 Volume 12 precipitation frequency estimates for any location in the project area are available in a variety of formats through the [PFDS](#) via a point-and-click interface; more details are provided in Section 5. Additional results and information available include:

- ASCII grids of partial duration series-based and annual maximum series-based precipitation frequency estimates and related confidence limits for a range of durations and frequencies with associated metadata;
- cartographic maps of partial duration series-based precipitation frequency estimates for selected frequencies and durations;
- final, quality controlled annual maximum series for all observing locations used in the analysis;
- temporal distributions;
- seasonality analysis of annual maxima.

Cartographic maps were created to serve as visual aids and are not recommended for estimating precipitation frequency estimates. Users are advised to take advantage of the PFDS interface or the downloadable underlying ASCII grids for obtaining precipitation frequency estimates.

Please notice that precipitation frequency estimates from this Atlas are estimates for a point location and are not directly applicable for an area. Also, precipitation frequency estimates for each volume of NOAA Atlas 14 were computed independently using all available data at the time. Some discrepancies between volumes at project boundaries are inevitable and they will generally be more pronounced for rarer frequencies.



## 4. Frequency analysis

### 4.1. Project area

The project area includes the interior northwestern states of Idaho, Montana, and Wyoming (Figure 4.1.1), which are the 14th, 4th, and 10th largest states in the U.S. by land area respectively. These three states encompass a large portion of the Rocky Mountains in the United States. The continental divide runs through this project area separating watersheds that drain into the Pacific, Atlantic and Arctic Oceans. Only eastern Montana and eastern Wyoming lie outside the Rockies in the high elevation prairie known as the northern Great Plains.

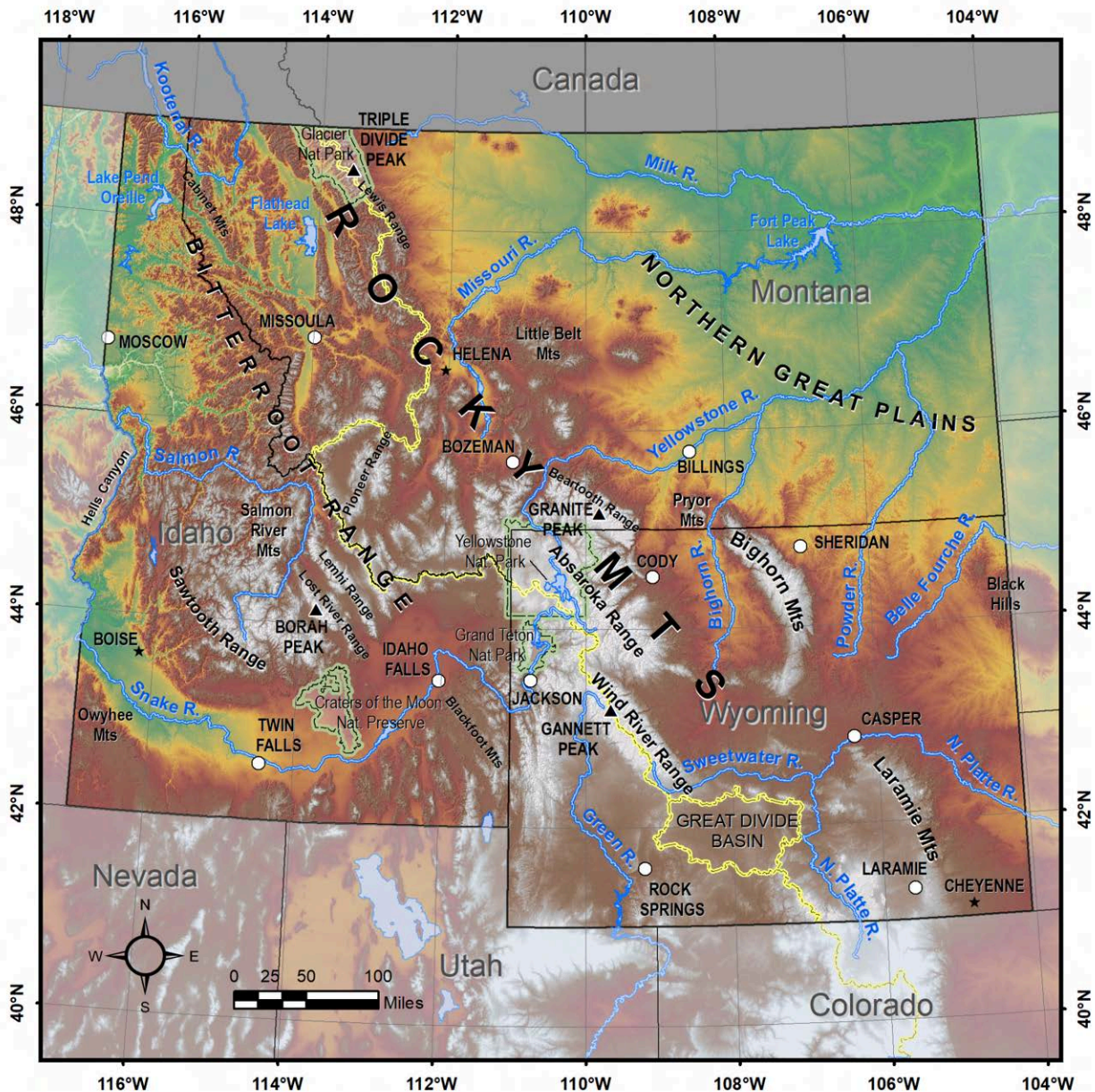


Figure 4.1.1. Project area for NOAA Atlas 14 Volume 12  
(shaded relief was obtained from [EPA/USGS NHDPlusV2](#))

A majority of Idaho resides in the northern U.S. Rocky Mountains. The Bitterroot Range that runs along Idaho's border with Montana is one of the longest continuous mountain ranges in the Rockies. The state has 9 mountain peaks above 12,000 ft including the highest, Borah peak in the Lost River Range, at 12,662 ft. Idaho's lowest point is 710 ft and occurs at the confluence of the Snake and Clearwater Rivers in Lewiston on the state's western border. Just upstream on the Snake River to the south is the deepest river gorge in the U.S. known as Hells Canyon. Continuing farther to the south upstream, the Snake River opens up to a large plain running east to west where a majority of the state's population resides in the cities of Boise, Twin Falls and Idaho Falls. Other major rivers in Idaho include the Kootenai in the north and the Salmon in the central mountains.

The elevation in Montana ranges widely from 1,804 ft above sea level at the Kootenai River along the Idaho Border to over 12,000 ft in the Beartooth Mountains. Only Montana's western half is dominated by the northern U.S. Rocky Mountains. In the southwestern portion of the state there are several mountain ranges including the largest continuous land mass above 10,000 ft in the continental U.S. known as the Beartooth Plateau. Also in the Beartooth Mountains is Granite Peak, the highest point in Montana at 12,807 ft. The Triple Divide Peak, located in the Lewis Range near Glacier National Park, is the major hydrologic apex of the United States, separating the water basins that drain into the Pacific, Atlantic, and Arctic Oceans. As you move east past the last mountains of the Rocky Mountain Front you come to the prairie land of the northern Great Plains that covers about 60% of the state. Major rivers that flow across the state include the Milk, Missouri, and Yellowstone rivers.

Wyoming is the least populous state and is second only to Alaska in lowest population density. Geographically the state is a great plateau broken up by several mountain ranges including the Bighorns, Wind River, Teton, and Snowy Ranges to name a few. Elevations range from 3,125 ft at the northeast corner along the Belle Fourche River Valley to Gannett Peak in the Wind River Range at 13,810 ft. The famous Grand Teton comes in a close second at 13,775 ft. The Wind River Range contains over 40 mountain peaks above 13,000 ft. The Great Divide Basin located in the Red Desert in the south central portion of the state is a unique geographic area known as an endorheic basin where water does not drain to any ocean. Several large rivers initiate or transverse the state including the Belle Fourche, Bighorn, Green, N. Platte, Powder, Snake, and Sweetwater Rivers.

**Climatology of extreme precipitation.** The precipitation climatology of the interior northwest (INW) is dominated by semi-arid and continental climates. Due to its high elevation and distance from the coast, this landlocked region is drier and windier than most of the U.S., with large temperature extremes between summer and winter. The westerly dry Föhn wind can also bring rapid warming in valley regions on the lee side of the mountains due to adiabatic warming. Despite the distance from the coast, Idaho and western Montana can still experience some Pacific maritime influence especially in the winter when clouds and precipitation are at a maximum. Strong low pressure systems and atmospheric rivers of high water vapor from the Pacific can bring significant rainfall inland over the mountains on occasion. In the Great Plains portion of the project area, the maritime influence is least prominent and precipitation patterns tend to be wetter in the summer and drier in the winter. Monsoonal energy from the Gulf of California and the Gulf of Mexico can sometimes surge into Montana and Wyoming during the summer months.

Mean annual precipitation (MAP) within the project area, developed by the [Oregon State University PRISM Group](#) (PRISM Climate Group, 2024) and shown in Figure 4.1.2, varies with elevation. MAP amounts, as low as 6-10 inches, can be found in the Great Divide Basin and Snake River Valley in western Wyoming and southern Idaho, respectively. MAP increases in many of the mountain ranges with up to 100-130 inches occurring in the Lewis Range of Montana due primarily to snowfall. To the east, in the Great Plains of Montana and Wyoming, MAP is between 10–20 inches.

When looking at precipitation extremes, at shorter hourly durations much of the rainfall occurs during the warmer summer months for the entire project area. When shifting to daily durations, two fairly distinct



extreme precipitation climate regions emerge. At higher elevations in the Rocky Mountains, longer duration precipitation extremes occur throughout the year and can include large snowfall events. As you move east, away from the mountains and into the Great Plains, daily precipitation extremes typically occur between late spring and early fall.

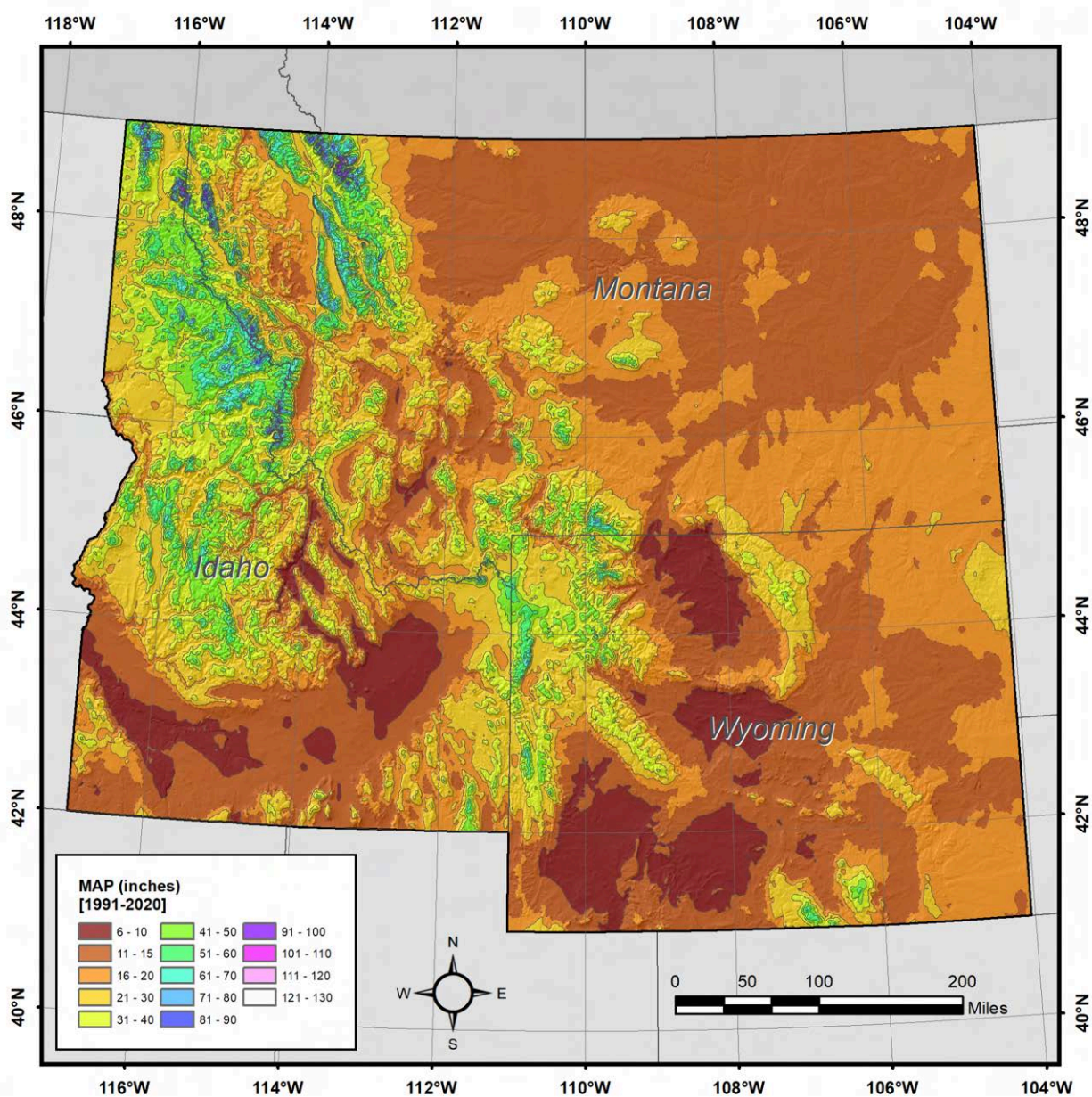


Figure 4.1.2. PRISM Mean Annual Precipitation in inches from 1991-2020.

**NOAA Atlas 14 Volume 12 climate regions.** Based on the climatology of extreme precipitation and the seasonality analysis of annual maxima (Appendix A.6), two climate regions, shown in Figure 4.1.3, were delineated to assist in the extraction of the annual maximum series data (Section 4.3) and in portraying the



temporal distributions of extreme events (Appendix A.5). Climate regions were attuned to make them consistent with climate regions from NOAA Atlas 14 Volumes 1 and 8.

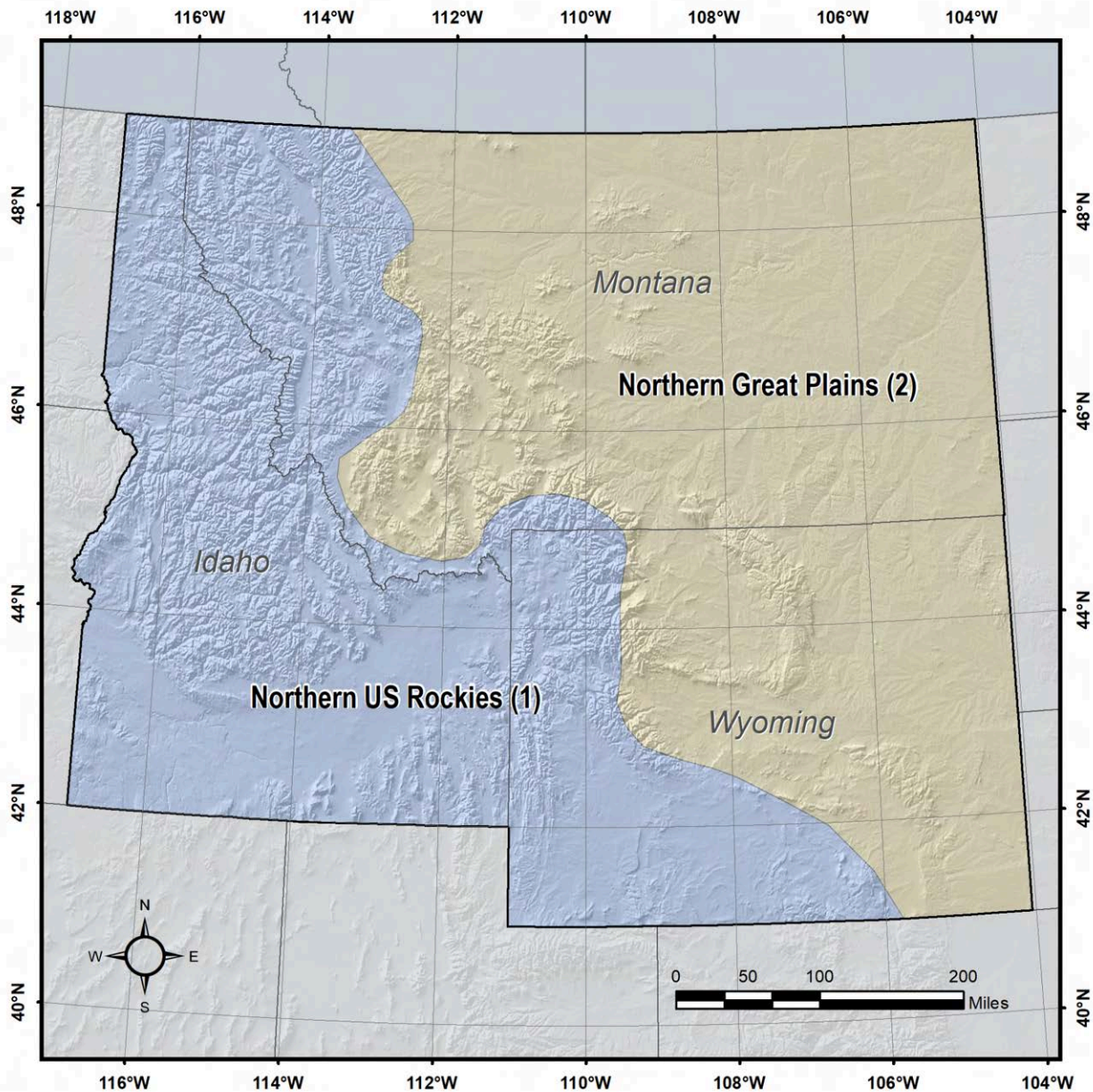


Figure 4.1.3. Climate regions delineated for NOAA Atlas 14 Volume 12.

## 4.2. Precipitation data collection and formatting

Precipitation measurements were obtained for 15,328 stations from a number of federal, state, and local agencies. The majority of the stations were from the NWS Cooperative Observer Program (COOP) database maintained by the National Centers for Environmental Information (NCEI). In order to have a uniform system of numbering, each station was assigned a unique six-digit identification number (SID). Except for NCEI stations, assigned identification numbers do not match identification numbers assigned by agencies that collected or provided the data. Table 4.2.1 lists all agencies that provided the data (not necessarily agencies that collected the data) along with the datasets' names, their abbreviations used in

Appendix A.1, and the first two digits of the stations' identification numbers that are common for all stations from the same dataset.

*Table 4.2.1. List of agencies, datasets with their abbreviated names used in Appendix A.1, data reporting intervals, and common SID's digits.*

| Agency/network                                 | Dataset                                                              | Abbr. | Reporting interval | Common SID's digits                                                                                                                                                                                                       |
|------------------------------------------------|----------------------------------------------------------------------|-------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| National Centers for Environmental Information | DSI-3240                                                             | NCEI  | 1-hour             | 05 <sup>(1)</sup> , 10 <sup>(1)</sup> , 24 <sup>(1)</sup> , 25 <sup>(1)</sup> , 26 <sup>(1)</sup> , 32 <sup>(1)</sup> , 35 <sup>(1)</sup> , 39 <sup>(1)</sup> , 42 <sup>(1)</sup> , 45 <sup>(1)</sup> , 48 <sup>(1)</sup> |
|                                                | DSI-3260                                                             |       | 15-min             | 05 <sup>(1)</sup> , 10 <sup>(1)</sup> , 24 <sup>(1)</sup> , 25 <sup>(1)</sup> , 26 <sup>(1)</sup> , 32 <sup>(1)</sup> , 35 <sup>(1)</sup> , 39 <sup>(1)</sup> , 42 <sup>(1)</sup> , 45 <sup>(1)</sup> , 48 <sup>(1)</sup> |
|                                                | Global Historical Climatological Network (GHCN) Daily                |       | 1-day              | 05 <sup>(1)</sup> , 10 <sup>(1)</sup> , 24 <sup>(1)</sup> , 25 <sup>(1)</sup> , 26 <sup>(1)</sup> , 32 <sup>(1)</sup> , 35 <sup>(1)</sup> , 39 <sup>(1)</sup> , 42 <sup>(1)</sup> , 45 <sup>(1)</sup> , 48 <sup>(1)</sup> |
|                                                | Automated Surface Observing System                                   |       | 1-min              | 78                                                                                                                                                                                                                        |
|                                                | Integrated Surface Data – Lite                                       |       | 1-hour             | 64                                                                                                                                                                                                                        |
|                                                | Corrected data/ Digitized                                            |       | 1-day              |                                                                                                                                                                                                                           |
|                                                |                                                                      |       | 1-hour             | 97, 99 <sup>(2)</sup>                                                                                                                                                                                                     |
|                                                | Local Climatological Data                                            |       | 1-day              |                                                                                                                                                                                                                           |
|                                                |                                                                      |       | 1-hour             | 55                                                                                                                                                                                                                        |
|                                                | Environmental Canada                                                 |       | 1-hour             | 71                                                                                                                                                                                                                        |
|                                                |                                                                      |       | 1-day              |                                                                                                                                                                                                                           |
|                                                | United States CoCoRaHS                                               |       | 1-day              | 69                                                                                                                                                                                                                        |
|                                                | Canada CoCoRaHS                                                      |       | 1-day              | 70                                                                                                                                                                                                                        |
|                                                | Snow Telemetry                                                       |       | 1-day              | 80                                                                                                                                                                                                                        |
|                                                | Weather Bureau Army Navy                                             |       | 1-day              | 79                                                                                                                                                                                                                        |
|                                                | U.S. Climate Reference Network                                       |       | 15-min             | 57                                                                                                                                                                                                                        |
|                                                |                                                                      |       | 1-hour             |                                                                                                                                                                                                                           |
|                                                | Hourly Precipitation Data v1.0 and v2.0 Beta                         |       | 1-day              |                                                                                                                                                                                                                           |
|                                                |                                                                      |       | 15-min             | 53, 54                                                                                                                                                                                                                    |
|                                                |                                                                      |       | 1-hour             |                                                                                                                                                                                                                           |
| Ada County Highway District                    | Precipitation Gauge Network                                          | ADA   | 1-hour             | 74 <sup>(3)</sup>                                                                                                                                                                                                         |
| Boise State University                         | Dry Creek Experimental Watershed                                     | DCEW  | 1-hour             | 65                                                                                                                                                                                                                        |
| Environment and Climate Change Canada          | Historical Climate Data Network                                      | EC    | 1-hour             | 60                                                                                                                                                                                                                        |
| High Plains Regional Climate Center            | Automated Weather Data Network                                       | AWDN  | 1-hour             | 62                                                                                                                                                                                                                        |
|                                                |                                                                      |       | 1-day              |                                                                                                                                                                                                                           |
| Idaho National Laboratory                      | Air Resources Laboratory Mesonet                                     | INL   | 15-min             | 89                                                                                                                                                                                                                        |
|                                                |                                                                      |       | 1-day              |                                                                                                                                                                                                                           |
| Illinois State Water Survey                    | National Atmospheric Deposition Program                              | NADP  | 1-day              | 61                                                                                                                                                                                                                        |
| Midwestern Regional Climate Center             | CDMP 19 <sup>th</sup> Century Forts and Voluntary Observers Database | FORTS | 1-day              | 52                                                                                                                                                                                                                        |

| Agency/network                    | Dataset                                       | Abbr.    | Reporting interval        | Common SID's digits |
|-----------------------------------|-----------------------------------------------|----------|---------------------------|---------------------|
| Northeast Regional Climate Center | TD3298 Summary of the Day Climate Record Book | XMACIS   | 1-day                     | 98                  |
| Synoptic                          | University of Utah Mesowest                   | SYNOPTIC | 1-hour                    | 72                  |
| University of Montana             | Montana Mesonet                               | MT MESO  | 1-day                     | 63                  |
| University of Wyoming             | Water Resources Data System                   | WACNET   | 1-hour<br>1-day           | 90                  |
| U.S. Bureau of Reclamation        | AgriMet and HydroMet                          | USBR     | 15-min<br>1-hour<br>1-day | 87                  |
| U.S. Dept. of Agriculture (USDA)  | Coram Experimental Forest                     | CEF      | 1-day                     | 73 <sup>(3)</sup>   |
|                                   | Priest River Experimental Forest              | PREF     | 1-day                     | 66                  |
|                                   | Remote Automated Weather Station Network      | RAWS     | 1-hour                    | 76                  |
|                                   | Reynolds Creek Experimental Watershed         | RCEW     | 1-hour<br>1-day           | 81                  |
|                                   | Snowpack Telemetry Network                    | SNOTEL   | 1-hour<br>1-day           | 86                  |
|                                   | Soil Climate Analysis Network                 | SCAN     | 1-hour<br>1-day           | 88                  |

<sup>(1)</sup> SIDs by state: 05 - Colorado, 10 - Idaho, 24 - Montana, 25 - Nebraska, 26 -Nevada, 32 - North Dakota, 35 - Oregon, 39 - South Dakota, 42 - Utah, 45 - Washington, 48 - Wyoming.

<sup>(2)</sup> NCEI's stations for which additional data were digitized using information from the Climate Database Modernization Program (CDMP) through the NCEI-developed Environmental Document Access and Display System, Version 2 (EV2) application.

<sup>(3)</sup> Dataset not used in frequency analysis; not included in Appendix A.1.

In areas of high importance or scarce data, additional precipitation data were digitized to improve analysis by extending record lengths and/or including extreme events missing in digitized datasets. The additional digitized data were collected from the NCEI CDMP dataset and consist mainly of data from Climatological Data publications (daily), Climate Record Books (daily), and Original COOP observer forms (daily). Figure 4.2.1 shows locations of daily stations for which up to 53 additional years were digitized. In many cases, some of the highest extracted annual maxima came from the digitized periods. For example, the largest 1-day AMS value for the NCEI daily station Scobey (24-7424) came from the newly digitized data from 1938 to 1948. The 6.90 inches observed was one of the most significant events ever measured in northeast Montana and even exceeds the 1,000-year 24-hour estimate for this location. All stations for which additional data were digitized are listed in Table A.1.6 of Appendix A.1.



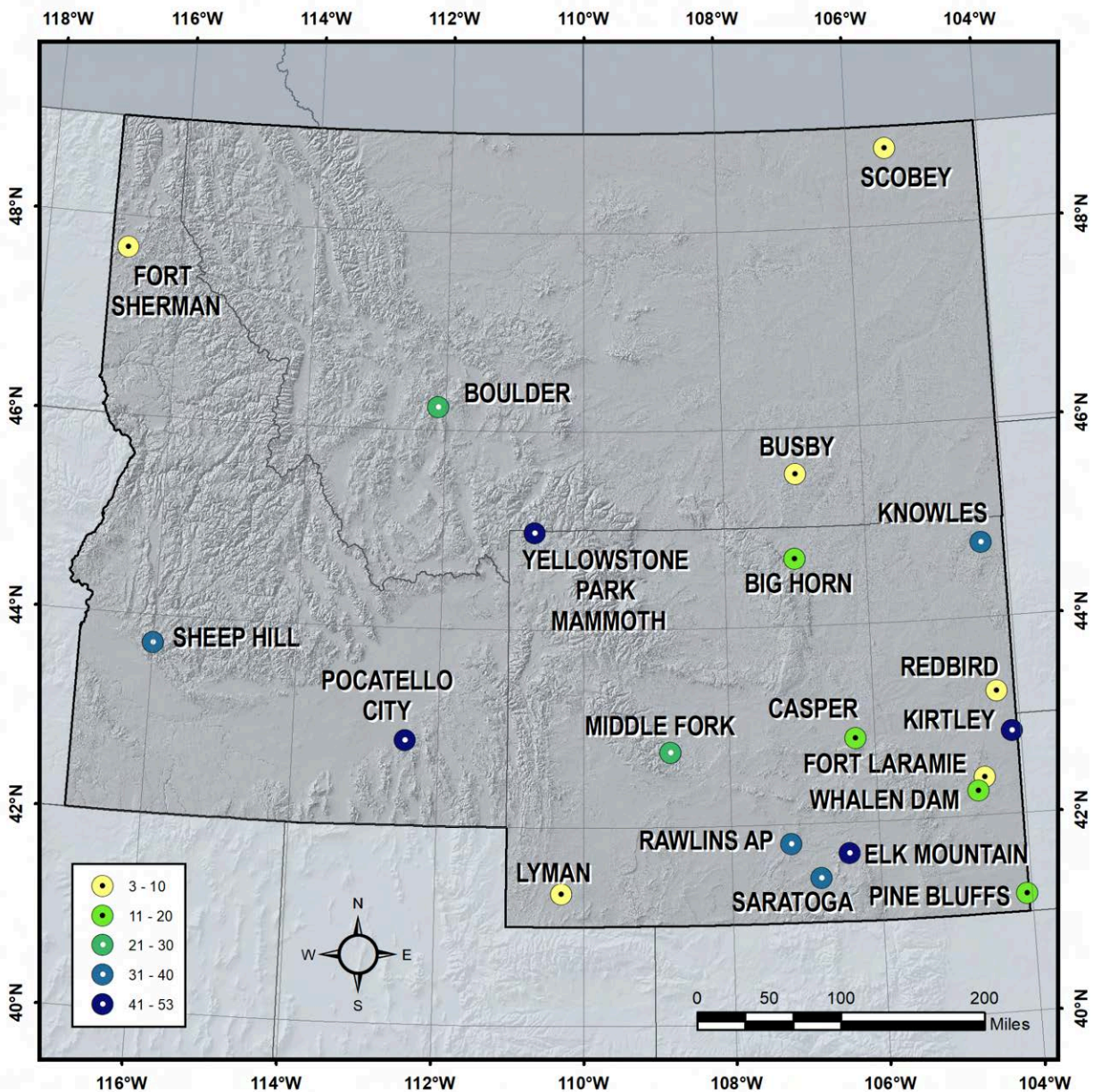


Figure 4.2.1. The locations of 21 stations where daily records were extended through digitization. Legend indicates the number of data years that were digitized. Casper had two stations that were digitized and combined.

All data were formatted to a common format at one of three base durations that corresponded to the original reporting period: 15-minute, 1-hour, or 1-day. Data recorded at variable time steps were formatted at 15-minute increments. Where available, records extended through December 2023. Table 4.2.2 lists the total number of stations that were obtained and formatted for each interval.

Table 4.2.2. The number of stations that were obtained per formatting interval.

| Formatting interval | Abbr. | Number of stations |
|---------------------|-------|--------------------|
| 1-day               | DLY   | 7,781              |
| 1-hour              | HLY   | 6,685              |
| 15-minute           | 15M   | 862                |
| <b>TOTAL</b>        |       | <b>15,328</b>      |

In addition, 63 stations from the NWS and Federal Aviation Administration’s Automated Surface Observing System (ASOS) network (archived by NCEI) were used to develop scaling factors for generation of precipitation frequency estimate grids at 5-minute and 10-minute durations (Section 4.8.2). The 63 stations are also used at the 15-minute duration, which are accounted for in Table 4.2.2.

### 4.3. Annual maximum series extraction

The precipitation frequency analysis approach used in this project is based on analysis of annual maximum series (AMS) across a range of durations. AMS for each station were obtained by extracting the highest precipitation amount for a particular duration in each successive year. Based on the distribution of heavy precipitation events for this project area, a water year (October - September) was used rather than a standard calendar year so that a year begins and ends during a relatively dry season. Annual maximum (AM) data at stations were extracted for all durations equal to or longer than the base duration (or reporting interval) up to 60 days. AMS for the 1-day through 60-day durations were compiled from daily, hourly, and 15-minute records. To accomplish this, 15-minute and 1-hour data were first aggregated to constrained 1-day (hours 0 to 24) values before extracting 1-day and longer duration annual maxima. Hourly and 15-minute data were used to compile AMS for 1-hour through 12-hour durations, where 15-minute data were aggregated first to constrained 1-hour (0 to 60 minutes) values before extracting annual maximum value. 15-minute data were also used to compile AMS for 15-minute and 30-minute durations.

The procedure for developing an AMS from a precipitation dataset used similar criteria as in previous volumes that were designed to extract only reasonable maxima if a year was incomplete or had accumulated data. Accumulated data occur in some records where observations were not taken regularly, so recorded numbers represent accumulated amounts over extended periods of time. Since the precipitation distribution over the period is unknown, the total amount was distributed uniformly across the whole period. All annual maxima that resulted from accumulated data were flagged and screened to ensure that the incomplete data did not result in erroneously low maxima (Section 4.5.1).

The criteria for AMS extraction also exclude maxima if there were too many missing or accumulated data during the year and more specifically during critical months when precipitation maxima were most likely to occur (“wet season”). Wet seasons were resolved by assessing the periods in which two-thirds of AM occurred at each station and by inspecting histograms of annual maxima for the 1-day and 1-hour durations in a region. The final wet season months assisted in the determination of the climate regions depicted in Figure 4.1.3. The assigned wet season months for each region are shown in Table 4.3.1.

Table 4.3.1. Wet season months for each region for daily and sub-daily durations.

| Region                    | Wet season months   |                     |
|---------------------------|---------------------|---------------------|
|                           | Daily durations     | Sub-daily durations |
| Northern U.S. Rockies (1) | October – September | April – September   |
| Northern Great Plains (2) | March – September   | May – September     |

The flowchart in Figure 4.3.1 depicts the AMS extraction criteria for all durations. Various thresholds for acceptable amounts of missing or accumulated data were applied to the year and wet season. The extracted maximum value of a given duration for a given year had to pass through all of the criteria in the flowchart to be accepted. Various codes were assigned to both accepted and rejected maxima based on the amount of missing and accumulated data in each year (see Figure 4.3.1) to assist in further quality control of AMS as described in Section 4.5.1.

For example, in a year with less than 20% of the measurements missing in the whole year and during the assigned wet season, if more than 66% of the measurements were accumulated, then the maxima for that year was (conditionally) rejected and assigned code 130. If the year had between 33% and 66% accumulated data, then it was further screened by assessing the lengths of the accumulation periods. If the lengths of the accumulation periods for more than 33% of the accumulated data were equal to or longer than threshold accumulation period lengths ( $D_{\text{thresh}}$ ), then the maximum for that year was (conditionally) rejected (code 140). Threshold accumulation period lengths were defined as matching the selected duration for durations less than 2 days, as equal to half of duration period for durations between 2 days and 20 days, and as equal to 15 days for durations equal to or longer than 30 days. If the year had less than 33% accumulated data, the extracted maximum was passed to another set of criteria for accumulations during its wet season, etc.

If a rejected annual maximum was higher than 85% of the accepted maxima at that station, then it was kept in the series (code 30). Also, if a rejected 1-day annual maximum was higher than any accumulated amount in a year, then it was kept in the series and assigned code 40. Years in which a maximum was rejected were marked as missing in the series.



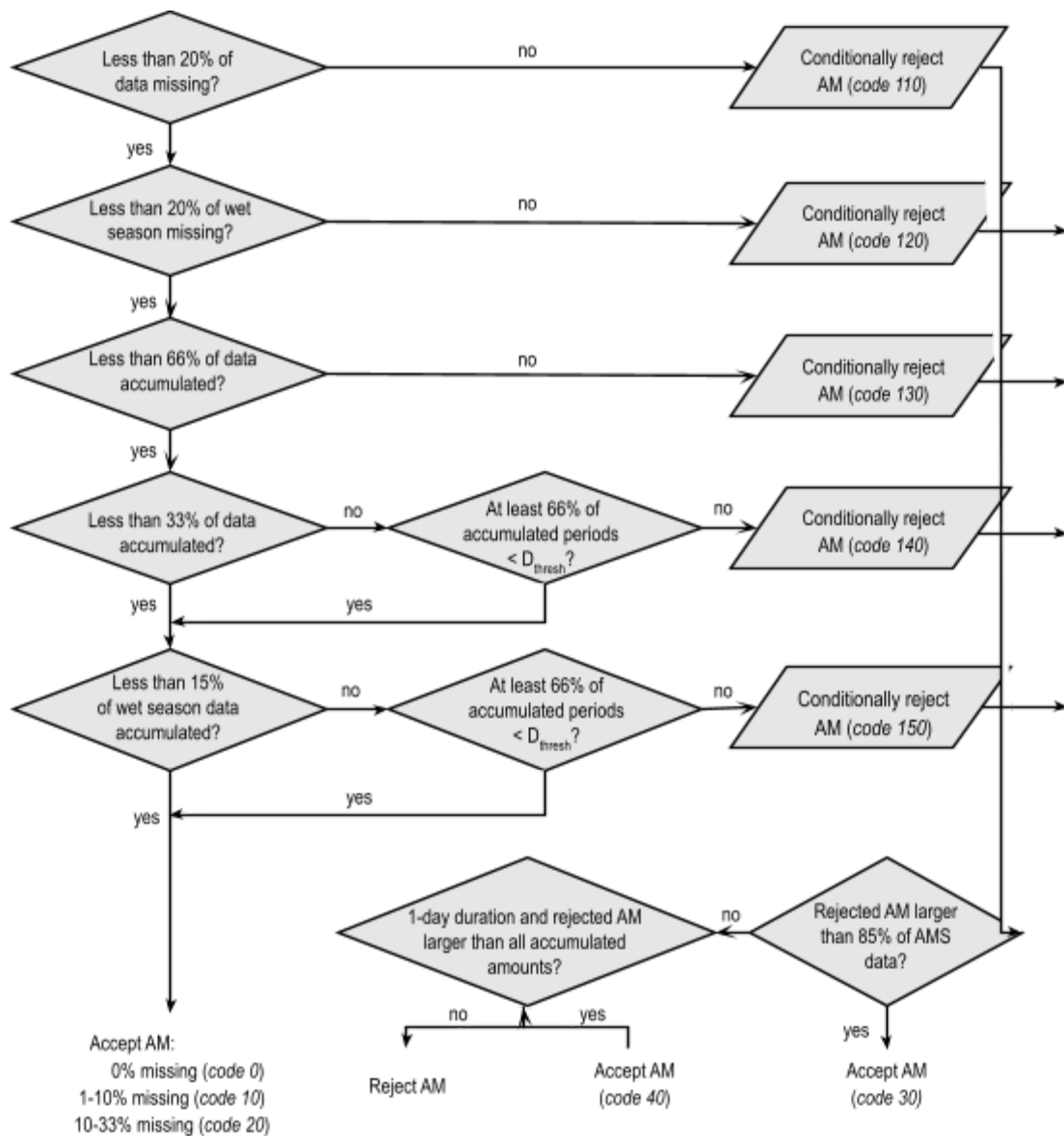


Figure 4.3.1. Criteria used to extract annual maxima. Data quality codes were assigned based on acceptance and rejection;  $D_{thresh}$  depends on duration.

#### 4.4. Station screening

Station screening was done in the following order: a) examination of geospatial data, b) screening for duplicate records at co-located daily, hourly, and/or 15-minute stations and extending records using data from co-located stations, c) screening nearby stations for potentially merging records or removing shorter, less reliable records in station dense areas, and d) screening for sufficient number of years with usable data.

**Geospatial data.** Latitude, longitude, and elevation data for all stations were screened for errors. Several stations had to be relocated because they plotted in a different state or were clearly misplaced based on inspection of satellite images and maps. Misplacement was typically the result of no seconds recorded in latitude and longitude data. There were also several stations with no elevation data; for those stations, elevation was estimated from high-resolution digital elevation model (DEM) grids. Several corrections to metadata were also made based on input received during the peer review (see Appendix A.4).

**Co-located stations.** Co-located stations were defined as stations that have the same geospatial data but report precipitation amounts at different time intervals. The screening of co-located stations was done as follows:

- If co-located 15-minute and hourly stations provided data for the same period and there were no differences in AMS for constrained 1-hour maxima (15-minute data aggregated on the clock hour), only the 15-minute station was retained and used to extract AMS for all longer durations.
- If a 15-minute or hourly station provided data for the same period as a co-located daily station and there were no differences in AMS for constrained 1-day maxima (15-minute or 1-hour data aggregated from 0 to 24 hours), only the 15-minute or hourly station was retained and used to extract AMS for all longer durations.
- If periods of record at co-located stations were consistent but did not completely overlap, aggregated data from the station with the shorter reporting interval were used to extend the record of the station with the longer reporting interval.
- If the station with the longer reporting interval had a longer period of record, then it was retained in the dataset in addition to the co-located station with the shorter reporting interval.

AMS data consistency across durations was ensured in later quality control procedures (Section 4.5.4).

**Nearby stations.** Nearby stations were defined as stations located within three miles with consideration to elevation differences. However, in areas of flat terrain, stations up to four miles apart or farther may have been considered. The records of nearby stations were considered for merging to increase record lengths. In station-dense areas, some stations were removed from the analysis if a nearby station had a longer overlapping record, better quality data, or was highly correlated.

**Record length.** Record length was characterized by the number of years for which annual maxima could be extracted (i.e., data years) rather than the entire period of record. Daily stations were considered for frequency analysis if they had at least 30 data years, but allowances were made for isolated stations. A minimum of 20 data years was required for stations recording at sub-daily durations, with a few exceptions (for example, a station that caught an extreme event).

Figure 4.4.1 shows histograms for the number of AMS data years of stations retained for frequency analysis across daily, hourly, and sub-hourly durations after all the screenings were done. The average and median record lengths as well as corresponding ranges of record lengths are given in Table 4.4.1.

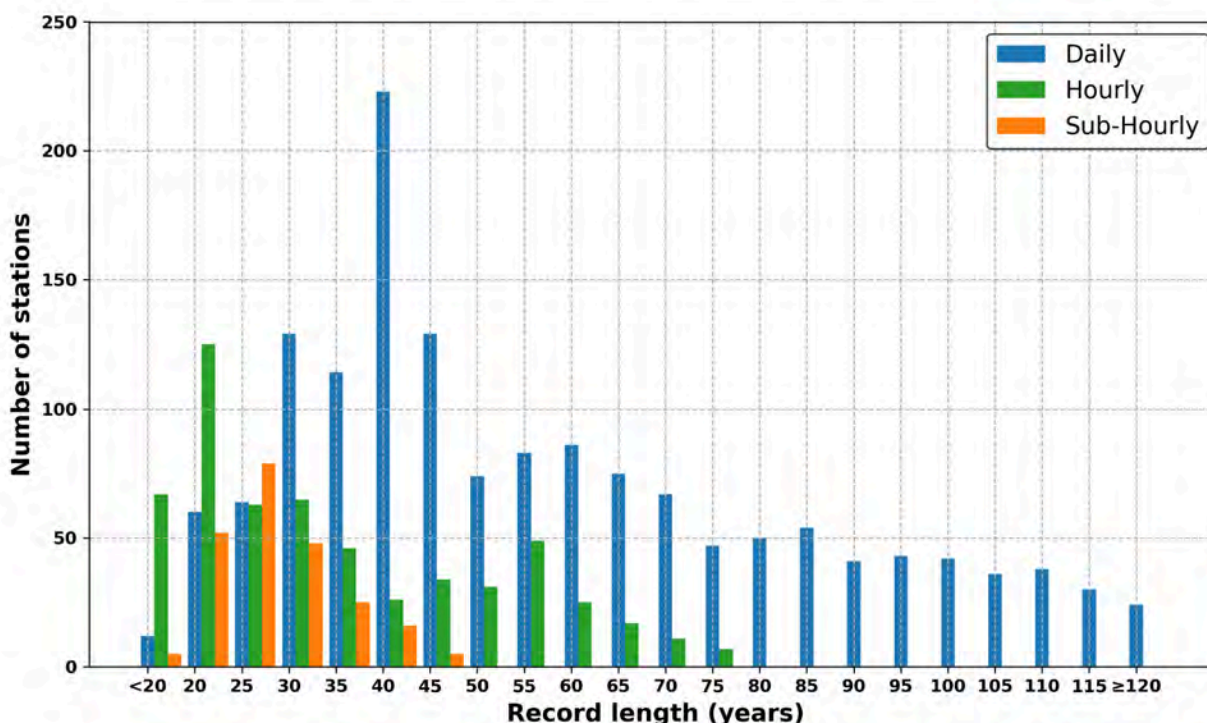


Figure 4.4.1. Number of stations available for precipitation frequency analysis across sub-hourly, hourly and daily durations.

Table 4.4.1. Record length statistics for stations used in frequency analysis for different durations.

| Duration (D)                          | Number of stations | Record length (data years) |        |          |
|---------------------------------------|--------------------|----------------------------|--------|----------|
|                                       |                    | average                    | median | range    |
| Daily (1-day $\leq$ D $\leq$ 60-day)  | 1,521              | 60                         | 51     | 10 – 150 |
| Hourly (1-hr $\leq$ D < 24-hr)        | 566                | 36                         | 32     | 9 – 75   |
| Sub-hourly (15-min $\leq$ D < 60-min) | 230                | 29                         | 28     | 12 – 47  |

Locations of stations recording precipitation data at 1-day intervals that were used in the frequency analysis are shown in Figure 4.4.2 and locations of stations recording at 1-hour and sub-hourly intervals, as well as n-minute stations, are shown in Figure 4.4.3. More detailed information on each station whose data were used to calculate precipitation frequency estimates is given in the following six tables in Appendix A.1.

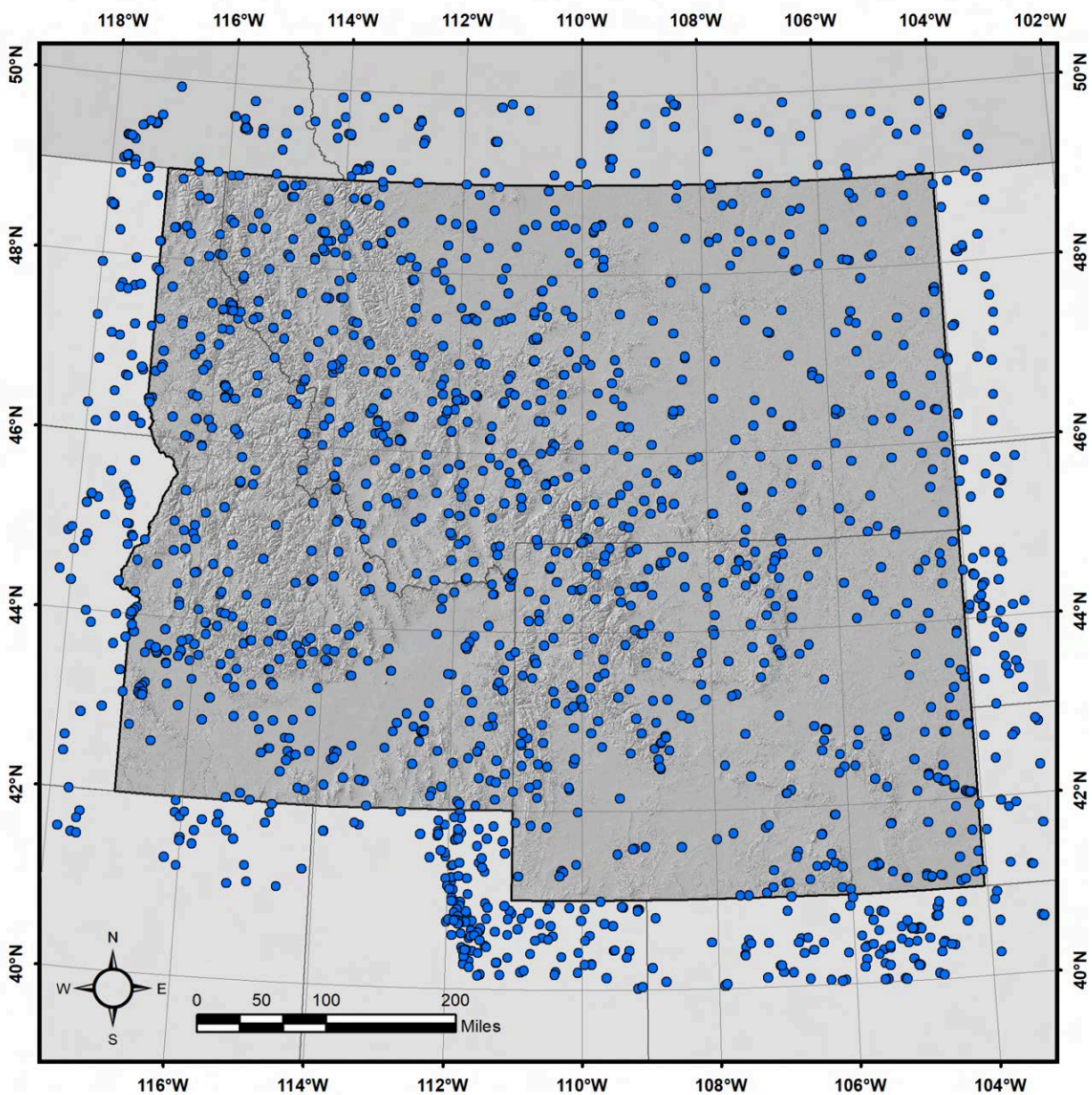
Table A.1.1 shows INW locations for which precipitation frequency estimates were derived. The table shows each location's state (for consistency with table A.1.2), name, identification number (SID), latitude, longitude, elevation, and AMS record lengths (data years) across sub-hourly, hourly, and daily durations. It also lists SIDs for stations that contributed data to each location for sub-hourly, hourly, and/or daily durations.

Table A.1.2 shows similar information for stations in Colorado (CO), Nebraska (NE), Nevada (NV), North Dakota (ND), Oregon (OR), South Dakota (SD), Utah (UT), Washington (WA), and Canada provinces in Alberta (AB), British Columbia (BC), and Saskatchewan (SK).

Details on contributing stations' metadata are provided in Table A.1.3 for ID, MT, and WY stations and in Table A.1.4 for stations outside these states. The tables show each station's state, name, SID, shortest

formatting interval (see Table 4.2.2), latitude, longitude, elevation, dataset identifier (see Table 4.2.1), and the period of record. Similar information is shown in Table A.1.5 for stations used in derivation of n-minute scaling factors (see Section 4.6.3).

Finally, Table A.1.6 lists stations for which additional data were digitized (Section 4.2), showing each station's state, name, SID, formatting interval (Table 4.2.2), dataset identifier (Table 4.2.1), and the period(s) of record for which data were digitized.



*Figure 4.4.2. Map of stations recording at 1-day intervals used in frequency analysis.*



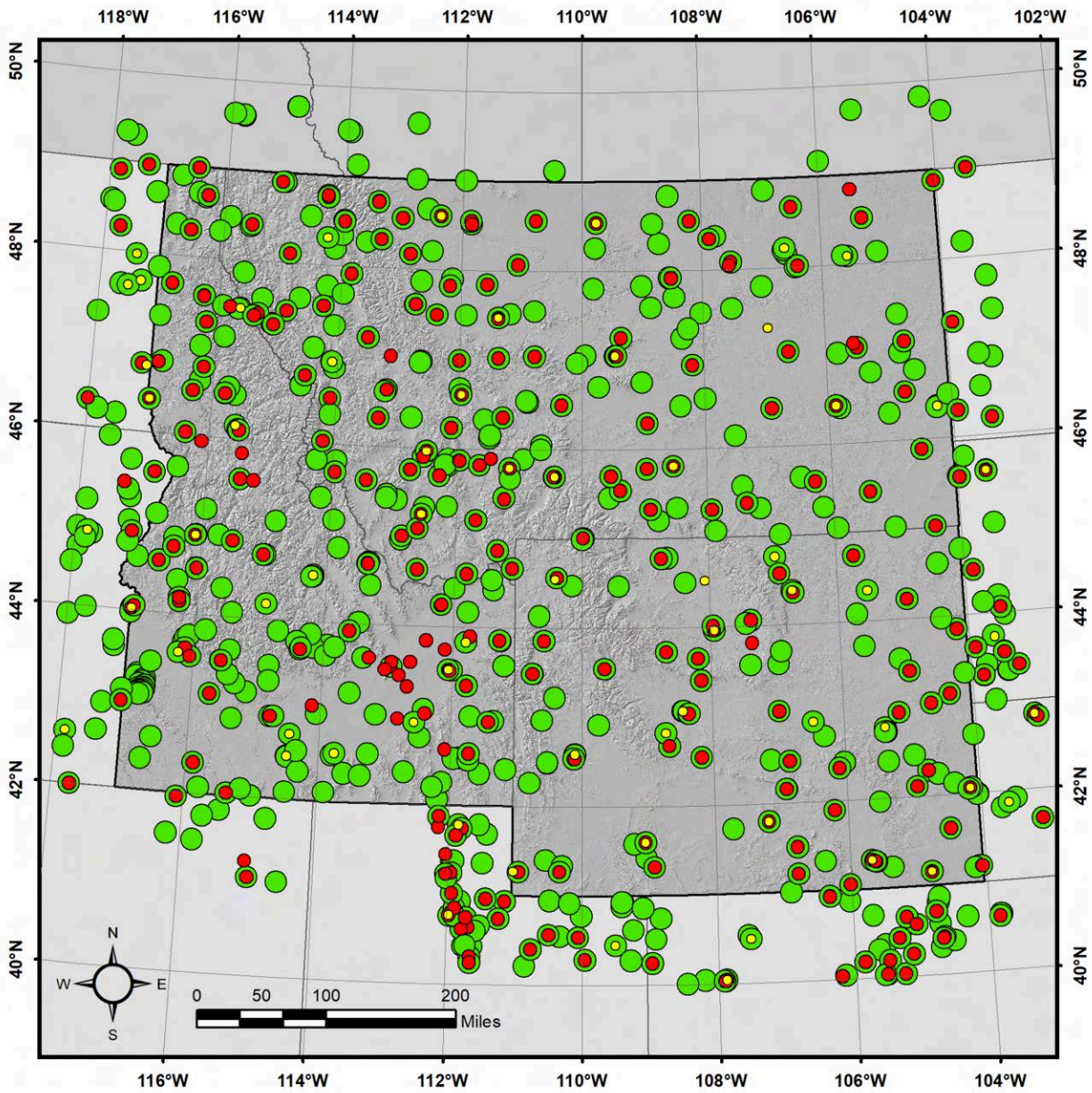


Figure 4.4.3. Map of stations recording at 1-hour (green circles) and 15-minute or variable intervals (red circles) used in the analysis; n-minute stations are shown as yellow circles.



## 4.5. AMS screening and quality control

### 4.5.1. Outliers

For this project, outliers are defined as annual maxima which depart significantly from the trend of the corresponding remaining maxima. Since data at both high and low extremities can considerably affect precipitation frequency estimates, they have to be carefully investigated and either corrected or removed from the AMS if erroneous or due to measurement errors. The high and low outliers' thresholds from the Grubbs-Beck statistical test (Interagency Advisory Committee on Water Data, 1982) and the median  $\pm$  two standard deviations thresholds were used to identify low and high outliers for all durations. Low outliers, which frequently came from years with missing and/or accumulated data, were typically removed from the annual maximum series. All values identified as high outliers were mapped with concurrent measurements at nearby stations. Questionable values that could not be confirmed were investigated further using climatological observation forms, radar data, monthly storm data reports and other historical weather event publications. Depending on the outcome of each investigation, values were either kept as is, corrected, or removed from the datasets.

An example of an outlier examination is shown in Figure 4.5.1. Statistical tests indicated that the 24-hour annual maximum amount of 3.42 inches recorded on 26 January 1984 at Blackfoot, Idaho (10-0915) was a high outlier. Investigation of the original observation form (COOP) for the month in question showed that the recorded value was erroneous, and was supported by the observations for nearby stations that reported very little to no precipitation. The original observation form indicated that the correct value was 0.34 inches and the monthly precipitation totaled only 0.65 inches. The Climatological data publication from Idaho for January 1984 confirms the 1-day value as 0.34 inches. This station also illustrates the large number of data quality issues seen in this project area, as the other two highest 1-day values (3.00 inches on 1 June 1999, 2.07 inches on 18 April 2000) are also both erroneous values that were disproved either from the original COOP form or the monthly climatological data publication.

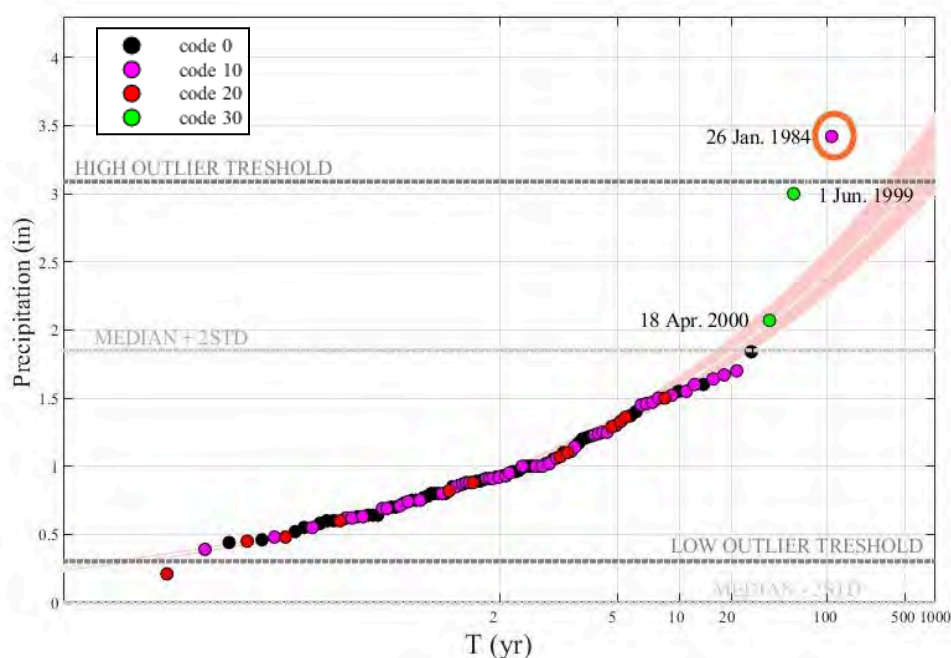


Figure 4.5.1. Outlier tests for 1-day AMS at Blackfoot, Idaho (10-0915). Data in purple. red and green indicate conditional AMS acceptance (quality code 10, 20 and 30, respectively) assigned to annual maxima during the extraction process (Section 4.3).

#### 4.5.2. Missing significant events in records

Precipitation frequency estimates can be significantly affected by an incomplete data record, particularly if one of the highest observed amounts is missing, either because it occurred outside a station's operational period, or due to data that was never archived or digitized or was otherwise lost over time. Less commonly, the rainfall amounts were misread from the observation forms, errors occurred during digitization of the data, the gauge malfunctioned, or equipment was impacted during a flood so measurements couldn't be made.

Several significant events that were either missing, underestimated, or recorded erroneously in various stations' records were added, if they were well documented and/or recorded at nearby stations. Table 4.5.1 shows the most notable cases. For example, at Billings International Airport, MT, there is a long record length of both hourly and daily precipitation data. A large discrepancy was noted between the co-located stations on 8 June 1997, when the daily weather station measured a significant 1-day precipitation event of 2.91 inches, while the co-located hourly precipitation gauge at the airport measured significantly less and recorded only 0.68 inches for the day, of which 0.63 inches fell in six hours in the evening of the 8th. Further investigation revealed that the daily total was accurate as the event caused flooding throughout Billings and was supported by another Billings station (24-0802) which reported 3.00 inches on 9 June. Because the hourly gauge significantly under-reported the flooding event, the hourly annual maximum values for 1997 were unrealistically low relative to the high 1-day amount of 2.91 measured at the airport. After reviewing the ASOS-AWOS-METAR information available for the airport (KBIL) from [Iowa State Mesonet](#), the heavy precipitation event began approximately at 01:24 UTC on 9 June and ended by 6:56 UTC, lasting just under 6 hours. This is supported by the timing of the hourly precipitation measurements reported in the Local Climatological Data form for Billings, as well as the AP News article referenced in the table, which reported that 2-4 inches fell the evening of 8 June. As a result, it was estimated that of the 2.91 inches, 2.86 inches fell in six hours, which is the largest amount of precipitation measured in that timeframe in the record of this station dating back to 1 July 1948.

*Table 4.5.1. List of the most significant events that were corrected or added to the stations' records.*

| Name (SID)                       | Date           | Original       | Updated                          | References                                                                                                                                                                                                      |
|----------------------------------|----------------|----------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Billings Logan Intl AP (24-0807) | 8 Jun 1997     | 0.63 in/6-hour | 2.86 in/6-hour                   | a) <a href="#">1997-06 Local Climatological Data form for Billings, MT</a> ;<br>b) Record-high flows predicted on Yellowstone near Billings, MT. (June 9, 1997). Retrieved from <a href="#">web.archive.org</a> |
| Bloomfield 6 E (24-0926)         | 16 Jun 1944    |                | 2.63 in/1-hour<br>3.87 in/2-hour | <a href="#">NCEI's EV2 - Hydrological Bulletin<sup>(1)</sup></a>                                                                                                                                                |
| Bloomfield 6 E (24-0926)         | 3 Aug 1945     |                | 2.05 in/1-hour<br>2.80 in/2-hour | <a href="#">NCEI's EV2 - Hydrological Bulletin<sup>(1)</sup></a>                                                                                                                                                |
| Cody (48-1840)                   | 25 Apr 1964    | 0.26 in/1-day  | 2.60 in/1-day                    | <a href="#">1964-04 Cooperative observation form for Cody, WY<sup>(2)</sup></a>                                                                                                                                 |
| Cody (48-1840)                   | 17 May 2000    | 0.16 in/1-day  | 2.60 in/1-day                    | a) <a href="#">2000-05 Cooperative observation form for Cody, WY<sup>(3)</sup></a> ;<br>b) <a href="#">Park County Historical Floods<sup>(3)</sup></a>                                                          |
| Dull Center (48-2725)            | 31 May 1927    | -999           | 5.50 in/1-day                    | <a href="#">1927-05 Cooperative observation form for Dull Center, WY<sup>(4)</sup></a>                                                                                                                          |
| Dupuyer (24-2571)                | 15–17 Jun 1948 |                | 9.10 in/48-hour                  | a) <a href="#">1948 Climatological Data annual summary</a><br>b) <a href="#">Montana Marias Basin Rainstorm</a> (Dightman, 1950) <sup>(5)</sup>                                                                 |

|                                        |                |      |                                   |                                                                                                                                                                                            |
|----------------------------------------|----------------|------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fort Laramie 11<br>NNW<br>(48-3490)    | 27 Jun 1955    | -999 | 5.00 in/1-day                     | a) 1955-06 Cooperative observation form for Fort Laramie 11 NNW, WY;<br>b) <i>Summary of Floods in the United States during 1955</i> (Wells, 1962) <sup>(6)</sup>                          |
| Iliad, MT<br>(24-4368)                 | 21 May 1948    |      | 1.59 in /1-hour                   | NCEI's EV2 - Hydrological Bulletin <sup>(1)</sup>                                                                                                                                          |
| Lavina<br>(24-4904)                    | 4 Jun 1942     |      | 2.02 in/1-hour                    | NCEI's EV2 - Hydrological Bulletin <sup>(1)</sup>                                                                                                                                          |
| Lavina<br>(24-4904)                    | 16 Jun 1948    |      | 1.61 in/1-hour                    | NCEI's EV2 - Hydrological Bulletin <sup>(1)</sup>                                                                                                                                          |
| Lewistown<br>Municipal AP<br>(24-4983) | 7 Aug 1900     |      | 2.50 in/1-hour                    | Fergus County Argus. Lewiston, MT. August 8, 1900. <sup>(7)</sup>                                                                                                                          |
| Scobey<br>(24-7424)                    | 9 Jul 1946     |      | 6.90 in/1-day                     | CD publication of 1946-07 for Montana <sup>(8)</sup>                                                                                                                                       |
| Seminole Rsvr USBR<br>(48-8074)        | 17 May 2000    |      | 3.09 in/1-day                     | 2000-05 Cooperative observation form for Seminole Rsvr USBR, WY <sup>(9)</sup>                                                                                                             |
| Sheridan AP<br>(48-8155)               | 22–23 Jul 1923 |      | 3.85 in/6-hour<br>4.41 in/24-hour | a) <i>Maximum Recorded United States Point Rainfall for 5 Minutes to 24 Hours at 296 First-Order Stations</i> (Jennings, 1963)<br>b) NCEI's EV2 - Surface Weather Observation Forms (1001) |
| Torrington Municipal<br>AP (55-0170)   | 12 Jun 2016    | 0    | 2.81 in/1-hour<br>3.70 in/2-hour  | a) Station report for GHCNd 69-2343 <sup>(10)</sup><br>b) NCEI Storm Events Database report                                                                                                |
| Twin Falls 2 NNE<br>(10-9294)          | 18 Sep 1948    | -999 | 1.94 in/1-day<br>2.75 in/2-day    | a) CD publication of 1948-09 for Idaho <sup>(11)</sup><br>b) Times News. Twin Falls, ID. September 19, 1948.                                                                               |
| Winnett 8 ESE<br>(24-9052)             | 19 May 1948    |      | 2.00 in/1-hour<br>3.25 in/6-hour  | NCEI's EV2 - Hydrological Bulletin <sup>(1)</sup>                                                                                                                                          |

<sup>(1)</sup> Select individual extreme events digitized from the Hydrologic Bulletin hourly precipitation dataset.

<sup>(2)</sup> 2.6 written in the snow column is the correct daily precipitation amount. Confirmed as all-time daily precipitation total in Cody Enterprise, April 30, 1964.

<sup>(3)</sup> Significant event of ~2.50 inches in 12 hours caused flooding. Cody Enterprise, May 17, 2000 confirms that 2.44 inches fell between 7 pm and 7 am on 16-17 May. Observer forgot to add 2.44 to 0.16, so the correct total is estimated as 2.60 on 17 May.

<sup>(4)</sup> Event missing, added back single value from cooperative observer form.

<sup>(5)</sup> Event documented in weather reports prior to the station becoming operational.

<sup>(6)</sup> Estimated from Figure 29 on pg. 104, isohyetal map of June 26-27, 1955 flood

<sup>(7)</sup> 2.53 inches noted to have in a little more than half an hour.

<sup>(8)</sup> Significant event caught in digitized record (1938-1948) of Scobey from Climatological Data Publication for Montana

<sup>(9)</sup> Entire month of May 2000 digitized from cooperative observer form

<sup>(10)</sup> Power outage during significant flash flooding event. Event was added back from nearby CoCoRaHS station and estimated from radar and a nearby hourly station (88-2018) to have occurred in two hours, with most of the rain falling in one hour.

<sup>(11)</sup> Missing significant event added back from Climatological Data publication.

### 4.5.3. Correction for constrained observations

**Daily durations.** The majority of AMS data used in this project came from daily stations at which readings were taken once per day (usually around 8 am local time, but this can vary over the course of a station's record and from station to station). Due to the fixed beginning and ending of observation times at daily stations, the true 24-hour (unconstrained) annual maximum could be up to 100 percent larger than the corresponding 1-day (constrained) value extracted from the daily records.

For extreme events, unconstrained 24-hour AM values were determined by inspection of information from nearby gauges, and by reviewing storm reports, storm data, and radar data. For some events, weather observers computed their own 24-hour rainfall totals or made special observations that made it possible to determine more accurate unconstrained values. For example, Casper 2 E, WY measured an extreme 2-day precipitation event of 5.03 inches on August 2 – 3, 1972, which caused flash flooding in the area, but there is a note on the observer form that during the heavy rain on August 2nd that 4.99 inches was received in just over an hour, from 5:55 – 7:05 pm. Because the observer measured at 6:15 pm on this day, the precipitation was split over 2 days when most of it fell in just about one hour. In this case, based on the observer's remarks and indication of when the rain occurred, 5.03 inches was accepted as the 24-hour AM value for 1972. Table 4.5.2 lists the most notable cases for which AM values were corrected. In these cases where more accurate unconstrained amounts can be determined, the values are then divided by the 1-day conversion factor in Table 4.5.3 to be consistent with all other constrained daily measurements.

*Table 4.5.2. Examples of significant adjustments on 1-day AM values to account for fixed-clock observations. Bold font indicates 1-day AM values before correction.*

| Station name                | SID     | Date                | 1-day AM values (in)<br>from digital records |             | 24-hour<br>AM value<br>(in) |
|-----------------------------|---------|---------------------|----------------------------------------------|-------------|-----------------------------|
|                             |         |                     | day 1                                        | day 2       |                             |
| Albin                       | 48-0080 | 31 Jul – 1 Aug 1985 | <b>2.00</b>                                  | 1.57        | 3.47                        |
| Brandenberg                 | 24-1084 | 6 – 7 Jun 2007      | 2.34                                         | <b>2.35</b> | 4.69                        |
| Cascade 5 S                 | 24-1552 | 24 – 25 May 1953    | <b>2.08</b>                                  | 1.87        | 3.40                        |
| Casper 2 E                  | 48-1565 | 2 – 3 Aug 1972      | 2.20                                         | <b>2.83</b> | 5.03                        |
| Cheyenne                    | 98-0002 | 15 – 16 Jul 1896    | <b>3.65</b>                                  | 1.05        | 4.70                        |
| Fisher Creek                | 86-0480 | 18 – 19 Nov 1996    | 2.70                                         | <b>3.00</b> | 4.30                        |
| Helena                      | 79-0105 | 4 – 5 Jun 1908      | 1.73                                         | <b>1.94</b> | 3.67                        |
| Mackay                      | 10-5462 | 8 – 9 Jun 1944      | <b>1.36</b>                                  | 1.00        | 2.26                        |
| Millegan 14 SE              | 24-5712 | 12 – 13 Jun 2013    | <b>2.09</b>                                  | 2.09        | 4.05                        |
| Riverton                    | 48-7760 | 27 – 28 Sep 1923    | <b>2.14</b>                                  | 1.79        | 3.75                        |
| Sheridan                    | 98-0004 | 22 – 23 Jul 1923    | 1.86                                         | <b>2.55</b> | 4.41                        |
| Stevensville                | 24-7894 | 30 – 31 Jul 1946    | <b>1.71</b>                                  | 1.18        | 2.89                        |
| Yellowstone Park<br>Mammoth | 99-9905 | 14 – 15 Oct 1908    | <b>1.23</b>                                  | 1.23        | 2.34                        |

At all daily stations, correction factors were applied to AM to account for the likely failure of capturing the true unconstrained values. The correction factor for each daily duration was estimated by using the same pool of sub-daily data to calculate unconstrained (e.g. 24-hour) and constrained (e.g. 1-day 8am-8am) AM independently. Ratios of unconstrained / constrained (e.g. 24-hour / 1-hour) did not show statistical significance with respect to spatial distribution (latitude, longitude, elevation), nor average recurrence interval. For this reason, mean ratios per duration were used, which are given in Table 4.5.3.

Table 4.5.3. Correction factors applied to constrained AMS data across daily durations.

| Duration (days)   | 1    | 2    | 3    | 4    | 7    | >7   |
|-------------------|------|------|------|------|------|------|
| Correction factor | 1.17 | 1.06 | 1.04 | 1.03 | 1.02 | 1.00 |

**Hourly durations.** While significant underestimations due to constrained observations are commonly seen for daily stations, ‘clock-hour’ observations also affect hourly measurements at stations recording at 1-hour intervals. Data from stations recording at sub-hourly durations or from first-order hourly stations, which often report unconstrained amounts, were used to make corrections. For example, the maximum 1-hour value of 0.93 inches recorded at 6:00 pm local time on 11 June, 1958 at the Missoula International Airport hourly station was increased to 1.36 inches based on the corresponding 60-min value reported at the first-order hourly station (also in Jennings, 1963).

For other AM data extracted at hourly stations, the correction factors were developed using a similar process as the daily factors, except using sub-hourly station information. Correction factors applied to constrained AMS data across hourly durations are shown in Table 4.5.4.

Table 4.5.4. Correction factors applied to constrained AMS data across hourly durations.

| Duration (hours)  | 1    | 2    | 3    | 6    | 12   | >12  |
|-------------------|------|------|------|------|------|------|
| Correction factor | 1.13 | 1.05 | 1.03 | 1.02 | 1.01 | 1.00 |

**Sub-hourly durations.** Because sub-hourly measurements are also constrained by a fixed beginning and end measurement, as a further enhancement, a similar adjustment was done for sub-hourly durations. The correction factors for sub-hourly AMS were using concurrent constrained and unconstrained annual maxima for each duration estimated from 1-min stations; they are shown in Table 4.5.5.

Table 4.5.5. Correction factors applied to constrained AMS data across sub-hourly durations.

| Duration (minutes) | 15   | 30   | 45   | 60   | >60  |
|--------------------|------|------|------|------|------|
| Correction factor  | 1.14 | 1.04 | 1.02 | 1.01 | 1.00 |

#### 4.5.4. Inconsistencies across durations

At co-located stations, it was not unusual that corresponding annual maxima differed for some years during their overlapping periods of record. Related 1-day maxima at co-located daily and hourly stations were compared, and each pair of significantly different estimates was investigated. Effort was made to identify the source of the error and to correct erroneous observations across all durations that were affected.

Annual maxima at each station were also compared across all durations in each year to ensure that every extracted amount for a longer duration was at least equal to the corresponding amount for the successive shorter duration. Inconsistencies of this type occurred at stations with a significant number of missing and/or accumulated data and resulted from different AMS extraction rules applied for different durations (Section 4.3), or from the correction for constrained observations (Section 4.5.3). In those cases, shorter duration annual maxima were used to replace annual maxima extracted for longer durations. Typically, adjustments of this type were small.



#### 4.5.5. Trend analysis

The precipitation frequency analysis methods used in NOAA Atlas 14 are based on the assumption that the annual maximum series used in the analysis are stationary. Statistical tests for trends in AMS and the main findings for this project area are described in more detail in Appendix A.2. Briefly, the stationarity assumption was tested by applying a parametric *t*-test and non-parametric Mann-Kendall test for trends in means and Levene's test for trends in variance in the 1-day and 1-hour AMS data at the 5% significance level. For the 1-day duration, testing was done on stations with at least 70 years of data; for the 1-hour duration, the minimum number of data years was lowered to 40 to increase sample size. Overall, the *t*-test detected slightly more negative trends in the AMS than the Mann-Kendall test, but neither test detected trends in approximately 90% of the stations at both durations. Levene's test did not detect trends in variance in more than 90% of stations at both durations. Spatial maps did not reveal any spatial coherence in trend results.

Any trend in the relative magnitude of AMS values was also assessed for both climate regions delineated for this project (see Figure 4.1.3). AMS from all stations in each region were rescaled by corresponding mean values and then regressed against time. The regression results were tested against a null hypothesis of the slope coefficient being equal to zero (zero correlation between rescaled AMS and time). The null hypothesis of no trends in relative AMS data could not be rejected at 5% significance level for either region, except for the Northern Great Plains region at the 1-hour duration, where the relationship was statistically significant but very small.

#### 4.6. Precipitation frequency estimates with confidence limits at stations

##### 4.6.1. Overview of methodology and related terminology

Precipitation magnitude-frequency relationships at individual stations have been computed using a regional frequency analysis approach based on L-moment statistics. Frequency analyses were carried out on annual maximum series (AMS) for the following seventeen durations: 15-minute, 30-minute, 1-hour, 2-hour, 3-hour, 6-hour, 12-hour, 1-day, 2-day, 3-day, 4-day, 7-day, 10-day, 20-day, 30-day, 45-day, and 60-day. Frequency estimates based on partial duration series (PDS), which include all amounts for a specified duration at a given station above a predefined threshold regardless of year, were developed from AMS data using a formula that allows for conversion between AMS and PDS frequencies. Precipitation frequency estimates at 5-minute and 10-minute durations were derived from corresponding 15-minute estimates. To assess the uncertainty in estimates, 90% confidence intervals were constructed on both AMS and PDS frequency curves.

Frequency analysis involves fitting an assumed distribution function to the data. The following distribution functions were analyzed with the aim to identify a distribution that provides the best precipitation frequency estimates for the project area across all frequencies and durations: 3-parameter Generalized Extreme Value (GEV), Generalized Normal, Generalized Pareto, Generalized Logistic, and Pearson Type III distributions; 4-parameter Kappa distribution; and 5-parameter Wakeby distribution.

When fitting a distribution to a precipitation annual maximum series extracted at a given location (and selected duration), the result is a frequency distribution relating precipitation magnitude to its annual exceedance probability (AEP). The inverse of the AEP is frequently referred to as the average recurrence interval (ARI), also known as return period. When used with the AMS-based frequency analysis, ARI does not represent the “true” average period between exceedances of a given precipitation magnitude, but the average period between years in which a given precipitation magnitude is exceeded at least once. Those two average periods can be considerably different for more frequent events. The “true” average recurrence interval (ARI) between exceedances of a particular magnitude can be obtained through frequency analysis of PDS.

Differences in magnitudes of corresponding frequency estimates (i.e., quantiles) from the two series are negligible for ARIs greater than about 15 years, but notable at smaller ARIs (especially for  $ARI \leq 5$  years). Because the PDS can include more than one event in any particular year, the results from a PDS analysis are more reliable for designs based on frequent events (e.g., Laurenson, 1987). To avoid confusion, herein the term AEP is used with AMS frequency analysis and ARI with PDS frequency analysis. The term “frequency” is interchangeably used to specify the ARI and AEP.

L-moments (Hosking and Wallis, 1997) provide an alternative way of describing frequency distributions to traditional product moments (conventional moments) or the maximum likelihood approach. Since sample estimators of L-moments are linear combinations of ranked observations, they are less susceptible to the presence of outliers in the data than conventional moments and are well suited for the analysis of data that exhibit significant skewness. L-moments typically used to calculate parameters of various frequency distributions include 1<sup>st</sup> and 2<sup>nd</sup> order L-moments: L-location ( $\lambda_1$ ) and L-scale ( $\lambda_2$ ), and the following L-moment ratios: L-CV ( $\tau$ ), L-skewness ( $\tau_3$ ), and L-kurtosis ( $\tau_4$ ). L-CV, which stands for “coefficient of L-variation”, is calculated as the ratio of L-scale to L-location ( $\lambda_2/\lambda_1$ ). L-skewness and L-kurtosis represent ratios of the 3<sup>rd</sup> order ( $\lambda_3$ ) and 4<sup>th</sup> order ( $\lambda_4$ ) L-moments to the 2<sup>nd</sup> order ( $\lambda_2$ ) L-moment, respectively, and thus are independent of scale.

One of the primary problems in precipitation frequency analysis is the need to provide estimates for average recurrence intervals that are significantly longer than available records. Regional approaches, which use data from stations that are expected to have similar frequency distributions, have been shown to yield more accurate estimates of extreme quantiles than approaches that use only data from a single station. The number of stations used to define a region should be large enough to smooth variability in at-station estimates, but also small enough that regional estimates still adequately represent local conditions. The region-of-influence approach (Burn, 1990) used in this volume defines regions such that each station has its own region with a potentially unique combination of nearby stations. Stations are selected based on the maximum allowable distance from the target station that is defined in a geographic space and in a space of selected statistical attribute variables. Like with other regionalization approaches, there is a level of subjectivity involved in the process, for example, in choosing attribute variables, selecting the maximum allowable distance as well as attributes’ weights and transformations for similarity distance algorithms. One of the advantages of the region-of-influence approach is that it results in a smooth transition in estimates across regional boundaries, which is relevant for the mapping of precipitation frequency estimates.

A frequency curve derived from sample data serves as an estimate of the population frequency curve. However, the true population values may differ from this estimate. Confidence intervals are used to express the uncertainty associated with this estimate, providing a range of values that are likely to contain the true population value based on the sample data. A specified confidence level (e.g., 90%) indicates the proportion of such intervals that would capture the true value if the sampling process were repeated multiple times. The bounds of the confidence interval are not necessarily equidistant from the sample estimate. The width of the confidence interval is influenced by factors such as sample size, data variability, the choice of model (e.g., GEV vs. GLO), and the estimation method (e.g., MLE vs. L-moments). To determine the bounds of the 90% confidence interval, a Monte Carlo simulation is employed, with detailed methodology provided in Section 4.6.5.

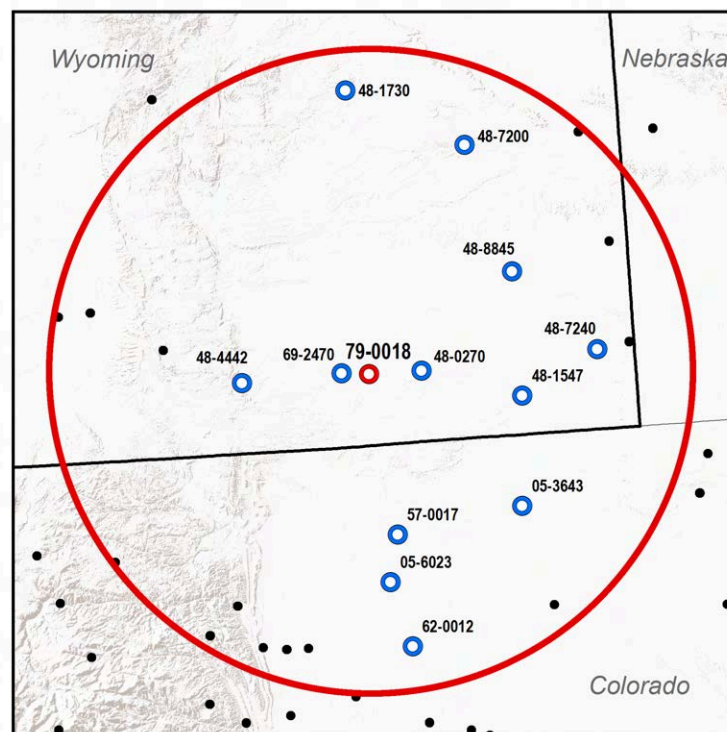
It should be noted that precipitation frequency estimates from NOAA Atlas 14 are point estimates and are not directly applicable to larger areas. The conversion of a point to an areal estimate is usually done by applying an appropriate areal reduction factor to the average of the point estimates within the subject area. Areal reduction factors are generally a function of the size of an area and the duration of the precipitation. The depth-area-duration curves from NOAA Atlas 2 (Miller et al., 1973) and Technical Report 24 (Meyers and Zehr, 1980) are the most current publications by NOAA.

Also, precipitation frequency estimates for each NOAA Atlas 14 volume were computed independently using all available data at the time. Some discrepancies between volumes at project boundaries are inevitable and they will generally be more pronounced for more rare frequencies.

#### 4.6.2. Regionalization

For each station, an initial region was created by grouping up to the closest 15 stations (including the target station) within a 50-mile radius, prioritizing stations with the longest data record lengths and stations with hourly data. Those stations within a 50-mile radius that captured the highest observed 1-hour, 6-hour, 24-hour, 48-hour, or 10-day amounts were also automatically included in the initial region, regardless of their record length. Stations were then added to or removed from the region based on examination of their distance from a target station, inspection of their locations with respect to mountain ridges, elevation difference, difference in mean annual maxima, maximum recorded values and record lengths for selected durations, etc. (see an example in Figure 4.6.1) and assessment of similarities/dissimilarities in the progression of relevant L-moment statistics across durations compared with other stations in the region (see Figure 4.6.2). While highly dependent on station density, typical regions included between 12 and 20 stations with a cumulative number of data years between 600 and 1,300 for daily durations and 125 and 375 for hourly durations. However, in some areas of low station density, regions may have less than 10 stations, with a cumulative number of data years as low as 269 for daily durations and 42 for hourly durations.

**Regional L-moments calculation.** For a given duration, regional estimates of L-moment ratios (L-CV, L-skewness and L-kurtosis) were obtained by averaging corresponding station-specific estimates weighted by record lengths. Regional L-moment ratios were then used to estimate higher order L-moments at each station.



| Index                                                                             | SID     | Distance | Elev  | Elev<br>diff | N<br>24h | N<br>1hr | MAX<br>1h | MAX<br>6h | MAX<br>24h | MAX<br>10d |
|-----------------------------------------------------------------------------------|---------|----------|-------|--------------|----------|----------|-----------|-----------|------------|------------|
|                                                                                   |         | (mi)     | (ft)  | (ft)         |          |          | (in)      | (in)      | (in)       | (in)       |
| <b>SELECTED STATIONS:</b>                                                         |         |          |       |              |          |          |           |           |            |            |
| 1                                                                                 | 79-0018 | 0        | 6,128 | 0            | 150      | 75       | 3.97      | 6.18      | 6.06       | 7.58       |
| 2                                                                                 | 69-2470 | 4.08     | 6,195 | 67           | 30       | 0        | -         | -         | 3.57       | 6.92       |
| 3                                                                                 | 48-0270 | 7.75     | 6,010 | -118         | 85       | 0        | -         | -         | 3.85       | 6.61       |
| 4                                                                                 | 48-4442 | 18.81    | 6,690 | 562          | 96       | 0        | -         | -         | 4.69       | 8.37       |
| 5                                                                                 | 48-1547 | 22.78    | 5,437 | -691         | 78       | 0        | -         | -         | 6.43       | 6.44       |
| 6                                                                                 | 57-0017 | 23.98    | 5,390 | -738         | 42       | 23       | 1.55      | 2.75      | 3.08       | 7.45       |
| 7                                                                                 | 48-8845 | 25.92    | 5,616 | -512         | 34       | 0        | -         | -         | 4.45       | 4.85       |
| 8                                                                                 | 05-3643 | 29.74    | 5,090 | -1,038       | 53       | 0        | -         | -         | 4.45       | 5.45       |
| 10                                                                                | 05-6023 | 30.76    | 5,196 | -932         | 71       | 60       | 3.2       | 3.2       | 4.00       | 7.70       |
| 11                                                                                | 48-7240 | 33.81    | 5,180 | -948         | 51       | 41       | 2.32      | 3.69      | 3.62       | 6.01       |
| 12                                                                                | 48-7200 | 36.55    | 4,982 | -1,146       | 71       | 59       | 3.28      | 3.28      | 3.83       | 6.84       |
| 16                                                                                | 62-0012 | 40.56    | 4,885 | -1,243       | 25       | 25       | 1.75      | 2.15      | 3.22       | 6.51       |
| 18                                                                                | 48-1730 | 41.93    | 5,304 | -824         | 110      | 0        | -         | -         | 4.19       | 6.26       |
| <b>BACKUP STATIONS:</b>                                                           |         |          |       |              |          |          |           |           |            |            |
| 9                                                                                 | 86-1045 | 30.53    | 8,330 | 2,202        | 20       | 16       | 0.9       | 1.94      | 3.10       | 7.40       |
| 13                                                                                | 48-7235 | 38.62    | 5,074 | -1,054       | 90       | 14       | 3.6       | 4.9       | 5.46       | 7.49       |
| 14                                                                                | 69-0634 | 39.23    | 5,354 | -774         | 42       | 23       | 2.31      | 4.7       | 5.90       | 10.0       |
| 15                                                                                | 48-0080 | 40.47    | 5,345 | -783         | 61       | 0        | -         | -         | 4.33       | 4.78       |
| 17                                                                                | 05-3006 | 41.37    | 4,920 | -1,208       | 45       | 0        | -         | -         | 3.28       | 7.50       |
| 19                                                                                | 48-5411 | 42.05    | 7,175 | 1,047        | 139      | 0        | -         | -         | 4.39       | 4.50       |
| 20                                                                                | 05-3005 | 42.33    | 5,004 | -1,124       | 128      | 63       | 2.8       | 5.41      | 6.18       | 8.84       |
| 21                                                                                | 62-0003 | 43.17    | 5,062 | -1,066       | 32       | 23       | 3.44      | 5.88      | 9.25       | 13.17      |
| 22                                                                                | 05-0945 | 43.59    | 4,862 | -1,266       | 62       | 0        | -         | -         | 3.93       | 5.11       |
| 23                                                                                | 05-1060 | 45.05    | 7,400 | 1,272        | 34       | 0        | -         | -         | 4.07       | 10.07      |
| 29                                                                                | 48-8808 | 51.57    | 6,086 | -42          | 72       | 0        | -         | -         | 3.76       | 5.35       |
| ...                                                                               |         |          |       |              |          |          |           |           |            |            |
| <b>Enter SID for station(s) you want to remove from "Selected stations" list:</b> |         |          |       |              |          |          |           |           |            |            |
| <b>Enter SID for station(s) you want to add from "Backup stations" list:</b>      |         |          |       |              |          |          |           |           |            |            |

*Figure 4.6.1. An example of a spatial plot with accompanying table used in an interactive process for adding or removing stations assigned to the Cheyenne (41-1007) station's region.*

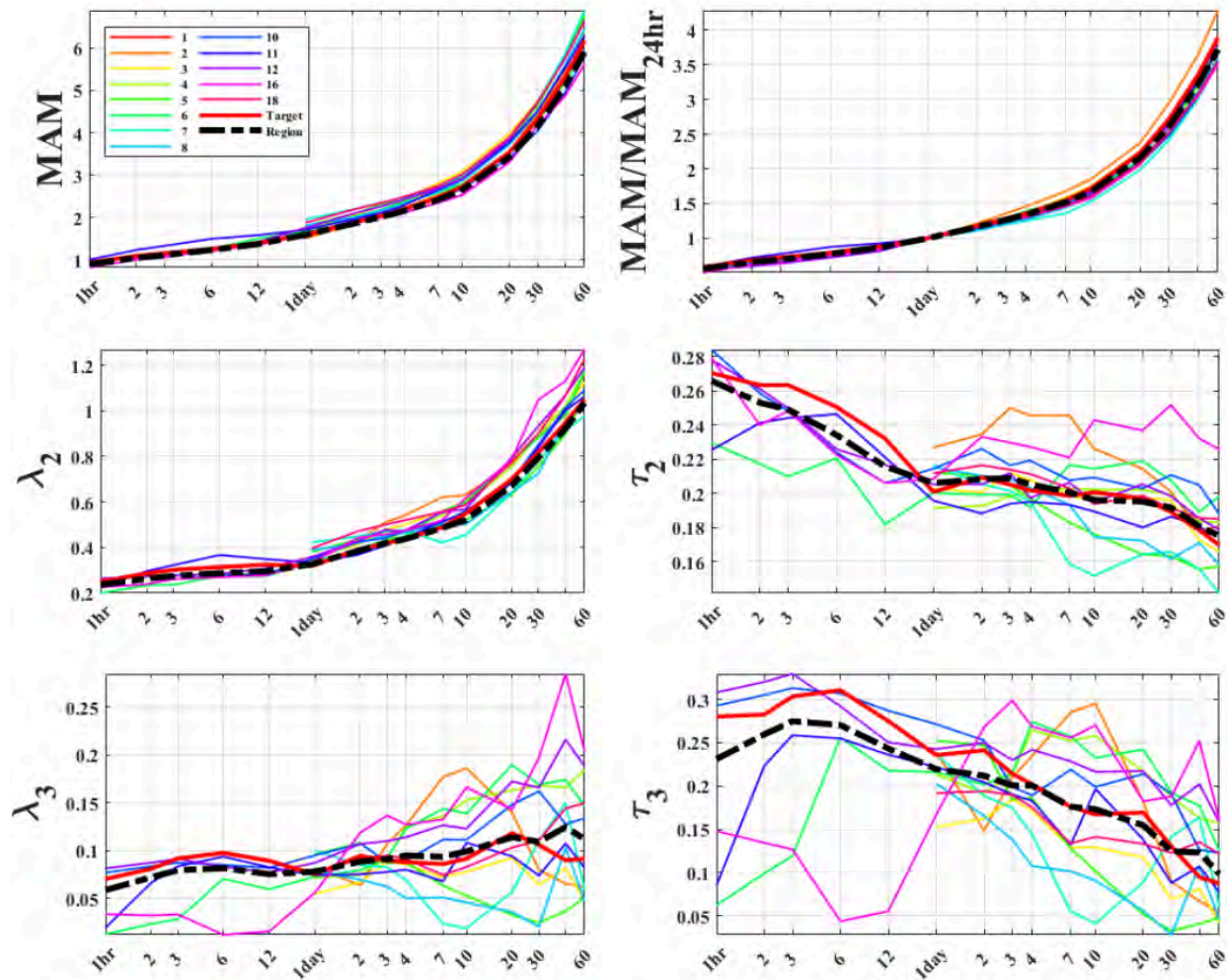


Figure 4.6.2. An example of plots of L-moments (left panels),  $MAM/MAM_{24-hr}$  and L-moment ratios (right panels) across hourly and daily durations for stations assigned to Cheyenne's region. Thick red lines show statistics for the target station, thin colored lines show statistics for other stations in the region, and thick dashed black lines show corresponding regional estimates.

**Station dependence.** Since stations were selected based on geographic proximity to a target station, it was likely that some of the extracted annual maxima at nearby stations came from the same storm events. Dependence in AMS data for stations within a region was analyzed using a  $t$ -test for the significance of a correlation coefficient at the 5% level. Analysis indicated that cross-correlation among stations was often statistically significant in areas with a dense network of rain gauges and that the number of dependent station pairs increased with duration length. The impact of station dependence was accounted for during the construction of confidence intervals on estimates where it could have substantial influence (see Section 4.6.5).

#### 4.6.3. AMS-based estimates

**Choice of distribution.** A goodness-of-fit test based on L-moment statistics for 3-parameter distributions, as suggested by Hosking and Wallis (1997), was used to assess which of the five 3-parameter distributions listed in Section 4.6.1 provide acceptable fit to the AMS data. Results of  $\chi^2$ - and Kolmogorov-Smirnov



tests and visual inspection of probability plots for all seven distributions for 1-hour, 1-day, and 10-day durations, like the one shown in Figure 4.6.3, were considered during distribution selection.

Although it is not required to use the same type of distribution across all durations and/or regions, changes in distribution type for different durations or regions often lead to considerable discontinuities in frequency estimates across durations or between nearby locations, particularly at more rare frequencies. Based on the test results, the GEV distribution, which is generally recommended for analysis of extreme event, provided an acceptable fit to data more frequently than any other distribution. Accordingly, the GEV distribution was adopted across all stations and for all durations.

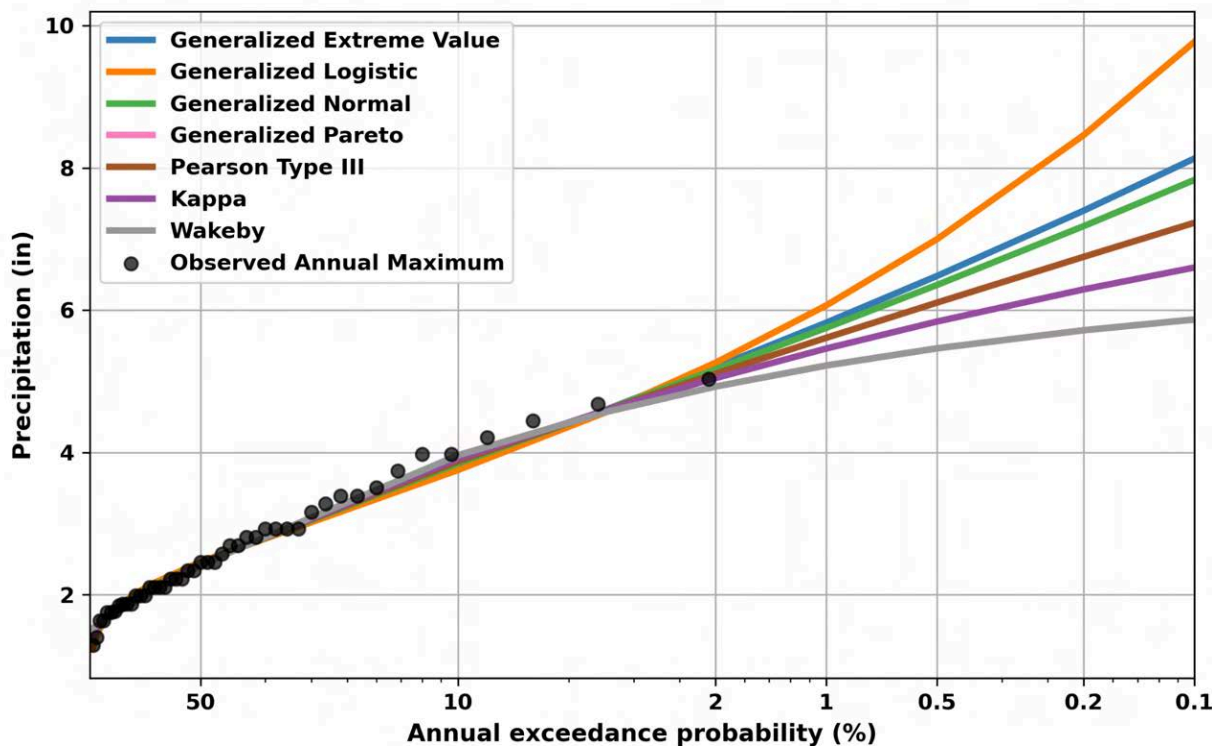


Figure 4.6.3. Probability plots for selected distributions for 1-day AMS at the Mancy Glacier, MT (86-0613) station.

**Frequency estimates for hourly and daily durations.** For each station and for each hourly and daily duration, L-moment statistics were used to calculate the parameters of the GEV distribution and to produce precipitation frequency estimates for the following annual exceedance probabilities (AEPs): 1/2 (50%), 1/5, 1/10, 1/25, 1/50, 1/100, 1/200, 1/500, and 1/1000. This calculation was repeated for all durations and for all stations. Since L-moments, and consequently, precipitation frequency estimates, were calculated independently for each duration, the resulting depth-duration-frequency (DDF) curves did not always look smooth. Smoothing of quantiles using PCHIP (Piecewise Cubic Hermite Interpolating Polynomial) function (Fritsch and Carlson, 1980) improved the shape of DDF curves. Figure 4.6.4 illustrates precipitation depth-duration-frequency curves before and after smoothing for Cheyenne, WY (79-0018).

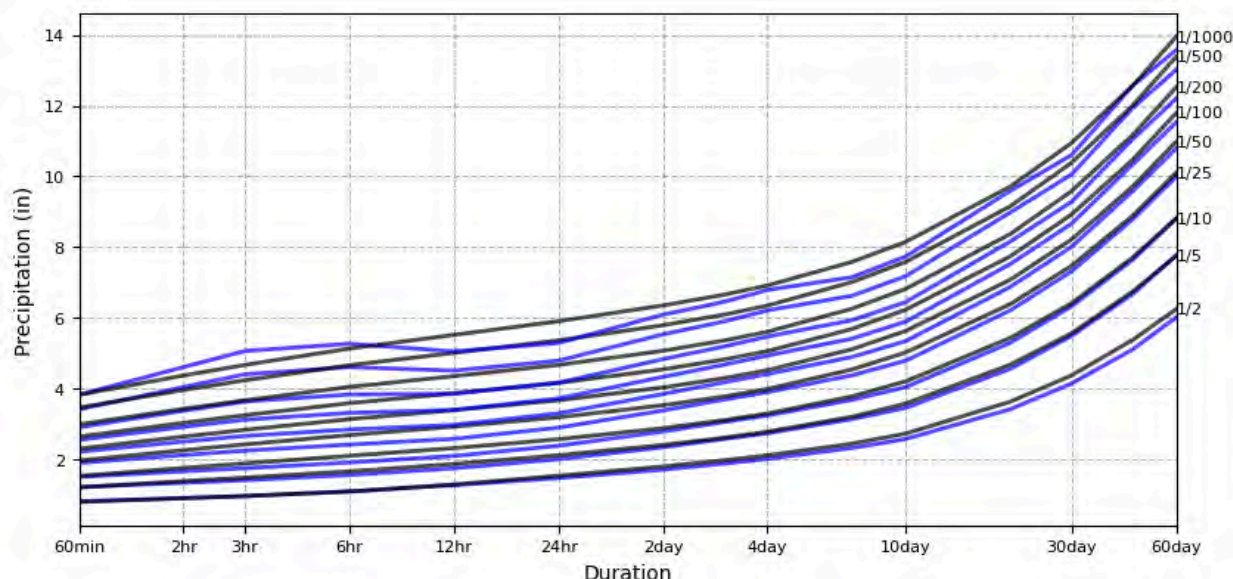


Figure 4.6.4. DDF curve for the Cheyenne, WY (79-0018) station. Blue lines represent original estimates; black lines represent smoothed estimates.

**Frequency estimates for sub-hourly durations.** The shortest duration at which AMS data were extracted was 15 minutes. Regional L-moment statistics were calculated for the 15-minute and 30-minute durations at stations that had 15-minute AMS data available for at least one station assigned to their region. L-moments were then used to produce precipitation frequency estimates in the same manner as for hourly and daily durations. However, in many cases, resulting precipitation frequency estimates were implausible, especially for AEPs of 1/100 (1%) or less. The primary cause of this was the sample size, as very few stations with measurements at sub-hourly durations were available, and when they were available, they typically had short periods of record. This resulted in unreliable moments (especially higher-order moments), and consequently, unreliable precipitation frequency estimates.  $\lambda_1$  moments (i.e., mean annual maxima) were less sensitive to sample size and were generally in line with corresponding estimates at nearby stations.  $\lambda_1$  moments were also, for the most part, consistent with the expected progression across hourly and daily durations (see top left panel of Figure 4.6.2). For that reason, at-station quantiles, which were assessed as unreliable, were not interpolated to create precipitation frequency grids; an alternative approach described in Section 4.8.2 was used for that purpose.

Similarly, for the 5-minute and 10-minute durations, very few n-minute stations were available to compute precipitation frequency estimates using regional L-moments or to develop MAM grids. Therefore, an alternative approach described in Section 4.8.2 was used to develop these estimates, as well.

#### 4.6.4. PDS-based estimates

PDS-based precipitation frequency estimates were calculated indirectly from Langbein's formula (Langbein, 1949) which transforms a PDS-based average recurrence interval (ARI) to an annual exceedance probability (AEP):

$$\text{AEP} = 1 - \exp\left(-\frac{1}{\text{ARI}}\right)$$

PDS-based frequency estimates were calculated for the same durations as AMS-based estimates for 1-, 2-, 5-, 10-, 25-, 50-, 100-, 200-, 500-, and 1,000-year ARIs. Selected ARIs were first converted to AEPs

using the above formula and then precipitation frequency estimates were calculated for those AEPs following the same approach that was used in the AMS analysis.

#### **4.6.5. Confidence limits**

A Monte Carlo simulation procedure, similar to the methodology described in Hosking and Wallis (1997), is employed to construct 90% confidence intervals (i.e., 5% and 95% confidence limits) on both AMS-based and PDS-based precipitation frequency curves (see Section 4.6.1 for calculation of PDS-based precipitation frequency estimates). At each station, 1,000 simulated data sets per duration were used to generate precipitation quantiles, using the region L-moment algorithm (see Section 4.6.2 for spatial dependence analysis). Estimates were sorted from smallest to largest and the 50th value was selected as the lower confidence limit, while the 950th value was selected as the upper confidence limit. The region used for the simulation is designed to mirror the characteristics of the actual target station region, including the number of sites and the record length at each site. The L-moment ratios for individual sites within the simulated region are constructed by linearly varying the ratios across sites, with the mean value set to the regional average L-moment ratio and the range determined by the standard error. The simulation algorithm is designed to account for uncertainties such as sampling variability, model choice, and parameter uncertainty, but it does not include other sources of uncertainty, such as differences between model estimation methods (MLE vs. L-moments), that could significantly impact the total error, particularly at more rare frequencies.

For some stations, due to differences in record lengths across hourly and daily durations, confidence intervals for hourly durations were wider than corresponding intervals at daily durations; therefore, they were restricted by the corresponding values at 24-hour duration. Confidence limits for sub-hourly durations were calculated using similar approaches that were used to calculate frequency estimates at those durations. Since confidence limits were derived for each duration independently, like precipitation frequency estimates, they could fluctuate from duration to duration and were smoothed across durations using cubic spline functions.

### **4.7. Rainfall (liquid precipitation) frequency estimates**

#### **4.7.1 Background**

Precipitation frequency estimates from Section 4.6 represent precipitation magnitudes regardless of the type (phase) of precipitation. For some applications it may be important to differentiate frequency estimates from liquid precipitation only (i.e. rainfall). For example, rainfall is treated differently from snowfall in watershed modeling because of different runoff producing mechanisms: while rainfall generates runoff almost immediately, snowfall generally goes into storage until it melts at a later date.

For high elevation areas in the Volume 12 project area, the contribution of snowfall to the annual precipitation is notable; however, high annual snowfall does not necessarily translate into a direct relationship to high snowfall AMS, especially for durations of 24-hour and less. To explore differences in total and liquid-only precipitation frequency estimates, concurrent rainfall and precipitation AMS were extracted at stations which had information useful for distinguishing the type of precipitation. Rainfall analysis was done for durations up to 24 hours, which are of the most interest to design projects relying on peak flows.

#### **4.7.2. Extraction of rainfall data**

For the rain-precipitation analysis at 24-hour duration, two main data sources, Global Historical Climatology Network daily (GHCNd), and Snow Telemetry (SNOTEL) Network, were considered, and

the concurrent daily precipitation and snowfall for each of these networks was calculated differently due to data availability.

For GHCNd, recorded snowfall amounts were first converted to snow water equivalent (SWE) using the 10 to 1 rule, which assumes the density of water is 10 times the density of snowfall. This ratio is on average higher (thus lower liquid equivalent) for many areas in the project area; however, historical observations of snowfall were often assumed to have a 10 to 1 ratio, and thus precipitation was recorded as 1/10th the actual snowfall observation (and no direct precipitation was melted/recorded) (Baxter, et al 2005). The rainfall was then calculated by subtracting the SWE from the precipitation. Values less than 0 are truncated to 0 rainfall. Warm season (i.e. May – September) precipitation is assumed to be rainfall. Some stations report “missing” snowfall during warm season months, which would cause too many missing periods for annual maximum rainfall to be sufficiently extracted, even though these warm months are likely mostly 0 snowfall (with some exceptions). Precipitation and rainfall-only time series for the GHCNd dataset remain after these steps.

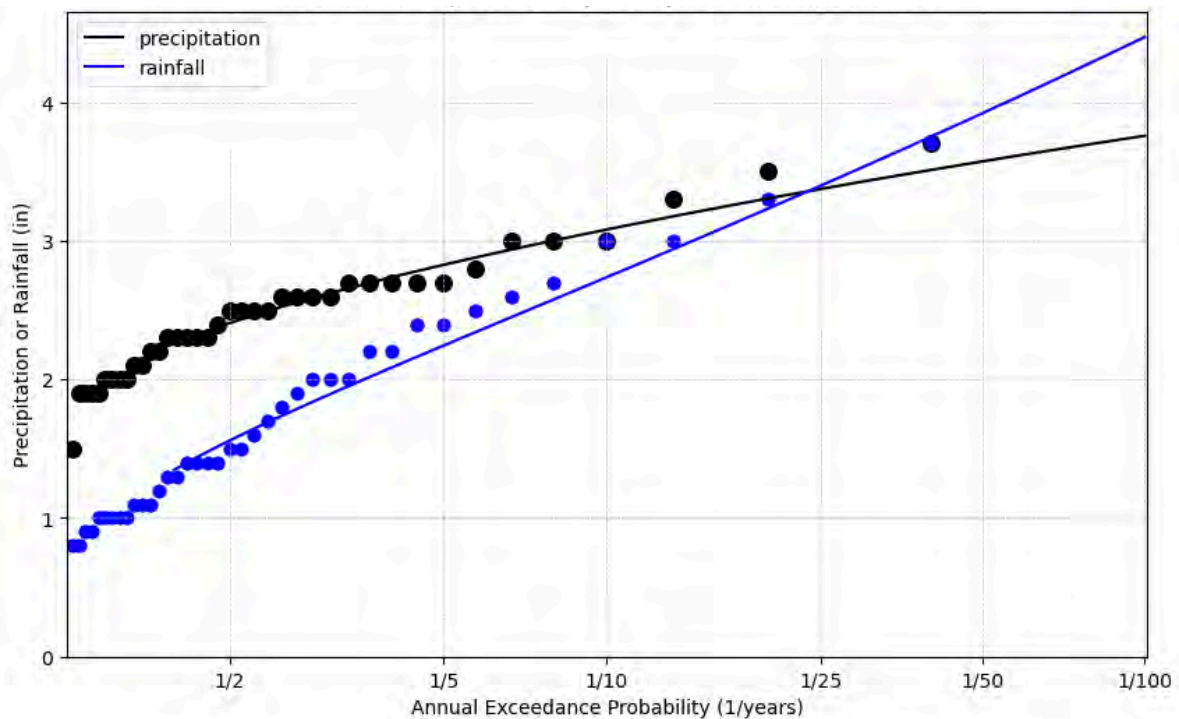
For SNOTEL, recorded SWE on the ground and mean daily temperatures were used to estimate snowfall days within the time series. Positive changes in SWE were subtracted from the precipitation to create a rainfall time series. Rain on deep snowpacks can often cause SWE to rise during rainfall events for some time. An upper bound of 34°F for mean daily temperature was used to distinguish rain on deep snowpack, where the precipitation was assumed to be rainfall if the daily mean temperature was over 34°F. A value of 34°F was chosen for this threshold due to Critical Success Index (CSI) showing 34.5°F (1.4°C) threshold as the most skillful for estimating rain versus snow, and rounding down to the nearest integer value of 34°F to account for some uncertainty in accumulation potential.

While daily snowfall and ground SWE estimates were readily available for daily durations, there is a very limited quantity of sub-daily snowfall data available. Temperature measurements at hourly time steps co-located with precipitation data could be used to distinguish liquid from solid precipitation, but these data are only available for a very limited number of stations. Instead of observational data, modeled daily mean temperature data, available from the PRISM AN81d and AN91d at 4-km resolution (PRISM Climate Group, 2024), were used at station locations to aid in distinguishing rainfall from precipitation. Similar to the 24-hour SNOTEL analysis threshold, 34°F daily mean temperature is used to determine if the station’s precipitation is rain or snow. If the day’s mean temperature is 34°F or less, then all hours that day are considered snow.

There is a large uncertainty associated with extracting rainfall using only extreme time series data, particularly in high terrain areas, where the contribution of snowfall events can be significant. This uncertainty is associated with available data, data measurement errors, assumptions associated with 10 to 1 snowfall-to-liquid ratios, or ground SWE not being a 1:1 indicator of snowfall (e.g. blowing snow, rainfall on deep snowpacks, avalanches).

#### **4.7.3. Rainfall frequency estimates**

For rainfall frequency analysis, concurrent annual maxima from the precipitation and rainfall-only time series using at least 20 years of station data were used. At-station precipitation and rainfall frequency estimates were produced using L-moment statistics with a GEV distribution on each annual maximum series (e.g. the station in Figure 4.7.1). Ratios of rainfall/precipitation frequency estimates at various average recurrence intervals from 1-year to 1000-year were calculated at each station. Multiple linear regression of these ratios for each average recurrence interval, with various combinations of independent variables such as latitude, longitude and elevation were used to form a relationship. For more common return periods (e.g. 1-year) correlation was weak (adjusted  $R^2 < 0.10$ ), though there was statistical significance with elevation (p value  $< 0.05$ ), with increasing elevation correlating with decreasing rain/precipitation ratios. At rarer recurrence intervals there was no statistical significance, where rain/precipitation ratios approached 1.0.



*Figure 4.7.1: Precipitation (black) versus rainfall (blue) annual maxima, with GEV distributions fitted. Station is SNOTEL Site number 411 - Cool Creek at 1,914 meters. Precipitation and rainfall show differences at frequent AEPs, but converge at rarer AEPs.*

To further investigate, the stations with both concurrent precipitation and rainfall-only time AMS were collected in 500-meter bins (Table 4.7.1). For each bin and recurrence interval, the mean rain/precipitation ratio was calculated (Table 4.7.2). The resulting “binned” ratios show a similar pattern as the multiple linear regression, where ratios are smaller for higher elevations and for more common average recurrence intervals. This is physically consistent with:

- Snowfall having a larger impact at higher elevations.
- Rainfall being more dominant at larger/rarer average recurrence intervals. These likely need higher precipitable water values, which are directly correlated with higher temperatures.



Table 4.7.1: Number of stations used for 24-hour rainfall frequency analysis per elevation bin.

| Elevation (m) | Number of stations |
|---------------|--------------------|
| <=500         | 20                 |
| 501 – 1,000   | 433                |
| 1,001 – 1,500 | 498                |
| 1,501 – 2,000 | 422                |
| 1,001 – 2,500 | 218                |
| 2,501 – 3,000 | 108                |
| >3,000        | 21                 |

Table 4.7.2: Rainfall / Precipitation ratios for various elevation bins and average recurrence intervals for the 24-hour duration.

| ARI              | Elevation bins (meters) |           |             |             |             |             |       |
|------------------|-------------------------|-----------|-------------|-------------|-------------|-------------|-------|
|                  | <=500                   | 500–1,000 | 1,001–1,500 | 1,501–2,000 | 2,001–2,500 | 2,501–3,000 | >3000 |
| <b>1-year</b>    | 0.973                   | 0.973     | 0.960       | 0.917       | 0.839       | 0.764       | 0.695 |
| <b>10-year</b>   | 0.985                   | 0.985     | 0.981       | 0.954       | 0.910       | 0.847       | 0.764 |
| <b>100-year</b>  | 0.991                   | 0.991     | 0.987       | 0.968       | 0.949       | 0.911       | 0.879 |
| <b>1000-year</b> | 1.000                   | 1.000     | 1.000       | 1.000       | 0.970       | 0.960       | 0.950 |

Similar to the 24-hour analysis, annual maximum series for precipitation and rainfall are compared using elevation bins at different recurrence intervals and durations, and mean ratios are calculated. The number of sub-daily stations used per elevation bin are shown in Table 4.7.3. Lastly, these sub-hourly ratios were combined with the 24-hour ratios (Table 4.7.4). Ratios for all ARIs/AEPs from 1-year to 1000-year were interpolated using Piecewise Cubic Hermite Interpolating Polynomial (PCHIP) and log-transformed durations as the independent variables. Additional optimization was used to constrain ratios to a maximum of 1.00, and also enforce consistency (eg. ratio for 1-hr > 2-hr > 3-hr > 6-hr > 12-hr > 24-hr). Ratio consistency was typically only necessary for average recurrence intervals above 100-year. Some manual adjustments were needed at sub-daily for the highest two elevation bins, where only 8 and 2 stations existed, respectively. Results show higher ratios (more liquid contribution) for the shorter durations and rarer average recurrence intervals, consistent with warm season convection at short durations.

Table 4.7.3: Number of stations used for sub-daily rainfall frequency analysis per elevation bin.

| Elevation (m) | Number of stations |
|---------------|--------------------|
| <=500         | 9                  |
| 501 – 1,000   | 100                |
| 1,001 – 1,500 | 176                |
| 1,501 – 2,000 | 123                |
| 1,001 – 2,500 | 52                 |
| 2,501 – 3,000 | 8                  |
| >3,000        | 2                  |

#### 4.7.4 Development of rainfall frequency grids and confidence limits.

Ratios from Table 4.7.4 are multiplied with relevant precipitation frequency gridded information (e.g. 100-year 24-hour) to create a rainfall-only equivalent frequency grid. The same ratios were used to

estimate confidence limits by multiplying with the relevant lower or upper precipitation frequency grid. Due to applying these ratios directly to the precipitation frequency confidence limits, it is important to note that the rainfall confidence limits do not incorporate the added uncertainty with respect to the precipitation-to-rainfall conversion process itself.

*Table 4.7.4: Rainfall / Precipitation ratios for various elevation bins and average recurrence intervals for the 1-hour, 2-hour, 3-hour, 6-hour, and 12-hour, combined with the original 24-hour ratios.*

| ARI     | Duration | Elevation bins (meters) |           |             |             |             |             |       |
|---------|----------|-------------------------|-----------|-------------|-------------|-------------|-------------|-------|
|         |          | <=500                   | 500–1,000 | 1,001–1,500 | 1,501–2,000 | 2,001–2,500 | 2,501–3,000 | >3000 |
| 1-yr    | 60-min   | 0.988                   | 0.988     | 0.988       | 0.979       | 0.967       | 0.935       | 0.935 |
| 1-yr    | 2-hr     | 0.987                   | 0.987     | 0.987       | 0.979       | 0.963       | 0.919       | 0.919 |
| 1-yr    | 3-hr     | 0.987                   | 0.987     | 0.987       | 0.978       | 0.959       | 0.900       | 0.900 |
| 1-yr    | 6-hr     | 0.986                   | 0.986     | 0.986       | 0.969       | 0.939       | 0.832       | 0.822 |
| 1-yr    | 12-hr    | 0.982                   | 0.982     | 0.978       | 0.949       | 0.900       | 0.789       | 0.754 |
| 1-yr    | 24-hr    | 0.973                   | 0.973     | 0.960       | 0.917       | 0.839       | 0.764       | 0.695 |
| 10-yr   | 60-min   | 0.997                   | 0.997     | 0.997       | 0.996       | 0.996       | 0.995       | 0.995 |
| 10-yr   | 2-hr     | 0.997                   | 0.997     | 0.997       | 0.995       | 0.992       | 0.992       | 0.992 |
| 10-yr   | 3-hr     | 0.996                   | 0.996     | 0.996       | 0.994       | 0.989       | 0.988       | 0.987 |
| 10-yr   | 6-hr     | 0.994                   | 0.994     | 0.994       | 0.992       | 0.980       | 0.955       | 0.945 |
| 10-yr   | 12-hr    | 0.990                   | 0.990     | 0.989       | 0.980       | 0.955       | 0.908       | 0.871 |
| 10-yr   | 24-hr    | 0.985                   | 0.985     | 0.981       | 0.954       | 0.910       | 0.847       | 0.764 |
| 100-yr  | 60-min   | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 1.000 |
| 100-yr  | 2-hr     | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 0.994 |
| 100-yr  | 3-hr     | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 0.990 |
| 100-yr  | 6-hr     | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 0.985       | 0.983 |
| 100-yr  | 12-hr    | 0.997                   | 0.997     | 0.996       | 0.991       | 0.985       | 0.956       | 0.949 |
| 100-yr  | 24-hr    | 0.991                   | 0.991     | 0.987       | 0.968       | 0.949       | 0.911       | 0.879 |
| 1000-yr | 60-min   | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 1.000 |
| 1000-yr | 2-hr     | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 1.000 |
| 1000-yr | 3-hr     | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 1.000 |
| 1000-yr | 6-hr     | 1.000                   | 1.000     | 1.000       | 1.000       | 1.000       | 1.000       | 1.000 |
| 1000-yr | 12-hr    | 1.000                   | 1.000     | 1.000       | 1.000       | 0.991       | 0.988       | 0.985 |
| 1000-yr | 24-hr    | 1.000                   | 1.000     | 1.000       | 1.000       | 0.970       | 0.960       | 0.950 |

## 4.8. Derivation of grids

### 4.8.1. Mean annual maximum precipitation

Grids of mean annual maxima (MAM) served as the basis for deriving gridded precipitation frequency estimates at different frequencies and durations. The station mean annual maximum values for the 17 durations from 15-minute and 60-day were spatially interpolated to produce corresponding mean annual maximum grids at 30 arc-seconds resolution using a hybrid statistical-geographic approach for mapping climate data named Parameter-elevation Regressions on Independent Slopes Model (PRISM), developed by Oregon State University's PRISM Climate Group (e.g., Daly et al., 2002).

Several iterations with the PRISM Climate Group were made to ensure satisfactory MAM patterns. Gauged locations where interpolated MAMs for selected base durations (1-hour, 6-hour, 1-day, 4-day, 10-day, 30-day, and 60-day) were more than 15% different (determined by jackknife analysis) than the expected at-station MAMs were carefully re-examined. As a result of those reviews, some MAM estimates often received minor adjustments. MAMs were also estimated for a number of locations to better anchor the spatial interpolation in complex terrain areas and/or where the lack of stations with sufficiently long records unduly influenced expected spatial patterns, particularly at hourly durations. To aid in this estimation, SNOTEL hourly gauges were used to help estimate hourly values at many of the daily SNOTEL stations at 1-hour and 6-hour, particularly those areas that PRISM was having noticeable difficulties at those short durations during the first initial iterations. Since SNOTEL hourly stations have a short data record and data quality issues, these stations were primarily used only where data closely matched the overlapping quality controlled daily SNOTEL data.

Appendix A.3 provides detailed information on the PRISM-based methodology for creating the mean annual maximum grids. In summary, a unique regression function was developed for each target grid cell to derive mean annual maximum values for each duration that accounted for the difference between an observing station and the target cell's mean annual precipitation, topographic facet, coastal proximity, the distance of an observing station to the target cell, etc. Jackknife cross-validation indicated that the overall percent bias was less than 1.0% for 24-hour and 10-day, and -4.11% for 60-min, and the mean absolute error was approximately 6% across for the three durations.

#### **4.8.2. Precipitation frequency estimates with confidence limits**

**Estimates for 60-minute through 60-day durations.** The spatial interpolation technique used in this volume developed grids of AMS-based and PDS-based precipitation frequency estimates along the frequency dimension for a given duration. Hence, the evolution of frequency-dependent spatial patterns for a given duration was independent of other durations. The technique utilizes the inherently strong linear relationship that was found to exist between precipitation frequency estimates for consecutive frequencies, as well as mean annual maxima and 2-year precipitation frequency estimates. For example, Figure 4.8.1 a) shows the relationship between the 50-year and 100-year estimates for the 24-hour duration for this project area together with regression lines for a linear model and zero-intercept model. The  $R^2$  values are very close to 1.0, which was common for all relationships. Another common occurrence was a negligible intercept coefficient in the linear model regression equations, so a zero-intercept model was adopted for all frequencies and durations. The slope coefficient of the zero-intercept model represents an average domain-wide ratio between consecutive quantiles; in this case, 1.120 is an average ratio between 100-year and 50-year quantiles for the 24-hour duration for the whole project area. Although the correlation coefficients were very high, when plotted on a map, at-station ratios showed some regional features (as shown in Figure 4.8.1 b) for the same example); this finding was used in the grid generation process.

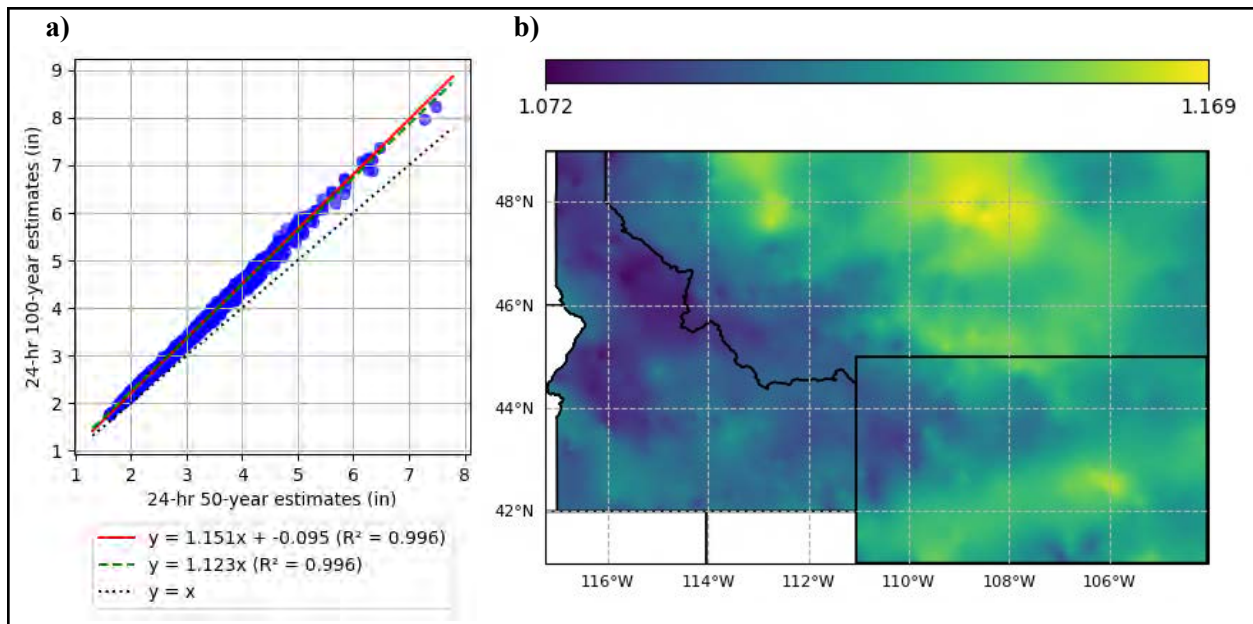


Figure 4.8.1. a) Scatter plot of 100-year versus 50-year 24-hour precipitation frequency estimates. Linear model, zero-intercept linear model, and 1:1 lines are also shown. b) Spatially interpolated ratios used to calculate 24-hour 100-year precipitation frequency grid from the 24-hour 50-year grid.

For each duration, the calculation began with the PRISM-derived MAM grid as the initial predictor grid and the grid of 2-year precipitation frequency estimates as the resulting subsequent grid. At-station ratios between the 2-year estimates and corresponding MAM estimates were spatially interpolated to a grid using a natural neighbor interpolation method, which provides a smooth approximation to the underlying "true" function while remaining true to the at-station estimates. Gridded MAM estimates were then multiplied by corresponding gridded ratios to create a grid of 2-year precipitation frequency estimates. In the subsequent run, ratios between the 5-year and 2-year estimates were interpolated and used to calculate the 5-year precipitation grid from the 2-year grid, and so forth. The grid of 2-year precipitation frequency estimates was also used to create a grid of 1-year estimates. The same process was repeated for all hourly and daily durations.

During the review process, station-driven contour lines were showing up in cartographic maps in flat terrain areas (see Appendix A.4). The majority of these were driven by small differences in MAM estimates at nearby stations and selected mapping contour intervals, but to reduce a number of station-driven contours in the final cartographic maps, a dynamic filter was applied to the precipitation frequency grids. Parameters of the filter, which controlled the amount of smoothing, were a function of elevation gradients and proximity to the coastline. Parameters were selected such that minimal smoothing was applied at the coastline or in the mountains, maximum smoothing was applied in flat terrain, and the transition from one to another was gradual. The resulting smoothed grid then served in the subsequent run as the basis for the derivation of the next grid.

To ensure consistency in grid cell values across all durations and frequencies (e.g., 24-hour estimate has to be at least equal to 12-hour estimate), duration-based internal consistency checks were conducted. For inconsistent cases, the longer duration grid cell value was adjusted by multiplying the shorter duration grid cell value by 1.01 to provide a 1% difference between the values. After grid cell consistency was ensured across durations, it was performed across frequencies to ensure that there were no frequency-based inconsistencies caused by the adjustment across durations.

A jackknife cross-validation was used to evaluate the spatial interpolation technique's performance for interpolating precipitation frequency estimates. It was cost prohibitive to re-create the PRISM mean annual maximum grids for each cross-validation iteration. For this reason, the cross-validation results reflect the accuracy of the interpolation procedure based on the same mean annual maximum grids. Figure 4.8.2 shows validation results for 100-year estimates for the 1-hour and 24-hour durations as histograms showing the distribution of differences in estimates with and without each station (errors). Overall, the spatial interpolation technique adequately reproduced values. Errors in 100-year estimates were less than  $\pm 10\%$  for 97% of stations for the 1-hour duration and for 99% of stations for the 24-hour duration.

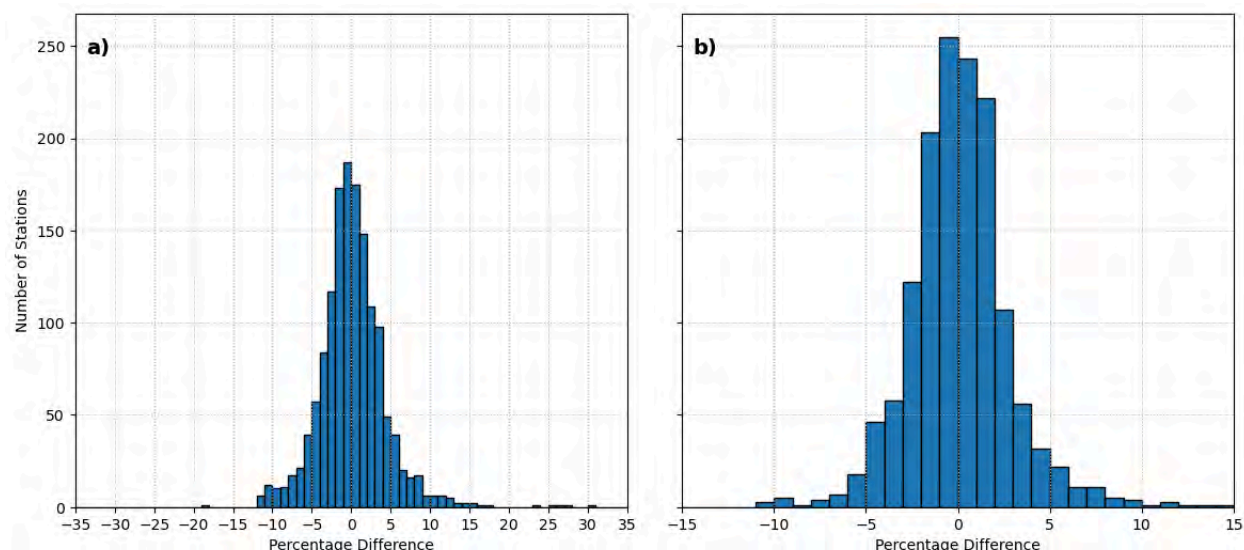


Figure 4.8.2. NOAA Atlas 14 Volume 12 jackknife cross-validation results for: a) 100-year 1-hour estimates, and b) 100-year 24-hour estimates.

**Estimates for 5-minute through 30-minute durations.** Precipitation frequency grids for sub-hourly durations were derived by applying scaling factors, due to the sparseness of 15-minute and n-minute data in the project area, as well as the lack of diversity of elevations for these stations. This was done in two steps: 15-minute and 30-minute scaling factors applied to the 60-minute gridded estimates, and then 5-minute and 10-minute scaling factors applied to the 15-minute gridded estimates.

Scaling factors for 15-minute and 30-minute were obtained from 15-minute stations, which had a median period of record of 28 years. From the 15-minute stations, at-station precipitation frequency estimates for average recurrence intervals from 1-year to 100-year were calculated for 15-minute, 30-minute and 60-minute. Ratios of 15-minute / 60-minute and 30-minute / 60-minute were calculated at each station per average recurrence interval. Using multiple linear regression of the ratios, with covariates such as elevation, latitude and longitude, no statistically significant spatial patterns were found. Additionally, calculating region-average ratios per average recurrence interval did not show strong dependence on average recurrence interval. From these results, scaling factors for 15-minute and 30-minute were assumed to be uniform for the whole area and for all average recurrence intervals: 0.69 for 15-minute and 0.84 for 30-minute. These scaling factors were applied to the 60-minute precipitation frequency grids to create matching 15-minute and 30-minute grids.

Similarly, precipitation frequency grids for 5-minute and 10-minute durations were derived by multiplying the 15-minute precipitation frequency grids by scaling factors. Scaling factors were obtained from n-minute stations (1-minute timestep). They were calculated as average ratios of 5-minute and 10-minute annual maxima to corresponding 15-minute annual maxima. Given that relatively few n-minute stations were available (63), and that at-station scaling factors varied little across the project area, they



were also assumed to be uniform for the whole area: 0.62 for 5-minute duration and 0.86 for 10-minute duration. The scaling factors were applied to the 15-minute precipitation frequency grids for all frequencies to create matching 5-minute and 10-minute grids.

**Confidence limits.** Grids of upper and lower limits of the 90% confidence interval for the precipitation frequency estimates between 5-minute and 30-minute durations were derived using the same procedures that were used to create grids of precipitation frequency estimates.

## **5. Precipitation Frequency Data Server**

NOAA Atlas 14 precipitation frequency estimates are delivered entirely in digital form in order to make the estimates more widely available and to provide them in various formats. The [Precipitation Frequency Data Server \(PFDS\)](#) provides a point-and-click web portal for precipitation frequency estimates and associated information.

In early 2011, the PFDS underwent a major redesign to make PFDS pages interactive. Since then, PFDS pages were enhanced on several occasions to improve the usability and readability of the PFDS website's content, to increase data download speeds, and to provide additional information. In order to keep this section of the documentation up-to-date for all volumes, the PFDS section is offered as a separate document. This document is updated as needed and is available for download from [here](#).

## 6. Peer review

A peer review of preliminary results for the NOAA Atlas 14 (NA14) Volume 12 precipitation frequency project was carried out in the period between 10 October, 2023 and 22 December, 2023. An invitation for the review was sent to individuals who expressed interest in updates to the Volume 12 project area and/or subscribed to the HDSC mailing list server.

The review package included the following items:

- a. Station metadata. Reviewers were asked to examine the accuracy of stations' metadata and provide comments on suggested stations' deletions and merges. Stations were grouped into three categories: a) stations within the Interior Northwest (INW) used in the analysis, b) stations outside the INW used in the analysis, and c) stations that were examined but not retained for the analysis. The metadata tables included information on each station's name, state, abbreviation used to identify the agency that provided data for the station, agency-assigned ID, latitude, longitude, elevation, and period of record. The tables also included basic information on other stations that contributed data to that station for sub-hourly, hourly, and daily durations, if applicable. If station data was collected but not used in the analysis, a brief comment was also provided on why the data was not used.
- b. Spatially-interpolated estimates. Reviewers were invited to comment on the overall and local spatial patterns in spatially-interpolated precipitation frequency estimates for 2-year and 100-year ARIs and for 60-minute, 6-hour, 24-hour, and 10-day durations. To illustrate how much estimates changed in the project area, cartographic maps showing differences between preliminary NOAA Atlas 14 and superseded NOAA estimates for 100-year ARI and 6-hour and 24-hour durations were also shared.
- c. At-station depth-duration-frequency (DDF) curves. Reviewers were asked to examine the DDF curves only for stations within the project states retained in the analysis for 60-minute to 10-day durations and for 2-year through 100-year average recurrence intervals and to comment on their reasonableness.

Comments were received from ten individuals representing various federal and state agencies, as well as the private sector. Their reviews provided critical feedback that improved the estimates. Reviewers' comments regarding station data, patterns of spatially interpolated precipitation frequency estimates, and comparisons with other studies can be found in Appendix A.4 along with HDSC responses.

## 7. Comparison with previous NOAA publications

The precipitation frequency estimates in NOAA Atlas 14 (NA14) Volume 12 supersede the estimates published in the following publications:

- a. [\*Short Duration Rainfall Relations for the Western United States\*](#), Preprint Volume of the Conference on Climate and Water Management, American Meteorological Society (Arkell et al., 1986) for 5-minute to 60-minute durations;
- b. [\*NOAA Atlas 2 Volume 1, Precipitation-Frequency Atlas of the Western United States, Montana\*](#) (Miller et al., 1973) for 1-hour to 24-hour durations in Montana;
- c. [\*NOAA Atlas 2 Volume 2, Precipitation-Frequency Atlas of the Western United States, Wyoming\*](#) (Miller et al., 1973) for 1-hour to 24-hour durations in Wyoming;
- d. [\*NOAA Atlas 2 Volume 5, Precipitation-Frequency Atlas of the Western United States, Idaho\*](#) (Miller et al., 1973) for 1-hour to 24-hour durations in Idaho;
- e. [\*Weather Bureau Technical Paper No. 49, Two-to-Ten-Day Precipitation for Return Periods of 2 to 100 Years in the Contiguous United States\*](#) (Miller, 1964) for 2-day to 10-day durations.

Precipitation frequency estimates at the 100-year average recurrence interval from NOAA Atlas 14 were examined in relation to corresponding estimates from NOAA Atlas 2 (NA2) for the 6-hour and 24-hour durations. Corresponding grids from NA2 used in the comparison were obtained from the Bureau of Reclamation, which digitized isopleths from paper cartographic maps and interpolated it to high-resolution (15-sec) grids. The digitizing of the NA2 data sets was developed with the specific purpose of performing the storm studies used in the development of Hydrometeorological Report (HMR) 55A, HMR 57 and the analysis of parameters used in the development of probable maximum precipitation (PMP) in these reports. Richard Stodt was the project leader and conducted a large portion of the work.

**100-year 6-hour.** The maps in Figures 7.1 and 7.2 illustrate the differences between NA14 and NA2 100-year 6-hour estimates in inches and in percentages, respectively. 100-year 6-hour precipitation frequency estimates at specific locations across the project area changed between -1.13 and 1.61 inches, or from -40% to 72%. The largest increases occurred in mountainous areas, with parts of the Idaho panhandle, northwest Montana and central Montana increasing over 1.25 inches. Other areas with notable increases of 0.76–1.25 inches were along the Montana-Idaho border near Wyoming and south of Casper, WY, extending from the north end of the Laramie Mountains south to the Shirley Mountains. Relatively flatter areas with increases of 0.76–1.25 inches include much of eastern Montana and in the vicinity of Cheyenne, WY. Most decreases were also in mountainous areas, the largest being over one inch in the Wind River Range of Wyoming. Other notable decreases were in the Absaroka Range of Montana north of Yellowstone National Park and the Bitterroot Mountains in Idaho, which both saw decreases of 0.50–0.99 inches.

The differences in estimates between the two publications are attributed to several factors. Firstly, differences in data quality control procedures and frequency analysis approaches (such as distribution selection, parameter estimation method, regional versus at-station methods) affect estimates, especially at higher ARIs. Section 4.6.1 of this document describes the methods used in NA14 and their advantages. Secondly, differences in spatial interpolation techniques impact estimates at ungauged locations. NA2 interpolated precipitation-frequency values with regression equations for sub-regions considered to be meteorologically homogeneous; NA14 estimates were based on the PRISM interpolation consisting of a local moving-window regression and weighting functions for station data (see Appendix A.3 for more details). Finally, the increase in the amount of available data from NA2 to NA14, both in the number of stations and their record lengths, has a considerable effect on estimates. NA2 was published in 1973 using data through 1970. Of the 189 stations in Idaho, Montana and Wyoming used for NA2 6-hour estimates, none had a record length of at least 30 years, and 42% had less than 20 years. NA14 utilized 566 stations for hourly durations with record lengths ranging from 9 to 75 years and an average length of 36 years.

Furthermore, many weather station networks, such as RAWS and SNOTEL, did not exist at the time but have accumulated sufficient records for use in NA14. These networks provide sub-daily and daily data for many remote and/or high-elevation locations where station data were unavailable for NA2. This allows for more representative estimates at these locations and aids interpolation in surrounding areas.

**100-year 24-hour.** The maps in Figures 7.3 and 7.4 illustrate the differences between NA14 and NA2 100-year 24-hour estimates in inches and in percentages, respectively. 100-year 24-hour precipitation frequency estimates at specific locations across the project area changed between -2.46 and 5.07 inches, or from -47% to 124%. Areas with the largest increases and decreases generally coincide with those at 100-year 6-hour. The largest increase occurred in the Cabinet Mountains of Idaho, with an increase of about 4 to 5 inches (~101–124%). Areas of northwest Montana and central Montana increased over 2–3 inches, and multiple areas of eastern Montana increased over an inch. In Wyoming, parts of the Laramie Mountains between Casper and Cheyenne and the Black Hills region increased by over one inch. The largest decreases (over two inches) were again in Wind River Range of Wyoming and the Absaroka Range of Montana north of Yellowstone National Park. The Bitterroot Mountains and parts of other mountain ranges in central Idaho decreased over an inch. A section of the Bighorn Mountains in Wyoming also decreased, in some areas over an inch.

Differences in estimates can be attributed to similar factors as for the 6-hour duration: different data quality control techniques, frequency analysis approaches, and spatial interpolation techniques. Also, longer periods of record for stations used in both studies and additional data from networks that began observing after 1970. Of the 598 stations in Idaho, Montana and Wyoming used for NA2 24-hour estimates, none had a record length of at least 70 years, and 63% had less than 30 years. For NA14, 1521 stations were used with record lengths ranging from 10 to 150 years and an average length of 60 years. Many changes in remote mountain areas are supported by station data, especially the SNOTEL network, that did not exist for NA2. For example, the largest increase at 100-year 6-hour and 24-hour occurred in the vicinity of the Bear Mountain SNOTEL station in Idaho. Beginning in 1982, this station has already exceeded the interpolated NA2 100-yr 24-hr estimate of 4.29 inches nine times in 42 years, and also measured the state 24-hour precipitation record of 9.4 inches on November 6-7, 2006. This station data is the major reason behind the increase of nearly four inches for the estimate at this location.



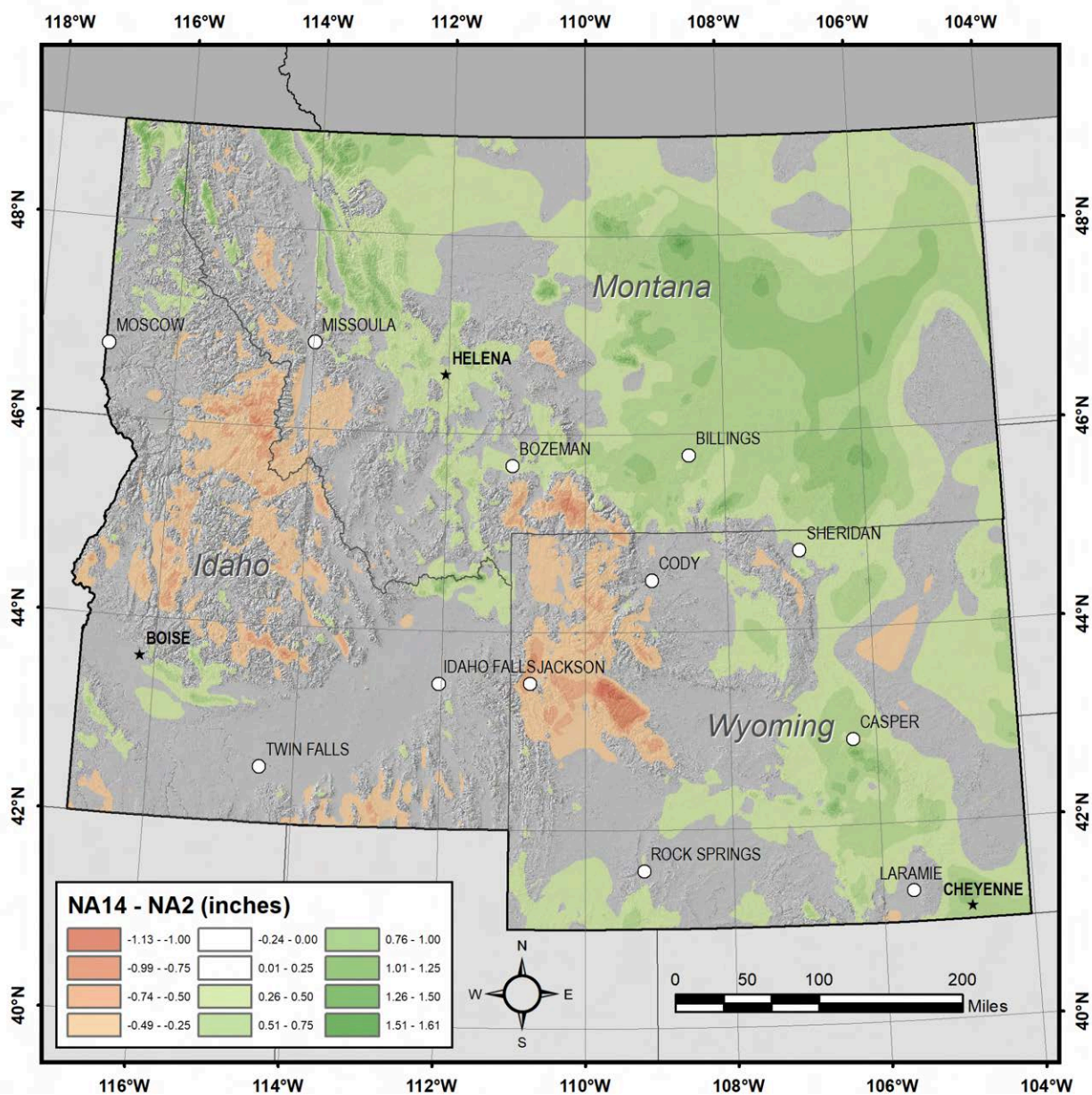


Figure 7.1. Map showing differences in 100-year 6-hour estimates (in inches) between NA14 and NA2 for the Interior Northwest.

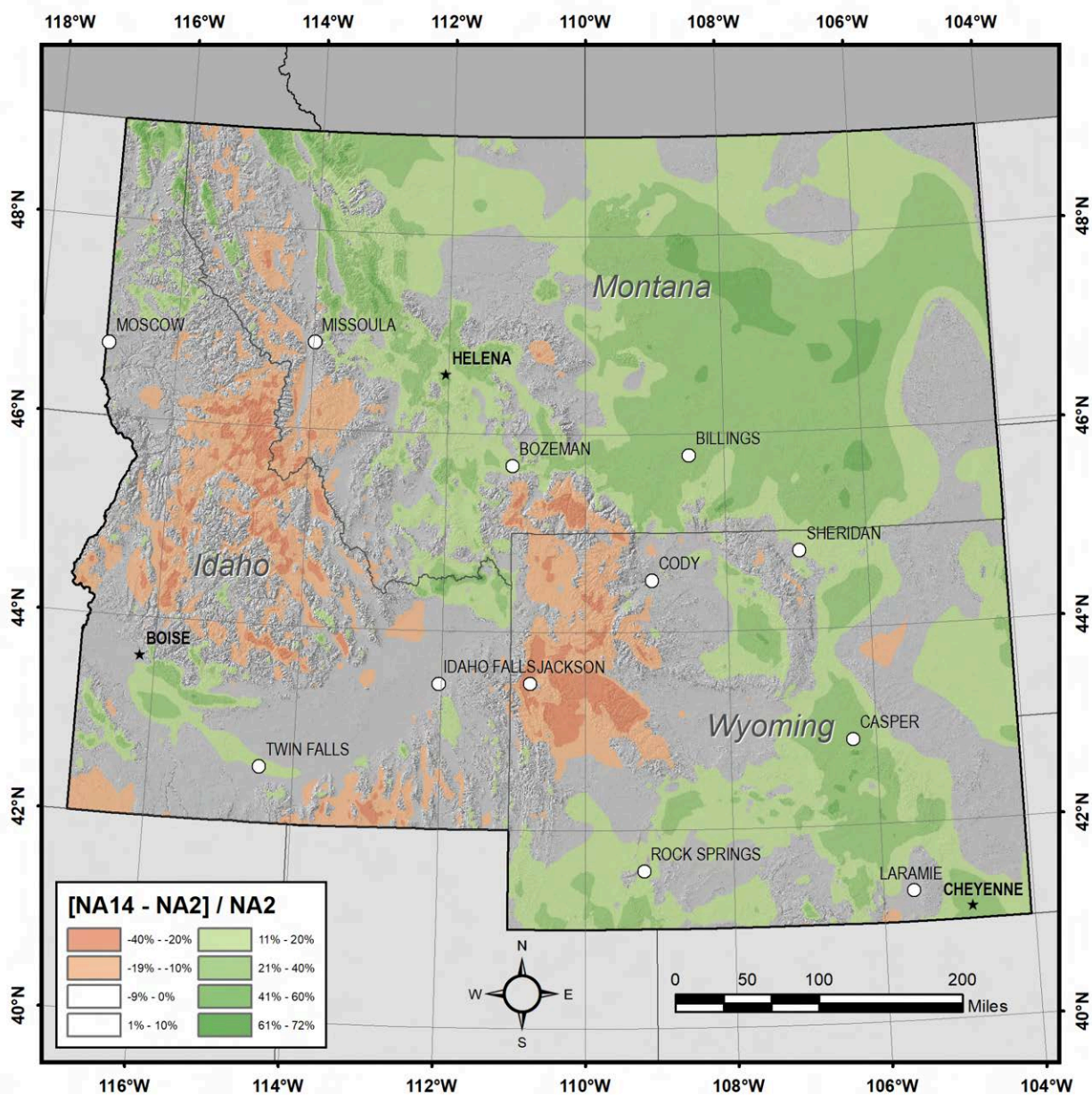


Figure 7.2. Map showing percent differences in 100-year 6-hour estimates between NA14 and NA2 for the Interior Northwest.



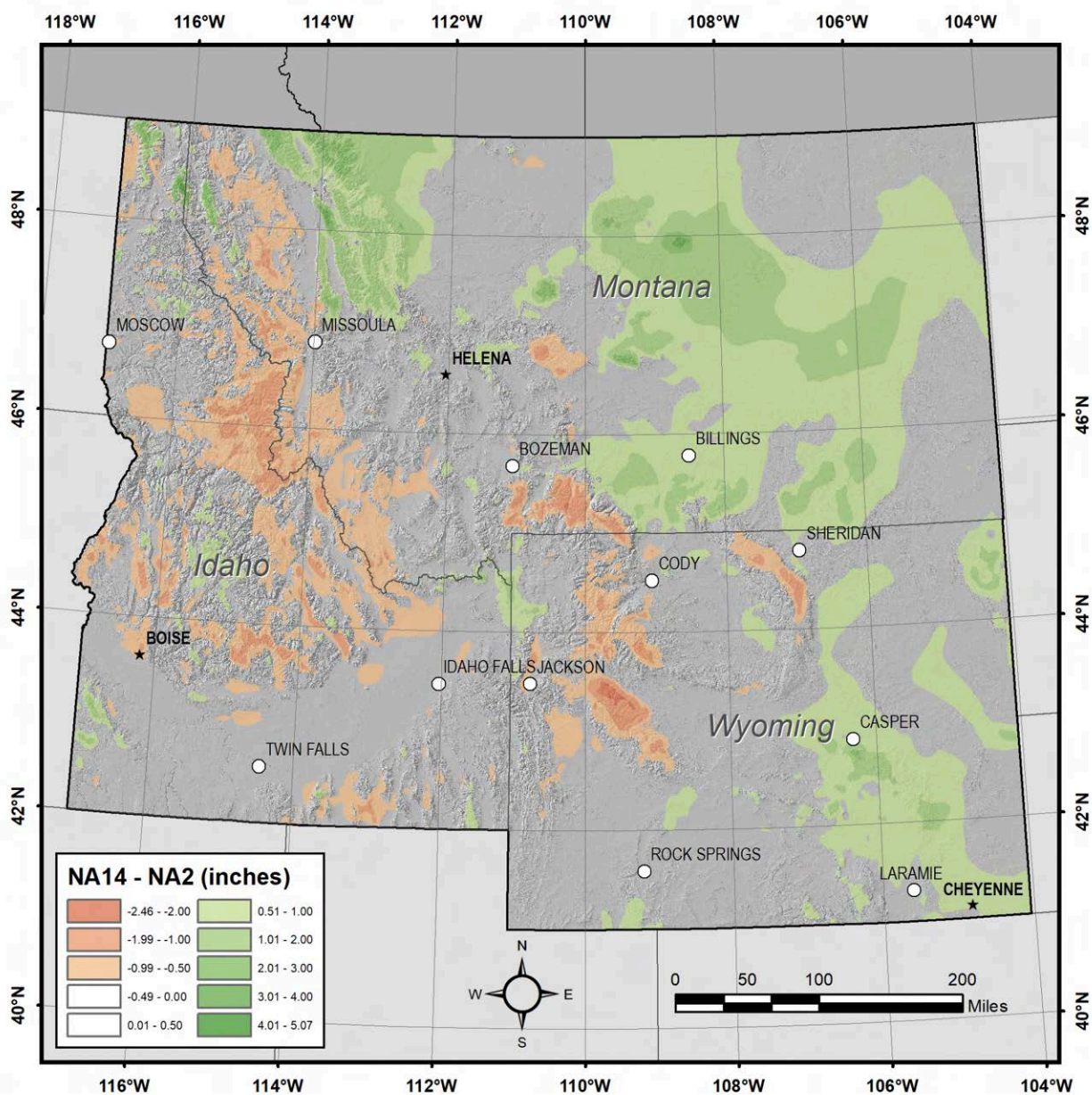


Figure 7.3. Map showing differences in 100-year 24-hour estimates (in inches) between NA14 and NA2 for the Interior Northwest.

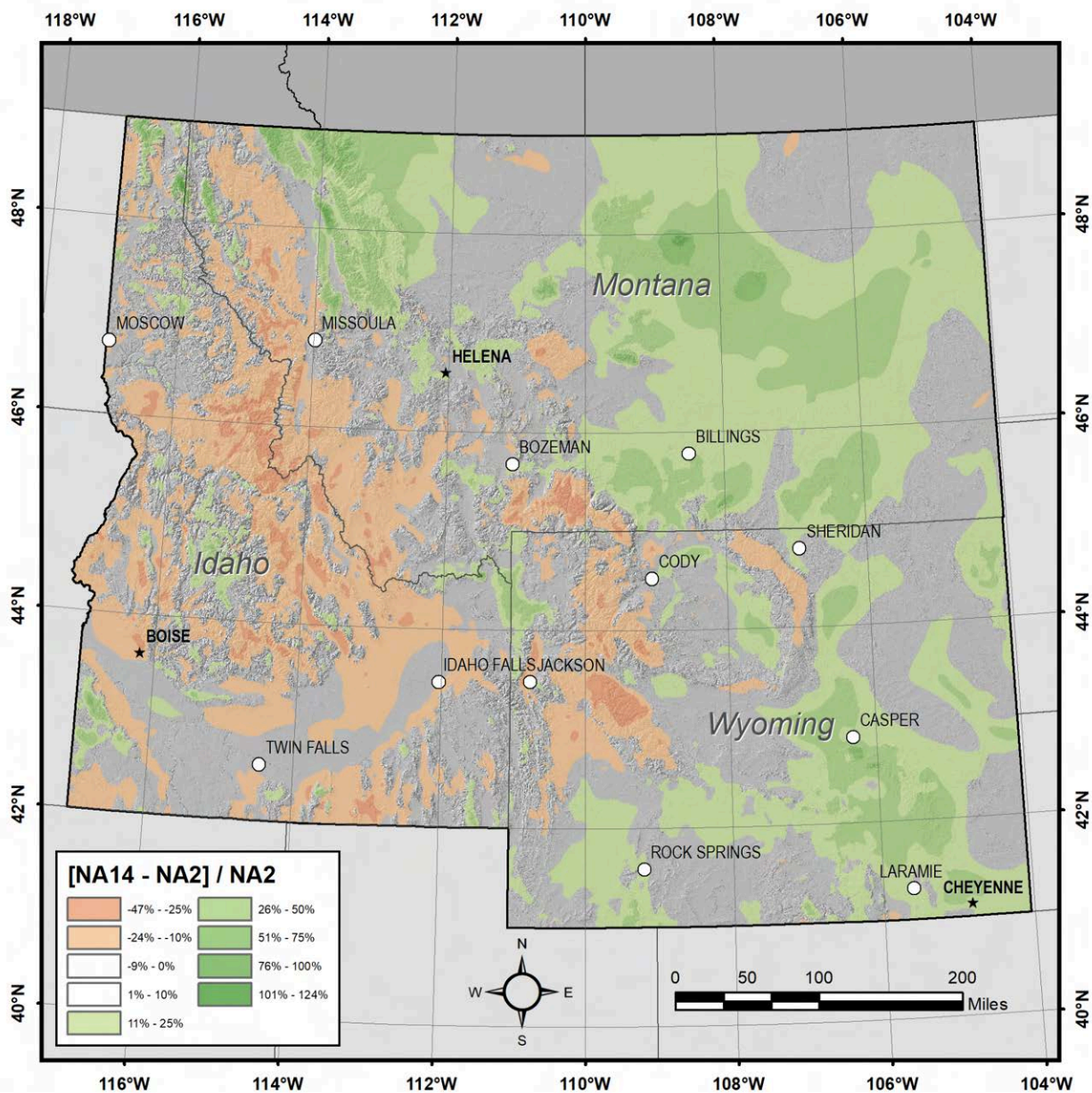


Figure 7.4. Map showing percent differences in 100-year 24-hour estimates between NA14 and NA2.

## Appendix A.1. Metadata for stations used to prepare precipitation frequency estimates.

*Table A.1.1. Idaho, Montana, and Wyoming locations for which precipitation frequency estimates were directly derived. The table shows each location's state (for consistency with table A.1.2), name, identification number (SID), latitude, longitude, elevation, and AMS record lengths (data years) across sub-hourly, hourly, and daily durations. It also lists SIDs for stations that contributed data to this location for sub-hourly, hourly, and/or daily durations. Details on contributing stations' metadata are provided in Tables A.1.3 and A.1.4.*

| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                                           |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------------------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                                     |
| ID    | ABERDEEN EXP STN    | 10-0010 | 42.9536  | -112.8253 | 4405              | 25         | 25     | 109   | 89-0033 15M           | 89-0033 15M | 10-0010 DLY                               |
| ID    | AMERICAN FALLS 6 NE | 10-0227 | 42.8572  | -112.8800 | 4415              | 0          | 0      | 98    |                       |             | 10-0227 DLY                               |
| ID    | ANDERSON DAM        | 10-0282 | 43.3572  | -115.4522 | 3882              | 0          | 21     | 50    |                       | 10-0282 HLY | 10-0282 DLY                               |
| ID    | ARBON 2 NW          | 10-0347 | 42.5031  | -112.5758 | 5210              | 0          | 0      | 38    |                       |             | 10-0347 DLY                               |
| ID    | ARCO                | 10-0375 | 43.6356  | -113.2997 | 5325              | 26         | 26     | 88    | 89-0015 15M           | 89-0015 15M | 10-0375 DLY<br>89-0015 15M                |
| ID    | ARROWROCK DAM       | 10-0448 | 43.5936  | -115.9236 | 3235              | 0          | 0      | 95    |                       |             | 10-0448 DLY                               |
| ID    | ASHTON 1N           | 10-0470 | 44.0708  | -111.4564 | 5212              | 0          | 0      | 118   |                       |             | 10-0470 DLY                               |
| ID    | ATLANTA             | 10-0491 | 43.8000  | -115.1333 | 5505              | 0          | 0      | 45    |                       |             | 10-0491 DLY<br>10-0494 DLY<br>10-0493 DLY |
| ID    | AVERY RS            | 10-0525 | 47.2500  | -115.8000 | 2490              | 0          | 0      | 54    |                       |             | 10-0525 DLY                               |
| ID    | AVERY RS #2         | 10-0528 | 47.2533  | -115.9203 | 2394              | 0          | 0      | 30    |                       |             | 10-0528 DLY                               |
| ID    | BAYVIEW MODEL BASIN | 10-0667 | 47.9803  | -116.5594 | 2087              | 0          | 0      | 67    |                       |             | 10-0667 DLY                               |
| ID    | BERN                | 10-0803 | 42.3353  | -111.3850 | 5964              | 0          | 0      | 31    |                       |             | 10-0803 DLY                               |
| ID    | BLACKFOOT FIRE DEPT | 10-0915 | 43.1917  | -112.3453 | 4499              | 0          | 0      | 111   |                       |             | 10-0915 DLY                               |
| ID    | BLACKFOOT DAM       | 10-0920 | 43.0000  | -111.7167 | 6204              | 0          | 0      | 31    |                       |             | 10-0920 DLY<br>10-0920 HLY                |
| ID    | BLISS 4 NW          | 10-1002 | 42.9544  | -115.0131 | 3275              | 0          | 0      | 78    |                       |             | 10-1002 DLY                               |
| ID    | BOISE 3 E           | 10-1016 | 43.6192  | -116.1331 | 3377              | 23         | 24     | 24    | 10-1016 15M           | 10-1016 HLY | 10-1016 HLY                               |
| ID    | BOISE 7 N           | 10-1017 | 43.7383  | -116.2022 | 3885              | 0          | 0      | 47    |                       |             | 10-1017 DLY                               |

| State | Station name            | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                          |
|-------|-------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                         |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                    |
| ID    | BOISE LUCKY PEAK DAM    | 10-1018 | 43.5253  | -116.0542 | 2840              | 37         | 53     | 60    | 10-1018 15M<br>54-0014 15M | 10-1018 HLY<br>54-0014 15M                | 10-1018 DLY<br>54-0014 15M                               |
| ID    | BONNERS FERRY           | 10-1079 | 48.6928  | -116.3103 | 2075              | 29         | 67     | 101   | 10-1079 15M                | 10-1079 HLY<br>76-0033 HLY                | 10-1079 DLY<br>76-0033 HLY<br>10-1079 HLY<br>10-1084 DLY |
| ID    | BROWNLEE DAM            | 10-1180 | 44.8364  | -116.8981 | 1844              | 0          | 0      | 44    |                            |                                           | 10-1180 DLY                                              |
| ID    | BRUNEAU                 | 10-1195 | 42.8819  | -115.8017 | 2530              | 0          | 0      | 55    |                            |                                           | 10-1195 DLY                                              |
| ID    | BUHL #2                 | 10-1220 | 42.6006  | -114.7453 | 3800              | 0          | 0      | 87    |                            |                                           | 10-1220 DLY<br>10-1217 DLY                               |
| ID    | CABINET GORGE           | 10-1363 | 48.0864  | -116.0572 | 2173              | 0          | 0      | 54    |                            |                                           | 10-1363 DLY                                              |
| ID    | CALDER                  | 10-1370 | 47.2747  | -116.1889 | 2185              | 26         | 26     | 29    | 10-1370 15M                | 10-1370 HLY                               | 10-1370 HLY                                              |
| ID    | CALDWELL                | 10-1380 | 43.6667  | -116.6833 | 2370              | 0          | 0      | 92    |                            |                                           | 10-1380 DLY                                              |
| ID    | CAMBRIDGE               | 10-1408 | 44.5733  | -116.6753 | 2650              | 24         | 25     | 119   | 10-1410 15M                | 10-1410 HLY                               | 10-1408 DLY                                              |
| ID    | CASCADE 1 NW            | 10-1514 | 44.5228  | -116.0481 | 4896              | 28         | 68     | 81    | 10-1514 15M                | 10-1514 HLY<br>87-3101 HLY<br>10-1524 HLY | 10-1514 DLY<br>87-3105 DLY<br>10-9380 DLY                |
| ID    | CASTLEFORD 2 N          | 10-1551 | 42.5503  | -114.8661 | 3825              | 0          | 0      | 52    |                            |                                           | 10-1551 DLY                                              |
| ID    | CENTERVILLE ARBAUGH RCH | 10-1636 | 43.9592  | -115.8453 | 4440              | 0          | 0      | 101   |                            |                                           | 10-1636 DLY<br>10-3861 DLY                               |
| ID    | CHALLIS                 | 10-1663 | 44.5036  | -114.2397 | 5175              | 0          | 44     | 103   |                            | 10-1663 HLY<br>76-0041 HLY                | 10-1663 DLY<br>76-0041 HLY                               |
| ID    | CHILLY BARTON FLAT      | 10-1671 | 43.9778  | -113.8292 | 6260              | 0          | 0      | 83    |                            |                                           | 10-1671 DLY<br>10-0621 DLY                               |
| ID    | CLARKIA                 | 10-1831 | 47.0111  | -116.2558 | 2822              | 0          | 39     | 43    |                            | 10-1831 HLY                               | 10-1831 DLY<br>10-1831 HLY                               |
| ID    | COEUR D'ALENE           | 10-1956 | 47.6822  | -116.7967 | 2133              | 26         | 43     | 104   | 10-1956 15M<br>54-0016 15M | 10-1956 HLY<br>54-0016 15M                | 10-1956 DLY<br>99-1956 DLY<br>54-0016 15M                |



| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                           |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                    | Daily                                     |
| ID    | CONDA                  | 10-2071 | 42.7167  | -111.5500 | 6204              | 0          | 0      | 39    |                                           |                                           | 10-2071 DLY                               |
| ID    | COTTONWOOD 2 WSW       | 10-2159 | 46.0336  | -116.3919 | 3945              | 21         | 48     | 103   | 10-2159 15M<br>54-0017 15M                | 10-2159 HLY<br>54-0017 15M                | 10-2159 DLY<br>10-2154 DLY<br>10-2159 HLY |
| ID    | COUNCIL                | 10-2187 | 44.7442  | -116.4325 | 2943              | 22         | 43     | 87    | 10-2187 15M                               | 10-2187 HLY                               | 10-2187 DLY                               |
| ID    | CRATERS OF THE MOON    | 10-2260 | 43.4628  | -113.5600 | 5914              | 0          | 0      | 65    |                                           |                                           | 10-2260 DLY<br>79-0007 DLY                |
| ID    | DEADWOOD DAM           | 10-2385 | 44.3167  | -115.6333 | 5384              | 0          | 23     | 87    |                                           | 10-2385 HLY                               | 10-2385 DLY<br>86-0423 DLY<br>10-2385 HLY |
| ID    | DEER FLAT DAM          | 10-2444 | 43.5764  | -116.7475 | 2510              | 0          | 0      | 65    |                                           |                                           | 10-2444 DLY                               |
| ID    | DIXIE                  | 10-2575 | 45.5525  | -115.4606 | 5620              | 20         | 22     | 71    | 10-2575 15M<br>54-0018 15M                | 10-2575 HLY<br>54-0018 15M                | 10-2575 DLY<br>10-2577 DLY<br>54-0018 15M |
| ID    | DRIGGS                 | 10-2676 | 43.7306  | -111.1125 | 6120              | 0          | 0      | 90    |                                           |                                           | 10-2676 DLY                               |
| ID    | DUBOIS EXP STN         | 10-2707 | 44.2436  | -112.2006 | 5450              | 42         | 64     | 98    | 10-2707 15M<br>89-0001 15M<br>54-0019 15M | 10-2707 HLY<br>89-0001 15M<br>54-0019 15M | 10-2707 DLY                               |
| ID    | DWORSHAK FISH HATCHERY | 10-2845 | 46.5022  | -116.3217 | 995               | 35         | 38     | 54    | 10-2845 15M                               | 10-2845 HLY                               | 10-2845 DLY                               |
| ID    | ELK CITY 1NE           | 10-2875 | 45.8356  | -115.4611 | 4058              | 28         | 29     | 64    | 10-2875 15M<br>54-0021 15M                | 10-2875 15M<br>54-0021 15M                | 10-2875 DLY                               |
| ID    | ELK RVR                | 10-2892 | 46.7822  | -116.1797 | 2866              | 24         | 22     | 55    | 10-2892 15M                               | 10-2892 HLY                               | 10-2892 DLY<br>10-2892 HLY                |
| ID    | EMMETT 2 E             | 10-2942 | 43.8544  | -116.4664 | 2390              | 0          | 0      | 114   |                                           |                                           | 10-2942 DLY                               |
| ID    | ENAVILLE               | 10-2966 | 47.5689  | -116.2531 | 2120              | 31         | 31     | 31    | 10-2966 15M<br>10-2971 15M                | 10-2966 HLY<br>10-2971 15M                | 10-2966 HLY<br>10-2971 15M                |
| ID    | FAIRFIELD RS           | 10-3108 | 43.3428  | -114.7900 | 5065              | 0          | 31     | 71    |                                           | 87-3331 HLY                               | 10-3108 DLY<br>10-3110 DLY<br>87-3331 HLY |

| State | Station name    | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                          |
|-------|-----------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                 |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                    |
| ID    | FENN RS         | 10-3143 | 46.0931  | -115.5356 | 1560              | 34         | 59     | 78    | 10-3143 15M<br>54-0022 15M | 10-3143 HLY<br>76-0060 HLY<br>54-0022 15M | 10-3143 DLY<br>54-0022 15M                               |
| ID    | FT HALL 1 NNE   | 10-3297 | 43.0425  | -112.4144 | 4465              | 22         | 22     | 107   | 89-0032 15M                | 89-0032 15M                               | 10-3297 DLY                                              |
| ID    | GARDEN VALLEY   | 10-3448 | 44.1011  | -115.9694 | 3100              | 0          | 0      | 93    |                            |                                           | 10-3448 DLY                                              |
| ID    | GIBBONSVILLE    | 10-3554 | 45.5394  | -113.9275 | 4480              | 0          | 0      | 49    |                            |                                           | 10-3554 DLY<br>10-3558 DLY                               |
| ID    | GLENNS FERRY    | 10-3631 | 42.9403  | -115.3231 | 2466              | 0          | 0      | 103   |                            |                                           | 10-3631 DLY                                              |
| ID    | GRACE           | 10-3732 | 42.5872  | -111.7275 | 5550              | 27         | 52     | 106   | 10-3732 15M<br>54-0024 15M | 10-3732 HLY<br>87-3501 HLY<br>54-0024 15M | 10-3732 DLY                                              |
| ID    | GRAND VIEW 4 NW | 10-3760 | 43.0175  | -116.1772 | 2400              | 0          | 0      | 89    |                            |                                           | 10-3760 DLY                                              |
| ID    | GRANGEVILLE     | 10-3771 | 45.9414  | -116.1175 | 3300              | 0          | 0      | 106   |                            |                                           | 10-3771 DLY<br>69-1404 DLY<br>54-0025 15M<br>10-3773 15M |
| ID    | GRASMERE 3 S    | 10-3811 | 42.3450  | -115.8836 | 5140              | 31         | 39     | 44    | 10-3811 15M<br>54-0026 15M | 10-3811 HLY<br>54-0026 15M                | 10-3811 HLY<br>54-0026 15M                               |
| ID    | GRAY            | 10-3825 | 43.0500  | -111.3667 | 6450              | 0          | 0      | 30    |                            |                                           | 10-3825 DLY                                              |
| ID    | GROUSE          | 10-3882 | 43.7186  | -113.5472 | 6001              | 0          | 0      | 67    |                            |                                           | 10-3882 DLY                                              |
| ID    | HAGERMAN 2 SW   | 10-3932 | 42.8114  | -114.9239 | 2897              | 0          | 0      | 34    |                            |                                           | 10-3932 DLY                                              |
| ID    | HAILEY 3 NNW    | 10-3942 | 43.5667  | -114.3333 | 5424              | 0          | 0      | 74    |                            |                                           | 10-3942 DLY                                              |
| ID    | HAMER 4 NW      | 10-3964 | 43.9664  | -112.2642 | 4790              | 0          | 0      | 75    |                            |                                           | 10-3964 DLY                                              |
| ID    | HAZELTON        | 10-4140 | 42.5972  | -114.1378 | 4060              | 0          | 0      | 97    |                            |                                           | 10-4140 DLY                                              |
| ID    | HEADQUARTERS    | 10-4150 | 46.6311  | -115.8086 | 3200              | 0          | 0      | 53    |                            |                                           | 10-4150 DLY<br>61-0031 DLY<br>10-4154 DLY                |
| ID    | HENRY           | 10-4230 | 42.9419  | -111.4361 | 6644              | 28         | 29     | 33    | 10-4230 15M                | 10-4230 HLY                               | 10-4230 DLY<br>10-4230 HLY                               |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                                                         |                                                                                                                      |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                                                  | Daily                                                                                                                |
| ID    | HILL CITY 1 W      | 10-4268 | 43.2994  | -115.0733 | 5100              | 0          | 0      | 85    |                                           |                                                                         | 10-4268 DLY                                                                                                          |
| ID    | HOLLISTER          | 10-4295 | 42.3528  | -114.5739 | 4525              | 0          | 0      | 95    |                                           |                                                                         | 10-4295 DLY                                                                                                          |
| ID    | HOWE               | 10-4384 | 43.7828  | -113.0033 | 4820              | 0          | 0      | 82    |                                           |                                                                         | 10-4384 DLY                                                                                                          |
| ID    | IDAHO CITY         | 10-4442 | 43.8383  | -115.8319 | 3965              | 0          | 34     | 113   |                                           | 87-3741 HLY                                                             | 10-4442 DLY<br>87-3741 HLY                                                                                           |
| ID    | IDAHO CITY 11 SW   | 10-4450 | 43.7167  | -116.0000 | 5003              | 0          | 0      | 52    |                                           |                                                                         | 10-4450 DLY<br>99-4450 DLY                                                                                           |
| ID    | IDAHO FALLS - KIFI | 10-4455 | 43.5139  | -112.0125 | 4742              | 0          | 0      | 64    |                                           |                                                                         | 10-4455 DLY                                                                                                          |
| ID    | IDAHO FALLS 16 SE  | 10-4456 | 43.3456  | -111.7847 | 5828              | 33         | 43     | 68    | 10-4456 15M                               | 10-4456 HLY                                                             | 10-4456 DLY                                                                                                          |
| ID    | ISLAND PARK        | 10-4598 | 44.4189  | -111.3714 | 6290              | 0          | 22     | 82    |                                           | 76-0077 HLY<br>86-0546 HLY                                              | 10-4598 DLY<br>76-0077 HLY<br>80-0180 DLY<br>54-0029 15M                                                             |
| ID    | JEROME             | 10-4670 | 42.7325  | -114.5192 | 3740              | 0          | 0      | 103   |                                           |                                                                         | 10-4670 DLY                                                                                                          |
| ID    | KAMIAH             | 10-4793 | 46.2300  | -116.0339 | 1210              | 0          | 0      | 88    |                                           |                                                                         | 10-4793 DLY                                                                                                          |
| ID    | KELLOGG            | 10-4831 | 47.5339  | -116.1222 | 2377              | 0          | 0      | 114   |                                           |                                                                         | 10-4831 DLY                                                                                                          |
| ID    | KETCHUM RS         | 10-4845 | 43.6842  | -114.3603 | 5890              | 26         | 52     | 78    | 10-4845 15M<br>54-0030 15M                | 10-4845 HLY<br>10-8906 HLY<br>54-0030 15M<br>10-4845 15M<br>54-0030 15M | 10-4845 DLY<br>10-8906 DLY<br>54-0030 15M<br>10-4845 HLY<br>54-0030 15M                                              |
| ID    | KOOSKIA            | 10-5011 | 46.1448  | -115.9779 | 1280              | 0          | 0      | 78    |                                           |                                                                         | 10-5011 DLY                                                                                                          |
| ID    | LEADORE #2         | 10-5177 | 44.6831  | -113.3622 | 6000              | 35         | 70     | 75    | 10-5177 15M<br>10-5169 15M<br>54-0031 15M | 10-5177 HLY<br>76-0085 HLY<br>10-5169 HLY<br>54-0031 15M                | 10-5177 DLY<br>76-0085 HLY<br>10-5169 HLY<br>54-0031 15M<br>10-5177 HLY<br>10-5169 DLY<br>10-5169 HLY<br>54-0031 15M |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                     |
| ID    | LIFTON PUMPING STN | 10-5275 | 42.1231  | -111.3133 | 5935              | 0          | 0      | 101   |                            |                                           | 10-5275 DLY                               |
| ID    | LOWMAN             | 10-5414 | 44.0828  | -115.6186 | 3920              | 0          | 0      | 82    |                            |                                           | 10-5414 DLY<br>10-5420 DLY<br>10-5426 DLY |
| ID    | MACKAY LOST RVR RS | 10-5462 | 43.9178  | -113.6153 | 5897              | 23         | 50     | 107   | 10-5462 15M<br>54-0032 15M | 10-5462 HLY<br>54-0032 15M                | 10-5462 DLY                               |
| ID    | MALAD              | 10-5544 | 42.2000  | -112.2667 | 4581              | 0          | 29     | 66    |                            | 10-5544 HLY                               | 10-5544 DLY                               |
| ID    | MALTA 4 ESE        | 10-5563 | 42.2917  | -113.3042 | 4590              | 0          | 0      | 37    |                            |                                           | 10-5563 DLY                               |
| ID    | MALTA              | 10-5567 | 42.3061  | -113.3689 | 4521              | 0          | 43     | 57    |                            | 10-5567 HLY                               | 10-5567 DLY<br>10-5567 HLY                |
| ID    | MASSACRE ROCKS SP  | 10-5678 | 42.6681  | -112.9981 | 4195              | 0          | 0      | 48    |                            |                                           | 10-5678 DLY                               |
| ID    | MAY 2SSE           | 10-5685 | 44.5664  | -113.8953 | 5050              | 0          | 0      | 69    |                            |                                           | 10-5685 DLY                               |
| ID    | MCCALL             | 10-5708 | 44.8872  | -116.1047 | 5025              | 32         | 44     | 112   | 10-5708 15M<br>54-0034 15M | 10-5708 HLY<br>72-0482 HLY<br>54-0034 15M | 10-5708 DLY                               |
| ID    | MCCAMMON           | 10-5716 | 42.6522  | -112.1936 | 4770              | 0          | 0      | 41    |                            |                                           | 10-5716 DLY                               |
| ID    | MERIDIAN 1 W       | 10-5841 | 43.6167  | -116.4167 | 2621              | 0          | 0      | 48    |                            |                                           | 10-5841 DLY                               |
| ID    | MIDDLE FORK LODGE  | 10-5897 | 44.7189  | -115.0150 | 4480              | 29         | 40     | 50    | 10-5897 15M                | 10-5897 HLY<br>76-0084 HLY                | 10-5897 DLY<br>76-0084 HLY<br>10-5897 HLY |
| ID    | MINIDOKA DAM       | 10-5980 | 42.6769  | -113.5022 | 4164              | 0          | 0      | 73    |                            |                                           | 10-5980 DLY                               |
| ID    | MONTPELIER RS      | 10-6053 | 42.3167  | -111.3000 | 5960              | 0          | 0      | 73    |                            |                                           | 10-6053 DLY                               |
| ID    | MOSCOW U OF I      | 10-6152 | 46.7281  | -116.9558 | 2660              | 0          | 0      | 128   |                            |                                           | 10-6152 DLY                               |
| ID    | MTN HOME           | 10-6174 | 43.1261  | -115.7119 | 3140              | 35         | 53     | 113   | 10-6174 15M<br>54-0035 15M | 10-6174 HLY<br>54-0035 15M                | 10-6174 DLY<br>69-1387 DLY<br>54-0035 15M |
| ID    | MULLAN             | 10-6230 | 47.4661  | -115.8114 | 3201              | 39         | 38     | 62    | 10-6230 15M<br>54-0036 15M | 10-6230 15M<br>54-0036 15M                | 10-6230 DLY<br>79-0112 DLY<br>54-0036 15M |

| State | Station name                | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                                                         |
|-------|-----------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                             |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                    | Daily                                                                   |
| ID    | MURPHY (DESERT) HOT SPRINGS | 10-6250 | 42.0264  | -115.3597 | 5152              | 0          | 20     | 25    |                                           | 10-6250 HLY<br>54-0037 15M                | 10-6250 DLY<br>10-6250 HLY                                              |
| ID    | NAMPA SUGAR FACTORY         | 10-6305 | 43.6039  | -116.5753 | 2470              | 0          | 0      | 69    |                                           |                                           | 10-6305 DLY<br>69-1378 DLY<br>10-6300 DLY<br>10-6295 DLY                |
| ID    | NEW MEADOWS RS              | 10-6388 | 44.9714  | -116.2933 | 3862              | 0          | 0      | 98    |                                           |                                           | 10-6388 DLY                                                             |
| ID    | NEZPERCE                    | 10-6424 | 46.2325  | -116.2430 | 3248              | 0          | 0      | 66    |                                           |                                           | 10-6424 DLY<br>10-6421 DLY                                              |
| ID    | OAKLEY                      | 10-6542 | 42.2342  | -113.8981 | 4559              | 0          | 0      | 128   |                                           |                                           | 10-6542 DLY                                                             |
| ID    | OBSIDIAN 3 SSE              | 10-6553 | 44.0333  | -114.8333 | 6873              | 0          | 0      | 42    |                                           |                                           | 10-6553 DLY                                                             |
| ID    | OLA                         | 10-6586 | 44.1758  | -116.2828 | 3075              | 27         | 43     | 82    | 10-6586 15M<br>10-6590 15M<br>54-0038 15M | 10-6586 HLY<br>10-6590 HLY<br>54-0038 15M | 10-6586 DLY<br>10-6590 DLY<br>54-0038 15M                               |
| ID    | OROFINO                     | 10-6681 | 46.4823  | -116.2488 | 1046              | 0          | 0      | 75    |                                           |                                           | 10-6681 DLY                                                             |
| ID    | PALISADES                   | 10-6764 | 43.3500  | -111.2167 | 5385              | 0          | 0      | 42    |                                           |                                           | 10-6764 DLY                                                             |
| ID    | PARMA EXP STN               | 10-6844 | 43.8022  | -116.9442 | 2290              | 0          | 0      | 93    |                                           |                                           | 10-6844 DLY                                                             |
| ID    | PAUL 1ENE                   | 10-6877 | 42.6117  | -113.7628 | 4150              | 0          | 0      | 74    |                                           |                                           | 10-6877 DLY                                                             |
| ID    | PAYETTE                     | 10-6891 | 44.0764  | -116.9311 | 2150              | 0          | 0      | 112   |                                           |                                           | 10-6891 DLY                                                             |
| ID    | PICABO                      | 10-7040 | 43.3086  | -114.0667 | 4839              | 0          | 0      | 63    |                                           |                                           | 10-7040 DLY                                                             |
| ID    | PIERCE                      | 10-7046 | 46.4922  | -115.8006 | 3080              | 25         | 56     | 96    | 10-7046 15M                               | 10-7046 HLY<br>86-1142 HLY<br>10-7049 HLY | 10-7046 DLY<br>10-7047 DLY<br>10-7049 DLY<br>80-0320 DLY<br>10-7046 HLY |
| ID    | PINE 2 S                    | 10-7079 | 43.4667  | -115.3167 | 4232              | 0          | 0      | 37    |                                           |                                           | 10-7079 DLY                                                             |
| ID    | PLUMMER 3 WSW               | 10-7188 | 47.3111  | -116.9544 | 2905              | 0          | 36     | 45    |                                           | 10-7188 HLY                               | 10-7188 DLY<br>10-7188 HLY                                              |



| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                                        |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|----------------------------------------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                                  |
| ID    | POCATELLO 2 NE     | 10-7208 | 42.8917  | -112.4086 | 4832              | 0          | 0      | 35    |                            |                                           | 10-7208 DLY<br>69-1311 DLY                                                             |
| ID    | POCATELLO CITY     | 10-7210 | 42.8750  | -112.4469 | 4460              | 0          | 0      | 71    |                            |                                           | 10-7210 DLY<br>99-0001 DLY<br>98-7210 DLY                                              |
| ID    | PORTHILL 1 SW      | 10-7264 | 48.9939  | -116.5025 | 1799              | 37         | 35     | 118   | 10-7269 15M<br>54-0039 15M | 10-7269 HLY<br>54-0039 15M                | 10-7264 DLY<br>54-0039 15M<br>10-7269 HLY<br>54-0039 15M<br>10-7269 HLY                |
| ID    | POTLATCH 3 NNE     | 10-7301 | 46.9603  | -116.8550 | 2760              | 0          | 0      | 97    |                            |                                           | 10-7301 DLY                                                                            |
| ID    | POWELL             | 10-7320 | 46.5100  | -114.7111 | 3530              | 0          | 0      | 44    |                            |                                           | 10-7320 DLY                                                                            |
| ID    | PRAIRIE            | 10-7327 | 43.5064  | -115.5717 | 4780              | 28         | 54     | 79    | 10-7327 15M<br>54-0040 15M | 10-7327 HLY<br>86-0704 HLY<br>54-0040 15M | 10-7327 DLY<br>54-0040 15M<br>10-7327 HLY<br>80-0335 DLY<br>10-7327 HLY<br>54-0040 15M |
| ID    | PRESTON            | 10-7346 | 42.0933  | -111.8825 | 4719              | 0          | 0      | 97    |                            |                                           | 10-7346 DLY<br>10-7353 DLY                                                             |
| ID    | PRIEST RVR EXP STN | 10-7386 | 48.3511  | -116.8353 | 2371              | 0          | 0      | 119   |                            |                                           | 10-7386 DLY                                                                            |
| ID    | REXBURG BYU IDAHO  | 10-7644 | 43.8083  | -111.7892 | 5005              | 0          | 0      | 42    |                            |                                           | 10-7644 DLY<br>10-7642 DLY                                                             |
| ID    | RICHFIELD          | 10-7673 | 43.0517  | -114.1550 | 4309              | 0          | 0      | 100   |                            |                                           | 10-7673 DLY                                                                            |
| ID    | RIGGINS            | 10-7706 | 45.4239  | -116.3150 | 1800              | 0          | 0      | 93    |                            |                                           | 10-7706 DLY                                                                            |
| ID    | ROLAND WEST PORTAL | 10-7858 | 47.3789  | -115.6684 | 4154              | 0          | 0      | 30    |                            |                                           | 10-7858 DLY                                                                            |
| ID    | RUPERT 3 WSW       | 10-7968 | 42.6022  | -113.7233 | 4200              | 0          | 0      | 76    |                            |                                           | 10-7968 DLY                                                                            |
| ID    | SAINT ANTHONY      | 10-8022 | 43.9517  | -111.6789 | 4910              | 0          | 0      | 76    |                            |                                           | 10-8022 DLY                                                                            |
| ID    | SAINT MARIES       | 10-8062 | 47.3164  | -116.5789 | 2151              | 0          | 0      | 116   |                            |                                           | 10-8062 DLY<br>69-1359 DLY                                                             |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                         |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                   |
| ID    | SALMON-KSRA       | 10-8080 | 45.1731  | -113.8856 | 3953              | 0          | 0      | 111   |                            |                                           | 10-8080 DLY<br>10-8076 DLY                                              |
| ID    | SANDPOINT EXP STN | 10-8137 | 48.2942  | -116.5628 | 2126              | 32         | 45     | 107   | 10-8137 15M<br>54-0041 15M | 10-8137 HLY<br>54-0041 15M                | 10-8137 DLY<br>54-0041 15M<br>10-8137 HLY                               |
| ID    | SHOSHONE 1 WNW    | 10-8380 | 42.9383  | -114.4169 | 3950              | 0          | 0      | 110   |                            |                                           | 10-8380 DLY                                                             |
| ID    | SHOUP             | 10-8395 | 45.3767  | -114.2775 | 3400              | 0          | 0      | 41    |                            |                                           | 10-8395 DLY                                                             |
| ID    | SODA SPRINGS AP   | 10-8535 | 42.6514  | -111.5833 | 5842              | 0          | 0      | 42    |                            |                                           | 10-8535 DLY<br>69-1360 DLY                                              |
| ID    | SPENCER           | 10-8604 | 44.3606  | -112.1864 | 5892              | 0          | 0      | 38    |                            |                                           | 10-8604 DLY                                                             |
| ID    | SPRINGFIELD 1 SE  | 10-8626 | 43.0667  | -112.6833 | 4413              | 0          | 0      | 44    |                            |                                           | 10-8626 DLY                                                             |
| ID    | STANLEY           | 10-8676 | 44.2208  | -114.9347 | 6249              | 0          | 0      | 53    |                            |                                           | 10-8676 DLY<br>76-0147 HLY                                              |
| ID    | SUGAR CITY        | 10-8818 | 43.8867  | -111.7367 | 4925              | 21         | 21     | 90    | 89-0005 15M                | 89-0005 15M                               | 10-8818 DLY<br>10-8072 DLY<br>89-0005 15M                               |
| ID    | SWAN FALLS PH     | 10-8928 | 43.2436  | -116.3783 | 2325              | 0          | 0      | 87    |                            |                                           | 10-8928 DLY                                                             |
| ID    | SWAN VALLEY       | 10-8937 | 43.4372  | -111.2792 | 5397              | 0          | 0      | 110   |                            |                                           | 10-8937 DLY<br>10-4588 DLY                                              |
| ID    | TAYLOR RCH        | 10-9000 | 45.1017  | -114.8508 | 3835              | 0          | 0      | 35    |                            |                                           | 10-9000 DLY<br>76-0149 HLY                                              |
| ID    | TETONIA EXP STN   | 10-9065 | 43.8564  | -111.2769 | 6170              | 27         | 45     | 68    | 10-9065 15M<br>54-0044 15M | 10-9065 HLY<br>10-1881 HLY<br>54-0044 15M | 10-9065 DLY<br>54-0044 15M<br>10-9065 HLY<br>54-0044 15M<br>10-9065 HLY |
| ID    | THREE CREEK       | 10-9119 | 42.0833  | -115.1500 | 5460              | 0          | 0      | 44    |                            |                                           | 10-9119 DLY<br>10-9119 HLY                                              |
| ID    | TOPAZ             | 10-9158 | 42.6250  | -112.0881 | 4918              | 28         | 29     | 28    | 10-9158 15M<br>54-0045 15M | 10-9158 15M<br>54-0045 15M                | 10-9158 15M<br>54-0045 15M                                              |

| State | Station name    | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|-----------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                 |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                     |
| ID    | TWIN FALLS-KMVT | 10-9293 | 42.5808  | -114.4569 | 3670              | 0          | 0      | 97    |                            |                            | 10-9293 DLY<br>10-9294 DLY                |
| ID    | TWIN FALLS 6 E  | 10-9303 | 42.5458  | -114.3461 | 3960              | 0          | 39     | 95    |                            | 10-9303 HLY<br>87-5221 HLY | 10-9303 DLY<br>10-9299 DLY<br>87-5224 DLY |
| ID    | WALLACE         | 10-9498 | 47.4753  | -115.9314 | 2710              | 0          | 22     | 108   |                            | 10-9498 HLY                | 10-9498 DLY<br>10-9493 DLY<br>10-9498 HLY |
| ID    | WARREN          | 10-9560 | 45.2658  | -115.6789 | 5907              | 0          | 0      | 52    |                            |                            | 10-9560 DLY                               |
| ID    | WEISER          | 10-9638 | 44.2456  | -116.9697 | 2120              | 0          | 0      | 92    |                            |                            | 10-9638 DLY<br>10-9637 DLY                |
| ID    | WINCHESTER      | 10-9846 | 46.2381  | -116.6233 | 3972              | 0          | 0      | 76    |                            |                            | 10-9846 DLY<br>10-9840 DLY                |
| ID    | YELLOWPINE 7 S  | 10-9951 | 44.8542  | -115.5114 | 5100              | 27         | 32     | 35    | 10-9951 15M                | 10-9951 HLY                | 10-9951 DLY<br>10-9951 HLY                |
| ID    | YELLOWPINE BAR  | 10-9963 | 45.5450  | -115.2514 | 2480              | 20         | 20     | 24    | 10-9963 15M<br>54-0047 15M | 10-9963 15M<br>54-0047 15M | 10-9963 DLY<br>54-0047 15M                |
| MT    | ALBERTON        | 24-0075 | 47.0036  | -114.4781 | 3060              | 0          | 0      | 40    |                            |                            | 24-0075 DLY                               |
| MT    | ALBION 1 N      | 24-0088 | 45.2089  | -104.2647 | 3312              | 0          | 0      | 56    |                            |                            | 24-0088 DLY                               |
| MT    | ALDER           | 24-0100 | 45.3167  | -112.1167 | 5125              | 0          | 29     | 47    |                            | 87-1763 HLY<br>24-0100 HLY | 24-0100 DLY<br>87-1763 HLY<br>24-0100 HLY |
| MT    | ALDER 19S       | 24-0111 | 45.0961  | -112.0856 | 5749              | 0          | 0      | 63    |                            |                            | 24-0111 DLY<br>24-0110 DLY                |
| MT    | ALZADA          | 24-0165 | 45.0156  | -104.4108 | 3450              | 30         | 60     | 63    | 24-0165 15M<br>54-0049 15M | 24-0165 HLY<br>54-0049 15M | 24-0165 HLY<br>54-0049 15M                |
| MT    | ANACONDA        | 24-0199 | 46.1308  | -112.9333 | 5230              | 0          | 0      | 111   |                            |                            | 24-0199 DLY<br>24-2606 DLY<br>24-2604 DLY |

| State | Station name               | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                          |
|-------|----------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------------------------------------|
|       |                            |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                                    |
| MT    | ASHLAND RS                 | 24-0330 | 45.5939  | -106.2722 | 2940              | 31         | 56     | 62    | 24-0330 15M<br>54-0050 15M | 24-0330 HLY<br>54-0050 15M | 24-0330 HLY<br>54-0050 15M                               |
| MT    | AUGUSTA                    | 24-0364 | 47.4925  | -112.3969 | 4070              | 29         | 47     | 108   | 24-0364 15M                | 24-0364 HLY<br>24-0364 15M | 24-0364 DLY<br>72-2547 HLY<br>24-0364 HLY                |
| MT    | AUSTIN 1 W                 | 24-0375 | 46.6456  | -112.2656 | 4851              | 0          | 0      | 54    |                            |                            | 24-0375 DLY                                              |
| MT    | BABB 6 NE                  | 24-0392 | 48.9389  | -113.3719 | 4300              | 0          | 0      | 98    |                            |                            | 24-0392 DLY                                              |
| MT    | BALLANTINE                 | 24-0432 | 45.9497  | -108.1439 | 3000              | 0          | 0      | 79    |                            |                            | 24-0432 DLY                                              |
| MT    | BARBER                     | 24-0466 | 46.3108  | -109.3719 | 3730              | 0          | 0      | 55    |                            |                            | 24-0466 DLY                                              |
| MT    | BAYLOR                     | 24-0554 | 48.6714  | -106.4808 | 2963              | 28         | 59     | 64    | 24-0554 15M<br>54-0051 15M | 24-0554 HLY<br>54-0051 15M | 24-0554 DLY<br>54-0051 15M<br>24-0554 HLY                |
| MT    | BELLTOWER                  | 24-0636 | 45.6947  | -104.3856 | 3234              | 0          | 0      | 71    |                            |                            | 24-0636 DLY                                              |
| MT    | BIDDLE                     | 24-0739 | 45.1008  | -105.3186 | 3312              | 0          | 0      | 66    |                            |                            | 24-0739 DLY                                              |
| MT    | BIDDLE 8 SW                | 24-0743 | 45.0428  | -105.4800 | 3631              | 0          | 0      | 60    |                            |                            | 24-0743 DLY                                              |
| MT    | BIGFORK 13 S               | 24-0755 | 47.8769  | -114.0336 | 2979              | 0          | 0      | 74    |                            |                            | 24-0755 DLY                                              |
| MT    | BIG SANDY                  | 24-0770 | 48.1347  | -110.0592 | 2770              | 0          | 0      | 88    |                            |                            | 24-0770 DLY                                              |
| MT    | BIG TIMBER                 | 24-0780 | 45.8325  | -109.9511 | 4100              | 0          | 0      | 113   |                            |                            | 24-0780 DLY                                              |
| MT    | BILLINGS WTP               | 24-0802 | 45.7717  | -108.4811 | 3097              | 0          | 0      | 117   |                            |                            | 24-0802 DLY                                              |
| MT    | BIRNEY                     | 24-0819 | 45.3247  | -106.5125 | 3160              | 0          | 0      | 42    |                            |                            | 24-0819 DLY                                              |
| MT    | BLACKLEAF                  | 24-0877 | 48.0128  | -112.4369 | 4235              | 0          | 0      | 62    |                            |                            | 24-0877 DLY                                              |
| MT    | BLOOMFIELD 6 E             | 24-0926 | 47.4167  | -104.8000 | 2552              | 0          | 21     | 23    |                            | 24-0926 HLY                | 24-0926 DLY<br>24-0926 HLY                               |
| MT    | BOULDER                    | 24-1008 | 46.2311  | -112.1139 | 4904              | 43         | 61     | 95    | 24-1008 15M<br>54-0052 15M | 24-1008 HLY<br>54-0052 15M | 24-1008 DLY<br>99-1008 DLY<br>69-1583 DLY<br>54-0052 15M |
| MT    | BOZEMAN MONTANA STATE UNIV | 24-1044 | 45.6622  | -111.0464 | 4913              | 0          | 0      | 127   |                            |                            | 24-1044 DLY                                              |

| State | Station name             | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                         |
|-------|--------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                          |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                   |
| MT    | BOZEMAN 6 W EXP FARM     | 24-1047 | 45.6728  | -111.1547 | 4775              | 0          | 33     | 57    |                            | 24-1047 HLY<br>87-0343 HLY                | 24-1047 DLY<br>87-0343 HLY                                              |
| MT    | BOZEMAN 12 NE            | 24-1050 | 45.8167  | -110.8833 | 5950              | 0          | 0      | 45    |                            |                                           | 24-1050 DLY                                                             |
| MT    | BRADY AZNOE              | 24-1080 | 47.9500  | -111.3333 | 3333              | 0          | 0      | 62    |                            |                                           | 24-1080 DLY                                                             |
| MT    | BRADY 27 ENE (THE KNEES) | 24-1081 | 48.0750  | -111.2603 | 3325              | 0          | 0      | 36    |                            |                                           | 24-1081 DLY                                                             |
| MT    | BRANDENBERG              | 24-1084 | 45.8161  | -106.2328 | 2770              | 0          | 0      | 66    |                            |                                           | 24-1084 DLY                                                             |
| MT    | BREDETTE                 | 24-1088 | 48.5156  | -105.2992 | 2313              | 27         | 67     | 83    | 24-1088 15M<br>54-0053 15M | 24-1088 HLY<br>54-0053 15M                | 24-1088 DLY<br>54-0053 15M<br>24-1088 HLY                               |
| MT    | BRIDGER 2 N              | 24-1102 | 45.3261  | -108.9092 | 3583              | 24         | 56     | 104   | 24-1102 15M<br>54-0054 15M | 24-1102 HLY<br>54-0054 15M                | 24-1102 DLY                                                             |
| MT    | BROADUS                  | 24-1127 | 45.4442  | -105.4072 | 3032              | 32         | 60     | 88    | 24-1127 15M<br>54-0055 15M | 24-1127 HLY<br>54-0055 15M                | 24-1127 DLY                                                             |
| MT    | BROADVIEW                | 24-1149 | 46.1000  | -108.8833 | 3881              | 0          | 0      | 46    |                            |                                           | 24-1149 DLY                                                             |
| MT    | BROCKWAY 3 WSW           | 24-1169 | 47.2875  | -105.8300 | 2630              | 0          | 0      | 62    |                            |                                           | 24-1169 DLY                                                             |
| MT    | BROWNING                 | 24-1202 | 48.5594  | -113.0108 | 4355              | 31         | 60     | 116   | 24-1202 15M<br>54-0056 15M | 24-1202 HLY<br>76-0180 HLY<br>54-0056 15M | 24-1202 DLY<br>24-1217 DLY<br>76-0180 HLY<br>54-0056 15M<br>24-1202 HLY |
| MT    | BRUSETT 3 N              | 24-1231 | 47.4647  | -107.3114 | 2974              | 0          | 0      | 72    |                            |                                           | 24-1231 DLY                                                             |
| MT    | BUSBY                    | 24-1297 | 45.5397  | -106.9597 | 3430              | 0          | 0      | 110   |                            |                                           | 24-1297 DLY<br>99-1297 DLY                                              |
| MT    | BUTTE 8 S                | 24-1309 | 45.8967  | -112.5472 | 5700              | 40         | 55     | 58    | 24-1309 15M<br>54-0057 15M | 24-1309 HLY<br>54-0057 15M                | 24-1309 HLY<br>54-0057 15M                                              |
| MT    | BYNUM 4 SSE              | 24-1342 | 47.9261  | -112.2919 | 4039              | 0          | 0      | 36    |                            |                                           | 24-1342 DLY                                                             |
| MT    | CAMERON                  | 24-1408 | 45.2000  | -111.6833 | 5500              | 21         | 43     | 43    | 24-1408 15M                | 24-1408 HLY                               | 24-1408 HLY                                                             |
| MT    | CANYON CREEK             | 24-1450 | 46.8167  | -112.2500 | 4314              | 0          | 0      | 33    |                            |                                           | 24-1450 DLY                                                             |

| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                                          |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                    | Daily                                                    |
| MT    | CANYON FERRY DAM    | 24-1470 | 46.6500  | -111.7333 | 3672              | 0          | 0      | 96    |                                           |                                           | 24-1470 DLY<br>24-1460 DLY<br>24-1465 DLY                |
| MT    | CARDWELL            | 24-1500 | 45.8608  | -111.9519 | 4270              | 38         | 37     | 57    | 24-1500 15M<br>24-8914 15M<br>54-0058 15M | 24-1500 15M<br>24-8914 15M<br>54-0058 15M | 24-1500 DLY<br>79-0071 DLY<br>24-8914 HLY<br>54-0058 15M |
| MT    | CARLYLE 13 NW       | 24-1518 | 46.7444  | -104.3092 | 3145              | 0          | 0      | 58    |                                           |                                           | 24-1518 DLY                                              |
| MT    | CARTER 14 W         | 24-1525 | 47.7922  | -111.2203 | 3450              | 0          | 0      | 35    |                                           |                                           | 24-1525 DLY                                              |
| MT    | CASCADE 5 S         | 24-1552 | 47.2192  | -111.7106 | 3360              | 0          | 0      | 111   |                                           |                                           | 24-1552 DLY                                              |
| MT    | CASCADE 20 SSE      | 24-1557 | 46.9956  | -111.5772 | 4600              | 0          | 0      | 115   |                                           |                                           | 24-1557 DLY<br>24-0056 DLY                               |
| MT    | CHESTER             | 24-1692 | 48.5092  | -110.9694 | 3132              | 0          | 0      | 87    |                                           |                                           | 24-1692 DLY                                              |
| MT    | CHINOOK             | 24-1722 | 48.5883  | -109.2267 | 2420              | 0          | 0      | 117   |                                           |                                           | 24-1722 DLY                                              |
| MT    | CHOTEAU             | 24-1737 | 47.8206  | -112.1922 | 3845              | 41         | 70     | 108   | 24-1737 15M<br>54-0059 15M                | 24-1737 HLY<br>54-0059 15M                | 24-1737 DLY                                              |
| MT    | CIRCLE              | 24-1758 | 47.4122  | -105.5956 | 2480              | 0          | 0      | 60    |                                           |                                           | 24-1758 DLY                                              |
| MT    | CIRCLE 7 N          | 24-1765 | 47.5167  | -105.5667 | 2431              | 0          | 0      | 34    |                                           |                                           | 24-1765 DLY                                              |
| MT    | CLARK CANYON DAM    | 24-1781 | 45.0017  | -112.8575 | 5580              | 24         | 49     | 53    | 24-1781 15M<br>24-0274 HLY                | 24-1781 HLY<br>24-0274 HLY                | 24-1781 HLY<br>24-0274 HLY                               |
| MT    | COHAGEN             | 24-1875 | 47.0564  | -106.6164 | 2720              | 25         | 39     | 55    | 24-1875 15M<br>54-0060 15M                | 24-1875 HLY<br>54-0060 15M                | 24-1875 DLY                                              |
| MT    | COLSTRIP            | 24-1905 | 45.8944  | -106.6336 | 3218              | 0          | 0      | 92    |                                           |                                           | 24-1905 DLY                                              |
| MT    | COLUMBIA FALLS 5 SW | 24-1919 | 48.3167  | -114.2000 | 3081              | 0          | 0      | 49    |                                           |                                           | 24-1919 DLY                                              |
| MT    | COLUMBUS            | 24-1938 | 45.6444  | -109.2675 | 3602              | 0          | 0      | 91    |                                           |                                           | 24-1938 DLY                                              |
| MT    | CONRAD              | 24-1974 | 48.1736  | -111.9503 | 3550              | 0          | 0      | 100   |                                           |                                           | 24-1974 DLY                                              |



| State | Station name                | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                         |
|-------|-----------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                             |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                   |
| MT    | CONTENT 4 NNE               | 24-1984 | 48.0803  | -107.5250 | 2325              | 0          | 48     | 68    |                            | 24-1984 HLY<br>54-0061 15M                | 24-1984 DLY<br>54-0061 15M<br>24-1984 HLY<br>24-1984 15M                |
| MT    | COOKE CITY 2 W              | 24-1995 | 45.0108  | -109.9819 | 7483              | 0          | 34     | 67    |                            | 24-1995 HLY<br>24-9211 HLY<br>24-1995 15M | 24-1995 DLY<br>24-9211 HLY<br>24-9211 DLY<br>24-7603 DLY<br>24-1995 HLY |
| MT    | COPPER                      | 24-2012 | 46.6000  | -110.6667 | 5682              | 0          | 0      | 46    |                            |                                           | 24-2012 DLY                                                             |
| MT    | CRESTON                     | 24-2104 | 48.1881  | -114.1339 | 2935              | 0          | 32     | 74    |                            | 87-3091 HLY                               | 24-2104 DLY                                                             |
| MT    | CROW AGENCY                 | 24-2112 | 45.6000  | -107.4500 | 3030              | 0          | 21     | 118   |                            | 76-0247 HLY                               | 24-2112 DLY<br>76-0247 HLY<br>63-0027 DLY<br>61-0028 DLY                |
| MT    | CULBERTSON                  | 24-2122 | 48.1503  | -104.5089 | 1940              | 0          | 0      | 115   |                            |                                           | 24-2122 DLY                                                             |
| MT    | DARBY                       | 24-2221 | 46.0264  | -114.1764 | 3880              | 29         | 30     | 81    | 24-2221 15M                | 24-2221 HLY                               | 24-2221 DLY<br>72-2284 HLY                                              |
| MT    | DECKER                      | 24-2266 | 45.0117  | -106.8636 | 3520              | 0          | 0      | 73    |                            |                                           | 24-2266 DLY<br>69-2666 DLY<br>24-2266 HLY<br>24-2266 HLY                |
| MT    | DEER LODGE 3 W              | 24-2275 | 46.3911  | -112.7975 | 4850              | 0          | 0      | 86    |                            |                                           | 24-2275 DLY<br>24-2273 DLY                                              |
| MT    | DEL BONITA                  | 24-2301 | 48.9983  | -112.7886 | 4337              | 0          | 0      | 58    |                            |                                           | 24-2301 DLY<br>24-2301 HLY                                              |
| MT    | DENTON                      | 24-2347 | 47.3181  | -109.9372 | 3610              | 0          | 0      | 88    |                            |                                           | 24-2347 DLY                                                             |
| MT    | DILLON U OF MONTANA WESTERN | 24-2409 | 45.2089  | -112.6389 | 5129              | 0          | 0      | 124   |                            |                                           | 24-2409 DLY                                                             |
| MT    | DILLON 9 SSE                | 24-2414 | 45.0917  | -112.6044 | 5500              | 32         | 54     | 57    | 24-2414 15M<br>54-0064 15M | 24-2414 HLY<br>54-0064 15M                | 24-2414 HLY<br>54-0064 15M                                              |

| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                     |
| MT    | DIVIDE              | 24-2421 | 45.7511  | -112.7547 | 5350              | 35         | 54     | 69    | 24-2421 15M<br>54-0065 15M | 24-2421 HLY<br>54-0065 15M                | 24-2421 DLY<br>54-0065 15M                |
| MT    | DODSON 1 WNW        | 24-2438 | 48.3992  | -108.2625 | 2294              | 0          | 0      | 56    |                            |                                           | 24-2438 DLY                               |
| MT    | DODSON 11 N         | 24-2441 | 48.5542  | -108.2067 | 2710              | 29         | 47     | 52    | 24-2441 15M<br>54-0066 15M | 24-2441 HLY<br>54-0066 15M                | 24-2441 HLY<br>54-0066 15M                |
| MT    | DOVETAIL            | 24-2477 | 47.3500  | -108.2500 | 2743              | 0          | 21     | 22    |                            | 24-2477 HLY                               | 24-2477 HLY                               |
| MT    | DUNKIRK 19NNE       | 24-2550 | 48.7167  | -111.4758 | 3323              | 0          | 0      | 88    |                            |                                           | 24-2550 DLY                               |
| MT    | DUPUYER             | 24-2571 | 48.2000  | -112.5000 | 4134              | 0          | 23     | 25    |                            | 24-2571 HLY                               | 24-2571 HLY                               |
| MT    | DUTTON 6 E          | 24-2584 | 47.8433  | -111.5794 | 3594              | 40         | 59     | 63    | 24-2584 15M<br>54-0068 15M | 24-2584 HLY<br>54-0068 15M                | 24-2584 HLY<br>54-0068 15M                |
| MT    | E GLACIER           | 24-2629 | 48.4472  | -113.2236 | 4806              | 0          | 0      | 66    |                            |                                           | 24-2629 DLY<br>24-3551 DLY                |
| MT    | EDGAR 9 SE          | 24-2661 | 45.3965  | -108.7241 | 4400              | 0          | 0      | 33    |                            |                                           | 24-2661 DLY<br>24-2658 DLY                |
| MT    | EKALAKA             | 24-2689 | 45.8864  | -104.5478 | 3432              | 25         | 44     | 118   | 24-2689 15M<br>54-0069 15M | 24-2689 HLY<br>54-0069 15M                | 24-2689 DLY                               |
| MT    | ELKHORN HOT SPRINGS | 24-2719 | 45.4667  | -113.1167 | 7385              | 0          | 33     | 39    |                            | 24-2719 HLY<br>24-2720 HLY                | 24-2719 DLY<br>24-2720 HLY<br>24-2719 HLY |
| MT    | ELLISTON            | 24-2738 | 46.5631  | -112.4342 | 5080              | 0          | 0      | 49    |                            |                                           | 24-2738 DLY                               |
| MT    | ENNIS               | 24-2793 | 45.3394  | -111.7122 | 4953              | 0          | 0      | 97    |                            |                                           | 24-2793 DLY                               |
| MT    | ESSEX               | 24-2812 | 48.2828  | -113.6061 | 3850              | 0          | 22     | 36    |                            | 24-2812 HLY                               | 24-2812 DLY<br>24-2812 HLY                |
| MT    | ETHRIDGE            | 24-2820 | 48.5586  | -112.1253 | 3552              | 0          | 0      | 55    |                            |                                           | 24-2820 DLY                               |
| MT    | EUREKA RS           | 24-2827 | 48.8978  | -115.0644 | 2532              | 37         | 57     | 68    | 24-2827 15M<br>54-0070 15M | 24-2827 HLY<br>76-0209 HLY<br>54-0070 15M | 24-2827 DLY<br>24-2825 DLY                |
| MT    | FAIRFIELD           | 24-2857 | 47.6150  | -111.9861 | 3983              | 0          | 0      | 92    |                            |                                           | 24-2857 DLY                               |
| MT    | FISHTAIL            | 24-2996 | 45.4531  | -109.5069 | 4500              | 0          | 27     | 68    |                            | 76-0213 HLY                               | 24-2996 DLY                               |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                         |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                   |
| MT    | FLATWILLOW 4 ENE       | 24-3013 | 46.8217  | -108.3725 | 3292              | 0          | 0      | 109   |                            |                                           | 24-3013 DLY                                                             |
| MT    | FORKS 4 NNE            | 24-3089 | 48.7778  | -107.4536 | 2599              | 0          | 0      | 77    |                            |                                           | 24-3089 DLY                                                             |
| MT    | FORSYTH                | 24-3098 | 46.2722  | -106.6756 | 2515              | 0          | 0      | 92    |                            |                                           | 24-3098 DLY<br>24-3099 DLY<br>69-1682 DLY                               |
| MT    | FT ASSINIBOINE         | 24-3110 | 48.4983  | -109.8014 | 2675              | 0          | 0      | 116   |                            |                                           | 24-3110 DLY<br>52-3110 DLY<br>52-3111 DLY<br>88-2019 DLY                |
| MT    | FT BENTON              | 24-3113 | 47.8303  | -110.6611 | 2649              | 0          | 0      | 110   |                            |                                           | 24-3113 DLY<br>52-3122 DLY<br>52-3113 DLY                               |
| MT    | FORTINE 1 N            | 24-3139 | 48.7783  | -114.8997 | 3000              | 0          | 0      | 98    |                            |                                           | 24-3139 DLY<br>24-3142 DLY                                              |
| MT    | FT LOGAN 4 ESE         | 24-3157 | 46.6547  | -111.0939 | 4710              | 0          | 0      | 65    |                            |                                           | 24-3157 DLY<br>52-3157 DLY                                              |
| MT    | FT PECK PWR PLT        | 24-3176 | 48.0119  | -106.4117 | 2071              | 41         | 64     | 78    | 24-3176 15M<br>54-0071 15M | 24-3176 HLY<br>24-3175 HLY<br>54-0071 15M | 24-3176 DLY<br>24-3175 DLY                                              |
| MT    | FRAZER                 | 24-3280 | 48.0667  | -106.0500 | 2070              | 0          | 0      | 41    |                            |                                           | 24-3280 DLY                                                             |
| MT    | GALATA 16 SW           | 24-3346 | 48.2922  | -111.5683 | 3550              | 0          | 0      | 74    |                            |                                           | 24-3346 DLY                                                             |
| MT    | GALLATIN GATEWAY 10SSW | 24-3366 | 45.4453  | -111.2367 | 5441              | 0          | 14     | 67    |                            | 76-0291 HLY<br>54-0072 15M<br>24-3366 15M | 24-3366 DLY<br>54-0072 15M<br>24-3366 15M<br>76-0291 HLY<br>54-0072 15M |
| MT    | GARDINER               | 24-3378 | 45.0317  | -110.7036 | 5275              | 0          | 0      | 49    |                            |                                           | 24-3378 DLY<br>69-9000 DLY                                              |
| MT    | GARLAND                | 24-3383 | 46.0500  | -105.9167 | 2602              | 0          | 0      | 34    |                            |                                           | 24-3383 DLY                                                             |
| MT    | GERALDINE              | 24-3445 | 47.6014  | -110.2669 | 3145              | 0          | 0      | 55    |                            |                                           | 24-3445 DLY                                                             |

| State | Station name     | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                  |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                     |
| MT    | GERALDINE 6 SE   | 24-3455 | 47.5333  | -110.1667 | 3451              | 0          | 0      | 38    |                            |                                           | 24-3455 DLY                               |
| MT    | GIBBONS PASS     | 24-3479 | 45.6928  | -113.9550 | 7070              | 31         | 47     | 55    | 24-3479 15M<br>54-0073 15M | 24-3479 HLY<br>54-0073 15M<br>24-3479 15M | 24-3479 HLY<br>54-0073 15M<br>24-3479 15M |
| MT    | GIBSON 2 NE      | 24-3486 | 46.0397  | -109.4953 | 4444              | 0          | 0      | 60    |                            |                                           | 24-3486 DLY                               |
| MT    | GIBSON DAM       | 24-3489 | 47.6011  | -112.7547 | 4590              | 31         | 65     | 99    | 24-3489 15M                | 24-3489 HLY<br>87-3411 HLY                | 24-3489 DLY<br>24-3489 HLY                |
| MT    | GILDFORD         | 24-3530 | 48.5647  | -110.3028 | 2820              | 0          | 0      | 63    |                            |                                           | 24-3530 DLY                               |
| MT    | GLASGOW 14 NW    | 24-3554 | 48.3531  | -106.8425 | 2160              | 0          | 0      | 61    |                            |                                           | 24-3554 DLY                               |
| MT    | GLEN 4 N         | 24-3570 | 45.5261  | -112.7006 | 5054              | 0          | 0      | 50    |                            |                                           | 24-3570 DLY                               |
| MT    | GLENDIVE         | 24-3581 | 47.1058  | -104.7175 | 2075              | 33         | 62     | 125   | 24-3581 15M<br>54-0074 15M | 24-3581 HLY<br>54-0074 15M                | 24-3581 DLY<br>24-3581 HLY                |
| MT    | GOLDBUTTE 7 N    | 24-3617 | 48.9753  | -111.3989 | 3498              | 0          | 0      | 107   |                            |                                           | 24-3617 DLY                               |
| MT    | GRANT 5 SE       | 24-3707 | 44.9656  | -113.0042 | 5780              | 0          | 0      | 68    |                            |                                           | 24-3707 DLY                               |
| MT    | GRASS RANGE      | 24-3727 | 47.0256  | -108.8036 | 3490              | 0          | 0      | 88    |                            |                                           | 24-3727 DLY                               |
| MT    | GREAT FALLS 16ST | 24-3749 | 47.4883  | -111.2792 | 3505              | 0          | 0      | 60    |                            |                                           | 24-3749 DLY                               |
| MT    | HAMILTON         | 24-3885 | 46.2461  | -114.1681 | 3585              | 0          | 0      | 109   |                            |                                           | 24-3885 DLY                               |
| MT    | HARB             | 24-3910 | 48.2333  | -107.4103 | 2542              | 0          | 0      | 44    |                            |                                           | 24-3910 DLY                               |
| MT    | HARDIN           | 24-3915 | 45.7317  | -107.6092 | 2880              | 0          | 0      | 68    |                            |                                           | 24-3915 DLY                               |
| MT    | HARLEM           | 24-3929 | 48.5353  | -108.7964 | 2371              | 0          | 22     | 87    |                            | 87-1083 HLY                               | 24-3929 DLY<br>87-1083 HLY                |
| MT    | HARLOWTON        | 24-3939 | 46.4356  | -109.8428 | 4222              | 0          | 0      | 61    |                            |                                           | 24-3939 DLY                               |
| MT    | HAUGAN 1 W       | 24-3984 | 47.3889  | -115.4225 | 3160              | 22         | 44     | 96    | 24-3984 15M<br>24-2260 15M | 24-3984 HLY<br>24-2260 HLY                | 24-3984 DLY<br>24-2260 DLY<br>72-2314 HLY |
| MT    | HAXBY 18 SW      | 24-4007 | 47.5667  | -106.7000 | 2651              | 0          | 0      | 68    |                            |                                           | 24-4007 DLY                               |
| MT    | HEBGEN DAM       | 24-4038 | 44.8667  | -111.3392 | 6489              | 32         | 50     | 108   | 24-4038 15M                | 24-4038 HLY                               | 24-4038 DLY<br>24-4038 HLY                |

| State | Station name     | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                  |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                     |
| MT    | HELENA 6 N       | 24-4050 | 46.6667  | -112.0500 | 3802              | 0          | 0      | 55    |                            |                            | 24-4050 DLY                               |
| MT    | HERON 2 NW       | 24-4084 | 48.0800  | -116.0014 | 2240              | 0          | 0      | 110   |                            |                            | 24-4084 DLY<br>98-4084 DLY                |
| MT    | HIGHWOOD         | 24-4120 | 47.5500  | -110.7833 | 3401              | 0          | 25     | 40    |                            | 24-4120 HLY                | 24-4120 DLY<br>69-1510 DLY<br>24-4120 HLY |
| MT    | HIGHWOOD 7 NE    | 24-4133 | 47.6414  | -110.6678 | 3600              | 0          | 0      | 59    |                            |                            | 24-4133 DLY                               |
| MT    | HILGER           | 24-4143 | 47.2531  | -109.3611 | 4080              | 32         | 53     | 58    | 24-4143 15M<br>54-0077 15M | 24-4143 HLY<br>54-0077 15M | 24-4143 HLY<br>54-0077 15M<br>24-4143 15M |
| MT    | HINGHAM          | 24-4172 | 48.5500  | -110.4333 | 3031              | 0          | 0      | 30    |                            |                            | 24-4172 DLY                               |
| MT    | HINGHAM 12 N     | 24-4174 | 48.7261  | -110.4561 | 2950              | 0          | 0      | 37    |                            |                            | 24-4174 DLY                               |
| MT    | HINSDALE 4 SW    | 24-4180 | 48.3478  | -107.1533 | 2805              | 0          | 0      | 50    |                            |                            | 24-4180 DLY                               |
| MT    | HOBSON           | 24-4193 | 46.9997  | -109.8703 | 4244              | 0          | 0      | 45    |                            |                            | 24-4193 DLY                               |
| MT    | HOLTER DAM       | 24-4241 | 46.9908  | -112.0117 | 3487              | 40         | 58     | 116   | 24-4241 15M<br>54-0078 15M | 24-4241 HLY<br>54-0078 15M | 24-4241 DLY                               |
| MT    | HUNGRY HORSE DAM | 24-4328 | 48.3425  | -114.0217 | 3160              | 0          | 29     | 74    |                            | 24-4328 HLY<br>87-3621 HLY | 24-4328 DLY                               |
| MT    | HUNTLEY EXP STN  | 24-4345 | 45.9228  | -108.2453 | 3034              | 0          | 0      | 110   |                            |                            | 24-4345 DLY                               |
| MT    | HYSHAM           | 24-4358 | 46.2897  | -107.2306 | 2669              | 0          | 0      | 76    |                            |                            | 24-4358 DLY                               |
| MT    | HYSHAM 25 SSE    | 24-4364 | 45.9353  | -107.1375 | 3100              | 0          | 0      | 57    |                            |                            | 24-4364 DLY                               |
| MT    | ILIAD            | 24-4368 | 47.8056  | -109.8100 | 2965              | 0          | 33     | 50    |                            | 24-4368 HLY                | 24-4368 DLY<br>24-4368 HLY                |
| MT    | INGOMAR 9 E      | 24-4386 | 46.5675  | -107.1950 | 2800              | 0          | 0      | 66    |                            |                            | 24-4386 DLY                               |
| MT    | JACKSON          | 24-4447 | 45.3681  | -113.4089 | 6480              | 0          | 0      | 52    |                            |                            | 24-4447 DLY                               |
| MT    | JOLIET           | 24-4506 | 45.4733  | -109.0106 | 3838              | 0          | 0      | 68    |                            |                            | 24-4506 DLY                               |
| MT    | JOPLIN           | 24-4512 | 48.5594  | -110.7719 | 3323              | 22         | 50     | 87    | 24-4512 15M<br>54-0080 15M | 24-4512 HLY<br>54-0080 15M | 24-4512 DLY<br>54-0080 15M                |

| State | Station name         | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                      |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                     |
| MT    | JUDITH GAP           | 24-4538 | 46.6778  | -109.7506 | 4630              | 0          | 0      | 65    |                            |                            | 24-4538 DLY<br>55-0119 HLY                |
| MT    | JUDITH GAP 13 E      | 24-4545 | 46.6103  | -109.4736 | 4791              | 0          | 0      | 52    |                            |                            | 24-4545 DLY                               |
| MT    | KALISPELL GLACIER AP | 24-4558 | 48.3042  | -114.2636 | 2957              | 0          | 71     | 74    |                            | 24-4558 HLY<br>64-0333 HLY | 24-4558 DLY                               |
| MT    | KALISPELL            | 24-4563 | 48.1892  | -114.3114 | 2940              | 0          | 0      | 90    |                            |                            | 24-4563 DLY<br>97-0002 DLY<br>69-1547 DLY |
| MT    | KILA                 | 24-4645 | 48.1167  | -114.4667 | 3255              | 0          | 0      | 32    |                            |                            | 24-4645 DLY<br>69-1540 DLY                |
| MT    | KNOBS 4 SW           | 24-4715 | 45.8728  | -104.1583 | 3086              | 0          | 0      | 71    |                            |                            | 24-4715 DLY                               |
| MT    | KNOWLTON             | 24-4730 | 46.3000  | -105.0000 | 3600              | 0          | 35     | 45    |                            | 76-0244 HLY                | 24-4730 DLY<br>76-0244 HLY                |
| MT    | KREMLIN              | 24-4766 | 48.5217  | -110.1075 | 2860              | 0          | 0      | 64    |                            |                            | 24-4766 DLY                               |
| MT    | LAKEVIEW             | 24-4820 | 44.5994  | -111.8125 | 6710              | 42         | 63     | 76    | 24-4820 15M<br>54-0081 15M | 24-4820 HLY<br>54-0081 15M | 24-4820 DLY<br>54-0081 15M                |
| MT    | LAME DEER            | 24-4839 | 45.6258  | -106.6642 | 3300              | 0          | 0      | 54    |                            |                            | 24-4839 DLY                               |
| MT    | LAUREL 3 WSW         | 24-4894 | 45.6667  | -108.8167 | 3319              | 0          | 0      | 37    |                            |                            | 24-4894 DLY                               |
| MT    | LAVINA               | 24-4904 | 46.2931  | -108.9417 | 3434              | 27         | 59     | 63    | 24-4904 15M<br>54-0082 15M | 24-4904 HLY<br>54-0082 15M | 24-4904 HLY<br>54-0082 15M                |
| MT    | LENNEP 5 SW          | 24-4954 | 46.3614  | -110.5997 | 5600              | 0          | 0      | 59    |                            |                            | 24-4954 DLY                               |
| MT    | LEWISTOWN 11 SSE     | 24-4978 | 46.9058  | -109.4114 | 4965              | 0          | 0      | 71    |                            |                            | 24-4978 DLY                               |
| MT    | LIBBY DAM (BASE)     | 24-5011 | 48.4100  | -115.3181 | 2110              | 0          | 0      | 54    |                            |                            | 24-5011 DLY<br>24-5009 DLY                |
| MT    | LIBBY 1 NE RS        | 24-5015 | 48.4036  | -115.5392 | 2096              | 26         | 62     | 109   | 24-5015 15M<br>76-0245 HLY | 24-5015 HLY<br>76-0245 HLY | 24-5015 DLY<br>76-0245 HLY                |
| MT    | LIBBY 32 SSE         | 24-5020 | 47.9578  | -115.2144 | 3440              | 0          | 0      | 64    |                            |                            | 24-5020 DLY                               |
| MT    | LIMA                 | 24-5030 | 44.6331  | -112.5928 | 6279              | 23         | 55     | 92    | 24-5030 15M<br>54-0085 15M | 24-5030 HLY<br>54-0085 15M | 24-5030 DLY<br>54-0085 15M                |



| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                                          |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly                     | Daily                                                    |
| MT    | LINCOLN RS            | 24-5040 | 46.9558  | -112.6547 | 4575              | 0          | 26     | 62    |                       | 24-5040 HLY<br>76-0250 HLY | 24-5040 DLY<br>76-0250 HLY<br>24-5040 HLY                |
| MT    | LINDBERGH LAKE        | 24-5043 | 47.4083  | -113.7125 | 4320              | 0          | 0      | 61    |                       |                            | 24-5043 DLY                                              |
| MT    | LINDSAY               | 24-5045 | 47.2253  | -105.1522 | 2693              | 0          | 0      | 75    |                       |                            | 24-5045 DLY                                              |
| MT    | LIVINGSTON            | 24-5076 | 45.6667  | -110.5667 | 4491              | 0          | 0      | 87    |                       |                            | 24-5076 DLY<br>69-1662 DLY<br>69-1655 DLY                |
| MT    | LIVINGSTON 12 S       | 24-5080 | 45.4956  | -110.5589 | 5044              | 0          | 0      | 70    |                       |                            | 24-5080 DLY                                              |
| MT    | LOLO HOT SPRINGS 2 NE | 24-5146 | 46.7506  | -114.5139 | 4055              | 28         | 28     | 42    | 24-5146 15M           | 24-5146 HLY                | 24-5146 DLY<br>24-5144 DLY<br>24-5146 HLY<br>24-5146 15M |
| MT    | LOMA                  | 24-5153 | 47.9364  | -110.5025 | 2578              | 0          | 0      | 71    |                       |                            | 24-5153 DLY                                              |
| MT    | LONEPINE 1 WNW        | 24-5164 | 47.7167  | -114.6500 | 2881              | 0          | 0      | 47    |                       |                            | 24-5164 DLY                                              |
| MT    | LONESOME LAKE         | 24-5177 | 48.2500  | -110.2000 | 2762              | 0          | 0      | 33    |                       |                            | 24-5177 DLY                                              |
| MT    | LOWETH                | 24-5235 | 46.3667  | -110.7000 | 5804              | 0          | 0      | 32    |                       |                            | 24-5235 DLY                                              |
| MT    | LUSTRE 4 NNW          | 24-5285 | 48.4500  | -105.9333 | 2923              | 0          | 0      | 67    |                       |                            | 24-5285 DLY                                              |
| MT    | MACKENZIE             | 24-5303 | 46.1422  | -104.7353 | 2810              | 0          | 0      | 72    |                       |                            | 24-5303 DLY                                              |
| MT    | MALTA                 | 24-5337 | 48.3500  | -107.8667 | 2260              | 0          | 0      | 90    |                       |                            | 24-5337 DLY<br>24-5334 DLY<br>54-0089 15M<br>24-5335 HLY |
| MT    | MALTA 7 E             | 24-5338 | 48.3939  | -107.7286 | 2231              | 0          | 22     | 49    |                       | 87-1333 HLY                | 24-5338 DLY                                              |
| MT    | MALTA 35 S            | 24-5340 | 47.8417  | -107.9556 | 2615              | 0          | 0      | 59    |                       |                            | 24-5340 DLY                                              |
| MT    | MANHATTAN             | 24-5351 | 45.8667  | -111.3333 | 4232              | 0          | 0      | 37    |                       |                            | 24-5351 DLY                                              |
| MT    | MARTINSDALE 3 NNW     | 24-5387 | 46.5000  | -110.3378 | 4800              | 34         | 61     | 73    | 24-5387 15M           | 24-5387 HLY                | 24-5387 DLY                                              |
| MT    | MARYSVILLE 1 SW       | 24-5402 | 46.7500  | -112.3000 | 5801              | 0          | 0      | 33    |                       |                            | 24-5402 DLY<br>24-5405 DLY                               |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                          |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                                    |
| MT    | MEDICINE LAKE 3 SE | 24-5572 | 48.4828  | -104.4514 | 1942              | 0          | 0      | 89    |                            |                            | 24-5572 DLY                                              |
| MT    | MELSTONE           | 24-5596 | 46.6008  | -107.8706 | 2932              | 0          | 0      | 99    |                            |                            | 24-5596 DLY                                              |
| MT    | MELVILLE 4 W       | 24-5603 | 46.1047  | -110.0500 | 5365              | 0          | 0      | 63    |                            |                            | 24-5603 DLY                                              |
| MT    | MENARD 3 NE        | 24-5608 | 45.9994  | -111.1328 | 5053              | 0          | 0      | 56    |                            |                            | 24-5608 DLY                                              |
| MT    | MILDRED            | 24-5666 | 46.6833  | -104.9500 | 2411              | 0          | 0      | 66    |                            |                            | 24-5666 DLY                                              |
| MT    | MILDRED 5 N        | 24-5668 | 46.7614  | -104.9622 | 2482              | 0          | 0      | 42    |                            |                            | 24-5668 DLY                                              |
| MT    | MILES CITY         | 24-5685 | 46.4000  | -105.8167 | 2362              | 0          | 20     | 97    |                            | 24-5685 HLY                | 24-5685 DLY<br>52-3149 DLY<br>52-3148 DLY<br>24-5685 HLY |
| MT    | MILLEGAN           | 24-5706 | 47.0206  | -111.3700 | 4500              | 46         | 71     | 69    | 24-5706 15M<br>54-0093 15M | 24-5706 HLY<br>54-0093 15M | 24-5706 HLY<br>54-0093 15M                               |
| MT    | MILLEGAN 14 SE     | 24-5712 | 46.8747  | -111.1642 | 4970              | 0          | 0      | 48    |                            |                            | 24-5712 DLY<br>24-8936 DLY                               |
| MT    | MISSOULA 2 NE      | 24-5735 | 46.8983  | -113.9678 | 3420              | 0          | 0      | 57    |                            |                            | 24-5735 DLY<br>69-1637 DLY                               |
| MT    | MIZPAH 4 NNW       | 24-5754 | 46.2858  | -105.2919 | 2480              | 0          | 0      | 71    |                            |                            | 24-5754 DLY                                              |
| MT    | MOCCASIN EXP STN   | 24-5761 | 47.0572  | -109.9511 | 4300              | 0          | 20     | 111   |                            | 87-1493 HLY                | 24-5761 DLY<br>87-1493 HLY                               |
| MT    | MOLT 6 SW          | 24-5791 | 45.7847  | -108.9664 | 3990              | 24         | 55     | 63    | 24-5791 15M<br>54-0094 15M | 24-5791 HLY<br>54-0094 15M | 24-5791 DLY<br>54-0094 15M<br>24-5791 HLY                |
| MT    | MONIDA             | 24-5811 | 44.5667  | -112.3167 | 6785              | 0          | 0      | 36    |                            |                            | 24-5811 DLY                                              |
| MT    | MOORHEAD 9 NE      | 24-5870 | 45.1758  | -105.7517 | 3220              | 0          | 0      | 58    |                            |                            | 24-5870 DLY                                              |
| MT    | MOSBY 4 ENE        | 24-5872 | 47.0219  | -107.8225 | 2910              | 0          | 0      | 59    |                            |                            | 24-5872 DLY                                              |
| MT    | MYSTIC LAKE        | 24-5961 | 45.2436  | -109.7311 | 6544              | 0          | 0      | 94    |                            |                            | 24-5961 DLY                                              |

| State | Station name             | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                         |
|-------|--------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                          |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                   |
| MT    | NEIHART 8 NNW            | 24-6008 | 47.0414  | -110.7761 | 5230              | 27         | 34     | 47    | 24-6008 15M                | 24-6008 HLY                               | 24-6008 DLY<br>24-6007 DLY<br>24-6008 HLY<br>24-6008 HLY                |
| MT    | NORRIS MADISON PWR HOUSE | 24-6157 | 45.4875  | -111.6336 | 4745              | 0          | 0      | 117   |                            |                                           | 24-6157 DLY                                                             |
| MT    | NYE #2                   | 24-6190 | 45.4350  | -109.8081 | 4840              | 0          | 0      | 50    |                            |                                           | 24-6190 DLY                                                             |
| MT    | OLNEY                    | 24-6218 | 48.5497  | -114.5739 | 3165              | 0          | 0      | 55    |                            |                                           | 24-6218 DLY<br>76-0299 HLY                                              |
| MT    | OPHEIM 10 N              | 24-6236 | 48.9989  | -106.3800 | 2878              | 0          | 0      | 63    |                            |                                           | 24-6236 DLY                                                             |
| MT    | OPHEIM 12 SSE            | 24-6238 | 48.6956  | -106.3153 | 2936              | 0          | 0      | 78    |                            |                                           | 24-6238 DLY                                                             |
| MT    | OVANDO                   | 24-6302 | 47.0189  | -113.1314 | 4109              | 30         | 30     | 100   | 24-6302 15M                | 24-6302 15M                               | 24-6302 DLY<br>24-6302 15M<br>24-6302 HLY                               |
| MT    | OVANDO 9 SSE             | 24-6304 | 46.8819  | -113.0564 | 4325              | 0          | 0      | 31    |                            |                                           | 24-6304 DLY                                                             |
| MT    | PENDROY 2 NNW            | 24-6426 | 48.1167  | -112.3333 | 4365              | 0          | 0      | 47    |                            |                                           | 24-6426 DLY                                                             |
| MT    | PHILLIPSBURG RS          | 24-6472 | 46.3158  | -113.3000 | 5270              | 29         | 39     | 104   | 24-6472 15M<br>54-0095 15M | 76-0263 HLY<br>54-0095 15M<br>24-6472 15M | 24-6472 DLY<br>24-6470 DLY<br>54-0095 15M<br>24-6472 15M<br>54-0095 15M |
| MT    | PLAINS RS                | 24-6562 | 47.4661  | -114.8794 | 2490              | 30         | 58     | 90    | 24-6562 15M<br>54-0096 15M | 24-6562 HLY<br>76-0266 HLY<br>54-0096 15M | 24-6562 DLY<br>76-0266 HLY<br>54-0096 15M<br>24-6562 HLY                |
| MT    | PLEASANT VALLEY 5 SE     | 24-6580 | 48.1056  | -114.8778 | 3540              | 19         | 43     | 82    | 24-6580 15M                | 24-6580 HLY                               | 24-6580 DLY<br>24-6576 DLY<br>24-6580 HLY                               |
| MT    | PLENTYWOOD               | 24-6586 | 48.7747  | -104.5672 | 2048              | 0          | 0      | 72    |                            |                                           | 24-6586 DLY<br>69-1715 DLY                                              |
| MT    | PLEVNA                   | 24-6601 | 46.4178  | -104.5164 | 2780              | 0          | 0      | 108   |                            |                                           | 24-6601 DLY                                                             |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                                          |                                                          |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------------------------------------|----------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                                   | Daily                                                    |
| MT    | POLEBRIDGE         | 24-6615 | 48.7647  | -114.2842 | 3520              | 30         | 60     | 80    | 24-6615 15M<br>24-6628 15M | 24-6615 HLY<br>76-0268 HLY<br>24-6628 15M<br>24-6615 15M | 24-6615 DLY<br>76-0268 HLY<br>24-6618 DLY<br>24-6615 15M |
| MT    | POLSON             | 24-6635 | 47.6750  | -114.1906 | 3010              | 0          | 0      | 94    |                            |                                                          | 24-6635 DLY                                              |
| MT    | SKQ DAM            | 24-6640 | 47.6775  | -114.2419 | 2730              | 0          | 0      | 73    |                            |                                                          | 24-6640 DLY                                              |
| MT    | PONY               | 24-6655 | 45.6572  | -111.8986 | 5590              | 0          | 0      | 37    |                            |                                                          | 24-6655 DLY                                              |
| MT    | POPLAR 2 E         | 24-6660 | 48.1333  | -105.1500 | 2000              | 0          | 0      | 99    |                            |                                                          | 24-6660 DLY<br>52-6660 DLY                               |
| MT    | PORT OF MORGAN     | 24-6672 | 48.9978  | -107.8331 | 2830              | 0          | 0      | 61    |                            |                                                          | 24-6672 DLY<br>24-5191 DLY                               |
| MT    | POTOMAC            | 24-6685 | 46.8767  | -113.5625 | 3690              | 0          | 0      | 47    |                            |                                                          | 24-6685 DLY                                              |
| MT    | POWDERVILLE 8 NNE  | 24-6691 | 45.8525  | -105.0350 | 2800              | 0          | 0      | 50    |                            |                                                          | 24-6691 DLY                                              |
| MT    | POWER 6 SE         | 24-6700 | 47.6544  | -111.5981 | 3750              | 0          | 0      | 60    |                            |                                                          | 24-6700 DLY                                              |
| MT    | PRYOR              | 24-6747 | 45.4339  | -108.5361 | 4057              | 0          | 0      | 58    |                            |                                                          | 24-6747 DLY                                              |
| MT    | RAPELJE            | 24-6862 | 45.9717  | -109.2536 | 4068              | 0          | 0      | 113   |                            |                                                          | 24-6862 DLY                                              |
| MT    | RAYMOND BORDER STN | 24-6893 | 48.9975  | -104.5750 | 2345              | 0          | 0      | 62    |                            |                                                          | 24-6893 DLY                                              |
| MT    | RAYNESFORD 2 NNW   | 24-6902 | 47.2972  | -110.7456 | 4215              | 0          | 0      | 55    |                            |                                                          | 24-6902 DLY<br>24-6900 DLY                               |
| MT    | RED LODGE          | 24-6918 | 45.1769  | -109.2572 | 5646              | 0          | 0      | 119   |                            |                                                          | 24-6918 DLY                                              |
| MT    | REDSTONE           | 24-6927 | 48.8197  | -104.9428 | 2106              | 0          | 0      | 56    |                            |                                                          | 24-6927 DLY                                              |
| MT    | REEDPOINT          | 24-6946 | 45.7061  | -109.5400 | 3744              | 27         | 56     | 60    | 24-6946 15M<br>54-0099 15M | 24-6946 HLY<br>54-0099 15M                               | 24-6946 HLY<br>54-0099 15M                               |
| MT    | RENOVA             | 24-6964 | 45.8167  | -112.1500 | 4383              | 0          | 0      | 32    |                            |                                                          | 24-6964 DLY                                              |
| MT    | RIDGEWAY 1 S       | 24-7034 | 45.5022  | -104.4478 | 3316              | 0          | 0      | 70    |                            |                                                          | 24-7034 DLY                                              |
| MT    | ROBERTS 1 W        | 24-7128 | 45.3572  | -109.1883 | 4650              | 0          | 0      | 71    |                            |                                                          | 24-7128 DLY                                              |
| MT    | ROCK SPRINGS       | 24-7136 | 46.8203  | -106.2453 | 3024              | 0          | 0      | 68    |                            |                                                          | 24-7136 DLY<br>24-1883 DLY                               |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                                         |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                                                   |
| MT    | ROCK SPRINGS 7 SE | 24-7140 | 46.7833  | -106.1333 | 3202              | 0          | 0      | 34    |                            |                                           | 24-7140 DLY                                                             |
| MT    | ROCKY BOY         | 24-7148 | 48.2500  | -109.7833 | 3691              | 0          | 26     | 60    |                            | 76-0277 HLY                               | 24-7148 DLY<br>76-0277 HLY                                              |
| MT    | ROGERS PASS 9 NNE | 24-7159 | 47.1900  | -112.2900 | 4200              | 0          | 0      | 48    |                            |                                           | 24-7159 DLY                                                             |
| MT    | ROUND BUTTE 1 NNW | 24-7204 | 47.5375  | -114.2761 | 3100              | 26         | 46     | 51    | 24-7204 15M                | 24-7204 HLY                               | 24-7204 HLY                                                             |
| MT    | ROUNDUP           | 24-7214 | 46.4381  | -108.5319 | 3200              | 0          | 0      | 96    |                            |                                           | 24-7214 DLY<br>69-1625 DLY                                              |
| MT    | ROY 8 NE          | 24-7228 | 47.4869  | -108.8372 | 3085              | 0          | 0      | 66    |                            |                                           | 24-7228 DLY                                                             |
| MT    | RUDYARD 27 N      | 24-7250 | 48.9375  | -110.5661 | 3010              | 0          | 0      | 35    |                            |                                           | 24-7250 DLY                                                             |
| MT    | RUSSELL           | 24-7258 | 48.0686  | -111.0661 | 3200              | 26         | 37     | 40    | 24-7258 15M<br>54-0100 15M | 24-7258 HLY<br>54-0100 15M                | 24-7258 HLY<br>54-0100 15M                                              |
| MT    | RYEGATE           | 24-7261 | 46.2986  | -109.2561 | 3650              | 0          | 0      | 27    |                            |                                           | 24-7261 DLY<br>69-1576 DLY                                              |
| MT    | RYEGATE 18 NNW    | 24-7263 | 46.5333  | -109.3442 | 4440              | 0          | 0      | 61    |                            |                                           | 24-7263 DLY                                                             |
| MT    | SACO 1 NNW        | 24-7265 | 48.4661  | -107.3528 | 2185              | 0          | 0      | 54    |                            |                                           | 24-7265 DLY                                                             |
| MT    | SAINT IGNATIUS    | 24-7286 | 47.3150  | -114.0983 | 2915              | 0          | 30     | 115   |                            | 87-4811 HLY                               | 24-7286 DLY<br>87-4811 HLY                                              |
| MT    | ST MARY           | 24-7292 | 48.7386  | -113.4294 | 4560              | 31         | 33     | 39    | 24-7292 15M<br>57-0020 15M | 24-7292 HLY<br>76-0297 HLY<br>57-0020 15M | 24-7292 DLY<br>57-0020 15M<br>54-0101 15M<br>53-0098 HLY<br>24-7292 HLY |
| MT    | SAINT REGIS 1 NE  | 24-7318 | 47.3036  | -115.0908 | 2660              | 22         | 37     | 54    | 24-7316 15M                | 24-7316 HLY<br>76-0298 HLY                | 24-7318 DLY<br>76-0298 HLY<br>24-7316 HLY<br>24-7314 DLY                |
| MT    | SAVAGE            | 24-7382 | 47.4536  | -104.3378 | 1978              | 0          | 0      | 117   |                            |                                           | 24-7382 DLY                                                             |
| MT    | SCOBAY            | 24-7424 | 48.7833  | -105.4167 | 2458              | 0          | 0      | 47    |                            |                                           | 24-7424 DLY<br>99-7424 DLY                                              |

| State | Station name            | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                                          |
|-------|-------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                         |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                    | Daily                                                    |
| MT    | SCOBAY 4 NW             | 24-7425 | 48.8356  | -105.4747 | 2390              | 29         | 29     | 39    | 24-7425 15M<br>54-0102 15M                | 24-7425 15M<br>54-0102 15M                | 24-7425 DLY<br>54-0102 15M                               |
| MT    | SEELEY LAKE RS          | 24-7448 | 47.2142  | -113.5203 | 4100              | 27         | 52     | 82    | 24-7448 15M                               | 24-7448 HLY                               | 24-7448 DLY<br>69-1640 DLY                               |
| MT    | SHELBY                  | 24-7500 | 48.5133  | -111.8550 | 3325              | 31         | 53     | 68    | 24-7500 15M<br>24-7501 15M<br>54-0103 15M | 24-7500 HLY<br>24-7501 HLY<br>54-0103 15M | 24-7500 DLY<br>24-7501 HLY<br>24-7501 DLY<br>24-7500 HLY |
| MT    | SHONKIN 7 S             | 24-7540 | 47.5314  | -110.5764 | 4300              | 0          | 0      | 61    |                                           |                                           | 24-7540 DLY                                              |
| MT    | SIDNEY                  | 24-7560 | 47.7283  | -104.1469 | 1933              | 0          | 0      | 83    |                                           |                                           | 24-7560 DLY<br>24-7562 DLY<br>62-0027 DLY                |
| MT    | SILVER LAKE             | 24-7605 | 46.1667  | -113.2167 | 6483              | 0          | 0      | 44    |                                           |                                           | 24-7605 DLY<br>24-3434 DLY<br>24-3437 DLY                |
| MT    | SILVERSTAR              | 24-7610 | 45.6917  | -112.2833 | 4585              | 26         | 53     | 65    | 24-7610 15M<br>54-0105 15M                | 24-7610 HLY<br>54-0105 15M                | 24-7610 HLY<br>54-0105 15M                               |
| MT    | SIMMS 1 NE              | 24-7618 | 47.4961  | -111.9161 | 3558              | 0          | 0      | 35    |                                           |                                           | 24-7618 DLY<br>24-7618 HLY                               |
| MT    | SIMPSON 6 N - WILDHORSE | 24-7620 | 48.9981  | -110.2158 | 2815              | 0          | 0      | 87    |                                           |                                           | 24-7620 DLY                                              |
| MT    | SONNETTE 7 SW           | 24-7740 | 45.3242  | -105.9136 | 3914              | 0          | 0      | 54    |                                           |                                           | 24-7740 DLY                                              |
| MT    | SPRINGBROOK             | 24-7796 | 47.3838  | -105.4797 | 2580              | 0          | 0      | 25    |                                           |                                           | 24-7796 DLY                                              |
| MT    | SPRINGDALE              | 24-7800 | 45.7383  | -110.2242 | 4235              | 0          | 0      | 68    |                                           |                                           | 24-7800 DLY                                              |
| MT    | STANFORD                | 24-7864 | 47.1550  | -110.2239 | 4275              | 0          | 0      | 91    |                                           |                                           | 24-7864 DLY<br>24-7858 DLY                               |
| MT    | STEVENSVILLE            | 24-7894 | 46.5136  | -114.0911 | 3375              | 28         | 31     | 111   | 24-7894 15M<br>54-0106 15M                | 76-0294 HLY<br>54-0106 15M<br>24-7894 15M | 24-7894 DLY                                              |
| MT    | SULA 3 ENE              | 24-7964 | 45.8478  | -113.9269 | 4475              | 0          | 0      | 65    |                                           |                                           | 24-7964 DLY<br>76-0300 HLY                               |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                          |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                                    |
| MT    | SUMMIT            | 24-7978 | 48.3161  | -113.3542 | 5233              | 26         | 47     | 68    | 24-7978 15M                | 24-7978 HLY                | 24-7978 DLY<br>24-7978 HLY                               |
| MT    | SUNBURST 8 E      | 24-7996 | 48.8869  | -111.7275 | 3700              | 0          | 0      | 62    |                            |                            | 24-7996 DLY                                              |
| MT    | SUN RVR 4 S       | 24-8021 | 47.4772  | -111.7375 | 3600              | 0          | 0      | 116   |                            |                            | 24-8021 DLY<br>52-8021 DLY<br>52-3195 DLY<br>24-3195 DLY |
| MT    | SWAN LAKE         | 24-8087 | 47.9161  | -113.8389 | 3100              | 25         | 48     | 60    | 24-8087 15M                | 24-8087 HLY                | 24-8087 DLY<br>24-8087 HLY                               |
| MT    | SWEETGRASS        | 24-8093 | 48.9972  | -111.9642 | 3510              | 0          | 0      | 51    |                            |                            | 24-8093 DLY<br>24-8093 HLY                               |
| MT    | SWIFT DAM         | 24-8101 | 48.1639  | -112.8669 | 4780              | 27         | 32     | 40    | 24-8101 15M                | 24-8101 HLY                | 24-8101 DLY<br>24-8101 HLY                               |
| MT    | TERRY             | 24-8165 | 46.7939  | -105.3022 | 2250              | 0          | 22     | 70    |                            | 87-0403 HLY                | 24-8165 DLY<br>87-0403 HLY                               |
| MT    | TERRY 21 NNW      | 24-8169 | 47.0700  | -105.4953 | 3142              | 28         | 66     | 78    | 24-8169 15M<br>54-0108 15M | 24-8169 HLY<br>54-0108 15M | 24-8169 DLY<br>54-0108 15M<br>24-8169 HLY<br>54-0108 15M |
| MT    | THOENY 1 E        | 24-8202 | 48.8833  | -106.8833 | 2461              | 0          | 36     | 48    |                            | 76-0175 HLY                | 24-8202 DLY<br>76-0175 HLY                               |
| MT    | THOMPSON FALLS PH | 24-8211 | 47.5933  | -115.3594 | 2380              | 0          | 22     | 112   |                            | 76-0302 HLY                | 24-8211 DLY<br>24-8207 DLY                               |
| MT    | TIBER DAM         | 24-8233 | 48.3103  | -111.0878 | 2850              | 0          | 0      | 59    |                            |                            | 24-8233 DLY                                              |
| MT    | TOSTON 2 SW       | 24-8313 | 46.1500  | -111.4833 | 3953              | 0          | 33     | 61    |                            | 24-8313 HLY<br>87-2153 HLY | 24-8313 DLY<br>87-2153 HLY<br>24-8314 DLY<br>24-8313 HLY |
| MT    | TOWNSEND 3SE      | 24-8324 | 46.2989  | -111.4525 | 3964              | 0          | 0      | 74    |                            |                            | 24-8324 DLY                                              |
| MT    | TOWNSEND 12 ENE   | 24-8329 | 46.3567  | -111.2842 | 5050              | 32         | 55     | 63    | 24-8329 15M<br>54-0109 15M | 24-8329 HLY<br>54-0109 15M | 24-8329 HLY<br>54-0109 15M                               |



| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                     |
| MT    | TRIDENT             | 24-8363 | 45.9467  | -111.4758 | 4036              | 38         | 37     | 80    | 24-5122 15M<br>54-0088 15M | 24-5122 15M<br>54-0088 15M | 24-8363 DLY                               |
| MT    | TROUT CREEK RS      | 24-8380 | 47.8669  | -115.6278 | 2356              | 0          | 0      | 103   |                            |                            | 24-8380 DLY<br>24-8379 DLY<br>76-0187 HLY |
| MT    | TROY                | 24-8390 | 48.4806  | -115.9061 | 1929              | 0          | 20     | 64    |                            | 76-0305 HLY                | 24-8390 DLY<br>24-8392 DLY                |
| MT    | TURNER              | 24-8413 | 48.8500  | -108.4000 | 3046              | 0          | 0      | 50    |                            |                            | 24-8413 DLY                               |
| MT    | TURNER 11N          | 24-8415 | 48.9992  | -108.3894 | 2982              | 0          | 0      | 50    |                            |                            | 24-8415 DLY<br>71-0362 DLY                |
| MT    | TWIN BRIDGES        | 24-8430 | 45.5472  | -112.3261 | 4625              | 0          | 0      | 69    |                            |                            | 24-8430 DLY                               |
| MT    | UTICA               | 24-8493 | 46.9667  | -110.0833 | 4705              | 0          | 0      | 30    |                            |                            | 24-8493 DLY<br>24-8493 HLY                |
| MT    | VALENTINE           | 24-8498 | 47.3392  | -108.4992 | 2905              | 0          | 0      | 57    |                            |                            | 24-8498 DLY                               |
| MT    | VALIER              | 24-8501 | 48.3119  | -112.2492 | 3807              | 0          | 0      | 101   |                            |                            | 24-8501 DLY                               |
| MT    | VANANDA 6 NE        | 24-8511 | 46.4300  | -106.9200 | 2625              | 26         | 55     | 62    | 24-8511 15M<br>54-0110 15M | 24-8511 HLY<br>54-0110 15M | 24-8511 DLY<br>54-0110 15M<br>24-8511 HLY |
| MT    | VIDA 6 NE           | 24-8569 | 47.8800  | -105.3686 | 2284              | 0          | 0      | 79    |                            |                            | 24-8569 DLY                               |
| MT    | VIRGINIA CITY       | 24-8597 | 45.2925  | -111.9478 | 5773              | 0          | 0      | 119   |                            |                            | 24-8597 DLY<br>52-8597 DLY                |
| MT    | VOLBORG             | 24-8607 | 45.8436  | -105.6808 | 2980              | 0          | 0      | 70    |                            |                            | 24-8607 DLY                               |
| MT    | WARRICK 2 NW        | 24-8693 | 48.0878  | -109.6453 | 4250              | 0          | 0      | 36    |                            |                            | 24-8693 DLY<br>24-8691 DLY                |
| MT    | WEBSTER 3 E         | 24-8732 | 46.0558  | -104.1853 | 3140              | 0          | 0      | 61    |                            |                            | 24-8732 DLY                               |
| MT    | WESTBY              | 24-8777 | 48.8744  | -104.0503 | 2103              | 22         | 50     | 79    | 24-8777 15M<br>54-0111 15M | 24-8777 HLY<br>54-0111 15M | 24-8777 DLY<br>54-0111 15M                |
| MT    | WESTERN AG RSCH CTR | 24-8783 | 46.3283  | -114.0847 | 3608              | 0          | 33     | 55    |                            | 87-3021 HLY                | 24-8783 DLY<br>87-3021 HLY                |

| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                          |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                                    |
| MT    | W GLACIER             | 24-8809 | 48.5003  | -113.9847 | 3148              | 35         | 47     | 74    | 24-8809 15M                | 24-8809 HLY<br>76-0308 HLY | 24-8809 DLY                                              |
| MT    | WHITEFISH             | 24-8902 | 48.4081  | -114.3594 | 3100              | 0          | 0      | 81    |                            |                            | 24-8902 DLY<br>69-1542 DLY<br>24-8893 DLY                |
| MT    | WHITE SULPHUR SPRINGS | 24-8927 | 46.5425  | -110.9042 | 5160              | 0          | 32     | 106   |                            | 24-8927 HLY<br>76-0317 HLY | 24-8927 DLY<br>76-0317 HLY<br>24-8930 DLY<br>24-8927 HLY |
| MT    | WHITEWATER            | 24-8939 | 48.7597  | -107.6250 | 2328              | 0          | 0      | 67    |                            |                            | 24-8939 DLY                                              |
| MT    | WIBAUX 2 E            | 24-8957 | 46.9878  | -104.1567 | 2696              | 0          | 0      | 90    |                            |                            | 24-8957 DLY                                              |
| MT    | WILLSALL              | 24-9018 | 46.0000  | -110.6667 | 5052              | 0          | 0      | 33    |                            |                            | 24-9018 DLY<br>69-1656 DLY<br>24-9018 HLY                |
| MT    | WILLSALL 8 ENE        | 24-9023 | 46.0306  | -110.5056 | 5865              | 0          | 0      | 57    |                            |                            | 24-9023 DLY                                              |
| MT    | WINIFRED              | 24-9033 | 47.5597  | -109.3767 | 3243              | 0          | 0      | 83    |                            |                            | 24-9033 DLY                                              |
| MT    | WINNETT 6NNE          | 24-9048 | 47.0831  | -108.3164 | 2865              | 0          | 0      | 43    |                            |                            | 24-9048 DLY<br>24-9047 DLY                               |
| MT    | WINNETT 8 ESE         | 24-9052 | 46.9389  | -108.1967 | 2810              | 29         | 59     | 68    | 24-9052 15M<br>54-0114 15M | 24-9052 HLY<br>54-0114 15M | 24-9052 HLY<br>54-0114 15M                               |
| MT    | WISDOM                | 24-9067 | 45.6178  | -113.4514 | 6060              | 32         | 54     | 82    | 24-9067 15M                | 24-9067 HLY                | 24-9067 DLY                                              |
| MT    | WISE RVR 3 WNW        | 24-9082 | 45.8025  | -112.9939 | 5730              | 0          | 0      | 72    |                            |                            | 24-9082 DLY                                              |
| MT    | WOLF PT               | 24-9103 | 48.1000  | -105.6483 | 2090              | 0          | 0      | 45    |                            |                            | 24-9103 DLY<br>24-9103 HLY                               |
| MT    | WYOLA 1 SW            | 24-9175 | 45.1217  | -107.4061 | 3730              | 0          | 0      | 70    |                            |                            | 24-9175 DLY                                              |
| MT    | YELLOWTAIL DAM        | 24-9240 | 45.3128  | -107.9383 | 3305              | 32         | 41     | 63    | 24-9240 15M<br>54-0115 15M | 24-9240 HLY<br>54-0115 15M | 24-9240 DLY<br>69-1476 DLY<br>54-0115 15M                |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                                          |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                    | Daily                                                    |
| MT    | ZORTMAN           | 24-9900 | 47.9186  | -108.5244 | 4035              | 30         | 43     | 58    | 24-9900 15M<br>54-0116 15M                | 24-9900 HLY<br>76-0323 HLY<br>54-0116 15M | 24-9900 DLY<br>76-0323 HLY<br>24-9903 DLY<br>54-0116 15M |
| WY    | AFTON             | 48-0027 | 42.7331  | -110.9217 | 6248              | 0          | 0      | 105   |                                           |                                           | 48-0027 DLY<br>48-4095 DLY                               |
| WY    | ALBIN             | 48-0080 | 41.4000  | -104.1017 | 5345              | 0          | 0      | 61    |                                           |                                           | 48-0080 DLY                                              |
| WY    | ALTA 1 NNW        | 48-0140 | 43.7728  | -111.0339 | 6440              | 0          | 0      | 96    |                                           |                                           | 48-0140 DLY                                              |
| WY    | ALVA 5 ESE        | 48-0200 | 44.6522  | -104.3492 | 4390              | 0          | 0      | 38    |                                           |                                           | 48-0200 DLY                                              |
| WY    | ARCHER            | 48-0270 | 41.1517  | -104.6575 | 6010              | 0          | 0      | 85    |                                           |                                           | 48-0270 DLY<br>69-2404 DLY                               |
| WY    | BAGGS             | 48-0484 | 41.0383  | -107.6578 | 6319              | 0          | 0      | 40    |                                           |                                           | 48-0484 DLY<br>69-2279 DLY                               |
| WY    | BARNUM 1 N        | 48-0528 | 43.7000  | -106.9167 | 5154              | 0          | 0      | 30    |                                           |                                           | 48-0528 DLY<br>48-0528 HLY                               |
| WY    | BASIN             | 48-0540 | 44.3797  | -108.0350 | 3840              | 0          | 0      | 99    |                                           |                                           | 48-0540 DLY                                              |
| WY    | BATES CREEK #2    | 48-0552 | 42.6233  | -106.3567 | 6042              | 0          | 0      | 53    |                                           |                                           | 48-0552 DLY                                              |
| WY    | BEDFORD 3 SE      | 48-0603 | 42.8731  | -110.9069 | 6355              | 0          | 0      | 106   |                                           |                                           | 48-0603 DLY<br>48-0605 DLY                               |
| WY    | BIG HORN          | 48-0680 | 44.6828  | -107.0089 | 4208              | 0          | 0      | 44    |                                           |                                           | 48-0680 DLY<br>99-0680 DLY                               |
| WY    | BIG PINEY         | 48-0695 | 42.5414  | -110.1253 | 6835              | 25         | 50     | 65    | 48-0695 15M<br>54-0152 15M<br>48-0697 15M | 48-0695 HLY<br>54-0152 15M<br>48-0697 15M | 48-0695 DLY<br>54-0152 15M<br>48-0697 15M<br>48-0695 HLY |
| WY    | BILLY CREEK       | 48-0740 | 44.1242  | -106.7319 | 4975              | 0          | 0      | 50    |                                           |                                           | 48-0740 DLY                                              |
| WY    | BITTER CREEK 4 NE | 48-0761 | 41.5897  | -108.5094 | 6722              | 0          | 0      | 47    |                                           |                                           | 48-0761 DLY                                              |
| WY    | BLACK MTN         | 48-0778 | 43.6561  | -107.7375 | 5635              | 0          | 0      | 54    |                                           |                                           | 48-0778 DLY                                              |
| WY    | BONDURANT         | 48-0865 | 43.2094  | -110.4033 | 6693              | 0          | 23     | 69    |                                           | 76-0465 HLY                               | 48-0865 DLY                                              |

| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                                         |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                                                   |
| WY    | BORDER 3 N            | 48-0915 | 42.2128  | -111.0456 | 6069              | 0          | 0      | 90    |                            |                            | 48-0915 DLY                                                             |
| WY    | BOULDER REARING STN   | 48-0951 | 42.7156  | -109.6894 | 6940              | 0          | 0      | 34    |                            |                            | 48-0951 DLY                                                             |
| WY    | BOYSEN DAM            | 48-1000 | 43.4053  | -108.1633 | 4875              | 42         | 65     | 73    | 48-1000 15M<br>54-0153 15M | 48-1000 HLY<br>54-0153 15M | 48-1000 DLY<br>48-1000 HLY                                              |
| WY    | BUFFALO               | 48-1165 | 44.3544  | -106.6994 | 4639              | 35         | 57     | 84    | 48-1165 15M<br>54-0154 15M | 48-1165 HLY<br>54-0154 15M | 48-1165 DLY                                                             |
| WY    | BUFFALO BILL DAM      | 48-1175 | 44.5075  | -109.1675 | 5160              | 0          | 0      | 102   |                            |                            | 48-1175 DLY                                                             |
| WY    | BURGESS JUNCTION      | 48-1220 | 44.7742  | -107.5217 | 8060              | 0          | 0      | 57    |                            |                            | 48-1220 DLY                                                             |
| WY    | BURRIS                | 48-1284 | 43.3656  | -109.2756 | 6125              | 0          | 0      | 53    |                            |                            | 48-1284 DLY                                                             |
| WY    | CARPENTER 3N          | 48-1547 | 41.0844  | -104.3789 | 5437              | 0          | 0      | 78    |                            |                            | 48-1547 DLY<br>69-2446 DLY<br>48-1550 DLY                               |
| WY    | CASPER 1SW            | 48-1572 | 42.8519  | -106.2844 | 5143              | 0          | 0      | 85    |                            |                            | 48-1572 DLY<br>99-1566 DLY<br>99-1565 DLY<br>48-1565 DLY<br>48-1569 DLY |
| WY    | CENTENNIAL 1NE        | 48-1610 | 41.3136  | -106.1292 | 8170              | 0          | 0      | 89    |                            |                            | 48-1610 DLY<br>69-2192 DLY                                              |
| WY    | CHUGWATER             | 48-1730 | 41.7594  | -104.8222 | 5304              | 0          | 0      | 110   |                            |                            | 48-1730 DLY                                                             |
| WY    | CHURCH BUTTES GAS PLT | 48-1736 | 41.3975  | -110.0883 | 7079              | 0          | 0      | 63    |                            |                            | 48-1736 DLY                                                             |
| WY    | CLARK 4 SW            | 48-1770 | 44.9000  | -109.2333 | 4534              | 0          | 0      | 35    |                            |                            | 48-1770 DLY                                                             |
| WY    | CLARK 3NE             | 48-1775 | 44.9364  | -109.1372 | 4117              | 0          | 0      | 61    |                            |                            | 48-1775 DLY                                                             |
| WY    | CLEARMONT 5 SW        | 48-1816 | 44.5781  | -106.4472 | 3995              | 0          | 0      | 73    |                            |                            | 48-1816 DLY                                                             |
| WY    | CODY                  | 48-1840 | 44.5147  | -109.0450 | 5075              | 0          | 0      | 104   |                            |                            | 48-1840 DLY<br>69-2625 DLY<br>69-2621 DLY                               |
| WY    | CODY 12SE             | 48-1850 | 44.4139  | -108.9006 | 5248              | 0          | 0      | 51    |                            |                            | 48-1850 DLY                                                             |
| WY    | CODY 21 SW            | 48-1855 | 44.3367  | -109.3914 | 5840              | 0          | 0      | 43    |                            |                            | 48-1855 DLY                                                             |

| State | Station name         | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                                          |                                           |
|-------|----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------------------------------------|-------------------------------------------|
|       |                      |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                                   | Daily                                     |
| WY    | COLONY               | 48-1905 | 44.8711  | -104.1533 | 3480              | 0          | 0      | 93    |                            |                                                          | 48-1905 DLY                               |
| WY    | CRANDALL CREEK       | 48-2135 | 44.8675  | -109.6436 | 6509              | 0          | 0      | 49    |                            |                                                          | 48-2135 DLY                               |
| WY    | CRESTON              | 48-2175 | 41.7333  | -107.7333 | 7044              | 0          | 25     | 25    |                            | 48-2175 HLY                                              | 48-2175 DLY<br>48-2175 HLY                |
| WY    | DANIEL FISH HATCHERY | 48-2242 | 42.9281  | -110.1272 | 7341              | 0          | 0      | 34    |                            |                                                          | 48-2242 DLY                               |
| WY    | DARWIN RCH           | 48-2375 | 43.4128  | -110.1633 | 8190              | 0          | 0      | 48    |                            |                                                          | 48-2375 DLY                               |
| WY    | DAYTON               | 48-2399 | 44.8767  | -107.2631 | 3920              | 0          | 0      | 33    |                            |                                                          | 48-2399 DLY                               |
| WY    | DEAVER               | 48-2415 | 44.8919  | -108.5928 | 4105              | 0          | 0      | 87    |                            |                                                          | 48-2415 DLY                               |
| WY    | DEVILS TWR #2        | 48-2466 | 44.5833  | -104.7147 | 3862              | 0          | 0      | 75    |                            |                                                          | 48-2466 DLY<br>48-2465 DLY                |
| WY    | DILLINGER            | 48-2580 | 44.0992  | -105.1175 | 4310              | 0          | 0      | 77    |                            |                                                          | 48-2580 DLY                               |
| WY    | DIVERSION DAM        | 48-2595 | 43.2336  | -108.9133 | 5578              | 0          | 0      | 80    |                            |                                                          | 48-2595 DLY                               |
| WY    | DIXON                | 48-2610 | 41.0333  | -107.5333 | 6365              | 0          | 0      | 54    |                            |                                                          | 48-2610 DLY                               |
| WY    | DOUBLE FOUR RCH      | 48-2680 | 42.1794  | -105.4017 | 6120              | 0          | 0      | 60    |                            |                                                          | 48-2680 DLY                               |
| WY    | DOUGLAS 1 SE         | 48-2685 | 42.7467  | -105.3603 | 4870              | 0          | 69     | 109   |                            | 48-2685 HLY<br>72-3872 HLY<br>48-2693 HLY<br>48-2690 HLY | 48-2685 DLY<br>79-0091 DLY<br>79-0019 DLY |
| WY    | DOUGLAS 17NE         | 48-2696 | 42.9533  | -105.1650 | 4930              | 33         | 50     | 64    | 48-2696 15M<br>54-0156 15M | 48-2696 HLY<br>54-0156 15M                               | 48-2696 DLY<br>48-2696 HLY<br>54-0156 15M |
| WY    | DUBOIS               | 48-2715 | 43.5397  | -109.6553 | 6955              | 35         | 53     | 91    | 48-2715 15M<br>54-0157 15M | 48-2715 HLY<br>54-0157 15M                               | 48-2715 DLY                               |
| WY    | DULL CTR 1SE         | 48-2725 | 43.4117  | -104.9614 | 4415              | 0          | 52     | 90    |                            | 48-2725 HLY<br>54-0158 15M                               | 48-2725 DLY                               |
| WY    | ECHETA 2 NW          | 48-2881 | 44.4828  | -105.8992 | 4000              | 0          | 0      | 54    |                            |                                                          | 48-2881 DLY                               |
| WY    | ELK MTN              | 48-2995 | 41.6878  | -106.4136 | 7265              | 0          | 0      | 115   |                            |                                                          | 48-2995 DLY<br>99-2995 DLY<br>69-2284 DLY |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                     |
| WY    | EMBLEM            | 48-3031 | 44.4972  | -108.3906 | 4448              | 0          | 0      | 77    |                            |                            | 48-3031 DLY<br>48-3031 HLY<br>48-3031 HLY |
| WY    | ENCAMPMENT 10 ESE | 48-3045 | 41.1833  | -106.6167 | 7385              | 0          | 0      | 50    |                            |                            | 48-3045 DLY                               |
| WY    | ENCAMPMENT        | 48-3050 | 41.2058  | -106.7883 | 7290              | 31         | 51     | 55    | 48-3050 15M<br>54-0159 15M | 48-3050 HLY<br>54-0159 15M | 48-3050 HLY<br>54-0159 15M                |
| WY    | EVANSTON 1 E      | 48-3100 | 41.2650  | -110.9508 | 6825              | 23         | 47     | 118   | 48-3100 15M                | 48-3100 HLY                | 48-3100 DLY                               |
| WY    | FARSON 2NNE       | 48-3170 | 42.1397  | -109.4308 | 6620              | 0          | 0      | 81    |                            |                            | 48-3170 DLY                               |
| WY    | FONTENELLE DAM    | 48-3396 | 41.9861  | -110.0611 | 6485              | 0          | 0      | 58    |                            |                            | 48-3396 DLY                               |
| WY    | FT LARAMIE 11 NNW | 48-3490 | 42.3833  | -104.5333 | 4764              | 0          | 0      | 51    |                            |                            | 48-3490 DLY<br>99-3490 DLY                |
| WY    | FT WASHAKIE 1 SE  | 48-3570 | 42.9833  | -108.8667 | 5554              | 0          | 0      | 40    |                            |                            | 48-3570 DLY                               |
| WY    | FOSSIL BUTTE      | 48-3582 | 41.8369  | -110.7706 | 6785              | 0          | 0      | 31    |                            |                            | 48-3582 DLY                               |
| WY    | FOXPARK           | 48-3630 | 41.0833  | -106.1500 | 9067              | 0          | 0      | 50    |                            |                            | 48-3630 DLY                               |
| WY    | GAS HILLS 4E      | 48-3801 | 42.8394  | -107.5133 | 6470              | 0          | 0      | 37    |                            |                            | 48-3801 DLY                               |
| WY    | GILLETTE 4SE      | 48-3855 | 44.2667  | -105.4489 | 4640              | 0          | 0      | 108   |                            |                            | 48-3855 DLY                               |
| WY    | GILLETTE 18 SW    | 48-3865 | 44.0833  | -105.7167 | 4905              | 0          | 23     | 36    |                            | 48-3865 HLY                | 48-3865 DLY                               |
| WY    | GLENDO RSVR USBR  | 48-3944 | 42.4689  | -104.9658 | 4780              | 0          | 23     | 26    |                            | 87-2304 HLY                | 48-3944 DLY<br>87-2304 HLY                |
| WY    | GLENROCK 5 ESE    | 48-3950 | 42.8267  | -105.7878 | 4948              | 0          | 0      | 61    |                            |                            | 48-3950 DLY                               |
| WY    | GLENROCK 14 SSE   | 48-3960 | 42.6667  | -105.8167 | 6434              | 0          | 0      | 36    |                            |                            | 48-3960 DLY                               |
| WY    | GRASS CREEK       | 48-4036 | 43.9500  | -108.6500 | 5579              | 0          | 0      | 33    |                            |                            | 48-4036 DLY                               |
| WY    | GREEN RVR         | 48-4065 | 41.5167  | -109.4703 | 6160              | 0          | 0      | 108   |                            |                            | 48-4065 DLY                               |
| WY    | GREYBULL          | 48-4080 | 44.4894  | -108.0536 | 3787              | 0          | 0      | 57    |                            |                            | 48-4080 DLY                               |

| State | Station name    | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                                                                        |
|-------|-----------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------------------------------------------------------------------|
|       |                 |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly                     | Daily                                                                                  |
| WY    | GUERNSEY DAM #2 | 48-4126 | 42.2906  | -104.7625 | 4355              | 0          | 30     | 75    |                       | 87-1014 HLY                | 48-4126 DLY<br>87-1014 HLY<br>48-4125 DLY<br>54-0160 15M<br>48-4126 15M<br>48-4131 DLY |
| WY    | HAT CREEK 5 E   | 48-4303 | 42.9333  | -104.3167 | 4380              | 0          | 0      | 32    |                       |                            | 48-4303 DLY<br>48-4300 DLY                                                             |
| WY    | HAT CREEK 14 N  | 48-4310 | 43.1333  | -104.3667 | 4324              | 0          | 28     | 31    |                       | 48-4310 HLY<br>48-4310 15M | 48-4310 DLY<br>48-4310 HLY                                                             |
| WY    | HEART MTN       | 48-4411 | 44.7053  | -108.9558 | 4790              | 0          | 0      | 59    |                       |                            | 48-4411 DLY                                                                            |
| WY    | HECLA 1E        | 48-4442 | 41.1500  | -105.1667 | 6690              | 0          | 0      | 96    |                       |                            | 48-4442 DLY<br>48-4440 DLY                                                             |
| WY    | HULETT          | 48-4760 | 44.6856  | -104.6028 | 3758              | 0          | 0      | 56    |                       |                            | 48-4760 DLY                                                                            |
| WY    | JACKSON         | 48-4910 | 43.4864  | -110.7617 | 6210              | 29         | 69     | 98    | 48-4910 15M           | 48-4910 HLY<br>87-3831 HLY | 48-4910 DLY<br>87-3831 HLY<br>48-4910 HLY                                              |
| WY    | JEFFREY CITY    | 48-4925 | 42.4942  | -107.8292 | 6319              | 0          | 0      | 44    |                       |                            | 48-4925 DLY                                                                            |
| WY    | JELM 2S         | 48-4930 | 41.0600  | -106.0264 | 7580              | 37         | 60     | 61    | 48-4930 15M           | 48-4930 HLY<br>53-0158 HLY | 48-4930 DLY<br>53-0158 HLY<br>48-4930 HLY                                              |
| WY    | KAYCEE          | 48-5055 | 43.7144  | -106.6378 | 4660              | 0          | 0      | 75    |                       |                            | 48-5055 DLY                                                                            |
| WY    | KAYCEE 17 WNW   | 48-5060 | 43.7667  | -106.9667 | 5663              | 0          | 0      | 10    |                       |                            | 48-5060 DLY<br>69-2384 DLY                                                             |
| WY    | KEELINE 3 W     | 48-5085 | 42.7667  | -104.7833 | 5280              | 0          | 0      | 33    |                       |                            | 48-5085 DLY                                                                            |
| WY    | KEMMERER 2N     | 48-5105 | 41.8181  | -110.5333 | 6937              | 0          | 0      | 79    |                       |                            | 48-5105 DLY                                                                            |
| WY    | KENDALL         | 48-5115 | 43.1667  | -109.9833 | 7654              | 0          | 0      | 52    |                       |                            | 48-5115 DLY                                                                            |
| WY    | LUSK 18 ENE     | 48-5170 | 42.8333  | -104.1167 | 5072              | 0          | 0      | 60    |                       |                            | 48-5170 DLY<br>99-5170 DLY<br>48-5832 DLY                                              |



| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                                                                                      |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                                                                                                |
| WY    | LA BARGE              | 48-5252 | 42.2644  | -110.1950 | 6598              | 0          | 0      | 48    |                            |                            | 48-5252 DLY<br>90-0024 DLY                                                                                           |
| WY    | LA GRANGE             | 48-5260 | 41.6378  | -104.1669 | 4590              | 0          | 0      | 61    |                            |                            | 48-5260 DLY                                                                                                          |
| WY    | LAKE YELLOWSTONE      | 48-5345 | 44.5622  | -110.3986 | 7892              | 23         | 48     | 103   | 48-5345 15M<br>54-0163 15M | 48-5345 HLY<br>54-0163 15M | 48-5345 DLY                                                                                                          |
| WY    | LAMAR RS              | 48-5355 | 44.8956  | -110.2342 | 6575              | 0          | 0      | 55    |                            |                            | 48-5355 DLY                                                                                                          |
| WY    | LANCE CREEK 1W        | 48-5371 | 43.0389  | -104.6633 | 4412              | 22         | 50     | 60    | 48-5371 15M                | 48-5371 HLY                | 48-5371 DLY<br>48-5371 HLY                                                                                           |
| WY    | LARAMIE 2             | 48-5411 | 41.3167  | -105.5833 | 7175              | 0          | 0      | 139   |                            |                            | 48-5411 DLY<br>48-5435 DLY<br>52-5411 DLY<br>52-5410 DLY<br>69-2171 DLY<br>69-2154 DLY<br>69-2149 DLY<br>48-5410 DLY |
| WY    | LEITER 9N             | 48-5506 | 44.8500  | -106.2889 | 4160              | 0          | 0      | 57    |                            |                            | 48-5506 DLY                                                                                                          |
| WY    | LEO 6 SW              | 48-5525 | 42.1953  | -106.8556 | 6035              | 0          | 0      | 86    |                            |                            | 48-5525 DLY                                                                                                          |
| WY    | LINGLE 2WSW           | 48-5612 | 42.1297  | -104.3900 | 4158              | 0          | 0      | 55    |                            |                            | 48-5612 DLY<br>90-0025 HLY<br>48-9880 DLY                                                                            |
| WY    | LITTLE MEDICINE 4 NNW | 48-5685 | 42.4333  | -106.0333 | 7346              | 0          | 11     | 13    |                            | 48-5685 HLY                | 48-5685 DLY<br>48-5685 HLY                                                                                           |
| WY    | LOST CABIN            | 48-5734 | 43.2833  | -107.6333 | 5415              | 0          | 0      | 31    |                            |                            | 48-5734 DLY<br>48-5843 DLY                                                                                           |
| WY    | LOVELL                | 48-5770 | 44.8378  | -108.4039 | 3847              | 0          | 0      | 97    |                            |                            | 48-5770 DLY                                                                                                          |
| WY    | LUSK 2 SW             | 48-5830 | 42.7506  | -104.4811 | 5090              | 0          | 0      | 100   |                            |                            | 48-5830 DLY<br>69-2548 DLY                                                                                           |

| State | Station name | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                                                                                       |                                                                                        |
|-------|--------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|       |              |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                                                                                | Daily                                                                                  |
| WY    | LYMAN        | 48-5839 | 41.3156  | -110.2725 | 6652              | 0          | 0      | 24    |                                           |                                                                                                       | 48-5839 DLY<br>99-5836 DLY<br>48-5836 HLY<br>90-0027 DLY                               |
| WY    | MEDICINE BOW | 48-6120 | 41.8969  | -106.2061 | 6635              | 21         | 44     | 64    | 48-6120 15M<br>54-0166 15M<br>48-6132 15M | 48-6120 HLY<br>54-0166 15M<br>48-6132 15M<br>48-6120 15M<br>54-0166 15M<br>48-6132 15M<br>48-6120 15M | 48-6120 DLY<br>69-2270 DLY<br>54-0166 15M<br>48-6132 15M<br>48-6120 15M<br>48-6120 HLY |
| WY    | MIDDLE FORK  | 48-6185 | 42.7526  | -108.8054 | 6283              | 0          | 0      | 50    |                                           |                                                                                                       | 48-6185 DLY<br>99-6185 DLY<br>69-2316 DLY                                              |
| WY    | MIDWEST      | 48-6195 | 43.4131  | -106.2772 | 4860              | 0          | 0      | 73    |                                           |                                                                                                       | 48-6195 DLY                                                                            |
| WY    | MOOSE        | 48-6428 | 43.6536  | -110.7169 | 6444              | 0          | 0      | 85    |                                           |                                                                                                       | 48-6428 DLY<br>48-6430 DLY<br>69-2718 DLY                                              |
| WY    | MORAN 5WNW   | 48-6440 | 43.8567  | -110.5889 | 6805              | 23         | 52     | 112   | 48-6440 15M                               | 48-6440 HLY                                                                                           | 48-6440 DLY                                                                            |
| WY    | MORRISEY     | 48-6450 | 43.5167  | -104.3333 | 4104              | 0          | 0      | 30    |                                           |                                                                                                       | 48-6450 DLY                                                                            |
| WY    | MTN VIEW     | 48-6555 | 41.2658  | -110.3375 | 6800              | 39         | 44     | 55    | 48-6555 15M<br>54-0168 15M                | 48-6555 HLY<br>54-0168 15M                                                                            | 48-6555 DLY<br>72-4574 HLY<br>54-0168 15M                                              |
| WY    | MUDDY GAP    | 48-6595 | 42.3628  | -107.4444 | 6248              | 0          | 0      | 51    |                                           |                                                                                                       | 48-6595 DLY                                                                            |
| WY    | MUD SPRINGS  | 48-6597 | 41.3186  | -108.9178 | 6736              | 30         | 48     | 53    | 48-6597 15M<br>54-0169 15M                | 48-6597 HLY<br>54-0169 15M<br>48-6597 15M<br>54-0169 15M                                              | 48-6597 HLY<br>54-0169 15M<br>48-6597 15M<br>54-0169 15M                               |
| WY    | MULE CREEK   | 48-6600 | 43.3500  | -104.1167 | 4124              | 0          | 23     | 26    |                                           | 48-6600 HLY                                                                                           | 48-6600 DLY<br>48-6600 HLY                                                             |
| WY    | NEWCASTLE    | 48-6660 | 43.8497  | -104.1886 | 4415              | 40         | 61     | 109   | 48-6660 15M<br>54-0170 15M                | 48-6660 HLY<br>54-0170 15M                                                                            | 48-6660 DLY<br>48-6660 HLY                                                             |

| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                                          |                                                          |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                                   | Daily                                                    |
| WY    | NINE MILE CREEK       | 48-6680 | 43.8167  | -106.4833 | 4872              | 0          | 0      | 37    |                                           |                                                          | 48-6680 DLY                                              |
| WY    | OLD FAITHFUL          | 48-6845 | 44.4569  | -110.8328 | 7351              | 0          | 0      | 53    |                                           |                                                          | 48-6845 DLY                                              |
| WY    | OLD FT LARAMIE        | 48-6852 | 42.2058  | -104.5561 | 4250              | 0          | 0      | 64    |                                           |                                                          | 48-6852 DLY<br>52-3485 DLY<br>69-2354 DLY<br>48-3485 DLY |
| WY    | OREGON TRAIL CROSSING | 48-6875 | 42.5394  | -108.1872 | 6544              | 37         | 58     | 63    | 48-6875 15M<br>54-0171 15M                | 48-6875 HLY<br>54-0171 15M<br>54-0171 15M                | 48-6875 HLY<br>54-0171 15M<br>54-0171 15M                |
| WY    | OSAGE                 | 48-6935 | 43.9781  | -104.4194 | 4320              | 0          | 45     | 48    |                                           | 48-6935 HLY                                              | 48-6935 HLY                                              |
| WY    | PARKMAN 5 WNW         | 48-7079 | 44.9833  | -107.4333 | 4436              | 0          | 0      | 34    |                                           |                                                          | 48-7079 DLY                                              |
| WY    | PATHFINDER DAM        | 48-7105 | 42.4717  | -106.8528 | 5923              | 23         | 61     | 103   | 48-7105 15M<br>54-0173 15M                | 48-7105 HLY<br>87-2404 HLY<br>54-0173 15M                | 48-7105 DLY<br>87-2404 HLY<br>54-0173 15M<br>48-7105 HLY |
| WY    | PAVILLION             | 48-7115 | 43.2458  | -108.6942 | 5480              | 0          | 0      | 88    |                                           |                                                          | 48-7115 DLY                                              |
| WY    | PHILLIPS              | 48-7200 | 41.6264  | -104.4936 | 4982              | 36         | 59     | 71    | 48-7200 15M<br>54-0174 15M                | 48-7200 HLY<br>54-0174 15M                               | 48-7200 DLY<br>54-0174 15M<br>48-7200 HLY                |
| WY    | PINE BLUFFS           | 48-7235 | 41.1833  | -104.0667 | 5074              | 12         | 14     | 90    | 48-7235 15M<br>54-0175 15M<br>48-7236 15M | 48-7235 HLY<br>62-0069 HLY<br>54-0175 15M<br>48-7236 15M | 48-7235 DLY<br>99-7235 DLY<br>62-0069 DLY<br>48-7236 DLY |
| WY    | PINE BLUFFS 5W        | 48-7240 | 41.1722  | -104.1583 | 5180              | 0          | 41     | 51    |                                           | 48-7240 HLY                                              | 48-7240 DLY<br>48-7240 HLY                               |
| WY    | PINEDALE              | 48-7260 | 42.8744  | -109.8581 | 7210              | 0          | 0      | 65    |                                           |                                                          | 48-7260 DLY                                              |
| WY    | PINE TREE 9 NE        | 48-7270 | 43.7167  | -105.6333 | 5111              | 0          | 30     | 31    |                                           | 48-7270 HLY                                              | 48-7270 HLY                                              |
| WY    | POWDER RVR (SCHOOL)   | 48-7375 | 43.0353  | -106.9894 | 5722              | 35         | 45     | 62    | 48-7375 15M<br>54-0176 15M                | 48-7375 HLY<br>54-0176 15M                               | 48-7375 DLY<br>48-7376 DLY<br>54-0176 15M<br>48-7375 HLY |

| State | Station name    | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                                                         |                                                          |
|-------|-----------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------------------------------------|----------------------------------------------------------|
|       |                 |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                                                  | Daily                                                    |
| WY    | POWELL FLD STN  | 48-7388 | 44.7764  | -108.7592 | 4372              | 34         | 44     | 111   | 48-7388 15M<br>54-0177 15M | 48-7388 HLY<br>54-0177 15M                                              | 48-7388 DLY<br>48-7380 DLY<br>48-7388 HLY                |
| WY    | RAIRDEN 2WSW    | 48-7473 | 44.1786  | -107.9381 | 4020              | 0          | 0      | 71    |                            |                                                                         | 48-7473 DLY                                              |
| WY    | RAWLINS         | 48-7530 | 41.7833  | -107.2500 | 6854              | 0          | 0      | 38    |                            |                                                                         | 48-7530 DLY<br>99-7533 DLY                               |
| WY    | RECLUSE         | 48-7545 | 44.7408  | -105.7261 | 4150              | 25         | 48     | 51    | 48-7545 15M                | 48-7545 HLY<br>48-7545 15M                                              | 48-7545 HLY<br>48-7545 15M                               |
| WY    | REDBIRD         | 48-7555 | 43.2450  | -104.2881 | 3890              | 0          | 0      | 81    |                            |                                                                         | 48-7555 DLY<br>99-7555 DLY                               |
| WY    | RIVERTON        | 48-7760 | 43.0306  | -108.3744 | 4955              | 43         | 63     | 104   | 48-7760 15M<br>54-0180 15M | 48-7760 HLY<br>48-7765 HLY<br>54-0180 15M                               | 48-7760 DLY                                              |
| WY    | ROCHELLE 7ENE   | 48-7810 | 43.6450  | -104.8414 | 4239              | 0          | 0      | 69    |                            |                                                                         | 48-7810 DLY                                              |
| WY    | ROCK SPRINGS    | 48-7840 | 41.5833  | -109.2167 | 6375              | 0          | 21     | 60    |                            | 48-7840 HLY                                                             | 48-7840 DLY<br>48-7847 DLY                               |
| WY    | ROCKYPOINT 7NNE | 48-7885 | 44.9917  | -105.0472 | 3910              | 0          | 0      | 61    |                            |                                                                         | 48-7885 DLY<br>24-7028 HLY<br>24-7028 DLY                |
| WY    | SAGE 4 NNW      | 48-7955 | 41.8667  | -111.0000 | 6210              | 0          | 0      | 58    |                            |                                                                         | 48-7955 DLY                                              |
| WY    | SARATOGA        | 48-7990 | 41.4528  | -106.8053 | 6790              | 0          | 0      | 102   |                            |                                                                         | 48-7990 DLY<br>99-7990 DLY<br>69-2278 DLY                |
| WY    | SARATOGA 4N     | 48-7995 | 41.5047  | -106.7889 | 6801              | 33         | 53     | 66    | 48-7995 15M<br>54-0183 15M | 48-7995 HLY<br>54-0183 15M                                              | 48-7995 DLY<br>48-7995 HLY                               |
| WY    | SEMINOE DAM     | 48-8070 | 42.1569  | -106.9153 | 6838              | 22         | 62     | 69    | 48-8070 15M<br>54-0184 15M | 48-8070 HLY<br>87-2465 HLY<br>54-0184 15M<br>48-8070 15M<br>54-0184 15M | 48-8070 DLY<br>48-8074 DLY<br>54-0184 15M<br>48-8070 HLY |
| WY    | SHELL           | 48-8124 | 44.5353  | -107.7775 | 4242              | 0          | 0      | 49    |                            |                                                                         | 48-8124 DLY                                              |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                    | Daily                                     |
| WY    | SHERIDAN FLD STN  | 48-8160 | 44.8406  | -106.8383 | 3750              | 0          | 0      | 98    |                            |                                           | 48-8160 DLY                               |
| WY    | SHIRLEY BASIN     | 48-8192 | 42.3703  | -106.1050 | 7057              | 21         | 32     | 50    | 48-8192 15M<br>54-0185 15M | 48-8192 HLY<br>54-0185 15M                | 48-8192 DLY<br>48-8192 HLY                |
| WY    | SHOSHONI          | 48-8209 | 43.2372  | -108.1097 | 4837              | 0          | 0      | 76    |                            |                                           | 48-8209 DLY                               |
| WY    | SNAKE RVR         | 48-8315 | 44.1364  | -110.6664 | 6882              | 0          | 18     | 90    |                            | 86-0764 HLY                               | 48-8315 DLY<br>80-0129 DLY                |
| WY    | SOUTH PASS CITY   | 48-8385 | 42.4667  | -108.8000 | 7840              | 0          | 0      | 97    |                            |                                           | 48-8385 DLY<br>61-0003 DLY<br>48-8410 DLY |
| WY    | SPENCER 10 NE     | 48-8475 | 43.4333  | -104.1667 | 3802              | 0          | 0      | 37    |                            |                                           | 48-8475 DLY                               |
| WY    | STORY             | 48-8626 | 44.5767  | -106.9061 | 5168              | 33         | 56     | 67    | 48-8626 15M<br>54-0186 15M | 48-8626 HLY<br>54-0186 15M                | 48-8626 DLY<br>48-8626 HLY                |
| WY    | SUNDANCE          | 48-8705 | 44.4122  | -104.3567 | 4695              | 0          | 0      | 102   |                            |                                           | 48-8705 DLY                               |
| WY    | SUNSHINE 3 SW     | 48-8748 | 43.9897  | -109.0504 | 6844              | 0          | 0      | 38    |                            |                                           | 48-8748 DLY<br>48-7420 DLY                |
| WY    | SUNSHINE 3NE      | 48-8758 | 44.0758  | -108.9547 | 6224              | 0          | 0      | 53    |                            |                                           | 48-8758 DLY                               |
| WY    | SYBILLE RSCH UNIT | 48-8808 | 41.7644  | -105.3750 | 6086              | 0          | 0      | 72    |                            |                                           | 48-8808 DLY<br>48-6422 DLY                |
| WY    | TENNYSON          | 48-8845 | 41.3500  | -104.3833 | 5616              | 0          | 0      | 34    |                            |                                           | 48-8845 DLY                               |
| WY    | TENSLEEP 4NE      | 48-8852 | 44.0647  | -107.3819 | 4748              | 33         | 61     | 72    | 48-8852 15M<br>54-0187 15M | 48-8852 HLY<br>48-8855 HLY<br>54-0187 15M | 48-8852 DLY<br>48-8855 HLY                |
| WY    | TENSLEEP 16SSE    | 48-8858 | 43.8111  | -107.3653 | 4680              | 31         | 31     | 66    | 48-8858 15M<br>54-0188 15M | 48-8858 15M<br>54-0188 15M                | 48-8858 DLY                               |
| WY    | THERMOPOLIS       | 48-8875 | 43.6483  | -108.2036 | 4321              | 28         | 52     | 110   | 48-8875 15M<br>54-0189 15M | 48-8875 HLY<br>54-0189 15M                | 48-8875 DLY<br>48-8880 DLY<br>48-8875 HLY |
| WY    | THERMOPOLIS 9NE   | 48-8884 | 43.7533  | -108.1431 | 4282              | 0          | 0      | 32    |                            |                                           | 48-8884 DLY                               |

| State | Station name             | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                                          |                                           |
|-------|--------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------------------------------------|-------------------------------------------|
|       |                          |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                                   | Daily                                     |
| WY    | THERMOPOLIS 21WNW        | 48-8888 | 43.7231  | -108.6964 | 5510              | 26         | 46     | 61    | 48-8888 15M                | 48-8888 HLY                                              | 48-8888 DLY<br>48-8888 HLY                |
| WY    | TORRINGTON EXP FARM      | 48-8995 | 42.0803  | -104.2236 | 4098              | 0          | 0      | 89    |                            |                                                          | 48-8995 DLY<br>69-2341 DLY                |
| WY    | TOWER FALLS              | 48-9025 | 44.9167  | -110.4203 | 6275              | 0          | 0      | 73    |                            |                                                          | 48-9025 DLY                               |
| WY    | UPTON                    | 48-9205 | 44.0928  | -104.6114 | 4320              | 0          | 0      | 82    |                            |                                                          | 48-9205 DLY                               |
| WY    | UPTON 13 SW              | 48-9207 | 43.9269  | -104.7456 | 4780              | 0          | 0      | 51    |                            |                                                          | 48-9207 DLY                               |
| WY    | WAMSUTTER                | 48-9459 | 41.6717  | -107.9783 | 6740              | 0          | 0      | 71    |                            |                                                          | 48-9459 DLY                               |
| WY    | WAPITI 1WSW              | 48-9467 | 44.4594  | -109.4164 | 5558              | 0          | 27     | 32    |                            | 87-1554 HLY                                              | 48-9467 DLY<br>87-1554 HLY                |
| WY    | WESTON 1 E               | 48-9580 | 44.6403  | -105.3008 | 3738              | 0          | 0      | 68    |                            |                                                          | 48-9580 DLY                               |
| WY    | WHALEN DAM USBR          | 48-9604 | 42.2494  | -104.6281 | 4294              | 0          | 28     | 73    |                            | 87-2474 HLY                                              | 48-9604 DLY<br>87-2474 HLY<br>99-9604 DLY |
| WY    | WHEATLAND 4 N            | 48-9615 | 42.1106  | -104.9492 | 4638              | 28         | 47     | 106   | 48-9615 15M<br>54-0192 15M | 48-9615 HLY<br>54-0192 15M<br>48-9615 15M<br>54-0192 15M | 48-9615 DLY                               |
| WY    | WORLAND                  | 48-9770 | 44.0114  | -107.9683 | 4058              | 0          | 27     | 111   |                            | 48-9770 HLY<br>54-0193 15M                               | 48-9770 DLY                               |
| WY    | YELLOWSTONE PARK MAMMOTH | 48-9905 | 44.9767  | -110.6964 | 6195              | 0          | 0      | 130   |                            |                                                          | 48-9905 DLY<br>99-9905 DLY                |
| WY    | YODER 5 W                | 48-9925 | 41.9131  | -104.3881 | 4330              | 0          | 0      | 76    |                            |                                                          | 48-9925 DLY                               |
| MT    | FORT MISSOULA            | 52-5737 | 46.8428  | -114.0617 | 3150              | 0          | 20     | 90    |                            | 76-0255 HLY                                              | 52-5737 DLY<br>76-0255 HLY<br>97-0001 DLY |
| WY    | LANDER 11 SSE            | 57-0009 | 42.6754  | -108.6686 | 5773              | 15         | 17     | 17    | 57-0009 15M                | 57-0009 HLY                                              | 57-0009 DLY                               |
| WY    | NEWCASTLE                | 61-0001 | 43.8730  | -104.1917 | 4810              | 0          | 0      | 31    |                            |                                                          | 61-0001 DLY                               |
| MT    | CLANCY                   | 61-0026 | 46.4850  | -112.0647 | 4751              | 0          | 0      | 31    |                            |                                                          | 61-0026 DLY                               |

| State | Station name         | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                      |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                     | Daily                                     |
| ID    | LOWERWEATHER         | 65-0003 | 43.6885  | -116.1699 | 3776              | 0          | 22     | 22    |                            | 65-0003 HLY                | 65-0003 HLY                               |
| ID    | TREELINE             | 65-0005 | 43.7302  | -116.1401 | 5282              | 0          | 20     | 19    |                            | 65-0005 HLY                | 65-0005 HLY                               |
| ID    | BENTON DAM (1007891) | 66-0001 | 48.3502  | -116.8071 | 2641              | 0          | 28     | 71    |                            | 10-0789 HLY                | 66-0001 DLY<br>10-0789 HLY                |
| ID    | KUNA 1.5 SSE         | 69-1272 | 43.4704  | -116.4037 | 2742              | 0          | 0      | 73    |                            |                            | 69-1272 DLY<br>10-5038 DLY                |
| ID    | MOSCOW 7.3 ENE       | 69-1430 | 46.7762  | -116.8570 | 3116              | 25         | 24     | 30    | 10-6148 15M                | 10-6148 15M                | 69-1430 DLY<br>10-6148 15M                |
| MT    | LODGE GRASS 4.5 N    | 69-1474 | 45.3796  | -107.3778 | 3263              | 32         | 55     | 54    | 24-5106 15M<br>54-0087 15M | 24-5106 HLY<br>54-0087 15M | 69-1474 DLY<br>54-0087 15M<br>24-5106 HLY |
| MT    | ISMAY 3.4 NE         | 69-1520 | 46.5396  | -104.7518 | 2718              | 24         | 55     | 65    | 24-4442 15M<br>54-0079 15M | 24-4442 HLY<br>54-0079 15M | 69-1520 DLY<br>54-0079 15M<br>24-4442 HLY |
| MT    | ROUNDUP 6.2 ENE      | 69-1613 | 46.4779  | -108.4165 | 3148              | 0          | 23     | 42    |                            | 24-2317 HLY                | 69-1613 DLY<br>24-2317 HLY                |
| MT    | ABSAROKEE 0.6 S      | 69-1725 | 45.5442  | -109.3936 | 3955              | 28         | 28     | 35    | 24-0019 15M<br>54-0048 15M | 24-0019 HLY<br>54-0048 15M | 69-1725 DLY<br>54-0048 15M<br>24-0019 HLY |
| WY    | CHEYENNE 5.0 W       | 69-2470 | 41.1575  | -104.8840 | 6195              | 0          | 0      | 30    |                            |                            | 69-2470 DLY<br>48-1680 DLY                |
| WY    | POWELL 3.9 ENE       | 69-2610 | 44.7825  | -108.6879 | 4288              | 0          | 0      | 34    |                            |                            | 69-2610 DLY<br>48-3770 HLY                |
| ID    | ARCO                 | 76-0029 | 43.6231  | -113.3872 | 5380              | 0          | 33     | 36    |                            | 76-0029 HLY                | 76-0029 HLY                               |
| ID    | BRACE FLAT           | 76-0035 | 42.3497  | -116.6900 | 4900              | 0          | 31     | 32    |                            | 76-0035 HLY                | 76-0035 HLY                               |
| ID    | BULL SPRING          | 76-0036 | 42.0800  | -114.4847 | 5700              | 0          | 29     | 30    |                            | 76-0036 HLY                | 76-0036 HLY                               |
| ID    | CRYSTAL              | 76-0049 | 42.9900  | -113.1600 | 5064              | 0          | 32     | 34    |                            | 76-0049 HLY                | 76-0049 HLY                               |
| ID    | BULL CANYON          | 76-0053 | 42.3653  | -112.7056 | 6400              | 0          | 30     | 31    |                            | 76-0053 HLY                | 76-0053 HLY                               |
| ID    | DEER HAVEN           | 76-0054 | 43.1744  | -115.1517 | 5550              | 0          | 31     | 32    |                            | 76-0054 HLY                | 76-0054 HLY                               |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily       |
| ID    | FISH HOOK          | 76-0061 | 47.1352  | -115.8766 | 4270              | 0          | 19     | 19    |                       | 76-0061 HLY | 76-0061 HLY |
| ID    | FLINT CREEK        | 76-0063 | 42.0689  | -112.1906 | 5200              | 0          | 25     | 27    |                       | 76-0063 HLY | 76-0063 HLY |
| ID    | GAS CAVES          | 76-0065 | 44.1678  | -111.7792 | 5740              | 0          | 31     | 31    |                       | 76-0065 HLY | 76-0065 HLY |
| ID    | GOOSE CREEK        | 76-0067 | 42.0950  | -113.8958 | 5660              | 0          | 32     | 31    |                       | 76-0067 HLY | 76-0067 HLY |
| ID    | GRACE              | 76-0068 | 42.5372  | -111.8547 | 6210              | 0          | 35     | 35    |                       | 76-0068 HLY | 76-0068 HLY |
| ID    | INDIANOLA          | 76-0076 | 45.4007  | -114.1634 | 3500              | 0          | 30     | 29    |                       | 76-0076 HLY | 76-0076 HLY |
| ID    | POLE CREEK         | 76-0108 | 42.0694  | -115.7861 | 5660              | 0          | 31     | 31    |                       | 76-0108 HLY | 76-0108 HLY |
| ID    | PITTSBURG LANDING  | 76-0113 | 45.6375  | -116.4686 | 1357              | 0          | 22     | 22    |                       | 76-0113 HLY | 76-0113 HLY |
| ID    | POTTER BUTTE       | 76-0114 | 43.2261  | -113.5744 | 4930              | 0          | 32     | 31    |                       | 76-0114 HLY | 76-0114 HLY |
| ID    | RAFT RIVER         | 76-0120 | 42.5478  | -113.2594 | 4400              | 0          | 35     | 35    |                       | 76-0120 HLY | 76-0120 HLY |
| ID    | ROCK LAKE          | 76-0123 | 42.9717  | -114.0631 | 4260              | 0          | 31     | 30    |                       | 76-0123 HLY | 76-0123 HLY |
| ID    | SALMON             | 76-0128 | 45.1500  | -113.9333 | 4960              | 0          | 36     | 36    |                       | 76-0128 HLY | 76-0128 HLY |
| ID    | SNAKE RIVER        | 76-0144 | 45.0997  | -116.7369 | 4100              | 0          | 29     | 29    |                       | 76-0144 HLY | 76-0144 HLY |
| ID    | TEA POT            | 76-0150 | 44.9044  | -115.7375 | 5152              | 0          | 26     | 27    |                       | 76-0150 HLY | 76-0150 HLY |
| ID    | TRAIL GULCH        | 76-0153 | 42.3161  | -114.3031 | 6000              | 0          | 34     | 35    |                       | 76-0153 HLY | 76-0153 HLY |
| ID    | WEISER RIVER       | 76-0157 | 44.8475  | -116.4267 | 3835              | 0          | 24     | 22    |                       | 76-0157 HLY | 76-0157 HLY |
| MT    | ARMELLS CREEK      | 76-0163 | 47.5867  | -108.8694 | 2845              | 0          | 30     | 30    |                       | 76-0163 HLY | 76-0163 HLY |
| MT    | BADGER PEAK        | 76-0167 | 45.6481  | -106.5008 | 4340              | 0          | 32     | 32    |                       | 76-0167 HLY | 76-0167 HLY |
| MT    | BIGHORN MOUNTAIN   | 76-0173 | 45.0733  | -107.8887 | 8180              | 0          | 24     | 26    |                       | 76-0173 HLY | 76-0173 HLY |
| MT    | BRADSHAW CREEK     | 76-0177 | 45.0553  | -105.9483 | 3930              | 0          | 30     | 30    |                       | 76-0177 HLY | 76-0177 HLY |
| MT    | BIG SHEEP MOUNTAIN | 76-0182 | 47.0167  | -105.8167 | 3200              | 0          | 36     | 36    |                       | 76-0182 HLY | 76-0182 HLY |
| MT    | CANNONBALL CREEK   | 76-0186 | 46.4847  | -104.0658 | 2930              | 0          | 32     | 32    |                       | 76-0186 HLY | 76-0186 HLY |
| MT    | CHAIN BUTTES       | 76-0188 | 47.5167  | -108.0333 | 2928              | 0          | 28     | 28    |                       | 76-0188 HLY | 76-0188 HLY |
| MT    | DRY BLOOD CREEK    | 76-0203 | 47.2442  | -108.3575 | 3000              | 0          | 23     | 24    |                       | 76-0203 HLY | 76-0203 HLY |
| MT    | FORT HOWES         | 76-0215 | 45.2969  | -106.1614 | 3380              | 0          | 33     | 34    |                       | 76-0215 HLY | 76-0215 HLY |



| State | Station name            | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|-------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                         |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily       |
| MT    | FORT BELKNAP            | 76-0216 | 48.3042  | -108.7189 | 2665              | 0          | 28     | 28    |                       | 76-0216 HLY | 76-0216 HLY |
| MT    | GINGER                  | 76-0222 | 46.3292  | -111.5881 | 4370              | 0          | 28     | 28    |                       | 76-0222 HLY | 76-0222 HLY |
| MT    | GLEASON                 | 76-0224 | 47.8678  | -112.6681 | 5200              | 0          | 20     | 20    |                       | 76-0224 HLY | 76-0224 HLY |
| MT    | HOT SPRINGS             | 76-0235 | 47.6156  | -114.6694 | 2960              | 0          | 30     | 30    |                       | 76-0235 HLY | 76-0235 HLY |
| MT    | JETTE                   | 76-0239 | 47.7669  | -114.2347 | 3600              | 0          | 27     | 27    |                       | 76-0239 HLY | 76-0239 HLY |
| MT    | KING COULEE             | 76-0243 | 47.7981  | -107.0233 | 2760              | 0          | 32     | 32    |                       | 76-0243 HLY | 76-0243 HLY |
| MT    | LITTLE SNOWY            | 76-0248 | 46.7511  | -109.0233 | 4975              | 0          | 21     | 21    |                       | 76-0248 HLY | 76-0248 HLY |
| MT    | LITTLE BULLWACKER CREEK | 76-0249 | 47.8314  | -109.0083 | 3100              | 0          | 35     | 36    |                       | 76-0249 HLY | 76-0249 HLY |
| MT    | MANNING CORRAL DOGTOWN  | 76-0253 | 47.7028  | -108.4786 | 3080              | 0          | 24     | 24    |                       | 76-0253 HLY | 76-0253 HLY |
| MT    | NINE MILE               | 76-0257 | 47.0708  | -114.4022 | 3300              | 0          | 21     | 21    |                       | 76-0257 HLY | 76-0257 HLY |
| MT    | PINE HILL               | 76-0264 | 46.7769  | -104.5797 | 2649              | 0          | 22     | 22    |                       | 76-0264 HLY | 76-0264 HLY |
| MT    | POPLAR                  | 76-0270 | 48.1269  | -105.0731 | 2423              | 0          | 28     | 29    |                       | 76-0270 HLY | 76-0270 HLY |
| MT    | PRYOR MOUNTAIN          | 76-0275 | 45.3375  | -108.4908 | 6186              | 0          | 27     | 29    |                       | 76-0275 HLY | 76-0275 HLY |
| MT    | SOUTH BRIDGER           | 76-0280 | 45.1994  | -108.7919 | 4725              | 0          | 17     | 18    |                       | 76-0280 HLY | 76-0280 HLY |
| MT    | SOUTH SAWMILL CREEK     | 76-0292 | 47.5619  | -107.5286 | 3290              | 0          | 36     | 36    |                       | 76-0292 HLY | 76-0292 HLY |
| MT    | WEST FORK               | 76-0307 | 45.8156  | -114.2585 | 4420              | 0          | 20     | 20    |                       | 76-0307 HLY | 76-0307 HLY |
| MT    | WHITEHALL               | 76-0310 | 45.8833  | -112.1500 | 4360              | 0          | 20     | 20    |                       | 76-0310 HLY | 76-0310 HLY |
| MT    | WOLF MOUNTAIN           | 76-0316 | 45.3131  | -107.1719 | 5217              | 0          | 38     | 38    |                       | 76-0316 HLY | 76-0316 HLY |
| WY    | BEAR LODGE              | 76-0436 | 44.5972  | -104.4275 | 5280              | 0          | 29     | 33    |                       | 76-0436 HLY | 76-0436 HLY |
| WY    | DODGE CREEK             | 76-0449 | 41.9675  | -105.5194 | 7100              | 0          | 33     | 33    |                       | 76-0449 HLY | 76-0449 HLY |
| WY    | ESTERBROOK              | 76-0455 | 42.4153  | -105.3611 | 6530              | 0          | 33     | 32    |                       | 76-0455 HLY | 76-0455 HLY |
| WY    | HALF MOON               | 76-0463 | 42.9147  | -109.7472 | 8530              | 0          | 23     | 24    |                       | 76-0463 HLY | 76-0463 HLY |
| WY    | MUDDY CREEK             | 76-0473 | 41.4000  | -110.5528 | 6970              | 0          | 33     | 33    |                       | 76-0473 HLY | 76-0473 HLY |
| WY    | POKER CREEK             | 76-0476 | 43.5614  | -106.9669 | 6440              | 0          | 29     | 27    |                       | 76-0476 HLY | 76-0476 HLY |
| WY    | ROCHELLE HILLS          | 76-0483 | 43.5506  | -105.0922 | 5199              | 0          | 27     | 28    |                       | 76-0483 HLY | 76-0483 HLY |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                                          |                                                          |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                                   | Daily                                                    |
| WY    | SNOW SPRINGS CREEK     | 76-0494 | 41.4175  | -109.0361 | 7550              | 0          | 33     | 33    |                                           | 76-0494 HLY                                              | 76-0494 HLY                                              |
| WY    | SPLIT ROCK CREEK       | 76-0496 | 43.5606  | -107.3975 | 6000              | 0          | 32     | 33    |                                           | 76-0496 HLY                                              | 76-0496 HLY                                              |
| ID    | LOWELL THREE RIVERS    | 79-0002 | 46.1442  | -115.5964 | 1480              | 0          | 20     | 26    |                                           | 55-0177 HLY<br>72-0483 HLY                               | 79-0002 DLY<br>64-0207 DLY                               |
| ID    | JEROME CO AP           | 79-0003 | 42.7267  | -114.4564 | 4048              | 0          | 23     | 25    |                                           | 72-0477 HLY                                              | 79-0003 DLY                                              |
| ID    | CHALLIS AP             | 79-0006 | 44.5228  | -114.2150 | 5033              | 0          | 23     | 25    |                                           | 55-0125 HLY<br>72-0478 HLY                               | 79-0006 DLY                                              |
| MT    | LEWISTOWN 42 WSW       | 79-0014 | 46.8847  | -110.2894 | 5070              | 0          | 0      | 39    |                                           |                                                          | 79-0014 DLY<br>24-8495 DLY                               |
| WY    | CHEYENNE               | 79-0018 | 41.1519  | -104.8061 | 6128              | 20         | 75     | 150   | 78-0017 15M<br>48-1676 15M                | 48-1675 HLY<br>55-0138 HLY                               | 79-0018 DLY<br>98-0002 DLY                               |
| WY    | LANDER HUNT FLD AP     | 79-0020 | 42.8153  | -108.7261 | 5592              | 0          | 73     | 130   |                                           | 48-5390 HLY<br>64-0195 HLY                               | 79-0020 DLY<br>98-0003 DLY<br>98-0020 DLY                |
| WY    | LARAMIE RGNL AP        | 79-0021 | 41.3119  | -105.6747 | 7266              | 31         | 57     | 75    | 78-0034 15M<br>48-5420 15M<br>48-5416 15M | 55-0141 HLY<br>48-5420 HLY<br>48-5416 HLY<br>48-5415 HLY | 79-0021 DLY<br>48-5420 HLY<br>48-5416 HLY<br>48-5416 DLY |
| WY    | ROCK SPRINGS AP        | 79-0022 | 41.5944  | -109.0528 | 6741              | 31         | 45     | 75    | 48-7845 15M<br>78-0053 15M                | 48-7845 HLY<br>55-0164 HLY                               | 79-0022 DLY<br>48-7845 HLY                               |
| WY    | SHERIDAN CO AP         | 79-0024 | 44.7694  | -106.9689 | 3945              | 0          | 73     | 118   |                                           | 48-8155 HLY<br>55-0203 HLY                               | 79-0024 DLY<br>48-8163 DLY<br>98-0004 DLY<br>98-0024 DLY |
| MT    | BILLINGS LOGAN INTL AP | 79-0026 | 45.8069  | -108.5422 | 3581              | 20         | 75     | 89    | 78-0004 15M                               | 24-0807 HLY<br>55-0217 HLY                               | 79-0026 DLY<br>98-0026 DLY                               |
| MT    | HAVRE WB CITY          | 79-0027 | 48.5526  | -109.6794 | 2493              | 0          | 0      | 69    |                                           |                                                          | 79-0027 DLY<br>98-0027 DLY                               |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                                          |                                                          |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                                   | Daily                                                    |
| MT    | LEWISTOWN MUNI AP      | 79-0028 | 47.0492  | -109.4578 | 4145              | 42         | 65     | 121   | 24-4983 15M<br>78-0040 15M<br>54-0083 15M | 24-4983 HLY<br>55-0311 HLY<br>64-0276 HLY<br>54-0083 15M | 79-0028 DLY                                              |
| MT    | MILES CITY F WILEY FLD | 79-0029 | 46.4267  | -105.8825 | 2624              | 0          | 36     | 86    |                                           | 24-5690 HLY<br>87-1404 HLY<br>55-0279 HLY<br>54-0092 15M | 79-0029 DLY<br>54-0092 15M                               |
| MT    | CUSTER                 | 79-0030 | 46.1333  | -107.5333 | 2743              | 0          | 22     | 27    |                                           | 24-2158 HLY                                              | 79-0030 DLY<br>24-2158 HLY                               |
| WY    | RAWLINS MUNI AP        | 79-0033 | 41.8056  | -107.1997 | 6736              | 26         | 58     | 70    | 48-7533 15M<br>78-0054 15M                | 48-7533 HLY<br>55-0209 HLY<br>64-0189 HLY                | 79-0033 DLY                                              |
| WY    | RIVERTON               | 79-0034 | 43.0661  | -108.4767 | 5568              | 0          | 26     | 27    |                                           | 55-0213 HLY<br>55-0171 HLY<br>72-3879 HLY                | 79-0034 DLY<br>55-0171 HLY<br>72-3879 HLY<br>55-0213 HLY |
| WY    | WORLAND                | 79-0035 | 43.9658  | -107.9508 | 4172              | 0          | 22     | 63    |                                           | 55-0205 HLY<br>78-0063 15M                               | 79-0035 DLY                                              |
| WY    | MOORCROFT 3S           | 79-0036 | 44.2169  | -104.9292 | 4325              | 25         | 37     | 69    | 48-6395 15M<br>54-0167 15M                | 48-6395 HLY<br>53-0163 HLY                               | 79-0036 DLY<br>53-0163 HLY                               |
| WY    | CASPER NATRONA CO AP   | 79-0037 | 42.8975  | -106.4636 | 5338              | 0          | 75     | 75    |                                           | 48-1570 HLY<br>55-0152 HLY                               | 79-0037 DLY                                              |
| MT    | MALMSTROM AFB          | 79-0040 | 47.5167  | -111.1833 | 3472              | 0          | 0      | 55    |                                           |                                                          | 79-0040 DLY<br>64-0329 DLY<br>64-0329 HLY<br>55-0259 HLY |
| ID    | BOISE AIR TERMINAL     | 79-0048 | 43.5667  | -116.2406 | 2814              | 0          | 75     | 83    |                                           | 10-1022 HLY<br>55-0229 HLY                               | 79-0048 DLY                                              |
| MT    | BOZEMAN GALLATIN FLD   | 79-0049 | 45.7881  | -111.1608 | 4427              | 0          | 56     | 82    |                                           | 24-0622 HLY<br>78-0011 15M<br>55-0225 HLY                | 79-0049 DLY<br>78-0011 15M                               |

| State | Station name            | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                                          |                                                          |
|-------|-------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
|       |                         |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                     | Hourly                                                   | Daily                                                    |
| ID    | BURLEY MUNI AP          | 79-0050 | 42.5417  | -113.7661 | 4142              | 0          | 50     | 107   |                                           | 10-1303 HLY<br>10-1298 HLY<br>55-0189 HLY                | 79-0050 DLY<br>10-1288 DLY<br>10-1298 HLY<br>10-1298 DLY |
| MT    | BUTTE BERT MOONEY AP    | 79-0051 | 45.9647  | -112.5006 | 5506              | 0          | 25     | 125   |                                           | 24-1318 HLY<br>78-0008 15M<br>64-0327 HLY                | 79-0051 DLY<br>78-0008 15M                               |
| MT    | CUT BANK MUNI AP        | 79-0053 | 48.6033  | -112.3753 | 3838              | 27         | 58     | 114   | 24-2173 15M<br>78-0015 15M<br>54-0063 15M | 24-2173 HLY<br>78-0015 15M<br>54-0063 15M                | 79-0053 DLY                                              |
| MT    | DILLON AP               | 79-0054 | 45.2575  | -112.5545 | 5200              | 20         | 54     | 75    | 24-2404 15M<br>78-0020 15M                | 24-2404 HLY<br>72-1523 HLY                               | 79-0054 DLY                                              |
| MT    | DRUMMOND AVIATION       | 79-0055 | 46.6383  | -113.1761 | 4000              | 26         | 49     | 80    | 24-2500 15M                               | 24-2500 HLY<br>24-2511 HLY<br>64-0413 HLY                | 79-0055 DLY<br>24-2511 HLY<br>24-2511 DLY                |
| ID    | GOODING 2 S             | 79-0057 | 42.9167  | -114.7167 | 3570              | 38         | 60     | 97    | 10-3677 15M<br>54-0023 15M                | 10-3677 HLY<br>10-3682 HLY<br>54-0023 15M                | 79-0057 DLY<br>10-3682 HLY<br>54-0023 15M<br>10-3677 HLY |
| MT    | GREAT FALLS INTL AP     | 79-0058 | 47.4733  | -111.3822 | 3664              | 20         | 74     | 86    | 78-0028 15M<br>54-0075 15M<br>24-3753 15M | 24-3751 HLY<br>72-1527 HLY                               | 79-0058 DLY                                              |
| MT    | HELENA RGNL AP          | 79-0059 | 46.6056  | -111.9636 | 3828              | 18         | 74     | 94    | 78-0029 15M                               | 24-4055 HLY<br>78-0029 15M<br>55-0252 HLY                | 79-0059 DLY<br>24-2634 DLY<br>78-0029 15M                |
| ID    | IDAHO FALLS FANNING FLD | 79-0060 | 43.5164  | -112.0672 | 4729              | 0          | 34     | 70    |                                           | 55-0178 HLY<br>10-4455 HLY<br>78-0031 15M<br>10-4457 HLY | 79-0060 DLY<br>78-0031 15M                               |

| State | Station name             | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                                    |                                                          |                                                                                        |
|-------|--------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------|
|       |                          |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                                                    | Hourly                                                   | Daily                                                                                  |
| ID    | LEWISTON NEZ PERCE CO AP | 79-0062 | 46.3747  | -117.0156 | 1436              | 20         | 70     | 135   | 78-0039 15M                                              | 10-5241 HLY<br>55-0265 HLY                               | 79-0062 DLY<br>52-5230 DLY<br>52-5236 DLY<br>98-5230 DLY<br>10-5230 DLY<br>10-5236 DLY |
| MT    | LIVINGSTON MISSION FLD   | 79-0063 | 45.6983  | -110.4408 | 4643              | 28         | 67     | 81    | 24-5086 15M<br>54-0086 15M<br>24-5088 15M<br>78-0038 15M | 24-5086 HLY<br>72-1531 HLY                               | 79-0063 DLY<br>72-1531 HLY<br>24-5086 HLY                                              |
| ID    | MALAD CITY               | 79-0064 | 42.1492  | -112.2872 | 4470              | 0          | 0      | 68    |                                                          |                                                          | 79-0064 DLY                                                                            |
| MT    | MISSOULA INTL AP         | 79-0065 | 46.9208  | -114.0925 | 3192              | 0          | 75     | 78    |                                                          | 64-0324 HLY<br>55-0254 HLY<br>24-5745 HLY                | 79-0065 DLY<br>24-5740 DLY                                                             |
| ID    | MULLAN PASS VOR/DME      | 79-0066 | 47.4569  | -115.6450 | 6028              | 0          | 27     | 42    |                                                          | 55-0233 HLY<br>10-6237 HLY<br>72-1533 HLY                | 79-0066 DLY<br>55-0233 HLY                                                             |
| ID    | POCATELLO RGNL AP        | 79-0067 | 42.9203  | -112.5711 | 4478              | 0          | 75     | 84    |                                                          | 10-7211 HLY<br>64-0205 HLY                               | 79-0067 DLY                                                                            |
| ID    | STREVELL                 | 79-0069 | 42.0167  | -113.2500 | 5280              | 0          | 0      | 35    |                                                          |                                                          | 79-0069 DLY                                                                            |
| MT    | SUPERIOR                 | 79-0070 | 47.1928  | -114.8903 | 2710              | 0          | 0      | 98    |                                                          |                                                          | 79-0070 DLY                                                                            |
| WY    | BIG PINEY MARBLETON AP   | 79-0073 | 42.5844  | -110.1075 | 6970              | 0          | 24     | 25    |                                                          | 55-0212 HLY<br>72-3867 HLY                               | 79-0073 DLY<br>72-3867 HLY<br>55-0212 HLY                                              |
| MT    | GLASGOW INTL AP          | 79-0077 | 48.2138  | -106.6213 | 2285              | 0          | 64     | 123   |                                                          | 24-3558 HLY<br>72-1526 HLY<br>24-3557 HLY<br>64-0312 HLY | 79-0077 DLY<br>24-3557 DLY                                                             |
| MT    | ST MARIE                 | 79-0078 | 48.4089  | -106.5144 | 2756              | 0          | 0      | 34    |                                                          |                                                          | 79-0078 DLY                                                                            |
| MT    | HAVRE CITY CO AP         | 79-0079 | 48.5428  | -109.7633 | 2585              | 26         | 60     | 62    | 24-3996 15M<br>78-0030 15M                               | 24-3996 HLY<br>55-0261 HLY                               | 79-0079 DLY                                                                            |

| State | Station name               | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                                                         |                                                                                        |
|-------|----------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|       |                            |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                      | Hourly                                                                  | Daily                                                                                  |
| MT    | WOLF POINT INTL AP         | 79-0081 | 48.0944  | -105.5744 | 1986              | 0          | 23     | 55    |                            | 72-1536 HLY                                                             | 79-0081 DLY<br>24-9111 DLY                                                             |
| WY    | GILLETTE CAMPBELL AP       | 79-0082 | 44.3394  | -105.5419 | 4354              | 0          | 22     | 24    |                            | 55-0201 HLY<br>72-3874 HLY                                              | 79-0082 DLY                                                                            |
| MT    | JORDAN AP                  | 79-0087 | 47.3258  | -106.9475 | 2662              | 0          | 0      | 100   |                            |                                                                         | 79-0087 DLY<br>24-4522 DLY                                                             |
| WY    | TORRINGTON MUNI AP         | 79-0088 | 42.0647  | -104.1528 | 4205              | 0          | 56     | 57    |                            | 55-0170 HLY<br>88-2018 HLY<br>48-9000 HLY<br>78-0060 15M<br>72-3906 HLY | 79-0088 DLY<br>88-2018 DLY<br>69-2343 DLY<br>48-9000 HLY<br>72-3906 HLY                |
| WY    | BUFFALO JOHNSON CO AP      | 79-0089 | 44.3814  | -106.7211 | 4967              | 0          | 23     | 25    |                            | 55-0202 HLY<br>72-3868 HLY                                              | 79-0089 DLY                                                                            |
| MT    | BAKER MUNI AP              | 79-0090 | 46.3583  | -104.2500 | 2971              | 0          | 23     | 95    |                            | 55-0221 HLY<br>72-1518 HLY                                              | 79-0090 DLY<br>24-0412 DLY                                                             |
| MT    | HELENA WB CITY             | 79-0105 | 46.5833  | -112.0333 | 4144              | 0          | 0      | 61    |                            |                                                                         | 79-0105 DLY<br>52-4050 DLY<br>98-0105 DLY                                              |
| ID    | IDAHO FALLS 46 W           | 79-0110 | 43.5317  | -112.9422 | 4938              | 26         | 48     | 73    | 89-0016 15M                | 10-4460 HLY<br>89-0016 15M                                              | 79-0110 DLY<br>89-0016 DLY                                                             |
| ID    | TWIN FALLS SUN VLY RGNL AP | 79-0115 | 42.4819  | -114.4869 | 4151              | 0          | 23     | 26    |                            | 55-0188 HLY<br>72-0490 HLY                                              | 79-0115 DLY<br>64-0222 DLY                                                             |
| ID    | REXBURG MADISON CO AP      | 79-0117 | 43.8339  | -111.8045 | 4858              | 0          | 24     | 25    |                            | 55-0234 HLY<br>72-0485 HLY                                              | 79-0117 DLY<br>72-0485 HLY<br>55-0234 HLY                                              |
| MT    | NORTHEAST ENTRANCE         | 80-0116 | 45.0100  | -110.0100 | 7350              | 0          | 0      | 45    |                            |                                                                         | 80-0116 DLY                                                                            |
| MT    | WEST YELLOWSTONE           | 80-0179 | 44.6600  | -111.0900 | 6700              | 26         | 32     | 96    | 24-8866 15M<br>54-0112 15M | 24-8866 HLY<br>76-0230 HLY<br>54-0112 15M<br>53-0109 HLY                | 80-0179 DLY<br>24-8857 DLY<br>76-0230 HLY<br>54-0112 15M<br>53-0109 HLY<br>24-8866 HLY |

| State | Station name                   | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|--------------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                                |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily       |
| ID    | LITTLE SALMON CREEK            | 81-0001 | 43.2968  | -116.8280 | 5167              | 0          | 32     | 32    |                       | 81-0001 HLY | 81-0001 HLY |
| ID    | UPPER SALMON CREEK NEAR SALMON | 81-0002 | 43.2669  | -116.8499 | 5886              | 0          | 24     | 26    |                       | 81-0002 HLY | 81-0002 HLY |
| ID    | SUMMIT RAINGAGE SITE           | 81-0004 | 43.2471  | -116.7071 | 4206              | 0          | 51     | 52    |                       | 81-0004 HLY | 81-0004 DLY |
| ID    | FLATS WEIR AND RAINGAGES AND M | 81-0005 | 43.2286  | -116.7375 | 3885              | 0          | 57     | 57    |                       | 81-0005 HLY | 81-0005 HLY |
| ID    | REYNOLDS QUONSET               | 81-0006 | 43.2051  | -116.7503 | 3937              | 0          | 57     | 57    |                       | 81-0006 HLY | 81-0006 DLY |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0007 | 43.1785  | -116.7910 | 5030              | 0          | 55     | 55    |                       | 81-0007 HLY | 81-0007 DLY |
| ID    | NANCY GULCH METEOROLOGY AND RA | 81-0008 | 43.1688  | -116.7137 | 4639              | 0          | 39     | 40    |                       | 81-0008 HLY | 81-0008 HLY |
| ID    | RAINGAGE SITE NEAR TOLLGATE WE | 81-0009 | 43.1414  | -116.7672 | 4790              | 0          | 57     | 56    |                       | 81-0009 HLY | 81-0009 HLY |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0010 | 43.1286  | -116.7966 | 5833              | 0          | 39     | 39    |                       | 81-0010 HLY | 81-0010 DLY |
|       |                                |         |          |           |                   |            |        |       |                       | 81-0011 HLY | 81-0011 DLY |
| ID    | LOWER SHEEP CREEK              | 81-0013 | 43.1400  | -116.7336 | 5410              | 0          | 57     | 57    |                       | 81-0013 HLY | 81-0013 DLY |
| ID    | UPPER SHEEP CREEK WEATHER SIT  | 81-0014 | 43.1221  | -116.7232 | 6132              | 0          | 33     | 34    |                       | 81-0014 HLY | 81-0014 HLY |
| ID    | CHRISTMAS MEADOWS METEOROLOGY  | 81-0017 | 43.1023  | -116.8050 | 5951              | 0          | 57     | 57    |                       | 81-0017 HLY | 81-0017 HLY |
| ID    | BREAKS METEOROLOGY AND RAINGA  | 81-0018 | 43.1068  | -116.7739 | 5200              | 0          | 28     | 28    |                       | 81-0018 HLY | 81-0018 DLY |
| ID    | RAINGAGE SITE ON DIVIDE BETWEE | 81-0019 | 43.1052  | -116.7387 | 6142              | 0          | 57     | 57    |                       | 81-0019 HLY | 81-0019 DLY |
| ID    | RAINGAGE SITE NEAR DEMOCRAT HI | 81-0020 | 43.0961  | -116.7745 | 5426              | 0          | 57     | 57    |                       | 81-0020 HLY | 81-0020 HLY |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0021 | 43.0792  | -116.8273 | 7116              | 0          | 57     | 57    |                       | 81-0021 HLY | 81-0021 HLY |
| ID    | BULL MEADOW METEOROLOGY AND RA | 81-0023 | 43.0822  | -116.7356 | 6568              | 0          | 57     | 57    |                       | 81-0023 HLY | 81-0023 HLY |
| ID    | HEADWATERS OF WEST FORK REYNOL | 81-0024 | 43.0665  | -116.7945 | 6804              | 0          | 57     | 57    |                       | 81-0024 HLY | 81-0024 HLY |
| ID    | ATLANTA SUMMIT                 | 86-0306 | 43.7569  | -115.2391 | 7580              | 0          | 0      | 43    |                       |             | 86-0306 DLY |
| MT    | BADGER PASS                    | 86-0307 | 48.1309  | -113.0232 | 6900              | 0          | 0      | 43    |                       |             | 86-0307 DLY |
| WY    | BALD MTN.                      | 86-0309 | 44.8007  | -107.8444 | 9380              | 0          | 0      | 45    |                       |             | 86-0309 DLY |
| MT    | BANFIELD MOUNTAIN              | 86-0311 | 48.5712  | -115.4457 | 5600              | 0          | 0      | 35    |                       |             | 86-0311 DLY |
| ID    | BANNER SUMMIT                  | 86-0312 | 44.3034  | -115.2345 | 7040              | 0          | 0      | 43    |                       |             | 86-0312 DLY |
| MT    | BARKER LAKES                   | 86-0313 | 46.0971  | -113.1304 | 8250              | 0          | 0      | 43    |                       |             | 86-0313 DLY |
| WY    | BASE CAMP                      | 86-0314 | 43.9402  | -110.4454 | 7060              | 0          | 0      | 43    |                       |             | 86-0314 DLY |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily       |
| MT    | BASIN CREEK        | 86-0315 | 45.7974  | -112.5205 | 7180              | 0          | 0      | 43    |                       |             | 86-0315 DLY |
| WY    | BATTLE MOUNTAIN    | 86-0317 | 41.0541  | -107.2661 | 7440              | 0          | 0      | 37    |                       |             | 86-0317 DLY |
| MT    | BEAGLE SPRINGS     | 86-0318 | 44.4715  | -112.9819 | 8850              | 0          | 0      | 45    |                       |             | 86-0318 DLY |
| ID    | BEAR BASIN         | 86-0319 | 44.9522  | -116.1429 | 5350              | 0          | 0      | 42    |                       |             | 86-0319 DLY |
| ID    | BEAR CANYON        | 86-0320 | 43.7437  | -113.9380 | 7900              | 0          | 18     | 42    |                       | 86-0320 HLY | 86-0320 DLY |
| ID    | BEAR MOUNTAIN      | 86-0323 | 48.3058  | -116.0745 | 5400              | 0          | 16     | 42    |                       | 86-0323 HLY | 86-0323 DLY |
| ID    | BEAR SADDLE        | 86-0324 | 44.6053  | -116.9810 | 6180              | 0          | 17     | 42    |                       | 86-0324 HLY | 86-0324 DLY |
| WY    | BEAR TRAP MEADOW   | 86-0325 | 43.8874  | -107.0613 | 8200              | 0          | 0      | 43    |                       |             | 86-0325 DLY |
| WY    | BEARTOOTH LAKE     | 86-0326 | 44.9431  | -109.5674 | 9360              | 0          | 0      | 43    |                       |             | 86-0326 DLY |
| MT    | BEAVER CREEK       | 86-0328 | 44.9497  | -111.3585 | 7850              | 0          | 0      | 38    |                       |             | 86-0328 DLY |
| ID    | BIG CREEK SUMMIT   | 86-0338 | 44.6262  | -115.7956 | 6560              | 0          | 0      | 42    |                       |             | 86-0338 DLY |
| WY    | BIG SANDY OPENING  | 86-0342 | 42.6458  | -109.2597 | 9080              | 0          | 0      | 43    |                       |             | 86-0342 DLY |
| MT    | BISSON CREEK       | 86-0346 | 47.6839  | -113.9990 | 4920              | 0          | 0      | 31    |                       |             | 86-0346 DLY |
| MT    | BLACK BEAR         | 86-0347 | 44.5083  | -111.1280 | 8170              | 0          | 0      | 45    |                       |             | 86-0347 DLY |
| MT    | BLACK PINE         | 86-0349 | 46.4140  | -113.4309 | 7210              | 0          | 0      | 45    |                       |             | 86-0349 DLY |
| WY    | BLACKWATER         | 86-0350 | 44.3767  | -109.7933 | 9780              | 0          | 0      | 43    |                       |             | 86-0350 DLY |
| WY    | BLIND BULL SUM     | 86-0353 | 42.9640  | -110.6097 | 8650              | 0          | 15     | 43    |                       | 86-0353 HLY | 86-0353 DLY |
| MT    | BLOODY DICK        | 86-0355 | 45.1651  | -113.5010 | 7600              | 0          | 0      | 43    |                       |             | 86-0355 DLY |
| WY    | BONE SPRINGS DIV   | 86-0358 | 44.6789  | -107.5811 | 9350              | 0          | 0      | 45    |                       |             | 86-0358 DLY |
| ID    | BOSTETTER R.S.     | 86-0359 | 42.1644  | -114.1927 | 7500              | 0          | 0      | 42    |                       |             | 86-0359 DLY |
| MT    | BOULDER MOUNTAIN   | 86-0360 | 46.5596  | -111.2897 | 7950              | 0          | 0      | 45    |                       |             | 86-0360 DLY |
| MT    | BOX CANYON         | 86-0363 | 45.2719  | -110.2490 | 6670              | 0          | 0      | 45    |                       |             | 86-0363 DLY |
| MT    | BRACKETT CREEK     | 86-0365 | 45.8911  | -110.9385 | 7320              | 0          | 10     | 29    |                       | 86-0365 HLY | 86-0365 DLY |
| WY    | BROOKLYN LAKE      | 86-0367 | 41.3588  | -106.2321 | 10240             | 0          | 0      | 43    |                       |             | 86-0367 DLY |
| ID    | BRUNDAGE RESERVOIR | 86-0370 | 45.0432  | -116.1325 | 6250              | 0          | 0      | 37    |                       |             | 86-0370 DLY |



| State | Station name         | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                            |
|-------|----------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------|
|       |                      |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                      |
| WY    | BURGESS JUNCTION     | 86-0377 | 44.7877  | -107.5292 | 7880              | 0          | 0      | 43    |                       |             | 86-0377 DLY                |
| WY    | BURROUGHS CREEK      | 86-0379 | 43.6973  | -109.6702 | 8750              | 0          | 0      | 43    |                       |             | 86-0379 DLY                |
| MT    | CALVERT CREEK        | 86-0381 | 45.8838  | -113.3255 | 6430              | 0          | 0      | 44    |                       |             | 86-0381 DLY                |
| ID    | CAMAS CREEK DIVIDE   | 86-0382 | 43.2655  | -115.3453 | 5710              | 0          | 17     | 31    |                       | 86-0382 HLY | 86-0382 DLY                |
| WY    | CANYON               | 86-0384 | 44.7196  | -110.5108 | 7870              | 0          | 0      | 52    |                       |             | 86-0384 DLY<br>48-3995 DLY |
| MT    | CARROT BASIN         | 86-0385 | 44.9619  | -111.2940 | 9000              | 0          | 0      | 41    |                       |             | 86-0385 DLY                |
| WY    | CASPER MTN.          | 86-0389 | 42.7339  | -106.3186 | 7900              | 0          | 16     | 42    |                       | 86-0389 HLY | 86-0389 DLY                |
| WY    | CLOUD PEAK RESERVOIR | 86-0402 | 44.4034  | -107.0606 | 9860              | 0          | 0      | 44    |                       |             | 86-0402 DLY                |
| MT    | CLOVER MEADOW        | 86-0403 | 45.0179  | -111.8456 | 8600              | 0          | 0      | 45    |                       |             | 86-0403 DLY                |
| WY    | COLD SPRINGS         | 86-0405 | 43.2768  | -109.4458 | 9630              | 0          | 0      | 40    |                       |             | 86-0405 DLY                |
| MT    | COLE CREEK           | 86-0407 | 45.1940  | -109.3455 | 7850              | 0          | 0      | 45    |                       |             | 86-0407 DLY                |
| MT    | COMBINATION          | 86-0410 | 46.4652  | -113.3936 | 5600              | 0          | 0      | 44    |                       |             | 86-0410 DLY                |
| ID    | COOL CREEK           | 86-0411 | 46.7636  | -115.2953 | 6280              | 0          | 0      | 38    |                       |             | 86-0411 DLY                |
| MT    | COPPER BOTTOM        | 86-0413 | 47.0568  | -112.5950 | 5200              | 0          | 0      | 44    |                       |             | 86-0413 DLY                |
| MT    | COPPER CAMP          | 86-0414 | 47.0816  | -112.7296 | 6950              | 0          | 0      | 45    |                       |             | 86-0414 DLY                |
| WY    | COTTONWOOD CREEK     | 86-0419 | 42.6459  | -110.8148 | 7670              | 0          | 0      | 39    |                       |             | 86-0419 DLY                |
| ID    | CRAB CREEK           | 86-0424 | 44.4370  | -111.9938 | 6900              | 0          | 15     | 42    |                       | 86-0424 HLY | 86-0424 DLY                |
| ID    | CRATER MEADOWS       | 86-0425 | 46.5639  | -115.2890 | 5960              | 0          | 0      | 39    |                       |             | 86-0425 DLY                |
| MT    | CRYSTAL LAKE         | 86-0427 | 46.7894  | -109.5120 | 6050              | 0          | 0      | 45    |                       |             | 86-0427 DLY                |
| MT    | DALY CREEK           | 86-0433 | 46.1837  | -113.8533 | 5780              | 0          | 0      | 43    |                       |             | 86-0433 DLY                |
| MT    | DARKHORSE LAKE       | 86-0436 | 45.1737  | -113.5845 | 8945              | 0          | 0      | 43    |                       |             | 86-0436 DLY                |
| MT    | DEADMAN CREEK        | 86-0437 | 46.7928  | -110.6755 | 6450              | 0          | 0      | 44    |                       |             | 86-0437 DLY                |
| ID    | DEADWOOD SUMMIT      | 86-0439 | 44.5451  | -115.5638 | 6860              | 0          | 0      | 42    |                       |             | 86-0439 DLY                |
| MT    | DIVIDE               | 86-0448 | 44.7932  | -112.0564 | 7800              | 0          | 0      | 45    |                       |             | 86-0448 DLY                |
| WY    | DIVIDE PEAK          | 86-0449 | 41.3040  | -107.1524 | 8880              | 0          | 0      | 43    |                       |             | 86-0449 DLY                |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                            |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                      |
| ID    | DOLLARHIDE SUMMIT  | 86-0450 | 43.6025  | -114.6742 | 8420              | 0          | 0      | 41    |                       |             | 86-0450 DLY                |
| WY    | DOME LAKE          | 86-0451 | 44.5746  | -107.2954 | 8880              | 0          | 0      | 65    |                       |             | 86-0451 DLY<br>48-2638 DLY |
| MT    | DUPUYER CREEK      | 86-0458 | 48.0634  | -112.7573 | 5750              | 0          | 0      | 40    |                       |             | 86-0458 DLY                |
| WY    | EAST RIM DIVIDE    | 86-0460 | 43.1310  | -110.2023 | 7930              | 0          | 0      | 38    |                       |             | 86-0460 DLY                |
| ID    | ELK BUTTE          | 86-0466 | 46.8400  | -116.1223 | 5690              | 0          | 0      | 40    |                       |             | 86-0466 DLY                |
| WY    | ELKHART PARK G.S.  | 86-0468 | 43.0066  | -109.7589 | 9400              | 0          | 0      | 43    |                       |             | 86-0468 DLY                |
| MT    | EMERY CREEK        | 86-0469 | 48.4341  | -113.9372 | 4350              | 0          | 0      | 43    |                       |             | 86-0469 DLY                |
| ID    | EMIGRANT SUMMIT    | 86-0471 | 42.3605  | -111.5609 | 7390              | 0          | 17     | 43    |                       | 86-0471 HLY | 86-0471 DLY                |
| WY    | EVENING STAR       | 86-0472 | 44.6526  | -109.7842 | 9200              | 0          | 0      | 43    |                       |             | 86-0472 DLY                |
| MT    | FISHER CREEK       | 86-0480 | 45.0624  | -109.9449 | 9100              | 0          | 0      | 45    |                       |             | 86-0480 DLY                |
| MT    | FLATTOP MTN.       | 86-0482 | 48.8022  | -113.8571 | 6300              | 0          | 0      | 45    |                       |             | 86-0482 DLY                |
| ID    | FRANKLIN BASIN     | 86-0484 | 42.0505  | -111.6012 | 8140              | 0          | 0      | 43    |                       |             | 86-0484 DLY                |
| MT    | FROHNER MEADOW     | 86-0487 | 46.4355  | -112.1928 | 6480              | 0          | 0      | 55    |                       |             | 86-0487 DLY<br>24-1686 DLY |
| ID    | GALENA             | 86-0489 | 43.8772  | -114.6725 | 7470              | 0          | 0      | 50    |                       |             | 86-0489 DLY<br>10-3417 DLY |
| ID    | GALENA SUMMIT      | 86-0490 | 43.8750  | -114.7136 | 8780              | 0          | 16     | 41    |                       | 86-0490 HLY | 86-0490 DLY                |
| ID    | GARFIELD R.S.      | 86-0492 | 43.6104  | -113.9308 | 6560              | 0          | 0      | 43    |                       |             | 86-0492 DLY                |
| ID    | GIVEOUT            | 86-0493 | 42.4132  | -111.1663 | 6930              | 0          | 16     | 41    |                       | 86-0493 HLY | 86-0493 DLY                |
| ID    | GRAHAM GUARD STA.  | 86-0496 | 43.9538  | -115.2739 | 5690              | 0          | 0      | 43    |                       |             | 86-0496 DLY                |
| WY    | GRANITE CREEK      | 86-0497 | 43.3430  | -110.4350 | 6770              | 0          | 0      | 36    |                       |             | 86-0497 DLY                |
| WY    | GRASSY LAKE        | 86-0499 | 44.1261  | -110.8344 | 7265              | 0          | 0      | 43    |                       |             | 86-0499 DLY                |
| MT    | GRAVE CREEK        | 86-0500 | 48.9145  | -114.7666 | 4300              | 0          | 0      | 44    |                       |             | 86-0500 DLY                |
| WY    | GRAVE SPRINGS      | 86-0501 | 43.4664  | -107.2398 | 8550              | 0          | 0      | 31    |                       |             | 86-0501 DLY                |
| WY    | GROS VENTRE SUMMIT | 86-0506 | 43.3894  | -110.1294 | 8750              | 0          | 0      | 41    |                       |             | 86-0506 DLY                |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                            |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                      |
| WY    | HAMS FORK         | 86-0509 | 42.1460  | -110.6783 | 7840              | 0          | 0      | 38    |                       |             | 86-0509 DLY                |
| MT    | HAND CREEK        | 86-0510 | 48.3075  | -114.8408 | 5035              | 0          | 0      | 43    |                       |             | 86-0510 DLY                |
| WY    | HANSEN SAWMILL    | 86-0512 | 44.2560  | -106.9798 | 8360              | 0          | 0      | 43    |                       |             | 86-0512 DLY                |
| MT    | HAWKINS LAKE      | 86-0516 | 48.9723  | -115.9534 | 6450              | 0          | 0      | 36    |                       |             | 86-0516 DLY                |
| ID    | HEMLOCK BUTTE     | 86-0520 | 46.4811  | -115.6336 | 5810              | 0          | 16     | 40    |                       | 86-0520 HLY | 86-0520 DLY                |
| ID    | HILTS CREEK       | 86-0524 | 44.0190  | -113.4723 | 8000              | 0          | 18     | 42    |                       | 86-0524 HLY | 86-0524 DLY                |
| WY    | HOBBS PARK        | 86-0525 | 42.8698  | -109.0946 | 10100             | 0          | 0      | 45    |                       |             | 86-0525 DLY                |
| MT    | HOODOO BASIN      | 86-0530 | 46.9751  | -115.0349 | 6050              | 0          | 0      | 43    |                       |             | 86-0530 DLY                |
| ID    | HOWELL CANYON     | 86-0534 | 42.3203  | -113.6159 | 7980              | 0          | 19     | 42    |                       | 86-0534 HLY | 86-0534 DLY                |
| ID    | HUMBOLDT GULCH    | 86-0535 | 47.5318  | -115.7764 | 4250              | 0          | 0      | 72    |                       |             | 86-0535 DLY<br>10-1272 DLY |
| ID    | HYNDMAN           | 86-0537 | 43.7108  | -114.1589 | 7620              | 0          | 18     | 42    |                       | 86-0537 HLY | 86-0537 DLY                |
| WY    | INDIAN CREEK      | 86-0544 | 42.3002  | -110.6775 | 9425              | 0          | 0      | 41    |                       |             | 86-0544 DLY                |
| ID    | JACKSON PEAK      | 86-0550 | 44.0509  | -115.4432 | 7070              | 0          | 21     | 42    |                       | 86-0550 HLY | 86-0550 DLY                |
| WY    | KELLEY R.S.       | 86-0554 | 42.2655  | -110.8018 | 8180              | 0          | 17     | 42    |                       | 86-0554 HLY | 86-0554 DLY                |
| WY    | KENDALL R.S.      | 86-0555 | 43.2493  | -110.0166 | 7740              | 0          | 0      | 38    |                       |             | 86-0555 DLY                |
| WY    | KIRWIN            | 86-0560 | 43.8607  | -109.3216 | 9550              | 0          | 0      | 43    |                       |             | 86-0560 DLY                |
| MT    | KRAFT CREEK       | 86-0562 | 47.4275  | -113.7751 | 4750              | 0          | 0      | 43    |                       |             | 86-0562 DLY                |
| MT    | LAKEVIEW RIDGE    | 86-0568 | 44.5891  | -111.8250 | 7400              | 0          | 0      | 45    |                       |             | 86-0568 DLY                |
| WY    | LAPRELE CREEK     | 86-0571 | 42.4358  | -105.8608 | 8375              | 0          | 0      | 42    |                       |             | 86-0571 DLY                |
| MT    | LEMHI RIDGE       | 86-0576 | 44.9938  | -113.4440 | 8100              | 0          | 0      | 44    |                       |             | 86-0576 DLY                |
| WY    | LEWIS LAKE DIVIDE | 86-0577 | 44.2086  | -110.6663 | 7850              | 0          | 0      | 43    |                       |             | 86-0577 DLY                |
| MT    | LICK CREEK        | 86-0578 | 45.5041  | -110.9662 | 6860              | 0          | 0      | 45    |                       |             | 86-0578 DLY                |
| WY    | LITTLE WARM       | 86-0585 | 43.5028  | -109.7520 | 9370              | 0          | 0      | 45    |                       |             | 86-0585 DLY                |
| ID    | LOLO PASS         | 86-0588 | 46.6345  | -114.5807 | 5240              | 0          | 18     | 40    |                       | 86-0588 HLY | 86-0588 DLY                |
| MT    | LONE MOUNTAIN     | 86-0590 | 45.2741  | -111.4269 | 8880              | 0          | 0      | 32    |                       |             | 86-0590 DLY                |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                            |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                      |
| ID    | LOOKOUT            | 86-0594 | 47.4575  | -115.7046 | 5190              | 0          | 0      | 42    |                       |             | 86-0594 DLY                |
| WY    | LOOMIS PARK        | 86-0597 | 43.1739  | -110.1401 | 8240              | 0          | 0      | 43    |                       |             | 86-0597 DLY                |
| ID    | LOST LAKE          | 86-0600 | 47.0809  | -115.9604 | 6110              | 0          | 0      | 42    |                       |             | 86-0600 DLY                |
| ID    | LOST-WOOD DIVIDE   | 86-0601 | 43.8243  | -114.2640 | 7900              | 0          | 0      | 42    |                       |             | 86-0601 DLY                |
| MT    | LOWER TWIN         | 86-0603 | 45.5087  | -111.9229 | 7900              | 0          | 0      | 43    |                       |             | 86-0603 DLY                |
| MT    | LUBRECHT FLUME     | 86-0604 | 46.8829  | -113.3223 | 4680              | 0          | 0      | 45    |                       |             | 86-0604 DLY                |
| MT    | MADISON PLATEAU    | 86-0609 | 44.5862  | -111.1163 | 7750              | 0          | 0      | 35    |                       |             | 86-0609 DLY                |
| ID    | MAGIC MOUNTAIN     | 86-0610 | 42.1807  | -114.2866 | 6880              | 0          | 0      | 43    |                       |             | 86-0610 DLY                |
| MT    | MANY GLACIER       | 86-0613 | 48.7970  | -113.6705 | 4900              | 0          | 0      | 47    |                       |             | 86-0613 DLY<br>24-5361 DLY |
| WY    | MARQUETTE          | 86-0616 | 44.3016  | -109.2402 | 8760              | 0          | 0      | 42    |                       |             | 86-0616 DLY                |
| ID    | MEADOW LAKE        | 86-0620 | 44.4366  | -113.3182 | 9150              | 0          | 17     | 41    |                       | 86-0620 HLY | 86-0620 DLY                |
| ID    | MICA CREEK         | 86-0623 | 47.1505  | -116.2664 | 4510              | 0          | 0      | 33    |                       |             | 86-0623 DLY                |
| WY    | MIDDLE POWDER      | 86-0625 | 43.6273  | -107.1814 | 7760              | 0          | 0      | 44    |                       |             | 86-0625 DLY                |
| ID    | MILL CREEK SUMMIT  | 86-0627 | 44.4721  | -114.4899 | 8800              | 0          | 0      | 40    |                       |             | 86-0627 DLY                |
| MT    | MONUMENT PEAK      | 86-0635 | 45.2176  | -110.2370 | 8850              | 0          | 0      | 43    |                       |             | 86-0635 DLY                |
| ID    | MOONSHINE          | 86-0636 | 44.4147  | -113.3981 | 7440              | 0          | 0      | 42    |                       |             | 86-0636 DLY                |
| ID    | MORES CREEK SUMMIT | 86-0637 | 43.9320  | -115.6659 | 6100              | 0          | 0      | 41    |                       |             | 86-0637 DLY                |
| ID    | MOOSE CREEK        | 86-0638 | 45.6701  | -113.9531 | 6200              | 0          | 0      | 42    |                       |             | 86-0638 DLY                |
| ID    | MORGAN CREEK       | 86-0639 | 44.8424  | -114.2687 | 7600              | 0          | 0      | 42    |                       |             | 86-0639 DLY                |
| ID    | MOSQUITO RIDGE     | 86-0645 | 48.0573  | -116.2306 | 5260              | 0          | 0      | 42    |                       |             | 86-0645 DLY                |
| MT    | MOSS PEAK          | 86-0646 | 47.6849  | -113.9623 | 6780              | 0          | 9      | 38    |                       | 86-0646 HLY | 86-0646 DLY                |
| MT    | MOUNT LOCKHART     | 86-0649 | 47.9173  | -112.8238 | 6400              | 0          | 0      | 45    |                       |             | 86-0649 DLY                |
| ID    | MOUNTAIN MEADOWS   | 86-0650 | 45.6969  | -115.2297 | 6320              | 0          | 0      | 43    |                       |             | 86-0650 DLY                |
| ID    | MUD FLAT           | 86-0654 | 42.6004  | -116.5592 | 5730              | 0          | 15     | 43    |                       | 86-0654 HLY | 86-0654 DLY                |
| MT    | MULE CREEK         | 86-0656 | 45.4096  | -112.9593 | 8300              | 0          | 10     | 43    |                       | 86-0656 HLY | 86-0656 DLY                |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily       |
| MT    | N FK ELK CREEK     | 86-0657 | 46.8716  | -113.2773 | 6250              | 0          | 0      | 44    |                       |             | 86-0657 DLY |
| MT    | NEZ PERCE CAMP     | 86-0662 | 45.7311  | -114.4808 | 5650              | 0          | 0      | 43    |                       |             | 86-0662 DLY |
| MT    | NOISY BASIN        | 86-0664 | 48.1568  | -113.9464 | 6040              | 0          | 0      | 45    |                       |             | 86-0664 DLY |
| MT    | NORTH FORK JOCKO   | 86-0667 | 47.2726  | -113.7562 | 6330              | 0          | 0      | 33    |                       |             | 86-0667 DLY |
| WY    | NORTH FRENCH CREEK | 86-0668 | 41.3308  | -106.3755 | 10130             | 0          | 13     | 44    |                       | 86-0668 HLY | 86-0668 DLY |
| WY    | OLD BATTLE         | 86-0673 | 41.1540  | -106.9694 | 10000             | 0          | 0      | 43    |                       |             | 86-0673 DLY |
| WY    | OWL CREEK          | 86-0676 | 43.6587  | -109.0099 | 8975              | 0          | 0      | 43    |                       |             | 86-0676 DLY |
| ID    | OXFORD SPRING      | 86-0677 | 42.2602  | -112.1252 | 6740              | 0          | 15     | 43    |                       | 86-0677 HLY | 86-0677 DLY |
| WY    | PARKER PEAK        | 86-0683 | 44.7340  | -109.9148 | 9400              | 0          | 0      | 43    |                       |             | 86-0683 DLY |
| WY    | PHILLIPS BENCH     | 86-0689 | 43.5169  | -110.9126 | 8200              | 0          | 0      | 42    |                       |             | 86-0689 DLY |
| MT    | PICKFOOT CREEK     | 86-0690 | 46.5798  | -111.2683 | 6650              | 0          | 0      | 45    |                       |             | 86-0690 DLY |
| MT    | PIKE CREEK         | 86-0693 | 48.3031  | -113.3287 | 5930              | 0          | 0      | 43    |                       |             | 86-0693 DLY |
| ID    | PINE CREEK PASS    | 86-0695 | 43.5700  | -111.2116 | 6720              | 0          | 17     | 35    |                       | 86-0695 HLY | 86-0695 DLY |
| MT    | PLACER BASIN       | 86-0696 | 45.4190  | -110.0884 | 8830              | 0          | 0      | 43    |                       |             | 86-0696 DLY |
| MT    | PORCUPINE          | 86-0700 | 46.1119  | -110.4696 | 6500              | 0          | 0      | 45    |                       |             | 86-0700 DLY |
| WY    | POWDER RIVER PASS  | 86-0703 | 44.1619  | -107.1262 | 9480              | 0          | 0      | 45    |                       |             | 86-0703 DLY |
| WY    | RENO HILL          | 86-0716 | 42.5711  | -106.0889 | 8400              | 0          | 0      | 41    |                       |             | 86-0716 DLY |
| MT    | ROCKER PEAK        | 86-0722 | 46.3561  | -112.2618 | 8000              | 0          | 0      | 45    |                       |             | 86-0722 DLY |
| MT    | S FORK SHIELDS     | 86-0725 | 46.0896  | -110.4336 | 8100              | 0          | 0      | 40    |                       |             | 86-0725 DLY |
| MT    | SADDLE MTN.        | 86-0727 | 45.6926  | -113.9683 | 7940              | 0          | 0      | 45    |                       |             | 86-0727 DLY |
| WY    | SALT RIVER SUMMIT  | 86-0730 | 42.5075  | -110.9099 | 7640              | 0          | 0      | 42    |                       |             | 86-0730 DLY |
| WY    | SAND LAKE          | 86-0731 | 41.4626  | -106.2811 | 10050             | 0          | 0      | 41    |                       |             | 86-0731 DLY |
| WY    | SANDSTONE RS       | 86-0732 | 41.1117  | -107.1706 | 8150              | 0          | 0      | 38    |                       |             | 86-0732 DLY |
| ID    | SAVAGE PASS        | 86-0735 | 46.4663  | -114.6333 | 6190              | 0          | 0      | 40    |                       |             | 86-0735 DLY |
| ID    | SCHWEITZER BASIN   | 86-0738 | 48.3743  | -116.6392 | 6090              | 0          | 0      | 40    |                       |             | 86-0738 DLY |

| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                            |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly                     | Daily                      |
| ID    | SECESH SUMMIT       | 86-0740 | 45.1885  | -115.9715 | 6540              | 0          | 17     | 41    |                       | 86-0740 HLY                | 86-0740 DLY                |
| ID    | SEDGWICK PEAK       | 86-0741 | 42.5250  | -111.9564 | 7850              | 0          | 17     | 35    |                       | 86-0741 HLY                | 86-0741 DLY                |
| ID    | SHANGHI SUMMIT      | 86-0747 | 46.5660  | -115.7422 | 4600              | 0          | 15     | 38    |                       | 86-0747 HLY                | 86-0747 DLY                |
| ID    | SHEEP MTN.          | 86-0749 | 43.2103  | -111.6879 | 6650              | 0          | 0      | 40    |                       |                            | 86-0749 DLY                |
| WY    | SHELL CREEK         | 86-0751 | 44.5001  | -107.4295 | 9580              | 0          | 0      | 45    |                       |                            | 86-0751 DLY                |
| ID    | SHERWIN             | 86-0752 | 46.9503  | -116.3397 | 3200              | 0          | 0      | 40    |                       |                            | 86-0752 DLY                |
| MT    | SHORT CREEK         | 86-0753 | 44.9757  | -111.9521 | 7000              | 0          | 0      | 36    |                       |                            | 86-0753 DLY                |
| MT    | SHOWER FALLS        | 86-0754 | 45.4012  | -110.9576 | 8100              | 0          | 0      | 45    |                       |                            | 86-0754 DLY                |
| MT    | SKALKAHO SUMMIT     | 86-0760 | 46.2421  | -113.7725 | 7250              | 0          | 0      | 43    |                       |                            | 86-0760 DLY                |
| ID    | SLUG CREEK DIVIDE   | 86-0761 | 42.5625  | -111.2980 | 7225              | 0          | 0      | 43    |                       |                            | 86-0761 DLY                |
| WY    | SNIDER BASIN        | 86-0765 | 42.4949  | -110.5320 | 8060              | 0          | 17     | 43    |                       | 86-0765 HLY<br>76-0493 HLY | 86-0765 DLY                |
| ID    | SOLDIER R.S.        | 86-0769 | 43.4841  | -114.8269 | 5740              | 0          | 17     | 85    |                       | 86-0769 HLY                | 86-0769 DLY<br>10-8548 DLY |
| ID    | SOMSEN RANCH        | 86-0770 | 42.9528  | -111.3593 | 6800              | 0          | 16     | 42    |                       | 86-0770 HLY                | 86-0770 DLY                |
| WY    | SOUTH BRUSH CREEK   | 86-0772 | 41.3294  | -106.5025 | 8440              | 0          | 0      | 43    |                       |                            | 86-0772 DLY                |
| ID    | SOUTH MTN.          | 86-0774 | 42.7648  | -116.9004 | 6500              | 0          | 0      | 42    |                       |                            | 86-0774 DLY                |
| WY    | SOUTH PASS          | 86-0775 | 42.5732  | -108.8432 | 9040              | 0          | 0      | 39    |                       |                            | 86-0775 DLY                |
| WY    | SPRING CREEK DIVIDE | 86-0779 | 42.5252  | -110.6615 | 9000              | 0          | 0      | 42    |                       |                            | 86-0779 DLY                |
| MT    | SPUR PARK           | 86-0781 | 46.7796  | -110.6217 | 8100              | 0          | 0      | 45    |                       |                            | 86-0781 DLY                |
| ID    | SQUAW FLAT          | 86-0782 | 44.7709  | -116.2480 | 6240              | 0          | 0      | 42    |                       |                            | 86-0782 DLY                |
| MT    | SLEEPING WOMAN      | 86-0783 | 47.1790  | -114.3337 | 6150              | 0          | 0      | 31    |                       |                            | 86-0783 DLY                |
| WY    | ST. LAWRENCE ALT    | 86-0786 | 43.0331  | -109.1702 | 8620              | 0          | 0      | 40    |                       |                            | 86-0786 DLY                |
| MT    | STAHL PEAK          | 86-0787 | 48.9090  | -114.8630 | 6030              | 0          | 0      | 45    |                       |                            | 86-0787 DLY                |
| ID    | STICKNEY MILL       | 86-0792 | 43.8612  | -114.2090 | 7430              | 0          | 18     | 42    |                       | 86-0792 HLY                | 86-0792 DLY                |
| WY    | SUCKER CREEK        | 86-0798 | 44.7225  | -107.4003 | 8880              | 0          | 0      | 45    |                       |                            | 86-0798 DLY                |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                                           |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                                     |
| ID    | SUNSET            | 86-0803 | 47.5555  | -115.8242 | 5540              | 0          | 0      | 41    |                       |             | 86-0803 DLY                               |
| ID    | SWEDE PEAK        | 86-0805 | 43.6260  | -113.9689 | 7640              | 0          | 16     | 42    |                       | 86-0805 HLY | 86-0805 DLY                               |
| WY    | SYLVAN LAKE       | 86-0806 | 44.4776  | -110.1565 | 8420              | 0          | 12     | 43    |                       | 86-0806 HLY | 86-0806 DLY                               |
| WY    | SYLVAN ROAD       | 86-0807 | 44.4782  | -110.0381 | 7120              | 0          | 0      | 47    |                       |             | 86-0807 DLY<br>48-2845 DLY<br>48-9902 DLY |
| MT    | TEPEE CREEK       | 86-0813 | 44.7856  | -111.7100 | 8000              | 0          | 0      | 45    |                       |             | 86-0813 DLY                               |
| WY    | THUMB DIVIDE      | 86-0816 | 44.3692  | -110.5772 | 7980              | 0          | 0      | 36    |                       |             | 86-0816 DLY                               |
| WY    | TIMBER CREEK      | 86-0819 | 44.0274  | -109.1788 | 7950              | 0          | 0      | 36    |                       |             | 86-0819 DLY                               |
| WY    | TOGWOTEE PASS     | 86-0822 | 43.7490  | -110.0578 | 9580              | 0          | 0      | 42    |                       |             | 86-0822 DLY                               |
| WY    | TOWNSEND CREEK    | 86-0826 | 42.6953  | -108.8957 | 8700              | 0          | 0      | 43    |                       |             | 86-0826 DLY                               |
| ID    | TRINITY MTN.      | 86-0830 | 43.6290  | -115.4382 | 7770              | 0          | 15     | 43    |                       | 86-0830 HLY | 86-0830 DLY                               |
| WY    | TRIPLE PEAK       | 86-0831 | 42.7639  | -110.5914 | 8500              | 0          | 0      | 38    |                       |             | 86-0831 DLY                               |
| MT    | TWELVEMILE CREEK  | 86-0835 | 46.1429  | -114.4475 | 5600              | 0          | 0      | 44    |                       |             | 86-0835 DLY                               |
| MT    | TWIN LAKES        | 86-0836 | 46.1438  | -114.5056 | 6400              | 0          | 0      | 45    |                       |             | 86-0836 DLY                               |
| WY    | TWO OCEAN PLATEAU | 86-0837 | 44.1518  | -110.2212 | 9240              | 0          | 0      | 40    |                       |             | 86-0837 DLY                               |
| ID    | VIENNA MINE       | 86-0845 | 43.7994  | -114.8527 | 8960              | 0          | 0      | 42    |                       |             | 86-0845 DLY                               |
| MT    | WALDRON           | 86-0847 | 47.9200  | -112.7909 | 5600              | 0          | 0      | 45    |                       |             | 86-0847 DLY                               |
| MT    | WARM SPRINGS      | 86-0850 | 46.2737  | -113.1640 | 7800              | 0          | 0      | 43    |                       |             | 86-0850 DLY                               |
| WY    | WEBBER SPRINGS    | 86-0852 | 41.1595  | -106.9271 | 9250              | 0          | 0      | 42    |                       |             | 86-0852 DLY                               |
| ID    | WEST BRANCH       | 86-0855 | 45.0722  | -116.4541 | 5560              | 0          | 0      | 42    |                       |             | 86-0855 DLY                               |
| MT    | WHISKEY CREEK     | 86-0858 | 44.6109  | -111.1500 | 6800              | 0          | 0      | 44    |                       |             | 86-0858 DLY                               |
| WY    | WHISKEY PARK      | 86-0859 | 41.0029  | -106.9085 | 8950              | 0          | 12     | 36    |                       | 86-0859 HLY | 86-0859 DLY                               |
| ID    | WHITE ELEPHANT    | 86-0860 | 44.5327  | -111.4109 | 7710              | 0          | 15     | 42    |                       | 86-0860 HLY | 86-0860 DLY                               |
| MT    | WHITE MILL        | 86-0862 | 45.0457  | -109.9099 | 8700              | 0          | 0      | 45    |                       |             | 86-0862 DLY                               |
| ID    | WILDHORSE DIVIDE  | 86-0867 | 42.7574  | -112.4778 | 6490              | 0          | 15     | 41    |                       | 86-0867 HLY | 86-0867 DLY                               |

| State | Station name    | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|-----------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                 |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily       |
| WY    | WILLOW CREEK    | 86-0868 | 42.8151  | -110.8352 | 8080              | 0          | 0      | 41    |                       |             | 86-0868 DLY |
| ID    | WILSON CREEK    | 86-0871 | 42.0126  | -115.0028 | 7120              | 0          | 15     | 33    |                       | 86-0871 HLY | 86-0871 DLY |
| WY    | WINDY PEAK      | 86-0872 | 42.2802  | -105.5782 | 7900              | 0          | 0      | 40    |                       |             | 86-0872 DLY |
| WY    | WOLVERINE       | 86-0875 | 44.8042  | -109.6570 | 7650              | 0          | 0      | 43    |                       |             | 86-0875 DLY |
| MT    | WOOD CREEK      | 86-0876 | 47.4485  | -112.8143 | 5960              | 0          | 0      | 45    |                       |             | 86-0876 DLY |
| WY    | YOUNTS PEAK     | 86-0878 | 43.9323  | -109.8177 | 8350              | 0          | 0      | 41    |                       |             | 86-0878 DLY |
| MT    | TIZER BASIN     | 86-0893 | 46.3494  | -111.8531 | 6880              | 0          | 0      | 34    |                       |             | 86-0893 DLY |
| ID    | CHOCOLATE GULCH | 86-0895 | 43.7685  | -114.4181 | 6310              | 0          | 18     | 30    |                       | 86-0895 HLY | 86-0895 DLY |
| MT    | STUART MOUNTAIN | 86-0901 | 46.9952  | -113.9266 | 7400              | 0          | 0      | 29    |                       |             | 86-0901 DLY |
| ID    | SCHWARTZ LAKE   | 86-0915 | 44.8462  | -113.8373 | 8630              | 0          | 15     | 28    |                       | 86-0915 HLY | 86-0915 DLY |
| MT    | ALBRO LAKE      | 86-0916 | 45.5972  | -111.9590 | 8300              | 0          | 0      | 27    |                       |             | 86-0916 DLY |
| MT    | ROCKY BOY       | 86-0917 | 48.1748  | -109.6473 | 4700              | 0          | 0      | 28    |                       |             | 86-0917 DLY |
| MT    | GARVER CREEK    | 86-0918 | 48.9752  | -115.8192 | 4250              | 0          | 0      | 27    |                       |             | 86-0918 DLY |
| MT    | DAISY PEAK      | 86-0919 | 46.6686  | -110.3302 | 7600              | 0          | 0      | 27    |                       |             | 86-0919 DLY |
| ID    | SMILEY MOUNTAIN | 86-0926 | 43.7272  | -113.8340 | 9520              | 0          | 19     | 22    |                       | 86-0926 HLY | 86-0926 DLY |
| MT    | SACAJAWEA       | 86-0929 | 45.8740  | -110.9278 | 6550              | 0          | 0      | 24    |                       |             | 86-0929 DLY |
| MT    | POORMAN CREEK   | 86-0932 | 48.1267  | -115.6233 | 5100              | 0          | 0      | 23    |                       |             | 86-0932 DLY |
| WY    | GUNSIGHT PASS   | 86-0944 | 43.3833  | -109.8782 | 9820              | 0          | 0      | 25    |                       |             | 86-0944 DLY |
| ID    | BOGUS BASIN     | 86-0978 | 43.7638  | -116.0968 | 6340              | 0          | 22     | 24    |                       | 86-0978 HLY | 86-0978 DLY |
| ID    | VAN WYCK        | 86-0979 | 44.3767  | -116.3366 | 4920              | 0          | 19     | 21    |                       | 86-0979 HLY | 86-0979 DLY |
| ID    | HIDDEN LAKE     | 86-0988 | 48.8937  | -116.7575 | 5040              | 0          | 18     | 23    |                       | 86-0988 HLY | 86-0988 DLY |
| ID    | MOSCOW MOUNTAIN | 86-0989 | 46.8050  | -116.8535 | 4700              | 0          | 16     | 23    |                       | 86-0989 HLY | 86-0989 DLY |
| WY    | CROW CREEK      | 86-1045 | 41.2287  | -105.3828 | 8330              | 0          | 16     | 20    |                       | 86-1045 HLY | 86-1045 DLY |
| ID    | MYRTLE CREEK    | 86-1053 | 48.7226  | -116.4631 | 3520              | 0          | 18     | 20    |                       | 86-1053 HLY | 86-1053 DLY |
| ID    | RAGGED MOUNTAIN | 86-1081 | 47.8558  | -117.0367 | 4210              | 0          | 15     | 17    |                       | 86-1081 HLY | 86-1081 DLY |



| State | Station name                     | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                           |
|-------|----------------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|-------------------------------------------|
|       |                                  |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly                     | Daily                                     |
| MT    | BLACKFEET AGRIMET STATION NR S   | 87-0103 | 48.6753  | -112.5889 | 3905              | 0          | 22     | 22    |                       | 87-0103 HLY                | 87-0103 HLY                               |
| MT    | BIG FLAT NEAR TURNER WEATHER S   | 87-0133 | 48.8356  | -108.5636 | 3103              | 0          | 21     | 21    |                       | 87-0133 HLY                | 87-0133 HLY                               |
| MT    | BUFFALO RAPIDS WEATHER STATION   | 87-0373 | 46.9883  | -104.8031 | 2140              | 0          | 22     | 22    |                       | 87-0373 HLY                | 87-0373 HLY                               |
| MT    | DILLON MONTANA WEATHER STATION   | 87-0743 | 45.3336  | -112.5094 | 5000              | 0          | 24     | 24    |                       | 87-0743 HLY                | 87-0743 HLY                               |
| MT    | GLASGOW MONTANA WEATHER STATIO   | 87-0963 | 48.1467  | -106.6006 | 2084              | 0          | 23     | 23    |                       | 87-0963 HLY                | 87-0963 HLY                               |
| MT    | HELENA VALLEY MONTANA WEATHER    | 87-1103 | 46.6756  | -111.9892 | 3673              | 0          | 26     | 26    |                       | 87-1103 HLY                | 87-1103 HLY                               |
| MT    | JEFFERSON RVR VALLEY WEATHER S   | 87-1123 | 45.7978  | -112.1653 | 4415              | 0          | 31     | 31    |                       | 87-1123 HLY<br>24-8917 HLY | 87-1123 HLY<br>24-8917 HLY                |
| MT    | LOWER MUSSELSHELL WEATHER STAT   | 87-1233 | 46.5628  | -108.0058 | 2950              | 0          | 20     | 20    |                       | 87-1233 HLY                | 87-1233 HLY                               |
| MT    | SHIELDS VALLEY WEATHER STATION   | 87-2033 | 46.0467  | -110.6533 | 5310              | 0          | 20     | 19    |                       | 87-2033 HLY                | 87-2033 HLY                               |
| WY    | SWEETWATER RIVER NR INDEPENDEN   | 87-2044 | 42.4925  | -107.1381 | 5850              | 0          | 25     | 26    |                       | 87-2044 HLY                | 87-2044 HLY                               |
| MT    | TETON RIVER WEATHER STATION NE   | 87-2183 | 47.9006  | -112.1597 | 3854              | 0          | 20     | 20    |                       | 87-2183 HLY                | 87-2183 HLY                               |
| ID    | DWORSHAK - DENT ACRES<br>IDAHO A | 87-3151 | 46.6233  | -116.2206 | 1640              | 0          | 20     | 20    |                       | 87-3151 HLY<br>76-0052 HLY | 87-3151 HLY<br>76-0052 HLY                |
| MT    | DEER LODGE<br>MONTANA AGRIMET WE | 87-3211 | 46.3355  | -112.7667 | 4680              | 0          | 23     | 24    |                       | 87-3211 HLY                | 87-3211 HLY                               |
| ID    | FORT HALL<br>IDAHO AGRIMET WEATH | 87-3351 | 43.0714  | -112.4311 | 4445              | 0          | 28     | 28    |                       | 87-3351 HLY                | 87-3351 HLY                               |
| ID    | GLENNS FERRY<br>IDAHO AGRIMET WE | 87-3431 | 42.8667  | -115.3569 | 3025              | 0          | 28     | 29    |                       | 87-3431 HLY                | 87-3431 HLY                               |
| ID    | NAMPA<br>IDAHO AGRIMET WEATHER S | 87-4321 | 43.4372  | -116.6453 | 2702              | 0          | 22     | 23    |                       | 87-4321 HLY                | 87-4321 HLY                               |
| ID    | ORCHARD RANGE SITE               | 88-0674 | 43.3227  | -115.9964 | 3200              | 0          | 0      | 30    |                       |                            | 88-0674 DLY                               |
| MT    | TABLE MOUNTAIN                   | 88-0808 | 45.8027  | -111.5865 | 4474              | 0          | 0      | 42    |                       |                            | 88-0808 DLY<br>24-9008 15M<br>24-9008 HLY |
| ID    | TERRETON                         | 89-0007 | 43.8417  | -112.4183 | 4792              | 23         | 23     | 22    | 89-0007 15M           | 89-0007 15M                | 89-0007 15M                               |
| ID    | ROBERTS                          | 89-0010 | 43.7435  | -112.1211 | 4760              | 25         | 25     | 24    | 89-0010 15M           | 89-0010 15M                | 89-0010 15M                               |

| State | Station name                   | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                            |
|-------|--------------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------|
|       |                                |         |          |           |                   | <1Hr       | Hourly | Daily | < 1Hr                 | Hourly      | Daily                      |
| ID    | MATERIALS AND FUELS COMPLEX    | 89-0017 | 43.5941  | -112.6517 | 5143              | 26         | 26     | 26    | 89-0017 15M           | 89-0017 15M | 89-0017 15M                |
| ID    | GRID 3/INTEC                   | 89-0018 | 43.5897  | -112.9399 | 4897              | 26         | 26     | 26    | 89-0018 15M           | 89-0018 15M | 89-0018 15M                |
| ID    | RADIOACTIVE WASTE MANAGEMENT C | 89-0023 | 43.5034  | -113.0460 | 5025              | 26         | 26     | 26    | 89-0023 15M           | 89-0023 15M | 89-0023 15M                |
| ID    | IDAHO FALLS                    | 89-0024 | 43.5041  | -112.0501 | 4709              | 23         | 23     | 21    | 89-0024 15M           | 89-0024 15M | 89-0024 15M                |
| ID    | ATOMIC CITY                    | 89-0025 | 43.4437  | -112.8157 | 5058              | 21         | 21     | 21    | 89-0025 15M           | 89-0025 15M | 89-0025 15M                |
| ID    | TABER                          | 89-0028 | 43.3187  | -112.6918 | 4730              | 26         | 26     | 26    | 89-0028 15M           | 89-0028 15M | 89-0028 15M                |
| ID    | RICHFIELD                      | 89-0031 | 43.0606  | -114.1346 | 4315              | 24         | 24     | 24    | 89-0031 15M           | 89-0031 15M | 89-0031 15M                |
| ID    | BOISE WB CITY                  | 98-0001 | 43.6167  | -116.2000 | 2713              | 0          | 0      | 75    |                       |             | 98-0001 DLY<br>69-1274 DLY |
| WY    | KNOWLES                        | 99-5226 | 44.7500  | -104.3667 | 4505              | 0          | 0      | 34    |                       |             | 99-5226 DLY                |

Table A.1.2. Same as Table A.1.1, but for locations in Colorado (CO), Nebraska (NE), Nevada (NV), North Dakota (ND), Oregon (OR), South Dakota (SD), Utah (UT), Washington (WA), and the Canadian provinces of Alberta (AB), British Columbia (BC), and Saskatchewan (SK).

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                                                         |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                                      | Hourly                                    | Daily                                                                   |
| CO    | ALLENSPARK 2SE     | 05-0183 | 40.1881  | -105.5019 | 8215              | 27         | 49     | 73    | 05-0183 15M                               | 05-0183 HLY                               | 05-0183 DLY<br>69-0103 DLY<br>05-0183 HLY                               |
| CO    | BOULDER 2          | 05-0843 | 40.0339  | -105.2811 | 5415              | 41         | 64     | 72    | 05-0843 15M<br>54-0001 15M                | 05-0843 HLY<br>54-0001 15M                | 05-0843 DLY<br>69-0123 DLY<br>69-0098 DLY<br>54-0001 15M<br>05-0843 HLY |
| CO    | BRIGGSDALE         | 05-0945 | 40.6344  | -104.3286 | 4862              | 0          | 0      | 62    |                                           |                                           | 05-0945 DLY<br>05-0945 HLY                                              |
| CO    | BROWNS PARK REFUGE | 05-1017 | 40.8008  | -108.9172 | 5354              | 0          | 0      | 30    |                                           |                                           | 05-1017 DLY                                                             |
| CO    | BUCKHORN MTN 1 E   | 05-1060 | 40.6158  | -105.2969 | 7400              | 0          | 0      | 34    |                                           |                                           | 05-1060 DLY                                                             |
| CO    | CRAIG 4SW          | 05-1932 | 40.4517  | -107.5906 | 6496              | 0          | 0      | 31    |                                           |                                           | 05-1932 DLY                                                             |
| CO    | DINOSAUR NM        | 05-2286 | 40.2442  | -108.9725 | 5960              | 30         | 46     | 56    | 05-2286 15M<br>57-0007 15M<br>54-0003 15M | 05-2286 HLY<br>57-0007 HLY<br>54-0003 15M | 05-2286 DLY<br>57-0007 DLY<br>57-0007 HLY<br>54-0003 15M<br>54-0003 15M |
| CO    | ESTES PARK         | 05-2759 | 40.3767  | -105.4858 | 7480              | 0          | 0      | 102   |                                           |                                           | 05-2759 DLY<br>69-0448 DLY                                              |
| CO    | FT COLLINS         | 05-3005 | 40.5764  | -105.0858 | 5004              | 21         | 63     | 128   | 54-0004 15M                               | 05-3005 HLY<br>54-0004 15M                | 05-3005 DLY                                                             |
| CO    | FT COLLINS 4 E     | 05-3006 | 40.5756  | -105.0236 | 4920              | 0          | 0      | 45    |                                           |                                           | 05-3006 DLY<br>64-0147 DLY                                              |

| State | Station name     | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                                          |
|-------|------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                  |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                                      | Hourly                                    | Daily                                                    |
| CO    | FT LUPTON 2 SE   | 05-3027 | 40.0667  | -104.7833 | 5023              | 0          | 0      | 80    |                                           |                                           | 05-3027 DLY<br>69-1120 DLY                               |
| CO    | FT MORGAN        | 05-3038 | 40.2569  | -103.87   | 4376              | 0          | 0      | 109   |                                           |                                           | 05-3038 DLY                                              |
| CO    | GRAND LAKE 1 NW  | 05-3496 | 40.2669  | -105.8322 | 8720              | 0          | 0      | 94    |                                           |                                           | 05-3496 DLY                                              |
| CO    | GRAND LAKE 6 SSW | 05-3500 | 40.185   | -105.8667 | 8288              | 30         | 57     | 75    | 05-3500 15M<br>54-0005 15M                | 05-3500 HLY<br>54-0005 15M                | 05-3500 DLY                                              |
| CO    | GREELEY UNC      | 05-3553 | 40.4022  | -104.6992 | 4715              | 27         | 58     | 125   | 05-3553 15M<br>05-3546 15M<br>54-0006 15M | 05-3553 HLY<br>05-3546 HLY<br>54-0006 15M | 05-3553 DLY<br>05-3546 HLY<br>05-3546 DLY                |
| CO    | GROVER 10 W      | 05-3643 | 40.85    | -104.4    | 5090              | 0          | 0      | 53    |                                           |                                           | 05-3643 DLY                                              |
| CO    | HAMILTON         | 05-3738 | 40.3722  | -107.6117 | 6230              | 0          | 0      | 63    |                                           |                                           | 05-3738 DLY<br>05-3742 DLY                               |
| CO    | HAYDEN           | 05-3867 | 40.4925  | -107.2547 | 6467              | 0          | 0      | 101   |                                           |                                           | 05-3867 DLY                                              |
| CO    | HOHNHOLZ RCH     | 05-4054 | 40.9683  | -105.9986 | 7797              | 0          | 0      | 34    |                                           |                                           | 05-4054 DLY                                              |
| CO    | HOURLASS RSVR    | 05-4135 | 40.5831  | -105.6319 | 9520              | 0          | 0      | 33    |                                           |                                           | 05-4135 DLY                                              |
| CO    | KAUFFMAN 4 SSE   | 05-4460 | 40.85    | -103.9    | 5250              | 0          | 0      | 49    |                                           |                                           | 05-4460 DLY                                              |
| CO    | KREMMLING        | 05-4664 | 40.0575  | -106.3681 | 7460              | 0          | 0      | 62    |                                           |                                           | 05-4664 DLY                                              |
| CO    | LONGMONT 2 ESE   | 05-5116 | 40.1694  | -105.0775 | 4950              | 0          | 0      | 110   |                                           |                                           | 05-5116 DLY<br>69-0186 DLY<br>69-0229 DLY<br>69-0230 DLY |
| CO    | LONGMONT 6 NW    | 05-5121 | 40.2467  | -105.1464 | 5150              | 34         | 57     | 60    | 05-5121 15M<br>54-0007 15M                | 05-5121 HLY<br>54-0007 15M                | 05-5121 DLY<br>54-0007 15M<br>05-5121 HLY                |
| CO    | LOVELAND 2N      | 05-5236 | 40.435   | -105.085  | 5080              | 0          | 0      | 32    |                                           |                                           | 05-5236 DLY                                              |
| CO    | MAYBELL          | 05-5446 | 40.5158  | -108.0947 | 5944              | 0          | 0      | 59    |                                           |                                           | 05-5446 DLY                                              |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                                    |                                                                                        |                                                          |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                                                     | Hourly                                                                                 | Daily                                                    |
| CO    | MEEKER                 | 05-5484 | 40.0358  | -107.9058 | 6229              | 28         | 56     | 109   | 05-5484 15M<br>78-0021 15M<br>05-5487 15M<br>54-0008 15M | 05-5484 HLY<br>64-0143 HLY<br>05-5485 HLY<br>72-0002 HLY<br>05-5487 HLY<br>54-0008 15M | 05-5484 DLY<br>79-0086 DLY<br>05-5487 DLY                |
| CO    | NEW RAYMER             | 05-5922 | 40.6089  | -103.8461 | 4783              | 22         | 54     | 62    | 05-5922 15M                                              | 05-5922 HLY<br>55-0106 HLY<br>76-0015 HLY                                              | 05-5922 DLY<br>55-0106 HLY<br>76-0015 HLY<br>05-5922 HLY |
| CO    | NEW RAYMER 21 N        | 05-5934 | 40.9319  | -103.8678 | 5180              | 0          | 0      | 34    |                                                          |                                                                                        | 05-5934 DLY                                              |
| CO    | NORTHGATE              | 05-5982 | 40.9367  | -106.3392 | 7830              | 25         | 25     | 25    | 05-5982 15M<br>54-0011 15M                               | 05-5982 HLY<br>54-0011 15M                                                             | 05-5982 HLY<br>54-0011 15M                               |
| CO    | NUNN                   | 05-6023 | 40.7064  | -104.7833 | 5196              | 40         | 60     | 71    | 05-6023 15M<br>54-0012 15M                               | 05-6023 HLY<br>54-0012 15M                                                             | 05-6023 DLY<br>69-1183 DLY<br>54-0012 15M<br>05-6023 HLY |
| CO    | OAK CREEK 7WSW         | 05-6040 | 40.2406  | -107.0969 | 8205              | 0          | 0      | 68    |                                                          |                                                                                        | 05-6040 DLY<br>05-6797 DLY                               |
| CO    | RANGELY 1E             | 05-6832 | 40.0889  | -108.7728 | 5277              | 0          | 0      | 84    |                                                          |                                                                                        | 05-6832 DLY                                              |
| CO    | RED FEATHER LAKES 2 SE | 05-6925 | 40.7833  | -105.55   | 8165              | 0          | 0      | 46    |                                                          |                                                                                        | 05-6925 DLY<br>05-6921 DLY                               |
| CO    | RUSTIC 9WSW            | 05-7296 | 40.7022  | -105.7106 | 7700              | 0          | 0      | 31    |                                                          |                                                                                        | 05-7296 DLY<br>05-7296 HLY                               |
| CO    | SPICER                 | 05-7848 | 40.4725  | -106.4475 | 8385              | 0          | 0      | 87    |                                                          |                                                                                        | 05-7848 DLY                                              |
| CO    | STEAMBOAT SPRINGS      | 05-7936 | 40.4883  | -106.8233 | 6866              | 0          | 0      | 115   |                                                          |                                                                                        | 05-7936 DLY                                              |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                                          |                                                          |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------------------------------------|----------------------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                                                   | Daily                                                    |
| CO    | STERLING          | 05-7950 | 40.6278  | -103.2083 | 3974              | 0          | 0      | 112   |                            |                                                          | 05-7950 DLY<br>69-0328 DLY<br>69-0337 DLY<br>69-0339 DLY |
| CO    | WALDEN            | 05-8756 | 40.7442  | -106.2792 | 8056              | 0          | 0      | 89    |                            |                                                          | 05-8756 DLY                                              |
| CO    | WATERDALE         | 05-8839 | 40.4256  | -105.2103 | 5230              | 0          | 0      | 111   |                            |                                                          | 05-8839 DLY                                              |
| CO    | WILLIAMS FORK DAM | 05-9096 | 40.0375  | -106.2039 | 7618              | 28         | 46     | 64    | 05-9096 15M<br>54-0013 15M | 05-4129 HLY<br>54-0013 15M<br>05-9096 15M                | 05-9096 DLY<br>05-4129 DLY                               |
| CO    | WINDSOR           | 05-9147 | 40.4667  | -104.9    | 4781              | 0          | 0      | 45    |                            |                                                          | 05-9147 DLY                                              |
| CO    | YAMPA             | 05-9265 | 40.1564  | -106.9108 | 7857              | 0          | 0      | 86    |                            |                                                          | 05-9265 DLY                                              |
| NE    | AGATE 3 E         | 25-0030 | 42.4244  | -103.7347 | 4670              | 0          | 0      | 80    |                            |                                                          | 25-0030 DLY                                              |
| NE    | BRIDGEPORT        | 25-1145 | 41.6681  | -103.1039 | 3666              | 34         | 55     | 124   | 25-1145 15M<br>54-0117 15M | 25-1145 HLY<br>54-0117 15M<br>25-1145 15M<br>54-0117 15M | 25-1145 DLY                                              |
| NE    | CHADRON 3SW       | 25-1575 | 42.8083  | -103.0533 | 3383              | 18         | 50     | 102   | 25-1575 15M<br>54-0118 15M | 25-1575 HLY<br>54-0118 15M                               | 25-1575 DLY                                              |
| NE    | FT ROBINSON       | 25-3015 | 42.6656  | -103.4617 | 3812              | 0          | 0      | 89    |                            |                                                          | 25-3015 DLY<br>25-1973 DLY                               |
| NE    | HARRISBURG 12WNW  | 25-3605 | 41.6331  | -103.9542 | 4550              | 0          | 0      | 105   |                            |                                                          | 25-3605 DLY                                              |
| NE    | HARRISON          | 25-3615 | 42.6858  | -103.8842 | 4850              | 0          | 0      | 105   |                            |                                                          | 25-3615 DLY                                              |
| NE    | HARRISON 9W       | 25-3620 | 42.6544  | -104.0467 | 4710              | 0          | 46     | 49    |                            | 25-3620 HLY                                              | 25-3620 HLY                                              |
| NE    | HEMINGFORD        | 25-3755 | 42.3208  | -103.0733 | 4270              | 0          | 0      | 53    |                            |                                                          | 25-3755 DLY                                              |
| NE    | KIMBALL 2NE       | 25-4440 | 41.2453  | -103.6344 | 4708              | 0          | 0      | 111   |                            |                                                          | 25-4440 DLY                                              |
| NE    | LYMAN             | 25-5020 | 41.9169  | -104.0358 | 4050              | 0          | 0      | 81    |                            |                                                          | 25-5020 DLY                                              |

| State | Station name              | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                                           |                            |
|-------|---------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------------------------------------|----------------------------|
|       |                           |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                                    | Daily                      |
| NE    | MINATARE DAM (USBR)       | 25-5555 | 41.9178  | -103.4842 | 4144              | 0          | 0      | 46    |                       |                                           | 25-5555 DLY<br>87-2374 HLY |
| NE    | POTTER                    | 25-6880 | 41.2183  | -103.3206 | 4430              | 0          | 0      | 81    |                       |                                           | 25-6880 DLY<br>69-0014 DLY |
| NV    | CONTACT                   | 26-1905 | 41.7706  | -114.7528 | 5350              | 0          | 39     | 50    |                       | 26-1905 HLY                               | 26-1905 DLY<br>26-1905 HLY |
| NV    | DEETH                     | 26-2189 | 41.0661  | -115.2711 | 5340              | 0          | 0      | 50    |                       |                                           | 26-2189 DLY                |
| NV    | GIBBS RCH - JARBIDGE 24SE | 26-3114 | 41.5697  | -115.2111 | 5960              | 0          | 0      | 69    |                       |                                           | 26-3114 DLY                |
| NV    | JACKPOT                   | 26-4016 | 41.9828  | -114.6586 | 5233              | 0          | 0      | 34    |                       |                                           | 26-4016 DLY                |
| NV    | MCDERMITT                 | 26-4935 | 41.9953  | -117.72   | 4430              | 30         | 41     | 72    | 26-4935 15M           | 26-4935 HLY                               | 26-4935 DLY<br>26-4935 HLY |
| NV    | METROPOLIS                | 26-5092 | 41.2833  | -115.0167 | 5800              | 0          | 0      | 30    |                       |                                           | 26-5092 DLY<br>26-5092 15M |
| NV    | MONTELO 2NE               | 26-5352 | 41.2781  | -114.1706 | 4830              | 0          | 0      | 104   |                       |                                           | 26-5352 DLY                |
| NV    | MTN CITY RS               | 26-5392 | 41.8375  | -115.9653 | 5650              | 0          | 0      | 42    |                       |                                           | 26-5392 DLY                |
| NV    | NORTH FORK MNTC STN       | 26-5691 | 41.4833  | -115.8167 | 6204              | 0          | 0      | 48    |                       |                                           | 26-5691 DLY<br>26-5691 HLY |
| NV    | OROVADA 3 W               | 26-5818 | 41.5683  | -117.8389 | 4200              | 0          | 0      | 103   |                       |                                           | 26-5818 DLY                |
| NV    | OWYHEE                    | 26-5869 | 41.95    | -116.1    | 5397              | 0          | 26     | 35    |                       | 26-5869 HLY<br>26-5869 15M<br>26-5869 15M | 26-5869 DLY                |
| NV    | PARADISE VALLEY 1 NW      | 26-6005 | 41.5022  | -117.5478 | 4560              | 0          | 0      | 91    |                       |                                           | 26-6005 DLY                |
| NV    | PEQUOP                    | 26-6148 | 41.0667  | -114.5333 | 6033              | 0          | 35     | 36    |                       | 26-6148 HLY                               | 26-6148 DLY<br>26-6148 HLY |
| NV    | SAN JACINTO               | 26-7284 | 41.8833  | -114.6833 | 5203              | 0          | 0      | 36    |                       |                                           | 26-7284 DLY                |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                                    | Daily                                     |
| NV    | TUSCARORA         | 26-8346 | 41.3144  | -116.2225 | 6170              | 0          | 0      | 53    |                            |                                           | 26-8346 DLY                               |
| NV    | WELLS             | 26-8988 | 41.1006  | -114.9736 | 5700              | 27         | 49     | 83    | 26-8988 15M                | 26-8988 HLY                               | 26-8988 DLY                               |
| NV    | WILD HORSE RSVR   | 26-9072 | 41.6358  | -115.8008 | 6239              | 0          | 0      | 38    |                            |                                           | 26-9072 DLY                               |
| ND    | ALEXANDER 4 NNW   | 32-0096 | 47.9022  | -103.6608 | 2140              | 0          | 0      | 57    |                            |                                           | 32-0096 DLY                               |
| ND    | AMBROSE 3 N       | 32-0189 | 48.9975  | -103.4878 | 2027              | 29         | 29     | 66    | 32-0189 15M<br>54-0119 15M | 32-0189 HLY<br>54-0119 15M                | 32-0189 DLY<br>54-0119 15M                |
| ND    | AMIDON            | 32-0209 | 46.4819  | -103.3222 | 2910              | 0          | 0      | 70    |                            |                                           | 32-0209 DLY                               |
| ND    | BOWMAN            | 32-0995 | 46.1936  | -103.3714 | 2983              | 41         | 62     | 103   | 32-0995 15M<br>54-0120 15M | 32-0995 HLY<br>54-0120 15M                | 32-0995 DLY<br>32-0995 HLY                |
| ND    | CROSBY            | 32-1871 | 48.9144  | -103.2978 | 1959              | 0          | 0      | 113   |                            |                                           | 32-1871 DLY                               |
| ND    | EPPING            | 32-2735 | 48.2833  | -103.3667 | 2220              | 0          | 0      | 76    |                            |                                           | 32-2735 DLY                               |
| ND    | FAIRFIELD         | 32-2809 | 47.1906  | -103.2247 | 2750              | 0          | 0      | 69    |                            |                                           | 32-2809 DLY                               |
| ND    | FORTUNA 1 W       | 32-3196 | 48.9081  | -103.8056 | 2350              | 0          | 0      | 51    |                            |                                           | 32-3196 DLY                               |
| ND    | FRYBURG 1 SSE     | 32-3277 | 46.8667  | -103.3    | 2733              | 0          | 0      | 35    |                            |                                           | 32-3277 DLY<br>32-3277 HLY                |
| ND    | GRASSY BUTTE 2ENE | 32-3705 | 47.4011  | -103.2072 | 2670              | 0          | 0      | 43    |                            |                                           | 32-3705 DLY<br>32-3696 HLY                |
| ND    | GRENORA           | 32-3736 | 48.6167  | -103.9333 | 2129              | 0          | 0      | 62    |                            |                                           | 32-3736 DLY                               |
| ND    | MARMARTH          | 32-5575 | 46.2958  | -103.92   | 2709              | 0          | 21     | 86    |                            | 32-5575 HLY<br>32-5575 15M<br>32-5575 15M | 32-5575 DLY<br>32-5573 DLY<br>32-5575 HLY |
| ND    | MEDORA            | 32-5813 | 46.9161  | -103.5264 | 2268              | 0          | 0      | 95    |                            |                                           | 32-5813 DLY<br>32-5803 HLY<br>32-5803 DLY |



| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                                                    |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly      | Daily                                              |
| ND    | TROTTERS 3 SSE     | 32-8812 | 47.2842  | -103.9006 | 2420              | 29         | 56     | 83    | 32-8812 15M           | 32-8812 HLY | 32-8812 DLY<br>32-8807 DLY<br>32-8812 HLY          |
| ND    | WATFORD CITY       | 32-9233 | 47.8039  | -103.2892 | 2170              | 0          | 0      | 81    |                       |             | 32-9233 DLY                                        |
| ND    | WATFORD CITY 14S   | 32-9246 | 47.6     | -103.2597 | 2027              | 0          | 0      | 63    |                       |             | 32-9246 DLY                                        |
| ND    | WILDROSE 3NW       | 32-9400 | 48.6631  | -103.2131 | 2227              | 0          | 0      | 78    |                       |             | 32-9400 DLY                                        |
| ND    | WILLISTON EXP FARM | 32-9430 | 48.1375  | -103.7372 | 2105              | 0          | 0      | 88    |                       |             | 32-9430 DLY<br>32-9420 DLY<br>62-0049 DLY          |
| OR    | ADRIAN             | 35-0041 | 43.7333  | -117.0667 | 2231              | 0          | 0      | 61    |                       |             | 35-0041 DLY                                        |
| OR    | CORNUCOPIA         | 35-1852 | 45       | -117.2    | 4705              | 0          | 0      | 34    |                       |             | 35-1852 DLY                                        |
| OR    | COVE 1 E           | 35-1926 | 45.3064  | -117.7967 | 3062              | 0          | 0      | 87    |                       |             | 35-1926 DLY<br>35-1924 DLY                         |
| OR    | DANNER             | 35-2135 | 42.9447  | -117.3389 | 4225              | 0          | 33     | 92    |                       | 87-3121 HLY | 35-2135 DLY<br>87-3121 HLY                         |
| OR    | ENTERPRISE RS      | 35-2672 | 45.4256  | -117.2972 | 3815              | 0          | 0      | 74    |                       |             | 35-2672 DLY<br>35-2675 DLY<br>35-2672 15M          |
| OR    | ENTERPRISE 20 NNE  | 35-2678 | 45.7083  | -117.1528 | 3280              | 0          | 0      | 36    |                       |             | 35-2678 DLY                                        |
| OR    | HALFWAY            | 35-3604 | 44.8772  | -117.1094 | 2653              | 35         | 33     | 88    | 35-3604 15M           | 35-3604 HLY | 35-3604 DLY<br>54-0121 15M 54-0121 15M 35-6652 DLY |
| OR    | HARPER             | 35-3666 | 43.8667  | -117.6167 | 2513              | 0          | 0      | 43    |                       |             | 35-3666 DLY                                        |
| OR    | HUNTINGTON         | 35-4098 | 44.3564  | -117.255  | 2110              | 0          | 0      | 90    |                       |             | 35-4098 DLY                                        |
| OR    | IMNAHA             | 35-4147 | 45.5622  | -116.8331 | 1968              | 22         | 48     | 49    | 35-4147 15M           | 35-4147 HLY | 35-4147 HLY                                        |
| OR    | IRONSIDE 2 W       | 35-4175 | 44.3247  | -117.9964 | 3915              | 0          | 0      | 44    |                       |             | 35-4175 DLY                                        |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                            |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                     | Daily                      |
| OR    | JORDAN VALLEY          | 35-4321 | 42.9792  | -117.0533 | 4390              | 22         | 48     | 55    | 35-4321 15M<br>35-4321 15M | 35-4321 HLY<br>35-4321 15M | 35-4321 HLY<br>35-4321 15M |
| OR    | JOSEPH                 | 35-4329 | 45.3497  | -117.2242 | 4184              | 0          | 0      | 95    |                            |                            | 35-4329 DLY<br>35-4329 HLY |
| OR    | MALHEUR BRANCH EXP STN | 35-5160 | 43.9794  | -117.0247 | 2260              | 0          | 18     | 80    |                            | 87-4351 HLY                | 35-5160 DLY<br>87-4351 HLY |
| OR    | MASON DAM              | 35-5258 | 44.6719  | -117.9942 | 3900              | 0          | 0      | 31    |                            |                            | 35-5258 DLY                |
| OR    | MC DERMITT 26 N        | 35-5335 | 42.4106  | -117.8656 | 4464              | 0          | 31     | 64    |                            | 87-4061 HLY                | 35-5335 DLY<br>87-4061 HLY |
| OR    | NYSSA                  | 35-6179 | 43.8764  | -116.9903 | 2175              | 0          | 0      | 70    |                            |                            | 35-6179 DLY                |
| OR    | OWYHEE DAM             | 35-6405 | 43.65    | -117.2467 | 2400              | 0          | 23     | 87    |                            | 35-6405 HLY                | 35-6405 DLY                |
| OR    | RICHLAND               | 35-7160 | 44.7656  | -117.1597 | 2215              | 0          | 21     | 77    |                            | 35-7160 HLY                | 35-7160 DLY                |
| OR    | ROCK CREEK             | 35-7250 | 44.9094  | -118.0625 | 4012              | 0          | 0      | 88    |                            |                            | 35-7250 DLY                |
| OR    | ROCKVILLE 5 N          | 35-7277 | 43.3636  | -117.1142 | 3670              | 0          | 0      | 48    |                            |                            | 35-7277 DLY                |
| OR    | ROME 2 NW              | 35-7310 | 42.8592  | -117.6569 | 3405              | 0          | 0      | 69    |                            |                            | 35-7310 DLY                |
| OR    | SHEAVILLE 1 SE         | 35-7736 | 43.1211  | -117.0392 | 4620              | 0          | 0      | 52    |                            |                            | 35-7736 DLY                |
| OR    | UNION                  | 35-8746 | 45.1986  | -117.8647 | 2777              | 0          | 47     | 105   |                            | 35-8746 HLY                | 35-8746 DLY<br>69-1811 DLY |
| OR    | UNITY                  | 35-8780 | 44.4367  | -118.1886 | 4031              | 0          | 0      | 62    |                            |                            | 35-8780 DLY                |
| OR    | VALE                   | 35-8797 | 43.9814  | -117.2439 | 2240              | 0          | 0      | 103   |                            |                            | 35-8797 DLY                |
| OR    | WALLOWA                | 35-8997 | 45.5722  | -117.5314 | 2923              | 0          | 0      | 112   |                            |                            | 35-8997 DLY                |
| OR    | WESTFALL               | 35-9176 | 43.9903  | -117.7183 | 3040              | 0          | 0      | 37    |                            |                            | 35-9176 DLY<br>35-9176 HLY |
| SD    | ANGOSTURA DAM          | 39-0217 | 43.35    | -103.4333 | 3143              | 0          | 37     | 38    |                            | 39-0217 HLY<br>87-0003 HLY | 39-0217 DLY<br>87-0003 HLY |

| State | Station name         | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                      |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                                    | Daily                                     |
| SD    | ARDMORE 1 NW         | 39-0236 | 43.03    | -103.66   | 3540              | 0          | 0      | 94    |                            |                                           | 39-0236 DLY<br>39-0236 HLY                |
| SD    | BELLE FOURCHE        | 39-0559 | 44.6714  | -103.8511 | 3020              | 0          | 0      | 102   |                            |                                           | 39-0559 DLY                               |
| SD    | BELLE FOURCHE 22 NNW | 39-0565 | 44.9906  | -103.9339 | 3200              | 0          | 0      | 35    |                            |                                           | 39-0565 DLY                               |
| SD    | BUFFALO GAP          | 39-1124 | 43.4917  | -103.3131 | 3188              | 0          | 0      | 48    |                            |                                           | 39-1124 DLY                               |
| SD    | CAMP CROOK           | 39-1294 | 45.5489  | -103.9744 | 3120              | 0          | 27     | 123   |                            | 39-1294 HLY<br>76-0338 HLY<br>54-0123 15M | 39-1294 DLY<br>39-1294 HLY                |
| SD    | CASTLE ROCK 4 NW     | 39-1504 | 45.01    | -103.4828 | 3150              | 0          | 22     | 22    |                            | 39-1504 HLY                               | 39-1504 HLY                               |
| SD    | CUSTER               | 39-2087 | 43.7744  | -103.6119 | 5480              | 0          | 0      | 96    |                            |                                           | 39-2087 DLY                               |
| SD    | DEADWOOD             | 39-2207 | 44.3736  | -103.7314 | 4670              | 0          | 0      | 89    |                            |                                           | 39-2207 DLY<br>39-2209 DLY<br>52-2207 DLY |
| SD    | DEERFIELD 3 SE       | 39-2231 | 43.9944  | -103.7858 | 6060              | 0          | 0      | 61    |                            |                                           | 39-2231 DLY<br>39-2234 DLY                |
| SD    | DUMONT 2 ENE         | 39-2409 | 44.25    | -103.7667 | 6145              | 0          | 0      | 57    |                            |                                           | 39-2409 DLY                               |
| SD    | EDGEMONT             | 39-2557 | 43.3136  | -103.8214 | 3432              | 36         | 69     | 74    | 39-2557 15M<br>54-0124 15M | 39-2557 HLY<br>87-0644 HLY<br>54-0124 15M | 39-2557 DLY<br>39-2557 HLY                |
| SD    | EDGEMONT 23 NNW      | 39-2565 | 43.6242  | -103.9172 | 4402              | 26         | 35     | 50    | 39-2565 15M<br>54-0125 15M | 39-2565 HLY<br>54-0125 15M                | 39-2565 DLY<br>39-2565 HLY                |
| SD    | FT MEADE             | 39-3069 | 44.4106  | -103.4769 | 3308              | 0          | 0      | 87    |                            |                                           | 39-3069 DLY                               |
| SD    | HARDING 3 SE         | 39-3560 | 45.36    | -103.8117 | 3400              | 0          | 0      | 70    |                            |                                           | 39-3560 DLY                               |
| SD    | HARDY RS             | 39-3572 | 44.15    | -103.95   | 6473              | 0          | 0      | 32    |                            |                                           | 39-3572 DLY                               |
| SD    | HERMOSA 3 SSW        | 39-3775 | 43.8069  | -103.2131 | 3425              | 0          | 0      | 90    |                            |                                           | 39-3775 DLY<br>69-1834 DLY                |

| State | Station name     | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                  |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                     | Daily                                     |
| SD    | HILL CITY        | 39-3868 | 43.9342  | -103.5572 | 4946              | 0          | 0      | 69    |                            |                            | 39-3868 DLY                               |
| SD    | HOT SPRINGS      | 39-4007 | 43.4378  | -103.4739 | 3560              | 0          | 0      | 118   |                            |                            | 39-4007 DLY                               |
| SD    | LADNER 9SW       | 39-4671 | 45.7733  | -103.8789 | 3000              | 0          | 0      | 34    |                            |                            | 39-4671 DLY<br>39-4671 HLY                |
| SD    | LEAD             | 39-4834 | 44.3544  | -103.743  | 5112              | 0          | 0      | 114   |                            |                            | 39-4834 DLY                               |
| SD    | LUDLOW 3 SSE     | 39-5048 | 45.785   | -103.3719 | 2990              | 0          | 0      | 86    |                            |                            | 39-5048 DLY                               |
| SD    | MT RUSHMORE NMEM | 39-5870 | 43.8769  | -103.4578 | 5311              | 0          | 0      | 62    |                            |                            | 39-5870 DLY                               |
| SD    | NEWELL           | 39-6054 | 44.7136  | -103.4258 | 2860              | 0          | 0      | 103   |                            |                            | 39-6054 DLY                               |
| SD    | OELRICHS         | 39-6212 | 43.1878  | -103.2372 | 3348              | 0          | 0      | 118   |                            |                            | 39-6212 DLY                               |
| SD    | ORAL             | 39-6304 | 43.4033  | -103.2683 | 2960              | 27         | 35     | 52    | 39-6304 15M<br>54-0126 15M | 39-6304 HLY<br>54-0126 15M | 39-6304 DLY                               |
| SD    | ORMAN DAM        | 39-6357 | 44.7333  | -103.6667 | 2933              | 0          | 0      | 64    |                            |                            | 39-6357 DLY                               |
| SD    | PACTOLA DAM      | 39-6427 | 44.0622  | -103.4819 | 4720              | 33         | 57     | 70    | 39-6427 15M<br>54-0127 15M | 39-6427 HLY<br>54-0127 15M | 39-6427 DLY<br>39-6427 HLY                |
| SD    | RALPH 1 N        | 39-6907 | 45.7842  | -103.0656 | 2790              | 0          | 0      | 58    |                            |                            | 39-6907 DLY                               |
| SD    | RAPID CITY 4NW   | 39-6947 | 44.1206  | -103.2842 | 3479              | 0          | 0      | 67    |                            |                            | 39-6947 DLY                               |
| SD    | REDIG 11 NE      | 39-7062 | 45.3767  | -103.3675 | 3070              | 0          | 0      | 96    |                            |                            | 39-7062 DLY                               |
| SD    | ROCHFORD 2 WNW   | 39-7227 | 44.1317  | -103.7506 | 5450              | 0          | 22     | 67    |                            | 39-7227 HLY                | 39-7227 DLY<br>39-7222 DLY<br>39-7227 HLY |
| SD    | SPEARFISH 9 WNW  | 39-7877 | 44.55    | -104.0167 | 3432              | 0          | 0      | 50    |                            |                            | 39-7877 DLY                               |
| SD    | SPEARFISH        | 39-7882 | 44.4975  | -103.8717 | 3633              | 24         | 47     | 123   | 39-7882 15M                | 39-7882 HLY                | 39-7882 DLY<br>69-1878 DLY<br>39-7882 HLY |
| SD    | VALE             | 39-8552 | 44.6167  | -103.4    | 2772              | 0          | 0      | 68    |                            |                            | 39-8552 DLY                               |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                     | Daily                                     |
| SD    | WIND CAVE              | 39-9347 | 43.5561  | -103.4794 | 4155              | 25         | 58     | 67    | 39-9347 15M                | 39-9347 HLY<br>76-0341 HLY | 39-9347 DLY<br>76-0341 HLY<br>39-9347 HLY |
| UT    | ALLEN'S RCH            | 42-0050 | 40.8997  | -109.1528 | 5490              | 0          | 0      | 49    |                            |                            | 42-0050 DLY<br>42-4322 DLY<br>42-4321 DLY |
| UT    | ALPINE                 | 42-0061 | 40.4644  | -111.7708 | 5100              | 0          | 0      | 107   |                            |                            | 42-0061 DLY                               |
| UT    | ALTA                   | 42-0072 | 40.5906  | -111.6369 | 8710              | 0          | 0      | 61    |                            |                            | 42-0072 DLY<br>42-0072 HLY                |
| UT    | ALTAMONT               | 42-0074 | 40.3669  | -110.2986 | 6456              | 0          | 0      | 66    |                            |                            | 42-0074 DLY                               |
| UT    | ARGENTA                | 42-0342 | 40.6419  | -111.6797 | 6980              | 25         | 25     | 26    | 42-0342 15M                | 42-0342 15M                | 42-0342 15M                               |
| UT    | BARTHOLOMEW POWERHOUSE | 42-0449 | 40.1667  | -111.5    | 5139              | 0          | 0      | 38    |                            |                            | 42-0449 DLY<br>42-4000 DLY                |
| UT    | BEAR RIVER REFUGE      | 42-0506 | 41.4667  | -112.2667 | 4213              | 0          | 0      | 44    |                            |                            | 42-0506 DLY                               |
| UT    | BONANZA                | 42-0802 | 40.0167  | -109.1833 | 5450              | 0          | 0      | 53    |                            |                            | 42-0802 DLY<br>42-0810 DLY                |
| UT    | BOUNTIFUL BENCH        | 42-0819 | 40.8911  | -111.8503 | 4950              | 0          | 0      | 48    |                            |                            | 42-0819 DLY                               |
| UT    | BOUNTIFUL-VAL VERDA    | 42-0820 | 40.8547  | -111.8903 | 4540              | 23         | 23     | 32    | 42-0820 15M                | 42-0820 HLY                | 42-0820 DLY                               |
| UT    | BRIGHAM CITY           | 42-0924 | 41.4833  | -112.0333 | 4344              | 0          | 0      | 44    |                            |                            | 42-0924 DLY                               |
| UT    | BRIGHAM CITY WASTE PLT | 42-0928 | 41.5242  | -112.0436 | 4240              | 0          | 0      | 48    |                            |                            | 42-0928 DLY                               |
| UT    | CITY CREEK WTP         | 42-1446 | 40.815   | -111.8322 | 5340              | 0          | 0      | 87    |                            |                            | 42-1446 DLY<br>42-3929 DLY                |
| UT    | COALVILLE 13 E         | 42-1590 | 40.9383  | -111.1472 | 6510              | 36         | 35     | 41    | 42-1590 15M<br>54-0131 15M | 42-1590 HLY<br>54-0131 15M | 42-1590 DLY<br>54-0131 15M<br>42-1590 HLY |
| UT    | CORINNE                | 42-1731 | 41.5481  | -112.1106 | 4230              | 0          | 0      | 82    |                            |                            | 42-1731 DLY                               |

| State | Station name            | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                                           |
|-------|-------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
|       |                         |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                                      | Hourly                                    | Daily                                     |
| UT    | COTTONWOOD WEIR         | 42-1759 | 40.6189  | -111.7836 | 4986              | 34         | 55     | 100   | 42-1759 15M                               | 42-1759 HLY                               | 42-1759 DLY<br>42-1759 HLY                |
| UT    | CUTLER DAM              | 42-1918 | 41.8331  | -112.0578 | 4290              | 0          | 0      | 40    |                                           |                                           | 42-1918 DLY                               |
| UT    | DEER CREEK DAM          | 42-2057 | 40.4044  | -111.5289 | 5270              | 0          | 0      | 84    |                                           |                                           | 42-2057 DLY                               |
| UT    | DINOSAUR NM-QUARRY AREA | 42-2173 | 40.4383  | -109.3069 | 4802              | 0          | 0      | 74    |                                           |                                           | 42-2173 DLY<br>42-2172 DLY                |
| UT    | DUCHESNE                | 42-2253 | 40.1703  | -110.3978 | 5551              | 0          | 0      | 116   |                                           |                                           | 42-2253 DLY<br>42-2252 DLY                |
| UT    | ECHO DAM                | 42-2385 | 40.9656  | -111.4336 | 5470              | 47         | 69     | 83    | 42-2385 15M<br>54-0133 15M                | 42-2385 HLY<br>54-0133 15M                | 42-2385 DLY                               |
| UT    | ELKHORN ASHLEY RNGR ST  | 42-2429 | 40.55    | -109.95   | 6810              | 0          | 0      | 34    |                                           |                                           | 42-2429 DLY                               |
| UT    | FARMINGTON 3 NW         | 42-2726 | 41.0203  | -111.9328 | 4380              | 21         | 41     | 72    | 42-2726 15M<br>42-4538 15M<br>54-0134 15M | 42-2726 HLY<br>42-4538 HLY<br>54-0134 15M | 42-2726 DLY<br>42-2726 HLY<br>54-0134 15M |
| UT    | FLAMING GORGE           | 42-2864 | 40.9317  | -109.4117 | 6244              | 0          | 33     | 61    |                                           | 42-2864 HLY<br>57-0011 HLY                | 42-2864 DLY<br>57-0011 DLY                |
| UT    | FT DUCHESNE             | 42-2996 | 40.2842  | -109.8611 | 5052              | 0          | 0      | 105   |                                           |                                           | 42-2996 DLY<br>52-2996 DLY                |
| UT    | FRUITLAND               | 42-3056 | 40.2167  | -110.85   | 6624              | 0          | 0      | 41    |                                           |                                           | 42-3056 DLY<br>42-1907 DLY<br>42-3056 HLY |
| UT    | GROUSE CREEK            | 42-3486 | 41.7139  | -113.8694 | 5320              | 0          | 0      | 55    |                                           |                                           | 42-3486 DLY<br>42-3485 DLY                |
| UT    | HANNA                   | 42-3624 | 40.4006  | -110.7586 | 6738              | 0          | 23     | 39    |                                           | 42-3624 HLY<br>42-3624 15M                | 42-3624 DLY<br>42-3624 15M<br>42-3624 HLY |

| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                           |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                     | Daily                                     |
| UT    | HARDWARE RCH          | 42-3671 | 41.6     | -111.5667 | 5560              | 0          | 0      | 31    |                            |                            | 42-3671 DLY                               |
| UT    | HEBER                 | 42-3809 | 40.4917  | -111.4261 | 5590              | 0          | 0      | 109   |                            |                            | 42-3809 DLY<br>69-2076 DLY                |
| UT    | HUNTSVILLE MONASTERY  | 42-4135 | 41.2403  | -111.7131 | 5140              | 0          | 0      | 36    |                            |                            | 42-4135 DLY                               |
| UT    | JENSEN                | 42-4342 | 40.3611  | -109.3464 | 4736              | 0          | 0      | 89    |                            |                            | 42-4342 DLY                               |
| UT    | KAMAS                 | 42-4467 | 40.6439  | -111.2822 | 6481              | 0          | 0      | 67    |                            |                            | 42-4467 DLY                               |
| UT    | LAKETOWN              | 42-4856 | 41.8253  | -111.3206 | 5980              | 0          | 0      | 108   |                            |                            | 42-4856 DLY                               |
| UT    | LEWISTON              | 42-5082 | 41.9667  | -111.8333 | 4482              | 0          | 0      | 51    |                            |                            | 42-5082 DLY                               |
| UT    | LOGAN RADIO KVNU      | 42-5182 | 41.735   | -111.8564 | 4475              | 0          | 0      | 98    |                            |                            | 42-5182 DLY<br>42-5705 DLY<br>42-5183 DLY |
| UT    | LOGAN UTAH ST UNIV    | 42-5186 | 41.7456  | -111.8033 | 4790              | 47         | 68     | 115   | 42-5186 15M<br>54-0135 15M | 42-5186 HLY<br>54-0135 15M | 42-5186 DLY                               |
| UT    | LOGAN 5 SW EXP FARM   | 42-5194 | 41.6661  | -111.8914 | 4488              | 24         | 31     | 55    | 42-5194 15M<br>54-0136 15M | 42-5194 HLY<br>54-0136 15M | 42-5194 DLY<br>61-0014 DLY<br>42-1601 DLY |
| UT    | LOWER AMERI FORK PWHS | 42-5219 | 40.4333  | -111.75   | 5043              | 0          | 22     | 60    |                            | 76-0406 HLY                | 42-5219 DLY<br>76-0406 HLY                |
| UT    | MANILA                | 42-5377 | 40.99    | -109.7258 | 6393              | 0          | 0      | 81    |                            |                            | 42-5377 DLY                               |
| UT    | MIDVALE               | 42-5610 | 40.6     | -111.9167 | 4344              | 0          | 0      | 58    |                            |                            | 42-5610 DLY                               |
| UT    | MOON LAKE             | 42-5815 | 40.5617  | -110.4925 | 8125              | 28         | 29     | 49    | 42-5815 15M                | 42-5815 HLY                | 42-5815 DLY<br>42-5815 HLY                |
| UT    | MORGAN                | 42-5826 | 41.0575  | -111.6894 | 5100              | 0          | 0      | 93    |                            |                            | 42-5826 DLY                               |
| UT    | MTN DELL DAM          | 42-5892 | 40.7486  | -111.7233 | 5420              | 39         | 42     | 100   | 42-5892 15M<br>54-0137 15M | 42-5892 HLY<br>54-0137 15M | 42-5892 DLY<br>54-0137 15M<br>42-5892 HLY |

| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                          |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                                    | Daily                                                    |
| UT    | MYTON               | 42-5969 | 40.1942  | -110.0608 | 5085              | 0          | 0      | 99    |                            |                                           | 42-5969 DLY                                              |
| UT    | NEOLA               | 42-6123 | 40.4178  | -110.0511 | 5950              | 0          | 0      | 64    |                            |                                           | 42-6123 DLY                                              |
| UT    | NEOLA 8 N           | 42-6127 | 40.5358  | -110.0642 | 6924              | 38         | 35     | 36    | 42-6127 15M                | 42-6127 HLY                               | 42-6127 HLY                                              |
| UT    | OAKLEY 3 NE         | 42-6374 | 40.7392  | -111.2414 | 6610              | 45         | 43     | 45    | 42-6374 15M<br>54-0139 15M | 42-6374 HLY<br>54-0139 15M                | 42-6374 HLY<br>54-0139 15M                               |
| UT    | OGDEN NE BENCH      | 42-6405 | 41.2458  | -111.9372 | 4572              | 38         | 39     | 111   | 42-6404 15M                | 42-6404 HLY                               | 42-6405 DLY<br>42-6400 DLY<br>42-6404 HLY<br>42-6404 DLY |
| UT    | OGDEN SUGAR FACTORY | 42-6414 | 41.2319  | -112.0283 | 4280              | 46         | 66     | 94    | 42-6414 15M<br>54-0140 15M | 42-6414 HLY<br>42-6424 HLY<br>54-0140 15M | 42-6414 DLY<br>54-0140 15M                               |
| UT    | OLMSTEAD PH         | 42-6455 | 40.3161  | -111.6539 | 4820              | 32         | 34     | 42    | 42-6455 15M<br>54-0141 15M | 42-6455 HLY<br>54-0141 15M                | 42-6455 DLY<br>54-0141 15M<br>42-6455 HLY                |
| UT    | OREM TRTMT PLT      | 42-6538 | 40.2767  | -111.7369 | 4510              | 0          | 0      | 53    |                            |                                           | 42-6538 DLY<br>42-3183 DLY<br>42-3182 DLY                |
| UT    | OURAY 4NE           | 42-6568 | 40.1344  | -109.6436 | 4674              | 0          | 0      | 70    |                            |                                           | 42-6568 DLY<br>57-0022 DLY                               |
| UT    | PARK CITY G.C.      | 42-6648 | 40.66    | -111.5156 | 6890              | 0          | 0      | 66    |                            |                                           | 42-6648 DLY<br>42-6650 DLY<br>42-6644 DLY<br>42-6648 HLY |
| UT    | PERRY               | 42-6757 | 41.4489  | -112.0369 | 4360              | 21         | 20     | 18    | 42-6757 15M<br>54-0142 15M | 42-6757 15M<br>54-0142 15M                | 42-6757 15M<br>54-0142 15M                               |
| UT    | PINEVIEW DAM        | 42-6869 | 41.2578  | -111.8378 | 4940              | 0          | 0      | 82    |                            |                                           | 42-6869 DLY                                              |



| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                                                                         |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|-------------------------------------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                     | Daily                                                                   |
| UT    | PLEASANT GROVE         | 42-6919 | 40.3678  | -111.7333 | 4692              | 0          | 0      | 75    |                            |                            | 42-6919 DLY                                                             |
| UT    | PLYMOUTH               | 42-6938 | 41.8739  | -112.1486 | 4470              | 41         | 59     | 74    | 42-6938 15M<br>54-0143 15M | 42-6938 HLY<br>54-0143 15M | 42-6938 DLY<br>42-6938 HLY                                              |
| UT    | PROVO BYU              | 42-7064 | 40.2458  | -111.6508 | 4570              | 31         | 38     | 49    | 42-7064 15M<br>54-0144 15M | 42-7064 HLY<br>54-0144 15M | 42-7064 DLY                                                             |
| UT    | RANDOLPH               | 42-7165 | 41.6608  | -111.1869 | 6290              | 0          | 0      | 49    |                            |                            | 42-7165 DLY                                                             |
| UT    | RICHMOND               | 42-7271 | 41.9064  | -111.81   | 4680              | 0          | 0      | 112   |                            |                            | 42-7271 DLY                                                             |
| UT    | RIVERDALE              | 42-7318 | 41.15    | -112      | 4400              | 0          | 0      | 66    |                            |                            | 42-7318 DLY                                                             |
| UT    | ROOSEVELT RADIO        | 42-7395 | 40.2878  | -109.9586 | 5014              | 30         | 61     | 71    | 42-7395 15M<br>54-0145 15M | 42-7395 HLY<br>54-0145 15M | 42-7395 DLY                                                             |
| UT    | ROSETTE                | 42-7408 | 41.8186  | -113.4133 | 5685              | 0          | 0      | 92    |                            |                            | 42-7408 DLY<br>42-6658 DLY                                              |
| UT    | SALT LAKE TRIAD CTR    | 42-7606 | 40.7708  | -111.8964 | 4280              | 0          | 35     | 89    |                            | 42-7606 HLY<br>42-7603 HLY | 42-7606 DLY<br>69-2008 DLY<br>42-7603 HLY<br>79-0074 DLY<br>42-7606 HLY |
| UT    | SILVER LAKE BRIGHTON   | 42-7846 | 40.6008  | -111.5842 | 8740              | 0          | 38     | 90    |                            | 42-7846 HLY                | 42-7846 DLY<br>86-0366 DLY                                              |
| UT    | SNAKE CREEK POWERHOUSE | 42-7909 | 40.5453  | -111.5042 | 6010              | 0          | 0      | 91    |                            |                            | 42-7909 DLY                                                             |
| UT    | SNOWVILLE              | 42-7931 | 41.9667  | -112.7167 | 4560              | 0          | 0      | 62    |                            |                            | 42-7931 DLY                                                             |
| UT    | TERMINAL               | 42-8631 | 40.75    | -112      | 4232              | 0          | 0      | 31    |                            |                            | 42-8631 DLY                                                             |
| UT    | THIOKOL PROPULSION F S | 42-8668 | 41.7197  | -112.4264 | 4600              | 0          | 0      | 42    |                            |                            | 42-8668 DLY                                                             |
| UT    | TIMPANOGOS CAVE        | 42-8733 | 40.4447  | -111.7075 | 5740              | 0          | 0      | 66    |                            |                            | 42-8733 DLY                                                             |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                                          |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                     | Daily                                                    |
| UT    | TREMONTON              | 42-8817 | 41.7108  | -112.1636 | 4310              | 0          | 0      | 90    |                       |                            | 42-8817 DLY<br>42-3122 15M<br>42-3122 DLY<br>69-1940 DLY |
| UT    | TRENTON                | 42-8828 | 41.9153  | -111.9128 | 4455              | 0          | 0      | 41    |                       |                            | 42-8828 DLY                                              |
| UT    | UNIV OF UTAH           | 42-8922 | 40.7667  | -111.8333 | 4800              | 0          | 0      | 53    |                       |                            | 42-8922 DLY<br>42-7655 DLY<br>69-2015 DLY                |
| UT    | UPPER AMERICAN FORK PH | 42-8939 | 40.4378  | -111.7236 | 5330              | 0          | 0      | 48    |                       |                            | 42-8939 DLY<br>42-8939 HLY                               |
| UT    | VERNAL                 | 42-9111 | 40.4403  | -109.5356 | 5345              | 0          | 0      | 110   |                       |                            | 42-9111 DLY                                              |
| UT    | WANSHIP DAM            | 42-9165 | 40.7908  | -111.4078 | 5940              | 0          | 0      | 68    |                       |                            | 42-9165 DLY                                              |
| UT    | WEBER BASIN PUMP PLT 3 | 42-9346 | 41.1092  | -111.9125 | 4900              | 0          | 0      | 55    |                       |                            | 42-9346 DLY                                              |
| UT    | WOODRUFF               | 42-9595 | 41.525   | -111.1494 | 6315              | 0          | 0      | 96    |                       |                            | 42-9595 DLY                                              |
| WA    | ANATONE                | 45-0184 | 46.1333  | -117.1333 | 3573              | 0          | 0      | 55    |                       |                            | 45-0184 DLY                                              |
| WA    | ASOTIN 14 SW           | 45-0294 | 46.2039  | -117.2472 | 3403              | 0          | 0      | 47    |                       |                            | 45-0294 DLY                                              |
| WA    | BOUNDARY DAM           | 45-0844 | 48.9947  | -117.3544 | 1837              | 0          | 0      | 58    |                       |                            | 45-0844 DLY<br>45-0845 DLY                               |
| WA    | BOUNDARY SWITCHYARD    | 45-0849 | 48.9806  | -117.3586 | 2572              | 23         | 20     | 24    | 45-0849 15M           | 45-0849 HLY                | 45-0849 HLY                                              |
| WA    | CHEWELAH               | 45-1395 | 48.2733  | -117.7408 | 1670              | 21         | 24     | 82    | 45-1395 15M           | 45-1395 HLY                | 45-1395 DLY<br>72-3829 HLY                               |
| WA    | COLFAX                 | 45-1586 | 46.8833  | -117.3647 | 1980              | 0          | 0      | 92    |                       |                            | 45-1586 DLY                                              |
| WA    | COLVILLE               | 45-1630 | 48.5678  | -117.9356 | 1554              | 0          | 43     | 120   |                       | 45-1630 HLY<br>45-1650 HLY | 45-1630 DLY<br>45-1654 DLY<br>64-0355 DLY<br>45-1650 DLY |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                            |                            |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|----------------------------|----------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                     | Daily                      |
| WA    | DAYTON 1 WSW      | 45-2030 | 46.3153  | -118.0022 | 1557              | 30         | 31     | 118   | 45-2030 15M<br>54-0149 15M | 45-2030 HLY<br>54-0149 15M | 45-2030 DLY                |
| WA    | DAYTON 9 SE       | 45-2037 | 46.2167  | -117.85   | 2343              | 0          | 24     | 24    |                            | 45-2037 HLY                | 45-2037 HLY                |
| WA    | EWAN              | 45-2706 | 47.1167  | -117.7333 | 1722              | 0          | 0      | 30    |                            |                            | 45-2706 DLY                |
| WA    | LACROSSE          | 45-4338 | 46.8167  | -117.8831 | 1476              | 0          | 0      | 113   |                            |                            | 45-4338 DLY                |
| WA    | LOWER GRANITE DAM | 45-4835 | 46.658   | -117.4327 | 660               | 0          | 0      | 41    |                            |                            | 45-4835 DLY<br>45-9024 DLY |
| WA    | METALINE FALLS    | 45-5317 | 48.8667  | -117.3667 | 2113              | 0          | 0      | 43    |                            |                            | 45-5317 DLY                |
| WA    | NEWPORT           | 45-5844 | 48.1842  | -117.0475 | 2162              | 0          | 0      | 102   |                            |                            | 45-5844 DLY<br>69-2090 DLY |
| WA    | NORTHPORT         | 45-5946 | 48.8994  | -117.8289 | 1497              | 27         | 44     | 104   | 45-5946 15M<br>54-0150 15M | 45-5946 HLY<br>54-0150 15M | 45-5946 DLY                |
| WA    | POMEROY           | 45-6610 | 46.4672  | -117.5883 | 1934              | 0          | 0      | 89    |                            |                            | 45-6610 DLY                |
| WA    | PULLMAN 2 NW      | 45-6789 | 46.7603  | -117.1861 | 2515              | 0          | 50     | 124   |                            | 45-6789 HLY<br>54-0151 15M | 45-6789 DLY<br>45-6784 DLY |
| WA    | ROSALIA           | 45-7180 | 47.2347  | -117.3636 | 2420              | 0          | 0      | 127   |                            |                            | 45-7180 DLY                |
| WA    | ST JOHN           | 45-7267 | 47.0933  | -117.5878 | 1952              | 0          | 0      | 56    |                            |                            | 45-7267 DLY                |
| WA    | SPOKANE           | 45-7933 | 47.6667  | -117.4167 | 1880              | 0          | 0      | 30    |                            |                            | 45-7933 DLY                |
| WA    | SPRAGUE           | 45-7956 | 47.3     | -117.9833 | 1970              | 0          | 28     | 60    |                            | 45-7956 HLY                | 45-7956 DLY                |
| WA    | TEKOA             | 45-8348 | 47.2275  | -117.0836 | 2495              | 0          | 0      | 53    |                            |                            | 45-8348 DLY<br>45-8348 HLY |
| WA    | WELLPINIT         | 45-9058 | 47.8964  | -117.9933 | 2490              | 0          | 0      | 69    |                            |                            | 45-9058 DLY                |
| SD    | BUFFALO 13 ESE    | 57-0004 | 45.516   | -103.3017 | 2883              | 0          | 0      | 33    |                            |                            | 57-0004 DLY<br>39-0223 DLY |

| State | Station name                   | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                                          |
|-------|--------------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------------------------------------|
|       |                                |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                     | Daily                                                    |
| CO    | NUNN 7 NNE                     | 57-0017 | 40.8066  | -104.7552 | 5390              | 0          | 23     | 42    |                       | 57-0017 HLY<br>88-2017 HLY | 57-0017 DLY<br>88-2017 DLY<br>61-0037 DLY                |
| CO    | ROCKY MOUNTAIN NATIONAL PARK-B | 61-0038 | 40.3639  | -105.581  | 8127              | 0          | 0      | 34    |                       |                            | 61-0038 DLY                                              |
| CO    | FT COLLINS AERC                | 62-0003 | 40.5833  | -105.15   | 5062              | 0          | 23     | 32    |                       | 62-0003 HLY                | 62-0003 DLY<br>69-0461 DLY<br>69-0472 DLY                |
| CO    | PECKHAM                        | 62-0010 | 40.3     | -104.7333 | 4648              | 0          | 25     | 25    |                       | 62-0010 HLY                | 62-0010 DLY                                              |
| CO    | AULT                           | 62-0012 | 40.5667  | -104.7333 | 4885              | 0          | 25     | 25    |                       | 62-0012 HLY                | 62-0012 HLY                                              |
| CO    | KERSEY                         | 62-0017 | 40.3667  | -104.5333 | 4573              | 0          | 24     | 25    |                       | 62-0017 HLY                | 62-0017 DLY                                              |
| NE    | SCOTTSBLUFF 6NW                | 62-0031 | 41.95    | -103.7    | 4114              | 0          | 0      | 99    |                       |                            | 62-0031 DLY<br>25-5590 DLY                               |
| AB    | BOW ISLAND IRRIGATION AGDM     | 64-0038 | 49.867   | -111.383  | 2621              | 0          | 0      | 35    |                       |                            | 64-0038 DLY<br>71-0094 DLY<br>71-0096 DLY<br>71-0093 DLY |
| AB    | RAYMOND AGDM ALTA              | 64-0042 | 49.483   | -112.683  | 3074              | 0          | 0      | 49    |                       |                            | 64-0042 DLY<br>71-0168 DLY                               |
| UT    | HILL AFB AIRPORT               | 64-0193 | 41.117   | -111.967  | 4789              | 0          | 0      | 48    |                       |                            | 64-0193 DLY<br>79-0038 DLY                               |
| SD    | ELLSWORTH AIR FORCE BASE       | 64-0235 | 44.15    | -103.1    | 3278              | 0          | 0      | 42    |                       |                            | 64-0235 DLY<br>79-0016 DLY                               |
| CO    | DRAKE 3.0 NNE                  | 69-0438 | 40.47    | -105.3092 | 6752              | 21         | 19     | 32    | 05-2354 15M           | 05-2354 HLY<br>05-2354 15M | 69-0438 DLY<br>05-2354 15M<br>05-2354 HLY                |

| State | Station name        | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                                                          |                                                                                        |
|-------|---------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------|
|       |                     |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                                                   | Daily                                                                                  |
| CO    | BLV 4.0 NW          | 69-0634 | 40.6754  | -105.215  | 5354              | 23         | 23     | 42    | 05-3007 15M           | 05-3007 HLY<br>05-3007 15M<br>05-3007 15M<br>05-3007 HLY | 69-0634 DLY<br>05-3007 15M<br>05-3007 15M<br>05-3007 HLY                               |
| CO    | KERSEY 1.3 WSW      | 69-1227 | 40.3802  | -104.5842 | 4643              | 0          | 0      | 31    |                       |                                                          | 69-1227 DLY<br>62-0017 HLY                                                             |
| ND    | BEACH 0.3 SSE       | 69-1787 | 46.9095  | -104.005  | 2803              | 0          | 0      | 85    |                       |                                                          | 69-1787 DLY<br>32-0590 DLY                                                             |
| UT    | FARMINGTON 1.8 W    | 69-1977 | 40.9874  | -111.9286 | 4239              | 0          | 0      | 59    |                       |                                                          | 69-1977 DLY<br>42-2721 DLY                                                             |
| BC    | CASTLEGAR A         | 71-0005 | 49.3     | -117.6333 | 1627              | 0          | 20     | 58    |                       | 60-1123 HLY                                              | 71-0005 DLY                                                                            |
| BC    | CASTLEGAR BCHPA DAM | 71-0006 | 49.3424  | -117.7641 | 1427              | 0          | 21     | 53    |                       | 60-1124 HLY                                              | 71-0006 DLY<br>71-0007 DLY                                                             |
| BC    | COLUMBIA GARDENS    | 71-0008 | 49.05    | -117.6    | 1421              | 0          | 0      | 38    |                       |                                                          | 71-0008 DLY<br>71-0009 DLY                                                             |
| BC    | CRESTON             | 71-0012 | 49.1     | -116.5167 | 2001              | 0          | 0      | 101   |                       |                                                          | 71-0012 DLY                                                                            |
| BC    | KASLO               | 71-0017 | 49.9167  | -116.9167 | 1969              | 0          | 0      | 105   |                       |                                                          | 71-0017 DLY                                                                            |
| BC    | KINGSGATE           | 71-0018 | 49       | -116.1833 | 2690              | 0          | 0      | 35    |                       |                                                          | 71-0018 DLY                                                                            |
| BC    | NELSON NE           | 71-0023 | 49.5861  | -117.2064 | 1870              | 0          | 0      | 35    |                       |                                                          | 71-0023 DLY                                                                            |
| BC    | NELSON CS           | 71-0029 | 49.4914  | -117.3053 | 1755              | 0          | 0      | 96    |                       |                                                          | 71-0029 DLY<br>70-0007 DLY<br>71-0026 DLY<br>71-0022 DLY<br>71-0027 DLY<br>64-0046 DLY |
| BC    | ROBSON              | 71-0032 | 49.3333  | -117.7    | 1450              | 0          | 0      | 31    |                       |                                                          | 71-0032 DLY                                                                            |

| State | Station name          | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                                          |
|-------|-----------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------------------------------------|
|       |                       |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                     | Daily                                                    |
| BC    | ROSSLAND CITY YARD    | 71-0033 | 49.0833  | -117.8    | 3409              | 0          | 0      | 89    |                       |                            | 71-0033 DLY<br>71-0034 DLY                               |
| BC    | SOUTH SLOCAN          | 71-0037 | 49.4548  | -117.5212 | 1499              | 0          | 0      | 75    |                       |                            | 71-0037 DLY<br>71-0002 DLY                               |
| BC    | WANETA                | 71-0041 | 49.0072  | -117.5927 | 1831              | 0          | 0      | 51    |                       |                            | 71-0041 DLY                                              |
| BC    | WARFIELD RCS          | 71-0043 | 49.1122  | -117.7385 | 1860              | 0          | 0      | 86    |                       |                            | 71-0043 DLY<br>71-0042 DLY<br>71-0040 DLY                |
| BC    | NELSON RIXEN CREEK    | 71-0048 | 49.5123  | -117.3988 | 2577              | 0          | 0      | 33    |                       |                            | 71-0048 DLY                                              |
| BC    | CRANBROOK A           | 71-0060 | 49.6167  | -115.7833 | 3084              | 0          | 37     | 54    |                       | 60-1134 HLY<br>60-1135 HLY | 71-0060 DLY<br>71-0057 DLY                               |
| BC    | ELKO                  | 71-0062 | 49.3     | -115.1167 | 3054              | 0          | 0      | 57    |                       |                            | 71-0062 DLY                                              |
| BC    | FERNIE                | 71-0063 | 49.4833  | -115.0667 | 3284              | 0          | 0      | 104   |                       |                            | 71-0063 DLY                                              |
| BC    | CRANBROOK CITY        | 71-0065 | 49.5167  | -115.7667 | 3038              | 0          | 0      | 82    |                       |                            | 71-0065 DLY<br>71-0059 DLY<br>71-0056 DLY<br>71-0055 DLY |
| BC    | FT STEELE DANDY CRK   | 71-0067 | 49.5167  | -115.4667 | 2808              | 0          | 0      | 36    |                       |                            | 71-0067 DLY                                              |
| BC    | KIMBERLEY PCC         | 71-0074 | 49.6333  | -115.9667 | 2917              | 0          | 24     | 40    |                       | 60-1137 HLY                | 71-0074 DLY                                              |
| BC    | MARYSVILLE            | 71-0075 | 49.6333  | -115.95   | 3150              | 0          | 0      | 34    |                       |                            | 71-0075 DLY                                              |
| BC    | NEWGATE               | 71-0080 | 49.0219  | -115.1861 | 2513              | 0          | 0      | 45    |                       |                            | 71-0080 DLY                                              |
| BC    | SPARWOOD              | 71-0081 | 49.75    | -114.8833 | 3734              | 0          | 40     | 48    |                       | 60-1138 HLY<br>55-0044 HLY | 71-0081 DLY<br>71-0079 DLY                               |
| BC    | WARDNER KTNV HATCHERY | 71-0084 | 49.4667  | -115.4667 | 2493              | 0          | 0      | 38    |                       |                            | 71-0084 DLY                                              |
| BC    | WASA                  | 71-0085 | 49.8167  | -115.6333 | 3182              | 0          | 0      | 90    |                       |                            | 71-0085 DLY                                              |

| State | Station name              | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                                                          |
|-------|---------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------------------------------------|
|       |                           |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly      | Daily                                                    |
| AB    | CALDWELL                  | 71-0099 | 49.1667  | -113.6333 | 4219              | 0          | 0      | 77    |                       |             | 71-0099 DLY                                              |
| AB    | CARDSTON                  | 71-0100 | 49.1333  | -113.25   | 3914              | 0          | 0      | 79    |                       |             | 71-0100 DLY                                              |
| AB    | CARWAY                    | 71-0104 | 49       | -113.3833 | 4442              | 0          | 0      | 105   |                       |             | 71-0104 DLY<br>71-0103 DLY                               |
| AB    | CONNELLY CREEK            | 71-0107 | 49.6167  | -114.2167 | 4098              | 0          | 0      | 34    |                       |             | 71-0107 DLY                                              |
| AB    | COWLEY OLIN CREEK         | 71-0111 | 49.7     | -114.0667 | 4049              | 0          | 0      | 39    |                       |             | 71-0111 DLY                                              |
| AB    | CLARESHOLM MEADOW CREEK   | 71-0113 | 49.9333  | -113.7333 | 3396              | 0          | 0      | 84    |                       |             | 71-0113 DLY                                              |
| AB    | FOREMOST AGDM             | 71-0118 | 49.4833  | -111.4833 | 2890              | 0          | 0      | 72    |                       |             | 71-0118 DLY<br>71-0120 DLY<br>71-0117 DLY<br>64-0019 DLY |
| AB    | FORT MACLEOD              | 71-0121 | 49.7167  | -113.4    | 3117              | 0          | 0      | 89    |                       |             | 71-0121 DLY                                              |
| AB    | LETHBRIDGE                | 71-0138 | 49.6333  | -112.8    | 3048              | 0          | 32     | 84    |                       | 60-1165 HLY | 71-0138 DLY<br>71-0142 DLY<br>71-0140 DLY<br>71-0141 DLY |
| AB    | LETHBRIDGE DEMO FARM AGDM | 71-0147 | 49.6833  | -112.75   | 2963              | 0          | 0      | 103   |                       |             | 71-0147 DLY<br>71-0144 DLY<br>64-0035 DLY                |
| AB    | MONARCH                   | 71-0152 | 49.8167  | -113.1667 | 3107              | 0          | 0      | 32    |                       |             | 71-0152 DLY                                              |
| AB    | MOUNTAIN VIEW             | 71-0153 | 49.1333  | -113.6333 | 4393              | 0          | 0      | 85    |                       |             | 71-0153 DLY                                              |

| State | Station name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                                                                                                       |                                           |
|-------|------------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------|
|       |                        |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                                                                                                | Daily                                     |
| AB    | PINCHER CREEK CLIMATE  | 71-0162 | 49.5167  | -114      | 3904              | 0          | 33     | 119   |                       | 60-1173 HLY<br>60-1172 HLY<br>60-1171 HLY<br>71-0160 DLY<br>64-0044 DLY<br>71-0158 DLY<br>71-0161 DLY | 71-0162 DLY<br>71-0159 DLY<br>71-0166 DLY |
| AB    | SEVEN PERSONS          | 71-0170 | 49.8333  | -110.9    | 2480              | 0          | 0      | 49    |                       |                                                                                                       | 71-0170 DLY                               |
| AB    | TABER                  | 71-0174 | 49.8     | -112.1167 | 2661              | 0          | 0      | 55    |                       |                                                                                                       | 71-0174 DLY                               |
| AB    | WINNIFRED              | 71-0177 | 49.9     | -111.2    | 2726              | 0          | 0      | 37    |                       |                                                                                                       | 71-0177 DLY                               |
| AB    | ALTAWAN                | 71-0182 | 49.25    | -110.0167 | 3100              | 0          | 0      | 32    |                       |                                                                                                       | 71-0182 DLY                               |
| AB    | MASINASIN              | 71-0199 | 49.1333  | -111.65   | 3127              | 0          | 0      | 43    |                       |                                                                                                       | 71-0199 DLY<br>64-0028 DLY                |
| AB    | ONEFOUR CDA            | 71-0207 | 49.1167  | -110.4667 | 3068              | 0          | 27     | 84    |                       | 55-0007 HLY<br>60-1178 HLY                                                                            | 71-0207 DLY<br>71-0196 DLY<br>55-0007 HLY |
| AB    | BEAVER MINES           | 71-0219 | 49.4667  | -114.1833 | 4124              | 0          | 0      | 109   |                       |                                                                                                       | 71-0219 DLY<br>64-0025 DLY                |
| AB    | CAMERON FALLS          | 71-0225 | 49.05    | -113.9167 | 4301              | 0          | 0      | 45    |                       |                                                                                                       | 71-0225 DLY<br>71-0259 DLY                |
| AB    | COLEMAN                | 71-0230 | 49.6333  | -114.5833 | 4400              | 0          | 0      | 83    |                       |                                                                                                       | 71-0230 DLY                               |
| AB    | LUNDBRECK              | 71-0239 | 49.9167  | -114.1333 | 4452              | 0          | 0      | 45    |                       |                                                                                                       | 71-0239 DLY                               |
| AB    | MOUNTAIN VIEW BIRDSEYE | 71-0241 | 49.1167  | -113.7333 | 4619              | 0          | 0      | 59    |                       |                                                                                                       | 71-0241 DLY                               |
| AB    | WATERTON PARK GATE     | 71-0249 | 49.1333  | -113.8167 | 4229              | 0          | 0      | 61    |                       |                                                                                                       | 71-0249 DLY<br>71-0261 DLY<br>55-0013 HLY |



| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                                                          |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|----------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly      | Daily                                                    |
| SK    | AMULET             | 71-0269 | 49.6167  | -104.7333 | 2388              | 0          | 0      | 30    |                       |             | 71-0269 DLY                                              |
| SK    | CEYLON             | 71-0271 | 49.4667  | -104.6    | 2339              | 0          | 0      | 55    |                       |             | 71-0271 DLY                                              |
| SK    | DAHINDA            | 71-0273 | 49.7333  | -105.0333 | 2349              | 0          | 0      | 33    |                       |             | 71-0273 DLY                                              |
| SK    | LAKE ALMA          | 71-0277 | 49.0667  | -104.25   | 2375              | 0          | 0      | 31    |                       |             | 71-0277 DLY                                              |
| SK    | MACOUN             | 71-0278 | 49.2333  | -103.2333 | 1873              | 0          | 0      | 38    |                       |             | 71-0278 DLY                                              |
| SK    | MIDALE             | 71-0281 | 49.4     | -103.4    | 1909              | 0          | 0      | 69    |                       |             | 71-0281 DLY                                              |
| SK    | ORMISTON           | 71-0282 | 49.7167  | -105.3667 | 2251              | 0          | 21     | 45    |                       | 60-1201 HLY | 71-0282 DLY                                              |
| SK    | RADVILL            | 71-0285 | 49.5     | -104.2833 | 2077              | 0          | 0      | 39    |                       |             | 71-0285 DLY                                              |
| SK    | WEYBURN            | 71-0290 | 49.65    | -103.8333 | 1870              | 0          | 37     | 64    |                       | 60-1202 HLY | 71-0290 DLY                                              |
| SK    | YELLOW GRASS       | 71-0292 | 49.8167  | -104.1833 | 1903              | 0          | 0      | 102   |                       |             | 71-0292 DLY<br>60-1203 HLY                               |
| SK    | WEYBURN            | 71-0293 | 49.7     | -103.8    | 1932              | 0          | 0      | 39    |                       |             | 71-0293 DLY<br>71-0291 DLY<br>70-0014 DLY<br>64-0032 DLY |
| SK    | ANEROID            | 71-0294 | 49.7167  | -107.3    | 2474              | 0          | 0      | 73    |                       |             | 71-0294 DLY                                              |
| SK    | ASSINIBOIA AIRPORT | 71-0296 | 49.7333  | -105.95   | 2382              | 0          | 0      | 97    |                       |             | 71-0296 DLY<br>71-0295 DLY                               |
| SK    | CYPRESS HILLS      | 71-0299 | 49.6667  | -109.4667 | 3924              | 0          | 0      | 30    |                       |             | 71-0299 DLY                                              |
| SK    | GARDEN HEAD        | 71-0301 | 49.8167  | -108.5667 | 2969              | 0          | 0      | 59    |                       |             | 71-0301 DLY                                              |
| SK    | GRAVELBOURG        | 71-0303 | 49.8833  | -106.55   | 2297              | 0          | 0      | 65    |                       |             | 71-0303 DLY                                              |
| SK    | GULL LAKE CDA EPF  | 71-0305 | 49.95    | -108.4667 | 2976              | 0          | 0      | 33    |                       |             | 71-0305 DLY                                              |
| SK    | ILLERBRUN          | 71-0308 | 49.8833  | -108.3667 | 2927              | 0          | 0      | 37    |                       |             | 71-0308 DLY                                              |
| SK    | KINCAID            | 71-0310 | 49.6667  | -107      | 2425              | 0          | 0      | 46    |                       |             | 71-0310 DLY                                              |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |                                                          |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|----------------------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                     | Daily                                                    |
| SK    | KLINTONEL          | 71-0311 | 49.6833  | -108.9167 | 3524              | 0          | 0      | 82    |                       |                            | 71-0311 DLY                                              |
| SK    | LIMERICK           | 71-0313 | 49.5     | -106.25   | 2490              | 0          | 0      | 33    |                       |                            | 71-0313 DLY                                              |
| SK    | MAPLE CREEK        | 71-0314 | 49.9     | -109.4667 | 2516              | 0          | 0      | 80    |                       |                            | 71-0314 DLY<br>71-0318 DLY<br>71-0317 DLY<br>71-0315 DLY |
| SK    | MAPLE CREEK NORTH  | 71-0316 | 50       | -109.4667 | 2507              | 0          | 0      | 53    |                       |                            | 71-0316 DLY                                              |
| SK    | SHAUNAVON          | 71-0322 | 49.65    | -108.4    | 3009              | 0          | 0      | 31    |                       |                            | 71-0322 DLY                                              |
| SK    | SHAUNAVON 2        | 71-0324 | 49.65    | -108.4167 | 2999              | 0          | 0      | 32    |                       |                            | 71-0324 DLY                                              |
| SK    | SHAUNAVON 3        | 71-0325 | 49.9     | -108.4167 | 2927              | 0          | 0      | 35    |                       |                            | 71-0325 DLY                                              |
| SK    | WOODROW            | 71-0327 | 49.5667  | -106.7833 | 2395              | 0          | 0      | 45    |                       |                            | 71-0327 DLY                                              |
| SK    | CLAYDON            | 71-0333 | 49.1333  | -109.1    | 3199              | 0          | 0      | 43    |                       |                            | 71-0333 DLY                                              |
| SK    | CONSUL             | 71-0336 | 49.3     | -109.4833 | 3091              | 0          | 0      | 42    |                       |                            | 71-0336 DLY<br>71-0335 DLY                               |
| SK    | CORONACH           | 71-0337 | 49.1167  | -105.5167 | 2536              | 0          | 0      | 44    |                       |                            | 71-0337 DLY                                              |
| SK    | CORONACH SPC       | 71-0339 | 49.05    | -105.4833 | 2480              | 0          | 0      | 39    |                       |                            | 71-0339 DLY                                              |
| SK    | CYPRESS HILLS PARK | 71-0340 | 49.6333  | -109.5167 | 4170              | 0          | 0      | 50    |                       |                            | 71-0340 DLY<br>71-0341 DLY                               |
| SK    | MANKOTA            | 71-0353 | 49.1     | -107.0167 | 2723              | 0          | 0      | 56    |                       |                            | 71-0353 DLY<br>64-0017 DLY                               |
| SK    | NASHLYN            | 71-0357 | 49.2     | -109.5167 | 3100              | 0          | 0      | 61    |                       |                            | 71-0357 DLY                                              |
| SK    | ROCKGLEN (AUT)     | 71-0360 | 49.1667  | -105.9833 | 3009              | 0          | 18     | 28    |                       | 55-0009 HLY<br>60-1213 HLY | 71-0360 DLY                                              |
| SK    | VAL-MARIE          | 71-0363 | 49.3667  | -107.85   | 2651              | 0          | 0      | 50    |                       |                            | 71-0363 DLY                                              |
| SK    | WEST POPLAR RIVER  | 71-0369 | 49       | -106.3833 | 2874              | 0          | 0      | 38    |                       |                            | 71-0369 DLY                                              |

| State | Station name    | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |             |
|-------|-----------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------|
|       |                 |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly      | Daily       |
| SK    | WILLOW CREEK    | 71-0370 | 49.0167  | -109.9167 | 2733              | 0          | 0      | 32    |                       |             | 71-0370 DLY |
| CO    | DINOSAUR N.M.   | 76-0006 | 40.5086  | -108.9106 | 5960              | 0          | 23     | 23    | 76-0006 HLY           | 76-0006 HLY |             |
| CO    | ERNIE GULCH     | 76-0008 | 40.0458  | -108.2    | 7000              | 0          | 25     | 26    | 76-0008 HLY           | 76-0008 HLY |             |
| CO    | ESTES PARK      | 76-0009 | 40.3667  | -105.55   | 7820              | 0          | 20     | 19    | 76-0009 HLY           | 76-0009 HLY |             |
| CO    | LODORE          | 76-0014 | 40.7386  | -108.8367 | 5940              | 0          | 32     | 32    | 76-0014 HLY           | 76-0014 HLY |             |
| CO    | PINTO           | 76-0017 | 40.0097  | -108.4597 | 6940              | 0          | 32     | 32    | 76-0017 HLY           | 76-0017 HLY |             |
| ND    | SAND CREEK      | 76-0333 | 46.5456  | -103.5183 | 2700              | 0          | 24     | 24    | 76-0333 HLY           | 76-0333 HLY |             |
| ND    | SCOTTS BLUFF    | 76-0334 | 41.8167  | -103.7    | 4224              | 0          | 18     | 19    | 76-0334 HLY           | 76-0334 HLY |             |
| ND    | WATFORD CITY    | 76-0336 | 47.7803  | -103.2867 | 2165              | 0          | 24     | 24    | 76-0336 HLY           | 76-0336 HLY |             |
| ND    | BAKER PARK      | 76-0337 | 43.9792  | -103.425  | 4674              | 0          | 20     | 20    | 76-0337 HLY           | 76-0337 HLY |             |
| ND    | CUSTER          | 76-0340 | 43.75    | -103.6333 | 5200              | 0          | 20     | 21    | 76-0340 HLY           | 76-0340 HLY |             |
| ND    | NEMO            | 76-0345 | 44.1917  | -103.5097 | 4644              | 0          | 28     | 28    | 76-0345 HLY           | 76-0345 HLY |             |
| ND    | RED CANYON      | 76-0347 | 43.4258  | -103.7589 | 4644              | 0          | 29     | 28    | 76-0347 HLY           | 76-0347 HLY |             |
| NV    | LONG HOLLOW     | 76-0357 | 41.5386  | -116.2175 | 5820              | 0          | 32     | 34    | 76-0357 HLY           | 76-0357 HLY |             |
| OR    | BLUE CANYON     | 76-0366 | 44.67    | -117.9336 | 4200              | 0          | 33     | 34    | 76-0366 HLY           | 76-0366 HLY |             |
| OR    | EDEN            | 76-0370 | 45.9267  | -117.5883 | 4200              | 0          | 23     | 21    | 76-0370 HLY           | 76-0370 HLY |             |
| OR    | FLAGSTAFF HILL  | 76-0371 | 44.8142  | -117.7289 | 3945              | 0          | 20     | 22    | 76-0371 HLY           | 76-0371 HLY |             |
| OR    | GRASSY MOUNTAIN | 76-0373 | 42.6261  | -117.395  | 4560              | 0          | 36     | 36    | 76-0373 HLY           | 76-0373 HLY |             |
| OR    | KELSAY BUTTE    | 76-0375 | 43.9014  | -117.9858 | 5187              | 0          | 35     | 36    | 76-0375 HLY           | 76-0375 HLY |             |
| OR    | OWYHEE RIDGE    | 76-0381 | 43.5833  | -117.2333 | 4400              | 0          | 36     | 36    | 76-0381 HLY           | 76-0381 HLY |             |
| OR    | ROBERTS BUTTE   | 76-0386 | 45.6817  | -117.2064 | 4263              | 0          | 21     | 20    | 76-0386 HLY           | 76-0386 HLY |             |
| UT    | CART CREEK      | 76-0393 | 40.8847  | -109.4122 | 6900              | 0          | 24     | 23    | 76-0393 HLY           | 76-0393 HLY |             |
| UT    | DIAMOND RIM     | 76-0395 | 40.6172  | -109.2428 | 7730              | 0          | 37     | 38    | 76-0395 HLY           | 76-0395 HLY |             |

| State | Station name                   | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                                          |
|-------|--------------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|----------------------------------------------------------|
|       |                                |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                                    | Daily                                                    |
| UT    | KINGS POINT - DUTCH JOHN 16ESE | 76-0399 | 40.8606  | -109.1022 | 5670              | 0          | 36     | 36    |                            | 76-0399 HLY                               | 76-0399 HLY                                              |
| UT    | YAMPA PLATEAU - JENSEN 7SSE    | 76-0418 | 40.278   | -109.2888 | 5240              | 0          | 37     | 35    |                            | 76-0418 HLY                               | 76-0418 HLY                                              |
| UT    | YELLOWSTONE - ALTAMONT 13NNW   | 76-0419 | 40.5436  | -110.3294 | 7800              | 0          | 24     | 26    |                            | 76-0419 HLY                               | 76-0419 HLY                                              |
| NE    | CHADRON MUNI AP                | 79-0017 | 42.8375  | -103.0953 | 3318              | 0          | 42     | 48    |                            | 55-0137 HLY<br>78-0013 15M<br>55-0299 HLY | 79-0017 DLY<br>78-0013 15M<br>55-0137 HLY<br>55-0299 HLY |
| NE    | SCOTTSBLUFF HEILIG AP          | 79-0023 | 41.8706  | -103.5931 | 3945              | 0          | 74     | 126   |                            | 25-7665 HLY<br>55-0146 HLY                | 79-0023 DLY                                              |
| CO    | CRAIG MOFFAT CO AP             | 79-0031 | 40.4953  | -107.5211 | 6186              | 0          | 47     | 65    |                            | 72-0001 HLY<br>05-1928 HLY<br>05-1931 HLY | 79-0031 DLY<br>05-1928 DLY<br>64-0176 DLY                |
| WA    | FAIRCHILD AFB                  | 79-0041 | 47.6333  | -117.65   | 2438              | 0          | 0      | 67    |                            |                                           | 79-0041 DLY<br>45-7941 DLY<br>55-0273 HLY<br>64-0345 DLY |
| UT    | COALVILLE                      | 79-0043 | 40.9139  | -111.3983 | 5550              | 0          | 0      | 74    |                            |                                           | 79-0043 DLY                                              |
| UT    | SALT LAKE CITY INTL AP         | 79-0046 | 40.7781  | -111.9694 | 4225              | 20         | 73     | 75    | 78-0058 15M                | 64-0184 HLY<br>78-0058 15M                | 79-0046 DLY                                              |
| OR    | BAKER CITY MUNI AP             | 79-0047 | 44.8428  | -117.8086 | 3361              | 0          | 22     | 80    |                            | 35-0412 HLY<br>55-0243 HLY                | 79-0047 DLY                                              |
| WA    | SPOKANE INTL AP                | 79-0068 | 47.6217  | -117.5281 | 2353              | 0          | 75     | 134   |                            | 45-7938 HLY<br>64-0342 HLY                | 79-0068 DLY                                              |
| OR    | ONTARIO MUNI AP                | 79-0072 | 44.0206  | -117.0128 | 2190              | 29         | 65     | 78    | 78-0046 15M<br>35-6294 15M | 55-0236 HLY<br>35-6294 HLY<br>72-2837 HLY | 79-0072 DLY<br>35-6294 DLY                               |

| State | Station name              | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |                                           |                                           |
|-------|---------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|-------------------------------------------|-------------------------------------------|
|       |                           |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly                                    | Daily                                     |
| OR    | BAKER KBRK                | 79-0075 | 44.7667  | -117.8333 | 3445              | 0          | 45     | 72    |                            | 35-0409 HLY<br>35-0417 HLY<br>35-0409 HLY | 79-0075 DLY<br>35-0417 HLY<br>35-0409 HLY |
| ND    | WILLISTON SLOULIN INTL AP | 79-0080 | 48.1739  | -103.6367 | 1902              | 0          | 69     | 126   |                            | 32-9425 HLY<br>55-0244 HLY                | 79-0080 DLY<br>32-9421 DLY                |
| UT    | VERNAL MUNICIPAL AP       | 79-0083 | 40.4422  | -109.5144 | 5260              | 0          | 23     | 25    |                            | 72-3113 HLY                               | 79-0083 DLY<br>69-2051 DLY<br>72-3113 HLY |
| SD    | BUFFALO ASOS              | 79-0085 | 45.6044  | -103.5464 | 3004              | 27         | 68     | 66    | 39-1114 15M<br>78-0001 15M | 39-1114 HLY<br>55-0200 HLY<br>39-1114 15M | 79-0085 DLY<br>39-1114 15M<br>39-1114 HLY |
| OR    | ROME ST AP                | 79-0106 | 42.5906  | -117.8644 | 4050              | 0          | 23     | 26    |                            | 72-2839 HLY                               | 79-0106 DLY<br>72-2839 HLY                |
| WA    | DEER PARK AP              | 79-0107 | 47.9742  | -117.4283 | 2191              | 0          | 23     | 83    |                            | 45-2064 HLY<br>55-0277 HLY<br>72-3741 HLY | 79-0107 DLY<br>45-2066 DLY<br>72-3741 HLY |
| UT    | LOGAN CACHE AP            | 79-0108 | 41.7872  | -111.8533 | 4454              | 0          | 24     | 25    |                            | 55-0134 HLY                               | 79-0108 DLY                               |
| WA    | SPOKANE FELTS FLD         | 79-0114 | 47.6831  | -117.3214 | 1953              | 0          | 23     | 25    |                            | 72-3744 HLY                               | 79-0114 DLY                               |
| OR    | ANEROID LAKE #2           | 86-0302 | 45.2133  | -117.1926 | 7400              | 0          | 0      | 42    |                            |                                           | 86-0302 DLY                               |
| NV    | BEAR CREEK                | 86-0321 | 41.8338  | -115.4528 | 8040              | 0          | 17     | 45    |                            | 86-0321 HLY                               | 86-0321 DLY                               |
| CO    | BEAR LAKE                 | 86-0322 | 40.3118  | -105.6467 | 9500              | 0          | 22     | 43    |                            | 86-0322 HLY                               | 86-0322 DLY                               |
| UT    | BEAVER DIVIDE             | 86-0330 | 40.6123  | -111.0978 | 8280              | 0          | 0      | 45    |                            |                                           | 86-0330 DLY                               |
| UT    | BEN LOMOND PEAK           | 86-0332 | 41.376   | -111.9441 | 7689              | 0          | 22     | 45    |                            | 86-0332 HLY                               | 86-0332 DLY                               |
| UT    | BEN LOMOND TRAIL          | 86-0333 | 41.3829  | -111.921  | 5972              | 0          | 20     | 43    |                            | 86-0333 HLY                               | 86-0333 DLY                               |
| NV    | BIG BEND                  | 86-0336 | 41.7617  | -115.6931 | 6898              | 0          | 21     | 45    |                            | 86-0336 HLY                               | 86-0336 DLY                               |
| SD    | BLIND PARK                | 86-0354 | 44.1077  | -103.9769 | 6890              | 0          | 0      | 33    |                            |                                           | 86-0354 DLY                               |

| State | Station name       | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |             |                                           |
|-------|--------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|-------------|-------------------------------------------|
|       |                    |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly      | Daily                                     |
| UT    | BROWN DUCK         | 86-0368 | 40.581   | -110.5859 | 10574             | 0          | 0      | 45    |                       |             | 86-0368 DLY                               |
| NV    | BUCKSKIN LOWER     | 86-0373 | 41.7507  | -117.5318 | 6930              | 0          | 0      | 43    |                       |             | 86-0373 DLY                               |
| UT    | BUG LAKE           | 86-0374 | 41.6854  | -111.4199 | 7987              | 0          | 14     | 45    |                       | 86-0374 HLY | 86-0374 DLY                               |
| WA    | BUNCHGRASS MDW     | 86-0376 | 48.6869  | -117.1763 | 5000              | 0          | 17     | 41    |                       | 86-0376 HLY | 86-0376 DLY                               |
| UT    | CHALK CREEK #1     | 86-0392 | 40.8546  | -111.0477 | 9171              | 0          | 0      | 45    |                       |             | 86-0392 DLY                               |
| UT    | CHALK CREEK #2     | 86-0393 | 40.8853  | -111.0695 | 8208              | 0          | 0      | 45    |                       |             | 86-0393 DLY                               |
| UT    | CHEPETA            | 86-0396 | 40.7746  | -110.0105 | 10499             | 0          | 21     | 42    |                       | 86-0396 HLY | 86-0396 DLY                               |
| CO    | COLUMBINE          | 86-0408 | 40.3948  | -106.6041 | 9160              | 0          | 0      | 44    |                       |             | 86-0408 DLY                               |
| CO    | COPELAND LAKE      | 86-0412 | 40.2078  | -105.5686 | 8600              | 0          | 0      | 42    |                       |             | 86-0412 DLY                               |
| CO    | CROSHO             | 86-0426 | 40.1674  | -107.0575 | 9100              | 0          | 0      | 37    |                       |             | 86-0426 DLY                               |
| UT    | CURRANT CREEK      | 86-0432 | 40.3575  | -111.0899 | 7915              | 0          | 0      | 45    |                       |             | 86-0432 DLY                               |
| UT    | DANIELS-STRAWBERRY | 86-0435 | 40.2953  | -111.2568 | 8008              | 0          | 0      | 56    |                       |             | 86-0435 DLY<br>42-8369 DLY<br>80-0222 DLY |
| CO    | DEADMAN HILL       | 86-0438 | 40.8057  | -105.7699 | 10220             | 0          | 0      | 45    |                       |             | 86-0438 DLY                               |
| NV    | DRAW CREEK         | 86-0454 | 41.661   | -115.3234 | 7332              | 0          | 0      | 40    |                       |             | 86-0454 DLY                               |
| UT    | DRY BREAD POND     | 86-0455 | 41.4129  | -111.5377 | 8302              | 0          | 0      | 45    |                       |             | 86-0455 DLY                               |
| CO    | DRY LAKE           | 86-0457 | 40.534   | -106.7813 | 8400              | 0          | 0      | 42    |                       |             | 86-0457 DLY<br>61-0035 DLY                |
| OR    | EILERTSON MEADOWS  | 86-0464 | 44.8689  | -118.1139 | 5510              | 0          | 0      | 43    |                       |             | 86-0464 DLY                               |
| CO    | ELK RIVER          | 86-0467 | 40.8478  | -106.9687 | 8700              | 0          | 0      | 43    |                       |             | 86-0467 DLY                               |
| UT    | FARMINGTON         | 86-0474 | 40.9746  | -111.8098 | 7902              | 0          | 0      | 45    |                       |             | 86-0474 DLY                               |
| NV    | FAWN CREEK         | 86-0476 | 41.821   | -116.1015 | 7031              | 0          | 0      | 43    |                       |             | 86-0476 DLY                               |
| UT    | FIVE POINTS LAKE   | 86-0481 | 40.7178  | -110.4672 | 10943             | 0          | 0      | 43    |                       |             | 86-0481 DLY                               |

| State | Station name     | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations |                            |             |
|-------|------------------|---------|----------|-----------|-------------------|------------|--------|-------|-----------------------|----------------------------|-------------|
|       |                  |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                  | Hourly                     | Daily       |
| NV    | GRANITE PEAK     | 86-0498 | 41.6703  | -117.5667 | 8503              | 0          | 0      | 43    |                       |                            | 86-0498 DLY |
| UT    | LAKEFORK BASIN   | 86-0513 | 40.7379  | -110.6212 | 10885             | 0          | 0      | 42    |                       |                            | 86-0513 DLY |
| UT    | HAYDEN FORK      | 86-0517 | 40.7967  | -110.8847 | 9130              | 0          | 0      | 45    |                       |                            | 86-0517 DLY |
| UT    | HEWINTA          | 86-0521 | 40.9501  | -110.4842 | 9500              | 0          | 23     | 38    |                       | 76-0398 HLY<br>86-0521 HLY | 86-0521 DLY |
| UT    | HICKERSON PARK   | 86-0522 | 40.9066  | -109.9629 | 9122              | 0          | 0      | 38    |                       |                            | 86-0522 DLY |
| UT    | HOLE-IN-ROCK     | 86-0528 | 40.9217  | -110.1862 | 9168              | 0          | 17     | 38    |                       | 86-0528 HLY                | 86-0528 DLY |
| UT    | HORSE RIDGE      | 86-0533 | 41.3137  | -111.4462 | 8199              | 0          | 0      | 45    |                       |                            | 86-0533 DLY |
| NV    | JACK CREEK UPPER | 86-0548 | 41.5467  | -116.0052 | 7377              | 0          | 0      | 45    |                       |                            | 86-0548 DLY |
| NV    | JACKS PEAK       | 86-0549 | 41.5136  | -116.0117 | 8424              | 0          | 0      | 42    |                       |                            | 86-0549 DLY |
| CO    | JOE WRIGHT       | 86-0551 | 40.5322  | -105.887  | 10120             | 0          | 0      | 45    |                       |                            | 86-0551 DLY |
| UT    | KINGS CABIN      | 86-0559 | 40.7163  | -109.544  | 8728              | 0          | 0      | 45    |                       |                            | 86-0559 DLY |
| CO    | LAKE IRENE       | 86-0565 | 40.4143  | -105.8198 | 10700             | 0          | 0      | 45    |                       |                            | 86-0565 DLY |
| UT    | LAKEFORK #1      | 86-0566 | 40.5971  | -110.4332 | 10128             | 0          | 0      | 45    |                       |                            | 86-0566 DLY |
| NV    | LAMANCE CREEK    | 86-0569 | 41.5154  | -117.632  | 6395              | 0          | 0      | 43    |                       |                            | 86-0569 DLY |
| NV    | LAUREL DRAW      | 86-0573 | 41.7764  | -116.0296 | 6682              | 0          | 0      | 44    |                       |                            | 86-0573 DLY |
| UT    | LILY LAKE        | 86-0579 | 40.8649  | -110.7981 | 9133              | 0          | 0      | 43    |                       |                            | 86-0579 DLY |
| UT    | LITTLE BEAR      | 86-0582 | 41.4056  | -111.8261 | 6548              | 0          | 0      | 45    |                       |                            | 86-0582 DLY |
| UT    | LOOKOUT PEAK     | 86-0596 | 40.8373  | -111.7096 | 8161              | 0          | 0      | 35    |                       |                            | 86-0596 DLY |
| CO    | LYNX PASS        | 86-0607 | 40.0781  | -106.6703 | 8880              | 0          | 0      | 43    |                       |                            | 86-0607 DLY |
| UT    | MILL-D NORTH     | 86-0628 | 40.6588  | -111.6368 | 8963              | 0          | 0      | 35    |                       |                            | 86-0628 DLY |
| UT    | MONTE CRISTO     | 86-0634 | 41.4655  | -111.4969 | 8932              | 0          | 0      | 45    |                       |                            | 86-0634 DLY |
| UT    | MOSBY MTN.       | 86-0643 | 40.608   | -109.8881 | 9553              | 0          | 0      | 45    |                       |                            | 86-0643 DLY |

| State | Station name      | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations                     |                                           |                            |
|-------|-------------------|---------|----------|-----------|-------------------|------------|--------|-------|-------------------------------------------|-------------------------------------------|----------------------------|
|       |                   |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                                      | Hourly                                    | Daily                      |
| OR    | MOSS SPRINGS      | 86-0647 | 45.2717  | -117.6875 | 5760              | 0          | 0      | 43    |                                           |                                           | 86-0647 DLY                |
| OR    | MT. HOWARD        | 86-0653 | 45.2652  | -117.1737 | 7910              | 0          | 18     | 40    |                                           | 86-0653 HLY                               | 86-0653 DLY                |
| CO    | NIWOT             | 86-0663 | 40.0352  | -105.5443 | 9910              | 23         | 23     | 43    | 05-5881 15M<br>57-0002 15M<br>54-0009 15M | 86-0663 HLY<br>57-0002 15M<br>54-0009 15M | 86-0663 DLY<br>05-5881 15M |
| UT    | PARLEYS SUMMIT    | 86-0684 | 40.7618  | -111.6292 | 7585              | 0          | 0      | 44    |                                           |                                           | 86-0684 DLY                |
| CO    | PHANTOM VALLEY    | 86-0688 | 40.3994  | -105.8476 | 9030              | 0          | 0      | 43    |                                           |                                           | 86-0688 DLY                |
| WA    | QUARTZ PEAK       | 86-0707 | 47.8793  | -117.0894 | 4700              | 0          | 0      | 36    |                                           |                                           | 86-0707 DLY                |
| CO    | RABBIT EARS       | 86-0709 | 40.3678  | -106.7404 | 9400              | 0          | 0      | 38    |                                           |                                           | 86-0709 DLY                |
| CO    | RIPPLE CREEK      | 86-0717 | 40.1081  | -107.2941 | 10340             | 0          | 0      | 37    |                                           |                                           | 86-0717 DLY                |
| CO    | ROACH             | 86-0718 | 40.875   | -106.046  | 9700              | 0          | 17     | 42    |                                           | 86-0718 HLY                               | 86-0718 DLY                |
| UT    | ROCK CREEK        | 86-0720 | 40.5488  | -110.6929 | 7886              | 0          | 0      | 43    |                                           |                                           | 86-0720 DLY                |
| OR    | SCHNEIDER MEADOWS | 86-0736 | 45.0011  | -117.1652 | 5400              | 0          | 17     | 42    |                                           | 86-0736 HLY                               | 86-0736 DLY                |
| NV    | SEVENTYSIX CREEK  | 86-0746 | 41.7373  | -115.4722 | 7350              | 0          | 0      | 44    |                                           |                                           | 86-0746 DLY                |
| UT    | SMITH MOREHOUSE   | 86-0763 | 40.7893  | -111.0919 | 7631              | 0          | 0      | 45    |                                           |                                           | 86-0763 DLY                |
| UT    | SNOWBIRD          | 86-0766 | 40.5691  | -111.6585 | 9177              | 0          | 0      | 34    |                                           |                                           | 86-0766 DLY                |
| UT    | STEEL CREEK PARK  | 86-0790 | 40.9086  | -110.5046 | 10158             | 0          | 0      | 45    |                                           |                                           | 86-0790 DLY                |
| UT    | STRAWBERRY DIVIDE | 86-0795 | 40.1648  | -111.2066 | 8123              | 0          | 0      | 45    |                                           |                                           | 86-0795 DLY                |
| NV    | TAYLOR CANYON     | 86-0811 | 41.2287  | -116.0293 | 6325              | 0          | 0      | 43    |                                           |                                           | 86-0811 DLY                |
| OR    | TAYLOR GREEN      | 86-0812 | 45.0771  | -117.5507 | 5740              | 0          | 0      | 44    |                                           |                                           | 86-0812 DLY                |
| UT    | THAYNES CANYON    | 86-0814 | 40.6235  | -111.5332 | 9230              | 0          | 0      | 43    |                                           |                                           | 86-0814 DLY<br>42-6652 DLY |
| UT    | TIMPANOGOS DIVIDE | 86-0820 | 40.4282  | -111.6163 | 8140              | 0          | 23     | 45    |                                           | 86-0820 HLY                               | 86-0820 DLY                |



| State | Station name                   | SID     | Latitude | Longitude | Elevation<br>(ft) | Data Years |        |       | Contributing Stations      |        |                                                          |
|-------|--------------------------------|---------|----------|-----------|-------------------|------------|--------|-------|----------------------------|--------|----------------------------------------------------------|
|       |                                |         |          |           |                   | <1Hr       | Hourly | Daily | <1Hr                       | Hourly | Daily                                                    |
| WA    | TOUCHET                        | 86-0824 | 46.1187  | -117.8505 | 5530              | 0          | 0      | 42    |                            |        | 86-0824 DLY                                              |
| CO    | TOWER                          | 86-0825 | 40.5374  | -106.6768 | 10500             | 0          | 0      | 44    |                            |        | 86-0825 DLY                                              |
| UT    | TRIAL LAKE                     | 86-0828 | 40.678   | -110.9487 | 9992              | 0          | 0      | 45    |                            |        | 86-0828 DLY                                              |
| UT    | TROUT CREEK                    | 86-0833 | 40.739   | -109.6728 | 9518              | 0          | 0      | 45    |                            |        | 86-0833 DLY                                              |
| CO    | UNIVERSITY CAMP                | 86-0838 | 40.0328  | -105.5761 | 10300             | 0          | 0      | 75    |                            |        | 86-0838 DLY<br>80-0010 DLY<br>05-7648 HLY<br>05-7648 DLY |
| CO    | WILLOW CREEK PASS              | 86-0869 | 40.347   | -106.0943 | 9540              | 0          | 0      | 45    |                            |        | 86-0869 DLY                                              |
| CO    | WILLOW PARK                    | 86-0870 | 40.4325  | -105.7334 | 10700             | 0          | 0      | 43    |                            |        | 86-0870 DLY                                              |
| UT    | HARDSCRABBLE                   | 86-0896 | 40.8683  | -111.7187 | 7250              | 0          | 0      | 30    |                            |        | 86-0896 DLY                                              |
| SD    | NORTH RAPID CREEK              | 86-0920 | 44.2062  | -103.7876 | 6130              | 0          | 0      | 100   |                            |        | 86-0920 DLY<br>39-1246 DLY                               |
| UT    | PARRISH CREEK                  | 86-0971 | 40.9342  | -111.8137 | 7740              | 0          | 19     | 24    | 86-0971 HLY                |        | 86-0971 DLY                                              |
| WA    | SPRUCE SPRINGS                 | 86-0984 | 46.1829  | -117.5415 | 5700              | 0          | 21     | 23    | 86-0984 HLY                |        | 86-0984 DLY                                              |
| UT    | TEMPLE FORK                    | 86-1013 | 41.793   | -111.5461 | 7406              | 0          | 20     | 22    | 86-1013 HLY                |        | 86-1013 DLY                                              |
| UT    | LIGHTNING RIDGE                | 86-1056 | 41.3589  | -111.4875 | 8215              | 0          | 16     | 19    | 86-1056 HLY                |        | 86-1056 DLY                                              |
| SD    | BELLE FOURCHE RVR @ WYOMING-SO | 87-0143 | 44.7497  | -104.0469 | 3100              | 0          | 23     | 23    | 87-0143 HLY<br>72-2970 HLY |        | 87-0143 HLY<br>72-2970 HLY                               |
| NE    | MITCHELL GERING CANAL NEAR STA | 87-1394 | 41.9828  | -104.0578 | 4028              | 0          | 29     | 29    | 87-1394 HLY<br>87-1044 HLY |        | 87-1394 HLY<br>87-1044 HLY                               |
| OR    | BALTZOR RANCH NEAR SHEAVILLE   | 87-2631 | 43.107   | -117.0604 | 4620              | 0          | 35     | 35    | 87-2631 HLY                |        | 87-2631 HLY                                              |
| OR    | BAKER VALLEY OREGON AGRIMET W  | 87-2761 | 44.8828  | -117.9628 | 3420              | 0          | 20     | 20    | 87-2761 HLY                |        | 87-2761 HLY                                              |
| OR    | HEREFORD OREGON AGRIMET WEATH  | 87-3671 | 44.4881  | -118.02   | 3600              | 0          | 23     | 24    | 87-3671 HLY                |        | 87-3671 HLY                                              |

*Table A.1.3. Metadata for stations whose data were used in this Volume showing each station's state, name, station identification number (SID), formatting interval (see Table 4.2.2), latitude, longitude, elevation, dataset identifier (see Table 4.2.1), and the period of record.*

| State | Station Name        | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|---------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | ABERDEEN EXP STN    | 10-0010 | DLY                 | 42.9536  | -112.8253 | 4405           | NCEI    | 1914-2023        |
| ID    | AMERICAN FALLS 6 NE | 10-0227 | DLY                 | 42.8572  | -112.8800 | 4415           | NCEI    | 1892-2008        |
| ID    | ANDERSON DAM        | 10-0282 | DLY                 | 43.3572  | -115.4522 | 3882           | NCEI    | 1941-2006        |
| ID    | ANDERSON DAM        | 10-0282 | HLY                 | 43.3572  | -115.4522 | 3882           | NCEI    | 1960-1983        |
| ID    | ARBON 2 NW          | 10-0347 | DLY                 | 42.5031  | -112.5758 | 5210           | NCEI    | 1962-2002        |
| ID    | ARCO                | 10-0375 | DLY                 | 43.6356  | -113.2997 | 5325           | NCEI    | 1914-2023        |
| ID    | ARROWROCK DAM       | 10-0448 | 15M                 | 43.5936  | -115.9236 | 3235           | NCEI    | 1984-1985        |
| ID    | ARROWROCK DAM       | 10-0448 | HLY                 | 43.5936  | -115.9236 | 3235           | NCEI    | 1976-1985        |
| ID    | ARROWROCK DAM       | 10-0448 | DLY                 | 43.5936  | -115.9236 | 3235           | NCEI    | 1911-2009        |
| ID    | ASHTON 1N           | 10-0470 | DLY                 | 44.0708  | -111.4564 | 5212           | NCEI    | 1896-2023        |
| ID    | ATLANTA             | 10-0491 | DLY                 | 43.8000  | -115.1333 | 5505           | NCEI    | 1955-1975        |
| ID    | ATLANTA             | 10-0491 | HLY                 | 43.8000  | -115.1333 | 5505           | NCEI    | 1955-1975        |
| ID    | ATLANTA             | 10-0491 | 15M                 | 43.8000  | -115.1333 | 5505           | NCEI    | 1971-1975        |
| ID    | ATLANTA 1 E         | 10-0493 | HLY                 | 43.8000  | -115.1167 | 6004           | NCEI    | 1948-1955        |
| ID    | ATLANTA 1 E         | 10-0493 | DLY                 | 43.8000  | -115.1167 | 6004           | NCEI    | 1893-1955        |
| ID    | ATLANTA 2           | 10-0494 | DLY                 | 43.8000  | -115.1167 | 5594           | NCEI    | 1956-1959        |
| ID    | ATLANTA 2           | 10-0494 | HLY                 | 43.8000  | -115.1167 | 5594           | NCEI    | 1956-1961        |
| ID    | AVERY RS            | 10-0525 | DLY                 | 47.2500  | -115.8000 | 2490           | NCEI    | 1913-1968        |
| ID    | AVERY RS #2         | 10-0528 | DLY                 | 47.2533  | -115.9203 | 2394           | NCEI    | 1968-2015        |
| ID    | BARTON FLAT         | 10-0621 | DLY                 | 43.9778  | -113.8291 | 6500           | NCEI    | 1933-1947        |
| ID    | BAYVIEW MODEL BASIN | 10-0667 | DLY                 | 47.9803  | -116.5594 | 2087           | NCEI    | 1947-2023        |
| ID    | BENTON DAM          | 10-0789 | HLY                 | 48.3500  | -116.8000 | 2641           | NCEI    | 1948-1977        |
| ID    | BENTON DAM          | 10-0789 | DLY                 | 48.3503  | -116.8081 | 2641           | NCEI    | 1949-1951        |
| ID    | BERN                | 10-0803 | DLY                 | 42.3353  | -111.3850 | 5964           | NCEI    | 1992-2023        |
| ID    | BLACKFOOT FIRE DEPT | 10-0915 | DLY                 | 43.1917  | -112.3453 | 4499           | NCEI    | 1895-2023        |
| ID    | BLACKFOOT DAM       | 10-0920 | DLY                 | 43.0000  | -111.7167 | 6204           | NCEI    | 1909-1971        |
| ID    | BLACKFOOT DAM       | 10-0920 | HLY                 | 43.0000  | -111.7167 | 6204           | NCEI    | 1948-1971        |

| State | Station Name         | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | BLISS 4 NW           | 10-1002 | DLY                 | 42.9544  | -115.0131 | 3275           | NCEI    | 1894-2000        |
| ID    | BOISE 3 E            | 10-1016 | HLY                 | 43.6192  | -116.1331 | 3377           | NCEI    | 1972-2007        |
| ID    | BOISE 3 E            | 10-1016 | 15M                 | 43.6192  | -116.1331 | 3377           | NCEI    | 1972-2007        |
| ID    | BOISE 7 N            | 10-1017 | HLY                 | 43.7383  | -116.2022 | 3885           | NCEI    | 1949-1949        |
| ID    | BOISE 7 N            | 10-1017 | DLY                 | 43.7383  | -116.2022 | 3885           | NCEI    | 1973-2023        |
| ID    | BOISE LUCKY PEAK DAM | 10-1018 | DLY                 | 43.5253  | -116.0542 | 2840           | NCEI    | 1950-2023        |
| ID    | BOISE LUCKY PEAK DAM | 10-1018 | 15M                 | 43.5253  | -116.0542 | 2840           | NCEI    | 1971-2013        |
| ID    | BOISE LUCKY PEAK DAM | 10-1018 | HLY                 | 43.5253  | -116.0542 | 2840           | NCEI    | 1951-2013        |
| ID    | BOISE AIR TERMINAL   | 10-1022 | HLY                 | 43.5667  | -116.2406 | 2872           | NCEI    | 1948-2013        |
| ID    | BONNERS FERRY        | 10-1079 | HLY                 | 48.6928  | -116.3103 | 2001           | NCEI    | 1948-2013        |
| ID    | BONNERS FERRY        | 10-1079 | 15M                 | 48.6928  | -116.3103 | 2001           | NCEI    | 1975-2013        |
| ID    | BONNERS FERRY        | 10-1079 | DLY                 | 48.6928  | -116.3103 | 2075           | NCEI    | 1907-2023        |
| ID    | BONNERS FERRY BRG    | 10-1084 | DLY                 | 48.7000  | -116.3167 | 1742           | NCEI    | 1909-1939        |
| ID    | BROWNLEE DAM         | 10-1180 | DLY                 | 44.8364  | -116.8981 | 1844           | NCEI    | 1966-2017        |
| ID    | BRUNEAU              | 10-1195 | DLY                 | 42.8819  | -115.8017 | 2530           | NCEI    | 1937-2012        |
| ID    | BUHL                 | 10-1217 | DLY                 | 42.6000  | -114.7667 | 3763           | NCEI    | 1906-1963        |
| ID    | BUHL #2              | 10-1220 | DLY                 | 42.6006  | -114.7453 | 3800           | NCEI    | 1977-2015        |
| ID    | BURKE 2 ENE          | 10-1272 | DLY                 | 47.5284  | -115.7887 | 4091           | NCEI    | 1906-1967        |
| ID    | BURLEY               | 10-1288 | DLY                 | 42.5333  | -113.7833 | 4183           | NCEI    | 1917-1967        |
| ID    | BURLEY 2S            | 10-1298 | HLY                 | 42.5189  | -113.8028 | 4516           | NCEI    | 1948-1978        |
| ID    | BURLEY 2S            | 10-1298 | DLY                 | 42.5189  | -113.8028 | 4516           | NCEI    | 1924-2008        |
| ID    | BURLEY MUNI AP       | 10-1303 | HLY                 | 42.5417  | -113.7661 | 4154           | NCEI    | 1948-2013        |
| ID    | CABINET GORGE        | 10-1363 | DLY                 | 48.0864  | -116.0572 | 2173           | NCEI    | 1956-2023        |
| ID    | CALDER               | 10-1370 | 15M                 | 47.2747  | -116.1889 | 2185           | NCEI    | 1971-2013        |
| ID    | CALDER               | 10-1370 | HLY                 | 47.2747  | -116.1889 | 2185           | NCEI    | 1971-2013        |
| ID    | CALDWELL             | 10-1380 | DLY                 | 43.6667  | -116.6833 | 2370           | NCEI    | 1904-1997        |
| ID    | CAMBRIDGE            | 10-1408 | DLY                 | 44.5733  | -116.6753 | 2650           | NCEI    | 1893-2022        |
| ID    | CAMBRIDGE 2 NE       | 10-1410 | 15M                 | 44.5797  | -116.6436 | 2660           | NCEI    | 1971-2013        |
| ID    | CAMBRIDGE 2 NE       | 10-1410 | HLY                 | 44.5797  | -116.6436 | 2660           | NCEI    | 1971-2013        |

| State | Station Name            | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | CASCADE 1 NW            | 10-1514 | HLY                 | 44.5228  | -116.0481 | 4896           | NCEI    | 1953-2013        |
| ID    | CASCADE 1 NW            | 10-1514 | 15M                 | 44.5228  | -116.0481 | 4896           | NCEI    | 1971-2013        |
| ID    | CASCADE 1 NW            | 10-1514 | DLY                 | 44.5228  | -116.0481 | 4896           | NCEI    | 1941-2017        |
| ID    | CASCADE RS              | 10-1524 | DLY                 | 44.5167  | -116.0500 | 4754           | NCEI    | 1949-1951        |
| ID    | CASCADE RS              | 10-1524 | HLY                 | 44.5167  | -116.0500 | 4754           | NCEI    | 1948-1953        |
| ID    | CASTLEFORD 2 N          | 10-1551 | DLY                 | 42.5503  | -114.8661 | 3825           | NCEI    | 1963-2021        |
| ID    | CENTERVILLE ARBAUGH RCH | 10-1636 | HLY                 | 43.9592  | -115.8453 | 4440           | NCEI    | 1974-2013        |
| ID    | CENTERVILLE ARBAUGH RCH | 10-1636 | DLY                 | 43.9592  | -115.8453 | 4440           | NCEI    | 1949-2013        |
| ID    | CENTERVILLE ARBAUGH RCH | 10-1636 | 15M                 | 43.9592  | -115.8453 | 4440           | NCEI    | 1974-2013        |
| ID    | CHALLIS                 | 10-1663 | HLY                 | 44.5036  | -114.2397 | 5175           | NCEI    | 1960-1986        |
| ID    | CHALLIS                 | 10-1663 | DLY                 | 44.5036  | -114.2397 | 5175           | NCEI    | 1894-1996        |
| ID    | CHALLIS                 | 10-1663 | 15M                 | 44.5036  | -114.2397 | 5175           | NCEI    | 1984-1986        |
| ID    | CHILLY BARTON FLAT      | 10-1671 | DLY                 | 43.9778  | -113.8292 | 6260           | NCEI    | 1948-2023        |
| ID    | CLARKIA                 | 10-1831 | DLY                 | 47.0111  | -116.2558 | 2822           | NCEI    | 1949-2015        |
| ID    | CLARKIA                 | 10-1831 | HLY                 | 47.0111  | -116.2558 | 2822           | NCEI    | 1948-2001        |
| ID    | CLARKIA                 | 10-1831 | 15M                 | 47.0111  | -116.2558 | 2822           | NCEI    | 1971-2001        |
| ID    | CLEMENTSVILLE 4 SE      | 10-1881 | DLY                 | 43.8500  | -111.2667 | 5906           | NCEI    | 1949-1951        |
| ID    | CLEMENTSVILLE 4 SE      | 10-1881 | HLY                 | 43.8500  | -111.2667 | 5906           | NCEI    | 1948-1952        |
| ID    | COEUR D'ALENE           | 10-1956 | HLY                 | 47.6822  | -116.7967 | 2133           | NCEI    | 1948-2013        |
| ID    | COEUR D'ALENE           | 10-1956 | DLY                 | 47.6822  | -116.7967 | 2133           | NCEI    | 1895-2023        |
| ID    | COEUR D'ALENE           | 10-1956 | 15M                 | 47.6822  | -116.7967 | 2133           | NCEI    | 1971-2013        |
| ID    | CONDA                   | 10-2071 | DLY                 | 42.7167  | -111.5500 | 6204           | NCEI    | 1938-1978        |
| ID    | COTTONWOOD              | 10-2154 | DLY                 | 46.0167  | -116.3333 | 3412           | NCEI    | 1893-1976        |
| ID    | COTTONWOOD              | 10-2154 | HLY                 | 46.0167  | -116.3333 | 3412           | NCEI    | 1948-1949        |
| ID    | COTTONWOOD 2 WSW        | 10-2159 | 15M                 | 46.0336  | -116.3919 | 3945           | NCEI    | 1978-2013        |
| ID    | COTTONWOOD 2 WSW        | 10-2159 | HLY                 | 46.0336  | -116.3919 | 3945           | NCEI    | 1948-2013        |
| ID    | COTTONWOOD 2 WSW        | 10-2159 | DLY                 | 46.0336  | -116.3919 | 3945           | NCEI    | 1949-2023        |
| ID    | COUNCIL                 | 10-2187 | HLY                 | 44.7442  | -116.4325 | 2943           | NCEI    | 1948-2013        |
| ID    | COUNCIL                 | 10-2187 | DLY                 | 44.7442  | -116.4325 | 2943           | NCEI    | 1911-2022        |

| State | Station Name           | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | COUNCIL                | 10-2187 | 15M                 | 44.7442  | -116.4325 | 2943           | NCEI    | 1971-2013        |
| ID    | CRATERS OF THE MOON    | 10-2260 | DLY                 | 43.4628  | -113.5600 | 5914           | NCEI    | 1958-2023        |
| ID    | DEADWOOD DAM           | 10-2385 | DLY                 | 44.3167  | -115.6333 | 5384           | NCEI    | 1929-1975        |
| ID    | DEADWOOD DAM           | 10-2385 | 15M                 | 44.3167  | -115.6333 | 5384           | NCEI    | 1971-1974        |
| ID    | DEADWOOD DAM           | 10-2385 | HLY                 | 44.3167  | -115.6333 | 5384           | NCEI    | 1948-1974        |
| ID    | DEER FLAT DAM          | 10-2444 | DLY                 | 43.5764  | -116.7475 | 2510           | NCEI    | 1916-2014        |
| ID    | DIXIE                  | 10-2575 | HLY                 | 45.5525  | -115.4606 | 5620           | NCEI    | 1978-2013        |
| ID    | DIXIE                  | 10-2575 | DLY                 | 45.5525  | -115.4606 | 5620           | NCEI    | 1952-2008        |
| ID    | DIXIE                  | 10-2575 | 15M                 | 45.5525  | -115.4606 | 5620           | NCEI    | 1978-2013        |
| ID    | DIXIE N                | 10-2577 | DLY                 | 45.5697  | -115.4528 | 5740           | NCEI    | 2008-2023        |
| ID    | DRIGGS                 | 10-2676 | HLY                 | 43.7306  | -111.1125 | 6120           | NCEI    | 1953-1953        |
| ID    | DRIGGS                 | 10-2676 | DLY                 | 43.7306  | -111.1125 | 6120           | NCEI    | 1904-2023        |
| ID    | DUBOIS EXP STN         | 10-2707 | HLY                 | 44.2436  | -112.2003 | 5450           | NCEI    | 1948-2013        |
| ID    | DUBOIS EXP STN         | 10-2707 | 15M                 | 44.2436  | -112.2003 | 5450           | NCEI    | 1979-2013        |
| ID    | DUBOIS EXP STN         | 10-2707 | DLY                 | 44.2436  | -112.2006 | 5450           | NCEI    | 1924-2023        |
| ID    | DWORSHAK FISH HATCHERY | 10-2845 | DLY                 | 46.5022  | -116.3217 | 995            | NCEI    | 1966-2023        |
| ID    | DWORSHAK FISH HATCHERY | 10-2845 | 15M                 | 46.5022  | -116.3217 | 995            | NCEI    | 1971-2013        |
| ID    | DWORSHAK FISH HATCHERY | 10-2845 | HLY                 | 46.5022  | -116.3217 | 995            | NCEI    | 1966-2013        |
| ID    | ELK CITY 1NE           | 10-2875 | DLY                 | 45.8356  | -115.4611 | 4058           | NCEI    | 1913-2013        |
| ID    | ELK CITY 1NE           | 10-2875 | 15M                 | 45.8356  | -115.4611 | 4058           | NCEI    | 1979-2013        |
| ID    | ELK CITY 1NE           | 10-2875 | HLY                 | 45.8356  | -115.4611 | 4058           | NCEI    | 1979-2013        |
| ID    | ELK RVR                | 10-2892 | HLY                 | 46.7744  | -116.1761 | 2845           | NCEI    | 1971-2013        |
| ID    | ELK RVR                | 10-2892 | 15M                 | 46.7744  | -116.1761 | 2845           | NCEI    | 1971-2013        |
| ID    | ELK RVR                | 10-2892 | DLY                 | 46.7822  | -116.1797 | 2866           | NCEI    | 1951-2022        |
| ID    | EMMETT 2 E             | 10-2942 | DLY                 | 43.8544  | -116.4664 | 2390           | NCEI    | 1906-2023        |
| ID    | ENAVILLE               | 10-2966 | HLY                 | 47.5689  | -116.2531 | 2120           | NCEI    | 1976-2013        |
| ID    | ENAVILLE               | 10-2966 | 15M                 | 47.5689  | -116.2531 | 2120           | NCEI    | 1976-2013        |
| ID    | ENAVILLE 2             | 10-2971 | HLY                 | 47.5667  | -116.2500 | 2402           | NCEI    | 1972-1976        |
| ID    | ENAVILLE 2             | 10-2971 | 15M                 | 47.5667  | -116.2500 | 2402           | NCEI    | 1972-1976        |

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|-------|-----------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | FAIRFIELD RS    | 10-3108 | DLY                 | 43.3428  | -114.7900 | 5065           | NCEI    | 1948-2023        |
| ID    | FAIRFIELD 3 SE  | 10-3110 | DLY                 | 43.3167  | -114.7500 | 5020           | NCEI    | 1977-1998        |
| ID    | FENN RS         | 10-3143 | DLY                 | 46.0931  | -115.5356 | 1560           | NCEI    | 1939-2022        |
| ID    | FENN RS         | 10-3143 | 15M                 | 46.0931  | -115.5356 | 1560           | NCEI    | 1971-2013        |
| ID    | FENN RS         | 10-3143 | HLY                 | 46.0931  | -115.5356 | 1560           | NCEI    | 1952-2013        |
| ID    | FT HALL 1 NNE   | 10-3297 | DLY                 | 43.0425  | -112.4144 | 4465           | NCEI    | 1913-2023        |
| ID    | GALENA          | 10-3417 | DLY                 | 43.8722  | -114.6542 | 7300           | NCEI    | 1963-1996        |
| ID    | GARDEN VALLEY   | 10-3448 | DLY                 | 44.1011  | -115.9694 | 3100           | NCEI    | 1892-2020        |
| ID    | GIBBONSVILLE    | 10-3554 | DLY                 | 45.5394  | -113.9275 | 4480           | NCEI    | 1894-2011        |
| ID    | GIBBONSVILLE #2 | 10-3558 | DLY                 | 45.5469  | -113.9258 | 4480           | NCEI    | 2004-2023        |
| ID    | GLENNS FERRY    | 10-3631 | DLY                 | 42.9403  | -115.3231 | 2466           | NCEI    | 1904-2023        |
| ID    | GOODING 1 S     | 10-3677 | HLY                 | 42.9183  | -114.7664 | 3643           | NCEI    | 1952-2013        |
| ID    | GOODING 1 S     | 10-3677 | 15M                 | 42.9183  | -114.7664 | 3643           | NCEI    | 1971-2013        |
| ID    | GOODING 2 S     | 10-3682 | HLY                 | 42.9167  | -114.7167 | 3570           | NCEI    | 1948-1952        |
| ID    | GRACE           | 10-3732 | 15M                 | 42.5872  | -111.7275 | 5550           | NCEI    | 1978-2013        |
| ID    | GRACE           | 10-3732 | DLY                 | 42.5872  | -111.7275 | 5550           | NCEI    | 1906-2023        |
| ID    | GRACE           | 10-3732 | HLY                 | 42.5872  | -111.7275 | 5550           | NCEI    | 1952-2013        |
| ID    | GRAND VIEW 4 NW | 10-3760 | DLY                 | 43.0175  | -116.1772 | 2400           | NCEI    | 1909-2010        |
| ID    | GRANGEVILLE     | 10-3771 | DLY                 | 45.9414  | -116.1175 | 3300           | NCEI    | 1893-2014        |
| ID    | GRANGEVILLE     | 10-3771 | HLY                 | 45.9414  | -116.1175 | 3300           | NCEI    | 1948-1951        |
| ID    | GRANGEVILLE 1N  | 10-3773 | HLY                 | 45.9397  | -116.1211 | 3310           | NCEI    | 1999-2013        |
| ID    | GRANGEVILLE 1N  | 10-3773 | 15M                 | 45.9397  | -116.1211 | 3310           | NCEI    | 1999-2013        |
| ID    | GRASMERE 3 S    | 10-3811 | HLY                 | 42.3450  | -115.8836 | 5140           | NCEI    | 1963-2013        |
| ID    | GRASMERE 3 S    | 10-3811 | 15M                 | 42.3450  | -115.8836 | 5140           | NCEI    | 1975-2013        |
| ID    | GRAY            | 10-3825 | DLY                 | 43.0500  | -111.3667 | 6450           | NCEI    | 1897-1955        |
| ID    | GRIMES PASS 6 S | 10-3861 | DLY                 | 43.9667  | -115.8500 | 4783           | NCEI    | 1909-1949        |
| ID    | GROUSE          | 10-3882 | DLY                 | 43.7186  | -113.5472 | 6001           | NCEI    | 1932-2004        |
| ID    | HAGERMAN 2 SW   | 10-3932 | DLY                 | 42.8114  | -114.9239 | 2897           | NCEI    | 1982-2018        |
| ID    | HAILEY 3 NNW    | 10-3942 | DLY                 | 43.5667  | -114.3333 | 5424           | NCEI    | 1894-1988        |

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| ID    | HAMER 4 NW         | 10-3964 | DLY                 | 43.9664  | -112.2642 | 4790           | NCEI    | 1948-2023        |
| ID    | HAZELTON           | 10-4140 | DLY                 | 42.5972  | -114.1378 | 4060           | NCEI    | 1917-2018        |
| ID    | HEADQUARTERS       | 10-4150 | DLY                 | 46.6311  | -115.8086 | 3200           | NCEI    | 1959-2010        |
| ID    | HEADQUARTERS       | 10-4150 | 15M                 | 46.6311  | -115.8086 | 3200           | NCEI    | 1998-2013        |
| ID    | HEADQUARTERS       | 10-4150 | HLY                 | 46.6311  | -115.8086 | 3200           | NCEI    | 1998-2013        |
| ID    | HEADQUARTERS 1 SSE | 10-4154 | DLY                 | 46.6131  | -115.7989 | 3260           | NCEI    | 2010-2016        |
| ID    | HEADQUARTERS 1 SSE | 10-4154 | 15M                 | 46.6131  | -115.7989 | 3260           | NCEI    | 1993-1997        |
| ID    | HEADQUARTERS 1 SSE | 10-4154 | HLY                 | 46.6131  | -115.7989 | 3260           | NCEI    | 1993-1997        |
| ID    | HENRY              | 10-4230 | DLY                 | 42.9419  | -111.4361 | 6644           | NCEI    | 1971-2008        |
| ID    | HENRY              | 10-4230 | 15M                 | 42.9419  | -111.4361 | 6644           | NCEI    | 1971-2012        |
| ID    | HENRY              | 10-4230 | HLY                 | 42.9419  | -111.4361 | 6644           | NCEI    | 1971-2012        |
| ID    | HILL CITY 1 W      | 10-4268 | DLY                 | 43.2994  | -115.0733 | 5100           | NCEI    | 1915-2023        |
| ID    | HOLLISTER          | 10-4295 | DLY                 | 42.3528  | -114.5739 | 4525           | NCEI    | 1912-2020        |
| ID    | HOWE               | 10-4384 | DLY                 | 43.7828  | -113.0033 | 4820           | NCEI    | 1913-2023        |
| ID    | IDAHO CITY         | 10-4442 | DLY                 | 43.8383  | -115.8319 | 3965           | NCEI    | 1893-2013        |
| ID    | IDAHO CITY 11 SW   | 10-4450 | DLY                 | 43.7167  | -116.0000 | 5003           | NCEI    | 1948-1963        |
| ID    | IDAHO FALLS - KIFI | 10-4455 | HLY                 | 43.5139  | -112.0125 | 4742           | NCEI    | 1952-1960        |
| ID    | IDAHO FALLS - KIFI | 10-4455 | DLY                 | 43.5139  | -112.0125 | 4742           | NCEI    | 1952-2023        |
| ID    | IDAHO FALLS 16 SE  | 10-4456 | HLY                 | 43.3456  | -111.7847 | 5828           | NCEI    | 1960-2013        |
| ID    | IDAHO FALLS 16 SE  | 10-4456 | DLY                 | 43.3456  | -111.7847 | 5828           | NCEI    | 1955-2023        |
| ID    | IDAHO FALLS 16 SE  | 10-4456 | 15M                 | 43.3456  | -111.7847 | 5828           | NCEI    | 1971-2013        |
| ID    | IDAHO FALLS FAA AP | 10-4457 | HLY                 | 43.5189  | -112.0639 | 4733           | NCEI    | 1948-1952        |
| ID    | IDAHO FALLS 46 W   | 10-4460 | HLY                 | 43.5325  | -112.9481 | 4938           | NCEI    | 1954-1982        |
| ID    | IRWIN 2 SE         | 10-4588 | DLY                 | 43.4000  | -111.3000 | 5305           | NCEI    | 1909-1960        |
| ID    | ISLAND PARK        | 10-4598 | 15M                 | 44.4203  | -111.3711 | 6290           | NCEI    | 2000-2013        |
| ID    | ISLAND PARK        | 10-4598 | DLY                 | 44.4189  | -111.3714 | 6290           | NCEI    | 1936-2023        |
| ID    | ISLAND PARK        | 10-4598 | HLY                 | 44.4203  | -111.3711 | 6290           | NCEI    | 2000-2013        |
| ID    | JEROME             | 10-4670 | DLY                 | 42.7325  | -114.5192 | 3740           | NCEI    | 1915-2023        |
| ID    | KAMIAH             | 10-4793 | DLY                 | 46.2300  | -116.0339 | 1210           | NCEI    | 1912-2023        |

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|-------|--------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | KELLOGG            | 10-4831 | DLY                 | 47.5339  | -116.1222 | 2377           | NCEI    | 1904-2023        |
| ID    | KETCHUM RS         | 10-4845 | 15M                 | 43.6842  | -114.3603 | 5890           | NCEI    | 1975-2013        |
| ID    | KETCHUM RS         | 10-4845 | HLY                 | 43.6842  | -114.3603 | 5890           | NCEI    | 1973-2013        |
| ID    | KETCHUM RS         | 10-4845 | DLY                 | 43.6842  | -114.3603 | 5890           | NCEI    | 1973-2023        |
| ID    | KOOSKIA            | 10-5011 | DLY                 | 46.1448  | -115.9779 | 1280           | NCEI    | 1908-1987        |
| ID    | KUNA               | 10-5038 | DLY                 | 43.4833  | -116.4167 | 2690           | NCEI    | 1925-1996        |
| ID    | LEADORE            | 10-5169 | DLY                 | 44.6867  | -113.3689 | 6000           | NCEI    | 1911-1951        |
| ID    | LEADORE            | 10-5169 | HLY                 | 44.6867  | -113.3689 | 6000           | NCEI    | 1948-2009        |
| ID    | LEADORE            | 10-5169 | 15M                 | 44.6867  | -113.3689 | 6000           | NCEI    | 1979-2009        |
| ID    | LEADORE #2         | 10-5177 | DLY                 | 44.6831  | -113.3622 | 6000           | NCEI    | 1965-2023        |
| ID    | LEADORE #2         | 10-5177 | HLY                 | 44.6831  | -113.3622 | 6000           | NCEI    | 2009-2013        |
| ID    | LEADORE #2         | 10-5177 | 15M                 | 44.6831  | -113.3622 | 6000           | NCEI    | 2009-2013        |
| ID    | LEWISTON           | 10-5230 | DLY                 | 46.4167  | -117.0333 | 708            | NCEI    | 1895-1957        |
| ID    | LEWISTON WTP       | 10-5236 | DLY                 | 46.4167  | -117.0167 | 741            | NCEI    | 1893-1955        |
| ID    | LEWISTON AP        | 10-5241 | HLY                 | 46.3747  | -117.0156 | 1442           | NCEI    | 1949-2013        |
| ID    | LIFTON PUMPING STN | 10-5275 | DLY                 | 42.1231  | -111.3133 | 5935           | NCEI    | 1919-2023        |
| ID    | LOWMAN             | 10-5414 | DLY                 | 44.0828  | -115.6186 | 3920           | NCEI    | 1909-2008        |
| ID    | LOWMAN 3 E         | 10-5420 | DLY                 | 44.0751  | -115.5567 | 3871           | NCEI    | 1961-1964        |
| ID    | LOWMAN 3E #2       | 10-5426 | DLY                 | 44.0751  | -115.5567 | 3983           | NCEI    | 1964-1975        |
| ID    | MACKAY LOST RVR RS | 10-5462 | 15M                 | 43.9178  | -113.6153 | 5897           | NCEI    | 1978-2013        |
| ID    | MACKAY LOST RVR RS | 10-5462 | DLY                 | 43.9178  | -113.6153 | 5897           | NCEI    | 1907-2023        |
| ID    | MACKAY LOST RVR RS | 10-5462 | HLY                 | 43.9178  | -113.6153 | 5897           | NCEI    | 1948-2013        |
| ID    | MALAD              | 10-5544 | DLY                 | 42.2000  | -112.2667 | 4581           | NCEI    | 1903-1982        |
| ID    | MALAD              | 10-5544 | HLY                 | 42.2000  | -112.2667 | 4581           | NCEI    | 1948-1978        |
| ID    | MALTA 4 ESE        | 10-5563 | DLY                 | 42.2917  | -113.3042 | 4590           | NCEI    | 1963-2002        |
| ID    | MALTA              | 10-5567 | DLY                 | 42.3061  | -113.3689 | 4521           | NCEI    | 1984-2018        |
| ID    | MALTA              | 10-5567 | HLY                 | 42.3061  | -113.3689 | 4521           | NCEI    | 1952-2010        |
| ID    | MALTA              | 10-5567 | 15M                 | 42.3061  | -113.3689 | 4521           | NCEI    | 1977-2010        |
| ID    | MASSACRE ROCKS SP  | 10-5678 | DLY                 | 42.6681  | -112.9981 | 4195           | NCEI    | 1973-2023        |



| State | Station Name                | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-----------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | MAY 2SSE                    | 10-5685 | DLY                 | 44.5664  | -113.8953 | 5050           | NCEI    | 1933-2019        |
| ID    | MCCALL                      | 10-5708 | DLY                 | 44.8872  | -116.1047 | 5025           | NCEI    | 1905-2023        |
| ID    | MCCALL                      | 10-5708 | 15M                 | 44.8872  | -116.1047 | 5025           | NCEI    | 1971-2013        |
| ID    | MCCALL                      | 10-5708 | HLY                 | 44.8872  | -116.1047 | 5025           | NCEI    | 1971-2013        |
| ID    | MCCAMMON                    | 10-5716 | DLY                 | 42.6522  | -112.1936 | 4770           | NCEI    | 1949-2023        |
| ID    | MERIDIAN 1 W                | 10-5841 | DLY                 | 43.6167  | -116.4167 | 2621           | NCEI    | 1910-1960        |
| ID    | MIDDLE FORK LODGE           | 10-5897 | HLY                 | 44.7189  | -115.0150 | 4480           | NCEI    | 1976-2013        |
| ID    | MIDDLE FORK LODGE           | 10-5897 | 15M                 | 44.7189  | -115.0150 | 4480           | NCEI    | 1976-2013        |
| ID    | MIDDLE FORK LODGE           | 10-5897 | DLY                 | 44.7189  | -115.0150 | 4480           | NCEI    | 1971-2013        |
| ID    | MINIDOKA DAM                | 10-5980 | DLY                 | 42.6769  | -113.5022 | 4164           | NCEI    | 1947-2023        |
| ID    | MONTPELIER RS               | 10-6053 | DLY                 | 42.3167  | -111.3000 | 5960           | NCEI    | 1914-1991        |
| ID    | MOSCOW 5 NE                 | 10-6148 | HLY                 | 46.7942  | -116.9150 | 3043           | NCEI    | 1972-2013        |
| ID    | MOSCOW 5 NE                 | 10-6148 | 15M                 | 46.7942  | -116.9150 | 3043           | NCEI    | 1972-2013        |
| ID    | MOSCOW U OF I               | 10-6152 | DLY                 | 46.7281  | -116.9558 | 2660           | NCEI    | 1893-2023        |
| ID    | MTN HOME                    | 10-6174 | 15M                 | 43.1261  | -115.7119 | 3140           | NCEI    | 1971-2013        |
| ID    | MTN HOME                    | 10-6174 | HLY                 | 43.1261  | -115.7119 | 3140           | NCEI    | 1948-2013        |
| ID    | MTN HOME                    | 10-6174 | DLY                 | 43.1261  | -115.7119 | 3140           | NCEI    | 1905-2007        |
| ID    | MULLAN                      | 10-6230 | 15M                 | 47.4661  | -115.8114 | 3201           | NCEI    | 1972-2013        |
| ID    | MULLAN                      | 10-6230 | HLY                 | 47.4661  | -115.8114 | 3201           | NCEI    | 1972-2013        |
| ID    | MULLAN                      | 10-6230 | DLY                 | 47.4661  | -115.8114 | 3201           | NCEI    | 1975-2023        |
| ID    | MULLEN PASS                 | 10-6237 | HLY                 | 47.4500  | -115.6667 | 5963           | NCEI    | 1948-1953        |
| ID    | MURPHY (DESERT) HOT SPRINGS | 10-6250 | HLY                 | 42.0264  | -115.3597 | 5152           | NCEI    | 1987-2013        |
| ID    | MURPHY (DESERT) HOT SPRINGS | 10-6250 | 15M                 | 42.0264  | -115.3597 | 5152           | NCEI    | 1987-2013        |
| ID    | MURPHY (DESERT) HOT SPRINGS | 10-6250 | DLY                 | 42.0264  | -115.3597 | 5152           | NCEI    | 1987-2023        |
| ID    | NAMPA                       | 10-6295 | DLY                 | 43.5833  | -116.5667 | 2480           | NCEI    | 1893-1951        |
| ID    | NAMPA 2 NW                  | 10-6300 | DLY                 | 43.6167  | -116.5833 | 2470           | NCEI    | 1945-1960        |
| ID    | NAMPA SUGAR FACTORY         | 10-6305 | DLY                 | 43.6039  | -116.5753 | 2470           | NCEI    | 1976-2015        |
| ID    | NEW MEADOWS RS              | 10-6388 | DLY                 | 44.9714  | -116.2933 | 3862           | NCEI    | 1904-2023        |
| ID    | NEZPERCE                    | 10-6421 | DLY                 | 46.2333  | -116.2333 | 3081           | NCEI    | 1948-1951        |

| State | Station Name   | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|----------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | NEZPERCE       | 10-6424 | DLY                 | 46.2325  | -116.2430 | 3248           | NCEI    | 1901-2020        |
| ID    | OAKLEY         | 10-6542 | DLY                 | 42.2342  | -113.8981 | 4559           | NCEI    | 1893-2023        |
| ID    | OBSIDIAN 3 SSE | 10-6553 | DLY                 | 44.0333  | -114.8333 | 6873           | NCEI    | 1919-1962        |
| ID    | OLA            | 10-6586 | DLY                 | 44.1758  | -116.2828 | 3075           | NCEI    | 1896-2017        |
| ID    | OLA            | 10-6586 | HLY                 | 44.1758  | -116.2828 | 3075           | NCEI    | 1948-2013        |
| ID    | OLA            | 10-6586 | 15M                 | 44.1758  | -116.2828 | 3075           | NCEI    | 1991-2013        |
| ID    | OLA 4 S        | 10-6590 | HLY                 | 44.1333  | -116.2833 | 2990           | NCEI    | 1951-1988        |
| ID    | OLA 4 S        | 10-6590 | 15M                 | 44.1333  | -116.2833 | 2990           | NCEI    | 1971-1988        |
| ID    | OLA 4 S        | 10-6590 | DLY                 | 44.1333  | -116.2833 | 2990           | NCEI    | 1951-1988        |
| ID    | OROFINO        | 10-6681 | DLY                 | 46.4823  | -116.2488 | 1046           | NCEI    | 1903-1981        |
| ID    | PALISADES      | 10-6764 | HLY                 | 43.3500  | -111.2167 | 5385           | NCEI    | 1960-1985        |
| ID    | PALISADES      | 10-6764 | 15M                 | 43.3500  | -111.2167 | 5385           | NCEI    | 1984-1985        |
| ID    | PALISADES      | 10-6764 | DLY                 | 43.3500  | -111.2167 | 5385           | NCEI    | 1947-1993        |
| ID    | PARMA EXP STN  | 10-6844 | DLY                 | 43.8022  | -116.9442 | 2290           | NCEI    | 1922-2023        |
| ID    | PAUL 1ENE      | 10-6877 | DLY                 | 42.6117  | -113.7628 | 4150           | NCEI    | 1924-2018        |
| ID    | PAYETTE        | 10-6891 | DLY                 | 44.0764  | -116.9311 | 2150           | NCEI    | 1892-2023        |
| ID    | PICABO         | 10-7040 | DLY                 | 43.3086  | -114.0667 | 4839           | NCEI    | 1958-2023        |
| ID    | PIERCE         | 10-7046 | HLY                 | 46.4922  | -115.8006 | 3080           | NCEI    | 1963-2013        |
| ID    | PIERCE         | 10-7046 | DLY                 | 46.4922  | -115.8006 | 3080           | NCEI    | 1962-2023        |
| ID    | PIERCE         | 10-7046 | 15M                 | 46.4922  | -115.8006 | 3080           | NCEI    | 1975-2013        |
| ID    | PIERCE 2       | 10-7047 | DLY                 | 46.5000  | -115.8000 | 3081           | NCEI    | 1974-1975        |
| ID    | PIERCE RS      | 10-7049 | HLY                 | 46.5000  | -115.8000 | 3173           | NCEI    | 1948-1963        |
| ID    | PIERCE RS      | 10-7049 | DLY                 | 46.5000  | -115.8000 | 3173           | NCEI    | 1913-1962        |
| ID    | PINE 2 S       | 10-7079 | DLY                 | 43.4667  | -115.3167 | 4232           | NCEI    | 1909-1953        |
| ID    | PLUMMER 3 WSW  | 10-7188 | DLY                 | 47.3111  | -116.9544 | 2905           | NCEI    | 1949-2023        |
| ID    | PLUMMER 3 WSW  | 10-7188 | 15M                 | 47.3111  | -116.9544 | 2905           | NCEI    | 1976-2013        |
| ID    | PLUMMER 3 WSW  | 10-7188 | HLY                 | 47.3111  | -116.9544 | 2905           | NCEI    | 1948-2013        |
| ID    | POCATELLO 2 NE | 10-7208 | DLY                 | 42.8917  | -112.4086 | 4832           | NCEI    | 1899-2017        |
| ID    | POCATELLO CITY | 10-7210 | DLY                 | 42.8750  | -112.4469 | 4460           | NCEI    | 2004-2023        |

| State | Station Name          | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | POCATELLO RGNL AP     | 10-7211 | HLY                 | 42.9203  | -112.5711 | 4452           | NCEI    | 1948-2013        |
| ID    | PORTHILL 1 SW         | 10-7264 | DLY                 | 48.9939  | -116.5025 | 1799           | NCEI    | 1892-2021        |
| ID    | PORTHILL 1 SW         | 10-7269 | HLY                 | 48.9939  | -116.5025 | 1799           | NCEI    | 1971-2013        |
| ID    | PORTHILL 1 SW         | 10-7269 | 15M                 | 48.9939  | -116.5025 | 1799           | NCEI    | 1971-2013        |
| ID    | POTLATCH 3 NNE        | 10-7301 | DLY                 | 46.9603  | -116.8550 | 2760           | NCEI    | 1914-2023        |
| ID    | POWELL                | 10-7320 | DLY                 | 46.5100  | -114.7111 | 3530           | NCEI    | 1962-2013        |
| ID    | PRAIRIE               | 10-7327 | HLY                 | 43.5064  | -115.5717 | 4780           | NCEI    | 1960-2013        |
| ID    | PRAIRIE               | 10-7327 | DLY                 | 43.5064  | -115.5717 | 4780           | NCEI    | 1925-1950        |
| ID    | PRAIRIE               | 10-7327 | 15M                 | 43.5064  | -115.5717 | 4780           | NCEI    | 1977-2013        |
| ID    | PRESTON               | 10-7346 | DLY                 | 42.0933  | -111.8825 | 4719           | NCEI    | 1964-2023        |
| ID    | PRESTON SUGAR FACTORY | 10-7353 | DLY                 | 42.0667  | -111.8500 | 4724           | NCEI    | 1921-1980        |
| ID    | PRIEST RVR EXP STN    | 10-7386 | DLY                 | 48.3511  | -116.8353 | 2371           | NCEI    | 1897-2023        |
| ID    | REXBURG KRXX          | 10-7642 | DLY                 | 43.8167  | -111.7833 | 4920           | NCEI    | 1896-1968        |
| ID    | REXBURG BYU IDAHO     | 10-7644 | DLY                 | 43.8083  | -111.7892 | 5005           | NCEI    | 1977-2023        |
| ID    | RICHFIELD             | 10-7673 | DLY                 | 43.0517  | -114.1550 | 4309           | NCEI    | 1909-2023        |
| ID    | RIGGINS               | 10-7706 | DLY                 | 45.4239  | -116.3150 | 1800           | NCEI    | 1895-2023        |
| ID    | ROLAND WEST PORTAL    | 10-7858 | DLY                 | 47.3789  | -115.6684 | 4154           | NCEI    | 1921-1953        |
| ID    | RUPERT 3 WSW          | 10-7968 | DLY                 | 42.6022  | -113.7233 | 4200           | NCEI    | 1906-2022        |
| ID    | SAINT ANTHONY         | 10-8022 | DLY                 | 43.9517  | -111.6789 | 4910           | NCEI    | 1895-2023        |
| ID    | SAINT MARIES          | 10-8062 | DLY                 | 47.3164  | -116.5789 | 2151           | NCEI    | 1897-2023        |
| ID    | SALEM                 | 10-8072 | DLY                 | 43.8667  | -111.7500 | 5000           | NCEI    | 1904-1909        |
| ID    | SALMON AP             | 10-8076 | DLY                 | 45.2000  | -113.8667 | 4044           | NCEI    | 1905-2023        |
| ID    | SALMON-KSRA           | 10-8080 | DLY                 | 45.1731  | -113.8856 | 3953           | NCEI    | 1967-2023        |
| ID    | SANDPOINT EXP STN     | 10-8137 | HLY                 | 48.2942  | -116.5628 | 2126           | NCEI    | 1960-2013        |
| ID    | SANDPOINT EXP STN     | 10-8137 | 15M                 | 48.2942  | -116.5628 | 2126           | NCEI    | 1972-2013        |
| ID    | SANDPOINT EXP STN     | 10-8137 | DLY                 | 48.2942  | -116.5628 | 2126           | NCEI    | 1910-2023        |
| ID    | SHOSHONE 1 WNW        | 10-8380 | DLY                 | 42.9383  | -114.4169 | 3950           | NCEI    | 1908-2023        |
| ID    | SHOUP                 | 10-8395 | DLY                 | 45.3767  | -114.2775 | 3400           | NCEI    | 1965-2011        |
| ID    | SODA SPRINGS AP       | 10-8535 | DLY                 | 42.6514  | -111.5833 | 5842           | NCEI    | 1978-2012        |

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|-------|------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | SOLDIER CREEK ADM SITE | 10-8548 | DLY                 | 43.4833  | -114.8167 | 5745           | NCEI    | 1894-1948        |
| ID    | SPENCER                | 10-8604 | DLY                 | 44.3606  | -112.1864 | 5892           | NCEI    | 1915-2013        |
| ID    | SPRINGFIELD 1 SE       | 10-8626 | DLY                 | 43.0667  | -112.6833 | 4413           | NCEI    | 1908-1956        |
| ID    | STANLEY                | 10-8676 | DLY                 | 44.2208  | -114.9347 | 6249           | NCEI    | 1916-2023        |
| ID    | SUGAR CITY             | 10-8818 | DLY                 | 43.8867  | -111.7367 | 4925           | NCEI    | 1907-2023        |
| ID    | SUN VALLEY             | 10-8906 | DLY                 | 43.7000  | -114.3500 | 5980           | NCEI    | 1937-1972        |
| ID    | SUN VALLEY             | 10-8906 | HLY                 | 43.7000  | -114.3500 | 5980           | NCEI    | 1948-1973        |
| ID    | SWAN FALLS PH          | 10-8928 | DLY                 | 43.2436  | -116.3783 | 2325           | NCEI    | 1935-2023        |
| ID    | SWAN VALLEY            | 10-8937 | DLY                 | 43.4372  | -111.2792 | 5397           | NCEI    | 1960-2023        |
| ID    | TAYLOR RCH             | 10-9000 | DLY                 | 45.1017  | -114.8508 | 3835           | NCEI    | 1974-2014        |
| ID    | TETONIA EXP STN        | 10-9065 | HLY                 | 43.8564  | -111.2769 | 6170           | NCEI    | 1952-2013        |
| ID    | TETONIA EXP STN        | 10-9065 | 15M                 | 43.8564  | -111.2769 | 6170           | NCEI    | 1972-2013        |
| ID    | TETONIA EXP STN        | 10-9065 | DLY                 | 43.8564  | -111.2769 | 6170           | NCEI    | 1950-2023        |
| ID    | THREE CREEK            | 10-9119 | 15M                 | 42.0833  | -115.1500 | 5460           | NCEI    | 1975-1987        |
| ID    | THREE CREEK            | 10-9119 | HLY                 | 42.0833  | -115.1500 | 5460           | NCEI    | 1961-1987        |
| ID    | THREE CREEK            | 10-9119 | DLY                 | 42.0833  | -115.1500 | 5460           | NCEI    | 1940-1987        |
| ID    | TOPAZ                  | 10-9158 | 15M                 | 42.6250  | -112.0881 | 4918           | NCEI    | 1978-2013        |
| ID    | TOPAZ                  | 10-9158 | HLY                 | 42.6250  | -112.0881 | 4918           | NCEI    | 1978-2013        |
| ID    | TWIN FALLS-KMVT        | 10-9293 | DLY                 | 42.5808  | -114.4569 | 3670           | NCEI    | 1979-2012        |
| ID    | TWIN FALLS 2 NNE       | 10-9294 | DLY                 | 42.5833  | -114.4667 | 3691           | NCEI    | 1905-1974        |
| ID    | TWIN FALLS 3 SE        | 10-9299 | DLY                 | 42.5333  | -114.4167 | 3773           | NCEI    | 1924-1977        |
| ID    | TWIN FALLS 6 E         | 10-9303 | 15M                 | 42.5458  | -114.3461 | 3960           | NCEI    | 1984-2001        |
| ID    | TWIN FALLS 6 E         | 10-9303 | DLY                 | 42.5458  | -114.3461 | 3960           | NCEI    | 1963-2012        |
| ID    | TWIN FALLS 6 E         | 10-9303 | HLY                 | 42.5458  | -114.3461 | 3960           | NCEI    | 1978-2001        |
| ID    | VAN WYCK               | 10-9380 | DLY                 | 44.5160  | -116.0767 | 4800           | NCEI    | 1908-1910        |
| ID    | WALLACE                | 10-9493 | DLY                 | 47.4667  | -115.9333 | 2772           | NCEI    | 1907-1962        |
| ID    | WALLACE                | 10-9498 | HLY                 | 47.4753  | -115.9314 | 2710           | NCEI    | 1948-1973        |
| ID    | WALLACE                | 10-9498 | DLY                 | 47.4753  | -115.9314 | 2710           | NCEI    | 1940-2023        |
| ID    | WARREN                 | 10-9560 | DLY                 | 45.2658  | -115.6789 | 5907           | NCEI    | 1894-2011        |

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| ID    | WEISER TELEMAR         | 10-9637 | DLY                 | 44.2500  | -116.9833 | 2090           | NCEI    | 1903-1911        |
| ID    | WEISER                 | 10-9638 | DLY                 | 44.2456  | -116.9697 | 2120           | NCEI    | 1911-2012        |
| ID    | WINCHESTER 1 SE        | 10-9840 | DLY                 | 46.2333  | -116.6167 | 3953           | NCEI    | 1939-1965        |
| ID    | WINCHESTER             | 10-9846 | DLY                 | 46.2381  | -116.6233 | 3972           | NCEI    | 1965-2015        |
| ID    | YELLOWPINE 7 S         | 10-9951 | DLY                 | 44.8542  | -115.5114 | 5100           | NCEI    | 1970-2007        |
| ID    | YELLOWPINE 7 S         | 10-9951 | HLY                 | 44.8542  | -115.5114 | 5100           | NCEI    | 1970-2013        |
| ID    | YELLOWPINE 7 S         | 10-9951 | 15M                 | 44.8542  | -115.5114 | 5100           | NCEI    | 1974-2013        |
| ID    | YELLOWPINE BAR         | 10-9963 | 15M                 | 45.5450  | -115.2514 | 2480           | NCEI    | 1987-2013        |
| ID    | YELLOWPINE BAR         | 10-9963 | DLY                 | 45.5450  | -115.2514 | 2480           | NCEI    | 1986-2014        |
| ID    | YELLOWPINE BAR         | 10-9963 | HLY                 | 45.5450  | -115.2514 | 2480           | NCEI    | 1987-2013        |
| MT    | ABSAROKEE              | 24-0019 | HLY                 | 45.5442  | -109.3936 | 3955           | NCEI    | 1971-2013        |
| MT    | ABSAROKEE              | 24-0019 | 15M                 | 45.5442  | -109.3936 | 3955           | NCEI    | 1971-2013        |
| MT    | ADEL                   | 24-0056 | DLY                 | 47.0092  | -111.6742 | 5017           | NCEI    | 1898-2023        |
| MT    | ALBERTON               | 24-0075 | DLY                 | 47.0036  | -114.4781 | 3060           | NCEI    | 1958-2023        |
| MT    | ALBION 1 N             | 24-0088 | DLY                 | 45.2089  | -104.2647 | 3312           | NCEI    | 1945-2021        |
| MT    | ALDER                  | 24-0100 | HLY                 | 45.3167  | -112.1167 | 5125           | NCEI    | 1950-1958        |
| MT    | ALDER                  | 24-0100 | DLY                 | 45.3167  | -112.1167 | 5125           | NCEI    | 1950-1980        |
| MT    | ALDER 17 S             | 24-0110 | DLY                 | 45.0708  | -112.0575 | 5850           | NCEI    | 1956-2008        |
| MT    | ALDER 19S              | 24-0111 | DLY                 | 45.0961  | -112.0856 | 5749           | NCEI    | 2008-2023        |
| MT    | ALZADA                 | 24-0165 | HLY                 | 45.0156  | -104.4108 | 3450           | NCEI    | 1948-2013        |
| MT    | ALZADA                 | 24-0165 | DLY                 | 45.0156  | -104.4108 | 3450           | NCEI    | 1904-1951        |
| MT    | ALZADA                 | 24-0165 | 15M                 | 45.0156  | -104.4108 | 3450           | NCEI    | 1984-2013        |
| MT    | ANACONDA               | 24-0199 | DLY                 | 46.1308  | -112.9333 | 5230           | NCEI    | 1894-2023        |
| MT    | ARMSTEAD               | 24-0274 | DLY                 | 44.9667  | -112.8667 | 5496           | NCEI    | 1949-1952        |
| MT    | ARMSTEAD               | 24-0274 | HLY                 | 44.9667  | -112.8667 | 5496           | NCEI    | 1949-1963        |
| MT    | ASHLAND RANGER STATION | 24-0330 | DLY                 | 45.5939  | -106.2722 | 2940           | NCEI    | 1950-1951        |
| MT    | ASHLAND RS             | 24-0330 | HLY                 | 45.5939  | -106.2722 | 2940           | NCEI    | 1948-2013        |
| MT    | ASHLAND RS             | 24-0330 | 15M                 | 45.5939  | -106.2722 | 2940           | NCEI    | 1973-2013        |
| MT    | AUGUSTA                | 24-0364 | DLY                 | 47.4925  | -112.3969 | 4070           | NCEI    | 1896-2023        |

| State | Station Name               | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|----------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | AUGUSTA                    | 24-0364 | 15M                 | 47.4925  | -112.3969 | 4070           | NCEI    | 1971-2013        |
| MT    | AUGUSTA                    | 24-0364 | HLY                 | 47.4925  | -112.3969 | 4070           | NCEI    | 1949-2013        |
| MT    | AUSTIN 1 W                 | 24-0375 | DLY                 | 46.6456  | -112.2656 | 4851           | NCEI    | 1950-2017        |
| MT    | BABB 6 NE                  | 24-0392 | DLY                 | 48.9389  | -113.3719 | 4300           | NCEI    | 1906-2011        |
| MT    | BAKER                      | 24-0412 | DLY                 | 46.3661  | -104.2822 | 2933           | NCEI    | 1922-2013        |
| MT    | BALLANTINE                 | 24-0432 | DLY                 | 45.9497  | -108.1439 | 3000           | NCEI    | 1919-2011        |
| MT    | BARBER                     | 24-0466 | DLY                 | 46.3108  | -109.3719 | 3730           | NCEI    | 1940-1998        |
| MT    | BAYLOR                     | 24-0554 | DLY                 | 48.6714  | -106.4808 | 2963           | NCEI    | 1941-2016        |
| MT    | BAYLOR                     | 24-0554 | 15M                 | 48.6714  | -106.4808 | 2963           | NCEI    | 1984-2013        |
| MT    | BAYLOR                     | 24-0554 | HLY                 | 48.6714  | -106.4808 | 2963           | NCEI    | 1948-2013        |
| MT    | BOZEMAN GALLATIN FLD AP    | 24-0622 | HLY                 | 45.7881  | -111.1608 | 4427           | NCEI    | 1948-2013        |
| MT    | BELLTOWER                  | 24-0636 | DLY                 | 45.6947  | -104.3856 | 3234           | NCEI    | 1949-2023        |
| MT    | BIDDLE                     | 24-0739 | DLY                 | 45.1008  | -105.3186 | 3312           | NCEI    | 1918-2023        |
| MT    | BIDDLE 8 SW                | 24-0743 | DLY                 | 45.0428  | -105.4800 | 3631           | NCEI    | 1963-2023        |
| MT    | BIGFORK 13 S               | 24-0755 | DLY                 | 47.8769  | -114.0336 | 2979           | NCEI    | 1938-2023        |
| MT    | BIG SANDY                  | 24-0770 | DLY                 | 48.1347  | -110.0592 | 2770           | NCEI    | 1921-2023        |
| MT    | BIG TIMBER                 | 24-0780 | DLY                 | 45.8325  | -109.9511 | 4100           | NCEI    | 1894-2023        |
| MT    | BILLINGS WTP               | 24-0802 | HLY                 | 45.7717  | -108.4811 | 3097           | NCEI    | 1948-1948        |
| MT    | BILLINGS WTP               | 24-0802 | DLY                 | 45.7717  | -108.4811 | 3097           | NCEI    | 1894-2023        |
| MT    | BILLINGS INTL AP           | 24-0807 | HLY                 | 45.8069  | -108.5422 | 3581           | NCEI    | 1948-2013        |
| MT    | BIRNEY                     | 24-0819 | DLY                 | 45.3247  | -106.5125 | 3160           | NCEI    | 1954-1999        |
| MT    | BLACKLEAF                  | 24-0877 | DLY                 | 48.0128  | -112.4369 | 4235           | NCEI    | 1904-2010        |
| MT    | BLOOMFIELD 6 E             | 24-0926 | HLY                 | 47.4167  | -104.8000 | 2552           | NCEI    | 1948-1968        |
| MT    | BLOOMFIELD 6 E             | 24-0926 | DLY                 | 47.4167  | -104.8000 | 2552           | NCEI    | 1908-1968        |
| MT    | BOULDER                    | 24-1008 | DLY                 | 46.2311  | -112.1139 | 4904           | NCEI    | 1880-2023        |
| MT    | BOULDER                    | 24-1008 | 15M                 | 46.2311  | -112.1139 | 4904           | NCEI    | 1971-2013        |
| MT    | BOULDER                    | 24-1008 | HLY                 | 46.2311  | -112.1139 | 4904           | NCEI    | 1948-2013        |
| MT    | BOZEMAN MONTANA STATE UNIV | 24-1044 | DLY                 | 45.6622  | -111.0464 | 4913           | NCEI    | 1892-2023        |
| MT    | BOZEMAN 6 W EXP FARM       | 24-1047 | DLY                 | 45.6728  | -111.1547 | 4775           | NCEI    | 1966-2023        |

| State | Station Name             | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | BOZEMAN 6 W EXP FARM     | 24-1047 | 15M                 | 45.6728  | -111.1547 | 4775           | NCEI    | 1984-2000        |
| MT    | BOZEMAN 6 W EXP FARM     | 24-1047 | HLY                 | 45.6728  | -111.1547 | 4775           | NCEI    | 1976-2006        |
| MT    | BOZEMAN 12 NE            | 24-1050 | DLY                 | 45.8167  | -110.8833 | 5950           | NCEI    | 1950-1995        |
| MT    | BRADY AZNOE              | 24-1080 | DLY                 | 47.9500  | -111.3333 | 3333           | NCEI    | 1912-1982        |
| MT    | BRADY 27 ENE (THE KNEES) | 24-1081 | DLY                 | 48.0750  | -111.2603 | 3325           | NCEI    | 1986-2023        |
| MT    | BRANDENBERG              | 24-1084 | DLY                 | 45.8161  | -106.2328 | 2770           | NCEI    | 1956-2023        |
| MT    | BREDETTE                 | 24-1088 | 15M                 | 48.5156  | -105.2992 | 2313           | NCEI    | 1984-2013        |
| MT    | BREDETTE                 | 24-1088 | DLY                 | 48.5156  | -105.2992 | 2313           | NCEI    | 1950-2023        |
| MT    | BREDETTE                 | 24-1088 | HLY                 | 48.5156  | -105.2992 | 2313           | NCEI    | 1940-2013        |
| MT    | BRIDGER 2 N              | 24-1102 | 15M                 | 45.3261  | -108.9092 | 3583           | NCEI    | 1984-2013        |
| MT    | BRIDGER 2 N              | 24-1102 | DLY                 | 45.3261  | -108.9092 | 3583           | NCEI    | 1900-2023        |
| MT    | BRIDGER 2 N              | 24-1102 | HLY                 | 45.3261  | -108.9092 | 3583           | NCEI    | 1948-2013        |
| MT    | BROADUS                  | 24-1127 | 15M                 | 45.4442  | -105.4072 | 3032           | NCEI    | 1973-2013        |
| MT    | BROADUS                  | 24-1127 | DLY                 | 45.4442  | -105.4072 | 3032           | NCEI    | 1919-2023        |
| MT    | BROADUS                  | 24-1127 | HLY                 | 45.4442  | -105.4072 | 3032           | NCEI    | 1942-2013        |
| MT    | BROADVIEW                | 24-1149 | DLY                 | 46.1000  | -108.8833 | 3881           | NCEI    | 1906-1991        |
| MT    | BROCKWAY 3 WSW           | 24-1169 | DLY                 | 47.2875  | -105.8300 | 2630           | NCEI    | 1959-2023        |
| MT    | BROWNING                 | 24-1202 | 15M                 | 48.5614  | -113.0133 | 4355           | NCEI    | 1979-2013        |
| MT    | BROWNING                 | 24-1202 | DLY                 | 48.5594  | -113.0108 | 4355           | NCEI    | 1894-1989        |
| MT    | BROWNING                 | 24-1202 | HLY                 | 48.5614  | -113.0133 | 4355           | NCEI    | 1949-2013        |
| MT    | BROWNING #2              | 24-1217 | DLY                 | 48.5500  | -113.0167 | 4379           | NCEI    | 1989-1996        |
| MT    | BRUSETT 3 N              | 24-1231 | DLY                 | 47.4647  | -107.3114 | 2974           | NCEI    | 1910-2023        |
| MT    | BUSBY                    | 24-1297 | DLY                 | 45.5397  | -106.9597 | 3430           | NCEI    | 1907-2023        |
| MT    | BUTTE 8 S                | 24-1309 | HLY                 | 45.8967  | -112.5472 | 5700           | NCEI    | 1953-2013        |
| MT    | BUTTE 8 S                | 24-1309 | 15M                 | 45.8967  | -112.5472 | 5700           | NCEI    | 1971-2013        |
| MT    | BUTTE BERT MOONEY AP     | 24-1318 | HLY                 | 45.9647  | -112.5006 | 5506           | NCEI    | 1948-2013        |
| MT    | BYNUM 4 SSE              | 24-1342 | DLY                 | 47.9261  | -112.2919 | 4039           | NCEI    | 1927-2023        |
| MT    | CAMERON                  | 24-1408 | 15M                 | 45.2000  | -111.6833 | 5500           | NCEI    | 1971-1995        |
| MT    | CAMERON                  | 24-1408 | HLY                 | 45.2000  | -111.6833 | 5500           | NCEI    | 1948-1995        |

| State | Station Name        | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|---------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | CAMERON             | 24-1408 | DLY                 | 45.2000  | -111.6833 | 5500           | NCEI    | 1911-1951        |
| MT    | CANYON CREEK        | 24-1450 | DLY                 | 46.8167  | -112.2500 | 4314           | NCEI    | 1907-1979        |
| MT    | CANYON FERRY        | 24-1460 | DLY                 | 46.6333  | -111.7000 | 3471           | NCEI    | 1898-1953        |
| MT    | CANYON FERRY DAM    | 24-1465 | DLY                 | 46.6500  | -111.7167 | 3852           | NCEI    | 1948-1957        |
| MT    | CANYON FERRY DAM    | 24-1470 | DLY                 | 46.6500  | -111.7333 | 3672           | NCEI    | 1907-1996        |
| MT    | CARDWELL            | 24-1500 | DLY                 | 45.8608  | -111.9519 | 4270           | NCEI    | 1978-1991        |
| MT    | CARDWELL            | 24-1500 | 15M                 | 45.8603  | -111.9583 | 4270           | NCEI    | 1978-2013        |
| MT    | CARDWELL            | 24-1500 | HLY                 | 45.8603  | -111.9583 | 4270           | NCEI    | 1978-2013        |
| MT    | CARLYLE 13 NW       | 24-1518 | DLY                 | 46.7444  | -104.3092 | 3145           | NCEI    | 1962-2023        |
| MT    | CARTER 14 W         | 24-1525 | DLY                 | 47.7922  | -111.2203 | 3450           | NCEI    | 1982-2023        |
| MT    | CASCADE 5 S         | 24-1552 | DLY                 | 47.2192  | -111.7106 | 3360           | NCEI    | 1894-2022        |
| MT    | CASCADE 20 SSE      | 24-1557 | DLY                 | 46.9956  | -111.5772 | 4600           | NCEI    | 1876-2013        |
| MT    | CHESSMAN RSVR       | 24-1686 | DLY                 | 46.4667  | -112.1833 | 6283           | NCEI    | 1908-1963        |
| MT    | CHESTER             | 24-1692 | DLY                 | 48.5092  | -110.9694 | 3132           | NCEI    | 1900-2023        |
| MT    | CHINOOK             | 24-1722 | DLY                 | 48.5883  | -109.2267 | 2420           | NCEI    | 1895-2023        |
| MT    | CHOTEAU             | 24-1737 | DLY                 | 47.8206  | -112.1922 | 3845           | NCEI    | 1892-2023        |
| MT    | CHOTEAU             | 24-1737 | 15M                 | 47.8206  | -112.1922 | 3845           | NCEI    | 1971-2013        |
| MT    | CHOTEAU             | 24-1737 | HLY                 | 47.8206  | -112.1922 | 3845           | NCEI    | 1940-2013        |
| MT    | CIRCLE              | 24-1758 | DLY                 | 47.4122  | -105.5956 | 2480           | NCEI    | 1963-2023        |
| MT    | CIRCLE 7 N          | 24-1765 | DLY                 | 47.5167  | -105.5667 | 2431           | NCEI    | 1928-1963        |
| MT    | CLARK CANYON DAM    | 24-1781 | HLY                 | 45.0017  | -112.8575 | 5580           | NCEI    | 1963-2013        |
| MT    | CLARK CANYON DAM    | 24-1781 | 15M                 | 45.0017  | -112.8575 | 5580           | NCEI    | 1984-2013        |
| MT    | COHAGEN             | 24-1875 | HLY                 | 47.0564  | -106.6164 | 2720           | NCEI    | 1948-2013        |
| MT    | COHAGEN             | 24-1875 | 15M                 | 47.0564  | -106.6164 | 2720           | NCEI    | 1981-2013        |
| MT    | COHAGEN             | 24-1875 | DLY                 | 47.0564  | -106.6164 | 2720           | NCEI    | 1950-2023        |
| MT    | COHAGEN 22 SE       | 24-1883 | DLY                 | 46.8631  | -106.2389 | 2865           | NCEI    | 2011-2023        |
| MT    | COLSTRIP            | 24-1905 | DLY                 | 45.8944  | -106.6336 | 3218           | NCEI    | 1926-2023        |
| MT    | COLUMBIA FALLS 5 SW | 24-1919 | DLY                 | 48.3167  | -114.2000 | 3081           | NCEI    | 1892-1949        |
| MT    | COLUMBUS            | 24-1938 | DLY                 | 45.6444  | -109.2675 | 3602           | NCEI    | 1930-2023        |



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|-------|----------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | CONRAD         | 24-1974 | DLY                 | 48.1736  | -111.9503 | 3550           | NCEI    | 1910-2023        |
| MT    | CONTENT 4 NNE  | 24-1984 | 15M                 | 48.0803  | -107.5250 | 2325           | NCEI    | 1984-2013        |
| MT    | CONTENT 4 NNE  | 24-1984 | HLY                 | 48.0803  | -107.5250 | 2325           | NCEI    | 1948-2013        |
| MT    | CONTENT 4 NNE  | 24-1984 | DLY                 | 48.0803  | -107.5250 | 2325           | NCEI    | 1950-2023        |
| MT    | COOKE CITY 2 W | 24-1995 | HLY                 | 45.0108  | -109.9819 | 7483           | NCEI    | 1967-2013        |
| MT    | COOKE CITY 2 W | 24-1995 | DLY                 | 45.0108  | -109.9819 | 7483           | NCEI    | 1967-2013        |
| MT    | COOKE CITY 2 W | 24-1995 | 15M                 | 45.0108  | -109.9819 | 7483           | NCEI    | 1976-2013        |
| MT    | COPPER         | 24-2012 | DLY                 | 46.6000  | -110.6667 | 5682           | NCEI    | 1905-1955        |
| MT    | CRESTON        | 24-2104 | DLY                 | 48.1881  | -114.1339 | 2935           | NCEI    | 1948-2023        |
| MT    | CROW AGENCY    | 24-2112 | DLY                 | 45.6000  | -107.4500 | 3030           | NCEI    | 1898-1991        |
| MT    | CULBERTSON     | 24-2122 | DLY                 | 48.1503  | -104.5089 | 1940           | NCEI    | 1900-2023        |
| MT    | CUSTER         | 24-2158 | HLY                 | 46.1333  | -107.5333 | 2743           | NCEI    | 1948-1975        |
| MT    | CUT BANK AP    | 24-2173 | HLY                 | 48.6033  | -112.3753 | 3838           | NCEI    | 1948-2013        |
| MT    | CUT BANK AP    | 24-2173 | 15M                 | 48.6033  | -112.3753 | 3838           | NCEI    | 1984-2013        |
| MT    | DARBY          | 24-2221 | 15M                 | 46.0264  | -114.1764 | 3880           | NCEI    | 1971-2013        |
| MT    | DARBY          | 24-2221 | DLY                 | 46.0264  | -114.1764 | 3880           | NCEI    | 1898-2023        |
| MT    | DARBY          | 24-2221 | HLY                 | 46.0264  | -114.1764 | 3880           | NCEI    | 1971-2013        |
| MT    | DEBORGIA 3 N   | 24-2260 | 15M                 | 47.4103  | -115.3514 | 3800           | NCEI    | 1990-2001        |
| MT    | DEBORGIA 3 N   | 24-2260 | HLY                 | 47.4103  | -115.3514 | 3800           | NCEI    | 1990-2001        |
| MT    | DEBORGIA 3 N   | 24-2260 | DLY                 | 47.4103  | -115.3514 | 3800           | NCEI    | 1990-2001        |
| MT    | DECKER         | 24-2266 | HLY                 | 45.0117  | -106.8636 | 3520           | NCEI    | 1949-1958        |
| MT    | DECKER         | 24-2266 | DLY                 | 45.0117  | -106.8636 | 3520           | NCEI    | 1904-2004        |
| MT    | DEER LODGE     | 24-2273 | DLY                 | 46.3833  | -112.7333 | 4534           | NCEI    | 1892-1959        |
| MT    | DEER LODGE 3 W | 24-2275 | DLY                 | 46.3911  | -112.7975 | 4850           | NCEI    | 1959-2023        |
| MT    | DEL BONITA     | 24-2301 | HLY                 | 48.9983  | -112.7886 | 4337           | NCEI    | 1951-1958        |
| MT    | DEL BONITA     | 24-2301 | DLY                 | 48.9983  | -112.7886 | 4337           | NCEI    | 1951-2013        |
| MT    | DELPHIA        | 24-2317 | HLY                 | 46.4833  | -108.4000 | 3061           | NCEI    | 1948-1983        |
| MT    | DELPHIA        | 24-2317 | DLY                 | 46.4833  | -108.4000 | 3061           | NCEI    | 1950-1951        |
| MT    | DENTON         | 24-2347 | DLY                 | 47.3181  | -109.9372 | 3610           | NCEI    | 1907-2014        |

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|-------|-----------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | DILLON AP                   | 24-2404 | 15M                 | 45.2575  | -112.5544 | 5200           | NCEI    | 1984-1992        |
| MT    | DILLON AP                   | 24-2404 | HLY                 | 45.2575  | -112.5544 | 5200           | NCEI    | 1948-2013        |
| MT    | DILLON U OF MONTANA WESTERN | 24-2409 | DLY                 | 45.2089  | -112.6389 | 5129           | NCEI    | 1894-2023        |
| MT    | DILLON 9 SSE                | 24-2414 | DLY                 | 45.1061  | -112.6097 | 5500           | NCEI    | 1950-1952        |
| MT    | DILLON 9 SSE                | 24-2414 | 15M                 | 45.0917  | -112.6044 | 5500           | NCEI    | 1978-2013        |
| MT    | DILLON 9 SSE                | 24-2414 | HLY                 | 45.0917  | -112.6044 | 5500           | NCEI    | 1949-2013        |
| MT    | DIVIDE                      | 24-2421 | 15M                 | 45.7511  | -112.7547 | 5350           | NCEI    | 1972-2013        |
| MT    | DIVIDE                      | 24-2421 | HLY                 | 45.7511  | -112.7547 | 5350           | NCEI    | 1948-2013        |
| MT    | DIVIDE                      | 24-2421 | DLY                 | 45.7511  | -112.7547 | 5350           | NCEI    | 1914-2023        |
| MT    | DODSON 1 WNW                | 24-2438 | DLY                 | 48.3992  | -108.2625 | 2294           | NCEI    | 1883-2012        |
| MT    | DODSON 11 N                 | 24-2441 | HLY                 | 48.5542  | -108.2067 | 2710           | NCEI    | 1952-2013        |
| MT    | DODSON 11 N                 | 24-2441 | 15M                 | 48.5542  | -108.2067 | 2710           | NCEI    | 1984-2013        |
| MT    | DOVETAIL                    | 24-2477 | DLY                 | 47.3500  | -108.2500 | 2743           | NCEI    | 1949-1951        |
| MT    | DOVETAIL                    | 24-2477 | HLY                 | 47.3500  | -108.2500 | 2743           | NCEI    | 1940-1975        |
| MT    | DRUMMOND AVIATION           | 24-2500 | HLY                 | 46.6383  | -113.1761 | 4000           | NCEI    | 1963-2012        |
| MT    | DRUMMOND AVIATION           | 24-2500 | 15M                 | 46.6383  | -113.1761 | 4000           | NCEI    | 1977-2012        |
| MT    | DRUMMOND FAA AP             | 24-2511 | DLY                 | 46.6167  | -113.2000 | 4242           | NCEI    | 1927-1963        |
| MT    | DRUMMOND FAA AP             | 24-2511 | HLY                 | 46.6167  | -113.2000 | 4242           | NCEI    | 1948-1963        |
| MT    | DUNKIRK 19NNE               | 24-2550 | DLY                 | 48.7167  | -111.4758 | 3323           | NCEI    | 1912-2023        |
| MT    | DUPUYER                     | 24-2571 | DLY                 | 48.2000  | -112.5000 | 4134           | NCEI    | 1948-1952        |
| MT    | DUPUYER                     | 24-2571 | HLY                 | 48.2000  | -112.5000 | 4134           | NCEI    | 1949-1976        |
| MT    | DUTTON 6 E                  | 24-2584 | HLY                 | 47.8433  | -111.5794 | 3594           | NCEI    | 1948-2013        |
| MT    | DUTTON 6 E                  | 24-2584 | DLY                 | 47.8436  | -111.5794 | 3594           | NCEI    | 1950-1951        |
| MT    | DUTTON 6 E                  | 24-2584 | 15M                 | 47.8433  | -111.5794 | 3594           | NCEI    | 1971-2013        |
| MT    | EAST ANACONDA               | 24-2604 | DLY                 | 46.1150  | -112.9144 | 5515           | NCEI    | 1905-1980        |
| MT    | EAST ANACONDA 2             | 24-2606 | DLY                 | 46.1167  | -112.9333 | 5201           | NCEI    | 1980-1982        |
| MT    | E GLACIER                   | 24-2629 | DLY                 | 48.4472  | -113.2236 | 4806           | NCEI    | 1952-2021        |
| MT    | EAST HELENA                 | 24-2634 | DLY                 | 46.5833  | -111.9167 | 3901           | NCEI    | 1926-1958        |
| MT    | EDGAR 6 E                   | 24-2658 | DLY                 | 45.4667  | -108.7333 | 4104           | NCEI    | 1941-1950        |

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|-------|----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | EDGAR 9 SE           | 24-2661 | DLY                 | 45.3965  | -108.7241 | 4400           | NCEI    | 1950-1974        |
| MT    | EKALAKA              | 24-2689 | 15M                 | 45.8864  | -104.5478 | 3432           | NCEI    | 1984-2013        |
| MT    | EKALAKA              | 24-2689 | DLY                 | 45.8864  | -104.5478 | 3432           | NCEI    | 1896-2023        |
| MT    | EKALAKA              | 24-2689 | HLY                 | 45.8864  | -104.5478 | 3432           | NCEI    | 1948-2013        |
| MT    | ELKHORN HOT SPRINGS  | 24-2719 | 15M                 | 45.4667  | -113.1167 | 7385           | NCEI    | 1977-1996        |
| MT    | ELKHORN HOT SPRINGS  | 24-2719 | HLY                 | 45.4667  | -113.1167 | 7385           | NCEI    | 1949-1996        |
| MT    | ELKHORN HOT SPRINGS  | 24-2719 | DLY                 | 45.4667  | -113.1167 | 7385           | NCEI    | 1891-1955        |
| MT    | ELKHORN HOT SPGS 2 S | 24-2720 | HLY                 | 45.4333  | -113.1167 | 6946           | NCEI    | 1960-1964        |
| MT    | ELLISTON             | 24-2738 | DLY                 | 46.5631  | -112.4342 | 5080           | NCEI    | 1909-2020        |
| MT    | ENNIS                | 24-2793 | DLY                 | 45.3394  | -111.7122 | 4953           | NCEI    | 1917-2023        |
| MT    | ESSEX                | 24-2812 | 15M                 | 48.2828  | -113.6061 | 3850           | NCEI    | 1976-2013        |
| MT    | ESSEX                | 24-2812 | DLY                 | 48.2828  | -113.6061 | 3850           | NCEI    | 1951-2023        |
| MT    | ESSEX                | 24-2812 | HLY                 | 48.2828  | -113.6061 | 3850           | NCEI    | 1976-2013        |
| MT    | ETHRIDGE             | 24-2820 | DLY                 | 48.5586  | -112.1253 | 3552           | NCEI    | 1949-2023        |
| MT    | EUREKA               | 24-2825 | DLY                 | 48.8833  | -115.0500 | 2577           | NCEI    | 1924-1932        |
| MT    | EUREKA RS            | 24-2827 | DLY                 | 48.8978  | -115.0644 | 2532           | NCEI    | 1960-2023        |
| MT    | EUREKA RS            | 24-2827 | HLY                 | 48.8978  | -115.0644 | 2532           | NCEI    | 1960-2013        |
| MT    | EUREKA RS            | 24-2827 | 15M                 | 48.8978  | -115.0644 | 2532           | NCEI    | 1971-2013        |
| MT    | FAIRFIELD            | 24-2857 | DLY                 | 47.6150  | -111.9861 | 3983           | NCEI    | 1926-2023        |
| MT    | FISHTAIL             | 24-2996 | DLY                 | 45.4531  | -109.5069 | 4500           | NCEI    | 1951-2021        |
| MT    | FLATWILLOW 4 ENE     | 24-3013 | DLY                 | 46.8217  | -108.3725 | 3292           | NCEI    | 1913-2023        |
| MT    | FORKS 4 NNE          | 24-3089 | DLY                 | 48.7778  | -107.4536 | 2599           | NCEI    | 1914-1996        |
| MT    | FORSYTH              | 24-3098 | DLY                 | 46.2722  | -106.6756 | 2515           | NCEI    | 1975-2023        |
| MT    | FORSYTH 2 E          | 24-3099 | DLY                 | 46.2667  | -106.6167 | 2723           | NCEI    | 1904-1975        |
| MT    | FORSYTH 2 E          | 24-3099 | HLY                 | 46.2667  | -106.6167 | 2723           | NCEI    | 1988-1988        |
| MT    | FT ASSINIBOINE       | 24-3110 | DLY                 | 48.4983  | -109.8014 | 2675           | NCEI    | 1916-2023        |
| MT    | FT BENTON            | 24-3113 | DLY                 | 47.8303  | -110.6611 | 2649           | NCEI    | 1894-2023        |
| MT    | FORTINE 1 N          | 24-3139 | DLY                 | 48.7783  | -114.8997 | 3000           | NCEI    | 1905-2009        |
| MT    | FORTINE 2 NE         | 24-3142 | DLY                 | 48.7822  | -114.8767 | 3040           | NCEI    | 2009-2013        |

| State | Station Name               | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|----------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | FT LOGAN 4 ESE             | 24-3157 | DLY                 | 46.6547  | -111.0939 | 4710           | NCEI    | 1892-2003        |
| MT    | FT PECK                    | 24-3175 | DLY                 | 48.0000  | -106.4500 | 2182           | NCEI    | 1944-1956        |
| MT    | FT PECK                    | 24-3175 | HLY                 | 48.0000  | -106.4500 | 2182           | NCEI    | 1948-1956        |
| MT    | FT PECK PWR PLT            | 24-3176 | HLY                 | 48.0119  | -106.4117 | 2071           | NCEI    | 1956-2013        |
| MT    | FT PECK PWR PLT            | 24-3176 | DLY                 | 48.0119  | -106.4117 | 2071           | NCEI    | 1956-2023        |
| MT    | FT PECK PWR PLT            | 24-3176 | 15M                 | 48.0119  | -106.4117 | 2071           | NCEI    | 1971-2013        |
| MT    | FORT SHAW                  | 24-3195 | DLY                 | 47.5000  | -111.8000 | 3500           | NCEI    | 1907-1926        |
| MT    | FRAZER                     | 24-3280 | DLY                 | 48.0667  | -106.0500 | 2070           | NCEI    | 1923-1966        |
| MT    | GALATA 16 SW               | 24-3346 | DLY                 | 48.2922  | -111.5683 | 3550           | NCEI    | 1949-2023        |
| MT    | GALLATIN GATEWAY 10SSW     | 24-3366 | DLY                 | 45.4453  | -111.2367 | 5441           | NCEI    | 1950-2008        |
| MT    | GALLATIN GATEWAY 10SSW     | 24-3366 | HLY                 | 45.4458  | -111.2369 | 5441           | NCEI    | 2013-2013        |
| MT    | GALLATIN GATEWAY 10SSW     | 24-3366 | 15M                 | 45.4458  | -111.2369 | 5441           | NCEI    | 2013-2013        |
| MT    | GARDINER                   | 24-3378 | DLY                 | 45.0317  | -110.7036 | 5275           | NCEI    | 1956-2021        |
| MT    | GARLAND                    | 24-3383 | DLY                 | 46.0500  | -105.9167 | 2602           | NCEI    | 1922-1955        |
| MT    | GEORGETOWN LAKE            | 24-3434 | DLY                 | 46.1836  | -113.3300 | 6470           | NCEI    | 2001-2008        |
| MT    | GEORGETOWN LAKE - 7 GABLES | 24-3437 | DLY                 | 46.1925  | -113.2633 | 6410           | NCEI    | 2008-2012        |
| MT    | GERALDINE                  | 24-3445 | DLY                 | 47.6014  | -110.2669 | 3145           | NCEI    | 1950-2012        |
| MT    | GERALDINE 6 SE             | 24-3455 | DLY                 | 47.5333  | -110.1667 | 3451           | NCEI    | 1905-1950        |
| MT    | GIBBONS PASS               | 24-3479 | 15M                 | 45.6928  | -113.9550 | 7070           | NCEI    | 1974-2013        |
| MT    | GIBBONS PASS               | 24-3479 | DLY                 | 45.6928  | -113.9550 | 7070           | NCEI    | 1950-1951        |
| MT    | GIBBONS PASS               | 24-3479 | HLY                 | 45.6928  | -113.9550 | 7070           | NCEI    | 1948-2013        |
| MT    | GIBSON 2 NE                | 24-3486 | DLY                 | 46.0397  | -109.4953 | 4444           | NCEI    | 1951-2023        |
| MT    | GIBSON DAM                 | 24-3489 | HLY                 | 47.6011  | -112.7547 | 4590           | NCEI    | 1948-2013        |
| MT    | GIBSON DAM                 | 24-3489 | DLY                 | 47.6011  | -112.7547 | 4590           | NCEI    | 1911-2023        |
| MT    | GIBSON DAM                 | 24-3489 | 15M                 | 47.6011  | -112.7547 | 4590           | NCEI    | 1971-2013        |
| MT    | GILDFORD                   | 24-3530 | DLY                 | 48.5647  | -110.3028 | 2820           | NCEI    | 1958-2023        |
| MT    | EAST GLACIER               | 24-3551 | DLY                 | 48.4500  | -113.2167 | 4813           | NCEI    | 1949-1952        |
| MT    | GLASGOW 14 NW              | 24-3554 | DLY                 | 48.3531  | -106.8425 | 2160           | NCEI    | 1951-2023        |
| MT    | GLASGOW #2                 | 24-3557 | DLY                 | 48.1925  | -106.6383 | 2090           | NCEI    | 1893-2000        |

| State | Station Name     | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | GLASGOW #2       | 24-3557 | HLY                 | 48.1925  | -106.6383 | 2090           | NCEI    | 1948-1951        |
| MT    | GLASGOW INTL AP  | 24-3558 | HLY                 | 48.2139  | -106.6214 | 2285           | NCEI    | 1957-2013        |
| MT    | GLEN 4 N         | 24-3570 | DLY                 | 45.5261  | -112.7006 | 5054           | NCEI    | 1958-2011        |
| MT    | GLENDIVE         | 24-3581 | HLY                 | 47.1058  | -104.7175 | 2075           | NCEI    | 1948-2013        |
| MT    | GLENDIVE         | 24-3581 | 15M                 | 47.1058  | -104.7175 | 2075           | NCEI    | 1978-2013        |
| MT    | GLENDIVE         | 24-3581 | DLY                 | 47.1058  | -104.7175 | 2075           | NCEI    | 1892-2023        |
| MT    | GOLDBUTTE 7 N    | 24-3617 | DLY                 | 48.9753  | -111.3989 | 3498           | NCEI    | 1905-2023        |
| MT    | GRANT 5 SE       | 24-3707 | DLY                 | 44.9656  | -113.0042 | 5780           | NCEI    | 1928-2023        |
| MT    | GRASS RANGE      | 24-3727 | DLY                 | 47.0256  | -108.8036 | 3490           | NCEI    | 1913-2023        |
| MT    | GREAT FALLS 16ST | 24-3749 | DLY                 | 47.4883  | -111.2792 | 3505           | NCEI    | 1891-2019        |
| MT    | GREAT FALLS AP   | 24-3751 | HLY                 | 47.4733  | -111.3822 | 3664           | NCEI    | 1948-2013        |
| MT    | GREAT FALLS WFO  | 24-3753 | DLY                 | 47.4614  | -111.3850 | 3705           | NCEI    | 1997-2023        |
| MT    | GREAT FALLS WFO  | 24-3753 | HLY                 | 47.4614  | -111.3850 | 3705           | NCEI    | 1997-2013        |
| MT    | GREAT FALLS WFO  | 24-3753 | 15M                 | 47.4614  | -111.3850 | 3705           | NCEI    | 1997-2013        |
| MT    | HAMILTON         | 24-3885 | DLY                 | 46.2461  | -114.1681 | 3585           | NCEI    | 1895-2023        |
| MT    | HARB             | 24-3910 | DLY                 | 48.2333  | -107.4103 | 2542           | NCEI    | 1951-2018        |
| MT    | HARDIN           | 24-3915 | DLY                 | 45.7317  | -107.6092 | 2880           | NCEI    | 1948-2023        |
| MT    | HARLEM           | 24-3929 | DLY                 | 48.5353  | -108.7964 | 2371           | NCEI    | 1896-2011        |
| MT    | HARLOWTON        | 24-3939 | DLY                 | 46.4356  | -109.8428 | 4222           | NCEI    | 1948-2023        |
| MT    | HAUGAN 1 W       | 24-3984 | 15M                 | 47.3889  | -115.4225 | 3160           | NCEI    | 1977-2013        |
| MT    | HAUGAN 1 W       | 24-3984 | HLY                 | 47.3889  | -115.4225 | 3160           | NCEI    | 1952-2013        |
| MT    | HAUGAN 1 W       | 24-3984 | DLY                 | 47.3889  | -115.4225 | 3160           | NCEI    | 1911-2023        |
| MT    | HAVRE AP ASOS    | 24-3996 | HLY                 | 48.5428  | -109.7633 | 2585           | NCEI    | 1961-2013        |
| MT    | HAVRE AP ASOS    | 24-3996 | 15M                 | 48.5428  | -109.7633 | 2585           | NCEI    | 1984-1997        |
| MT    | HAXBY 18 SW      | 24-4007 | DLY                 | 47.5667  | -106.7000 | 2651           | NCEI    | 1922-1991        |
| MT    | HEBGEN DAM       | 24-4038 | DLY                 | 44.8667  | -111.3392 | 6489           | NCEI    | 1904-2023        |
| MT    | HEBGEN DAM       | 24-4038 | HLY                 | 44.8667  | -111.3392 | 6489           | NCEI    | 1948-2013        |
| MT    | HEBGEN DAM       | 24-4038 | 15M                 | 44.8667  | -111.3392 | 6489           | NCEI    | 1971-2013        |
| MT    | HELENA 6 N       | 24-4050 | DLY                 | 46.6667  | -112.0500 | 3802           | NCEI    | 1923-1979        |

| State | Station Name     | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | HELENA AP ASOS   | 24-4055 | HLY                 | 46.6056  | -111.9636 | 3828           | NCEI    | 1948-2013        |
| MT    | HERON 2 NW       | 24-4084 | DLY                 | 48.0800  | -116.0014 | 2240           | NCEI    | 1911-2023        |
| MT    | HIGHWOOD         | 24-4120 | HLY                 | 47.5500  | -110.7833 | 3401           | NCEI    | 1951-1982        |
| MT    | HIGHWOOD         | 24-4120 | DLY                 | 47.5500  | -110.7833 | 3401           | NCEI    | 1950-1992        |
| MT    | HIGHWOOD         | 24-4120 | 15M                 | 47.5500  | -110.7833 | 3401           | NCEI    | 1979-1982        |
| MT    | HIGHWOOD 7 NE    | 24-4133 | DLY                 | 47.6414  | -110.6678 | 3600           | NCEI    | 1948-2023        |
| MT    | HILGER           | 24-4143 | HLY                 | 47.2531  | -109.3611 | 4080           | NCEI    | 1948-2013        |
| MT    | HILGER           | 24-4143 | DLY                 | 47.2528  | -109.3614 | 4080           | NCEI    | 1949-1951        |
| MT    | HILGER           | 24-4143 | 15M                 | 47.2531  | -109.3611 | 4080           | NCEI    | 1975-2013        |
| MT    | HINGHAM          | 24-4172 | DLY                 | 48.5500  | -110.4333 | 3031           | NCEI    | 1951-1983        |
| MT    | HINGHAM 12 N     | 24-4174 | DLY                 | 48.7261  | -110.4561 | 2950           | NCEI    | 1983-2023        |
| MT    | HINSDALE 4 SW    | 24-4180 | DLY                 | 48.3478  | -107.1533 | 2805           | NCEI    | 1971-2023        |
| MT    | HOBSON           | 24-4193 | DLY                 | 46.9997  | -109.8703 | 4244           | NCEI    | 1920-2021        |
| MT    | HOLTER DAM       | 24-4241 | DLY                 | 46.9908  | -112.0117 | 3487           | NCEI    | 1902-2023        |
| MT    | HOLTER DAM       | 24-4241 | HLY                 | 46.9908  | -112.0117 | 3487           | NCEI    | 1948-2013        |
| MT    | HOLTER DAM       | 24-4241 | 15M                 | 46.9908  | -112.0117 | 3487           | NCEI    | 1971-2013        |
| MT    | HUNGRY HORSE DAM | 24-4328 | 15M                 | 48.3425  | -114.0217 | 3160           | NCEI    | 1987-2013        |
| MT    | HUNGRY HORSE DAM | 24-4328 | DLY                 | 48.3425  | -114.0217 | 3160           | NCEI    | 1947-2023        |
| MT    | HUNGRY HORSE DAM | 24-4328 | HLY                 | 48.3425  | -114.0217 | 3160           | NCEI    | 1987-2013        |
| MT    | HUNTLEY EXP STN  | 24-4345 | DLY                 | 45.9228  | -108.2453 | 3034           | NCEI    | 1910-2023        |
| MT    | HYSHAM           | 24-4358 | DLY                 | 46.2897  | -107.2306 | 2669           | NCEI    | 1945-2023        |
| MT    | HYSHAM 25 SSE    | 24-4364 | DLY                 | 45.9353  | -107.1375 | 3100           | NCEI    | 1951-2023        |
| MT    | ILIAD            | 24-4368 | HLY                 | 47.8056  | -109.8100 | 2965           | NCEI    | 1948-2001        |
| MT    | ILIAD            | 24-4368 | 15M                 | 47.8056  | -109.8100 | 2965           | NCEI    | 1984-2001        |
| MT    | ILIAD            | 24-4368 | DLY                 | 47.8056  | -109.8100 | 2965           | NCEI    | 1949-2001        |
| MT    | INGOMAR 9 E      | 24-4386 | DLY                 | 46.5675  | -107.1950 | 2800           | NCEI    | 1953-2023        |
| MT    | ISMAY            | 24-4442 | HLY                 | 46.5400  | -104.7522 | 2715           | NCEI    | 1948-2013        |
| MT    | ISMAY            | 24-4442 | DLY                 | 46.4997  | -104.7997 | 2500           | NCEI    | 1950-1951        |
| MT    | ISMAY            | 24-4442 | 15M                 | 46.5400  | -104.7522 | 2715           | NCEI    | 1984-2013        |

| State | Station Name         | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | JACKSON              | 24-4447 | DLY                 | 45.3681  | -113.4089 | 6480           | NCEI    | 1949-2013        |
| MT    | JOLIET               | 24-4506 | DLY                 | 45.4733  | -109.0106 | 3838           | NCEI    | 1951-2021        |
| MT    | JOPLIN               | 24-4512 | 15M                 | 48.5594  | -110.7719 | 3323           | NCEI    | 1979-2013        |
| MT    | JOPLIN               | 24-4512 | DLY                 | 48.5594  | -110.7719 | 3323           | NCEI    | 1931-2023        |
| MT    | JOPLIN               | 24-4512 | HLY                 | 48.5594  | -110.7719 | 3323           | NCEI    | 1948-2013        |
| MT    | JORDAN               | 24-4522 | DLY                 | 47.3144  | -106.9103 | 2620           | NCEI    | 1904-2018        |
| MT    | JUDITH GAP           | 24-4538 | DLY                 | 46.6778  | -109.7506 | 4630           | NCEI    | 1950-2022        |
| MT    | JUDITH GAP 13 E      | 24-4545 | DLY                 | 46.6103  | -109.4736 | 4791           | NCEI    | 1964-2021        |
| MT    | KALISPELL GLACIER AP | 24-4558 | DLY                 | 48.3042  | -114.2636 | 2957           | NCEI    | 1896-2023        |
| MT    | KALISPELL GLACIER AP | 24-4558 | HLY                 | 48.3042  | -114.2636 | 2957           | NCEI    | 1949-2013        |
| MT    | KALISPELL            | 24-4563 | DLY                 | 48.1892  | -114.3114 | 2940           | NCEI    | 1948-2006        |
| MT    | KALISPELL            | 24-4563 | HLY                 | 48.1892  | -114.3114 | 2940           | NCEI    | 1948-1953        |
| MT    | KILA                 | 24-4645 | DLY                 | 48.1167  | -114.4667 | 3255           | NCEI    | 1963-1991        |
| MT    | KNOBS 4 SW           | 24-4715 | DLY                 | 45.8728  | -104.1583 | 3086           | NCEI    | 1951-2023        |
| MT    | KNOWLTON             | 24-4730 | DLY                 | 46.3000  | -105.0000 | 3600           | NCEI    | 1914-1943        |
| MT    | KREMLIN              | 24-4766 | DLY                 | 48.5217  | -110.1075 | 2860           | NCEI    | 1914-2015        |
| MT    | LAKEVIEW             | 24-4820 | HLY                 | 44.5994  | -111.8125 | 6710           | NCEI    | 1948-2013        |
| MT    | LAKEVIEW             | 24-4820 | 15M                 | 44.5994  | -111.8125 | 6710           | NCEI    | 1971-2013        |
| MT    | LAKEVIEW             | 24-4820 | DLY                 | 44.5994  | -111.8125 | 6710           | NCEI    | 1904-2023        |
| MT    | LAME DEER            | 24-4839 | DLY                 | 45.6258  | -106.6642 | 3300           | NCEI    | 1902-1998        |
| MT    | LAUREL 3 WSW         | 24-4894 | DLY                 | 45.6667  | -108.8167 | 3319           | NCEI    | 1951-1994        |
| MT    | LAVINA               | 24-4904 | HLY                 | 46.2931  | -108.9417 | 3434           | NCEI    | 1948-2013        |
| MT    | LAVINA               | 24-4904 | 15M                 | 46.2931  | -108.9417 | 3434           | NCEI    | 1984-2013        |
| MT    | LAVINA               | 24-4904 | DLY                 | 46.2931  | -108.9417 | 3434           | NCEI    | 1950-1951        |
| MT    | LENNEP 5 SW          | 24-4954 | DLY                 | 46.3614  | -110.5997 | 5600           | NCEI    | 1959-2019        |
| MT    | LEWISTOWN 11 SSE     | 24-4978 | DLY                 | 46.9058  | -109.4114 | 4965           | NCEI    | 1949-2023        |
| MT    | LEWISTOWN 2 SW       | 24-4983 | 15M                 | 47.0511  | -109.4425 | 4100           | NCEI    | 1972-2013        |
| MT    | LEWISTOWN 2 SW       | 24-4983 | HLY                 | 47.0511  | -109.4425 | 4100           | NCEI    | 1953-2013        |
| MT    | LIBBY DAM            | 24-5009 | DLY                 | 48.4057  | -115.3135 | 2201           | NCEI    | 1969-1986        |

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|-------|-----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | LIBBY DAM (BASE)      | 24-5011 | DLY                 | 48.4100  | -115.3181 | 2110           | NCEI    | 1986-2023        |
| MT    | LIBBY 1 NE RS         | 24-5015 | DLY                 | 48.4036  | -115.5392 | 2096           | NCEI    | 1895-2022        |
| MT    | LIBBY 1 NE RS         | 24-5015 | 15M                 | 48.4036  | -115.5392 | 2096           | NCEI    | 1977-2013        |
| MT    | LIBBY 1 NE RS         | 24-5015 | HLY                 | 48.4036  | -115.5392 | 2096           | NCEI    | 1948-2013        |
| MT    | LIBBY 32 SSE          | 24-5020 | DLY                 | 47.9578  | -115.2144 | 3440           | NCEI    | 1910-2021        |
| MT    | LIMA                  | 24-5030 | DLY                 | 44.6331  | -112.5928 | 6279           | NCEI    | 1898-2023        |
| MT    | LIMA                  | 24-5030 | 15M                 | 44.6331  | -112.5928 | 6279           | NCEI    | 1984-2013        |
| MT    | LIMA                  | 24-5030 | HLY                 | 44.6331  | -112.5928 | 6279           | NCEI    | 1948-2013        |
| MT    | LINCOLN RS            | 24-5040 | HLY                 | 46.9558  | -112.6547 | 4575           | NCEI    | 1971-2013        |
| MT    | LINCOLN RS            | 24-5040 | DLY                 | 46.9558  | -112.6547 | 4575           | NCEI    | 1948-2023        |
| MT    | LINCOLN RS            | 24-5040 | 15M                 | 46.9558  | -112.6547 | 4575           | NCEI    | 1971-2013        |
| MT    | LINDBERGH LAKE        | 24-5043 | DLY                 | 47.4083  | -113.7125 | 4320           | NCEI    | 1959-2023        |
| MT    | LINDSAY               | 24-5045 | DLY                 | 47.2253  | -105.1522 | 2693           | NCEI    | 1915-2023        |
| MT    | LIVINGSTON            | 24-5076 | DLY                 | 45.6667  | -110.5667 | 4491           | NCEI    | 1895-1981        |
| MT    | LIVINGSTON 12 S       | 24-5080 | DLY                 | 45.4956  | -110.5589 | 5044           | NCEI    | 1951-2023        |
| MT    | LIVINGSTON AP         | 24-5086 | HLY                 | 45.6983  | -110.4408 | 4643           | NCEI    | 1942-2013        |
| MT    | LIVINGSTON AP         | 24-5086 | 15M                 | 45.6983  | -110.4408 | 4643           | NCEI    | 1984-2006        |
| MT    | LIVINGSTON RAIN GAUGE | 24-5088 | DLY                 | 45.6969  | -110.4539 | 4697           | NCEI    | 2009-2021        |
| MT    | LIVINGSTON RAIN GAUGE | 24-5088 | HLY                 | 45.6969  | -110.4539 | 4697           | NCEI    | 2009-2013        |
| MT    | LIVINGSTON RAIN GAUGE | 24-5088 | 15M                 | 45.6969  | -110.4539 | 4697           | NCEI    | 2009-2013        |
| MT    | LODGE GRASS           | 24-5106 | DLY                 | 45.3164  | -107.3594 | 3360           | NCEI    | 1904-1951        |
| MT    | LODGE GRASS           | 24-5106 | HLY                 | 45.3789  | -107.3786 | 3263           | NCEI    | 1949-2013        |
| MT    | LODGE GRASS           | 24-5106 | 15M                 | 45.3789  | -107.3786 | 3263           | NCEI    | 1971-2013        |
| MT    | LOGAN 2 W             | 24-5122 | HLY                 | 45.8908  | -111.4589 | 4089           | NCEI    | 1971-2013        |
| MT    | LOGAN 2 W             | 24-5122 | 15M                 | 45.8908  | -111.4589 | 4089           | NCEI    | 1971-2013        |
| MT    | LOLO HOT SPRINGS      | 24-5144 | DLY                 | 46.7258  | -114.5331 | 4175           | NCEI    | 2008-2023        |
| MT    | LOLO HOT SPRINGS 2 NE | 24-5146 | HLY                 | 46.7506  | -114.5139 | 4055           | NCEI    | 1971-2013        |
| MT    | LOLO HOT SPRINGS 2 NE | 24-5146 | 15M                 | 46.7506  | -114.5139 | 4055           | NCEI    | 1971-2013        |
| MT    | LOLO HOT SPRINGS 2 NE | 24-5146 | DLY                 | 46.7506  | -114.5139 | 4055           | NCEI    | 1959-1984        |



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|-------|--------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | LOMA               | 24-5153 | DLY                 | 47.9364  | -110.5025 | 2578           | NCEI    | 1950-2023        |
| MT    | LONEPINE 1 WNW     | 24-5164 | HLY                 | 47.7167  | -114.6500 | 2881           | NCEI    | 1951-1969        |
| MT    | LONEPINE 1 WNW     | 24-5164 | DLY                 | 47.7167  | -114.6500 | 2881           | NCEI    | 1918-1969        |
| MT    | LONESOME LAKE      | 24-5177 | DLY                 | 48.2500  | -110.2000 | 2762           | NCEI    | 1948-1981        |
| MT    | LORING 10 N        | 24-5191 | DLY                 | 48.9500  | -107.8167 | 2661           | NCEI    | 1951-1975        |
| MT    | LOWETH             | 24-5235 | DLY                 | 46.3667  | -110.7000 | 5804           | NCEI    | 1926-1959        |
| MT    | LUSTRE 4 NNW       | 24-5285 | DLY                 | 48.4500  | -105.9333 | 2923           | NCEI    | 1921-1993        |
| MT    | LUSTRE 4 NNW       | 24-5285 | HLY                 | 48.4500  | -105.9333 | 2923           | NCEI    | 1949-1958        |
| MT    | MACKENZIE          | 24-5303 | DLY                 | 46.1422  | -104.7353 | 2810           | NCEI    | 1950-2023        |
| MT    | MALTA              | 24-5334 | DLY                 | 48.3589  | -107.8714 | 2262           | NCEI    | 1996-2023        |
| MT    | MALTA #2           | 24-5335 | 15M                 | 48.3469  | -107.8769 | 2288           | NCEI    | 1999-2013        |
| MT    | MALTA #2           | 24-5335 | HLY                 | 48.3469  | -107.8769 | 2288           | NCEI    | 1999-2013        |
| MT    | MALTA              | 24-5337 | DLY                 | 48.3500  | -107.8667 | 2260           | NCEI    | 1905-1972        |
| MT    | MALTA 7 E          | 24-5338 | DLY                 | 48.3939  | -107.7286 | 2231           | NCEI    | 1972-2023        |
| MT    | MALTA 35 S         | 24-5340 | DLY                 | 47.8417  | -107.9556 | 2615           | NCEI    | 1959-2023        |
| MT    | MANHATTAN          | 24-5351 | DLY                 | 45.8667  | -111.3333 | 4232           | NCEI    | 1895-1983        |
| MT    | MANY GLACIER       | 24-5361 | DLY                 | 48.8000  | -113.6500 | 4892           | NCEI    | 1967-1980        |
| MT    | MARTINSDALE 3 NNW  | 24-5387 | HLY                 | 46.5000  | -110.3378 | 4800           | NCEI    | 1941-2012        |
| MT    | MARTINSDALE 3 NNW  | 24-5387 | DLY                 | 46.5000  | -110.3378 | 4800           | NCEI    | 1892-2012        |
| MT    | MARTINSDALE 3 NNW  | 24-5387 | 15M                 | 46.5000  | -110.3378 | 4800           | NCEI    | 1971-2012        |
| MT    | MARYSVILLE 1 SW    | 24-5402 | DLY                 | 46.7500  | -112.3000 | 5801           | NCEI    | 1894-1982        |
| MT    | MARYSVILLE 3       | 24-5405 | DLY                 | 46.7500  | -112.3000 | 5384           | NCEI    | 1958-1971        |
| MT    | MEDICINE LAKE 3 SE | 24-5572 | DLY                 | 48.4828  | -104.4514 | 1942           | NCEI    | 1910-2023        |
| MT    | MELSTONE           | 24-5596 | DLY                 | 46.6008  | -107.8706 | 2932           | NCEI    | 1909-2023        |
| MT    | MELVILLE 4 W       | 24-5603 | DLY                 | 46.1047  | -110.0500 | 5365           | NCEI    | 1960-2023        |
| MT    | MENARD 3 NE        | 24-5608 | DLY                 | 45.9994  | -111.1328 | 5053           | NCEI    | 1952-2011        |
| MT    | MILDRED            | 24-5666 | DLY                 | 46.6833  | -104.9500 | 2411           | NCEI    | 1909-1978        |
| MT    | MILDRED 5 N        | 24-5668 | DLY                 | 46.7614  | -104.9622 | 2482           | NCEI    | 1979-2023        |
| MT    | MILES CITY         | 24-5685 | HLY                 | 46.4000  | -105.8167 | 2362           | NCEI    | 1948-1972        |

| State | Station Name             | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | MILES CITY               | 24-5685 | DLY                 | 46.4000  | -105.8167 | 2362           | NCEI    | 1892-1982        |
| MT    | MILES CITY AP            | 24-5690 | 15M                 | 46.4267  | -105.8825 | 2624           | NCEI    | 1984-1985        |
| MT    | MILES CITY AP            | 24-5690 | HLY                 | 46.4267  | -105.8825 | 2624           | NCEI    | 1948-2013        |
| MT    | MILLEGAN                 | 24-5706 | HLY                 | 47.0206  | -111.3700 | 4500           | NCEI    | 1948-2013        |
| MT    | MILLEGAN                 | 24-5706 | DLY                 | 47.0211  | -111.3689 | 4500           | NCEI    | 1950-1951        |
| MT    | MILLEGAN                 | 24-5706 | 15M                 | 47.0206  | -111.3700 | 4500           | NCEI    | 1971-2013        |
| MT    | MILLEGAN 14 SE           | 24-5712 | DLY                 | 46.8747  | -111.1642 | 4970           | NCEI    | 1984-2023        |
| MT    | MISSOULA 2 NE            | 24-5735 | DLY                 | 46.8983  | -113.9678 | 3420           | NCEI    | 1966-2013        |
| MT    | MISSOULA 6 NW WFO        | 24-5740 | DLY                 | 46.9244  | -114.0911 | 3197           | NCEI    | 1893-2023        |
| MT    | MISSOULA INTL AP         | 24-5745 | HLY                 | 46.9208  | -114.0925 | 3192           | NCEI    | 1948-2013        |
| MT    | MIZPAH 4 NNW             | 24-5754 | DLY                 | 46.2858  | -105.2919 | 2480           | NCEI    | 1949-2023        |
| MT    | MOCCASIN EXP STN         | 24-5761 | DLY                 | 47.0572  | -109.9511 | 4300           | NCEI    | 1908-2021        |
| MT    | MOLT 6 SW                | 24-5791 | DLY                 | 45.7847  | -108.9664 | 3990           | NCEI    | 1950-2023        |
| MT    | MOLT 6 SW                | 24-5791 | HLY                 | 45.7847  | -108.9664 | 3990           | NCEI    | 1948-2013        |
| MT    | MOLT 6 SW                | 24-5791 | 15M                 | 45.7847  | -108.9664 | 3990           | NCEI    | 1984-2013        |
| MT    | MONIDA                   | 24-5811 | DLY                 | 44.5667  | -112.3167 | 6785           | NCEI    | 1949-1992        |
| MT    | MOORHEAD 9 NE            | 24-5870 | DLY                 | 45.1758  | -105.7517 | 3220           | NCEI    | 1958-2023        |
| MT    | MOORHEAD 9 NE            | 24-5870 | HLY                 | 45.1758  | -105.7517 | 3220           | NCEI    | 1958-1958        |
| MT    | MOSBY 4 ENE              | 24-5872 | DLY                 | 47.0219  | -107.8225 | 2910           | NCEI    | 1959-2023        |
| MT    | MYSTIC LAKE              | 24-5961 | DLY                 | 45.2436  | -109.7311 | 6544           | NCEI    | 1924-2023        |
| MT    | MYSTIC LAKE              | 24-5961 | HLY                 | 45.2436  | -109.7311 | 6544           | NCEI    | 1951-1958        |
| MT    | NEIHART 7 NW             | 24-6007 | DLY                 | 47.0381  | -110.7861 | 4945           | NCEI    | 2005-2016        |
| MT    | NEIHART 8 NNW            | 24-6008 | HLY                 | 47.0414  | -110.7761 | 5230           | NCEI    | 1967-2013        |
| MT    | NEIHART 8 NNW            | 24-6008 | DLY                 | 47.0414  | -110.7761 | 5230           | NCEI    | 1967-2005        |
| MT    | NEIHART 8 NNW            | 24-6008 | 15M                 | 47.0414  | -110.7761 | 5230           | NCEI    | 1972-2013        |
| MT    | NORRIS MADISON PWR HOUSE | 24-6157 | DLY                 | 45.4875  | -111.6336 | 4745           | NCEI    | 1906-2023        |
| MT    | NYE #2                   | 24-6190 | DLY                 | 45.4350  | -109.8081 | 4840           | NCEI    | 1905-2021        |
| MT    | OLNEY                    | 24-6218 | DLY                 | 48.5497  | -114.5739 | 3165           | NCEI    | 1962-2017        |
| MT    | OPHEIM 10 N              | 24-6236 | DLY                 | 48.9989  | -106.3800 | 2878           | NCEI    | 1956-2023        |

| State | Station Name            | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | OPHEIM 12 SSE           | 24-6238 | DLY                 | 48.6956  | -106.3153 | 2936           | NCEI    | 1943-2023        |
| MT    | OVANDO                  | 24-6302 | 15M                 | 47.0189  | -113.1314 | 4109           | NCEI    | 1971-2013        |
| MT    | OVANDO                  | 24-6302 | HLY                 | 47.0189  | -113.1314 | 4109           | NCEI    | 1971-2013        |
| MT    | OVANDO                  | 24-6302 | DLY                 | 47.0189  | -113.1314 | 4109           | NCEI    | 1899-2023        |
| MT    | OVANDO 9 SSE            | 24-6304 | DLY                 | 46.8819  | -113.0564 | 4325           | NCEI    | 1976-2011        |
| MT    | PENDROY 2 NNW           | 24-6426 | HLY                 | 48.1167  | -112.3333 | 4365           | NCEI    | 1949-1950        |
| MT    | PENDROY 2 NNW           | 24-6426 | DLY                 | 48.1167  | -112.3333 | 4365           | NCEI    | 1940-1990        |
| MT    | PHILIPSBURG             | 24-6470 | DLY                 | 46.3333  | -113.3000 | 5282           | NCEI    | 1903-1955        |
| MT    | PHILLIPSBURG RS         | 24-6472 | 15M                 | 46.3158  | -113.3000 | 5270           | NCEI    | 1978-2013        |
| MT    | PHILLIPSBURG RS         | 24-6472 | HLY                 | 46.3158  | -113.3000 | 5270           | NCEI    | 1978-2013        |
| MT    | PHILLIPSBURG RS         | 24-6472 | DLY                 | 46.3158  | -113.3000 | 5270           | NCEI    | 1955-2023        |
| MT    | PLAINS RS               | 24-6562 | 15M                 | 47.4661  | -114.8794 | 2490           | NCEI    | 1978-2013        |
| MT    | PLAINS RS               | 24-6562 | HLY                 | 47.4661  | -114.8794 | 2490           | NCEI    | 1948-2013        |
| MT    | PLAINS RS               | 24-6562 | DLY                 | 47.4661  | -114.8794 | 2490           | NCEI    | 1898-1951        |
| MT    | PLEASANT VALLEY         | 24-6576 | DLY                 | 48.1333  | -114.9167 | 3602           | NCEI    | 1906-1972        |
| MT    | PLEASANT VALLEY 5 SE    | 24-6580 | 15M                 | 48.1056  | -114.8778 | 3540           | NCEI    | 1975-2013        |
| MT    | PLEASANT VALLEY 5 SE    | 24-6580 | DLY                 | 48.1056  | -114.8778 | 3540           | NCEI    | 1950-2023        |
| MT    | PLEASANT VALLEY 5 SE    | 24-6580 | HLY                 | 48.1056  | -114.8778 | 3540           | NCEI    | 1948-2013        |
| MT    | PLENTYWOOD              | 24-6586 | HLY                 | 48.7747  | -104.5672 | 2048           | NCEI    | 1948-1951        |
| MT    | PLENTYWOOD              | 24-6586 | DLY                 | 48.7747  | -104.5672 | 2048           | NCEI    | 1906-2023        |
| MT    | PLEVNA                  | 24-6601 | DLY                 | 46.4178  | -104.5164 | 2780           | NCEI    | 1910-2023        |
| MT    | POLEBRIDGE              | 24-6615 | HLY                 | 48.7647  | -114.2842 | 3520           | NCEI    | 1948-2013        |
| MT    | POLEBRIDGE              | 24-6615 | 15M                 | 48.7647  | -114.2842 | 3520           | NCEI    | 1971-2013        |
| MT    | POLEBRIDGE              | 24-6615 | DLY                 | 48.7647  | -114.2842 | 3520           | NCEI    | 1933-2000        |
| MT    | POLEBRIDGE 1 N          | 24-6618 | DLY                 | 48.7792  | -114.2889 | 3540           | NCEI    | 2006-2010        |
| MT    | POLEBRIDGE FLATHEAD RVR | 24-6628 | HLY                 | 48.7831  | -114.2819 | 3534           | NCEI    | 1980-1989        |
| MT    | POLEBRIDGE FLATHEAD RVR | 24-6628 | 15M                 | 48.7831  | -114.2819 | 3534           | NCEI    | 1980-1989        |
| MT    | POLSON                  | 24-6635 | DLY                 | 47.6750  | -114.1906 | 3010           | NCEI    | 1906-2015        |
| MT    | SKQ DAM                 | 24-6640 | DLY                 | 47.6775  | -114.2419 | 2730           | NCEI    | 1951-2023        |

| State | Station Name       | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | PONY               | 24-6655 | DLY                 | 45.6572  | -111.8986 | 5590           | NCEI    | 1894-1998        |
| MT    | POPLAR 2 E         | 24-6660 | DLY                 | 48.1333  | -105.1500 | 2000           | NCEI    | 1892-1991        |
| MT    | PORT OF MORGAN     | 24-6672 | DLY                 | 48.9978  | -107.8331 | 2830           | NCEI    | 1976-2023        |
| MT    | POTOMAC            | 24-6685 | DLY                 | 46.8767  | -113.5625 | 3690           | NCEI    | 1964-2023        |
| MT    | POWDERVILLE 8 NNE  | 24-6691 | DLY                 | 45.8525  | -105.0350 | 2800           | NCEI    | 1964-2023        |
| MT    | POWER 6 SE         | 24-6700 | DLY                 | 47.6544  | -111.5981 | 3750           | NCEI    | 1952-2014        |
| MT    | PRYOR              | 24-6747 | DLY                 | 45.4339  | -108.5361 | 4057           | NCEI    | 1950-2020        |
| MT    | RAPELJE            | 24-6862 | DLY                 | 45.9717  | -109.2536 | 4068           | NCEI    | 1908-2021        |
| MT    | RAYMOND BORDER STN | 24-6893 | DLY                 | 48.9975  | -104.5750 | 2345           | NCEI    | 1950-2023        |
| MT    | RAYNESFORD         | 24-6900 | DLY                 | 47.2833  | -110.7333 | 4222           | NCEI    | 1954-1970        |
| MT    | RAYNESFORD 2 NNW   | 24-6902 | DLY                 | 47.2972  | -110.7456 | 4215           | NCEI    | 1970-2013        |
| MT    | RED LODGE          | 24-6918 | DLY                 | 45.1769  | -109.2572 | 5646           | NCEI    | 1893-2023        |
| MT    | REDSTONE           | 24-6927 | DLY                 | 48.8197  | -104.9428 | 2106           | NCEI    | 1951-2011        |
| MT    | REEDPOINT          | 24-6946 | DLY                 | 45.7058  | -109.5389 | 3744           | NCEI    | 1950-1951        |
| MT    | REEDPOINT          | 24-6946 | 15M                 | 45.7061  | -109.5400 | 3744           | NCEI    | 1984-2013        |
| MT    | REEDPOINT          | 24-6946 | HLY                 | 45.7061  | -109.5400 | 3744           | NCEI    | 1948-2013        |
| MT    | RENOVA             | 24-6964 | DLY                 | 45.8167  | -112.1500 | 4383           | NCEI    | 1897-1932        |
| MT    | RIDGE 2 WSW        | 24-7028 | HLY                 | 45.0333  | -105.0333 | 4124           | NCEI    | 1951-1973        |
| MT    | RIDGE 2 WSW        | 24-7028 | DLY                 | 45.0333  | -105.0333 | 4124           | NCEI    | 1898-1952        |
| MT    | RIDGEWAY 1 S       | 24-7034 | DLY                 | 45.5022  | -104.4478 | 3316           | NCEI    | 1952-2023        |
| MT    | ROBERTS 1 W        | 24-7128 | DLY                 | 45.3572  | -109.1883 | 4650           | NCEI    | 1951-2023        |
| MT    | ROCK SPRINGS       | 24-7136 | DLY                 | 46.8203  | -106.2453 | 3024           | NCEI    | 1951-2013        |
| MT    | ROCK SPRINGS 7 SE  | 24-7140 | DLY                 | 46.7833  | -106.1333 | 3202           | NCEI    | 1915-1950        |
| MT    | ROCKY BOY          | 24-7148 | DLY                 | 48.2500  | -109.7833 | 3691           | NCEI    | 1951-1987        |
| MT    | ROGERS PASS 9 NNE  | 24-7159 | DLY                 | 47.1900  | -112.2900 | 4200           | NCEI    | 1964-2022        |
| MT    | ROUND BUTTE 1 NNW  | 24-7204 | HLY                 | 47.5375  | -114.2761 | 3100           | NCEI    | 1948-2013        |
| MT    | ROUND BUTTE 1 NNW  | 24-7204 | DLY                 | 47.5375  | -114.2761 | 3100           | NCEI    | 1950-1951        |
| MT    | ROUND BUTTE 1 NNW  | 24-7204 | 15M                 | 47.5375  | -114.2761 | 3100           | NCEI    | 1975-2013        |
| MT    | ROUNDUP            | 24-7214 | DLY                 | 46.4381  | -108.5319 | 3200           | NCEI    | 1914-2019        |

| State | Station Name      | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | ROY 8 NE          | 24-7228 | DLY                 | 47.4869  | -108.8372 | 3085           | NCEI    | 1938-2005        |
| MT    | RUDYARD 27 N      | 24-7250 | DLY                 | 48.9375  | -110.5661 | 3010           | NCEI    | 1960-1998        |
| MT    | RUSSELL           | 24-7258 | HLY                 | 48.0686  | -111.0661 | 3200           | NCEI    | 1948-2013        |
| MT    | RUSSELL           | 24-7258 | 15M                 | 48.0686  | -111.0661 | 3200           | NCEI    | 1981-2013        |
| MT    | RUSSELL           | 24-7258 | DLY                 | 48.0644  | -111.0633 | 3200           | NCEI    | 1950-1951        |
| MT    | RYEGATE           | 24-7261 | DLY                 | 46.2986  | -109.2561 | 3650           | NCEI    | 1909-2023        |
| MT    | RYEGATE 18 NNW    | 24-7263 | DLY                 | 46.5333  | -109.3442 | 4440           | NCEI    | 1962-2023        |
| MT    | SACO 1 NNW        | 24-7265 | DLY                 | 48.4661  | -107.3528 | 2185           | NCEI    | 1966-2023        |
| MT    | SAINT IGNATIUS    | 24-7286 | DLY                 | 47.3150  | -114.0983 | 2915           | NCEI    | 1895-2023        |
| MT    | ST MARY           | 24-7292 | HLY                 | 48.7386  | -113.4294 | 4560           | NCEI    | 1981-2013        |
| MT    | ST MARY           | 24-7292 | 15M                 | 48.7386  | -113.4294 | 4560           | NCEI    | 1981-2013        |
| MT    | ST MARY           | 24-7292 | DLY                 | 48.7386  | -113.4294 | 4560           | NCEI    | 1981-2023        |
| MT    | ST. REGIS         | 24-7314 | DLY                 | 47.3000  | -115.0833 | 2668           | NCEI    | 1907-1911        |
| MT    | ST REGIS-CLARK FK | 24-7316 | 15M                 | 47.3019  | -115.0864 | 2600           | NCEI    | 1971-2013        |
| MT    | ST REGIS-CLARK FK | 24-7316 | HLY                 | 47.3019  | -115.0864 | 2600           | NCEI    | 1971-2013        |
| MT    | SAINT REGIS 1 NE  | 24-7318 | DLY                 | 47.3036  | -115.0908 | 2660           | NCEI    | 1960-2014        |
| MT    | SAVAGE            | 24-7382 | DLY                 | 47.4536  | -104.3378 | 1978           | NCEI    | 1905-2022        |
| MT    | SCOBEEY           | 24-7424 | DLY                 | 48.7833  | -105.4167 | 2458           | NCEI    | 1948-1987        |
| MT    | SCOBEEY 4 NW      | 24-7425 | HLY                 | 48.8356  | -105.4747 | 2390           | NCEI    | 1979-2013        |
| MT    | SCOBEEY 4 NW      | 24-7425 | DLY                 | 48.8356  | -105.4747 | 2390           | NCEI    | 1987-2023        |
| MT    | SCOBEEY 4 NW      | 24-7425 | 15M                 | 48.8356  | -105.4747 | 2390           | NCEI    | 1979-2013        |
| MT    | SEELEY LAKE RS    | 24-7448 | DLY                 | 47.2142  | -113.5203 | 4100           | NCEI    | 1936-2023        |
| MT    | SEELEY LAKE RS    | 24-7448 | HLY                 | 47.2142  | -113.5203 | 4100           | NCEI    | 1948-2013        |
| MT    | SEELEY LAKE RS    | 24-7448 | 15M                 | 47.2142  | -113.5203 | 4100           | NCEI    | 1971-2013        |
| MT    | SHELBY            | 24-7500 | DLY                 | 48.5133  | -111.8550 | 3325           | NCEI    | 1950-2023        |
| MT    | SHELBY            | 24-7500 | HLY                 | 48.5133  | -111.8550 | 3325           | NCEI    | 1948-2013        |
| MT    | SHELBY            | 24-7500 | 15M                 | 48.5133  | -111.8550 | 3325           | NCEI    | 1992-2013        |
| MT    | SHELBY AP         | 24-7501 | HLY                 | 48.5500  | -111.8667 | 3426           | NCEI    | 1958-1989        |
| MT    | SHELBY AP         | 24-7501 | 15M                 | 48.5500  | -111.8667 | 3426           | NCEI    | 1971-1989        |

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|-------|-------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | SHELBY AP               | 24-7501 | DLY                 | 48.5500  | -111.8667 | 3426           | NCEI    | 1958-1988        |
| MT    | SHONKIN 7 S             | 24-7540 | DLY                 | 47.5314  | -110.5764 | 4300           | NCEI    | 1953-2023        |
| MT    | SIDNEY                  | 24-7560 | DLY                 | 47.7283  | -104.1469 | 1933           | NCEI    | 1910-2023        |
| MT    | SIDNEY 2 S              | 24-7562 | DLY                 | 47.6794  | -104.1578 | 1920           | NCEI    | 2011-2023        |
| MT    | SILVER GATE             | 24-7603 | DLY                 | 45.0156  | -109.9683 | 7495           | NCEI    | 2012-2020        |
| MT    | SILVER LAKE             | 24-7605 | DLY                 | 46.1667  | -113.2167 | 6483           | NCEI    | 1950-1983        |
| MT    | SILVERSTAR              | 24-7610 | DLY                 | 45.6950  | -112.2844 | 4580           | NCEI    | 1950-1951        |
| MT    | SILVERSTAR              | 24-7610 | 15M                 | 45.6917  | -112.2833 | 4585           | NCEI    | 1984-2013        |
| MT    | SILVERSTAR              | 24-7610 | HLY                 | 45.6917  | -112.2833 | 4585           | NCEI    | 1948-2013        |
| MT    | SIMMS 1 NE              | 24-7618 | HLY                 | 47.4961  | -111.9161 | 3558           | NCEI    | 1971-1984        |
| MT    | SIMMS 1 NE              | 24-7618 | 15M                 | 47.4961  | -111.9161 | 3558           | NCEI    | 1971-1984        |
| MT    | SIMMS 1 NE              | 24-7618 | DLY                 | 47.4961  | -111.9161 | 3558           | NCEI    | 1984-2014        |
| MT    | SIMPSON 6 N - WILDHORSE | 24-7620 | DLY                 | 48.9981  | -110.2158 | 2815           | NCEI    | 1931-2023        |
| MT    | SONNETTE 7 SW           | 24-7740 | DLY                 | 45.3242  | -105.9136 | 3914           | NCEI    | 1965-2023        |
| MT    | SPRINGBROOK             | 24-7796 | DLY                 | 47.3838  | -105.4797 | 2580           | NCEI    | 1901-1928        |
| MT    | SPRINGDALE              | 24-7800 | DLY                 | 45.7383  | -110.2242 | 4235           | NCEI    | 1951-2023        |
| MT    | STANFORD                | 24-7858 | HLY                 | 47.1500  | -110.2167 | 4281           | NCEI    | 1949-1958        |
| MT    | STANFORD                | 24-7858 | DLY                 | 47.1500  | -110.2167 | 4281           | NCEI    | 1927-1964        |
| MT    | STANFORD                | 24-7864 | DLY                 | 47.1550  | -110.2239 | 4275           | NCEI    | 1964-2023        |
| MT    | STEVENSVILLE            | 24-7894 | HLY                 | 46.5136  | -114.0911 | 3375           | NCEI    | 1978-2013        |
| MT    | STEVENSVILLE            | 24-7894 | DLY                 | 46.5136  | -114.0911 | 3375           | NCEI    | 1911-2023        |
| MT    | STEVENSVILLE            | 24-7894 | 15M                 | 46.5136  | -114.0911 | 3375           | NCEI    | 1978-2013        |
| MT    | SULA 3 ENE              | 24-7964 | DLY                 | 45.8478  | -113.9269 | 4475           | NCEI    | 1955-2023        |
| MT    | SUMMIT                  | 24-7978 | 15M                 | 48.3161  | -113.3542 | 5233           | NCEI    | 1973-2013        |
| MT    | SUMMIT                  | 24-7978 | HLY                 | 48.3161  | -113.3542 | 5233           | NCEI    | 1948-2013        |
| MT    | SUMMIT                  | 24-7978 | DLY                 | 48.3161  | -113.3542 | 5233           | NCEI    | 1902-1979        |
| MT    | SUNBURST 8 E            | 24-7996 | DLY                 | 48.8869  | -111.7275 | 3700           | NCEI    | 1951-2014        |
| MT    | SUN RVR 4 S             | 24-8021 | DLY                 | 47.4772  | -111.7375 | 3600           | NCEI    | 1912-2023        |
| MT    | SWAN LAKE               | 24-8087 | 15M                 | 47.9161  | -113.8389 | 3100           | NCEI    | 1972-2013        |

| State | Station Name      | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | SWAN LAKE         | 24-8087 | DLY                 | 47.9161  | -113.8389 | 3100           | NCEI    | 1950-2012        |
| MT    | SWAN LAKE         | 24-8087 | HLY                 | 47.9161  | -113.8389 | 3100           | NCEI    | 1948-2013        |
| MT    | SWEETGRASS        | 24-8093 | DLY                 | 48.9972  | -111.9642 | 3510           | NCEI    | 1924-2008        |
| MT    | SWEETGRASS        | 24-8093 | HLY                 | 48.9972  | -111.9642 | 3510           | NCEI    | 1951-1958        |
| MT    | SWIFT DAM         | 24-8101 | 15M                 | 48.1633  | -112.8672 | 4780           | NCEI    | 1976-2013        |
| MT    | SWIFT DAM         | 24-8101 | DLY                 | 48.1639  | -112.8669 | 4780           | NCEI    | 1965-1967        |
| MT    | SWIFT DAM         | 24-8101 | HLY                 | 48.1633  | -112.8672 | 4780           | NCEI    | 1965-2013        |
| MT    | TERRY             | 24-8165 | DLY                 | 46.7939  | -105.3022 | 2250           | NCEI    | 1949-2023        |
| MT    | TERRY 21 NNW      | 24-8169 | DLY                 | 47.0700  | -105.4953 | 3142           | NCEI    | 1949-2018        |
| MT    | TERRY 21 NNW      | 24-8169 | HLY                 | 47.0700  | -105.4953 | 3142           | NCEI    | 1940-2013        |
| MT    | TERRY 21 NNW      | 24-8169 | 15M                 | 47.0700  | -105.4953 | 3142           | NCEI    | 1984-2013        |
| MT    | THOENY 1 E        | 24-8202 | DLY                 | 48.8833  | -106.8833 | 2461           | NCEI    | 1951-1966        |
| MT    | THOMPSON FALLS    | 24-8207 | DLY                 | 47.6000  | -115.3500 | 2441           | NCEI    | 1911-1956        |
| MT    | THOMPSON FALLS PH | 24-8211 | DLY                 | 47.5933  | -115.3594 | 2380           | NCEI    | 1955-2023        |
| MT    | TIBER DAM         | 24-8233 | DLY                 | 48.3103  | -111.0878 | 2850           | NCEI    | 1952-2023        |
| MT    | TOSTON 2 SW       | 24-8313 | HLY                 | 46.1500  | -111.4833 | 3953           | NCEI    | 1950-1958        |
| MT    | TOSTON 2 SW       | 24-8313 | DLY                 | 46.1500  | -111.4833 | 3953           | NCEI    | 1895-1952        |
| MT    | TOSTON 1 W        | 24-8314 | DLY                 | 46.1667  | -111.4667 | 3934           | NCEI    | 1957-1982        |
| MT    | TOWNSEND 3SE      | 24-8324 | DLY                 | 46.2989  | -111.4525 | 3964           | NCEI    | 1948-2023        |
| MT    | TOWNSEND 12 ENE   | 24-8329 | 15M                 | 46.3567  | -111.2842 | 5050           | NCEI    | 1971-2013        |
| MT    | TOWNSEND 12 ENE   | 24-8329 | HLY                 | 46.3567  | -111.2842 | 5050           | NCEI    | 1948-2013        |
| MT    | TOWNSEND 12 ENE   | 24-8329 | DLY                 | 46.3569  | -111.2839 | 5050           | NCEI    | 1950-1951        |
| MT    | TRIDENT           | 24-8363 | DLY                 | 45.9467  | -111.4758 | 4036           | NCEI    | 1924-2023        |
| MT    | TROUT CREEK 2 W   | 24-8379 | DLY                 | 47.8333  | -115.6333 | 2490           | NCEI    | 1912-1960        |
| MT    | TROUT CREEK RS    | 24-8380 | DLY                 | 47.8669  | -115.6278 | 2356           | NCEI    | 1960-2022        |
| MT    | TROY              | 24-8390 | DLY                 | 48.4806  | -115.9061 | 1929           | NCEI    | 1960-2023        |
| MT    | TROY (1)          | 24-8392 | DLY                 | 48.4498  | -115.8595 | 2000           | NCEI    | 1894-1910        |
| MT    | TURNER            | 24-8413 | DLY                 | 48.8500  | -108.4000 | 3046           | NCEI    | 1932-1984        |
| MT    | TURNER 11N        | 24-8415 | DLY                 | 48.9992  | -108.3894 | 2982           | NCEI    | 1985-2023        |

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| MT    | TWIN BRIDGES        | 24-8430 | DLY                 | 45.5472  | -112.3261 | 4625           | NCEI    | 1950-2023        |
| MT    | UTICA               | 24-8493 | DLY                 | 46.9667  | -110.0833 | 4705           | NCEI    | 1894-1952        |
| MT    | UTICA               | 24-8493 | HLY                 | 46.9667  | -110.0833 | 4705           | NCEI    | 1949-1958        |
| MT    | UTICA 11 WSW        | 24-8495 | DLY                 | 46.8833  | -110.3000 | 5000           | NCEI    | 1961-1987        |
| MT    | VALENTINE           | 24-8498 | DLY                 | 47.3392  | -108.4992 | 2905           | NCEI    | 1906-2023        |
| MT    | VALIER              | 24-8501 | DLY                 | 48.3119  | -112.2492 | 3807           | NCEI    | 1911-2013        |
| MT    | VANANDA 6 NE        | 24-8511 | HLY                 | 46.4300  | -106.9200 | 2625           | NCEI    | 1948-2013        |
| MT    | VANANDA 6 NE        | 24-8511 | 15M                 | 46.4300  | -106.9200 | 2625           | NCEI    | 1984-2013        |
| MT    | VANANDA 6 NE        | 24-8511 | DLY                 | 46.4300  | -106.9200 | 2625           | NCEI    | 1917-1951        |
| MT    | VIDA 6 NE           | 24-8569 | DLY                 | 47.8800  | -105.3686 | 2284           | NCEI    | 1934-2022        |
| MT    | VIRGINIA CITY       | 24-8597 | DLY                 | 45.2925  | -111.9478 | 5773           | NCEI    | 1892-2023        |
| MT    | VOLBORG             | 24-8607 | DLY                 | 45.8436  | -105.6808 | 2980           | NCEI    | 1950-2023        |
| MT    | WARRICK             | 24-8691 | DLY                 | 48.0833  | -109.6667 | 4134           | NCEI    | 1904-1907        |
| MT    | WARRICK 2 NW        | 24-8693 | DLY                 | 48.0878  | -109.6453 | 4250           | NCEI    | 1987-2023        |
| MT    | WEBSTER 3 E         | 24-8732 | DLY                 | 46.0558  | -104.1853 | 3140           | NCEI    | 1951-2019        |
| MT    | WESTBY              | 24-8777 | HLY                 | 48.8744  | -104.0503 | 2103           | NCEI    | 1948-2013        |
| MT    | WESTBY              | 24-8777 | DLY                 | 48.8744  | -104.0503 | 2103           | NCEI    | 1936-2023        |
| MT    | WESTBY              | 24-8777 | 15M                 | 48.8744  | -104.0503 | 2103           | NCEI    | 1984-2013        |
| MT    | WESTERN AG RSCH CTR | 24-8783 | DLY                 | 46.3283  | -114.0847 | 3608           | NCEI    | 1965-2021        |
| MT    | W GLACIER           | 24-8809 | HLY                 | 48.5003  | -113.9847 | 3148           | NCEI    | 1971-2013        |
| MT    | W GLACIER           | 24-8809 | DLY                 | 48.5003  | -113.9847 | 3148           | NCEI    | 1949-2023        |
| MT    | W GLACIER           | 24-8809 | 15M                 | 48.5003  | -113.9847 | 3148           | NCEI    | 1971-2013        |
| MT    | WEST YELLOWSTONE    | 24-8857 | DLY                 | 44.6500  | -111.1000 | 6659           | NCEI    | 1923-1996        |
| MT    | W YELLOWSTONE USFS  | 24-8866 | HLY                 | 44.6661  | -111.0992 | 6660           | NCEI    | 1981-2013        |
| MT    | W YELLOWSTONE USFS  | 24-8866 | 15M                 | 44.6661  | -111.0992 | 6660           | NCEI    | 1981-2013        |
| MT    | WHITEFISH           | 24-8893 | DLY                 | 48.4000  | -114.3333 | 3033           | NCEI    | 1983-1987        |
| MT    | WHITEFISH           | 24-8902 | DLY                 | 48.4081  | -114.3594 | 3100           | NCEI    | 1939-2014        |
| MT    | WHITEHALL 7 E       | 24-8914 | HLY                 | 45.8667  | -111.9667 | 4278           | NCEI    | 1967-1977        |
| MT    | WHITEHALL 7 E       | 24-8914 | 15M                 | 45.8667  | -111.9667 | 4278           | NCEI    | 1971-1977        |



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| MT    | WHITEHALL FAA AP         | 24-8917 | HLY                 | 45.8167  | -112.2000 | 4598           | NCEI    | 1948-1959        |
| MT    | WHITE SULPHUR SPRINGS    | 24-8927 | DLY                 | 46.5425  | -110.9042 | 5160           | NCEI    | 1894-1978        |
| MT    | WHITE SULPHUR SPRINGS    | 24-8927 | HLY                 | 46.5431  | -110.9058 | 5160           | NCEI    | 1971-2013        |
| MT    | WHITE SULPHUR SPRINGS    | 24-8927 | 15M                 | 46.5431  | -110.9058 | 5160           | NCEI    | 1971-2013        |
| MT    | WHITE SULPHUR SPRINGS #2 | 24-8930 | DLY                 | 46.5436  | -110.9000 | 5040           | NCEI    | 1978-2014        |
| MT    | WHITE SULPHUR SPRNGS 2   | 24-8936 | DLY                 | 46.8333  | -111.2000 | 4391           | NCEI    | 1965-1984        |
| MT    | WHITEWATER               | 24-8939 | DLY                 | 48.7597  | -107.6250 | 2328           | NCEI    | 1951-2023        |
| MT    | WIBAUX 2 E               | 24-8957 | DLY                 | 46.9878  | -104.1567 | 2696           | NCEI    | 1894-2021        |
| MT    | WILLOW CREEK             | 24-9008 | HLY                 | 45.8167  | -111.6500 | 4160           | NCEI    | 1964-1989        |
| MT    | WILLOW CREEK             | 24-9008 | 15M                 | 45.8167  | -111.6500 | 4160           | NCEI    | 1984-1989        |
| MT    | WILLSALL                 | 24-9018 | DLY                 | 46.0000  | -110.6667 | 5052           | NCEI    | 1950-1969        |
| MT    | WILLSALL                 | 24-9018 | HLY                 | 46.0000  | -110.6667 | 5052           | NCEI    | 1950-1958        |
| MT    | WILLSALL 8 ENE           | 24-9023 | DLY                 | 46.0306  | -110.5056 | 5865           | NCEI    | 1957-2018        |
| MT    | WINIFRED                 | 24-9033 | DLY                 | 47.5597  | -109.3767 | 3243           | NCEI    | 1921-2021        |
| MT    | WINNETT 5 NNE            | 24-9047 | DLY                 | 47.0667  | -108.3167 | 2923           | NCEI    | 1942-1971        |
| MT    | WINNETT 6NNE             | 24-9048 | DLY                 | 47.0831  | -108.3164 | 2865           | NCEI    | 2005-2023        |
| MT    | WINNETT 8 ESE            | 24-9052 | DLY                 | 46.9392  | -108.1967 | 2810           | NCEI    | 1949-1951        |
| MT    | WINNETT 8 ESE            | 24-9052 | HLY                 | 46.9389  | -108.1967 | 2810           | NCEI    | 1948-2013        |
| MT    | WINNETT 8 ESE            | 24-9052 | 15M                 | 46.9389  | -108.1967 | 2810           | NCEI    | 1984-2013        |
| MT    | WISDOM                   | 24-9067 | DLY                 | 45.6178  | -113.4514 | 6060           | NCEI    | 1922-2023        |
| MT    | WISDOM                   | 24-9067 | HLY                 | 45.6178  | -113.4514 | 6060           | NCEI    | 1948-2013        |
| MT    | WISDOM                   | 24-9067 | 15M                 | 45.6178  | -113.4514 | 6060           | NCEI    | 1971-2013        |
| MT    | WISE RVR 3 WNW           | 24-9082 | DLY                 | 45.8025  | -112.9939 | 5730           | NCEI    | 1943-2022        |
| MT    | WOLF PT                  | 24-9103 | DLY                 | 48.1000  | -105.6483 | 2090           | NCEI    | 1904-2023        |
| MT    | WOLF PT                  | 24-9103 | HLY                 | 48.1000  | -105.6483 | 2090           | NCEI    | 1949-1958        |
| MT    | WOLF POINT 5 ESE         | 24-9111 | DLY                 | 48.0833  | -105.5333 | 1991           | NCEI    | 1941-1973        |
| MT    | WYOLA 1 SW               | 24-9175 | DLY                 | 45.1217  | -107.4061 | 3730           | NCEI    | 1922-2006        |
| MT    | YELLOWSTONE NP NE ENT    | 24-9211 | HLY                 | 45.0045  | -110.0122 | 7350           | NCEI    | 1949-1967        |
| MT    | YELLOWSTONE NP NE ENT    | 24-9211 | DLY                 | 45.0045  | -110.0122 | 7350           | NCEI    | 1945-1967        |

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|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | YELLOWTAIL DAM    | 24-9240 | HLY                 | 45.3128  | -107.9383 | 3305           | NCEI    | 1948-2013        |
| MT    | YELLOWTAIL DAM    | 24-9240 | 15M                 | 45.3128  | -107.9383 | 3305           | NCEI    | 1979-2013        |
| MT    | YELLOWTAIL DAM    | 24-9240 | DLY                 | 45.3128  | -107.9383 | 3305           | NCEI    | 1948-2023        |
| MT    | ZORTMAN           | 24-9900 | 15M                 | 47.9186  | -108.5244 | 4035           | NCEI    | 1978-2013        |
| MT    | ZORTMAN           | 24-9900 | HLY                 | 47.9186  | -108.5244 | 4035           | NCEI    | 1965-2013        |
| MT    | ZORTMAN           | 24-9900 | DLY                 | 47.9186  | -108.5244 | 4035           | NCEI    | 1965-2023        |
| MT    | ZORTMAN (1)       | 24-9903 | DLY                 | 47.9173  | -108.5242 | 4013           | NCEI    | 1895-1914        |
| WY    | AFTON             | 48-0027 | DLY                 | 42.7331  | -110.9217 | 6248           | NCEI    | 1957-2023        |
| WY    | ALBIN             | 48-0080 | DLY                 | 41.4000  | -104.1017 | 5345           | NCEI    | 1948-2009        |
| WY    | ALTA 1 NNW        | 48-0140 | DLY                 | 43.7728  | -111.0339 | 6440           | NCEI    | 1909-2023        |
| WY    | ALVA 5 ESE        | 48-0200 | DLY                 | 44.6522  | -104.3492 | 4390           | NCEI    | 1948-2001        |
| WY    | ARCHER            | 48-0270 | DLY                 | 41.1517  | -104.6575 | 6010           | NCEI    | 1911-2005        |
| WY    | BAGGS             | 48-0484 | DLY                 | 41.0383  | -107.6578 | 6319           | NCEI    | 1979-2023        |
| WY    | BARNUM 1 N        | 48-0528 | HLY                 | 43.7000  | -106.9167 | 5154           | NCEI    | 1949-1958        |
| WY    | BARNUM 1 N        | 48-0528 | DLY                 | 43.7000  | -106.9167 | 5154           | NCEI    | 1905-1952        |
| WY    | BASIN             | 48-0540 | HLY                 | 44.3797  | -108.0350 | 3840           | NCEI    | 1949-1958        |
| WY    | BASIN             | 48-0540 | DLY                 | 44.3797  | -108.0350 | 3840           | NCEI    | 1898-2023        |
| WY    | BATES CREEK #2    | 48-0552 | DLY                 | 42.6233  | -106.3567 | 6042           | NCEI    | 1969-2023        |
| WY    | BEDFORD 3 SE      | 48-0603 | DLY                 | 42.8731  | -110.9069 | 6355           | NCEI    | 1975-2023        |
| WY    | BEDFORD 2 SE      | 48-0605 | DLY                 | 42.8667  | -110.9000 | 6335           | NCEI    | 1899-1967        |
| WY    | BIG HORN          | 48-0680 | DLY                 | 44.6828  | -107.0089 | 4208           | NCEI    | 1949-2023        |
| WY    | BIG PINEY         | 48-0695 | HLY                 | 42.5414  | -110.1253 | 6835           | NCEI    | 1948-1992        |
| WY    | BIG PINEY         | 48-0695 | 15M                 | 42.5414  | -110.1253 | 6835           | NCEI    | 1976-1992        |
| WY    | BIG PINEY         | 48-0695 | DLY                 | 42.5414  | -110.1253 | 6835           | NCEI    | 1948-2023        |
| WY    | BIG PINEY UP&L    | 48-0697 | HLY                 | 42.5364  | -110.1128 | 6822           | NCEI    | 1992-2013        |
| WY    | BIG PINEY UP&L    | 48-0697 | 15M                 | 42.5364  | -110.1128 | 6822           | NCEI    | 1992-2013        |
| WY    | BILLY CREEK       | 48-0740 | DLY                 | 44.1242  | -106.7319 | 4975           | NCEI    | 1962-2013        |
| WY    | BITTER CREEK 4 NE | 48-0761 | DLY                 | 41.5897  | -108.5094 | 6722           | NCEI    | 1962-2023        |
| WY    | BLACK MTN         | 48-0778 | DLY                 | 43.6561  | -107.7375 | 5635           | NCEI    | 1963-2023        |

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| WY    | BONDURANT             | 48-0865 | DLY                 | 43.2094  | -110.4033 | 6693           | NCEI    | 1948-2023        |
| WY    | BORDER 3 N            | 48-0915 | DLY                 | 42.2128  | -111.0456 | 6069           | NCEI    | 1901-1993        |
| WY    | BOULDER REARING STN   | 48-0951 | DLY                 | 42.7156  | -109.6894 | 6940           | NCEI    | 1989-2023        |
| WY    | BOYSEN DAM            | 48-1000 | HLY                 | 43.4053  | -108.1633 | 4875           | NCEI    | 1948-2013        |
| WY    | BOYSEN DAM            | 48-1000 | 15M                 | 43.4053  | -108.1633 | 4875           | NCEI    | 1971-2013        |
| WY    | BOYSEN DAM            | 48-1000 | DLY                 | 43.4053  | -108.1633 | 4875           | NCEI    | 1948-2023        |
| WY    | BUFFALO               | 48-1165 | HLY                 | 44.3544  | -106.6994 | 4639           | NCEI    | 1948-2013        |
| WY    | BUFFALO               | 48-1165 | 15M                 | 44.3544  | -106.6994 | 4639           | NCEI    | 1971-2013        |
| WY    | BUFFALO               | 48-1165 | DLY                 | 44.3544  | -106.6994 | 4639           | NCEI    | 1899-2023        |
| WY    | BUFFALO BILL DAM      | 48-1175 | DLY                 | 44.5075  | -109.1675 | 5160           | NCEI    | 1904-2023        |
| WY    | BURGESS JUNCTION      | 48-1220 | DLY                 | 44.7742  | -107.5217 | 8060           | NCEI    | 1960-2023        |
| WY    | BURRIS                | 48-1284 | HLY                 | 43.3656  | -109.2756 | 6125           | NCEI    | 1951-1952        |
| WY    | BURRIS                | 48-1284 | DLY                 | 43.3656  | -109.2756 | 6125           | NCEI    | 1951-2020        |
| WY    | CARPENTER 3N          | 48-1547 | DLY                 | 41.0844  | -104.3789 | 5437           | NCEI    | 1948-2006        |
| WY    | CARPENTER 7 NE        | 48-1550 | DLY                 | 41.0833  | -104.3833 | 5282           | NCEI    | 1941-1947        |
| WY    | CASPER 2 E            | 48-1565 | DLY                 | 42.8500  | -106.2667 | 5203           | NCEI    | 1900-1981        |
| WY    | CASPER WWTP           | 48-1569 | DLY                 | 42.8614  | -106.2925 | 5097           | NCEI    | 2000-2023        |
| WY    | CASPER-NATRONA CO AP  | 48-1570 | HLY                 | 42.8978  | -106.4736 | 5318           | NCEI    | 1948-2013        |
| WY    | CASPER 1SW            | 48-1572 | DLY                 | 42.8519  | -106.2844 | 5143           | NCEI    | 2002-2023        |
| WY    | CENTENNIAL 1NE        | 48-1610 | DLY                 | 41.3136  | -106.1292 | 8170           | NCEI    | 1898-2007        |
| WY    | CHEYENNE WSFO AP      | 48-1675 | 15M                 | 41.1578  | -104.8069 | 6113           | NCEI    | 2009-2010        |
| WY    | CHEYENNE WSFO AP      | 48-1675 | HLY                 | 41.1578  | -104.8069 | 6113           | NCEI    | 1948-2013        |
| WY    | CHEYENNE WFO          | 48-1676 | 15M                 | 41.1517  | -104.8061 | 6119           | NCEI    | 2003-2012        |
| WY    | CHEYENNE WFO          | 48-1676 | DLY                 | 41.1517  | -104.8061 | 6119           | NCEI    | 2003-2023        |
| WY    | CHEYENNE WFO          | 48-1676 | HLY                 | 41.1517  | -104.8061 | 6119           | NCEI    | 2003-2012        |
| WY    | CHEYENNE HORT F STN   | 48-1680 | DLY                 | 41.1833  | -104.8833 | 6253           | NCEI    | 1934-1957        |
| WY    | CHUGWATER             | 48-1730 | DLY                 | 41.7594  | -104.8222 | 5304           | NCEI    | 1900-2023        |
| WY    | CHURCH BUTTES GAS PLT | 48-1736 | DLY                 | 41.3975  | -110.0883 | 7079           | NCEI    | 1891-2023        |
| WY    | CLARK 4 SW            | 48-1770 | DLY                 | 44.9000  | -109.2333 | 4534           | NCEI    | 1905-1958        |

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| WY    | CLARK 3NE            | 48-1775 | DLY                 | 44.9364  | -109.1372 | 4117           | NCEI    | 1960-2023        |
| WY    | CLEARMONT 5 SW       | 48-1816 | DLY                 | 44.5781  | -106.4472 | 3995           | NCEI    | 1881-2023        |
| WY    | CODY                 | 48-1840 | DLY                 | 44.5147  | -109.0450 | 5075           | NCEI    | 1914-2022        |
| WY    | CODY                 | 48-1840 | HLY                 | 44.5147  | -109.0450 | 5075           | NCEI    | 1948-1951        |
| WY    | CODY 12SE            | 48-1850 | DLY                 | 44.4139  | -108.9006 | 5248           | NCEI    | 1949-2023        |
| WY    | CODY 21 SW           | 48-1855 | DLY                 | 44.3367  | -109.3914 | 5840           | NCEI    | 1958-2009        |
| WY    | COLONY               | 48-1905 | DLY                 | 44.8711  | -104.1533 | 3480           | NCEI    | 1914-2023        |
| WY    | CRANDALL CREEK       | 48-2135 | DLY                 | 44.8675  | -109.6436 | 6509           | NCEI    | 1913-2015        |
| WY    | CRESTON              | 48-2175 | 15M                 | 41.7333  | -107.7333 | 7044           | NCEI    | 1971-1984        |
| WY    | CRESTON              | 48-2175 | HLY                 | 41.7333  | -107.7333 | 7044           | NCEI    | 1948-1984        |
| WY    | CRESTON              | 48-2175 | DLY                 | 41.7333  | -107.7333 | 7044           | NCEI    | 1946-1951        |
| WY    | DANIEL FISH HATCHERY | 48-2242 | DLY                 | 42.9281  | -110.1272 | 7341           | NCEI    | 1989-2023        |
| WY    | DARWIN RCH           | 48-2375 | DLY                 | 43.4128  | -110.1633 | 8190           | NCEI    | 1974-2023        |
| WY    | DAYTON               | 48-2399 | DLY                 | 44.8767  | -107.2631 | 3920           | NCEI    | 1951-2023        |
| WY    | DEAVER               | 48-2415 | DLY                 | 44.8919  | -108.5928 | 4105           | NCEI    | 1915-2023        |
| WY    | DEVILS TWR           | 48-2465 | DLY                 | 44.5901  | -104.7196 | 4334           | NCEI    | 1932-1958        |
| WY    | DEVILS TWR #2        | 48-2466 | DLY                 | 44.5833  | -104.7147 | 3862           | NCEI    | 1958-2023        |
| WY    | DILLINGER            | 48-2580 | DLY                 | 44.0992  | -105.1175 | 4310           | NCEI    | 1941-2023        |
| WY    | DIVERSION DAM        | 48-2595 | HLY                 | 43.2336  | -108.9133 | 5578           | NCEI    | 1949-1955        |
| WY    | DIVERSION DAM        | 48-2595 | DLY                 | 43.2336  | -108.9133 | 5578           | NCEI    | 1920-2023        |
| WY    | DIXON                | 48-2610 | DLY                 | 41.0333  | -107.5333 | 6365           | NCEI    | 1921-1978        |
| WY    | DOME LAKE            | 48-2638 | DLY                 | 44.5833  | -107.2833 | 8825           | NCEI    | 1896-1944        |
| WY    | DOUBLE FOUR RCH      | 48-2680 | DLY                 | 42.1794  | -105.4017 | 6120           | NCEI    | 1942-2005        |
| WY    | DOUGLAS 1 SE         | 48-2685 | HLY                 | 42.7467  | -105.3603 | 4870           | NCEI    | 1960-1962        |
| WY    | DOUGLAS 1 SE         | 48-2685 | DLY                 | 42.7467  | -105.3603 | 4870           | NCEI    | 1909-2016        |
| WY    | DOUGLAS CAA AP       | 48-2690 | HLY                 | 42.7500  | -105.3667 | 4879           | NCEI    | 1948-1960        |
| WY    | DOUGLAS              | 48-2693 | HLY                 | 42.7444  | -105.3897 | 4805           | NCEI    | 1962-2010        |
| WY    | DOUGLAS              | 48-2693 | 15M                 | 42.7444  | -105.3897 | 4805           | NCEI    | 1973-2010        |
| WY    | DOUGLAS 17NE         | 48-2696 | 15M                 | 42.9533  | -105.1650 | 4930           | NCEI    | 1976-2013        |

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|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| WY    | DOUGLAS 17NE      | 48-2696 | DLY                 | 42.9533  | -105.1650 | 4930           | NCEI    | 1949-1957        |
| WY    | DOUGLAS 17NE      | 48-2696 | HLY                 | 42.9533  | -105.1650 | 4930           | NCEI    | 1957-2013        |
| WY    | DUBOIS            | 48-2715 | 15M                 | 43.5397  | -109.6553 | 6955           | NCEI    | 1981-2013        |
| WY    | DUBOIS            | 48-2715 | DLY                 | 43.5397  | -109.6553 | 6955           | NCEI    | 1905-2023        |
| WY    | DUBOIS            | 48-2715 | HLY                 | 43.5397  | -109.6553 | 6955           | NCEI    | 1949-2013        |
| WY    | DULL CTR 1SE      | 48-2725 | HLY                 | 43.4117  | -104.9614 | 4415           | NCEI    | 1948-2013        |
| WY    | DULL CTR 1SE      | 48-2725 | DLY                 | 43.4117  | -104.9614 | 4415           | NCEI    | 1926-2022        |
| WY    | DULL CTR 1SE      | 48-2725 | 15M                 | 43.4117  | -104.9614 | 4415           | NCEI    | 1984-2013        |
| WY    | EAST GATE Y NP    | 48-2845 | DLY                 | 44.4892  | -110.0046 | 6965           | NCEI    | 1907-1952        |
| WY    | ECHETA 2 NW       | 48-2881 | DLY                 | 44.4828  | -105.8992 | 4000           | NCEI    | 1908-2006        |
| WY    | ELK MTN           | 48-2995 | DLY                 | 41.6878  | -106.4136 | 7265           | NCEI    | 1948-2016        |
| WY    | EMBLEM            | 48-3031 | HLY                 | 44.4972  | -108.3906 | 4448           | NCEI    | 1957-1958        |
| WY    | EMBLEM            | 48-3031 | DLY                 | 44.4972  | -108.3906 | 4448           | NCEI    | 1911-2023        |
| WY    | ENCAMPMENT 10 ESE | 48-3045 | DLY                 | 41.1833  | -106.6167 | 7385           | NCEI    | 1948-1998        |
| WY    | ENCAMPMENT        | 48-3050 | DLY                 | 41.2058  | -106.7883 | 7290           | NCEI    | 1948-1951        |
| WY    | ENCAMPMENT        | 48-3050 | 15M                 | 41.2058  | -106.7883 | 7290           | NCEI    | 1972-2013        |
| WY    | ENCAMPMENT        | 48-3050 | HLY                 | 41.2058  | -106.7883 | 7290           | NCEI    | 1948-2013        |
| WY    | EVANSTON 1 E      | 48-3100 | HLY                 | 41.2650  | -110.9508 | 6825           | NCEI    | 1948-2013        |
| WY    | EVANSTON 1 E      | 48-3100 | DLY                 | 41.2650  | -110.9508 | 6825           | NCEI    | 1890-2023        |
| WY    | EVANSTON 1 E      | 48-3100 | 15M                 | 41.2650  | -110.9508 | 6825           | NCEI    | 1974-2013        |
| WY    | FARSON 2NNE       | 48-3170 | DLY                 | 42.1397  | -109.4308 | 6620           | NCEI    | 1914-2023        |
| WY    | FONTENELLE DAM    | 48-3396 | DLY                 | 41.9861  | -110.0611 | 6485           | NCEI    | 1963-2023        |
| WY    | FORT LARAMIE      | 48-3485 | DLY                 | 42.2167  | -104.5167 | 4235           | NCEI    | 1894-1927        |
| WY    | FT LARAMIE 11 NNW | 48-3490 | DLY                 | 42.3833  | -104.5333 | 4764           | NCEI    | 1927-1979        |
| WY    | FT WASHAKIE 1 SE  | 48-3570 | DLY                 | 42.9833  | -108.8667 | 5554           | NCEI    | 1928-1979        |
| WY    | FOSSIL BUTTE      | 48-3582 | DLY                 | 41.8369  | -110.7706 | 6785           | NCEI    | 1990-2023        |
| WY    | FOXPARK           | 48-3630 | DLY                 | 41.0833  | -106.1500 | 9067           | NCEI    | 1910-1979        |
| WY    | GARLAND           | 48-3770 | DLY                 | 44.7833  | -108.6667 | 4252           | NCEI    | 1948-1951        |
| WY    | GARLAND           | 48-3770 | HLY                 | 44.7833  | -108.6667 | 4252           | NCEI    | 1948-1966        |

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| WY    | GAS HILLS 4E     | 48-3801 | DLY                 | 42.8394  | -107.5133 | 6470           | NCEI    | 1962-2007        |
| WY    | GILLETTE 4SE     | 48-3855 | DLY                 | 44.2667  | -105.4489 | 4640           | NCEI    | 1901-2023        |
| WY    | GILLETTE 18 SW   | 48-3865 | DLY                 | 44.0833  | -105.7167 | 4905           | NCEI    | 1949-1985        |
| WY    | GILLETTE 18 SW   | 48-3865 | 15M                 | 44.0833  | -105.7167 | 4905           | NCEI    | 1973-1986        |
| WY    | GILLETTE 18 SW   | 48-3865 | HLY                 | 44.0833  | -105.7167 | 4905           | NCEI    | 1960-1986        |
| WY    | GLENDO RSVR USBR | 48-3944 | DLY                 | 42.4689  | -104.9658 | 4780           | NCEI    | 2011-2023        |
| WY    | GLENROCK 5 ESE   | 48-3950 | DLY                 | 42.8267  | -105.7878 | 4948           | NCEI    | 1941-2008        |
| WY    | GLENROCK 14 SSE  | 48-3960 | DLY                 | 42.6667  | -105.8167 | 6434           | NCEI    | 1949-1987        |
| WY    | GRAND CANYON     | 48-3995 | DLY                 | 44.7333  | -110.5000 | 7900           | NCEI    | 1903-1916        |
| WY    | GRASS CREEK      | 48-4036 | DLY                 | 43.9500  | -108.6500 | 5579           | NCEI    | 1949-1990        |
| WY    | GREEN RVR        | 48-4065 | DLY                 | 41.5167  | -109.4703 | 6160           | NCEI    | 1897-2023        |
| WY    | GREYBULL         | 48-4080 | DLY                 | 44.4894  | -108.0536 | 3787           | NCEI    | 1951-2019        |
| WY    | GROVER 2 S       | 48-4095 | DLY                 | 42.7531  | -110.9326 | 6125           | NCEI    | 1902-1957        |
| WY    | GUERNSEY DAM     | 48-4125 | DLY                 | 42.3000  | -104.7667 | 4505           | NCEI    | 1944-1962        |
| WY    | GUERNSEY DAM #2  | 48-4126 | DLY                 | 42.2906  | -104.7625 | 4355           | NCEI    | 1962-2023        |
| WY    | GUERNSEY DAM #2  | 48-4126 | 15M                 | 42.2906  | -104.7625 | 4355           | NCEI    | 2013-2013        |
| WY    | GUERNSEY DAM #2  | 48-4126 | HLY                 | 42.2906  | -104.7625 | 4355           | NCEI    | 2013-2013        |
| WY    | GUERNSEY 2NW     | 48-4131 | DLY                 | 42.2833  | -104.7667 | 4480           | NCEI    | 2011-2023        |
| WY    | HAT CREEK        | 48-4300 | DLY                 | 42.9333  | -104.3667 | 4505           | NCEI    | 1948-1967        |
| WY    | HAT CREEK 5 E    | 48-4303 | DLY                 | 42.9333  | -104.3167 | 4380           | NCEI    | 1967-1983        |
| WY    | HAT CREEK 14 N   | 48-4310 | DLY                 | 43.1333  | -104.3667 | 4324           | NCEI    | 1948-1952        |
| WY    | HAT CREEK 14 N   | 48-4310 | 15M                 | 43.1333  | -104.3667 | 4324           | NCEI    | 1977-1984        |
| WY    | HAT CREEK 14 N   | 48-4310 | HLY                 | 43.1333  | -104.3667 | 4324           | NCEI    | 1950-1984        |
| WY    | HEART MTN        | 48-4411 | DLY                 | 44.7053  | -108.9558 | 4790           | NCEI    | 1942-2008        |
| WY    | HECLA            | 48-4440 | DLY                 | 41.1500  | -105.1833 | 6804           | NCEI    | 1898-1979        |
| WY    | HECLA 1E         | 48-4442 | DLY                 | 41.1500  | -105.1667 | 6690           | NCEI    | 1979-2023        |
| WY    | HULETT           | 48-4760 | DLY                 | 44.6856  | -104.6028 | 3758           | NCEI    | 1941-2018        |
| WY    | JACKSON          | 48-4910 | DLY                 | 43.4864  | -110.7617 | 6210           | NCEI    | 1904-2023        |
| WY    | JACKSON          | 48-4910 | HLY                 | 43.4864  | -110.7617 | 6210           | NCEI    | 1948-2013        |

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| WY    | JACKSON             | 48-4910 | 15M                 | 43.4864  | -110.7617 | 6210           | NCEI    | 1972-2013        |
| WY    | JEFFREY CITY        | 48-4925 | DLY                 | 42.4942  | -107.8292 | 6319           | NCEI    | 1964-2023        |
| WY    | JELM 2S             | 48-4930 | 15M                 | 41.0600  | -106.0264 | 7580           | NCEI    | 1972-2013        |
| WY    | JELM 2S             | 48-4930 | DLY                 | 41.0600  | -106.0264 | 7580           | NCEI    | 1948-1951        |
| WY    | JELM 2S             | 48-4930 | HLY                 | 41.0600  | -106.0264 | 7580           | NCEI    | 1948-2013        |
| WY    | KAYCEE              | 48-5055 | DLY                 | 43.7144  | -106.6378 | 4660           | NCEI    | 1900-2023        |
| WY    | KAYCEE 17 WNW       | 48-5060 | DLY                 | 43.7667  | -106.9667 | 5663           | NCEI    | 1949-1958        |
| WY    | KEELINE 3 W         | 48-5085 | DLY                 | 42.7667  | -104.7833 | 5280           | NCEI    | 1953-1987        |
| WY    | KEMMERER 2N         | 48-5105 | DLY                 | 41.8181  | -110.5333 | 6937           | NCEI    | 1901-2023        |
| WY    | KENDALL             | 48-5115 | DLY                 | 43.1667  | -109.9833 | 7654           | NCEI    | 1903-1976        |
| WY    | LUSK 18 ENE         | 48-5170 | DLY                 | 42.8333  | -104.1167 | 5072           | NCEI    | 1948-1964        |
| WY    | LA BARGE            | 48-5252 | DLY                 | 42.2644  | -110.1950 | 6598           | NCEI    | 1958-2012        |
| WY    | LA GRANGE           | 48-5260 | DLY                 | 41.6378  | -104.1669 | 4590           | NCEI    | 1948-2010        |
| WY    | LAKE YELLOWSTONE    | 48-5345 | 15M                 | 44.5622  | -110.3986 | 7892           | NCEI    | 1971-2013        |
| WY    | LAKE YELLOWSTONE    | 48-5345 | HLY                 | 44.5622  | -110.3986 | 7892           | NCEI    | 1948-2013        |
| WY    | LAKE YELLOWSTONE    | 48-5345 | DLY                 | 44.5622  | -110.3986 | 7892           | NCEI    | 1903-2023        |
| WY    | LAMAR RS            | 48-5355 | DLY                 | 44.8956  | -110.2342 | 6575           | NCEI    | 1922-2023        |
| WY    | LANCE CREEK 1W      | 48-5371 | DLY                 | 43.0389  | -104.6633 | 4412           | NCEI    | 1948-1952        |
| WY    | LANCE CREEK 1W      | 48-5371 | 15M                 | 43.0389  | -104.6633 | 4412           | NCEI    | 1984-2013        |
| WY    | LANCE CREEK 1W      | 48-5371 | HLY                 | 43.0389  | -104.6633 | 4412           | NCEI    | 1950-2013        |
| WY    | LANDER AP           | 48-5390 | HLY                 | 42.8153  | -108.7261 | 5592           | NCEI    | 1948-2013        |
| WY    | LARAMIE             | 48-5410 | DLY                 | 41.3167  | -105.5833 | 7205           | NCEI    | 1891-1961        |
| WY    | LARAMIE 2           | 48-5411 | DLY                 | 41.3167  | -105.5833 | 7175           | NCEI    | 1961-1976        |
| WY    | LARAMIE AP          | 48-5415 | HLY                 | 41.3167  | -105.6833 | 7266           | NCEI    | 1948-2013        |
| WY    | LARAMIE 2WSW SITE 2 | 48-5416 | DLY                 | 41.2975  | -105.6242 | 7159           | NCEI    | 2011-2014        |
| WY    | LARAMIE 2WSW SITE 2 | 48-5416 | HLY                 | 41.2975  | -105.6242 | 7159           | NCEI    | 2012-2013        |
| WY    | LARAMIE 2WSW SITE 2 | 48-5416 | 15M                 | 41.2975  | -105.6242 | 7159           | NCEI    | 2012-2013        |
| WY    | LARAMIE 2WSW        | 48-5420 | DLY                 | 41.3042  | -105.6408 | 7175           | NCEI    | 1948-1951        |
| WY    | LARAMIE 2WSW        | 48-5420 | HLY                 | 41.3042  | -105.6408 | 7175           | NCEI    | 1948-2010        |

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| WY    | LARAMIE 2WSW          | 48-5420 | 15M                 | 41.3042  | -105.6408 | 7175           | NCEI    | 1971-2010        |
| WY    | LARAMIE 2 NW          | 48-5435 | DLY                 | 41.3400  | -105.6064 | 7140           | NCEI    | 1966-2023        |
| WY    | LEITER 9N             | 48-5506 | DLY                 | 44.8500  | -106.2889 | 4160           | NCEI    | 1964-2023        |
| WY    | LEO 6 SW              | 48-5525 | DLY                 | 42.1953  | -106.8556 | 6035           | NCEI    | 1929-2023        |
| WY    | LINGLE 2WSW           | 48-5612 | DLY                 | 42.1297  | -104.3900 | 4158           | NCEI    | 1952-2023        |
| WY    | LITTLE MEDICINE 4 NNW | 48-5685 | DLY                 | 42.4333  | -106.0333 | 7346           | NCEI    | 1904-1951        |
| WY    | LITTLE MEDICINE 4 NNW | 48-5685 | HLY                 | 42.4333  | -106.0333 | 7346           | NCEI    | 1948-1961        |
| WY    | LOST CABIN            | 48-5734 | DLY                 | 43.2833  | -107.6333 | 5415           | NCEI    | 1961-1982        |
| WY    | LOVELL                | 48-5770 | DLY                 | 44.8378  | -108.4039 | 3847           | NCEI    | 1897-2023        |
| WY    | LUSK 2 SW             | 48-5830 | DLY                 | 42.7506  | -104.4811 | 5090           | NCEI    | 1892-2007        |
| WY    | LUSK 18 ENE           | 48-5832 | DLY                 | 42.8167  | -104.1167 | 5003           | NCEI    | 1964-1968        |
| WY    | LYMAN                 | 48-5836 | DLY                 | 41.3333  | -110.3000 | 6706           | NCEI    | 1956-1960        |
| WY    | LYMAN                 | 48-5836 | HLY                 | 41.3333  | -110.3000 | 6706           | NCEI    | 1956-1960        |
| WY    | LYMAN                 | 48-5839 | DLY                 | 41.3156  | -110.2725 | 6652           | NCEI    | 2018-2023        |
| WY    | LYSITE                | 48-5843 | DLY                 | 43.2667  | -107.7000 | 5262           | NCEI    | 1949-1961        |
| WY    | MEDICINE BOW          | 48-6120 | HLY                 | 41.8969  | -106.2061 | 6635           | NCEI    | 1948-2008        |
| WY    | MEDICINE BOW          | 48-6120 | DLY                 | 41.8969  | -106.2061 | 6635           | NCEI    | 1948-2023        |
| WY    | MEDICINE BOW          | 48-6120 | 15M                 | 41.8969  | -106.2061 | 6635           | NCEI    | 1971-2008        |
| WY    | MEDICINE BOW F&P      | 48-6132 | 15M                 | 41.8997  | -106.2058 | 6581           | NCEI    | 2006-2013        |
| WY    | MEDICINE BOW F&P      | 48-6132 | HLY                 | 41.8997  | -106.2058 | 6581           | NCEI    | 2006-2013        |
| WY    | MIDDLE FORK           | 48-6185 | HLY                 | 42.7526  | -108.8054 | 6283           | NCEI    | 1948-1955        |
| WY    | MIDDLE FORK           | 48-6185 | DLY                 | 42.7526  | -108.8054 | 6283           | NCEI    | 1948-1955        |
| WY    | MIDWEST               | 48-6195 | DLY                 | 43.4131  | -106.2772 | 4860           | NCEI    | 1938-2023        |
| WY    | MOORCROFT 3S          | 48-6395 | HLY                 | 44.2169  | -104.9292 | 4325           | NCEI    | 1948-2013        |
| WY    | MOORCROFT 3S          | 48-6395 | 15M                 | 44.2169  | -104.9292 | 4325           | NCEI    | 1971-2013        |
| WY    | MOORE                 | 48-6422 | DLY                 | 41.7667  | -105.3667 | 6000           | NCEI    | 1901-1917        |
| WY    | MOOSE                 | 48-6428 | DLY                 | 43.6536  | -110.7169 | 6444           | NCEI    | 1958-2023        |
| WY    | MOOSE 3 NW            | 48-6430 | DLY                 | 43.7000  | -110.7333 | 6634           | NCEI    | 1935-1958        |
| WY    | MORAN 5WNW            | 48-6440 | DLY                 | 43.8567  | -110.5889 | 6805           | NCEI    | 1910-2023        |



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| WY    | MORAN 5WNW            | 48-6440 | 15M                 | 43.8567  | -110.5889 | 6805           | NCEI    | 1984-2013        |
| WY    | MORAN 5WNW            | 48-6440 | HLY                 | 43.8567  | -110.5889 | 6805           | NCEI    | 1948-2013        |
| WY    | MORRISEY              | 48-6450 | DLY                 | 43.5167  | -104.3333 | 4104           | NCEI    | 1948-1978        |
| WY    | MTN VIEW              | 48-6555 | DLY                 | 41.2658  | -110.3375 | 6800           | NCEI    | 1966-2023        |
| WY    | MTN VIEW              | 48-6555 | 15M                 | 41.2658  | -110.3375 | 6800           | NCEI    | 1971-2013        |
| WY    | MTN VIEW              | 48-6555 | HLY                 | 41.2658  | -110.3375 | 6800           | NCEI    | 1966-2013        |
| WY    | MUDDY GAP             | 48-6595 | DLY                 | 42.3628  | -107.4444 | 6248           | NCEI    | 1949-2008        |
| WY    | MUD SPRINGS           | 48-6597 | HLY                 | 41.3186  | -108.9178 | 6736           | NCEI    | 1953-2013        |
| WY    | MUD SPRINGS           | 48-6597 | 15M                 | 41.3186  | -108.9178 | 6736           | NCEI    | 1971-2013        |
| WY    | MUD SPRINGS           | 48-6597 | DLY                 | 41.3186  | -108.9178 | 6736           | NCEI    | 2014-2023        |
| WY    | MULE CREEK            | 48-6600 | HLY                 | 43.3500  | -104.1167 | 4124           | NCEI    | 1949-1984        |
| WY    | MULE CREEK            | 48-6600 | DLY                 | 43.3500  | -104.1167 | 4124           | NCEI    | 1948-1952        |
| WY    | NEWCASTLE             | 48-6660 | HLY                 | 43.8497  | -104.1886 | 4415           | NCEI    | 1948-2013        |
| WY    | NEWCASTLE             | 48-6660 | 15M                 | 43.8497  | -104.1886 | 4415           | NCEI    | 1971-2013        |
| WY    | NEWCASTLE             | 48-6660 | DLY                 | 43.8497  | -104.1886 | 4415           | NCEI    | 1906-2023        |
| WY    | NINE MILE CREEK       | 48-6680 | DLY                 | 43.8167  | -106.4833 | 4872           | NCEI    | 1921-1960        |
| WY    | OLD FAITHFUL          | 48-6845 | DLY                 | 44.4569  | -110.8328 | 7351           | NCEI    | 1904-2023        |
| WY    | OLD FT LARAMIE        | 48-6852 | DLY                 | 42.2058  | -104.5561 | 4250           | NCEI    | 1989-2023        |
| WY    | OREGON TRAIL CROSSING | 48-6875 | DLY                 | 42.5419  | -108.1850 | 6542           | NCEI    | 1948-2023        |
| WY    | OREGON TRAIL CROSSING | 48-6875 | HLY                 | 42.5394  | -108.1872 | 6544           | NCEI    | 1948-2013        |
| WY    | OREGON TRAIL CROSSING | 48-6875 | 15M                 | 42.5394  | -108.1872 | 6544           | NCEI    | 1971-2013        |
| WY    | OSAGE                 | 48-6935 | DLY                 | 43.9781  | -104.4194 | 4320           | NCEI    | 1948-1952        |
| WY    | OSAGE                 | 48-6935 | 15M                 | 43.9781  | -104.4194 | 4320           | NCEI    | 1984-2012        |
| WY    | OSAGE                 | 48-6935 | HLY                 | 43.9781  | -104.4194 | 4320           | NCEI    | 1950-2013        |
| WY    | PARKMAN 5 WNW         | 48-7079 | DLY                 | 44.9833  | -107.4333 | 4436           | NCEI    | 1949-1983        |
| WY    | PATHFINDER DAM        | 48-7105 | DLY                 | 42.4717  | -106.8528 | 5923           | NCEI    | 1905-2023        |
| WY    | PATHFINDER DAM        | 48-7105 | 15M                 | 42.4717  | -106.8528 | 5923           | NCEI    | 1984-2013        |
| WY    | PATHFINDER DAM        | 48-7105 | HLY                 | 42.4717  | -106.8528 | 5923           | NCEI    | 1948-2013        |
| WY    | PAVILLION             | 48-7115 | DLY                 | 43.2458  | -108.6942 | 5480           | NCEI    | 1919-2023        |

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| WY    | PAVILLION           | 48-7115 | HLY                 | 43.2458  | -108.6942 | 5484           | NCEI    | 1949-1958        |
| WY    | PHILLIPS            | 48-7200 | 15M                 | 41.6264  | -104.4936 | 4982           | NCEI    | 1971-2013        |
| WY    | PHILLIPS            | 48-7200 | HLY                 | 41.6264  | -104.4936 | 4982           | NCEI    | 1948-2013        |
| WY    | PHILLIPS            | 48-7200 | DLY                 | 41.6264  | -104.4936 | 4982           | NCEI    | 1948-2018        |
| WY    | PINE BLUFFS         | 48-7235 | HLY                 | 41.1833  | -104.0667 | 5074           | NCEI    | 1979-1988        |
| WY    | PINE BLUFFS         | 48-7235 | DLY                 | 41.1833  | -104.0667 | 5074           | NCEI    | 1918-1988        |
| WY    | PINE BLUFFS         | 48-7235 | 15M                 | 41.1833  | -104.0667 | 5074           | NCEI    | 1979-1988        |
| WY    | PINE BLUFFS 1ESE    | 48-7236 | DLY                 | 41.1800  | -104.0572 | 5058           | NCEI    | 2012-2023        |
| WY    | PINE BLUFFS 1ESE    | 48-7236 | HLY                 | 41.1800  | -104.0572 | 5058           | NCEI    | 2011-2013        |
| WY    | PINE BLUFFS 1ESE    | 48-7236 | 15M                 | 41.1800  | -104.0572 | 5058           | NCEI    | 2011-2013        |
| WY    | PINE BLUFFS 5W      | 48-7240 | HLY                 | 41.1722  | -104.1583 | 5180           | NCEI    | 1948-2010        |
| WY    | PINE BLUFFS 5W      | 48-7240 | 15M                 | 41.1722  | -104.1583 | 5180           | NCEI    | 1974-2010        |
| WY    | PINE BLUFFS 5W      | 48-7240 | DLY                 | 41.1722  | -104.1583 | 5180           | NCEI    | 1948-2009        |
| WY    | PINEDALE            | 48-7260 | DLY                 | 42.8744  | -109.8581 | 7210           | NCEI    | 1948-2023        |
| WY    | PINE TREE 9 NE      | 48-7270 | DLY                 | 43.7167  | -105.6333 | 5111           | NCEI    | 1949-1952        |
| WY    | PINE TREE 9 NE      | 48-7270 | 15M                 | 43.7167  | -105.6333 | 5111           | NCEI    | 1976-1984        |
| WY    | PINE TREE 9 NE      | 48-7270 | HLY                 | 43.7167  | -105.6333 | 5111           | NCEI    | 1949-1984        |
| WY    | POWDER RVR (SCHOOL) | 48-7375 | HLY                 | 43.0353  | -106.9894 | 5722           | NCEI    | 1958-2013        |
| WY    | POWDER RVR (SCHOOL) | 48-7375 | 15M                 | 43.0353  | -106.9894 | 5722           | NCEI    | 1971-2013        |
| WY    | POWDER RVR (SCHOOL) | 48-7375 | DLY                 | 43.0353  | -106.9894 | 5722           | NCEI    | 1948-2023        |
| WY    | POWDER RIVER #2     | 48-7376 | DLY                 | 43.0350  | -106.9883 | 5700           | NCEI    | 1964-2009        |
| WY    | POWELL              | 48-7380 | DLY                 | 44.7500  | -108.7667 | 4383           | NCEI    | 1906-1981        |
| WY    | POWELL FLD STN      | 48-7388 | DLY                 | 44.7764  | -108.7592 | 4372           | NCEI    | 1981-2023        |
| WY    | POWELL FLD STN      | 48-7388 | 15M                 | 44.7764  | -108.7592 | 4372           | NCEI    | 1982-2013        |
| WY    | POWELL FLD STN      | 48-7388 | HLY                 | 44.7764  | -108.7592 | 4372           | NCEI    | 1966-2013        |
| WY    | QUAKING ASPEN CREEK | 48-7420 | DLY                 | 43.9833  | -109.0833 | 7454           | NCEI    | 1922-1950        |
| WY    | RAIRDEN 2WSW        | 48-7473 | DLY                 | 44.1786  | -107.9381 | 4020           | NCEI    | 1951-2023        |
| WY    | RAWLINS             | 48-7530 | DLY                 | 41.7833  | -107.2500 | 6854           | NCEI    | 1948-1954        |
| WY    | RAWLINS AP          | 48-7533 | 15M                 | 41.8000  | -107.2000 | 6736           | NCEI    | 1984-2005        |

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| WY    | RAWLINS AP             | 48-7533 | HLY                 | 41.8000  | -107.2000 | 6736           | NCEI    | 1951-2013        |
| WY    | RECLUSE                | 48-7545 | 15M                 | 44.7408  | -105.7261 | 4150           | NCEI    | 1971-2011        |
| WY    | RECLUSE                | 48-7545 | HLY                 | 44.7408  | -105.7261 | 4150           | NCEI    | 1948-2011        |
| WY    | RECLUSE                | 48-7545 | DLY                 | 44.7408  | -105.7261 | 4150           | NCEI    | 1948-1951        |
| WY    | REDBIRD                | 48-7555 | DLY                 | 43.2450  | -104.2881 | 3890           | NCEI    | 1948-2023        |
| WY    | RIVERTON               | 48-7760 | 15M                 | 43.0306  | -108.3744 | 4955           | NCEI    | 1974-2013        |
| WY    | RIVERTON               | 48-7760 | HLY                 | 43.0306  | -108.3744 | 4955           | NCEI    | 1955-2013        |
| WY    | RIVERTON               | 48-7760 | DLY                 | 43.0306  | -108.3744 | 4955           | NCEI    | 1906-2023        |
| WY    | RIVERTON USBR          | 48-7765 | HLY                 | 43.0333  | -108.3667 | 4944           | NCEI    | 1949-1955        |
| WY    | RIVERTON USBR          | 48-7765 | DLY                 | 43.0333  | -108.3667 | 4944           | NCEI    | 1949-1952        |
| WY    | ROCHELLE 7ENE          | 48-7810 | DLY                 | 43.6450  | -104.8414 | 4239           | NCEI    | 1927-2023        |
| WY    | ROCK SPRINGS           | 48-7840 | 15M                 | 41.5833  | -109.2167 | 6375           | NCEI    | 1971-1979        |
| WY    | ROCK SPRINGS           | 48-7840 | DLY                 | 41.5833  | -109.2167 | 6375           | NCEI    | 1898-1979        |
| WY    | ROCK SPRINGS           | 48-7840 | HLY                 | 41.5833  | -109.2167 | 6375           | NCEI    | 1954-1979        |
| WY    | ROCK SPRINGS AP        | 48-7845 | 15M                 | 41.5947  | -109.0531 | 6742           | NCEI    | 1979-2013        |
| WY    | ROCK SPRINGS AP        | 48-7845 | HLY                 | 41.5947  | -109.0531 | 6742           | NCEI    | 1948-2013        |
| WY    | ROCK SPRINGS FIRE DEPT | 48-7847 | DLY                 | 41.5778  | -109.2394 | 6270           | NCEI    | 2002-2023        |
| WY    | ROCKYPOINT 7NNE        | 48-7885 | DLY                 | 44.9917  | -105.0472 | 3910           | NCEI    | 1911-2010        |
| WY    | SAGE 4 NNW             | 48-7955 | DLY                 | 41.8667  | -111.0000 | 6210           | NCEI    | 1922-2001        |
| WY    | SARATOGA               | 48-7990 | DLY                 | 41.4528  | -106.8053 | 6790           | NCEI    | 1948-2007        |
| WY    | SARATOGA 4N            | 48-7995 | DLY                 | 41.5047  | -106.7889 | 6801           | NCEI    | 1948-2023        |
| WY    | SARATOGA 4N            | 48-7995 | HLY                 | 41.5047  | -106.7889 | 6801           | NCEI    | 1948-2013        |
| WY    | SARATOGA 4N            | 48-7995 | 15M                 | 41.5047  | -106.7889 | 6801           | NCEI    | 1971-2013        |
| WY    | SEMINOE DAM            | 48-8070 | HLY                 | 42.1569  | -106.9153 | 6838           | NCEI    | 1948-2013        |
| WY    | SEMINOE DAM            | 48-8070 | 15M                 | 42.1569  | -106.9153 | 6838           | NCEI    | 1984-2013        |
| WY    | SEMINOE DAM            | 48-8070 | DLY                 | 42.1569  | -106.9153 | 6838           | NCEI    | 1948-2011        |
| WY    | SEMINOE RSVR USBR      | 48-8074 | DLY                 | 42.1556  | -106.9139 | 6975           | NCEI    | 2011-2023        |
| WY    | SHELL                  | 48-8124 | HLY                 | 44.5353  | -107.7775 | 4242           | NCEI    | 1953-1958        |
| WY    | SHELL                  | 48-8124 | DLY                 | 44.5353  | -107.7775 | 4242           | NCEI    | 1958-2023        |

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| WY    | SHERIDAN AP          | 48-8155 | HLY                 | 44.7694  | -106.9689 | 3945           | NCEI    | 1948-2013        |
| WY    | SHERIDAN FLD STN     | 48-8160 | DLY                 | 44.8406  | -106.8383 | 3750           | NCEI    | 1919-2023        |
| WY    | SHERIDAN NO. 2       | 48-8163 | DLY                 | 44.8167  | -106.9500 | 3750           | NCEI    | 1893-1911        |
| WY    | SHIRLEY BASIN        | 48-8192 | HLY                 | 42.3703  | -106.1050 | 7057           | NCEI    | 1961-2013        |
| WY    | SHIRLEY BASIN        | 48-8192 | DLY                 | 42.3703  | -106.1050 | 7057           | NCEI    | 1977-2023        |
| WY    | SHIRLEY BASIN        | 48-8192 | 15M                 | 42.3703  | -106.1050 | 7057           | NCEI    | 1973-2013        |
| WY    | SHOSHONI             | 48-8209 | DLY                 | 43.2372  | -108.1097 | 4837           | NCEI    | 1931-2023        |
| WY    | SNAKE RVR            | 48-8315 | DLY                 | 44.1364  | -110.6664 | 6882           | NCEI    | 1905-2023        |
| WY    | SOUTH PASS CITY      | 48-8385 | DLY                 | 42.4667  | -108.8000 | 7840           | NCEI    | 1900-2014        |
| WY    | SOUTH PASS CITY 2 NW | 48-8410 | DLY                 | 42.4833  | -108.8167 | 8090           | NCEI    | 1988-1990        |
| WY    | SPENCER 10 NE        | 48-8475 | DLY                 | 43.4333  | -104.1667 | 3802           | NCEI    | 1917-1974        |
| WY    | STORY                | 48-8626 | DLY                 | 44.5767  | -106.9061 | 5168           | NCEI    | 1950-2023        |
| WY    | STORY                | 48-8626 | HLY                 | 44.5767  | -106.9061 | 5168           | NCEI    | 1950-2013        |
| WY    | STORY                | 48-8626 | 15M                 | 44.5767  | -106.9061 | 5168           | NCEI    | 1976-2013        |
| WY    | SUNDANCE             | 48-8705 | DLY                 | 44.4122  | -104.3567 | 4695           | NCEI    | 1893-2021        |
| WY    | SUNSHINE 3 SW        | 48-8748 | DLY                 | 43.9897  | -109.0504 | 6844           | NCEI    | 1950-1963        |
| WY    | SUNSHINE 3NE         | 48-8758 | DLY                 | 44.0758  | -108.9547 | 6224           | NCEI    | 1963-2020        |
| WY    | SYBILLE RSCH UNIT    | 48-8808 | DLY                 | 41.7644  | -105.3750 | 6086           | NCEI    | 1964-2023        |
| WY    | TENNYSON             | 48-8845 | DLY                 | 41.3500  | -104.3833 | 5616           | NCEI    | 1941-1981        |
| WY    | TENSLEEP 4NE         | 48-8852 | HLY                 | 44.0647  | -107.3819 | 4748           | NCEI    | 1964-2013        |
| WY    | TENSLEEP 4NE         | 48-8852 | DLY                 | 44.0647  | -107.3819 | 4748           | NCEI    | 1964-2023        |
| WY    | TENSLEEP 4NE         | 48-8852 | 15M                 | 44.0647  | -107.3819 | 4748           | NCEI    | 1982-2013        |
| WY    | TEN SLEEP            | 48-8855 | HLY                 | 44.0333  | -107.4500 | 4514           | NCEI    | 1948-1964        |
| WY    | TEN SLEEP            | 48-8855 | DLY                 | 44.0333  | -107.4500 | 4514           | NCEI    | 1902-1964        |
| WY    | TENSLEEP 16SSE       | 48-8858 | DLY                 | 43.8111  | -107.3653 | 4680           | NCEI    | 1955-2023        |
| WY    | TENSLEEP 16SSE       | 48-8858 | HLY                 | 43.8111  | -107.3653 | 4680           | NCEI    | 1979-2013        |
| WY    | TENSLEEP 16SSE       | 48-8858 | 15M                 | 43.8111  | -107.3653 | 4680           | NCEI    | 1979-2013        |
| WY    | THERMOPOLIS          | 48-8875 | DLY                 | 43.6483  | -108.2036 | 4321           | NCEI    | 1899-2023        |
| WY    | THERMOPOLIS          | 48-8875 | 15M                 | 43.6483  | -108.2036 | 4321           | NCEI    | 1984-2013        |

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| WY    | THERMOPOLIS              | 48-8875 | HLY                 | 43.6483  | -108.2036 | 4321           | NCEI    | 1949-2013        |
| WY    | THERMOPOLIS 2            | 48-8880 | DLY                 | 43.6500  | -108.2167 | 4400           | NCEI    | 1965-1990        |
| WY    | THERMOPOLIS 9NE          | 48-8884 | DLY                 | 43.7533  | -108.1431 | 4282           | NCEI    | 1991-2023        |
| WY    | THERMOPOLIS 21WNW        | 48-8888 | DLY                 | 43.7231  | -108.6964 | 5510           | NCEI    | 1951-2012        |
| WY    | THERMOPOLIS 21WNW        | 48-8888 | 15M                 | 43.7231  | -108.6964 | 5510           | NCEI    | 1975-2013        |
| WY    | THERMOPOLIS 21WNW        | 48-8888 | HLY                 | 43.7231  | -108.6964 | 5510           | NCEI    | 1951-2013        |
| WY    | TORRINGTON EXP FARM      | 48-8995 | 15M                 | 42.0803  | -104.2236 | 4098           | NCEI    | 1984-2008        |
| WY    | TORRINGTON EXP FARM      | 48-8995 | DLY                 | 42.0803  | -104.2236 | 4098           | NCEI    | 1921-2007        |
| WY    | TORRINGTON EXP FARM      | 48-8995 | HLY                 | 42.0803  | -104.2236 | 4098           | NCEI    | 1979-2008        |
| WY    | TORRINGTON 1 S           | 48-9000 | DLY                 | 42.0500  | -104.1833 | 4091           | NCEI    | 1948-1951        |
| WY    | TORRINGTON 1 S           | 48-9000 | HLY                 | 42.0500  | -104.1833 | 4091           | NCEI    | 1948-1979        |
| WY    | TOWER FALLS              | 48-9025 | DLY                 | 44.9167  | -110.4203 | 6275           | NCEI    | 1948-2023        |
| WY    | UPTON                    | 48-9205 | DLY                 | 44.0928  | -104.6114 | 4320           | NCEI    | 1908-2023        |
| WY    | UPTON 13 SW              | 48-9207 | DLY                 | 43.9269  | -104.7456 | 4780           | NCEI    | 1948-2001        |
| WY    | WAMSUTTER                | 48-9459 | DLY                 | 41.6717  | -107.9783 | 6740           | NCEI    | 1897-2023        |
| WY    | WAPITI 1WSW              | 48-9467 | HLY                 | 44.4594  | -109.4164 | 5558           | NCEI    | 1950-1950        |
| WY    | WAPITI 1WSW              | 48-9467 | DLY                 | 44.4594  | -109.4164 | 5558           | NCEI    | 1950-2018        |
| WY    | WESTON 1 E               | 48-9580 | DLY                 | 44.6403  | -105.3008 | 3738           | NCEI    | 1951-2023        |
| WY    | WHALEN DAM USBR          | 48-9604 | DLY                 | 42.2494  | -104.6281 | 4294           | NCEI    | 1949-2023        |
| WY    | WHEATLAND 4 N            | 48-9615 | HLY                 | 42.1106  | -104.9492 | 4638           | NCEI    | 1948-2013        |
| WY    | WHEATLAND 4 N            | 48-9615 | 15M                 | 42.1106  | -104.9492 | 4638           | NCEI    | 1971-2013        |
| WY    | WHEATLAND 4 N            | 48-9615 | DLY                 | 42.1106  | -104.9492 | 4638           | NCEI    | 1892-2023        |
| WY    | WORLAND                  | 48-9770 | HLY                 | 44.0114  | -107.9683 | 4058           | NCEI    | 1964-2013        |
| WY    | WORLAND                  | 48-9770 | 15M                 | 44.0114  | -107.9683 | 4058           | NCEI    | 1993-2013        |
| WY    | WORLAND                  | 48-9770 | DLY                 | 44.0114  | -107.9683 | 4058           | NCEI    | 1906-2023        |
| WY    | WYNCOTE                  | 48-9880 | DLY                 | 42.1500  | -104.3833 | 4250           | NCEI    | 1905-1921        |
| WY    | YELLOWSTONE NP E ENT     | 48-9902 | DLY                 | 44.4886  | -110.0039 | 6954           | NCEI    | 2000-2023        |
| WY    | YELLOWSTONE PARK MAMMOTH | 48-9905 | DLY                 | 44.9767  | -110.6964 | 6195           | NCEI    | 1893-2023        |
| WY    | YODER 5 W                | 48-9925 | DLY                 | 41.9131  | -104.3881 | 4330           | NCEI    | 1921-2011        |

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| MT    | FORT ASSINNIBOINE         | 52-3110 | DLY                 | 48.5019  | -109.7942 | 2663           | FORTS   | 1880-1889        |
| MT    | FORT ASSINNIBOINE         | 52-3111 | DLY                 | 48.5019  | -109.7942 | 2663           | FORTS   | 1880-1892        |
| MT    | FORT BENTON               | 52-3113 | DLY                 | 47.8215  | -110.6635 | 2623           | FORTS   | 1869-1886        |
| MT    | FORT BENTON               | 52-3122 | DLY                 | 47.2833  | -110.8000 | 2623           | FORTS   | 1869-1881        |
| MT    | FORT KEOGH                | 52-3148 | DLY                 | 46.3789  | -105.8858 | 2374           | FORTS   | 1877-1893        |
| MT    | FORT KEOGH                | 52-3149 | DLY                 | 46.3806  | -105.8864 | 2374           | FORTS   | 1879-1883        |
| MT    | FORT LOGAN                | 52-3157 | DLY                 | 46.6786  | -111.1736 | 4640           | FORTS   | 1870-1892        |
| MT    | FORT SHAW                 | 52-3195 | DLY                 | 47.5094  | -111.8214 | 3509           | FORTS   | 1867-1891        |
| WY    | FORT LARAMIE              | 52-3485 | DLY                 | 42.2103  | -104.5369 | 4230           | FORTS   | 1849-1892        |
| MT    | HELENA                    | 52-4050 | DLY                 | 46.5872  | -112.0394 | 4095           | FORTS   | 1866-1892        |
| ID    | LEWISTON                  | 52-5230 | DLY                 | 46.4292  | -116.9667 | 780            | FORTS   | 1888-1891        |
| ID    | LEWISTON                  | 52-5236 | DLY                 | 46.4217  | -117.0275 | 735            | FORTS   | 1879-1885        |
| WY    | LARAMIE                   | 52-5410 | DLY                 | 41.3133  | -105.5808 | 7190           | FORTS   | 1868-1892        |
| WY    | LARAMIE                   | 52-5411 | DLY                 | 41.3111  | -105.5936 | 7160           | FORTS   | 1871-1891        |
| MT    | FORT MISSOULA             | 52-5737 | DLY                 | 46.8428  | -114.0617 | 3150           | FORTS   | 1880-1893        |
| MT    | POPLAR RIVER              | 52-6660 | DLY                 | 48.1131  | -105.1983 | 2000           | FORTS   | 1882-1893        |
| MT    | FORT SHAW                 | 52-8021 | DLY                 | 47.5094  | -111.8214 | 3509           | FORTS   | 1880-1886        |
| MT    | VIRGINIA CITY             | 52-8597 | DLY                 | 45.2931  | -111.9467 | 5785           | FORTS   | 1871-1892        |
| MT    | ST. MARY                  | 53-0098 | HLY                 | 48.7386  | -113.4295 | 4560           | NCEI    | 2016-2017        |
| MT    | WEST YELLOWSTONE USFS     | 53-0109 | HLY                 | 44.6658  | -111.0983 | 6660           | NCEI    | 1981-2017        |
| WY    | JELM 2S                   | 53-0158 | HLY                 | 41.0599  | -106.0263 | 7580           | NCEI    | 1948-2017        |
| WY    | MOORCROFT 3S              | 53-0163 | HLY                 | 44.2169  | -104.9291 | 4325           | NCEI    | 1948-2012        |
| ID    | BOISE LUCKY PEAK DAM      | 54-0014 | 15M                 | 43.5253  | -116.0542 | 2840           | NCEI    | 1971-2020        |
| ID    | COEUR D'ALENE             | 54-0016 | 15M                 | 47.6821  | -116.7967 | 2133           | NCEI    | 1971-2019        |
| ID    | COTTONWOOD 2 WSW          | 54-0017 | 15M                 | 46.0336  | -116.3919 | 3945           | NCEI    | 1978-2020        |
| ID    | DIXIE                     | 54-0018 | 15M                 | 45.5525  | -115.4605 | 5620           | NCEI    | 1978-2020        |
| ID    | DUBOIS EXPERIMENT STATION | 54-0019 | 15M                 | 44.2436  | -112.2003 | 5450           | NCEI    | 1979-2020        |
| ID    | ELK CITY 1NE              | 54-0021 | 15M                 | 45.8356  | -115.4610 | 4058           | NCEI    | 1979-2015        |
| ID    | FENN RANGER STATION       | 54-0022 | 15M                 | 46.0930  | -115.5355 | 1560           | NCEI    | 1971-2020        |

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| ID    | GOODING 1 S                 | 54-0023 | 15M                 | 42.9183  | -114.7664 | 3643           | NCEI    | 1971-2020        |
| ID    | GRACE                       | 54-0024 | 15M                 | 42.5872  | -111.7275 | 5550           | NCEI    | 1978-2020        |
| ID    | GRANGEVILLE 1N              | 54-0025 | 15M                 | 45.9397  | -116.1211 | 3310           | NCEI    | 2000-2020        |
| ID    | GRASMERE 3 S                | 54-0026 | 15M                 | 42.3450  | -115.8836 | 5140           | NCEI    | 1976-2020        |
| ID    | ISLAND PARK                 | 54-0029 | 15M                 | 44.4203  | -111.3710 | 6290           | NCEI    | 2000-2020        |
| ID    | KETCHUM RANGER STATION      | 54-0030 | 15M                 | 43.6841  | -114.3602 | 5890           | NCEI    | 1975-2020        |
| ID    | LEADORE NO. 2               | 54-0031 | 15M                 | 44.6830  | -113.3622 | 6000           | NCEI    | 2009-2020        |
| ID    | MACKAY LOST RIVER RS        | 54-0032 | 15M                 | 43.9178  | -113.6152 | 5897           | NCEI    | 1978-2020        |
| ID    | MCCALL                      | 54-0034 | 15M                 | 44.8871  | -116.1046 | 5025           | NCEI    | 1971-2020        |
| ID    | MOUNTAIN HOME               | 54-0035 | 15M                 | 43.1261  | -115.7119 | 3140           | NCEI    | 1971-2017        |
| ID    | MULLAN                      | 54-0036 | 15M                 | 47.4661  | -115.8113 | 3201           | NCEI    | 1972-2019        |
| ID    | MURPHY (DESERT) HOT SPRINGS | 54-0037 | 15M                 | 42.0264  | -115.3596 | 5152           | NCEI    | 1987-2020        |
| ID    | OLA                         | 54-0038 | 15M                 | 44.1758  | -116.2827 | 3075           | NCEI    | 1991-2019        |
| ID    | PORTHILL 1 SW               | 54-0039 | 15M                 | 48.9938  | -116.5024 | 1799           | NCEI    | 1971-2019        |
| ID    | PRAIRIE                     | 54-0040 | 15M                 | 43.5063  | -115.5716 | 4780           | NCEI    | 1977-2020        |
| ID    | SANDPOINT EXP STATION       | 54-0041 | 15M                 | 48.2943  | -116.5627 | 2126           | NCEI    | 1972-2019        |
| ID    | TETONIA EXPERIMENT STN      | 54-0044 | 15M                 | 43.8563  | -111.2769 | 6170           | NCEI    | 1972-2020        |
| ID    | TOPAZ                       | 54-0045 | 15M                 | 42.6251  | -112.0879 | 4918           | NCEI    | 1978-2018        |
| ID    | YELLOWPINE BAR              | 54-0047 | 15M                 | 45.5450  | -115.2514 | 2480           | NCEI    | 1987-2013        |
| MT    | ABSAROKEE                   | 54-0048 | 15M                 | 45.5443  | -109.3935 | 3955           | NCEI    | 1971-2020        |
| MT    | ALZADA                      | 54-0049 | 15M                 | 45.0155  | -104.4108 | 3450           | NCEI    | 1984-2020        |
| MT    | ASHLAND RANGER STATION      | 54-0050 | 15M                 | 45.5938  | -106.2722 | 2940           | NCEI    | 1973-2020        |
| MT    | BAYLOR                      | 54-0051 | 15M                 | 48.6715  | -106.4808 | 2963           | NCEI    | 1984-2020        |
| MT    | BOULDER                     | 54-0052 | 15M                 | 46.2310  | -112.1138 | 4904           | NCEI    | 1971-2020        |
| MT    | BREDETTE                    | 54-0053 | 15M                 | 48.5155  | -105.2991 | 2313           | NCEI    | 1984-2020        |
| MT    | BRIDGER 2 N                 | 54-0054 | 15M                 | 45.3261  | -108.9091 | 3583           | NCEI    | 1984-2020        |
| MT    | BROADUS                     | 54-0055 | 15M                 | 45.4441  | -105.4072 | 3032           | NCEI    | 1973-2020        |
| MT    | BROWNING                    | 54-0056 | 15M                 | 48.5615  | -113.0133 | 4355           | NCEI    | 1979-2020        |
| MT    | BUTTE 8 S                   | 54-0057 | 15M                 | 45.8966  | -112.5471 | 5700           | NCEI    | 1971-2020        |

| State | Station Name           | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | CARDWELL               | 54-0058 | 15M                 | 45.8604  | -111.9582 | 4270           | NCEI    | 1978-2020        |
| MT    | CHOTEAU                | 54-0059 | 15M                 | 47.8205  | -112.1921 | 3845           | NCEI    | 1971-2020        |
| MT    | COHAGEN                | 54-0060 | 15M                 | 47.0564  | -106.6164 | 2720           | NCEI    | 1981-2020        |
| MT    | CONTENT 4 NNE          | 54-0061 | 15M                 | 48.0500  | -107.5500 | 997            | NCEI    | 1984-2020        |
| MT    | CUT BANK AIRPORT       | 54-0063 | 15M                 | 48.6033  | -112.3752 | 3838           | NCEI    | 1984-2020        |
| MT    | DILLON 9 SSE           | 54-0064 | 15M                 | 45.0918  | -112.6044 | 5500           | NCEI    | 1978-2020        |
| MT    | DIVIDE                 | 54-0065 | 15M                 | 45.7510  | -112.7547 | 5350           | NCEI    | 1972-2020        |
| MT    | DODSON 11 N            | 54-0066 | 15M                 | 48.5542  | -108.2067 | 2710           | NCEI    | 1984-2020        |
| MT    | DUTTON 6 E             | 54-0068 | 15M                 | 47.8433  | -111.5795 | 3594           | NCEI    | 1971-2020        |
| MT    | EKALAKA                | 54-0069 | 15M                 | 45.8863  | -104.5478 | 3432           | NCEI    | 1984-2020        |
| MT    | EUREKA RANGER STATION  | 54-0070 | 15M                 | 48.8978  | -115.0644 | 2532           | NCEI    | 1971-2020        |
| MT    | FORT PECK POWER PLANT  | 54-0071 | 15M                 | 48.0121  | -106.4117 | 2071           | NCEI    | 1971-2020        |
| MT    | GALLATIN GATEWAY 10SSW | 54-0072 | 15M                 | 45.4458  | -111.2369 | 5441           | NCEI    | 2012-2020        |
| MT    | GIBBONS PASS           | 54-0073 | 15M                 | 45.6928  | -113.9550 | 7070           | NCEI    | 1974-2020        |
| MT    | GLENDIVE               | 54-0074 | 15M                 | 47.1059  | -104.7176 | 2075           | NCEI    | 1978-2020        |
| MT    | GREAT FALLS WFO        | 54-0075 | 15M                 | 47.4615  | -111.3850 | 3705           | NCEI    | 2011-2020        |
| MT    | HILGER                 | 54-0077 | 15M                 | 47.2531  | -109.3610 | 4080           | NCEI    | 1975-2020        |
| MT    | HOLTER DAM             | 54-0078 | 15M                 | 46.9907  | -112.0116 | 3487           | NCEI    | 1971-2020        |
| MT    | ISMAY                  | 54-0079 | 15M                 | 46.5400  | -104.7522 | 2715           | NCEI    | 1984-2020        |
| MT    | JOPLIN                 | 54-0080 | 15M                 | 48.5595  | -110.7719 | 3323           | NCEI    | 1979-2020        |
| MT    | LAKEVIEW               | 54-0081 | 15M                 | 44.5994  | -111.8125 | 6710           | NCEI    | 1971-2020        |
| MT    | LAVINA                 | 54-0082 | 15M                 | 46.2930  | -108.9416 | 3434           | NCEI    | 1984-2020        |
| MT    | LEWISTOWN 2 SW         | 54-0083 | 15M                 | 47.0512  | -109.4426 | 4100           | NCEI    | 1972-2020        |
| MT    | LIMA                   | 54-0085 | 15M                 | 44.6331  | -112.5928 | 6279           | NCEI    | 1984-2020        |
| MT    | LIVINGSTON RAIN GAUGE  | 54-0086 | 15M                 | 45.6970  | -110.4540 | 4697           | NCEI    | 2009-2020        |
| MT    | LODGE GRASS            | 54-0087 | 15M                 | 45.3790  | -107.3787 | 3263           | NCEI    | 1971-2020        |
| MT    | LOGAN 2 W              | 54-0088 | 15M                 | 45.8908  | -111.4588 | 4089           | NCEI    | 1971-2020        |
| MT    | MALTA #2               | 54-0089 | 15M                 | 48.3469  | -107.8769 | 2288           | NCEI    | 1999-2020        |
| MT    | MILES CITY AIRPORT     | 54-0092 | 15M                 | 46.4266  | -105.8825 | 2624           | NCEI    | 2019-2020        |



| State | Station Name                | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-----------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | MILLEGAN                    | 54-0093 | 15M                 | 47.0206  | -111.3699 | 4500           | NCEI    | 1971-2020        |
| MT    | MOLT 6 SW                   | 54-0094 | 15M                 | 45.7846  | -108.9663 | 3990           | NCEI    | 1984-2020        |
| MT    | PHILLIPSBURG RANGER STATION | 54-0095 | 15M                 | 46.3158  | -113.3000 | 5270           | NCEI    | 1978-2020        |
| MT    | PLAINS RANGER STATION       | 54-0096 | 15M                 | 47.4661  | -114.8794 | 2490           | NCEI    | 1978-2020        |
| MT    | REEDPOINT                   | 54-0099 | 15M                 | 45.7061  | -109.5399 | 3744           | NCEI    | 1984-2020        |
| MT    | RUSSELL                     | 54-0100 | 15M                 | 48.0685  | -111.0661 | 3200           | NCEI    | 1981-2020        |
| MT    | ST. MARY                    | 54-0101 | 15M                 | 48.7386  | -113.4295 | 4560           | NCEI    | 1981-2020        |
| MT    | SCOBEY 4 NW                 | 54-0102 | 15M                 | 48.8355  | -105.4748 | 2390           | NCEI    | 1979-2020        |
| MT    | SHELBY                      | 54-0103 | 15M                 | 48.5133  | -111.8551 | 3325           | NCEI    | 1992-2020        |
| MT    | SILVERSTAR                  | 54-0105 | 15M                 | 45.6917  | -112.2834 | 4585           | NCEI    | 1984-2020        |
| MT    | STEVENSVILLE                | 54-0106 | 15M                 | 46.5137  | -114.0910 | 3375           | NCEI    | 1978-2020        |
| MT    | TERRY 25 NNW                | 54-0108 | 15M                 | 47.1167  | -105.5500 | 3333           | NCEI    | 1984-2020        |
| MT    | TOWNSEND 12 ENE             | 54-0109 | 15M                 | 46.3566  | -111.2841 | 5050           | NCEI    | 1971-2020        |
| MT    | VANANDA 6 NE                | 54-0110 | 15M                 | 46.4300  | -106.9200 | 2625           | NCEI    | 1984-2020        |
| MT    | WESTBY                      | 54-0111 | 15M                 | 48.8745  | -104.0504 | 2103           | NCEI    | 1984-2020        |
| MT    | WEST YELLOWSTONE USFS       | 54-0112 | 15M                 | 44.6660  | -111.0991 | 6660           | NCEI    | 1981-2020        |
| MT    | WINNETT 8 ESE               | 54-0114 | 15M                 | 46.9393  | -108.1968 | 2810           | NCEI    | 1984-2020        |
| MT    | YELLOWTAIL DAM              | 54-0115 | 15M                 | 45.3127  | -107.9383 | 3305           | NCEI    | 1979-2020        |
| MT    | ZORTMAN                     | 54-0116 | 15M                 | 47.9185  | -108.5244 | 4035           | NCEI    | 1978-2020        |
| WY    | BIG PINEY UP&L              | 54-0152 | 15M                 | 42.5364  | -110.1127 | 6822           | NCEI    | 1992-2020        |
| WY    | BOYSEN DAM                  | 54-0153 | 15M                 | 43.4054  | -108.1634 | 4875           | NCEI    | 1971-2020        |
| WY    | BUFFALO                     | 54-0154 | 15M                 | 44.3545  | -106.6994 | 4639           | NCEI    | 1971-2020        |
| WY    | DOUGLAS 17NE                | 54-0156 | 15M                 | 42.9533  | -105.1650 | 4930           | NCEI    | 1976-2020        |
| WY    | DUBOIS                      | 54-0157 | 15M                 | 43.5398  | -109.6552 | 6955           | NCEI    | 1981-2020        |
| WY    | DULL CENTER 1SE             | 54-0158 | 15M                 | 43.4117  | -104.9614 | 4415           | NCEI    | 1984-2020        |
| WY    | ENCAMPMENT                  | 54-0159 | 15M                 | 41.2058  | -106.7883 | 7290           | NCEI    | 1972-2020        |
| WY    | GUERNSEY DAM NO 2           | 54-0160 | 15M                 | 42.2905  | -104.7625 | 4355           | NCEI    | 2012-2018        |
| WY    | LAKE YELLOWSTONE            | 54-0163 | 15M                 | 44.5621  | -110.3986 | 7892           | NCEI    | 1971-2020        |
| WY    | MEDICINE BOW F&P            | 54-0166 | 15M                 | 41.8998  | -106.2059 | 6581           | NCEI    | 2006-2017        |

| State | Station Name                 | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| WY    | MOORCROFT 3S                 | 54-0167 | 15M                 | 44.2169  | -104.9291 | 4325           | NCEI    | 1971-2012        |
| WY    | MOUNTAIN VIEW                | 54-0168 | 15M                 | 41.2659  | -110.3375 | 6800           | NCEI    | 1971-2020        |
| WY    | MUD SPRINGS                  | 54-0169 | 15M                 | 41.3185  | -108.9176 | 6736           | NCEI    | 1971-2020        |
| WY    | NEWCASTLE                    | 54-0170 | 15M                 | 43.8497  | -104.1886 | 4415           | NCEI    | 1971-2020        |
| WY    | OREGON TRAIL CROSSING        | 54-0171 | 15M                 | 42.5393  | -108.1872 | 6544           | NCEI    | 1971-2020        |
| WY    | PATHFINDER DAM               | 54-0173 | 15M                 | 42.4717  | -106.8527 | 5923           | NCEI    | 1984-2020        |
| WY    | PHILLIPS                     | 54-0174 | 15M                 | 41.6263  | -104.4936 | 4982           | NCEI    | 1971-2020        |
| WY    | PINE BLUFFS 1ESE             | 54-0175 | 15M                 | 41.1799  | -104.0573 | 5058           | NCEI    | 2011-2020        |
| WY    | POWDER RIVER (SCHOOL)        | 54-0176 | 15M                 | 43.0352  | -106.9895 | 5722           | NCEI    | 1971-2020        |
| WY    | POWELL FIELD STATION         | 54-0177 | 15M                 | 44.7764  | -108.7590 | 4372           | NCEI    | 1982-2020        |
| WY    | RIVERTON                     | 54-0180 | 15M                 | 43.0307  | -108.3743 | 4955           | NCEI    | 1974-2020        |
| WY    | SARATOGA 4N                  | 54-0183 | 15M                 | 41.5047  | -106.7888 | 6801           | NCEI    | 1971-2017        |
| WY    | SEMINOE DAM                  | 54-0184 | 15M                 | 42.1569  | -106.9153 | 6838           | NCEI    | 1984-2020        |
| WY    | SHIRLEY BASIN                | 54-0185 | 15M                 | 42.3703  | -106.1049 | 7057           | NCEI    | 1973-2018        |
| WY    | STORY                        | 54-0186 | 15M                 | 44.5767  | -106.9062 | 5168           | NCEI    | 1976-2020        |
| WY    | TENSLEEP 4NE                 | 54-0187 | 15M                 | 44.0648  | -107.3820 | 4748           | NCEI    | 1982-2020        |
| WY    | TENSLEEP 16SSE               | 54-0188 | 15M                 | 43.8111  | -107.3653 | 4680           | NCEI    | 1979-2020        |
| WY    | THERMOPOLIS                  | 54-0189 | 15M                 | 43.6483  | -108.2037 | 4321           | NCEI    | 1984-2020        |
| WY    | WHEATLAND 4 N                | 54-0192 | 15M                 | 42.1106  | -104.9492 | 4638           | NCEI    | 1971-2020        |
| WY    | WORLAND                      | 54-0193 | 15M                 | 44.0113  | -107.9684 | 4058           | NCEI    | 1993-2020        |
| MT    | LIMA (JUDITH GAP)            | 55-0119 | HLY                 | 46.7000  | -109.7330 | 4640           | NCEI    | 2012-2023        |
| ID    | CHALLIS AIRPORT              | 55-0125 | HLY                 | 44.5230  | -114.2150 | 5072           | NCEI    | 2005-2023        |
| WY    | CHEYENNE AIRPORT             | 55-0138 | HLY                 | 41.1580  | -104.8070 | 6113           | NCEI    | 1948-2023        |
| WY    | LARAMIE REGIONAL AIRPORT     | 55-0141 | HLY                 | 41.3170  | -105.6830 | 7266           | NCEI    | 1997-2023        |
| WY    | NATRONA COUNTY INTERNATIONAL | 55-0152 | HLY                 | 42.8980  | -106.4740 | 5318           | NCEI    | 1950-2023        |
| WY    | RCK SRINGS-SWETWTER CO APT   | 55-0164 | HLY                 | 41.5950  | -109.0530 | 6742           | NCEI    | 1990-2023        |
| WY    | TORRINGTON MUNICIPAL ARPT    | 55-0170 | HLY                 | 42.0610  | -104.1580 | 4199           | NCEI    | 2006-2023        |
| WY    | RIVERTON REGIONAL            | 55-0171 | HLY                 | 43.0640  | -108.4590 | 5525           | NCEI    | 1996-2007        |
| ID    | LOWELL THREE RIVERS RESORT   | 55-0177 | HLY                 | 46.1440  | -115.5960 | 1480           | NCEI    | 2006-2023        |

| State | Station Name                 | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | IDAHO FALLS REGIONAL ARPT    | 55-0178 | HLY                 | 43.5190  | -112.0640 | 4733           | NCEI    | 1996-2023        |
| ID    | JSIN FLD-MAGIC VLY RGN APT   | 55-0188 | HLY                 | 42.4820  | -114.4870 | 4151           | NCEI    | 2006-2023        |
| ID    | BURLEY MUNICIPAL AIRPORT     | 55-0189 | HLY                 | 42.5420  | -113.7660 | 4154           | NCEI    | 2000-2023        |
| WY    | GILLETTE-CAMPBELL CO. ARPT   | 55-0201 | HLY                 | 44.3390  | -105.5420 | 4354           | NCEI    | 2006-2023        |
| WY    | JOHNSON COUNTY AIRPORT       | 55-0202 | HLY                 | 44.3810  | -106.7210 | 4967           | NCEI    | 2006-2023        |
| WY    | SHERIDAN COUNTY AIRPORT      | 55-0203 | HLY                 | 44.7690  | -106.9690 | 3945           | NCEI    | 1972-2023        |
| WY    | WORLAND MUNICIPAL AIRPORT    | 55-0205 | HLY                 | 43.9660  | -107.9510 | 4172           | NCEI    | 2000-2023        |
| WY    | RAWLINS MUNI/HARVEY FIELD AR | 55-0209 | HLY                 | 41.8000  | -107.2000 | 6736           | NCEI    | 2010-2023        |
| WY    | BIG PINEY-MARBLETON ARPT     | 55-0212 | HLY                 | 42.5840  | -110.1080 | 6970           | NCEI    | 1999-2023        |
| WY    | RIVERTON REGIONAL AIRPORT    | 55-0213 | HLY                 | 43.0640  | -108.4590 | 5445           | NCEI    | 2007-2023        |
| MT    | BILLINGS LOGAN INTERNATIONAL | 55-0217 | HLY                 | 45.8070  | -108.5420 | 3581           | NCEI    | 1972-2023        |
| MT    | BAKER MUNICIPAL AIRPORT      | 55-0221 | HLY                 | 46.3580  | -104.2500 | 2971           | NCEI    | 2006-2023        |
| MT    | GALLATIN FIELD AIRPORT       | 55-0225 | HLY                 | 45.7880  | -111.1610 | 4427           | NCEI    | 1972-2023        |
| ID    | BOISE AIR TERMINAL/GOWEN FD  | 55-0229 | HLY                 | 43.5670  | -116.2410 | 2872           | NCEI    | 1972-2023        |
| ID    | MULLAN PASS                  | 55-0233 | HLY                 | 47.4570  | -115.6450 | 6028           | NCEI    | 1999-2023        |
| ID    | REXBURG-MADISON COUNTY APT   | 55-0234 | HLY                 | 43.8320  | -111.8080 | 4862           | NCEI    | 1999-2023        |
| MT    | HELENA REGIONAL AIRPORT      | 55-0252 | HLY                 | 46.6060  | -111.9640 | 3828           | NCEI    | 1972-2023        |
| MT    | MISSOULA INTERNATIONAL AIRPO | 55-0254 | HLY                 | 46.9210  | -114.0930 | 3192           | NCEI    | 1972-2023        |
| MT    | MALMSTROM AFHP HELIPORT      | 55-0259 | HLY                 | 47.5170  | -111.1830 | 3472           | NCEI    | 2004-2023        |
| MT    | HAVRE CITY-COUNTY AIRPORT    | 55-0261 | HLY                 | 48.5430  | -109.7630 | 2585           | NCEI    | 1992-2023        |
| ID    | LEWISTON-NEZ PERCE COUNTY AI | 55-0265 | HLY                 | 46.3750  | -117.0160 | 1442           | NCEI    | 1973-2023        |
| MT    | FRANK WILEY FIELD AIRPORT    | 55-0279 | HLY                 | 46.4270  | -105.8830 | 2624           | NCEI    | 1984-2023        |
| MT    | LEWISTOWN MUNICIPAL ARPT     | 55-0311 | HLY                 | 47.0490  | -109.4580 | 4146           | NCEI    | 1948-1964        |
| WY    | LANDER 11 SSE                | 57-0009 | HLY                 | 42.6754  | -108.6686 | 5773           | NCEI    | 2004-2021        |
| WY    | LANDER 11 SSE                | 57-0009 | 15M                 | 42.6754  | -108.6686 | 5773           | NCEI    | 2006-2021        |
| WY    | LANDER 11 SSE                | 57-0009 | DLY                 | 42.6754  | -108.6686 | 5773           | NCEI    | 2004-2021        |
| MT    | ST. MARY 1 SSW               | 57-0020 | 15M                 | 48.7412  | -113.4330 | 4555           | NCEI    | 2006-2021        |
| MT    | ST. MARY 1 SSW               | 57-0020 | HLY                 | 48.7412  | -113.4330 | 4555           | NCEI    | 2003-2021        |
| MT    | ST. MARY 1 SSW               | 57-0020 | DLY                 | 48.7412  | -113.4330 | 4555           | NCEI    | 2003-2021        |

| State | Station Name                   | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| WY    | NEWCASTLE                      | 61-0001 | DLY                 | 43.8730  | -104.1917 | 4810           | NADP    | 1981-2017        |
| WY    | SOUTH PASS CITY                | 61-0003 | DLY                 | 42.4944  | -108.8320 | 8281           | NADP    | 1985-2017        |
| MT    | CLANCY                         | 61-0026 | DLY                 | 46.4850  | -112.0647 | 4751           | NADP    | 1984-2017        |
| MT    | LITTLE BIGHORN BATTLEFIELD NAT | 61-0028 | DLY                 | 45.5701  | -107.4380 | 3156           | NADP    | 1984-2017        |
| ID    | HEADQUARTERS                   | 61-0031 | DLY                 | 46.6278  | -115.8194 | 3179           | NADP    | 1982-1991        |
| MT    | SIDNEY                         | 62-0027 | DLY                 | 47.7167  | -104.1667 | 1919           | AWDN    | 1995-2021        |
| MT    | SIDNEY                         | 62-0027 | HLY                 | 47.7167  | -104.1667 | 1919           | AWDN    | 1995-2021        |
| WY    | PINEBLUFFS                     | 62-0069 | DLY                 | 41.1833  | -104.1000 | 5098           | AWDN    | 1985-1994        |
| WY    | PINEBLUFFS                     | 62-0069 | HLY                 | 41.1833  | -104.1000 | 5098           | AWDN    | 1985-1994        |
| MT    | CROW AGENCY E                  | 63-0027 | DLY                 | 45.5900  | -107.4400 | 3091           | MT MESO | 2017-2022        |
| WY    | RAWLINS MUNICIPAL              | 64-0189 | HLY                 | 41.8000  | -107.2000 | 6743           | NCEI    | 1972-2010        |
| WY    | RAWLINS MUNICIPAL              | 64-0189 | DLY                 | 41.8000  | -107.2000 | 6743           | NCEI    | 1972-2010        |
| WY    | HUNT FIELD AIRPORT             | 64-0195 | HLY                 | 42.8150  | -108.7260 | 5573           | NCEI    | 1972-2023        |
| WY    | HUNT FIELD AIRPORT             | 64-0195 | DLY                 | 42.8150  | -108.7260 | 5573           | NCEI    | 1972-2023        |
| ID    | POCATELLO REGIONAL AIRPORT     | 64-0205 | DLY                 | 42.9200  | -112.5720 | 4451           | NCEI    | 1972-2023        |
| ID    | POCATELLO REGIONAL AIRPORT     | 64-0205 | HLY                 | 42.9200  | -112.5720 | 4451           | NCEI    | 1972-2023        |
| ID    | LOWELL                         | 64-0207 | DLY                 | 46.1446  | -115.5930 | 1575           | NCEI    | 1983-2005        |
| ID    | JOSLIN FLD MAGIC VA            | 64-0222 | DLY                 | 42.4830  | -114.4830 | 4150           | NCEI    | 1972-2005        |
| MT    | LEWISTOWN MUNICIPAL ARPT       | 64-0276 | HLY                 | 47.0540  | -109.4570 | 4125           | NCEI    | 1996-2023        |
| MT    | LEWISTOWN MUNICIPAL ARPT       | 64-0276 | DLY                 | 47.0540  | -109.4570 | 4125           | NCEI    | 1972-2023        |
| MT    | WOKAL FIELD/GLASGOW INTL AIR   | 64-0312 | DLY                 | 48.2140  | -106.6210 | 2289           | NCEI    | 1972-2023        |
| MT    | WOKAL FIELD/GLASGOW INTL AIR   | 64-0312 | HLY                 | 48.2140  | -106.6210 | 2289           | NCEI    | 1972-2023        |
| MT    | MISSOULA INTERNATIONAL AIRPO   | 64-0324 | DLY                 | 46.9210  | -114.0940 | 3195           | NCEI    | 1972-2023        |
| MT    | MISSOULA INTERNATIONAL AIRPO   | 64-0324 | HLY                 | 46.9210  | -114.0940 | 3195           | NCEI    | 1972-2023        |
| MT    | BERT MOONEY AIRPORT            | 64-0327 | HLY                 | 45.9640  | -112.5010 | 5505           | NCEI    | 2004-2023        |
| MT    | BERT MOONEY AIRPORT            | 64-0327 | DLY                 | 45.9640  | -112.5010 | 5505           | NCEI    | 2004-2023        |
| MT    | MALMSTROM AFHP HELIPORT        | 64-0329 | HLY                 | 47.5170  | -111.1830 | 3472           | NCEI    | 2004-2023        |
| MT    | MALMSTROM AFHP HELIPORT        | 64-0329 | DLY                 | 47.5170  | -111.1830 | 3472           | NCEI    | 1971-2023        |
| MT    | GLACIER PARK INTERNATIONAL A   | 64-0333 | HLY                 | 48.3040  | -114.2640 | 2963           | NCEI    | 1972-2023        |

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|-------|------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | GLACIER PARK INTERNATIONAL A | 64-0333 | DLY                 | 48.3040  | -114.2640 | 2963           | NCEI    | 1972-2023        |
| MT    | DRUMMOND AVIATION            | 64-0413 | HLY                 | 46.6380  | -113.1760 | 4000           | NCEI    | 1948-1954        |
| ID    | LOWERWEATHER                 | 65-0003 | HLY                 | 43.6885  | -116.1699 | 3776           | DCEW    | 1999-2022        |
| ID    | TREELINE                     | 65-0005 | HLY                 | 43.7302  | -116.1401 | 5282           | DCEW    | 1999-2020        |
| ID    | BENTON DAM (1007891)         | 66-0001 | DLY                 | 48.3502  | -116.8071 | 2641           | PREF    | 1941-2020        |
| ID    | KUNA 1.5 SSE                 | 69-1272 | DLY                 | 43.4704  | -116.4037 | 2742           | NCEI    | 2008-2023        |
| ID    | BOISE 2.1 NNE                | 69-1274 | DLY                 | 43.6323  | -116.2045 | 2716           | NCEI    | 2009-2023        |
| ID    | POCATELLO 2.9 E              | 69-1311 | DLY                 | 42.8708  | -112.4126 | 4858           | NCEI    | 2014-2023        |
| ID    | ST. MARIES 2.8 S             | 69-1359 | DLY                 | 47.2750  | -116.5770 | 2516           | NCEI    | 2009-2023        |
| ID    | SODA SPRINGS 0.3 W           | 69-1360 | DLY                 | 42.6590  | -111.5923 | 5806           | NCEI    | 2009-2023        |
| ID    | NAMPA 4.8 NNW                | 69-1378 | DLY                 | 43.6453  | -116.5940 | 2444           | NCEI    | 2014-2023        |
| ID    | MOUNTAIN HOME 0.9 SW         | 69-1387 | DLY                 | 43.1307  | -115.7040 | 3146           | NCEI    | 2017-2023        |
| ID    | GRANGEVILLE 0.2 ENE          | 69-1404 | DLY                 | 45.9270  | -116.1168 | 3380           | NCEI    | 2016-2023        |
| ID    | MOSCOW 7.3 ENE               | 69-1430 | DLY                 | 46.7762  | -116.8570 | 3116           | NCEI    | 2008-2015        |
| MT    | LODGE GRASS 4.5 N            | 69-1474 | DLY                 | 45.3796  | -107.3778 | 3263           | NCEI    | 2010-2021        |
| MT    | FORT SMITH 0.5 ENE           | 69-1476 | DLY                 | 45.3108  | -107.9163 | 3283           | NCEI    | 2013-2023        |
| MT    | HIGHWOOD 0.1 NNE             | 69-1510 | DLY                 | 47.5851  | -110.7890 | 3398           | NCEI    | 2007-2014        |
| MT    | ISMAY 3.4 NE                 | 69-1520 | DLY                 | 46.5396  | -104.7518 | 2718           | NCEI    | 2011-2023        |
| MT    | KALISPELL 10.1 SW            | 69-1540 | DLY                 | 48.0913  | -114.4642 | 3255           | NCEI    | 2006-2023        |
| MT    | WHITEFISH 0.8 ESE            | 69-1542 | DLY                 | 48.4106  | -114.3293 | 3045           | NCEI    | 2007-2023        |
| MT    | KALISPELL 1.7 NW             | 69-1547 | DLY                 | 48.2180  | -114.3398 | 3020           | NCEI    | 2008-2023        |
| MT    | RYEGATE 0.3 E                | 69-1576 | DLY                 | 46.2990  | -109.2471 | 3649           | NCEI    | 2010-2023        |
| MT    | BOULDER 0.3 E                | 69-1583 | DLY                 | 46.2358  | -112.1141 | 4904           | NCEI    | 2008-2023        |
| MT    | ROUNDUP 6.2 ENE              | 69-1613 | DLY                 | 46.4779  | -108.4165 | 3148           | NCEI    | 2007-2023        |
| MT    | ROUNDUP 1.8 NNE              | 69-1625 | DLY                 | 46.4714  | -108.5208 | 3319           | NCEI    | 2012-2023        |
| MT    | MISSOULA 4.9 N               | 69-1637 | DLY                 | 46.9392  | -114.0194 | 3550           | NCEI    | 2007-2023        |
| MT    | SEELEY LAKE 0.3 ESE          | 69-1640 | DLY                 | 47.1784  | -113.4780 | 4068           | NCEI    | 2007-2023        |
| MT    | LIVINGSTON 0.4 SSW           | 69-1655 | DLY                 | 45.6581  | -110.5657 | 4518           | NCEI    | 2007-2018        |
| MT    | WILLSALL 0.3 NW              | 69-1656 | DLY                 | 45.9973  | -110.6622 | 5100           | NCEI    | 2007-2023        |

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| MT    | LIVINGSTON 0.9 WSW             | 69-1662 | DLY                 | 45.6580  | -110.5817 | 4605           | NCEI     | 2011-2023        |
| MT    | FORSYTH 1.5 ENE (CLOSED)       | 69-1682 | DLY                 | 46.2728  | -106.6471 | 2581           | NCEI     | 2010-2015        |
| MT    | PLENTYWOOD 0.6 W               | 69-1715 | DLY                 | 48.7748  | -104.5670 | 2044           | NCEI     | 2007-2023        |
| MT    | ABSAROKEE 0.6 S                | 69-1725 | DLY                 | 45.5442  | -109.3936 | 3955           | NCEI     | 2007-2020        |
| WY    | LARAMIE .73 ENE                | 69-2149 | DLY                 | 41.3139  | -105.5774 | 7221           | NCEI     | 2004-2020        |
| WY    | LARAMIE 0.8 NNE                | 69-2154 | DLY                 | 41.3221  | -105.5837 | 7172           | NCEI     | 2004-2015        |
| WY    | LARAMIE 0.8 N                  | 69-2171 | DLY                 | 41.3225  | -105.5812 | 7184           | NCEI     | 2013-2021        |
| WY    | CENTENNIAL 1.1 NNE             | 69-2192 | DLY                 | 41.3122  | -106.1313 | 8192           | NCEI     | 2014-2023        |
| WY    | MEDICINE BOW 0.3 NE            | 69-2270 | DLY                 | 41.8991  | -106.2002 | 6565           | NCEI     | 2004-2015        |
| WY    | SARATOGA 0.3 ESE (USDA SERVICE | 69-2278 | DLY                 | 41.4493  | -106.8073 | 6818           | NCEI     | 2008-2023        |
| WY    | BAGGS 0.2 NNW                  | 69-2279 | DLY                 | 41.0386  | -107.6572 | 6234           | NCEI     | 2008-2023        |
| WY    | ELK MOUNTAIN 0.3 SW            | 69-2284 | DLY                 | 41.6842  | -106.4175 | 7288           | NCEI     | 2014-2023        |
| WY    | LANDER 5.7 SW                  | 69-2316 | DLY                 | 42.7630  | -108.7933 | 6088           | NCEI     | 2009-2023        |
| WY    | TORRINGTON 1.0 WSW             | 69-2341 | DLY                 | 42.0614  | -104.2006 | 4101           | NCEI     | 2008-2016        |
| WY    | TORRINGTON                     | 69-2343 | DLY                 | 42.0586  | -104.1684 | 4098           | NCEI     | 2005-2023        |
| WY    | FORT LARAMIE 0.2 NW            | 69-2354 | DLY                 | 42.2139  | -104.5192 | 4246           | NCEI     | 2013-2023        |
| WY    | BARNUM 5.0 NNW                 | 69-2384 | DLY                 | 43.7344  | -106.9356 | 5489           | NCEI     | 2004-2009        |
| WY    | CHEYENNE 7.5 ENE               | 69-2404 | DLY                 | 41.1592  | -104.6742 | 6024           | NCEI     | 2004-2022        |
| WY    | CARPENTER 3.9 NNE              | 69-2446 | DLY                 | 41.1015  | -104.3212 | 5426           | NCEI     | 2007-2023        |
| WY    | CHEYENNE 5.0 W                 | 69-2470 | DLY                 | 41.1575  | -104.8840 | 6195           | NCEI     | 2009-2023        |
| WY    | LUSK 0.6 S                     | 69-2548 | DLY                 | 42.7533  | -104.4512 | 5016           | NCEI     | 2004-2023        |
| WY    | POWELL 3.9 ENE                 | 69-2610 | DLY                 | 44.7825  | -108.6879 | 4288           | NCEI     | 2006-2023        |
| WY    | CODY 0.8 E                     | 69-2621 | DLY                 | 44.5193  | -109.0384 | 5070           | NCEI     | 2011-2019        |
| WY    | CODY 1.0 SW                    | 69-2625 | DLY                 | 44.5099  | -109.0691 | 5139           | NCEI     | 2015-2023        |
| WY    | SHERIDAN 13.8 NNE              | 69-2666 | DLY                 | 44.9769  | -106.8475 | 3547           | NCEI     | 2007-2023        |
| WY    | MOOSE .4 S                     | 69-2718 | DLY                 | 43.6528  | -110.7105 | 6496           | NCEI     | 2004-2015        |
| MT    | GARDINER 0.7 NW                | 69-9000 | DLY                 | 45.0375  | -110.7171 | 5311           | NCEI     | 2022-2023        |
| SK    | TREELON                        | 71-0362 | DLY                 | 49.0000  | -108.3833 | 2959           | NCEI     | 1971-2017        |
| ID    | JEROME CNTY ARP                | 72-0477 | HLY                 | 42.7274  | -114.4547 | 4022           | SYNOPTIC | 1999-2023        |

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| ID    | CHALLIS CHALLIS ARP            | 72-0478 | HLY                 | 44.5230  | -114.2161 | 5026           | SYNOPTIC | 1999-2023        |
| ID    | MCCALL ARP                     | 72-0482 | HLY                 | 44.8942  | -116.0998 | 5020           | SYNOPTIC | 1999-2023        |
| ID    | LOWELL                         | 72-0483 | HLY                 | 46.1442  | -115.5964 | 1466           | SYNOPTIC | 2003-2021        |
| ID    | REXBURG-MADISON CNTY ARP       | 72-0485 | HLY                 | 43.8317  | -111.8061 | 4859           | SYNOPTIC | 1999-2023        |
| ID    | JOSLIN FLD MAGIC VALLEY REGION | 72-0490 | HLY                 | 42.4785  | -114.4774 | 4163           | SYNOPTIC | 1999-2023        |
| MT    | BAKER, BAKER MUNC ARP          | 72-1518 | HLY                 | 46.3478  | -104.2575 | 2969           | SYNOPTIC | 1999-2023        |
| MT    | DILLON, DILLON ARP             | 72-1523 | HLY                 | 45.2575  | -112.5544 | 5239           | SYNOPTIC | 1999-2023        |
| MT    | GLASGOW, GLASGOW INTL ARP      | 72-1526 | HLY                 | 48.2139  | -106.6214 | 2293           | SYNOPTIC | 1998-2023        |
| MT    | GREAT FALLS INTL ARP           | 72-1527 | HLY                 | 47.4733  | -111.3822 | 3675           | SYNOPTIC | 1999-2023        |
| MT    | LIVINGSTON, MISSION FLD ARP    | 72-1531 | HLY                 | 45.6994  | -110.4483 | 4656           | SYNOPTIC | 1999-2023        |
| MT    | MULLAN PASS, MULLAN PASS VOR   | 72-1533 | HLY                 | 47.4542  | -115.6697 | 6001           | SYNOPTIC | 1999-2023        |
| MT    | WOLF POINT, CLAYTON ARP        | 72-1536 | HLY                 | 48.0944  | -105.5772 | 1985           | SYNOPTIC | 1998-2023        |
| MT    | DARBY                          | 72-2284 | HLY                 | 46.0263  | -114.1763 | 3880           | SYNOPTIC | 2016-2020        |
| MT    | HAUGAN 1 W                     | 72-2314 | HLY                 | 47.3889  | -115.4225 | 3160           | SYNOPTIC | 2016-2021        |
| MT    | AUGUSTA                        | 72-2547 | HLY                 | 47.4926  | -112.3970 | 4070           | SYNOPTIC | 2019-2021        |
| WY    | BIG PINEY MARBLETON ARP        | 72-3867 | HLY                 | 42.5780  | -110.1097 | 6946           | SYNOPTIC | 1999-2023        |
| WY    | BUFFALO JOHNSON CNTY ARP       | 72-3868 | HLY                 | 44.3812  | -106.7195 | 4925           | SYNOPTIC | 1999-2023        |
| WY    | DOUGLASNVERSE CNTY ARP         | 72-3872 | HLY                 | 42.7942  | -105.3819 | 4928           | SYNOPTIC | 1999-2023        |
| WY    | GILLETTE-CAMPBELL CNTY ARP     | 72-3874 | HLY                 | 44.3394  | -105.5419 | 4364           | SYNOPTIC | 1998-2023        |
| WY    | RIVERTON REGIONAL ARP          | 72-3879 | HLY                 | 43.0622  | -108.4470 | 5443           | SYNOPTIC | 1998-2023        |
| WY    | TORRINGTON MUNC ARP            | 72-3906 | HLY                 | 42.0613  | -104.1584 | 4199           | SYNOPTIC | 2000-2023        |
| WY    | MOUNTAIN VIEW                  | 72-4574 | HLY                 | 41.2659  | -110.3375 | 6800           | SYNOPTIC | 2016-2021        |
| ID    | ARCO                           | 76-0029 | HLY                 | 43.6231  | -113.3872 | 5380           | RAWS     | 1986-2021        |
| ID    | BONNERS FERRY                  | 76-0033 | HLY                 | 48.6756  | -116.3361 | 1760           | RAWS     | 2002-2021        |
| ID    | BRACE FLAT                     | 76-0035 | HLY                 | 42.3497  | -116.6900 | 4900           | RAWS     | 1990-2021        |
| ID    | BULL SPRING                    | 76-0036 | HLY                 | 42.0800  | -114.4847 | 5700           | RAWS     | 1990-2021        |
| ID    | CHALLIS                        | 76-0041 | HLY                 | 44.5042  | -114.2228 | 5250           | RAWS     | 1997-2021        |
| ID    | CRYSTAL                        | 76-0049 | HLY                 | 42.9900  | -113.1600 | 5064           | RAWS     | 1985-2021        |
| ID    | DENT                           | 76-0052 | HLY                 | 46.6232  | -116.2207 | 1655           | RAWS     | 1998-2021        |

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| ID    | BULL CANYON       | 76-0053 | HLY                 | 42.3653  | -112.7056 | 6400           | RAWS    | 1990-2021        |
| ID    | DEER HAVEN        | 76-0054 | HLY                 | 43.1744  | -115.1517 | 5550           | RAWS    | 1990-2021        |
| ID    | FENN              | 76-0060 | HLY                 | 46.1017  | -115.5471 | 1557           | RAWS    | 1996-2021        |
| ID    | FISH HOOK         | 76-0061 | HLY                 | 47.1352  | -115.8766 | 4270           | RAWS    | 1985-2021        |
| ID    | FLINT CREEK       | 76-0063 | HLY                 | 42.0689  | -112.1906 | 5200           | RAWS    | 1985-2021        |
| ID    | GAS CAVES         | 76-0065 | HLY                 | 44.1678  | -111.7792 | 5740           | RAWS    | 1988-2021        |
| ID    | GOOSE CREEK       | 76-0067 | HLY                 | 42.0950  | -113.8958 | 5660           | RAWS    | 1990-2021        |
| ID    | GRACE             | 76-0068 | HLY                 | 42.5372  | -111.8547 | 6210           | RAWS    | 1986-2021        |
| ID    | INDIANOLA         | 76-0076 | HLY                 | 45.4007  | -114.1634 | 3500           | RAWS    | 1987-2021        |
| ID    | ISLAND PARK       | 76-0077 | HLY                 | 44.4167  | -111.3833 | 6284           | RAWS    | 1999-2021        |
| ID    | LITTLE CREEK      | 76-0084 | HLY                 | 44.7228  | -114.9964 | 4620           | RAWS    | 1985-2021        |
| ID    | LEADORE CREEK     | 76-0085 | HLY                 | 44.7000  | -113.3500 | 6000           | RAWS    | 1987-2021        |
| ID    | POLE CREEK        | 76-0108 | HLY                 | 42.0694  | -115.7861 | 5660           | RAWS    | 1990-2021        |
| ID    | PITTSBURG LANDING | 76-0113 | HLY                 | 45.6375  | -116.4686 | 1357           | RAWS    | 1993-2021        |
| ID    | POTTER BUTTE      | 76-0114 | HLY                 | 43.2261  | -113.5744 | 4930           | RAWS    | 1990-2021        |
| ID    | RAFT RIVER        | 76-0120 | HLY                 | 42.5478  | -113.2594 | 4400           | RAWS    | 1986-2021        |
| ID    | ROCK LAKE         | 76-0123 | HLY                 | 42.9717  | -114.0631 | 4260           | RAWS    | 1990-2021        |
| ID    | SALMON            | 76-0128 | HLY                 | 45.1500  | -113.9333 | 4960           | RAWS    | 1985-2021        |
| ID    | SNAKE RIVER       | 76-0144 | HLY                 | 45.0997  | -116.7369 | 4100           | RAWS    | 1985-2024        |
| ID    | STANLEY           | 76-0147 | HLY                 | 44.1692  | -114.9258 | 6570           | RAWS    | 2002-2021        |
| ID    | TAYLOR RANCH      | 76-0149 | HLY                 | 45.1019  | -114.8517 | 3949           | RAWS    | 2008-2016        |
| ID    | TEA POT           | 76-0150 | HLY                 | 44.9044  | -115.7375 | 5152           | RAWS    | 1986-2021        |
| ID    | TRAIL GULCH       | 76-0153 | HLY                 | 42.3161  | -114.3031 | 6000           | RAWS    | 1985-2021        |
| ID    | WEISER RIVER      | 76-0157 | HLY                 | 44.8475  | -116.4267 | 3835           | RAWS    | 1985-2021        |
| MT    | ARMELLS CREEK     | 76-0163 | HLY                 | 47.5867  | -108.8694 | 2845           | RAWS    | 1991-2021        |
| MT    | BADGER PEAK       | 76-0167 | HLY                 | 45.6481  | -106.5008 | 4340           | RAWS    | 1986-2021        |
| MT    | BIGHORN MOUNTAIN  | 76-0173 | HLY                 | 45.0733  | -107.8887 | 8180           | RAWS    | 1991-2021        |
| MT    | BLUFF CREEK       | 76-0175 | HLY                 | 48.8719  | -106.9456 | 2550           | RAWS    | 1985-2021        |
| MT    | BRADSHAW CREEK    | 76-0177 | HLY                 | 45.0553  | -105.9483 | 3930           | RAWS    | 1991-2021        |



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| MT    | BROWNING BFA            | 76-0180 | HLY                 | 48.5617  | -113.0133 | 4384           | RAWS    | 2003-2021        |
| MT    | BIG SHEEP MOUNTAIN      | 76-0182 | HLY                 | 47.0167  | -105.8167 | 3200           | RAWS    | 1985-2021        |
| MT    | CANNONBALL CREEK        | 76-0186 | HLY                 | 46.4847  | -104.0658 | 2930           | RAWS    | 1987-2021        |
| MT    | CABINET (TROUT CREEK)   | 76-0187 | HLY                 | 47.8667  | -115.6250 | 2350           | RAWS    | 2001-2021        |
| MT    | CHAIN BUTTES            | 76-0188 | HLY                 | 47.5167  | -108.0333 | 2928           | RAWS    | 1985-2014        |
| MT    | DRY BLOOD CREEK         | 76-0203 | HLY                 | 47.2442  | -108.3575 | 3000           | RAWS    | 1997-2021        |
| MT    | EUREKA                  | 76-0209 | HLY                 | 48.9000  | -115.0167 | 2800           | RAWS    | 2001-2021        |
| MT    | FISHTAIL                | 76-0213 | HLY                 | 45.4581  | -109.5714 | 4550           | RAWS    | 1992-2021        |
| MT    | FORT HOWES              | 76-0215 | HLY                 | 45.2969  | -106.1614 | 3380           | RAWS    | 1987-2021        |
| MT    | FORT BELKNAP            | 76-0216 | HLY                 | 48.3042  | -108.7189 | 2665           | RAWS    | 1992-2021        |
| MT    | GINGER                  | 76-0222 | HLY                 | 46.3292  | -111.5881 | 4370           | RAWS    | 1991-2021        |
| MT    | GLEASON                 | 76-0224 | HLY                 | 47.8678  | -112.6681 | 5200           | RAWS    | 2003-2024        |
| MT    | HEBGEN LAKE             | 76-0230 | HLY                 | 44.6678  | -111.1006 | 6667           | RAWS    | 2001-2021        |
| MT    | HOT SPRINGS             | 76-0235 | HLY                 | 47.6156  | -114.6694 | 2960           | RAWS    | 1991-2021        |
| MT    | JETTE                   | 76-0239 | HLY                 | 47.7669  | -114.2347 | 3600           | RAWS    | 1992-2021        |
| MT    | KING COULEE             | 76-0243 | HLY                 | 47.7981  | -107.0233 | 2760           | RAWS    | 1987-2021        |
| MT    | KNOWLTON                | 76-0244 | HLY                 | 46.3117  | -105.0222 | 3320           | RAWS    | 1985-2021        |
| MT    | LIBBY                   | 76-0245 | HLY                 | 48.3833  | -115.5667 | 2070           | RAWS    | 2001-2021        |
| MT    | LITTLE BIGHORN          | 76-0247 | HLY                 | 45.5697  | -107.4358 | 3400           | RAWS    | 1997-2021        |
| MT    | LITTLE SNOWY            | 76-0248 | HLY                 | 46.7511  | -109.0233 | 4975           | RAWS    | 2000-2021        |
| MT    | LITTLE BULLWACKER CREEK | 76-0249 | HLY                 | 47.8314  | -109.0083 | 3100           | RAWS    | 1985-2021        |
| MT    | LINCOLN                 | 76-0250 | HLY                 | 46.9681  | -112.6353 | 4597           | RAWS    | 2000-2021        |
| MT    | MANNING CORRAL DOGTOWN  | 76-0253 | HLY                 | 47.7028  | -108.4786 | 3080           | RAWS    | 1997-2021        |
| MT    | MISSOULA FTS            | 76-0255 | HLY                 | 46.8500  | -114.0500 | 3200           | RAWS    | 2001-2021        |
| MT    | NINE MILE               | 76-0257 | HLY                 | 47.0708  | -114.4022 | 3300           | RAWS    | 2000-2021        |
| MT    | PHILIPSBURG             | 76-0263 | HLY                 | 46.3167  | -113.3000 | 5280           | RAWS    | 2001-2021        |
| MT    | PINE HILL               | 76-0264 | HLY                 | 46.7769  | -104.5797 | 2649           | RAWS    | 1999-2021        |
| MT    | PLAINS                  | 76-0266 | HLY                 | 47.4661  | -114.8794 | 2400           | RAWS    | 2002-2021        |
| MT    | POLEBRIDGE              | 76-0268 | HLY                 | 48.7825  | -114.2803 | 3500           | RAWS    | 2003-2021        |

| State | Station Name         | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | POPLAR               | 76-0270 | HLY                 | 48.1269  | -105.0731 | 2423           | RAWS    | 1992-2021        |
| MT    | PRYOR MOUNTAIN       | 76-0275 | HLY                 | 45.3375  | -108.4908 | 6186           | RAWS    | 1991-2024        |
| MT    | ROCKY BOY            | 76-0277 | HLY                 | 48.2550  | -109.7836 | 3800           | RAWS    | 1992-2024        |
| MT    | SOUTH BRIDGER        | 76-0280 | HLY                 | 45.1994  | -108.7919 | 4725           | RAWS    | 1987-2006        |
| MT    | SHENANGO             | 76-0291 | HLY                 | 45.4596  | -111.2445 | 5370           | RAWS    | 2001-2021        |
| MT    | SOUTH SAWMILL CREEK  | 76-0292 | HLY                 | 47.5619  | -107.5286 | 3290           | RAWS    | 1985-2021        |
| MT    | STEVI                | 76-0294 | HLY                 | 46.5131  | -114.0911 | 3365           | RAWS    | 2000-2021        |
| MT    | ST. MARY             | 76-0297 | HLY                 | 48.7375  | -113.4306 | 4560           | RAWS    | 1986-2021        |
| MT    | ST. REGIS            | 76-0298 | HLY                 | 47.3108  | -115.1097 | 2680           | RAWS    | 2001-2021        |
| MT    | STILLWATER           | 76-0299 | HLY                 | 48.5394  | -114.5594 | 3116           | RAWS    | 2002-2021        |
| MT    | SULA                 | 76-0300 | HLY                 | 45.8175  | -113.9528 | 4570           | RAWS    | 2004-2021        |
| MT    | THOMPSON FALLS AP    | 76-0302 | HLY                 | 47.5806  | -115.2850 | 2460           | RAWS    | 2001-2024        |
| MT    | TROY                 | 76-0305 | HLY                 | 48.4779  | -115.9049 | 1950           | RAWS    | 2001-2021        |
| MT    | WEST FORK            | 76-0307 | HLY                 | 45.8156  | -114.2585 | 4420           | RAWS    | 2000-2021        |
| MT    | WEST GLACIER         | 76-0308 | HLY                 | 48.5106  | -113.9942 | 3200           | RAWS    | 2001-2021        |
| MT    | WHITEHALL            | 76-0310 | HLY                 | 45.8833  | -112.1500 | 4360           | RAWS    | 2001-2021        |
| MT    | WOLF MOUNTAIN        | 76-0316 | HLY                 | 45.3131  | -107.1719 | 5217           | RAWS    | 1985-2024        |
| MT    | WHITE SULPHUR SPRING | 76-0317 | HLY                 | 46.5344  | -110.8853 | 5060           | RAWS    | 2001-2021        |
| MT    | ZORTMAN MINE         | 76-0323 | HLY                 | 47.9225  | -108.5528 | 4660           | RAWS    | 1987-2016        |
| WY    | BEAR LODGE           | 76-0436 | HLY                 | 44.5972  | -104.4275 | 5280           | RAWS    | 1985-2021        |
| WY    | DODGE CREEK          | 76-0449 | HLY                 | 41.9675  | -105.5194 | 7100           | RAWS    | 1988-2021        |
| WY    | ESTERBROOK           | 76-0455 | HLY                 | 42.4153  | -105.3611 | 6530           | RAWS    | 1988-2021        |
| WY    | HALF MOON            | 76-0463 | HLY                 | 42.9147  | -109.7472 | 8530           | RAWS    | 1997-2021        |
| WY    | HOBACK               | 76-0465 | HLY                 | 43.2203  | -110.4231 | 6726           | RAWS    | 1996-2021        |
| WY    | MUDDY CREEK          | 76-0473 | HLY                 | 41.4000  | -110.5528 | 6970           | RAWS    | 1988-2021        |
| WY    | POKER CREEK          | 76-0476 | HLY                 | 43.5614  | -106.9669 | 6440           | RAWS    | 1992-2021        |
| WY    | ROCHELLE HILLS       | 76-0483 | HLY                 | 43.5506  | -105.0922 | 5199           | RAWS    | 1992-2021        |
| WY    | SNIDER BASIN         | 76-0493 | HLY                 | 42.4908  | -110.5267 | 8200           | RAWS    | 1985-2021        |
| WY    | SNOW SPRINGS CREEK   | 76-0494 | HLY                 | 41.4175  | -109.0361 | 7550           | RAWS    | 1988-2021        |

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| WY    | SPLIT ROCK CREEK        | 76-0496 | HLY                 | 43.5606  | -107.3975 | 6000           | RAWS    | 1988-2021        |
| MT    | BILLINGS INTL AP        | 78-0004 | 15M                 | 45.8069  | -108.5422 | 3581           | NCEI    | 2000-2021        |
| MT    | BUTTE BERT MOONEY AP    | 78-0008 | 15M                 | 45.9647  | -112.5006 | 5506           | NCEI    | 2005-2021        |
| MT    | BOZEMAN GALLATIN FLD AP | 78-0011 | 15M                 | 45.7880  | -111.1608 | 4427           | NCEI    | 2005-2021        |
| MT    | CUT BANK AP             | 78-0015 | 15M                 | 48.6033  | -112.3752 | 3838           | NCEI    | 2005-2021        |
| WY    | CHEYENNE WSFO AP        | 78-0017 | 15M                 | 41.1578  | -104.8069 | 6113           | NCEI    | 2000-2021        |
| MT    | DILLON AP               | 78-0020 | 15M                 | 45.2575  | -112.5544 | 5200           | NCEI    | 2005-2021        |
| MT    | GREAT FALLS AP          | 78-0028 | 15M                 | 47.4733  | -111.3822 | 3664           | NCEI    | 2000-2021        |
| MT    | HELENA AP ASOS          | 78-0029 | 15M                 | 46.6056  | -111.9636 | 3828           | NCEI    | 2000-2021        |
| MT    | HAVRE AP ASOS           | 78-0030 | 15M                 | 48.5428  | -109.7633 | 2585           | NCEI    | 2000-2021        |
| ID    | IDAHO FALLS FAA AP      | 78-0031 | 15M                 | 43.5190  | -112.0639 | 4733           | NCEI    | 2005-2021        |
| WY    | LARAMIE AP              | 78-0034 | 15M                 | 41.3167  | -105.6833 | 7266           | NCEI    | 2005-2021        |
| MT    | LIVINGSTON AP           | 78-0038 | 15M                 | 45.6983  | -110.4408 | 4643           | NCEI    | 2005-2021        |
| ID    | LEWISTON AP             | 78-0039 | 15M                 | 46.3747  | -117.0156 | 1442           | NCEI    | 2000-2021        |
| MT    | LEWISTOWN AP            | 78-0040 | 15M                 | 47.0492  | -109.4578 | 4145           | NCEI    | 2005-2021        |
| WY    | ROCK SPRINGS AP         | 78-0053 | 15M                 | 41.5947  | -109.0530 | 6742           | NCEI    | 2005-2021        |
| WY    | RAWLINS AP              | 78-0054 | 15M                 | 41.8000  | -107.2000 | 6736           | NCEI    | 2005-2021        |
| WY    | TORRINGTON MUNI AP      | 78-0060 | 15M                 | 42.0613  | -104.1584 | 4199           | NCEI    | 2005-2021        |
| WY    | WORLAND                 | 78-0063 | 15M                 | 43.9658  | -107.9508 | 4172           | NCEI    | 2005-2021        |
| ID    | LOWELL THREE RIVERS     | 79-0002 | DLY                 | 46.1442  | -115.5964 | 1480           | NCEI    | 1998-2023        |
| ID    | JEROME CO AP            | 79-0003 | DLY                 | 42.7267  | -114.4564 | 4048           | NCEI    | 1998-2023        |
| ID    | CHALLIS AP              | 79-0006 | DLY                 | 44.5228  | -114.2150 | 5033           | NCEI    | 1998-2023        |
| ID    | ARCO 17 SW              | 79-0007 | DLY                 | 43.4622  | -113.5561 | 5920           | NCEI    | 2003-2023        |
| MT    | LEWISTOWN 42 WSW        | 79-0014 | DLY                 | 46.8847  | -110.2894 | 5070           | NCEI    | 2008-2023        |
| WY    | CHEYENNE                | 79-0018 | DLY                 | 41.1519  | -104.8061 | 6128           | NCEI    | 1914-2023        |
| WY    | DOUGLAS CAA AP          | 79-0019 | DLY                 | 42.7500  | -105.3667 | 4879           | NCEI    | 1947-1995        |
| WY    | LANDER HUNT FLD AP      | 79-0020 | DLY                 | 42.8153  | -108.7261 | 5592           | NCEI    | 1947-2023        |
| WY    | LARAMIE RGNL AP         | 79-0021 | DLY                 | 41.3119  | -105.6747 | 7266           | NCEI    | 1947-2023        |
| WY    | ROCK SPRINGS AP         | 79-0022 | DLY                 | 41.5944  | -109.0528 | 6741           | NCEI    | 1947-2023        |

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| WY    | SHERIDAN CO AP           | 79-0024 | DLY                 | 44.7694  | -106.9689 | 3945           | NCEI    | 1947-2023        |
| MT    | BILLINGS LOGAN INTL AP   | 79-0026 | DLY                 | 45.8069  | -108.5422 | 3581           | NCEI    | 1947-2023        |
| MT    | HAVRE WB CITY            | 79-0027 | DLY                 | 48.5526  | -109.6794 | 2493           | NCEI    | 1879-1961        |
| MT    | LEWISTOWN MUNI AP        | 79-0028 | DLY                 | 47.0492  | -109.4578 | 4145           | NCEI    | 1895-2023        |
| MT    | MILES CITY F WILEY FLD   | 79-0029 | DLY                 | 46.4267  | -105.8825 | 2624           | NCEI    | 1936-2023        |
| MT    | CUSTER                   | 79-0030 | DLY                 | 46.1333  | -107.5333 | 2743           | NCEI    | 1940-1975        |
| WY    | RAWLINS MUNI AP          | 79-0033 | DLY                 | 41.8056  | -107.1997 | 6736           | NCEI    | 1951-2023        |
| WY    | RIVERTON                 | 79-0034 | DLY                 | 43.0661  | -108.4767 | 5568           | NCEI    | 1998-2023        |
| WY    | WORLAND                  | 79-0035 | DLY                 | 43.9658  | -107.9508 | 4172           | NCEI    | 1960-2023        |
| WY    | MOORCROFT 3S             | 79-0036 | DLY                 | 44.2169  | -104.9292 | 4325           | NCEI    | 1903-2012        |
| WY    | CASPER NATRONA CO AP     | 79-0037 | DLY                 | 42.8975  | -106.4636 | 5338           | NCEI    | 1948-2023        |
| MT    | MALMSTROM AFB            | 79-0040 | DLY                 | 47.5167  | -111.1833 | 3472           | NCEI    | 1948-2023        |
| ID    | BOISE AIR TERMINAL       | 79-0048 | DLY                 | 43.5667  | -116.2406 | 2814           | NCEI    | 1939-2023        |
| MT    | BOZEMAN GALLATIN FLD     | 79-0049 | DLY                 | 45.7881  | -111.1608 | 4427           | NCEI    | 1940-2023        |
| ID    | BURLEY MUNI AP           | 79-0050 | DLY                 | 42.5417  | -113.7661 | 4142           | NCEI    | 1948-2023        |
| MT    | BUTTE BERT MOONEY AP     | 79-0051 | DLY                 | 45.9647  | -112.5006 | 5506           | NCEI    | 1894-2023        |
| MT    | CUT BANK MUNI AP         | 79-0053 | DLY                 | 48.6033  | -112.3753 | 3838           | NCEI    | 1903-2023        |
| MT    | DILLON AP                | 79-0054 | DLY                 | 45.2575  | -112.5545 | 5200           | NCEI    | 1939-2023        |
| MT    | DRUMMOND AVIATION        | 79-0055 | DLY                 | 46.6383  | -113.1761 | 4000           | NCEI    | 1927-2012        |
| ID    | GOODING 2 S              | 79-0057 | DLY                 | 42.9167  | -114.7167 | 3570           | NCEI    | 1909-1997        |
| MT    | GREAT FALLS INTL AP      | 79-0058 | DLY                 | 47.4733  | -111.3822 | 3664           | NCEI    | 1937-2023        |
| MT    | HELENA RGNL AP           | 79-0059 | DLY                 | 46.6056  | -111.9636 | 3828           | NCEI    | 1938-2023        |
| ID    | IDAHO FALLS FANNING FLD  | 79-0060 | DLY                 | 43.5164  | -112.0672 | 4729           | NCEI    | 1948-2023        |
| ID    | LEWISTON NEZ PERCE CO AP | 79-0062 | DLY                 | 46.3747  | -117.0156 | 1436           | NCEI    | 1947-2023        |
| MT    | LIVINGSTON MISSION FLD   | 79-0063 | DLY                 | 45.6983  | -110.4408 | 4643           | NCEI    | 1948-2023        |
| ID    | MALAD CITY               | 79-0064 | DLY                 | 42.1492  | -112.2872 | 4470           | NCEI    | 1948-2023        |
| MT    | MISSOULA INTL AP         | 79-0065 | DLY                 | 46.9208  | -114.0925 | 3192           | NCEI    | 1947-2023        |
| ID    | MULLAN PASS VOR/DME      | 79-0066 | DLY                 | 47.4569  | -115.6450 | 6028           | NCEI    | 1938-2023        |
| ID    | POCATELLO RGNL AP        | 79-0067 | DLY                 | 42.9203  | -112.5711 | 4478           | NCEI    | 1938-2023        |

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| ID    | STREVELL                       | 79-0069 | DLY                 | 42.0167  | -113.2500 | 5280           | NCEI    | 1948-1986        |
| MT    | SUPERIOR                       | 79-0070 | DLY                 | 47.1928  | -114.8903 | 2710           | NCEI    | 1913-2018        |
| MT    | WHITEHALL 7 E                  | 79-0071 | DLY                 | 45.8667  | -111.9667 | 4278           | NCEI    | 1948-1959        |
| WY    | BIG PINEY MARBLETON AP         | 79-0073 | DLY                 | 42.5844  | -110.1075 | 6970           | NCEI    | 1998-2023        |
| MT    | GLASGOW INTL AP                | 79-0077 | DLY                 | 48.2138  | -106.6213 | 2285           | NCEI    | 1947-2023        |
| MT    | ST MARIE                       | 79-0078 | DLY                 | 48.4089  | -106.5144 | 2756           | NCEI    | 1959-2023        |
| MT    | HAVRE CITY CO AP               | 79-0079 | DLY                 | 48.5428  | -109.7633 | 2585           | NCEI    | 1960-2023        |
| MT    | WOLF POINT INTL AP             | 79-0081 | DLY                 | 48.0944  | -105.5744 | 1986           | NCEI    | 1998-2023        |
| WY    | GILLETTE CAMPBELL AP           | 79-0082 | DLY                 | 44.3394  | -105.5419 | 4354           | NCEI    | 1998-2023        |
| MT    | JORDAN AP                      | 79-0087 | DLY                 | 47.3258  | -106.9475 | 2662           | NCEI    | 1998-2023        |
| WY    | TORRINGTON MUNI AP             | 79-0088 | DLY                 | 42.0647  | -104.1528 | 4205           | NCEI    | 1998-2023        |
| WY    | BUFFALO JOHNSON CO AP          | 79-0089 | DLY                 | 44.3814  | -106.7211 | 4967           | NCEI    | 1998-2023        |
| MT    | BAKER MUNI AP                  | 79-0090 | DLY                 | 46.3583  | -104.2500 | 2971           | NCEI    | 1998-2023        |
| WY    | DOUGLAS CONVERSE CO AP         | 79-0091 | DLY                 | 42.7972  | -105.3856 | 4929           | NCEI    | 1999-2023        |
| MT    | HELENA WB CITY                 | 79-0105 | DLY                 | 46.5833  | -112.0333 | 4144           | NCEI    | 1892-1955        |
| ID    | IDAHO FALLS 46 W               | 79-0110 | DLY                 | 43.5317  | -112.9422 | 4938           | NCEI    | 1954-2023        |
| ID    | MULLAN PASS                    | 79-0112 | DLY                 | 47.4667  | -115.7667 | 3586           | NCEI    | 1957-1971        |
| ID    | TWIN FALLS SUN VLY RGNL AP     | 79-0115 | DLY                 | 42.4819  | -114.4869 | 4151           | NCEI    | 1998-2023        |
| ID    | REXBURG MADISON CO AP          | 79-0117 | DLY                 | 43.8339  | -111.8045 | 4858           | NCEI    | 1998-2023        |
| MT    | NORTHEAST ENTRANCE             | 80-0116 | DLY                 | 45.0100  | -110.0100 | 7350           | NCEI    | 1978-2023        |
| WY    | SNAKE RIVER STATION            | 80-0129 | DLY                 | 44.1300  | -110.6700 | 6920           | NCEI    | 1989-2023        |
| MT    | WEST YELLOWSTONE               | 80-0179 | DLY                 | 44.6600  | -111.0900 | 6700           | NCEI    | 1998-2023        |
| ID    | ISLAND PARK                    | 80-0180 | DLY                 | 44.4200  | -111.3900 | 6290           | NCEI    | 1981-2023        |
| ID    | PIERCE R.S.                    | 80-0320 | DLY                 | 46.4900  | -115.8000 | 3080           | NCEI    | 2009-2023        |
| ID    | PRAIRIE                        | 80-0335 | DLY                 | 43.5100  | -115.5700 | 4800           | NCEI    | 1981-2023        |
| ID    | LITTLE SALMON CREEK            | 81-0001 | HLY                 | 43.2968  | -116.8280 | 5167           | RCEW    | 1962-2019        |
| ID    | LITTLE SALMON CREEK            | 81-0001 | DLY                 | 43.2968  | -116.8280 | 5167           | RCEW    | 1962-2019        |
| ID    | UPPER SALMON CREEK NEAR SALMON | 81-0002 | HLY                 | 43.2669  | -116.8499 | 5886           | RCEW    | 1968-2019        |
| ID    | UPPER SALMON CREEK NEAR SALMON | 81-0002 | DLY                 | 43.2669  | -116.8499 | 5886           | RCEW    | 1968-2019        |

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|-------|--------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | SUMMIT RAINGAGE SITE           | 81-0004 | HLY                 | 43.2471  | -116.7071 | 4206           | RCEW    | 1965-2019        |
| ID    | SUMMIT RAINGAGE SITE           | 81-0004 | DLY                 | 43.2471  | -116.7071 | 4206           | RCEW    | 1965-2019        |
| ID    | FLATS WEIR AND RAINGAGES AND M | 81-0005 | HLY                 | 43.2286  | -116.7375 | 3885           | RCEW    | 1962-2019        |
| ID    | FLATS WEIR AND RAINGAGES AND M | 81-0005 | DLY                 | 43.2286  | -116.7375 | 3885           | RCEW    | 1962-2019        |
| ID    | REYNOLDS QUONSET               | 81-0006 | HLY                 | 43.2051  | -116.7503 | 3937           | RCEW    | 1962-2019        |
| ID    | REYNOLDS QUONSET               | 81-0006 | DLY                 | 43.2051  | -116.7503 | 3937           | RCEW    | 1962-2019        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0007 | HLY                 | 43.1785  | -116.7910 | 5030           | RCEW    | 1962-2019        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0007 | DLY                 | 43.1785  | -116.7910 | 5030           | RCEW    | 1962-2019        |
| ID    | NANCY GULCH METEOROLOGY AND RA | 81-0008 | DLY                 | 43.1688  | -116.7137 | 4639           | RCEW    | 1972-2019        |
| ID    | NANCY GULCH METEOROLOGY AND RA | 81-0008 | HLY                 | 43.1688  | -116.7137 | 4639           | RCEW    | 1972-2019        |
| ID    | RAINGAGE SITE NEAR TOLLGATE WE | 81-0009 | HLY                 | 43.1414  | -116.7672 | 4790           | RCEW    | 1962-2019        |
| ID    | RAINGAGE SITE NEAR TOLLGATE WE | 81-0009 | DLY                 | 43.1414  | -116.7672 | 4790           | RCEW    | 1962-2019        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0010 | HLY                 | 43.1286  | -116.7966 | 5833           | RCEW    | 2006-2019        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0010 | DLY                 | 43.1286  | -116.7966 | 5833           | RCEW    | 2006-2019        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0011 | HLY                 | 43.1292  | -116.7994 | 5919           | RCEW    | 1962-2014        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0011 | DLY                 | 43.1292  | -116.7994 | 5919           | RCEW    | 1962-2014        |
| ID    | LOWER SHEEP CREEK              | 81-0013 | DLY                 | 43.1400  | -116.7336 | 5410           | RCEW    | 1962-2019        |
| ID    | LOWER SHEEP CREEK              | 81-0013 | HLY                 | 43.1400  | -116.7336 | 5410           | RCEW    | 1962-2019        |
| ID    | UPPER SHEEP CREEK WEATHER SIT  | 81-0014 | HLY                 | 43.1221  | -116.7232 | 6132           | RCEW    | 1983-2019        |
| ID    | UPPER SHEEP CREEK WEATHER SIT  | 81-0014 | DLY                 | 43.1221  | -116.7232 | 6132           | RCEW    | 1983-2019        |
| ID    | CHRISTMAS MEADOWS METEOROLOGY  | 81-0017 | DLY                 | 43.1023  | -116.8050 | 5951           | RCEW    | 1962-2019        |
| ID    | CHRISTMAS MEADOWS METEOROLOGY  | 81-0017 | HLY                 | 43.1023  | -116.8050 | 5951           | RCEW    | 1962-2019        |
| ID    | BREAKS METEOROLOGY AND RAINGA  | 81-0018 | DLY                 | 43.1068  | -116.7739 | 5200           | RCEW    | 1965-2019        |
| ID    | BREAKS METEOROLOGY AND RAINGA  | 81-0018 | HLY                 | 43.1068  | -116.7739 | 5200           | RCEW    | 1965-2019        |
| ID    | RAINGAGE SITE ON DIVIDE BETWEE | 81-0019 | HLY                 | 43.1052  | -116.7387 | 6142           | RCEW    | 1962-2019        |
| ID    | RAINGAGE SITE ON DIVIDE BETWEE | 81-0019 | DLY                 | 43.1052  | -116.7387 | 6142           | RCEW    | 1962-2019        |
| ID    | RAINGAGE SITE NEAR DEMOCRAT HI | 81-0020 | HLY                 | 43.0961  | -116.7745 | 5426           | RCEW    | 1962-2019        |
| ID    | RAINGAGE SITE NEAR DEMOCRAT HI | 81-0020 | DLY                 | 43.0961  | -116.7745 | 5426           | RCEW    | 1962-2019        |
| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0021 | DLY                 | 43.0792  | -116.8273 | 7116           | RCEW    | 1962-2019        |

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| ID    | METEOROLOGY AND RAINGAGE SITE  | 81-0021 | HLY                 | 43.0792  | -116.8273 | 7116           | RCEW    | 1962-2019        |
| ID    | BULL MEADOW METEOROLOGY AND RA | 81-0023 | HLY                 | 43.0822  | -116.7356 | 6568           | RCEW    | 1962-2019        |
| ID    | BULL MEADOW METEOROLOGY AND RA | 81-0023 | DLY                 | 43.0822  | -116.7356 | 6568           | RCEW    | 1962-2019        |
| ID    | HEADWATERS OF WEST FORK REYNOL | 81-0024 | HLY                 | 43.0665  | -116.7945 | 6804           | RCEW    | 1962-2019        |
| ID    | HEADWATERS OF WEST FORK REYNOL | 81-0024 | DLY                 | 43.0665  | -116.7945 | 6804           | RCEW    | 1962-2019        |
| ID    | ATLANTA SUMMIT                 | 86-0306 | DLY                 | 43.7569  | -115.2391 | 7580           | SNOTEL  | 1979-2023        |
| ID    | ATLANTA SUMMIT                 | 86-0306 | HLY                 | 43.7569  | -115.2391 | 7580           | SNOTEL  | 1978-2022        |
| MT    | BADGER PASS                    | 86-0307 | DLY                 | 48.1309  | -113.0232 | 6900           | SNOTEL  | 1979-2023        |
| MT    | BADGER PASS                    | 86-0307 | HLY                 | 48.1309  | -113.0232 | 6900           | SNOTEL  | 1979-2022        |
| WY    | BALD MTN.                      | 86-0309 | HLY                 | 44.8007  | -107.8444 | 9380           | SNOTEL  | 1978-2022        |
| WY    | BALD MTN.                      | 86-0309 | DLY                 | 44.8007  | -107.8444 | 9380           | SNOTEL  | 1978-2023        |
| MT    | BANFIELD MOUNTAIN              | 86-0311 | HLY                 | 48.5712  | -115.4457 | 5600           | SNOTEL  | 1987-2022        |
| MT    | BANFIELD MOUNTAIN              | 86-0311 | DLY                 | 48.5712  | -115.4457 | 5600           | SNOTEL  | 1987-2023        |
| ID    | BANNER SUMMIT                  | 86-0312 | DLY                 | 44.3034  | -115.2345 | 7040           | SNOTEL  | 1980-2023        |
| ID    | BANNER SUMMIT                  | 86-0312 | HLY                 | 44.3034  | -115.2345 | 7040           | SNOTEL  | 1980-2022        |
| MT    | BARKER LAKES                   | 86-0313 | DLY                 | 46.0971  | -113.1304 | 8250           | SNOTEL  | 1980-2023        |
| MT    | BARKER LAKES                   | 86-0313 | HLY                 | 46.0971  | -113.1304 | 8250           | SNOTEL  | 1980-2022        |
| WY    | BASE CAMP                      | 86-0314 | DLY                 | 43.9402  | -110.4454 | 7060           | SNOTEL  | 1980-2023        |
| WY    | BASE CAMP                      | 86-0314 | HLY                 | 43.9402  | -110.4454 | 7060           | SNOTEL  | 1980-2022        |
| MT    | BASIN CREEK                    | 86-0315 | DLY                 | 45.7974  | -112.5205 | 7180           | SNOTEL  | 1980-2023        |
| MT    | BASIN CREEK                    | 86-0315 | HLY                 | 45.7974  | -112.5205 | 7180           | SNOTEL  | 1980-2022        |
| WY    | BATTLE MOUNTAIN                | 86-0317 | HLY                 | 41.0541  | -107.2661 | 7440           | SNOTEL  | 1985-2022        |
| WY    | BATTLE MOUNTAIN                | 86-0317 | DLY                 | 41.0541  | -107.2661 | 7440           | SNOTEL  | 1985-2023        |
| MT    | BEAGLE SPRINGS                 | 86-0318 | HLY                 | 44.4715  | -112.9819 | 8850           | SNOTEL  | 1978-2022        |
| MT    | BEAGLE SPRINGS                 | 86-0318 | DLY                 | 44.4715  | -112.9819 | 8850           | SNOTEL  | 1978-2023        |
| ID    | BEAR BASIN                     | 86-0319 | DLY                 | 44.9522  | -116.1429 | 5350           | SNOTEL  | 1981-2023        |
| ID    | BEAR BASIN                     | 86-0319 | HLY                 | 44.9522  | -116.1429 | 5350           | SNOTEL  | 1980-2022        |
| ID    | BEAR CANYON                    | 86-0320 | HLY                 | 43.7437  | -113.9380 | 7900           | SNOTEL  | 1980-2022        |
| ID    | BEAR CANYON                    | 86-0320 | DLY                 | 43.7437  | -113.9380 | 7900           | SNOTEL  | 1981-2023        |

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|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | BEAR MOUNTAIN     | 86-0323 | DLY                 | 48.3058  | -116.0745 | 5400           | SNOTEL  | 1981-2023        |
| ID    | BEAR MOUNTAIN     | 86-0323 | HLY                 | 48.3058  | -116.0745 | 5400           | SNOTEL  | 1981-2022        |
| ID    | BEAR SADDLE       | 86-0324 | HLY                 | 44.6053  | -116.9810 | 6180           | SNOTEL  | 1980-2022        |
| ID    | BEAR SADDLE       | 86-0324 | DLY                 | 44.6053  | -116.9810 | 6180           | SNOTEL  | 1981-2023        |
| WY    | BEAR TRAP MEADOW  | 86-0325 | HLY                 | 43.8874  | -107.0613 | 8200           | SNOTEL  | 1980-2022        |
| WY    | BEAR TRAP MEADOW  | 86-0325 | DLY                 | 43.8874  | -107.0613 | 8200           | SNOTEL  | 1980-2023        |
| WY    | BEARTOOTH LAKE    | 86-0326 | DLY                 | 44.9431  | -109.5674 | 9360           | SNOTEL  | 1980-2023        |
| WY    | BEARTOOTH LAKE    | 86-0326 | HLY                 | 44.9431  | -109.5674 | 9360           | SNOTEL  | 1980-2022        |
| MT    | BEAVER CREEK      | 86-0328 | DLY                 | 44.9497  | -111.3585 | 7850           | SNOTEL  | 1985-2023        |
| MT    | BEAVER CREEK      | 86-0328 | HLY                 | 44.9497  | -111.3585 | 7850           | SNOTEL  | 1985-2022        |
| ID    | BIG CREEK SUMMIT  | 86-0338 | HLY                 | 44.6262  | -115.7956 | 6560           | SNOTEL  | 1980-2022        |
| ID    | BIG CREEK SUMMIT  | 86-0338 | DLY                 | 44.6262  | -115.7956 | 6560           | SNOTEL  | 1981-2023        |
| WY    | BIG SANDY OPENING | 86-0342 | HLY                 | 42.6458  | -109.2597 | 9080           | SNOTEL  | 1978-2022        |
| WY    | BIG SANDY OPENING | 86-0342 | DLY                 | 42.6458  | -109.2597 | 9080           | SNOTEL  | 1979-2023        |
| MT    | BISSON CREEK      | 86-0346 | HLY                 | 47.6839  | -113.9990 | 4920           | SNOTEL  | 1992-2022        |
| MT    | BISSON CREEK      | 86-0346 | DLY                 | 47.6839  | -113.9990 | 4920           | SNOTEL  | 1992-2023        |
| MT    | BLACK BEAR        | 86-0347 | HLY                 | 44.5083  | -111.1280 | 8170           | SNOTEL  | 1978-2022        |
| MT    | BLACK BEAR        | 86-0347 | DLY                 | 44.5083  | -111.1280 | 8170           | SNOTEL  | 1978-2023        |
| MT    | BLACK PINE        | 86-0349 | HLY                 | 46.4140  | -113.4309 | 7210           | SNOTEL  | 1978-2022        |
| MT    | BLACK PINE        | 86-0349 | DLY                 | 46.4140  | -113.4309 | 7210           | SNOTEL  | 1978-2023        |
| WY    | BLACKWATER        | 86-0350 | DLY                 | 44.3767  | -109.7933 | 9780           | SNOTEL  | 1980-2023        |
| WY    | BLACKWATER        | 86-0350 | HLY                 | 44.3767  | -109.7933 | 9780           | SNOTEL  | 1981-2022        |
| WY    | BLIND BULL SUM    | 86-0353 | HLY                 | 42.9640  | -110.6097 | 8650           | SNOTEL  | 1978-2022        |
| WY    | BLIND BULL SUM    | 86-0353 | DLY                 | 42.9640  | -110.6097 | 8650           | SNOTEL  | 1979-2023        |
| MT    | BLOODY DICK       | 86-0355 | HLY                 | 45.1651  | -113.5010 | 7600           | SNOTEL  | 1979-2022        |
| MT    | BLOODY DICK       | 86-0355 | DLY                 | 45.1651  | -113.5010 | 7600           | SNOTEL  | 1979-2023        |
| WY    | BONE SPRINGS DIV  | 86-0358 | DLY                 | 44.6789  | -107.5811 | 9350           | SNOTEL  | 1978-2023        |
| WY    | BONE SPRINGS DIV  | 86-0358 | HLY                 | 44.6789  | -107.5811 | 9350           | SNOTEL  | 1978-2022        |
| ID    | BOSTETTER R.S.    | 86-0359 | DLY                 | 42.1644  | -114.1927 | 7500           | SNOTEL  | 1981-2023        |



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|-------|----------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | BOSTETTER R.S.       | 86-0359 | HLY                 | 42.1644  | -114.1927 | 7500           | SNOTEL  | 1981-2022        |
| MT    | BOULDER MOUNTAIN     | 86-0360 | HLY                 | 46.5596  | -111.2897 | 7950           | SNOTEL  | 1978-2022        |
| MT    | BOULDER MOUNTAIN     | 86-0360 | DLY                 | 46.5596  | -111.2897 | 7950           | SNOTEL  | 1978-2023        |
| MT    | BOX CANYON           | 86-0363 | HLY                 | 45.2719  | -110.2490 | 6670           | SNOTEL  | 1978-2022        |
| MT    | BOX CANYON           | 86-0363 | DLY                 | 45.2719  | -110.2490 | 6670           | SNOTEL  | 1978-2023        |
| MT    | BRACKETT CREEK       | 86-0365 | HLY                 | 45.8911  | -110.9385 | 7320           | SNOTEL  | 1994-2022        |
| MT    | BRACKETT CREEK       | 86-0365 | DLY                 | 45.8911  | -110.9385 | 7320           | SNOTEL  | 1994-2023        |
| WY    | BROOKLYN LAKE        | 86-0367 | HLY                 | 41.3588  | -106.2321 | 10240          | SNOTEL  | 1980-2022        |
| WY    | BROOKLYN LAKE        | 86-0367 | DLY                 | 41.3588  | -106.2321 | 10240          | SNOTEL  | 1980-2023        |
| ID    | BRUNDAGE RESERVOIR   | 86-0370 | DLY                 | 45.0432  | -116.1325 | 6250           | SNOTEL  | 1986-2023        |
| ID    | BRUNDAGE RESERVOIR   | 86-0370 | HLY                 | 45.0432  | -116.1325 | 6250           | SNOTEL  | 1986-2022        |
| WY    | BURGESS JUNCTION     | 86-0377 | DLY                 | 44.7877  | -107.5292 | 7880           | SNOTEL  | 1980-2023        |
| WY    | BURGESS JUNCTION     | 86-0377 | HLY                 | 44.7877  | -107.5292 | 7880           | SNOTEL  | 1980-2022        |
| WY    | BURROUGHS CREEK      | 86-0379 | DLY                 | 43.6973  | -109.6702 | 8750           | SNOTEL  | 1978-2023        |
| WY    | BURROUGHS CREEK      | 86-0379 | HLY                 | 43.6973  | -109.6702 | 8750           | SNOTEL  | 1978-2022        |
| MT    | CALVERT CREEK        | 86-0381 | DLY                 | 45.8838  | -113.3255 | 6430           | SNOTEL  | 1979-2023        |
| MT    | CALVERT CREEK        | 86-0381 | HLY                 | 45.8838  | -113.3255 | 6430           | SNOTEL  | 1979-2022        |
| ID    | CAMAS CREEK DIVIDE   | 86-0382 | DLY                 | 43.2655  | -115.3453 | 5710           | SNOTEL  | 1992-2023        |
| ID    | CAMAS CREEK DIVIDE   | 86-0382 | HLY                 | 43.2655  | -115.3453 | 5710           | SNOTEL  | 1992-2022        |
| WY    | CANYON               | 86-0384 | DLY                 | 44.7196  | -110.5108 | 7870           | SNOTEL  | 1980-2023        |
| WY    | CANYON               | 86-0384 | HLY                 | 44.7196  | -110.5108 | 7870           | SNOTEL  | 1980-2022        |
| MT    | CARROT BASIN         | 86-0385 | DLY                 | 44.9619  | -111.2940 | 9000           | SNOTEL  | 1982-2023        |
| MT    | CARROT BASIN         | 86-0385 | HLY                 | 44.9619  | -111.2940 | 9000           | SNOTEL  | 1983-2022        |
| WY    | CASPER MTN.          | 86-0389 | DLY                 | 42.7339  | -106.3186 | 7900           | SNOTEL  | 1979-2023        |
| WY    | CASPER MTN.          | 86-0389 | HLY                 | 42.7339  | -106.3186 | 7900           | SNOTEL  | 1978-2024        |
| WY    | CLOUD PEAK RESERVOIR | 86-0402 | DLY                 | 44.4034  | -107.0606 | 9860           | SNOTEL  | 1979-2023        |
| WY    | CLOUD PEAK RESERVOIR | 86-0402 | HLY                 | 44.4034  | -107.0606 | 9860           | SNOTEL  | 1979-2022        |
| MT    | CLOVER MEADOW        | 86-0403 | DLY                 | 45.0179  | -111.8456 | 8600           | SNOTEL  | 1978-2023        |
| MT    | CLOVER MEADOW        | 86-0403 | HLY                 | 45.0179  | -111.8456 | 8600           | SNOTEL  | 1978-2022        |

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| WY    | COLD SPRINGS     | 86-0405 | DLY                 | 43.2768  | -109.4458 | 9630           | SNOTEL  | 1983-2023        |
| WY    | COLD SPRINGS     | 86-0405 | HLY                 | 43.2768  | -109.4458 | 9630           | SNOTEL  | 1983-2022        |
| MT    | COLE CREEK       | 86-0407 | HLY                 | 45.1940  | -109.3455 | 7850           | SNOTEL  | 1978-2022        |
| MT    | COLE CREEK       | 86-0407 | DLY                 | 45.1940  | -109.3455 | 7850           | SNOTEL  | 1978-2023        |
| MT    | COMBINATION      | 86-0410 | HLY                 | 46.4652  | -113.3936 | 5600           | SNOTEL  | 1979-2022        |
| MT    | COMBINATION      | 86-0410 | DLY                 | 46.4652  | -113.3936 | 5600           | SNOTEL  | 1979-2023        |
| ID    | COOL CREEK       | 86-0411 | HLY                 | 46.7636  | -115.2953 | 6280           | SNOTEL  | 1984-2022        |
| ID    | COOL CREEK       | 86-0411 | DLY                 | 46.7636  | -115.2953 | 6280           | SNOTEL  | 1984-2023        |
| MT    | COPPER BOTTOM    | 86-0413 | HLY                 | 47.0568  | -112.5950 | 5200           | SNOTEL  | 1979-2022        |
| MT    | COPPER BOTTOM    | 86-0413 | DLY                 | 47.0568  | -112.5950 | 5200           | SNOTEL  | 1979-2023        |
| MT    | COPPER CAMP      | 86-0414 | HLY                 | 47.0816  | -112.7296 | 6950           | SNOTEL  | 1978-2022        |
| MT    | COPPER CAMP      | 86-0414 | DLY                 | 47.0816  | -112.7296 | 6950           | SNOTEL  | 1978-2023        |
| WY    | COTTONWOOD CREEK | 86-0419 | HLY                 | 42.6459  | -110.8148 | 7670           | SNOTEL  | 1982-2022        |
| WY    | COTTONWOOD CREEK | 86-0419 | DLY                 | 42.6459  | -110.8148 | 7670           | SNOTEL  | 1982-2023        |
| ID    | COZY COVE        | 86-0423 | DLY                 | 44.2885  | -115.6551 | 5400           | SNOTEL  | 1980-2023        |
| ID    | COZY COVE        | 86-0423 | HLY                 | 44.2885  | -115.6551 | 5400           | SNOTEL  | 1978-2022        |
| ID    | CRAB CREEK       | 86-0424 | DLY                 | 44.4370  | -111.9938 | 6900           | SNOTEL  | 1981-2023        |
| ID    | CRAB CREEK       | 86-0424 | HLY                 | 44.4370  | -111.9938 | 6900           | SNOTEL  | 1980-2022        |
| ID    | CRATER MEADOWS   | 86-0425 | DLY                 | 46.5639  | -115.2890 | 5960           | SNOTEL  | 1984-2023        |
| ID    | CRATER MEADOWS   | 86-0425 | HLY                 | 46.5639  | -115.2890 | 5960           | SNOTEL  | 1984-2022        |
| MT    | CRYSTAL LAKE     | 86-0427 | HLY                 | 46.7894  | -109.5120 | 6050           | SNOTEL  | 1978-2022        |
| MT    | CRYSTAL LAKE     | 86-0427 | DLY                 | 46.7894  | -109.5120 | 6050           | SNOTEL  | 1978-2023        |
| MT    | DALY CREEK       | 86-0433 | HLY                 | 46.1837  | -113.8533 | 5780           | SNOTEL  | 1980-2022        |
| MT    | DALY CREEK       | 86-0433 | DLY                 | 46.1837  | -113.8533 | 5780           | SNOTEL  | 1980-2023        |
| MT    | DARKHORSE LAKE   | 86-0436 | HLY                 | 45.1737  | -113.5845 | 8945           | SNOTEL  | 1980-2022        |
| MT    | DARKHORSE LAKE   | 86-0436 | DLY                 | 45.1737  | -113.5845 | 8945           | SNOTEL  | 1980-2023        |
| MT    | DEADMAN CREEK    | 86-0437 | DLY                 | 46.7928  | -110.6755 | 6450           | SNOTEL  | 1978-2023        |
| MT    | DEADMAN CREEK    | 86-0437 | HLY                 | 46.7928  | -110.6755 | 6450           | SNOTEL  | 1978-2022        |
| ID    | DEADWOOD SUMMIT  | 86-0439 | DLY                 | 44.5451  | -115.5638 | 6860           | SNOTEL  | 1979-2023        |

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| ID    | DEADWOOD SUMMIT   | 86-0439 | HLY                 | 44.5451  | -115.5638 | 6860           | SNOTEL  | 1980-2022        |
| MT    | DIVIDE            | 86-0448 | HLY                 | 44.7932  | -112.0564 | 7800           | SNOTEL  | 1978-2022        |
| MT    | DIVIDE            | 86-0448 | DLY                 | 44.7932  | -112.0564 | 7800           | SNOTEL  | 1978-2023        |
| WY    | DIVIDE PEAK       | 86-0449 | HLY                 | 41.3040  | -107.1524 | 8880           | SNOTEL  | 1980-2022        |
| WY    | DIVIDE PEAK       | 86-0449 | DLY                 | 41.3040  | -107.1524 | 8880           | SNOTEL  | 1980-2023        |
| ID    | DOLLARHIDE SUMMIT | 86-0450 | DLY                 | 43.6025  | -114.6742 | 8420           | SNOTEL  | 1981-2023        |
| ID    | DOLLARHIDE SUMMIT | 86-0450 | HLY                 | 43.6025  | -114.6742 | 8420           | SNOTEL  | 1981-2022        |
| WY    | DOME LAKE         | 86-0451 | DLY                 | 44.5746  | -107.2954 | 8880           | SNOTEL  | 1978-2023        |
| WY    | DOME LAKE         | 86-0451 | HLY                 | 44.5746  | -107.2954 | 8880           | SNOTEL  | 1978-2022        |
| MT    | DUPUYER CREEK     | 86-0458 | DLY                 | 48.0634  | -112.7573 | 5750           | SNOTEL  | 1983-2023        |
| MT    | DUPUYER CREEK     | 86-0458 | HLY                 | 48.0634  | -112.7573 | 5750           | SNOTEL  | 1983-2022        |
| WY    | EAST RIM DIVIDE   | 86-0460 | DLY                 | 43.1310  | -110.2023 | 7930           | SNOTEL  | 1985-2023        |
| WY    | EAST RIM DIVIDE   | 86-0460 | HLY                 | 43.1310  | -110.2023 | 7930           | SNOTEL  | 1985-2022        |
| ID    | ELK BUTTE         | 86-0466 | DLY                 | 46.8400  | -116.1223 | 5690           | SNOTEL  | 1983-2023        |
| ID    | ELK BUTTE         | 86-0466 | HLY                 | 46.8400  | -116.1223 | 5690           | SNOTEL  | 1983-2022        |
| WY    | ELKHART PARK G.S. | 86-0468 | HLY                 | 43.0066  | -109.7589 | 9400           | SNOTEL  | 1980-2022        |
| WY    | ELKHART PARK G.S. | 86-0468 | DLY                 | 43.0066  | -109.7589 | 9400           | SNOTEL  | 1980-2023        |
| MT    | EMERY CREEK       | 86-0469 | DLY                 | 48.4341  | -113.9372 | 4350           | SNOTEL  | 1980-2023        |
| MT    | EMERY CREEK       | 86-0469 | HLY                 | 48.4341  | -113.9372 | 4350           | SNOTEL  | 1980-2022        |
| ID    | EMIGRANT SUMMIT   | 86-0471 | HLY                 | 42.3605  | -111.5609 | 7390           | SNOTEL  | 1980-2022        |
| ID    | EMIGRANT SUMMIT   | 86-0471 | DLY                 | 42.3605  | -111.5609 | 7390           | SNOTEL  | 1980-2023        |
| WY    | EVENING STAR      | 86-0472 | HLY                 | 44.6526  | -109.7842 | 9200           | SNOTEL  | 1980-2022        |
| WY    | EVENING STAR      | 86-0472 | DLY                 | 44.6526  | -109.7842 | 9200           | SNOTEL  | 1980-2023        |
| MT    | FISHER CREEK      | 86-0480 | DLY                 | 45.0624  | -109.9449 | 9100           | SNOTEL  | 1978-2023        |
| MT    | FISHER CREEK      | 86-0480 | HLY                 | 45.0624  | -109.9449 | 9100           | SNOTEL  | 1978-2022        |
| MT    | FLATTOP MTN.      | 86-0482 | DLY                 | 48.8022  | -113.8571 | 6300           | SNOTEL  | 1978-2023        |
| MT    | FLATTOP MTN.      | 86-0482 | HLY                 | 48.8022  | -113.8571 | 6300           | SNOTEL  | 1978-2022        |
| ID    | FRANKLIN BASIN    | 86-0484 | DLY                 | 42.0505  | -111.6012 | 8140           | SNOTEL  | 1979-2023        |
| ID    | FRANKLIN BASIN    | 86-0484 | HLY                 | 42.0505  | -111.6012 | 8140           | SNOTEL  | 1979-2022        |

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|-------|--------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | FROHNER MEADOW     | 86-0487 | DLY                 | 46.4355  | -112.1928 | 6480           | SNOTEL  | 1978-2023        |
| MT    | FROHNER MEADOW     | 86-0487 | HLY                 | 46.4355  | -112.1928 | 6480           | SNOTEL  | 1978-2022        |
| ID    | GALENA             | 86-0489 | DLY                 | 43.8772  | -114.6725 | 7470           | SNOTEL  | 1981-2023        |
| ID    | GALENA             | 86-0489 | HLY                 | 43.8772  | -114.6725 | 7470           | SNOTEL  | 1981-2022        |
| ID    | GALENA SUMMIT      | 86-0490 | DLY                 | 43.8750  | -114.7136 | 8780           | SNOTEL  | 1979-2023        |
| ID    | GALENA SUMMIT      | 86-0490 | HLY                 | 43.8750  | -114.7136 | 8780           | SNOTEL  | 1978-2022        |
| ID    | GARFIELD R.S.      | 86-0492 | HLY                 | 43.6104  | -113.9308 | 6560           | SNOTEL  | 1980-2022        |
| ID    | GARFIELD R.S.      | 86-0492 | DLY                 | 43.6104  | -113.9308 | 6560           | SNOTEL  | 1980-2023        |
| ID    | GIVEOUT            | 86-0493 | HLY                 | 42.4132  | -111.1663 | 6930           | SNOTEL  | 1980-2022        |
| ID    | GIVEOUT            | 86-0493 | DLY                 | 42.4132  | -111.1663 | 6930           | SNOTEL  | 1981-2023        |
| ID    | GRAHAM GUARD STA.  | 86-0496 | DLY                 | 43.9538  | -115.2739 | 5690           | SNOTEL  | 1979-2023        |
| ID    | GRAHAM GUARD STA.  | 86-0496 | HLY                 | 43.9538  | -115.2739 | 5690           | SNOTEL  | 1978-2022        |
| WY    | GRANITE CREEK      | 86-0497 | DLY                 | 43.3430  | -110.4350 | 6770           | SNOTEL  | 1987-2023        |
| WY    | GRANITE CREEK      | 86-0497 | HLY                 | 43.3430  | -110.4350 | 6770           | SNOTEL  | 1987-2022        |
| WY    | GRASSY LAKE        | 86-0499 | DLY                 | 44.1261  | -110.8344 | 7265           | SNOTEL  | 1979-2023        |
| WY    | GRASSY LAKE        | 86-0499 | HLY                 | 44.1261  | -110.8344 | 7265           | SNOTEL  | 1979-2022        |
| MT    | GRAVE CREEK        | 86-0500 | HLY                 | 48.9145  | -114.7666 | 4300           | SNOTEL  | 1979-2022        |
| MT    | GRAVE CREEK        | 86-0500 | DLY                 | 48.9145  | -114.7666 | 4300           | SNOTEL  | 1979-2023        |
| WY    | GRAVE SPRINGS      | 86-0501 | HLY                 | 43.4664  | -107.2398 | 8550           | SNOTEL  | 1992-2022        |
| WY    | GRAVE SPRINGS      | 86-0501 | DLY                 | 43.4664  | -107.2398 | 8550           | SNOTEL  | 1992-2023        |
| WY    | GROS VENTRE SUMMIT | 86-0506 | HLY                 | 43.3894  | -110.1294 | 8750           | SNOTEL  | 1978-2022        |
| WY    | GROS VENTRE SUMMIT | 86-0506 | DLY                 | 43.3894  | -110.1294 | 8750           | SNOTEL  | 1979-2023        |
| WY    | HAMS FORK          | 86-0509 | HLY                 | 42.1460  | -110.6783 | 7840           | SNOTEL  | 1985-2022        |
| WY    | HAMS FORK          | 86-0509 | DLY                 | 42.1460  | -110.6783 | 7840           | SNOTEL  | 1985-2023        |
| MT    | HAND CREEK         | 86-0510 | DLY                 | 48.3075  | -114.8408 | 5035           | SNOTEL  | 1978-2023        |
| MT    | HAND CREEK         | 86-0510 | HLY                 | 48.3075  | -114.8408 | 5035           | SNOTEL  | 1978-2022        |
| WY    | HANSEN SAWMILL     | 86-0512 | HLY                 | 44.2560  | -106.9798 | 8360           | SNOTEL  | 1980-2022        |
| WY    | HANSEN SAWMILL     | 86-0512 | DLY                 | 44.2560  | -106.9798 | 8360           | SNOTEL  | 1980-2023        |
| MT    | HAWKINS LAKE       | 86-0516 | DLY                 | 48.9723  | -115.9534 | 6450           | SNOTEL  | 1987-2023        |

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| MT    | HAWKINS LAKE   | 86-0516 | HLY                 | 48.9723  | -115.9534 | 6450           | SNOTEL  | 1987-2022        |
| ID    | HEMLOCK BUTTE  | 86-0520 | DLY                 | 46.4811  | -115.6336 | 5810           | SNOTEL  | 1983-2023        |
| ID    | HEMLOCK BUTTE  | 86-0520 | HLY                 | 46.4811  | -115.6336 | 5810           | SNOTEL  | 1983-2022        |
| ID    | HILTS CREEK    | 86-0524 | DLY                 | 44.0190  | -113.4723 | 8000           | SNOTEL  | 1981-2023        |
| ID    | HILTS CREEK    | 86-0524 | HLY                 | 44.0190  | -113.4723 | 8000           | SNOTEL  | 1981-2022        |
| WY    | HOBBS PARK     | 86-0525 | DLY                 | 42.8698  | -109.0946 | 10100          | SNOTEL  | 1978-2023        |
| WY    | HOBBS PARK     | 86-0525 | HLY                 | 42.8698  | -109.0946 | 10100          | SNOTEL  | 1978-2022        |
| MT    | HOODOO BASIN   | 86-0530 | DLY                 | 46.9751  | -115.0349 | 6050           | SNOTEL  | 1980-2023        |
| MT    | HOODOO BASIN   | 86-0530 | HLY                 | 46.9751  | -115.0349 | 6050           | SNOTEL  | 1980-2022        |
| ID    | HOWELL CANYON  | 86-0534 | DLY                 | 42.3203  | -113.6159 | 7980           | SNOTEL  | 1980-2023        |
| ID    | HOWELL CANYON  | 86-0534 | HLY                 | 42.3203  | -113.6159 | 7980           | SNOTEL  | 1980-2022        |
| ID    | HUMBOLDT GULCH | 86-0535 | DLY                 | 47.5318  | -115.7764 | 4250           | SNOTEL  | 1979-2023        |
| ID    | HUMBOLDT GULCH | 86-0535 | HLY                 | 47.5318  | -115.7764 | 4250           | SNOTEL  | 1980-2022        |
| ID    | HYNDMAN        | 86-0537 | HLY                 | 43.7108  | -114.1589 | 7620           | SNOTEL  | 1981-2022        |
| ID    | HYNDMAN        | 86-0537 | DLY                 | 43.7108  | -114.1589 | 7620           | SNOTEL  | 1981-2023        |
| WY    | INDIAN CREEK   | 86-0544 | HLY                 | 42.3002  | -110.6775 | 9425           | SNOTEL  | 1980-2022        |
| WY    | INDIAN CREEK   | 86-0544 | DLY                 | 42.3002  | -110.6775 | 9425           | SNOTEL  | 1980-2023        |
| ID    | ISLAND PARK    | 86-0546 | HLY                 | 44.4203  | -111.3851 | 6290           | SNOTEL  | 1981-2022        |
| ID    | ISLAND PARK    | 86-0546 | DLY                 | 44.4203  | -111.3851 | 6290           | SNOTEL  | 1981-2023        |
| ID    | JACKSON PEAK   | 86-0550 | DLY                 | 44.0509  | -115.4432 | 7070           | SNOTEL  | 1981-2023        |
| ID    | JACKSON PEAK   | 86-0550 | HLY                 | 44.0509  | -115.4432 | 7070           | SNOTEL  | 1980-2022        |
| WY    | KELLEY R.S.    | 86-0554 | HLY                 | 42.2655  | -110.8018 | 8180           | SNOTEL  | 1980-2022        |
| WY    | KELLEY R.S.    | 86-0554 | DLY                 | 42.2655  | -110.8018 | 8180           | SNOTEL  | 1980-2023        |
| WY    | KENDALL R.S.   | 86-0555 | DLY                 | 43.2493  | -110.0166 | 7740           | SNOTEL  | 1985-2023        |
| WY    | KENDALL R.S.   | 86-0555 | HLY                 | 43.2493  | -110.0166 | 7740           | SNOTEL  | 1985-2022        |
| WY    | KIRWIN         | 86-0560 | DLY                 | 43.8607  | -109.3216 | 9550           | SNOTEL  | 1980-2023        |
| WY    | KIRWIN         | 86-0560 | HLY                 | 43.8607  | -109.3216 | 9550           | SNOTEL  | 1980-2022        |
| MT    | KRAFT CREEK    | 86-0562 | HLY                 | 47.4275  | -113.7751 | 4750           | SNOTEL  | 1980-2022        |
| MT    | KRAFT CREEK    | 86-0562 | DLY                 | 47.4275  | -113.7751 | 4750           | SNOTEL  | 1980-2023        |

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| MT    | LAKEVIEW RIDGE    | 86-0568 | HLY                 | 44.5891  | -111.8250 | 7400           | SNOTEL  | 1978-2022        |
| MT    | LAKEVIEW RIDGE    | 86-0568 | DLY                 | 44.5891  | -111.8250 | 7400           | SNOTEL  | 1978-2023        |
| WY    | LAPRELE CREEK     | 86-0571 | HLY                 | 42.4358  | -105.8608 | 8375           | SNOTEL  | 1982-2022        |
| WY    | LAPRELE CREEK     | 86-0571 | DLY                 | 42.4358  | -105.8608 | 8375           | SNOTEL  | 1979-2023        |
| MT    | LEMHI RIDGE       | 86-0576 | HLY                 | 44.9938  | -113.4440 | 8100           | SNOTEL  | 1979-2022        |
| MT    | LEMHI RIDGE       | 86-0576 | DLY                 | 44.9938  | -113.4440 | 8100           | SNOTEL  | 1979-2023        |
| WY    | LEWIS LAKE DIVIDE | 86-0577 | DLY                 | 44.2086  | -110.6663 | 7850           | SNOTEL  | 1979-2023        |
| WY    | LEWIS LAKE DIVIDE | 86-0577 | HLY                 | 44.2086  | -110.6663 | 7850           | SNOTEL  | 1979-2022        |
| MT    | LICK CREEK        | 86-0578 | HLY                 | 45.5041  | -110.9662 | 6860           | SNOTEL  | 1978-2022        |
| MT    | LICK CREEK        | 86-0578 | DLY                 | 45.5041  | -110.9662 | 6860           | SNOTEL  | 1978-2023        |
| WY    | LITTLE WARM       | 86-0585 | DLY                 | 43.5028  | -109.7520 | 9370           | SNOTEL  | 1978-2023        |
| WY    | LITTLE WARM       | 86-0585 | HLY                 | 43.5028  | -109.7520 | 9370           | SNOTEL  | 1978-2022        |
| ID    | LOLO PASS         | 86-0588 | DLY                 | 46.6345  | -114.5807 | 5240           | SNOTEL  | 1983-2023        |
| ID    | LOLO PASS         | 86-0588 | HLY                 | 46.6345  | -114.5807 | 5240           | SNOTEL  | 1983-2022        |
| MT    | LONE MOUNTAIN     | 86-0590 | DLY                 | 45.2741  | -111.4269 | 8880           | SNOTEL  | 1991-2023        |
| MT    | LONE MOUNTAIN     | 86-0590 | HLY                 | 45.2741  | -111.4269 | 8880           | SNOTEL  | 1991-2022        |
| ID    | LOOKOUT           | 86-0594 | HLY                 | 47.4575  | -115.7046 | 5190           | SNOTEL  | 1979-2022        |
| ID    | LOOKOUT           | 86-0594 | DLY                 | 47.4575  | -115.7046 | 5190           | SNOTEL  | 1979-2023        |
| WY    | LOOMIS PARK       | 86-0597 | DLY                 | 43.1739  | -110.1401 | 8240           | SNOTEL  | 1980-2023        |
| WY    | LOOMIS PARK       | 86-0597 | HLY                 | 43.1739  | -110.1401 | 8240           | SNOTEL  | 1980-2022        |
| ID    | LOST LAKE         | 86-0600 | DLY                 | 47.0809  | -115.9604 | 6110           | SNOTEL  | 1981-2023        |
| ID    | LOST LAKE         | 86-0600 | HLY                 | 47.0809  | -115.9604 | 6110           | SNOTEL  | 1981-2022        |
| ID    | LOST-WOOD DIVIDE  | 86-0601 | HLY                 | 43.8243  | -114.2640 | 7900           | SNOTEL  | 1981-2022        |
| ID    | LOST-WOOD DIVIDE  | 86-0601 | DLY                 | 43.8243  | -114.2640 | 7900           | SNOTEL  | 1981-2023        |
| MT    | LOWER TWIN        | 86-0603 | DLY                 | 45.5087  | -111.9229 | 7900           | SNOTEL  | 1980-2023        |
| MT    | LOWER TWIN        | 86-0603 | HLY                 | 45.5087  | -111.9229 | 7900           | SNOTEL  | 1980-2022        |
| MT    | LUBRECHT FLUME    | 86-0604 | DLY                 | 46.8829  | -113.3223 | 4680           | SNOTEL  | 1978-2023        |
| MT    | LUBRECHT FLUME    | 86-0604 | HLY                 | 46.8829  | -113.3223 | 4680           | SNOTEL  | 1978-2022        |
| MT    | MADISON PLATEAU   | 86-0609 | DLY                 | 44.5862  | -111.1163 | 7750           | SNOTEL  | 1988-2023        |

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| MT    | MADISON PLATEAU    | 86-0609 | HLY                 | 44.5862  | -111.1163 | 7750           | SNOTEL  | 1988-2022        |
| ID    | MAGIC MOUNTAIN     | 86-0610 | DLY                 | 42.1807  | -114.2866 | 6880           | SNOTEL  | 1980-2023        |
| ID    | MAGIC MOUNTAIN     | 86-0610 | HLY                 | 42.1807  | -114.2866 | 6880           | SNOTEL  | 1980-2022        |
| MT    | MANY GLACIER       | 86-0613 | DLY                 | 48.7970  | -113.6705 | 4900           | SNOTEL  | 1978-2023        |
| MT    | MANY GLACIER       | 86-0613 | HLY                 | 48.7970  | -113.6705 | 4900           | SNOTEL  | 1978-2022        |
| WY    | MARQUETTE          | 86-0616 | DLY                 | 44.3016  | -109.2402 | 8760           | SNOTEL  | 1980-2023        |
| WY    | MARQUETTE          | 86-0616 | HLY                 | 44.3016  | -109.2402 | 8760           | SNOTEL  | 1980-2022        |
| ID    | MEADOW LAKE        | 86-0620 | HLY                 | 44.4366  | -113.3182 | 9150           | SNOTEL  | 1980-2022        |
| ID    | MEADOW LAKE        | 86-0620 | DLY                 | 44.4366  | -113.3182 | 9150           | SNOTEL  | 1981-2023        |
| ID    | MICA CREEK         | 86-0623 | DLY                 | 47.1505  | -116.2664 | 4510           | SNOTEL  | 1990-2023        |
| ID    | MICA CREEK         | 86-0623 | HLY                 | 47.1505  | -116.2664 | 4510           | SNOTEL  | 1990-2022        |
| WY    | MIDDLE POWDER      | 86-0625 | HLY                 | 43.6273  | -107.1814 | 7760           | SNOTEL  | 1978-2022        |
| WY    | MIDDLE POWDER      | 86-0625 | DLY                 | 43.6273  | -107.1814 | 7760           | SNOTEL  | 1978-2023        |
| ID    | MILL CREEK SUMMIT  | 86-0627 | HLY                 | 44.4721  | -114.4899 | 8800           | SNOTEL  | 1979-2022        |
| ID    | MILL CREEK SUMMIT  | 86-0627 | DLY                 | 44.4721  | -114.4899 | 8800           | SNOTEL  | 1979-2023        |
| MT    | MONUMENT PEAK      | 86-0635 | HLY                 | 45.2176  | -110.2370 | 8850           | SNOTEL  | 1980-2022        |
| MT    | MONUMENT PEAK      | 86-0635 | DLY                 | 45.2176  | -110.2370 | 8850           | SNOTEL  | 1980-2023        |
| ID    | MOONSHINE          | 86-0636 | HLY                 | 44.4147  | -113.3981 | 7440           | SNOTEL  | 1981-2022        |
| ID    | MOONSHINE          | 86-0636 | DLY                 | 44.4147  | -113.3981 | 7440           | SNOTEL  | 1981-2023        |
| ID    | MORES CREEK SUMMIT | 86-0637 | DLY                 | 43.9320  | -115.6659 | 6100           | SNOTEL  | 1979-2023        |
| ID    | MORES CREEK SUMMIT | 86-0637 | HLY                 | 43.9320  | -115.6659 | 6100           | SNOTEL  | 1979-2022        |
| ID    | MOOSE CREEK        | 86-0638 | DLY                 | 45.6701  | -113.9531 | 6200           | SNOTEL  | 1981-2023        |
| ID    | MOOSE CREEK        | 86-0638 | HLY                 | 45.6701  | -113.9531 | 6200           | SNOTEL  | 1980-2022        |
| ID    | MORGAN CREEK       | 86-0639 | DLY                 | 44.8424  | -114.2687 | 7600           | SNOTEL  | 1981-2023        |
| ID    | MORGAN CREEK       | 86-0639 | HLY                 | 44.8424  | -114.2687 | 7600           | SNOTEL  | 1981-2022        |
| ID    | MOSQUITO RIDGE     | 86-0645 | HLY                 | 48.0573  | -116.2306 | 5260           | SNOTEL  | 1980-2022        |
| ID    | MOSQUITO RIDGE     | 86-0645 | DLY                 | 48.0573  | -116.2306 | 5260           | SNOTEL  | 1979-2023        |
| MT    | MOSS PEAK          | 86-0646 | HLY                 | 47.6849  | -113.9623 | 6780           | SNOTEL  | 1985-2022        |
| MT    | MOSS PEAK          | 86-0646 | DLY                 | 47.6849  | -113.9623 | 6780           | SNOTEL  | 1985-2023        |

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| MT    | MOUNT LOCKHART     | 86-0649 | DLY                 | 47.9173  | -112.8238 | 6400           | SNOTEL  | 1978-2023        |
| MT    | MOUNT LOCKHART     | 86-0649 | HLY                 | 47.9173  | -112.8238 | 6400           | SNOTEL  | 1978-2022        |
| ID    | MOUNTAIN MEADOWS   | 86-0650 | HLY                 | 45.6969  | -115.2297 | 6320           | SNOTEL  | 1980-2022        |
| ID    | MOUNTAIN MEADOWS   | 86-0650 | DLY                 | 45.6969  | -115.2297 | 6320           | SNOTEL  | 1980-2023        |
| ID    | MUD FLAT           | 86-0654 | DLY                 | 42.6004  | -116.5592 | 5730           | SNOTEL  | 1980-2023        |
| ID    | MUD FLAT           | 86-0654 | HLY                 | 42.6004  | -116.5592 | 5730           | SNOTEL  | 1980-2022        |
| MT    | MULE CREEK         | 86-0656 | HLY                 | 45.4096  | -112.9593 | 8300           | SNOTEL  | 1980-2022        |
| MT    | MULE CREEK         | 86-0656 | DLY                 | 45.4096  | -112.9593 | 8300           | SNOTEL  | 1980-2023        |
| MT    | N FK ELK CREEK     | 86-0657 | HLY                 | 46.8716  | -113.2773 | 6250           | SNOTEL  | 1978-2022        |
| MT    | N FK ELK CREEK     | 86-0657 | DLY                 | 46.8716  | -113.2773 | 6250           | SNOTEL  | 1978-2023        |
| MT    | NEZ PERCE CAMP     | 86-0662 | DLY                 | 45.7311  | -114.4808 | 5650           | SNOTEL  | 1980-2023        |
| MT    | NEZ PERCE CAMP     | 86-0662 | HLY                 | 45.7311  | -114.4808 | 5650           | SNOTEL  | 1980-2022        |
| MT    | NOISY BASIN        | 86-0664 | DLY                 | 48.1568  | -113.9464 | 6040           | SNOTEL  | 1978-2023        |
| MT    | NOISY BASIN        | 86-0664 | HLY                 | 48.1568  | -113.9464 | 6040           | SNOTEL  | 1978-2022        |
| MT    | NORTH FORK JOCKO   | 86-0667 | DLY                 | 47.2726  | -113.7562 | 6330           | SNOTEL  | 1989-2023        |
| MT    | NORTH FORK JOCKO   | 86-0667 | HLY                 | 47.2726  | -113.7562 | 6330           | SNOTEL  | 1989-2022        |
| WY    | NORTH FRENCH CREEK | 86-0668 | HLY                 | 41.3308  | -106.3755 | 10130          | SNOTEL  | 1978-2022        |
| WY    | NORTH FRENCH CREEK | 86-0668 | DLY                 | 41.3308  | -106.3755 | 10130          | SNOTEL  | 1978-2023        |
| WY    | OLD BATTLE         | 86-0673 | HLY                 | 41.1540  | -106.9694 | 10000          | SNOTEL  | 1978-2022        |
| WY    | OLD BATTLE         | 86-0673 | DLY                 | 41.1540  | -106.9694 | 10000          | SNOTEL  | 1979-2023        |
| WY    | OWL CREEK          | 86-0676 | HLY                 | 43.6587  | -109.0099 | 8975           | SNOTEL  | 1980-2022        |
| WY    | OWL CREEK          | 86-0676 | DLY                 | 43.6587  | -109.0099 | 8975           | SNOTEL  | 1980-2023        |
| ID    | OXFORD SPRING      | 86-0677 | HLY                 | 42.2602  | -112.1252 | 6740           | SNOTEL  | 1980-2022        |
| ID    | OXFORD SPRING      | 86-0677 | DLY                 | 42.2602  | -112.1252 | 6740           | SNOTEL  | 1980-2023        |
| WY    | PARKER PEAK        | 86-0683 | HLY                 | 44.7340  | -109.9148 | 9400           | SNOTEL  | 1980-2022        |
| WY    | PARKER PEAK        | 86-0683 | DLY                 | 44.7340  | -109.9148 | 9400           | SNOTEL  | 1980-2023        |
| WY    | PHILLIPS BENCH     | 86-0689 | HLY                 | 43.5169  | -110.9126 | 8200           | SNOTEL  | 1979-2022        |
| WY    | PHILLIPS BENCH     | 86-0689 | DLY                 | 43.5169  | -110.9126 | 8200           | SNOTEL  | 1979-2023        |
| MT    | PICKFOOT CREEK     | 86-0690 | DLY                 | 46.5798  | -111.2683 | 6650           | SNOTEL  | 1978-2023        |



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| MT    | PICKFOOT CREEK    | 86-0690 | HLY                 | 46.5798  | -111.2683 | 6650           | SNOTEL  | 1978-2022        |
| MT    | PIKE CREEK        | 86-0693 | HLY                 | 48.3031  | -113.3287 | 5930           | SNOTEL  | 1980-2022        |
| MT    | PIKE CREEK        | 86-0693 | DLY                 | 48.3031  | -113.3287 | 5930           | SNOTEL  | 1980-2023        |
| ID    | PINE CREEK PASS   | 86-0695 | DLY                 | 43.5700  | -111.2116 | 6720           | SNOTEL  | 1988-2023        |
| ID    | PINE CREEK PASS   | 86-0695 | HLY                 | 43.5700  | -111.2116 | 6720           | SNOTEL  | 1988-2022        |
| MT    | PLACER BASIN      | 86-0696 | HLY                 | 45.4190  | -110.0884 | 8830           | SNOTEL  | 1980-2022        |
| MT    | PLACER BASIN      | 86-0696 | DLY                 | 45.4190  | -110.0884 | 8830           | SNOTEL  | 1980-2023        |
| MT    | PORCUPINE         | 86-0700 | DLY                 | 46.1119  | -110.4696 | 6500           | SNOTEL  | 1978-2023        |
| MT    | PORCUPINE         | 86-0700 | HLY                 | 46.1119  | -110.4696 | 6500           | SNOTEL  | 1978-2022        |
| WY    | POWDER RIVER PASS | 86-0703 | HLY                 | 44.1619  | -107.1262 | 9480           | SNOTEL  | 1978-2022        |
| WY    | POWDER RIVER PASS | 86-0703 | DLY                 | 44.1619  | -107.1262 | 9480           | SNOTEL  | 1978-2023        |
| ID    | PRAIRIE           | 86-0704 | HLY                 | 43.5051  | -115.5730 | 4800           | SNOTEL  | 1981-2022        |
| ID    | PRAIRIE           | 86-0704 | DLY                 | 43.5051  | -115.5730 | 4800           | SNOTEL  | 1981-2023        |
| WY    | RENO HILL         | 86-0716 | HLY                 | 42.5711  | -106.0889 | 8400           | SNOTEL  | 1982-2022        |
| WY    | RENO HILL         | 86-0716 | DLY                 | 42.5711  | -106.0889 | 8400           | SNOTEL  | 1982-2023        |
| MT    | ROCKER PEAK       | 86-0722 | DLY                 | 46.3561  | -112.2618 | 8000           | SNOTEL  | 1978-2023        |
| MT    | ROCKER PEAK       | 86-0722 | HLY                 | 46.3561  | -112.2618 | 8000           | SNOTEL  | 1978-2022        |
| MT    | S FORK SHIELDS    | 86-0725 | HLY                 | 46.0896  | -110.4336 | 8100           | SNOTEL  | 1983-2022        |
| MT    | S FORK SHIELDS    | 86-0725 | DLY                 | 46.0896  | -110.4336 | 8100           | SNOTEL  | 1983-2023        |
| MT    | SADDLE MTN.       | 86-0727 | HLY                 | 45.6926  | -113.9683 | 7940           | SNOTEL  | 1978-2022        |
| MT    | SADDLE MTN.       | 86-0727 | DLY                 | 45.6926  | -113.9683 | 7940           | SNOTEL  | 1978-2023        |
| WY    | SALT RIVER SUMMIT | 86-0730 | HLY                 | 42.5075  | -110.9099 | 7640           | SNOTEL  | 1978-2022        |
| WY    | SALT RIVER SUMMIT | 86-0730 | DLY                 | 42.5075  | -110.9099 | 7640           | SNOTEL  | 1979-2023        |
| WY    | SAND LAKE         | 86-0731 | DLY                 | 41.4626  | -106.2811 | 10050          | SNOTEL  | 1982-2023        |
| WY    | SAND LAKE         | 86-0731 | HLY                 | 41.4626  | -106.2811 | 10050          | SNOTEL  | 1981-2022        |
| WY    | SANDSTONE RS      | 86-0732 | HLY                 | 41.1117  | -107.1706 | 8150           | SNOTEL  | 1985-2022        |
| WY    | SANDSTONE RS      | 86-0732 | DLY                 | 41.1117  | -107.1706 | 8150           | SNOTEL  | 1985-2023        |
| ID    | SAVAGE PASS       | 86-0735 | HLY                 | 46.4663  | -114.6333 | 6190           | SNOTEL  | 1983-2022        |
| ID    | SAVAGE PASS       | 86-0735 | DLY                 | 46.4663  | -114.6333 | 6190           | SNOTEL  | 1983-2023        |

| State | Station Name        | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|---------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | SCHWEITZER BASIN    | 86-0738 | DLY                 | 48.3743  | -116.6392 | 6090           | SNOTEL  | 1981-2023        |
| ID    | SCHWEITZER BASIN    | 86-0738 | HLY                 | 48.3743  | -116.6392 | 6090           | SNOTEL  | 1981-2022        |
| ID    | SECESH SUMMIT       | 86-0740 | DLY                 | 45.1885  | -115.9715 | 6540           | SNOTEL  | 1981-2023        |
| ID    | SECESH SUMMIT       | 86-0740 | HLY                 | 45.1885  | -115.9715 | 6540           | SNOTEL  | 1981-2022        |
| ID    | SEDGWICK PEAK       | 86-0741 | HLY                 | 42.5250  | -111.9564 | 7850           | SNOTEL  | 1988-2022        |
| ID    | SEDGWICK PEAK       | 86-0741 | DLY                 | 42.5250  | -111.9564 | 7850           | SNOTEL  | 1988-2023        |
| ID    | SHANGHI SUMMIT      | 86-0747 | DLY                 | 46.5660  | -115.7422 | 4600           | SNOTEL  | 1983-2023        |
| ID    | SHANGHI SUMMIT      | 86-0747 | HLY                 | 46.5660  | -115.7422 | 4600           | SNOTEL  | 1983-2022        |
| ID    | SHEEP MTN.          | 86-0749 | HLY                 | 43.2103  | -111.6879 | 6650           | SNOTEL  | 1978-2022        |
| ID    | SHEEP MTN.          | 86-0749 | DLY                 | 43.2103  | -111.6879 | 6650           | SNOTEL  | 1979-2023        |
| WY    | SHELL CREEK         | 86-0751 | HLY                 | 44.5001  | -107.4295 | 9580           | SNOTEL  | 1978-2022        |
| WY    | SHELL CREEK         | 86-0751 | DLY                 | 44.5001  | -107.4295 | 9580           | SNOTEL  | 1978-2023        |
| ID    | SHERWIN             | 86-0752 | HLY                 | 46.9503  | -116.3397 | 3200           | SNOTEL  | 1982-2022        |
| ID    | SHERWIN             | 86-0752 | DLY                 | 46.9503  | -116.3397 | 3200           | SNOTEL  | 1982-2023        |
| MT    | SHORT CREEK         | 86-0753 | DLY                 | 44.9757  | -111.9521 | 7000           | SNOTEL  | 1988-2023        |
| MT    | SHORT CREEK         | 86-0753 | HLY                 | 44.9757  | -111.9521 | 7000           | SNOTEL  | 1988-2022        |
| MT    | SHOWER FALLS        | 86-0754 | DLY                 | 45.4012  | -110.9576 | 8100           | SNOTEL  | 1978-2023        |
| MT    | SHOWER FALLS        | 86-0754 | HLY                 | 45.4012  | -110.9576 | 8100           | SNOTEL  | 1978-2022        |
| MT    | SKALKAHO SUMMIT     | 86-0760 | HLY                 | 46.2421  | -113.7725 | 7250           | SNOTEL  | 1980-2022        |
| MT    | SKALKAHO SUMMIT     | 86-0760 | DLY                 | 46.2421  | -113.7725 | 7250           | SNOTEL  | 1980-2023        |
| ID    | SLUG CREEK DIVIDE   | 86-0761 | DLY                 | 42.5625  | -111.2980 | 7225           | SNOTEL  | 1979-2023        |
| ID    | SLUG CREEK DIVIDE   | 86-0761 | HLY                 | 42.5625  | -111.2980 | 7225           | SNOTEL  | 1978-2022        |
| WY    | SNAKE RIVER STATION | 86-0764 | DLY                 | 44.1336  | -110.6692 | 6920           | SNOTEL  | 1989-2023        |
| WY    | SNAKE RIVER STATION | 86-0764 | HLY                 | 44.1336  | -110.6692 | 6920           | SNOTEL  | 1989-2022        |
| WY    | SNIDER BASIN        | 86-0765 | HLY                 | 42.4949  | -110.5320 | 8060           | SNOTEL  | 1980-2022        |
| WY    | SNIDER BASIN        | 86-0765 | DLY                 | 42.4949  | -110.5320 | 8060           | SNOTEL  | 1980-2023        |
| ID    | SOLDIER R.S.        | 86-0769 | DLY                 | 43.4841  | -114.8269 | 5740           | SNOTEL  | 1986-2023        |
| ID    | SOLDIER R.S.        | 86-0769 | HLY                 | 43.4841  | -114.8269 | 5740           | SNOTEL  | 1986-2022        |
| ID    | SOMSEN RANCH        | 86-0770 | DLY                 | 42.9528  | -111.3593 | 6800           | SNOTEL  | 1979-2023        |

| State | Station Name        | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|---------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | SOMSEN RANCH        | 86-0770 | HLY                 | 42.9528  | -111.3593 | 6800           | SNOTEL  | 1978-2022        |
| WY    | SOUTH BRUSH CREEK   | 86-0772 | HLY                 | 41.3294  | -106.5025 | 8440           | SNOTEL  | 1978-2022        |
| WY    | SOUTH BRUSH CREEK   | 86-0772 | DLY                 | 41.3294  | -106.5025 | 8440           | SNOTEL  | 1979-2023        |
| ID    | SOUTH MTN.          | 86-0774 | DLY                 | 42.7648  | -116.9004 | 6500           | SNOTEL  | 1979-2023        |
| ID    | SOUTH MTN.          | 86-0774 | HLY                 | 42.7648  | -116.9004 | 6500           | SNOTEL  | 1978-2022        |
| WY    | SOUTH PASS          | 86-0775 | DLY                 | 42.5732  | -108.8432 | 9040           | SNOTEL  | 1985-2023        |
| WY    | SOUTH PASS          | 86-0775 | HLY                 | 42.5732  | -108.8432 | 9040           | SNOTEL  | 1985-2022        |
| WY    | SPRING CREEK DIVIDE | 86-0779 | HLY                 | 42.5252  | -110.6615 | 9000           | SNOTEL  | 1979-2022        |
| WY    | SPRING CREEK DIVIDE | 86-0779 | DLY                 | 42.5252  | -110.6615 | 9000           | SNOTEL  | 1979-2023        |
| MT    | SPUR PARK           | 86-0781 | HLY                 | 46.7796  | -110.6217 | 8100           | SNOTEL  | 1978-2022        |
| MT    | SPUR PARK           | 86-0781 | DLY                 | 46.7796  | -110.6217 | 8100           | SNOTEL  | 1978-2023        |
| ID    | SQUAW FLAT          | 86-0782 | HLY                 | 44.7709  | -116.2480 | 6240           | SNOTEL  | 1980-2022        |
| ID    | SQUAW FLAT          | 86-0782 | DLY                 | 44.7709  | -116.2480 | 6240           | SNOTEL  | 1981-2023        |
| MT    | SLEEPING WOMAN      | 86-0783 | HLY                 | 47.1790  | -114.3337 | 6150           | SNOTEL  | 1992-2022        |
| MT    | SLEEPING WOMAN      | 86-0783 | DLY                 | 47.1790  | -114.3337 | 6150           | SNOTEL  | 1992-2023        |
| WY    | ST. LAWRENCE ALT    | 86-0786 | HLY                 | 43.0331  | -109.1702 | 8620           | SNOTEL  | 1983-2022        |
| WY    | ST. LAWRENCE ALT    | 86-0786 | DLY                 | 43.0331  | -109.1702 | 8620           | SNOTEL  | 1983-2023        |
| MT    | STAHL PEAK          | 86-0787 | HLY                 | 48.9090  | -114.8630 | 6030           | SNOTEL  | 1978-2022        |
| MT    | STAHL PEAK          | 86-0787 | DLY                 | 48.9090  | -114.8630 | 6030           | SNOTEL  | 1978-2023        |
| ID    | STICKNEY MILL       | 86-0792 | HLY                 | 43.8612  | -114.2090 | 7430           | SNOTEL  | 1981-2022        |
| ID    | STICKNEY MILL       | 86-0792 | DLY                 | 43.8612  | -114.2090 | 7430           | SNOTEL  | 1981-2023        |
| WY    | SUCKER CREEK        | 86-0798 | HLY                 | 44.7225  | -107.4003 | 8880           | SNOTEL  | 1978-2022        |
| WY    | SUCKER CREEK        | 86-0798 | DLY                 | 44.7225  | -107.4003 | 8880           | SNOTEL  | 1978-2023        |
| ID    | SUNSET              | 86-0803 | DLY                 | 47.5555  | -115.8242 | 5540           | SNOTEL  | 1979-2023        |
| ID    | SUNSET              | 86-0803 | HLY                 | 47.5555  | -115.8242 | 5540           | SNOTEL  | 1979-2022        |
| ID    | SWEDE PEAK          | 86-0805 | DLY                 | 43.6260  | -113.9689 | 7640           | SNOTEL  | 1979-2023        |
| ID    | SWEDE PEAK          | 86-0805 | HLY                 | 43.6260  | -113.9689 | 7640           | SNOTEL  | 1978-2022        |
| WY    | SYLVAN LAKE         | 86-0806 | DLY                 | 44.4776  | -110.1565 | 8420           | SNOTEL  | 1980-2023        |
| WY    | SYLVAN LAKE         | 86-0806 | HLY                 | 44.4776  | -110.1565 | 8420           | SNOTEL  | 1980-2022        |

| State | Station Name      | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| WY    | SYLVAN ROAD       | 86-0807 | HLY                 | 44.4782  | -110.0381 | 7120           | SNOTEL  | 1987-2022        |
| WY    | SYLVAN ROAD       | 86-0807 | DLY                 | 44.4782  | -110.0381 | 7120           | SNOTEL  | 1987-2023        |
| MT    | TEPEE CREEK       | 86-0813 | DLY                 | 44.7856  | -111.7100 | 8000           | SNOTEL  | 1978-2023        |
| MT    | TEPEE CREEK       | 86-0813 | HLY                 | 44.7856  | -111.7100 | 8000           | SNOTEL  | 1978-2022        |
| WY    | THUMB DIVIDE      | 86-0816 | HLY                 | 44.3692  | -110.5772 | 7980           | SNOTEL  | 1987-2022        |
| WY    | THUMB DIVIDE      | 86-0816 | DLY                 | 44.3692  | -110.5772 | 7980           | SNOTEL  | 1987-2023        |
| WY    | TIMBER CREEK      | 86-0819 | HLY                 | 44.0274  | -109.1788 | 7950           | SNOTEL  | 1987-2022        |
| WY    | TIMBER CREEK      | 86-0819 | DLY                 | 44.0274  | -109.1788 | 7950           | SNOTEL  | 1987-2023        |
| WY    | TOGWOTEE PASS     | 86-0822 | HLY                 | 43.7490  | -110.0578 | 9580           | SNOTEL  | 1980-2022        |
| WY    | TOGWOTEE PASS     | 86-0822 | DLY                 | 43.7490  | -110.0578 | 9580           | SNOTEL  | 1980-2023        |
| WY    | TOWNSEND CREEK    | 86-0826 | DLY                 | 42.6953  | -108.8957 | 8700           | SNOTEL  | 1980-2023        |
| WY    | TOWNSEND CREEK    | 86-0826 | HLY                 | 42.6953  | -108.8957 | 8700           | SNOTEL  | 1980-2022        |
| ID    | TRINITY MTN.      | 86-0830 | DLY                 | 43.6290  | -115.4382 | 7770           | SNOTEL  | 1979-2023        |
| ID    | TRINITY MTN.      | 86-0830 | HLY                 | 43.6290  | -115.4382 | 7770           | SNOTEL  | 1980-2022        |
| WY    | TRIPLE PEAK       | 86-0831 | HLY                 | 42.7639  | -110.5914 | 8500           | SNOTEL  | 1985-2022        |
| WY    | TRIPLE PEAK       | 86-0831 | DLY                 | 42.7639  | -110.5914 | 8500           | SNOTEL  | 1985-2023        |
| MT    | TWELVEMILE CREEK  | 86-0835 | HLY                 | 46.1429  | -114.4475 | 5600           | SNOTEL  | 1979-2022        |
| MT    | TWELVEMILE CREEK  | 86-0835 | DLY                 | 46.1429  | -114.4475 | 5600           | SNOTEL  | 1979-2023        |
| MT    | TWIN LAKES        | 86-0836 | DLY                 | 46.1438  | -114.5056 | 6400           | SNOTEL  | 1978-2023        |
| MT    | TWIN LAKES        | 86-0836 | HLY                 | 46.1438  | -114.5056 | 6400           | SNOTEL  | 1978-2022        |
| WY    | TWO OCEAN PLATEAU | 86-0837 | DLY                 | 44.1518  | -110.2212 | 9240           | SNOTEL  | 1980-2023        |
| WY    | TWO OCEAN PLATEAU | 86-0837 | HLY                 | 44.1518  | -110.2212 | 9240           | SNOTEL  | 1980-2022        |
| ID    | VIENNA MINE       | 86-0845 | HLY                 | 43.7994  | -114.8527 | 8960           | SNOTEL  | 1979-2022        |
| ID    | VIENNA MINE       | 86-0845 | DLY                 | 43.7994  | -114.8527 | 8960           | SNOTEL  | 1979-2023        |
| MT    | WALDRON           | 86-0847 | HLY                 | 47.9200  | -112.7909 | 5600           | SNOTEL  | 1978-2022        |
| MT    | WALDRON           | 86-0847 | DLY                 | 47.9200  | -112.7909 | 5600           | SNOTEL  | 1978-2023        |
| MT    | WARM SPRINGS      | 86-0850 | DLY                 | 46.2737  | -113.1640 | 7800           | SNOTEL  | 1980-2023        |
| MT    | WARM SPRINGS      | 86-0850 | HLY                 | 46.2737  | -113.1640 | 7800           | SNOTEL  | 1980-2022        |
| WY    | WEBBER SPRINGS    | 86-0852 | HLY                 | 41.1595  | -106.9271 | 9250           | SNOTEL  | 1978-2022        |

| State | Station Name     | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| WY    | WEBBER SPRINGS   | 86-0852 | DLY                 | 41.1595  | -106.9271 | 9250           | SNOTEL  | 1979-2023        |
| ID    | WEST BRANCH      | 86-0855 | DLY                 | 45.0722  | -116.4541 | 5560           | SNOTEL  | 1980-2023        |
| ID    | WEST BRANCH      | 86-0855 | HLY                 | 45.0722  | -116.4541 | 5560           | SNOTEL  | 1980-2022        |
| MT    | WHISKEY CREEK    | 86-0858 | DLY                 | 44.6109  | -111.1500 | 6800           | SNOTEL  | 1979-2023        |
| MT    | WHISKEY CREEK    | 86-0858 | HLY                 | 44.6109  | -111.1500 | 6800           | SNOTEL  | 1979-2022        |
| WY    | WHISKEY PARK     | 86-0859 | DLY                 | 41.0029  | -106.9085 | 8950           | SNOTEL  | 1986-2023        |
| WY    | WHISKEY PARK     | 86-0859 | HLY                 | 41.0029  | -106.9085 | 8950           | SNOTEL  | 1986-2022        |
| ID    | WHITE ELEPHANT   | 86-0860 | HLY                 | 44.5327  | -111.4109 | 7710           | SNOTEL  | 1981-2022        |
| ID    | WHITE ELEPHANT   | 86-0860 | DLY                 | 44.5327  | -111.4109 | 7710           | SNOTEL  | 1981-2023        |
| MT    | WHITE MILL       | 86-0862 | DLY                 | 45.0457  | -109.9099 | 8700           | SNOTEL  | 1978-2023        |
| MT    | WHITE MILL       | 86-0862 | HLY                 | 45.0457  | -109.9099 | 8700           | SNOTEL  | 1978-2022        |
| ID    | WILDHORSE DIVIDE | 86-0867 | DLY                 | 42.7574  | -112.4778 | 6490           | SNOTEL  | 1982-2023        |
| ID    | WILDHORSE DIVIDE | 86-0867 | HLY                 | 42.7574  | -112.4778 | 6490           | SNOTEL  | 1983-2022        |
| WY    | WILLOW CREEK     | 86-0868 | HLY                 | 42.8151  | -110.8352 | 8080           | SNOTEL  | 1980-2022        |
| WY    | WILLOW CREEK     | 86-0868 | DLY                 | 42.8151  | -110.8352 | 8080           | SNOTEL  | 1980-2023        |
| ID    | WILSON CREEK     | 86-0871 | DLY                 | 42.0126  | -115.0028 | 7120           | SNOTEL  | 1990-2023        |
| ID    | WILSON CREEK     | 86-0871 | HLY                 | 42.0126  | -115.0028 | 7120           | SNOTEL  | 1990-2022        |
| WY    | WINDY PEAK       | 86-0872 | HLY                 | 42.2802  | -105.5782 | 7900           | SNOTEL  | 1980-2022        |
| WY    | WINDY PEAK       | 86-0872 | DLY                 | 42.2802  | -105.5782 | 7900           | SNOTEL  | 1982-2023        |
| WY    | WOLVERINE        | 86-0875 | HLY                 | 44.8042  | -109.6570 | 7650           | SNOTEL  | 1980-2022        |
| WY    | WOLVERINE        | 86-0875 | DLY                 | 44.8042  | -109.6570 | 7650           | SNOTEL  | 1980-2023        |
| MT    | WOOD CREEK       | 86-0876 | HLY                 | 47.4485  | -112.8143 | 5960           | SNOTEL  | 1978-2022        |
| MT    | WOOD CREEK       | 86-0876 | DLY                 | 47.4485  | -112.8143 | 5960           | SNOTEL  | 1978-2023        |
| WY    | YOUNTS PEAK      | 86-0878 | DLY                 | 43.9323  | -109.8177 | 8350           | SNOTEL  | 1980-2023        |
| WY    | YOUNTS PEAK      | 86-0878 | HLY                 | 43.9323  | -109.8177 | 8350           | SNOTEL  | 1980-2022        |
| MT    | TIZER BASIN      | 86-0893 | DLY                 | 46.3494  | -111.8531 | 6880           | SNOTEL  | 1988-2023        |
| MT    | TIZER BASIN      | 86-0893 | HLY                 | 46.3494  | -111.8531 | 6880           | SNOTEL  | 1988-2022        |
| ID    | CHOCOLATE GULCH  | 86-0895 | DLY                 | 43.7685  | -114.4181 | 6310           | SNOTEL  | 1993-2023        |
| ID    | CHOCOLATE GULCH  | 86-0895 | HLY                 | 43.7685  | -114.4181 | 6310           | SNOTEL  | 1993-2022        |

| State | Station Name    | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|-----------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | STUART MOUNTAIN | 86-0901 | HLY                 | 46.9952  | -113.9266 | 7400           | SNOTEL  | 1994-2022        |
| MT    | STUART MOUNTAIN | 86-0901 | DLY                 | 46.9952  | -113.9266 | 7400           | SNOTEL  | 1994-2023        |
| ID    | SCHWARTZ LAKE   | 86-0915 | DLY                 | 44.8462  | -113.8373 | 8630           | SNOTEL  | 1995-2023        |
| ID    | SCHWARTZ LAKE   | 86-0915 | HLY                 | 44.8462  | -113.8373 | 8630           | SNOTEL  | 1995-2022        |
| MT    | ALBRO LAKE      | 86-0916 | HLY                 | 45.5972  | -111.9590 | 8300           | SNOTEL  | 1996-2022        |
| MT    | ALBRO LAKE      | 86-0916 | DLY                 | 45.5972  | -111.9590 | 8300           | SNOTEL  | 1996-2023        |
| MT    | ROCKY BOY       | 86-0917 | DLY                 | 48.1748  | -109.6473 | 4700           | SNOTEL  | 1996-2024        |
| MT    | ROCKY BOY       | 86-0917 | HLY                 | 48.1748  | -109.6473 | 4700           | SNOTEL  | 1996-2022        |
| MT    | GARVER CREEK    | 86-0918 | HLY                 | 48.9752  | -115.8192 | 4250           | SNOTEL  | 1996-2022        |
| MT    | GARVER CREEK    | 86-0918 | DLY                 | 48.9752  | -115.8192 | 4250           | SNOTEL  | 1996-2023        |
| MT    | DAISY PEAK      | 86-0919 | DLY                 | 46.6686  | -110.3302 | 7600           | SNOTEL  | 1996-2023        |
| MT    | DAISY PEAK      | 86-0919 | HLY                 | 46.6686  | -110.3302 | 7600           | SNOTEL  | 1996-2022        |
| ID    | SMILEY MOUNTAIN | 86-0926 | DLY                 | 43.7272  | -113.8340 | 9520           | SNOTEL  | 2001-2023        |
| ID    | SMILEY MOUNTAIN | 86-0926 | HLY                 | 43.7272  | -113.8340 | 9520           | SNOTEL  | 2001-2022        |
| MT    | SACAJAWEA       | 86-0929 | HLY                 | 45.8740  | -110.9278 | 6550           | SNOTEL  | 1999-2022        |
| MT    | SACAJAWEA       | 86-0929 | DLY                 | 45.8740  | -110.9278 | 6550           | SNOTEL  | 1999-2023        |
| MT    | POORMAN CREEK   | 86-0932 | DLY                 | 48.1267  | -115.6233 | 5100           | SNOTEL  | 1998-2023        |
| MT    | POORMAN CREEK   | 86-0932 | HLY                 | 48.1267  | -115.6233 | 5100           | SNOTEL  | 1998-2022        |
| WY    | GUNSIGHT PASS   | 86-0944 | DLY                 | 43.3833  | -109.8782 | 9820           | SNOTEL  | 1998-2023        |
| WY    | GUNSIGHT PASS   | 86-0944 | HLY                 | 43.3833  | -109.8782 | 9820           | SNOTEL  | 1998-2022        |
| ID    | BOGUS BASIN     | 86-0978 | HLY                 | 43.7638  | -116.0968 | 6340           | SNOTEL  | 1999-2022        |
| ID    | BOGUS BASIN     | 86-0978 | DLY                 | 43.7638  | -116.0968 | 6340           | SNOTEL  | 1999-2023        |
| ID    | VAN WYCK        | 86-0979 | HLY                 | 44.3767  | -116.3366 | 4920           | SNOTEL  | 2001-2022        |
| ID    | VAN WYCK        | 86-0979 | DLY                 | 44.3767  | -116.3366 | 4920           | SNOTEL  | 2001-2023        |
| ID    | HIDDEN LAKE     | 86-0988 | HLY                 | 48.8937  | -116.7575 | 5040           | SNOTEL  | 2000-2022        |
| ID    | HIDDEN LAKE     | 86-0988 | DLY                 | 48.8937  | -116.7575 | 5040           | SNOTEL  | 2000-2023        |
| ID    | MOSCOW MOUNTAIN | 86-0989 | DLY                 | 46.8050  | -116.8535 | 4700           | SNOTEL  | 2000-2023        |
| ID    | MOSCOW MOUNTAIN | 86-0989 | HLY                 | 46.8050  | -116.8535 | 4700           | SNOTEL  | 2000-2022        |
| WY    | CROW CREEK      | 86-1045 | DLY                 | 41.2287  | -105.3828 | 8330           | SNOTEL  | 2003-2023        |

| State | Station Name                   | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| WY    | CROW CREEK                     | 86-1045 | HLY                 | 41.2287  | -105.3828 | 8330           | SNOTEL  | 2003-2022        |
| ID    | MYRTLE CREEK                   | 86-1053 | HLY                 | 48.7226  | -116.4631 | 3520           | SNOTEL  | 2003-2022        |
| ID    | MYRTLE CREEK                   | 86-1053 | DLY                 | 48.7226  | -116.4631 | 3520           | SNOTEL  | 2003-2023        |
| ID    | RAGGED MOUNTAIN                | 86-1081 | HLY                 | 47.8558  | -117.0367 | 4210           | SNOTEL  | 2006-2022        |
| ID    | RAGGED MOUNTAIN                | 86-1081 | DLY                 | 47.8558  | -117.0367 | 4210           | SNOTEL  | 2006-2023        |
| ID    | PIERCE R.S.                    | 86-1142 | HLY                 | 46.4960  | -115.7957 | 3080           | SNOTEL  | 2009-2022        |
| ID    | PIERCE R.S.                    | 86-1142 | DLY                 | 46.4960  | -115.7957 | 3080           | SNOTEL  | 2009-2023        |
| MT    | BLACKFEET AGRIMET STATION NR S | 87-0103 | HLY                 | 48.6753  | -112.5889 | 3905           | USBR    | 1999-2022        |
| MT    | BIG FLAT NEAR TURNER WEATHER S | 87-0133 | HLY                 | 48.8356  | -108.5636 | 3103           | USBR    | 2000-2022        |
| MT    | BIG FLAT NEAR TURNER WEATHER S | 87-0133 | 15M                 | 48.8356  | -108.5636 | 3103           | USBR    | 2017-2017        |
| MT    | BOZEMAN MONTANA WEATHER STATIO | 87-0343 | HLY                 | 45.6731  | -111.1547 | 4775           | USBR    | 1992-2022        |
| MT    | BUFFALO RAPIDS WEATHER STATION | 87-0373 | HLY                 | 46.9883  | -104.8031 | 2140           | USBR    | 1999-2022        |
| MT    | BUFFALO RAPIDS WEATHER STATION | 87-0403 | HLY                 | 46.7783  | -105.2975 | 2270           | USBR    | 1999-2022        |
| MT    | DILLON MONTANA WEATHER STATION | 87-0743 | HLY                 | 45.3336  | -112.5094 | 5000           | USBR    | 1997-2022        |
| MT    | GLASGOW MONTANA WEATHER STATIO | 87-0963 | HLY                 | 48.1467  | -106.6006 | 2084           | USBR    | 1998-2022        |
| WY    | WEATHER STATION, GUERNSEY DAM, | 87-1014 | 15M                 | 42.2886  | -104.7625 | 4480           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, GUERNSEY DAM, | 87-1014 | HLY                 | 42.2886  | -104.7625 | 4480           | USBR    | 1989-2022        |
| MT    | HARLEM MONTANA WEATHER STATION | 87-1083 | HLY                 | 48.5250  | -108.8319 | 2360           | USBR    | 1998-2022        |
| MT    | HELENA VALLEY MONTANA WEATHER  | 87-1103 | HLY                 | 46.6756  | -111.9892 | 3673           | USBR    | 1995-2022        |
| MT    | JEFFERSON RVR VALLEY WEATHER S | 87-1123 | HLY                 | 45.7978  | -112.1653 | 4415           | USBR    | 2001-2022        |
| MT    | LOWER MUSSELSHELL WEATHER STAT | 87-1233 | HLY                 | 46.5628  | -108.0058 | 2950           | USBR    | 2000-2022        |
| MT    | MALTA MONTANA WEATHER STATION  | 87-1333 | HLY                 | 48.3739  | -107.7764 | 2270           | USBR    | 1998-2022        |
| MT    | YELLOWSTONE RIVER AT MILES CIT | 87-1404 | 15M                 | 46.4217  | -105.8606 | 2355           | USBR    | 1984-2022        |
| MT    | YELLOWSTONE RIVER AT MILES CIT | 87-1404 | HLY                 | 46.4217  | -105.8606 | 2355           | USBR    | 1984-2022        |
| MT    | MOCCASIN WEATHER STATION, MT   | 87-1493 | HLY                 | 47.0586  | -109.9508 | 4243           | USBR    | 2001-2022        |
| MT    | MOCCASIN WEATHER STATION, MT   | 87-1493 | 15M                 | 47.0586  | -109.9508 | 4243           | USBR    | 2017-2017        |
| WY    | NORTH FORK SHOSHONE RIVER NEAR | 87-1554 | 15M                 | 44.4697  | -109.4297 | 5399           | USBR    | 1984-2022        |
| WY    | NORTH FORK SHOSHONE RIVER NEAR | 87-1554 | HLY                 | 44.4697  | -109.4297 | 5399           | USBR    | 1984-2022        |
| MT    | RUBY RIVER VALLEY WEATHER STAT | 87-1763 | HLY                 | 45.3450  | -112.1503 | 5250           | USBR    | 1996-2022        |

| State | Station Name                    | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|---------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | SHIELDS VALLEY WEATHER STATION  | 87-2033 | HLY                 | 46.0467  | -110.6533 | 5310           | USBR    | 2001-2022        |
| WY    | SWEETWATER RIVER NR INDEPENDEN  | 87-2044 | 15M                 | 42.4925  | -107.1381 | 5850           | USBR    | 1988-2022        |
| WY    | SWEETWATER RIVER NR INDEPENDEN  | 87-2044 | HLY                 | 42.4925  | -107.1381 | 5850           | USBR    | 1988-2022        |
| MT    | TOSTON MONTANA WEATHER STATION  | 87-2153 | HLY                 | 46.1231  | -111.4944 | 4058           | USBR    | 1992-2022        |
| MT    | TETON RIVER WEATHER STATION NE  | 87-2183 | HLY                 | 47.9006  | -112.1597 | 3854           | USBR    | 2001-2022        |
| WY    | WEATHER STATION, GLENDON DAM, W | 87-2304 | 15M                 | 42.4689  | -104.9656 | 4780           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, GLENDON DAM, W | 87-2304 | HLY                 | 42.4689  | -104.9656 | 4780           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, PATHFINDER DA  | 87-2404 | HLY                 | 42.4717  | -106.8522 | 5920           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, PATHFINDER DA  | 87-2404 | 15M                 | 42.4717  | -106.8522 | 5920           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, SEMINOLE DAM,  | 87-2465 | HLY                 | 42.1556  | -106.9142 | 6946           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, SEMINOLE DAM,  | 87-2465 | 15M                 | 42.1556  | -106.9142 | 6175           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, WHALEN DAM, W  | 87-2474 | 15M                 | 42.2481  | -104.6278 | 4300           | USBR    | 1989-2022        |
| WY    | WEATHER STATION, WHALEN DAM, W  | 87-2474 | HLY                 | 42.2481  | -104.6278 | 4300           | USBR    | 1989-2022        |
| MT    | CORVALLIS, MONTANA AGRIMET WEA  | 87-3021 | HLY                 | 46.3333  | -114.0833 | 3597           | USBR    | 1986-2022        |
| MT    | CORVALLIS, MONTANA AGRIMET WEA  | 87-3021 | 15M                 | 46.3333  | -114.0833 | 1096           | USBR    | 1986-2022        |
| MT    | CRESTON, MONTANA AGRIMET WEATH  | 87-3091 | HLY                 | 48.1875  | -114.1278 | 2950           | USBR    | 1988-2022        |
| MT    | CRESTON, MONTANA AGRIMET WEATH  | 87-3091 | 15M                 | 48.1875  | -114.1278 | 899            | USBR    | 2012-2022        |
| ID    | CASCADE DAM AND CASCADE RESERV  | 87-3101 | 15M                 | 44.5246  | -116.0496 | 4828           | USBR    | 1982-2022        |
| ID    | CASCADE DAM AND CASCADE RESERV  | 87-3101 | HLY                 | 44.5246  | -116.0496 | 4828           | USBR    | 1982-2022        |
| ID    | CASCADE DAM AND CASCADE RESERV  | 87-3105 | DLY                 | 44.5246  | -116.0496 | 4828           | USBR    | 1980-2022        |
| ID    | DWORSHAK - DENT ACRES, IDAHO A  | 87-3151 | HLY                 | 46.6233  | -116.2206 | 1640           | USBR    | 2002-2022        |
| ID    | DWORSHAK - DENT ACRES, IDAHO A  | 87-3151 | 15M                 | 46.6233  | -116.2206 | 500            | USBR    | 2012-2022        |
| MT    | DEER LODGE, MONTANA AGRIMET WE  | 87-3211 | HLY                 | 46.3355  | -112.7667 | 4680           | USBR    | 1998-2022        |
| MT    | DEER LODGE, MONTANA AGRIMET WE  | 87-3211 | 15M                 | 46.3355  | -112.7667 | 1426           | USBR    | 2012-2022        |
| ID    | FAIRFIELD, IDAHO AGRIMET WEATH  | 87-3331 | 15M                 | 43.3130  | -114.8222 | 1536           | USBR    | 1987-2022        |
| ID    | FAIRFIELD, IDAHO AGRIMET WEATH  | 87-3331 | HLY                 | 43.3130  | -114.8222 | 5038           | USBR    | 1987-2022        |
| ID    | FORT HALL, IDAHO AGRIMET WEATH  | 87-3351 | 15M                 | 43.0714  | -112.4311 | 1355           | USBR    | 2012-2022        |
| ID    | FORT HALL, IDAHO AGRIMET WEATH  | 87-3351 | HLY                 | 43.0714  | -112.4311 | 4445           | USBR    | 1993-2022        |
| MT    | GIBSON DAM WEATHER STATION      | 87-3411 | 15M                 | 47.6017  | -112.7617 | 4590           | USBR    | 1990-2022        |



| State | Station Name                   | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | GIBSON DAM WEATHER STATION     | 87-3411 | HLY                 | 47.6017  | -112.7617 | 4590           | USBR    | 1990-2022        |
| ID    | GLENNS FERRY, IDAHO AGRIMET WE | 87-3431 | HLY                 | 42.8667  | -115.3569 | 3025           | USBR    | 1993-2022        |
| ID    | GLENNS FERRY, IDAHO AGRIMET WE | 87-3431 | 15M                 | 42.8667  | -115.3569 | 922            | USBR    | 2012-2022        |
| ID    | GRACE, IDAHO AGRIMET WEATHER S | 87-3501 | HLY                 | 42.5150  | -111.7361 | 5449           | USBR    | 2014-2022        |
| ID    | GRACE, IDAHO AGRIMET WEATHER S | 87-3501 | 15M                 | 42.5150  | -111.7361 | 1661           | USBR    | 2014-2022        |
| MT    | HUNGRY HORSE DAM WEATHER STATI | 87-3621 | HLY                 | 48.3422  | -114.0189 | 3180           | USBR    | 1990-2022        |
| MT    | HUNGRY HORSE DAM WEATHER STATI | 87-3621 | 15M                 | 48.3422  | -114.0189 | 3180           | USBR    | 1990-2022        |
| ID    | IDAHO CITY                     | 87-3741 | HLY                 | 43.8361  | -115.8347 | 3965           | USBR    | 1982-2022        |
| ID    | IDAHO CITY                     | 87-3741 | 15M                 | 43.8361  | -115.8347 | 3965           | USBR    | 1982-2022        |
| WY    | JACKSON WY WEATHER STATION     | 87-3831 | HLY                 | 43.4856  | -110.7613 | 6230           | USBR    | 1982-2022        |
| WY    | JACKSON WY WEATHER STATION     | 87-3831 | 15M                 | 43.4856  | -110.7613 | 6230           | USBR    | 1982-2022        |
| ID    | NAMPA, IDAHO AGRIMET WEATHER S | 87-4321 | HLY                 | 43.4372  | -116.6453 | 2702           | USBR    | 1996-2022        |
| ID    | NAMPA, IDAHO AGRIMET WEATHER S | 87-4321 | 15M                 | 43.4372  | -116.6453 | 824            | USBR    | 2012-2022        |
| MT    | SAINT IGNATIUS, MONTANA AGRIME | 87-4811 | HLY                 | 47.3253  | -114.0842 | 2980           | USBR    | 1991-2022        |
| MT    | SAINT IGNATIUS, MONTANA AGRIME | 87-4811 | 15M                 | 47.3253  | -114.0842 | 908            | USBR    | 1991-2022        |
| ID    | TWIN FALLS (KIMBERLY) IDAHO AG | 87-5221 | HLY                 | 42.5461  | -114.3453 | 3920           | USBR    | 1990-2022        |
| ID    | TWIN FALLS (KIMBERLY) IDAHO AG | 87-5221 | 15M                 | 42.5461  | -114.3453 | 1195           | USBR    | 2012-2022        |
| ID    | TWIN FALLS (KIMBERLY) IDAHO AG | 87-5224 | DLY                 | 42.5461  | -114.3453 | 3920           | USBR    | 1990-2022        |
| ID    | ORCHARD RANGE SITE             | 88-0674 | HLY                 | 43.3227  | -115.9964 | 3200           | SCAN    | 1989-2022        |
| ID    | ORCHARD RANGE SITE             | 88-0674 | DLY                 | 43.3227  | -115.9964 | 3200           | SCAN    | 1989-2022        |
| MT    | TABLE MOUNTAIN                 | 88-0808 | HLY                 | 45.8027  | -111.5865 | 4474           | SCAN    | 1986-2022        |
| MT    | TABLE MOUNTAIN                 | 88-0808 | DLY                 | 45.8027  | -111.5865 | 4474           | SCAN    | 1986-2022        |
| WY    | TORRINGTON #1                  | 88-2018 | HLY                 | 42.0667  | -104.1333 | 4280           | SCAN    | 1994-2022        |
| WY    | TORRINGTON #1                  | 88-2018 | DLY                 | 42.0667  | -104.1333 | 4280           | SCAN    | 1994-2022        |
| MT    | FORT ASSINIBOINE #1            | 88-2019 | DLY                 | 48.4833  | -109.8000 | 2710           | SCAN    | 1994-2022        |
| MT    | FORT ASSINIBOINE #1            | 88-2019 | HLY                 | 48.4833  | -109.8000 | 2710           | SCAN    | 1994-2022        |
| ID    | DUBOIS                         | 89-0001 | 15M                 | 44.2424  | -112.2018 | 5465           | INL     | 1994-2021        |
| ID    | SUGAR CITY                     | 89-0005 | 15M                 | 43.8966  | -111.7376 | 4895           | INL     | 1994-2021        |
| ID    | TERRETON                       | 89-0007 | 15M                 | 43.8417  | -112.4183 | 4792           | INL     | 1994-2021        |

| State | Station Name                   | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| ID    | ROBERTS                        | 89-0010 | 15M                 | 43.7435  | -112.1211 | 4760           | INL     | 1994-2021        |
| ID    | ARCO                           | 89-0015 | 15M                 | 43.6245  | -113.2971 | 5290           | INL     | 1994-2021        |
| ID    | CENTRAL FACILITIES AREA BUILDI | 89-0016 | DLY                 | 43.5326  | -112.9477 | 4950           | INL     | 1950-2021        |
| ID    | CENTRAL FACILITIES AREA BUILDI | 89-0016 | 15M                 | 43.5326  | -112.9477 | 4950           | INL     | 1994-2021        |
| ID    | MATERIALS AND FUELS COMPLEX    | 89-0017 | 15M                 | 43.5941  | -112.6517 | 5143           | INL     | 1994-2021        |
| ID    | GRID 3/INTEC                   | 89-0018 | 15M                 | 43.5897  | -112.9399 | 4897           | INL     | 1994-2021        |
| ID    | RADIOACTIVE WASTE MANAGEMENT C | 89-0023 | 15M                 | 43.5034  | -113.0460 | 5025           | INL     | 1994-2021        |
| ID    | IDAHO FALLS                    | 89-0024 | 15M                 | 43.5041  | -112.0501 | 4709           | INL     | 1994-2021        |
| ID    | ATOMIC CITY                    | 89-0025 | 15M                 | 43.4437  | -112.8157 | 5058           | INL     | 1994-2021        |
| ID    | TABER                          | 89-0028 | 15M                 | 43.3187  | -112.6918 | 4730           | INL     | 1994-2021        |
| ID    | RICHFIELD                      | 89-0031 | 15M                 | 43.0606  | -114.1346 | 4315           | INL     | 1994-2021        |
| ID    | FORT HALL                      | 89-0032 | 15M                 | 43.0220  | -112.4120 | 4452           | INL     | 1994-2021        |
| ID    | ABERDEEN                       | 89-0033 | 15M                 | 42.9549  | -112.8245 | 4392           | INL     | 1994-2021        |
| WY    | LABARGE 2S                     | 90-0024 | DLY                 | 42.2410  | -110.1880 | 6575           | WACNET  | 2016-2022        |
| WY    | LABARGE 2S                     | 90-0024 | HLY                 | 42.2410  | -110.1880 | 6575           | WACNET  | 2016-2022        |
| WY    | LINGLE 2W                      | 90-0025 | DLY                 | 42.1290  | -104.3900 | 4163           | WACNET  | 2008-2022        |
| WY    | LINGLE 2W                      | 90-0025 | HLY                 | 42.1290  | -104.3900 | 4163           | WACNET  | 2008-2022        |
| WY    | LYMAN 1SW                      | 90-0027 | HLY                 | 41.3170  | -110.3107 | 6723           | WACNET  | 2010-2022        |
| WY    | LYMAN 1SW                      | 90-0027 | DLY                 | 41.3170  | -110.3107 | 6723           | WACNET  | 2010-2022        |
| MT    | MISSOULA 2 WNW                 | 97-0001 | DLY                 | 46.8878  | -114.0367 | 3172           | NCEI    | 1893-1966        |
| MT    | KALISPELL WB                   | 97-0002 | DLY                 | 48.2000  | -114.3167 | 2956           | NCEI    | 1896-1948        |
| ID    | BOISE WB CITY                  | 98-0001 | DLY                 | 43.6167  | -116.2000 | 2713           | NCEI    | 1878-1939        |
| WY    | CHEYENNE WBO                   | 98-0002 | DLY                 | 41.1371  | -104.8192 | 6128           | NCEI    | 1871-1914        |
| WY    | LANDER WB CITY                 | 98-0003 | DLY                 | 42.8346  | -108.7328 | 5372           | NCEI    | 1891-1946        |
| WY    | SHERIDAN WB CITY               | 98-0004 | DLY                 | 44.7935  | -106.9556 | 3790           | NCEI    | 1907-1940        |
| WY    | LANDER HUNT FLD AP             | 98-0020 | DLY                 | 42.8153  | -108.7261 | 5592           | NCEI    | 1946-1947        |
| WY    | SHERIDAN CO AP                 | 98-0024 | DLY                 | 44.7694  | -106.9689 | 3945           | NCEI    | 1940-1947        |
| MT    | BILLINGS INTL AP               | 98-0026 | DLY                 | 45.8069  | -108.5422 | 3581           | NCEI    | 1934-1948        |
| MT    | HAVRE WB CITY                  | 98-0027 | DLY                 | 48.5667  | -109.6667 | 2493           | NCEI    | 1880-1892        |

| State | Station Name             | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record |
|-------|--------------------------|---------|---------------------|----------|-----------|----------------|---------|------------------|
| MT    | HELENA WB CITY           | 98-0105 | DLY                 | 46.5833  | -112.0333 | 4144           | NCEI    | 1880-1892        |
| MT    | HERON 2 NW               | 98-4084 | DLY                 | 48.0800  | -116.0014 | 2240           | NCEI    | 2009-2022        |
| ID    | LEWISTON                 | 98-5230 | DLY                 | 46.4167  | -117.0333 | 708            | NCEI    | 1881-1905        |
| ID    | POCATELLO CITY           | 98-7210 | DLY                 | 42.8750  | -112.4469 | 4460           | NCEI    | 2001-2004        |
| ID    | POCATELLO WB CITY        | 99-0001 | DLY                 | 42.8611  | -112.4507 | 4477           | NCEI    | 1899-1949        |
| WY    | BIG HORN                 | 99-0680 | DLY                 | 44.6828  | -107.0089 | 4208           | NCEI    | 1984-2005        |
| MT    | BOULDER                  | 99-1008 | DLY                 | 46.2311  | -112.1139 | 4904           | NCEI    | 1891-1948        |
| MT    | BUSBY                    | 99-1297 | DLY                 | 45.5397  | -106.9597 | 3430           | NCEI    | 1944-1948        |
| WY    | CASPER                   | 99-1565 | DLY                 | 42.8500  | -106.2667 | 5203           | NCEI    | 1937-1943        |
| WY    | CASPER                   | 99-1566 | DLY                 | 42.8500  | -106.2667 | 5203           | NCEI    | 1913-1948        |
| ID    | FORT SHERMAN             | 99-1956 | DLY                 | 47.6822  | -116.7967 | 2133           | NCEI    | 1894-1898        |
| WY    | ELK MOUNTAIN             | 99-2995 | DLY                 | 41.6878  | -106.4136 | 7265           | NCEI    | 1905-1948        |
| WY    | FORT LARAMIE             | 99-3490 | DLY                 | 42.3833  | -104.5333 | 4764           | NCEI    | 1931-1951        |
| ID    | SHEEP HILL               | 99-4450 | DLY                 | 43.7167  | -116.0000 | 5003           | NCEI    | 1909-1948        |
| WY    | KIRTLEY                  | 99-5170 | DLY                 | 42.8333  | -104.1167 | 5072           | NCEI    | 1904-1948        |
| WY    | KNOWLES                  | 99-5226 | DLY                 | 44.7500  | -104.3667 | 4505           | NCEI    | 1909-1943        |
| WY    | LYMAN                    | 99-5836 | DLY                 | 41.3333  | -110.3000 | 6706           | NCEI    | 1922-1943        |
| WY    | MIDDLE FORK              | 99-6185 | DLY                 | 42.7526  | -108.8054 | 6283           | NCEI    | 1916-1948        |
| WY    | PINE BLUFFS              | 99-7235 | DLY                 | 41.1833  | -104.0667 | 5074           | NCEI    | 1900-1918        |
| MT    | SCOBIE                   | 99-7424 | DLY                 | 48.7833  | -105.4167 | 2458           | NCEI    | 1938-1948        |
| WY    | RAWLINS AP               | 99-7533 | DLY                 | 41.8064  | -107.1952 | 6769           | NCEI    | 1898-1940        |
| WY    | REDBIRD                  | 99-7555 | DLY                 | 43.2450  | -104.2881 | 3890           | NCEI    | 1941-1948        |
| WY    | SARATOGA                 | 99-7990 | DLY                 | 41.4528  | -106.8053 | 6790           | NCEI    | 1900-1948        |
| WY    | WHALEN DAM USBR          | 99-9604 | DLY                 | 42.2494  | -104.6281 | 4294           | NCEI    | 1991-2011        |
| WY    | YELLOWSTONE PARK MAMMOTH | 99-9905 | DLY                 | 44.9767  | -110.6964 | 6195           | NCEI    | 1887-1941        |

*Table A.1.4. Same as Table A.1.3, but for stations in Colorado (CO), Nebraska (NE), Nevada (NV), North Dakota (ND), Oregon (OR), South Dakota (SD), Utah (UT), Washington (WA), and the Canadian provinces of Alberta (AB), British Columbia (BC), and Saskatchewan (SK).*

| State | Station name       | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|--------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| CO    | ALLENSPARK 2SE     | 05-0183 | DLY                 | 40.1881  | -105.5019 | 8215           | NCEI    | 09/1944 - 12/1993 |
| CO    | ALLENSPARK 2SE     | 05-0183 | HLY                 | 40.1881  | -105.5019 | 8243           | NCEI    | 08/1948 - 12/2013 |
| CO    | ALLENSPARK 2SE     | 05-0183 | 15M                 | 40.1881  | -105.5019 | 8243           | NCEI    | 05/1973 - 12/2013 |
| CO    | BOULDER 2          | 05-0843 | HLY                 | 40.0339  | -105.2814 | 5427           | NCEI    | 08/1948 - 12/2013 |
| CO    | BOULDER 2          | 05-0843 | 15M                 | 40.0339  | -105.2814 | 5427           | NCEI    | 05/1971 - 12/2013 |
| CO    | BOULDER 2          | 05-0843 | DLY                 | 40.0339  | -105.2811 | 5415           | NCEI    | 06/1948 - 09/1951 |
| CO    | BRIGGSDALE         | 05-0945 | HLY                 | 40.6344  | -104.3286 | 4862           | NCEI    | 08/1948 - 10/1966 |
| CO    | BRIGGSDALE         | 05-0945 | DLY                 | 40.6344  | -104.3286 | 4862           | NCEI    | 06/1948 - 10/2023 |
| CO    | BROWNS PARK REFUGE | 05-1017 | DLY                 | 40.8008  | -108.9172 | 5354           | NCEI    | 02/1966 - 07/1997 |
| CO    | BUCKHORN MTN 1 E   | 05-1060 | DLY                 | 40.6158  | -105.2969 | 7400           | NCEI    | 06/1988 - 10/2023 |
| CO    | CRAIG              | 05-1928 | HLY                 | 40.5333  | -107.5500 | 6280           | NCEI    | 08/1948 - 09/1976 |
| CO    | CRAIG              | 05-1928 | DLY                 | 40.5333  | -107.5500 | 6280           | NCEI    | 01/1894 - 10/1976 |
| CO    | CRAIG ASOS         | 05-1931 | HLY                 | 40.4928  | -107.5242 | 6190           | NCEI    | 03/2012 - 12/2013 |
| CO    | CRAIG 4SW          | 05-1932 | DLY                 | 40.4517  | -107.5906 | 6496           | NCEI    | 03/1977 - 10/2023 |
| CO    | DINOSAUR NM        | 05-2286 | HLY                 | 40.2442  | -108.9725 | 5960           | NCEI    | 06/1965 - 12/2013 |
| CO    | DINOSAUR NM        | 05-2286 | 15M                 | 40.2442  | -108.9725 | 5960           | NCEI    | 01/1984 - 12/2013 |
| CO    | DINOSAUR NM        | 05-2286 | DLY                 | 40.2442  | -108.9725 | 5960           | NCEI    | 04/1965 - 08/2015 |
| CO    | DRAKE              | 05-2354 | HLY                 | 40.4333  | -105.3394 | 6170           | NCEI    | 02/1975 - 12/2013 |
| CO    | DRAKE              | 05-2354 | 15M                 | 40.4333  | -105.3394 | 6170           | NCEI    | 02/1975 - 12/2013 |
| CO    | ESTES PARK         | 05-2759 | DLY                 | 40.3767  | -105.4858 | 7480           | NCEI    | 12/1895 - 10/2023 |
| CO    | ESTES PARK         | 05-2759 | HLY                 | 40.3767  | -105.4858 | 7480           | NCEI    | 06/1978 - 05/1994 |
| CO    | ESTES PARK         | 05-2759 | 15M                 | 40.3767  | -105.4858 | 7480           | NCEI    | 06/1978 - 05/1994 |
| CO    | FT COLLINS         | 05-3005 | DLY                 | 40.5764  | -105.0858 | 5004           | NCEI    | 11/1892 - 10/2023 |
| CO    | FT COLLINS         | 05-3005 | HLY                 | 40.5764  | -105.0858 | 5004           | NCEI    | 08/1948 - 12/2013 |
| CO    | FT COLLINS         | 05-3005 | 15M                 | 40.5764  | -105.0858 | 5004           | NCEI    | 01/1984 - 12/2013 |
| CO    | FT COLLINS 4 E     | 05-3006 | DLY                 | 40.5756  | -105.0236 | 4920           | NCEI    | 08/1990 - 07/2021 |

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|-------|-----------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| CO    | FT COLLINS 9 NW       | 05-3007 | 15M                 | 40.6647  | -105.2233 | 5220           | NCEI    | 02/1975 - 12/2013 |
| CO    | FT COLLINS 9 NW       | 05-3007 | HLY                 | 40.6647  | -105.2233 | 5220           | NCEI    | 02/1975 - 12/2013 |
| CO    | FT LUPTON 2 SE        | 05-3027 | DLY                 | 40.0667  | -104.7833 | 5023           | NCEI    | 07/1910 - 03/1976 |
| CO    | FT MORGAN             | 05-3038 | DLY                 | 40.2569  | -103.8700 | 4376           | NCEI    | 10/1896 - 09/2023 |
| CO    | GRAND LAKE 1 NW       | 05-3496 | 15M                 | 40.2669  | -105.8322 | 8720           | NCEI    | 01/2002 - 12/2013 |
| CO    | GRAND LAKE 1 NW       | 05-3496 | HLY                 | 40.2669  | -105.8322 | 8720           | NCEI    | 01/2002 - 12/2013 |
| CO    | GRAND LAKE 1 NW       | 05-3496 | DLY                 | 40.2669  | -105.8322 | 8720           | NCEI    | 08/1907 - 10/2023 |
| CO    | GRAND LAKE 6 SSW      | 05-3500 | 15M                 | 40.1850  | -105.8667 | 8288           | NCEI    | 01/1984 - 12/2013 |
| CO    | GRAND LAKE 6 SSW      | 05-3500 | HLY                 | 40.1850  | -105.8667 | 8288           | NCEI    | 08/1948 - 12/2013 |
| CO    | GRAND LAKE 6 SSW      | 05-3500 | DLY                 | 40.1850  | -105.8667 | 8288           | NCEI    | 06/1948 - 10/2023 |
| CO    | GREELEY               | 05-3546 | DLY                 | 40.4167  | -104.6833 | 4652           | NCEI    | 11/1892 - 02/1967 |
| CO    | GREELEY               | 05-3546 | 15M                 | 40.4167  | -104.6833 | 4652           | NCEI    | 10/1979 - 12/1988 |
| CO    | GREELEY               | 05-3546 | HLY                 | 40.4167  | -104.6833 | 4652           | NCEI    | 08/1948 - 12/1988 |
| CO    | GREELEY UNC           | 05-3553 | DLY                 | 40.4022  | -104.6992 | 4715           | NCEI    | 12/1966 - 10/2023 |
| CO    | GREELEY UNC           | 05-3553 | 15M                 | 40.4022  | -104.6992 | 4715           | NCEI    | 07/1985 - 12/2013 |
| CO    | GREELEY UNC           | 05-3553 | HLY                 | 40.4022  | -104.6992 | 4715           | NCEI    | 07/1985 - 12/2013 |
| CO    | GROVER 10 W           | 05-3643 | DLY                 | 40.8500  | -104.4000 | 5090           | NCEI    | 12/1892 - 07/1970 |
| CO    | HAMILTON              | 05-3738 | DLY                 | 40.3722  | -107.6117 | 6230           | NCEI    | 05/1947 - 04/2007 |
| CO    | HAMILTON 1SSE         | 05-3742 | DLY                 | 40.3581  | -107.6081 | 6380           | NCEI    | 06/2007 - 12/2012 |
| CO    | HAYDEN                | 05-3867 | DLY                 | 40.4925  | -107.2547 | 6467           | NCEI    | 11/1908 - 10/2023 |
| CO    | HOHNHOLZ RCH          | 05-4054 | DLY                 | 40.9683  | -105.9986 | 7797           | NCEI    | 10/1985 - 07/2020 |
| CO    | HOT SULPHUR SPGS 2 SW | 05-4129 | HLY                 | 40.0500  | -106.1500 | 7605           | NCEI    | 06/1953 - 02/1984 |
| CO    | HOT SULPHUR SPGS 2 SW | 05-4129 | DLY                 | 40.0500  | -106.1500 | 7605           | NCEI    | 10/1941 - 06/1981 |
| CO    | HOT SULPHUR SPGS 2 SW | 05-4129 | 15M                 | 40.0500  | -106.1500 | 7605           | NCEI    | 06/1979 - 02/1984 |
| CO    | HOURLASS RSVR         | 05-4135 | DLY                 | 40.5831  | -105.6319 | 9520           | NCEI    | 07/1988 - 09/2021 |
| CO    | KAUFFMAN 4 SSE        | 05-4460 | DLY                 | 40.8500  | -103.9000 | 5250           | NCEI    | 07/1936 - 02/1987 |
| CO    | KREMMLING             | 05-4664 | DLY                 | 40.0575  | -106.3681 | 7460           | NCEI    | 11/1907 - 09/2023 |
| CO    | KREMMLING             | 05-4664 | HLY                 | 40.0575  | -106.3681 | 7460           | NCEI    | 08/1948 - 04/1953 |
| CO    | LONGMONT 2 ESE        | 05-5116 | DLY                 | 40.1694  | -105.0775 | 4950           | NCEI    | 11/1892 - 10/2023 |

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|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| CO    | LONGMONT 6 NW     | 05-5121 | DLY                 | 40.2467  | -105.1464 | 5150           | NCEI    | 06/1948 - 09/1951 |
| CO    | LONGMONT 6 NW     | 05-5121 | HLY                 | 40.2467  | -105.1464 | 5150           | NCEI    | 08/1948 - 12/2013 |
| CO    | LONGMONT 6 NW     | 05-5121 | 15M                 | 40.2467  | -105.1464 | 5150           | NCEI    | 05/1971 - 12/2013 |
| CO    | LOVELAND 2N       | 05-5236 | DLY                 | 40.4350  | -105.0850 | 5080           | NCEI    | 07/1989 - 10/2023 |
| CO    | MAYBELL           | 05-5446 | DLY                 | 40.5158  | -108.0947 | 5944           | NCEI    | 04/1958 - 08/2023 |
| CO    | MEEKER            | 05-5484 | 15M                 | 40.0358  | -107.9058 | 6229           | NCEI    | 01/1993 - 12/2013 |
| CO    | MEEKER            | 05-5484 | DLY                 | 40.0358  | -107.9058 | 6229           | NCEI    | 11/1892 - 08/2023 |
| CO    | MEEKER            | 05-5484 | HLY                 | 40.0358  | -107.9058 | 6229           | NCEI    | 08/1948 - 12/2013 |
| CO    | MEEKER ASOS       | 05-5485 | HLY                 | 40.0442  | -107.8886 | 6366           | NCEI    | 03/2012 - 12/2013 |
| CO    | MEEKER #2         | 05-5487 | 15M                 | 40.0333  | -107.9167 | 6347           | NCEI    | 01/1984 - 09/1992 |
| CO    | MEEKER #2         | 05-5487 | HLY                 | 40.0333  | -107.9167 | 6347           | NCEI    | 10/1970 - 09/1992 |
| CO    | MEEKER #2         | 05-5487 | DLY                 | 40.0333  | -107.9167 | 6347           | NCEI    | 08/1970 - 08/1992 |
| CO    | NEDERLAND 5 NNW   | 05-5881 | HLY                 | 40.0361  | -105.5461 | 10010          | NCEI    | 10/1996 - 12/2013 |
| CO    | NEDERLAND 5 NNW   | 05-5881 | 15M                 | 40.0361  | -105.5461 | 10010          | NCEI    | 10/1996 - 12/2013 |
| CO    | NEW RAYMER        | 05-5922 | DLY                 | 40.6089  | -103.8461 | 4783           | NCEI    | 06/1948 - 11/2004 |
| CO    | NEW RAYMER        | 05-5922 | HLY                 | 40.6089  | -103.8461 | 4783           | NCEI    | 08/1948 - 12/2005 |
| CO    | NEW RAYMER        | 05-5922 | 15M                 | 40.6089  | -103.8461 | 4783           | NCEI    | 05/1971 - 12/2005 |
| CO    | NEW RAYMER 21 N   | 05-5934 | DLY                 | 40.9319  | -103.8678 | 5180           | NCEI    | 04/1987 - 10/2023 |
| CO    | NEW RAYMER 21 N   | 05-5934 | HLY                 | 40.9319  | -103.8678 | 5180           | NCEI    | 02/2005 - 12/2013 |
| CO    | NEW RAYMER 21 N   | 05-5934 | 15M                 | 40.9319  | -103.8678 | 5180           | NCEI    | 02/2005 - 12/2013 |
| CO    | NORTHGATE         | 05-5982 | 15M                 | 40.9367  | -106.3392 | 7830           | NCEI    | 03/1979 - 12/2013 |
| CO    | NORTHGATE         | 05-5982 | HLY                 | 40.9367  | -106.3392 | 7830           | NCEI    | 03/1979 - 12/2013 |
| CO    | NUNN              | 05-6023 | 15M                 | 40.7064  | -104.7833 | 5196           | NCEI    | 04/1973 - 12/2013 |
| CO    | NUNN              | 05-6023 | DLY                 | 40.7064  | -104.7833 | 5196           | NCEI    | 06/1948 - 01/1997 |
| CO    | NUNN              | 05-6023 | HLY                 | 40.7064  | -104.7833 | 5196           | NCEI    | 08/1948 - 12/2013 |
| CO    | OAK CREEK 7WSW    | 05-6040 | DLY                 | 40.2406  | -107.0969 | 8205           | NCEI    | 10/2005 - 07/2011 |
| CO    | PYRAMID           | 05-6797 | DLY                 | 40.2411  | -107.0864 | 8009           | NCEI    | 09/1910 - 06/2005 |
| CO    | RANGELY 1E        | 05-6832 | DLY                 | 40.0889  | -108.7728 | 5277           | NCEI    | 05/1894 - 10/2023 |
| CO    | RED FEATHER LAKES | 05-6921 | DLY                 | 40.7978  | -105.5856 | 8300           | NCEI    | 06/1991 - 04/1997 |

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| CO    | RED FEATHER LAKES 2 SE | 05-6925 | DLY                 | 40.7833  | -105.5500 | 8165           | NCEI    | 07/1941 - 06/1990 |
| CO    | RUSTIC 9WSW            | 05-7296 | 15M                 | 40.7008  | -105.7119 | 7697           | NCEI    | 10/1991 - 12/2013 |
| CO    | RUSTIC 9WSW            | 05-7296 | DLY                 | 40.7022  | -105.7106 | 7700           | NCEI    | 01/1993 - 10/2023 |
| CO    | RUSTIC 9WSW            | 05-7296 | HLY                 | 40.7008  | -105.7119 | 7697           | NCEI    | 10/1991 - 12/2013 |
| CO    | SILVER LAKE            | 05-7648 | HLY                 | 40.0328  | -105.5758 | 10360          | NCEI    | 01/1977 - 08/1996 |
| CO    | SILVER LAKE            | 05-7648 | 15M                 | 40.0328  | -105.5758 | 10360          | NCEI    | 01/1977 - 08/1996 |
| CO    | SILVER LAKE            | 05-7648 | DLY                 | 40.0328  | -105.5758 | 10360          | NCEI    | 04/1910 - 11/1955 |
| CO    | SPICER                 | 05-7848 | DLY                 | 40.4725  | -106.4475 | 8385           | NCEI    | 09/1909 - 01/2003 |
| CO    | STEAMBOAT SPRINGS      | 05-7936 | DLY                 | 40.4883  | -106.8233 | 6866           | NCEI    | 12/1892 - 10/2023 |
| CO    | STERLING               | 05-7950 | DLY                 | 40.6278  | -103.2083 | 3974           | NCEI    | 01/1895 - 07/2010 |
| CO    | WALDEN                 | 05-8756 | DLY                 | 40.7442  | -106.2792 | 8056           | NCEI    | 11/1896 - 10/2023 |
| CO    | WATERDALE              | 05-8839 | DLY                 | 40.4256  | -105.2103 | 5230           | NCEI    | 11/1901 - 10/2023 |
| CO    | WILLIAMS FORK DAM      | 05-9096 | DLY                 | 40.0375  | -106.2039 | 7618           | NCEI    | 04/1982 - 10/2023 |
| CO    | WILLIAMS FORK DAM      | 05-9096 | 15M                 | 40.0375  | -106.2039 | 7618           | NCEI    | 06/1982 - 12/2013 |
| CO    | WILLIAMS FORK DAM      | 05-9096 | HLY                 | 40.0375  | -106.2039 | 7618           | NCEI    | 06/1982 - 12/2013 |
| CO    | WINDSOR                | 05-9147 | DLY                 | 40.4667  | -104.9000 | 4781           | NCEI    | 05/1941 - 03/1990 |
| CO    | YAMPA                  | 05-9265 | DLY                 | 40.1564  | -106.9108 | 7857           | NCEI    | 12/1908 - 06/2023 |
| NE    | AGATE 3 E              | 25-0030 | DLY                 | 42.4244  | -103.7347 | 4670           | NCEI    | 02/1900 - 10/2023 |
| NE    | BRIDGEPORT             | 25-1145 | HLY                 | 41.6681  | -103.1039 | 3666           | NCEI    | 08/1948 - 12/2013 |
| NE    | BRIDGEPORT             | 25-1145 | DLY                 | 41.6681  | -103.1039 | 3666           | NCEI    | 03/1897 - 07/2022 |
| NE    | BRIDGEPORT             | 25-1145 | 15M                 | 41.6681  | -103.1039 | 3666           | NCEI    | 05/1971 - 12/2013 |
| NE    | CHADRON 3SW            | 25-1575 | DLY                 | 42.8083  | -103.0533 | 3383           | NCEI    | 06/1894 - 10/2023 |
| NE    | CHADRON 3SW            | 25-1575 | HLY                 | 42.8083  | -103.0533 | 3383           | NCEI    | 08/1948 - 12/2013 |
| NE    | CHADRON 3SW            | 25-1575 | 15M                 | 42.8083  | -103.0533 | 3383           | NCEI    | 01/1984 - 12/2013 |
| NE    | CRAWFORD               | 25-1973 | DLY                 | 42.7000  | -103.4167 | 3670           | NCEI    | 09/1984 - 05/2000 |
| NE    | FT ROBINSON            | 25-3015 | DLY                 | 42.6656  | -103.4617 | 3812           | NCEI    | 11/1901 - 07/2018 |
| NE    | HARRISBURG 12WNW       | 25-3605 | DLY                 | 41.6331  | -103.9542 | 4550           | NCEI    | 05/1911 - 10/2023 |
| NE    | HARRISON               | 25-3615 | DLY                 | 42.6858  | -103.8842 | 4850           | NCEI    | 12/1892 - 09/2023 |
| NE    | HARRISON               | 25-3615 | HLY                 | 42.6858  | -103.8842 | 4850           | NCEI    | 08/1948 - 03/1951 |

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| NE    | HARRISON 9W               | 25-3620 | DLY                 | 42.6544  | -104.0467 | 4710           | NCEI    | 09/1948 - 09/1951 |
| NE    | HARRISON 9W               | 25-3620 | 15M                 | 42.6544  | -104.0467 | 4710           | NCEI    | 11/1982 - 05/2010 |
| NE    | HARRISON 9W               | 25-3620 | HLY                 | 42.6544  | -104.0467 | 4710           | NCEI    | 11/1948 - 05/2010 |
| NE    | HEMINGFORD                | 25-3755 | DLY                 | 42.3208  | -103.0733 | 4270           | NCEI    | 11/1963 - 08/2023 |
| NE    | KIMBALL 2NE               | 25-4440 | DLY                 | 41.2453  | -103.6344 | 4708           | NCEI    | 11/1892 - 09/2017 |
| NE    | LYMAN                     | 25-5020 | DLY                 | 41.9169  | -104.0358 | 4050           | NCEI    | 10/1924 - 09/2006 |
| NE    | MINATARE DAM (USBR)       | 25-5555 | DLY                 | 41.9178  | -103.4842 | 4144           | NCEI    | 11/1924 - 10/2023 |
| NE    | MITCHELL 5E               | 25-5590 | DLY                 | 41.9481  | -103.7008 | 4080           | NCEI    | 04/1909 - 10/2017 |
| NE    | POTTER                    | 25-6880 | DLY                 | 41.2183  | -103.3206 | 4430           | NCEI    | 05/1895 - 05/2004 |
| NE    | SCOTTSBLUFF AP            | 25-7665 | HLY                 | 41.8706  | -103.5931 | 3945           | NCEI    | 09/1948 - 12/2013 |
| NV    | CONTACT                   | 26-1905 | 15M                 | 41.7706  | -114.7528 | 5350           | NCEI    | 04/1972 - 04/2001 |
| NV    | CONTACT                   | 26-1905 | DLY                 | 41.7706  | -114.7528 | 5350           | NCEI    | 05/1948 - 10/1999 |
| NV    | CONTACT                   | 26-1905 | HLY                 | 41.7706  | -114.7528 | 5350           | NCEI    | 07/1948 - 04/2001 |
| NV    | DEETH                     | 26-2189 | DLY                 | 41.0661  | -115.2711 | 5340           | NCEI    | 10/1951 - 05/2006 |
| NV    | GIBBS RCH - JARBIDGE 24SE | 26-3114 | DLY                 | 41.5697  | -115.2111 | 5960           | NCEI    | 09/1952 - 10/2023 |
| NV    | JACKPOT                   | 26-4016 | DLY                 | 41.9828  | -114.6586 | 5233           | NCEI    | 01/1986 - 10/2023 |
| NV    | MCDERMITT                 | 26-4935 | 15M                 | 41.9953  | -117.7200 | 4430           | NCEI    | 02/1972 - 09/2011 |
| NV    | MCDERMITT                 | 26-4935 | HLY                 | 41.9953  | -117.7200 | 4430           | NCEI    | 03/1950 - 08/2011 |
| NV    | MCDERMITT                 | 26-4935 | DLY                 | 41.9953  | -117.7200 | 4430           | NCEI    | 11/1891 - 10/2023 |
| NV    | METROPOLIS                | 26-5092 | 15M                 | 41.2833  | -115.0167 | 5800           | NCEI    | 07/1971 - 01/1996 |
| NV    | METROPOLIS                | 26-5092 | HLY                 | 41.2833  | -115.0167 | 5800           | NCEI    | 03/1968 - 01/1996 |
| NV    | METROPOLIS                | 26-5092 | DLY                 | 41.2833  | -115.0167 | 5800           | NCEI    | 06/1965 - 09/1995 |
| NV    | MONTELLO 2NE              | 26-5352 | DLY                 | 41.2781  | -114.1706 | 4830           | NCEI    | 02/1895 - 05/2017 |
| NV    | MTN CITY RS               | 26-5392 | DLY                 | 41.8375  | -115.9653 | 5650           | NCEI    | 12/1954 - 11/1999 |
| NV    | NORTH FORK MNTC STN       | 26-5691 | HLY                 | 41.4833  | -115.8167 | 6204           | NCEI    | 07/1948 - 10/1955 |
| NV    | NORTH FORK MNTC STN       | 26-5691 | DLY                 | 41.4833  | -115.8167 | 6204           | NCEI    | 09/1909 - 10/1970 |
| NV    | OROVADA 3 W               | 26-5818 | DLY                 | 41.5683  | -117.8389 | 4200           | NCEI    | 06/1911 - 10/2023 |
| NV    | OWYHEE                    | 26-5869 | 15M                 | 41.9500  | -116.1000 | 5397           | NCEI    | 12/1979 - 06/1985 |
| NV    | OWYHEE                    | 26-5869 | HLY                 | 41.9500  | -116.1000 | 5397           | NCEI    | 07/1948 - 06/1985 |



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| NV    | OWYHEE               | 26-5869 | DLY                 | 41.9500  | -116.1000 | 5397           | NCEI    | 05/1948 - 07/2017 |
| NV    | PARADISE VALLEY 1 NW | 26-6005 | HLY                 | 41.5022  | -117.5478 | 4560           | NCEI    | 07/1951 - 01/1964 |
| NV    | PARADISE VALLEY 1 NW | 26-6005 | DLY                 | 41.5022  | -117.5478 | 4560           | NCEI    | 12/1893 - 04/2010 |
| NV    | PEQUOP               | 26-6148 | HLY                 | 41.0667  | -114.5333 | 6033           | NCEI    | 07/1948 - 03/1989 |
| NV    | PEQUOP               | 26-6148 | 15M                 | 41.0667  | -114.5333 | 6033           | NCEI    | 05/1971 - 03/1989 |
| NV    | PEQUOP               | 26-6148 | DLY                 | 41.0667  | -114.5333 | 6033           | NCEI    | 05/1948 - 07/1985 |
| NV    | SAN JACINTO          | 26-7284 | DLY                 | 41.8833  | -114.6833 | 5203           | NCEI    | 07/1904 - 12/1947 |
| NV    | TUSCARORA            | 26-8346 | DLY                 | 41.3144  | -116.2225 | 6170           | NCEI    | 03/1957 - 05/2017 |
| NV    | WELLS                | 26-8988 | DLY                 | 41.1006  | -114.9736 | 5700           | NCEI    | 02/1895 - 10/2023 |
| NV    | WELLS                | 26-8988 | 15M                 | 41.1006  | -114.9736 | 5700           | NCEI    | 05/1971 - 03/2005 |
| NV    | WELLS                | 26-8988 | HLY                 | 41.1006  | -114.9736 | 5700           | NCEI    | 07/1948 - 03/2005 |
| NV    | WILD HORSE RSVR      | 26-9072 | DLY                 | 41.6358  | -115.8008 | 6239           | NCEI    | 09/1982 - 09/2023 |
| NV    | WILD HORSE RSVR      | 26-9072 | HLY                 | 41.6358  | -115.8008 | 6239           | NCEI    | 12/1985 - 07/2012 |
| NV    | WILD HORSE RSVR      | 26-9072 | 15M                 | 41.6358  | -115.8008 | 6239           | NCEI    | 12/1985 - 07/2012 |
| ND    | ALEXANDER 4 NNW      | 32-0096 | DLY                 | 47.9022  | -103.6608 | 2140           | NCEI    | 04/1916 - 11/2013 |
| ND    | AMBROSE 3 N          | 32-0189 | DLY                 | 48.9975  | -103.4878 | 2027           | NCEI    | 03/1950 - 10/2023 |
| ND    | AMBROSE 3 N          | 32-0189 | HLY                 | 48.9975  | -103.4878 | 2027           | NCEI    | 11/1977 - 12/2013 |
| ND    | AMBROSE 3 N          | 32-0189 | 15M                 | 48.9975  | -103.4878 | 2027           | NCEI    | 11/1977 - 12/2013 |
| ND    | AMIDON               | 32-0209 | DLY                 | 46.4819  | -103.3222 | 2910           | NCEI    | 10/1920 - 03/2012 |
| ND    | AMIDON               | 32-0209 | HLY                 | 46.4819  | -103.3222 | 2910           | NCEI    | 08/1949 - 06/1958 |
| ND    | BEACH                | 32-0590 | DLY                 | 46.9283  | -104.0158 | 2800           | NCEI    | 06/1906 - 06/2011 |
| ND    | BEACH                | 32-0590 | HLY                 | 46.9283  | -104.0158 | 2800           | NCEI    | 12/1949 - 11/1957 |
| ND    | BOWMAN               | 32-0995 | 15M                 | 46.1936  | -103.3714 | 2983           | NCEI    | 05/1971 - 12/2013 |
| ND    | BOWMAN               | 32-0995 | HLY                 | 46.1936  | -103.3714 | 2983           | NCEI    | 08/1948 - 12/2013 |
| ND    | BOWMAN               | 32-0995 | DLY                 | 46.1936  | -103.3714 | 2983           | NCEI    | 11/1914 - 10/2023 |
| ND    | CROSBY               | 32-1871 | HLY                 | 48.9144  | -103.2978 | 1959           | NCEI    | 06/1950 - 06/1958 |
| ND    | CROSBY               | 32-1871 | DLY                 | 48.9144  | -103.2978 | 1959           | NCEI    | 02/1907 - 07/2023 |
| ND    | EPPING               | 32-2735 | DLY                 | 48.2833  | -103.3667 | 2220           | NCEI    | 02/1908 - 11/1996 |
| ND    | FAIRFIELD            | 32-2809 | DLY                 | 47.1906  | -103.2247 | 2750           | NCEI    | 06/1928 - 02/2014 |

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|-------|-----------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| ND    | FORTUNA 1 W           | 32-3196 | DLY                 | 48.9081  | -103.8056 | 2350           | NCEI    | 08/1963 - 08/2023 |
| ND    | FRYBURG 1 SSE         | 32-3277 | HLY                 | 46.8667  | -103.3000 | 2733           | NCEI    | 08/1950 - 06/1958 |
| ND    | FRYBURG 1 SSE         | 32-3277 | DLY                 | 46.8667  | -103.3000 | 2733           | NCEI    | 01/1918 - 12/1952 |
| ND    | GRASSY BUTTE          | 32-3696 | DLY                 | 47.4000  | -103.2333 | 2661           | NCEI    | 04/1950 - 12/1952 |
| ND    | GRASSY BUTTE          | 32-3696 | HLY                 | 47.4000  | -103.2333 | 2661           | NCEI    | 06/1950 - 11/1961 |
| ND    | GRASSY BUTTE 2ENE     | 32-3705 | DLY                 | 47.4011  | -103.2072 | 2670           | NCEI    | 06/1987 - 08/2023 |
| ND    | GRENORA               | 32-3736 | DLY                 | 48.6167  | -103.9333 | 2129           | NCEI    | 08/1906 - 06/1990 |
| ND    | MARMARTH              | 32-5573 | DLY                 | 46.3000  | -103.9167 | 2713           | NCEI    | 11/1908 - 03/1957 |
| ND    | MARMARTH              | 32-5575 | HLY                 | 46.2958  | -103.9200 | 2709           | NCEI    | 07/1950 - 06/1981 |
| ND    | MARMARTH              | 32-5575 | DLY                 | 46.2958  | -103.9200 | 2709           | NCEI    | 05/1950 - 07/2016 |
| ND    | MARMARTH              | 32-5575 | 15M                 | 46.2958  | -103.9200 | 2709           | NCEI    | 04/1971 - 06/1981 |
| ND    | MEDORA                | 32-5803 | DLY                 | 46.9169  | -103.5250 | 2270           | NCEI    | 11/1892 - 12/1952 |
| ND    | MEDORA                | 32-5803 | HLY                 | 46.9167  | -103.5167 | 2270           | NCEI    | 07/1951 - 09/1955 |
| ND    | MEDORA                | 32-5813 | DLY                 | 46.9161  | -103.5264 | 2268           | NCEI    | 05/1948 - 10/2023 |
| ND    | MEDORA                | 32-5813 | HLY                 | 46.9161  | -103.5264 | 2268           | NCEI    | 10/1955 - 11/1957 |
| ND    | TROTTERS 6 SE         | 32-8807 | DLY                 | 47.3000  | -103.8667 | 2431           | NCEI    | 11/1925 - 10/1958 |
| ND    | TROTTERS 3 SSE        | 32-8812 | 15M                 | 47.2842  | -103.9006 | 2420           | NCEI    | 10/1976 - 09/2011 |
| ND    | TROTTERS 3 SSE        | 32-8812 | HLY                 | 47.2842  | -103.9006 | 2420           | NCEI    | 01/1950 - 08/2011 |
| ND    | TROTTERS 3 SSE        | 32-8812 | DLY                 | 47.2842  | -103.9006 | 2420           | NCEI    | 10/1949 - 08/2011 |
| ND    | WATFORD CITY          | 32-9233 | DLY                 | 47.8039  | -103.2892 | 2170           | NCEI    | 11/1911 - 12/2022 |
| ND    | WATFORD CITY 14S      | 32-9246 | DLY                 | 47.6000  | -103.2597 | 2027           | NCEI    | 04/1951 - 09/2021 |
| ND    | WILDROSE 3NW          | 32-9400 | DLY                 | 48.6631  | -103.2131 | 2227           | NCEI    | 06/1928 - 06/2012 |
| ND    | WILLISTON 5SW         | 32-9420 | DLY                 | 48.1081  | -103.7142 | 1830           | NCEI    | 09/1908 - 07/1948 |
| ND    | WILLISTON             | 32-9421 | DLY                 | 48.1500  | -103.6300 | 1872           | NCEI    | 01/2014 - 10/2023 |
| ND    | WILLISTON SLOULIN FLD | 32-9425 | HLY                 | 48.1739  | -103.6367 | 1902           | NCEI    | 08/1948 - 12/2013 |
| ND    | WILLISTON EXP FARM    | 32-9430 | DLY                 | 48.1375  | -103.7372 | 2105           | NCEI    | 05/1956 - 10/2023 |
| OR    | ADRIAN                | 35-0041 | DLY                 | 43.7333  | -117.0667 | 2231           | NCEI    | 05/1909 - 10/1972 |
| OR    | BAKER #2              | 35-0409 | 15M                 | 44.7703  | -117.8250 | 3467           | NCEI    | 09/1979 - 10/2011 |
| OR    | BAKER #2              | 35-0409 | HLY                 | 44.7703  | -117.8250 | 3467           | NCEI    | 10/1955 - 09/2011 |

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| OR    | BAKER CITY AP          | 35-0412 | HLY                 | 44.8428  | -117.8086 | 3361           | NCEI    | 05/1949 - 12/2013 |
| OR    | BAKER KBKR             | 35-0417 | HLY                 | 44.7667  | -117.8333 | 3445           | NCEI    | 07/1948 - 10/1955 |
| OR    | CORNUCOPIA             | 35-1852 | DLY                 | 45.0000  | -117.2000 | 4705           | NCEI    | 05/1909 - 10/1972 |
| OR    | COVE                   | 35-1924 | DLY                 | 45.3000  | -117.8000 | 2920           | NCEI    | 08/1973 - 07/1988 |
| OR    | COVE 1 E               | 35-1926 | DLY                 | 45.3064  | -117.7967 | 3062           | NCEI    | 12/1916 - 05/2023 |
| OR    | DANNER                 | 35-2135 | DLY                 | 42.9447  | -117.3389 | 4225           | NCEI    | 04/1929 - 01/2011 |
| OR    | ENTERPRISE RS          | 35-2672 | DLY                 | 45.4256  | -117.2972 | 3815           | NCEI    | 10/1931 - 10/1981 |
| OR    | ENTERPRISE RS          | 35-2672 | HLY                 | 45.4256  | -117.2972 | 3815           | NCEI    | 12/1990 - 12/2013 |
| OR    | ENTERPRISE RS          | 35-2672 | 15M                 | 45.4256  | -117.2972 | 3815           | NCEI    | 12/1990 - 12/2013 |
| OR    | ENTERPRISE 2 S         | 35-2675 | DLY                 | 45.4000  | -117.2667 | 3880           | NCEI    | 12/1981 - 09/1995 |
| OR    | ENTERPRISE 20 NNE      | 35-2678 | DLY                 | 45.7083  | -117.1528 | 3280           | NCEI    | 12/1968 - 04/2010 |
| OR    | HALFWAY                | 35-3604 | DLY                 | 44.8772  | -117.1094 | 2653           | NCEI    | 03/1936 - 10/2023 |
| OR    | HALFWAY                | 35-3604 | HLY                 | 44.8772  | -117.1094 | 2653           | NCEI    | 10/1974 - 12/2013 |
| OR    | HALFWAY                | 35-3604 | 15M                 | 44.8772  | -117.1094 | 2653           | NCEI    | 10/1974 - 12/2013 |
| OR    | HARPER                 | 35-3666 | DLY                 | 43.8667  | -117.6167 | 2513           | NCEI    | 08/1919 - 07/1975 |
| OR    | HUNTINGTON             | 35-4098 | DLY                 | 44.3564  | -117.2550 | 2110           | NCEI    | 12/1900 - 07/2016 |
| OR    | IMNAHA                 | 35-4147 | DLY                 | 45.5622  | -116.8331 | 1968           | NCEI    | 12/1949 - 09/1951 |
| OR    | IMNAHA                 | 35-4147 | HLY                 | 45.5622  | -116.8331 | 1968           | NCEI    | 07/1948 - 12/2013 |
| OR    | IMNAHA                 | 35-4147 | 15M                 | 45.5622  | -116.8331 | 1968           | NCEI    | 11/1974 - 12/2013 |
| OR    | IRONSIDE 2 W           | 35-4175 | DLY                 | 44.3247  | -117.9964 | 3915           | NCEI    | 09/1955 - 07/2004 |
| OR    | JORDAN VALLEY          | 35-4321 | HLY                 | 42.9792  | -117.0533 | 4390           | NCEI    | 10/1948 - 12/2013 |
| OR    | JORDAN VALLEY          | 35-4321 | DLY                 | 42.9792  | -117.0533 | 4390           | NCEI    | 04/1913 - 09/1951 |
| OR    | JORDAN VALLEY          | 35-4321 | 15M                 | 42.9792  | -117.0533 | 4390           | NCEI    | 01/1984 - 12/2013 |
| OR    | JOSEPH                 | 35-4329 | DLY                 | 45.3497  | -117.2242 | 4184           | NCEI    | 11/1892 - 10/2023 |
| OR    | JOSEPH                 | 35-4329 | HLY                 | 45.3497  | -117.2242 | 4184           | NCEI    | 10/1974 - 11/1990 |
| OR    | JOSEPH                 | 35-4329 | 15M                 | 45.3497  | -117.2242 | 4184           | NCEI    | 10/1974 - 11/1990 |
| OR    | MALHEUR BRANCH EXP STN | 35-5160 | DLY                 | 43.9794  | -117.0247 | 2260           | NCEI    | 05/1942 - 12/2022 |
| OR    | MASON DAM              | 35-5258 | DLY                 | 44.6719  | -117.9942 | 3900           | NCEI    | 12/1968 - 12/2000 |
| OR    | MC DERMITT 26 N        | 35-5335 | DLY                 | 42.4106  | -117.8656 | 4464           | NCEI    | 09/1955 - 06/2019 |

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| OR    | NYSSA          | 35-6179 | DLY                 | 43.8764  | -116.9903 | 2175           | NCEI    | 09/1937 - 12/2020 |
| OR    | ONTARIO KSRV   | 35-6294 | 15M                 | 44.0439  | -116.9717 | 2145           | NCEI    | 01/1984 - 02/2012 |
| OR    | ONTARIO KSRV   | 35-6294 | HLY                 | 44.0439  | -116.9717 | 2145           | NCEI    | 10/1948 - 02/2012 |
| OR    | ONTARIO KSRV   | 35-6294 | DLY                 | 44.0439  | -116.9717 | 2145           | NCEI    | 10/1903 - 02/2011 |
| OR    | OWYHEE DAM     | 35-6405 | DLY                 | 43.6500  | -117.2467 | 2400           | NCEI    | 12/1934 - 10/2023 |
| OR    | OWYHEE DAM     | 35-6405 | HLY                 | 43.6500  | -117.2467 | 2400           | NCEI    | 02/1961 - 09/1986 |
| OR    | OWYHEE DAM     | 35-6405 | 15M                 | 43.6500  | -117.2467 | 2400           | NCEI    | 01/1984 - 09/1986 |
| OR    | PINE           | 35-6652 | DLY                 | 44.8583  | -117.0926 | 2600           | NCEI    | 09/1901 - 08/1905 |
| OR    | RICHLAND       | 35-7160 | HLY                 | 44.7656  | -117.1597 | 2215           | NCEI    | 10/1948 - 05/1982 |
| OR    | RICHLAND       | 35-7160 | DLY                 | 44.7656  | -117.1597 | 2215           | NCEI    | 12/1892 - 05/2015 |
| OR    | ROCK CREEK     | 35-7250 | DLY                 | 44.9094  | -118.0625 | 4012           | NCEI    | 02/1920 - 05/2010 |
| OR    | ROCKVILLE 5 N  | 35-7277 | DLY                 | 43.3636  | -117.1142 | 3670           | NCEI    | 09/1963 - 12/2012 |
| OR    | ROME 2 NW      | 35-7310 | DLY                 | 42.8592  | -117.6569 | 3405           | NCEI    | 10/1950 - 09/2023 |
| OR    | SHEAVILLE 1 SE | 35-7736 | DLY                 | 43.1211  | -117.0392 | 4620           | NCEI    | 07/1931 - 02/2021 |
| OR    | UNION          | 35-8746 | 15M                 | 45.1986  | -117.8647 | 2777           | NCEI    | 05/1971 - 09/1998 |
| OR    | UNION          | 35-8746 | DLY                 | 45.1986  | -117.8647 | 2777           | NCEI    | 08/1911 - 10/2023 |
| OR    | UNION          | 35-8746 | HLY                 | 45.1986  | -117.8647 | 2777           | NCEI    | 07/1948 - 07/2010 |
| OR    | UNITY          | 35-8780 | DLY                 | 44.4367  | -118.1886 | 4031           | NCEI    | 03/1908 - 11/2007 |
| OR    | VALE           | 35-8797 | DLY                 | 43.9814  | -117.2439 | 2240           | NCEI    | 11/1892 - 07/2013 |
| OR    | WALLOWA        | 35-8997 | DLY                 | 45.5722  | -117.5314 | 2923           | NCEI    | 12/1902 - 08/2023 |
| OR    | WESTFALL       | 35-9176 | DLY                 | 43.9903  | -117.7183 | 3040           | NCEI    | 08/1962 - 10/2010 |
| OR    | WESTFALL       | 35-9176 | HLY                 | 43.9903  | -117.7183 | 3040           | NCEI    | 02/1961 - 09/1986 |
| OR    | WESTFALL       | 35-9176 | 15M                 | 43.9903  | -117.7183 | 3040           | NCEI    | 01/1984 - 09/1986 |
| SD    | ANGOSTURA DAM  | 39-0217 | DLY                 | 43.3500  | -103.4333 | 3143           | NCEI    | 01/1948 - 05/1971 |
| SD    | ANGOSTURA DAM  | 39-0217 | HLY                 | 43.3500  | -103.4333 | 3143           | NCEI    | 07/1949 - 05/1971 |
| SD    | ANTELOPE RS    | 39-0223 | DLY                 | 45.5317  | -103.3292 | 2820           | NCEI    | 12/1950 - 01/2008 |
| SD    | ARDMORE 1 NW   | 39-0236 | HLY                 | 43.0300  | -103.6600 | 3540           | NCEI    | 07/1949 - 06/1958 |
| SD    | ARDMORE 1 NW   | 39-0236 | DLY                 | 43.0300  | -103.6600 | 3540           | NCEI    | 09/1908 - 09/2013 |
| SD    | BELLE FOURCHE  | 39-0559 | HLY                 | 44.6714  | -103.8511 | 3020           | NCEI    | 08/1949 - 06/1958 |

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| SD    | BELLE FOURCHE        | 39-0559 | DLY                 | 44.6714  | -103.8511 | 3020           | NCEI    | 04/1908 - 05/2022 |
| SD    | BELLE FOURCHE 22 NNW | 39-0565 | DLY                 | 44.9906  | -103.9339 | 3200           | NCEI    | 03/1980 - 09/2023 |
| SD    | BUFFALO              | 39-1114 | HLY                 | 45.5958  | -103.5453 | 2925           | NCEI    | 08/1948 - 12/2006 |
| SD    | BUFFALO              | 39-1114 | DLY                 | 45.5958  | -103.5453 | 2925           | NCEI    | 06/1948 - 09/1951 |
| SD    | BUFFALO              | 39-1114 | 15M                 | 45.5958  | -103.5453 | 2925           | NCEI    | 12/1977 - 12/2006 |
| SD    | BUFFALO GAP          | 39-1124 | DLY                 | 43.4917  | -103.3131 | 3188           | NCEI    | 07/1951 - 02/2006 |
| SD    | BUSKALA RCH          | 39-1246 | DLY                 | 44.2167  | -103.8167 | 6110           | NCEI    | 06/1909 - 11/1997 |
| SD    | CAMP CROOK           | 39-1294 | 15M                 | 45.5489  | -103.9744 | 3120           | NCEI    | 01/1984 - 12/2013 |
| SD    | CAMP CROOK           | 39-1294 | HLY                 | 45.5489  | -103.9744 | 3120           | NCEI    | 06/1975 - 12/2013 |
| SD    | CAMP CROOK           | 39-1294 | DLY                 | 45.5489  | -103.9744 | 3120           | NCEI    | 11/1892 - 10/2023 |
| SD    | CASTLE ROCK 4 NW     | 39-1504 | HLY                 | 45.0100  | -103.4828 | 3150           | NCEI    | 08/1949 - 06/1975 |
| SD    | CASTLE ROCK 4 NW     | 39-1504 | DLY                 | 45.0100  | -103.4828 | 3150           | NCEI    | 06/1949 - 12/1952 |
| SD    | CUSTER               | 39-2087 | DLY                 | 43.7744  | -103.6119 | 5480           | NCEI    | 04/1911 - 09/2023 |
| SD    | DEADWOOD             | 39-2207 | DLY                 | 44.3736  | -103.7314 | 4670           | NCEI    | 12/1908 - 04/2006 |
| SD    | DEADWOOD 2NE         | 39-2209 | DLY                 | 44.3900  | -103.7006 | 4612           | NCEI    | 01/2000 - 06/2014 |
| SD    | DEERFIELD 3 SE       | 39-2231 | DLY                 | 43.9944  | -103.7858 | 6060           | NCEI    | 05/1981 - 12/2002 |
| SD    | DEERFIELD DAM        | 39-2234 | DLY                 | 44.0167  | -103.7833 | 5873           | NCEI    | 06/1909 - 11/1955 |
| SD    | DUMONT 2 ENE         | 39-2409 | DLY                 | 44.2500  | -103.7667 | 6145           | NCEI    | 03/1909 - 09/1969 |
| SD    | EDGEMONT             | 39-2557 | DLY                 | 43.3136  | -103.8214 | 3432           | NCEI    | 06/1948 - 10/2023 |
| SD    | EDGEMONT             | 39-2557 | 15M                 | 43.3136  | -103.8214 | 3432           | NCEI    | 09/1973 - 12/2013 |
| SD    | EDGEMONT             | 39-2557 | HLY                 | 43.3136  | -103.8214 | 3432           | NCEI    | 08/1948 - 12/2013 |
| SD    | EDGEMONT 23 NNW      | 39-2565 | 15M                 | 43.6242  | -103.9172 | 4402           | NCEI    | 11/1977 - 12/2013 |
| SD    | EDGEMONT 23 NNW      | 39-2565 | DLY                 | 43.6242  | -103.9172 | 4402           | NCEI    | 08/1989 - 09/2023 |
| SD    | EDGEMONT 23 NNW      | 39-2565 | HLY                 | 43.6242  | -103.9172 | 4402           | NCEI    | 11/1967 - 12/2013 |
| SD    | FT MEADE             | 39-3069 | DLY                 | 44.4106  | -103.4769 | 3308           | NCEI    | 11/1901 - 10/2023 |
| SD    | HARDING 3 SE         | 39-3560 | DLY                 | 45.3600  | -103.8117 | 3400           | NCEI    | 10/1951 - 10/2023 |
| SD    | HARDY RS             | 39-3572 | DLY                 | 44.1500  | -103.9500 | 6473           | NCEI    | 04/1909 - 09/1951 |
| SD    | HERMOSA 3 SSW        | 39-3775 | DLY                 | 43.8069  | -103.2131 | 3425           | NCEI    | 11/1905 - 12/2012 |
| SD    | HILL CITY            | 39-3868 | DLY                 | 43.9342  | -103.5572 | 4946           | NCEI    | 01/1909 - 10/2023 |

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| SD    | HOT SPRINGS      | 39-4007 | DLY                 | 43.4378  | -103.4739 | 3560           | NCEI    | 12/1893 - 10/2023 |
| SD    | LADNER 9SW       | 39-4671 | DLY                 | 45.7733  | -103.8789 | 3000           | NCEI    | 09/1949 - 09/2023 |
| SD    | LADNER 9SW       | 39-4671 | HLY                 | 45.7733  | -103.8789 | 3000           | NCEI    | 12/1949 - 06/1975 |
| SD    | LEAD             | 39-4834 | DLY                 | 44.3544  | -103.7430 | 5112           | NCEI    | 12/1908 - 10/2023 |
| SD    | LUDLOW 3 SSE     | 39-5048 | DLY                 | 45.7850  | -103.3719 | 2990           | NCEI    | 01/1924 - 05/2015 |
| SD    | MT RUSHMORE NMEM | 39-5870 | DLY                 | 43.8769  | -103.4578 | 5311           | NCEI    | 12/1961 - 10/2023 |
| SD    | NEWELL           | 39-6054 | DLY                 | 44.7136  | -103.4258 | 2860           | NCEI    | 07/1920 - 10/2023 |
| SD    | OELRICHS         | 39-6212 | DLY                 | 43.1878  | -103.2372 | 3348           | NCEI    | 11/1892 - 09/2023 |
| SD    | ORAL             | 39-6304 | 15M                 | 43.4033  | -103.2683 | 2960           | NCEI    | 01/1984 - 12/2013 |
| SD    | ORAL             | 39-6304 | DLY                 | 43.4033  | -103.2683 | 2960           | NCEI    | 03/1971 - 10/2023 |
| SD    | ORAL             | 39-6304 | HLY                 | 43.4033  | -103.2683 | 2960           | NCEI    | 05/1971 - 12/2013 |
| SD    | ORMAN DAM        | 39-6357 | DLY                 | 44.7333  | -103.6667 | 2933           | NCEI    | 03/1906 - 06/1974 |
| SD    | PACTOLA DAM      | 39-6427 | 15M                 | 44.0622  | -103.4819 | 4720           | NCEI    | 06/1978 - 12/2013 |
| SD    | PACTOLA DAM      | 39-6427 | DLY                 | 44.0622  | -103.4819 | 4720           | NCEI    | 06/1951 - 10/2023 |
| SD    | PACTOLA DAM      | 39-6427 | HLY                 | 44.0622  | -103.4819 | 4720           | NCEI    | 08/1951 - 12/2013 |
| SD    | RALPH 1 N        | 39-6907 | DLY                 | 45.7842  | -103.0656 | 2790           | NCEI    | 05/1941 - 07/2003 |
| SD    | RAPID CITY 4NW   | 39-6947 | DLY                 | 44.1206  | -103.2842 | 3479           | NCEI    | 04/1949 - 10/2023 |
| SD    | REDIG 11 NE      | 39-7062 | DLY                 | 45.3767  | -103.3675 | 3070           | NCEI    | 08/1914 - 12/2011 |
| SD    | ROCHFORD         | 39-7222 | DLY                 | 44.1242  | -103.7196 | 5299           | NCEI    | 04/1948 - 01/1951 |
| SD    | ROCHFORD 2 WNW   | 39-7227 | HLY                 | 44.1317  | -103.7506 | 5450           | NCEI    | 08/1948 - 02/1976 |
| SD    | ROCHFORD 2 WNW   | 39-7227 | DLY                 | 44.1317  | -103.7506 | 5450           | NCEI    | 08/1897 - 04/2005 |
| SD    | SPEARFISH 9 WNW  | 39-7877 | DLY                 | 44.5500  | -104.0167 | 3432           | NCEI    | 05/1909 - 07/1964 |
| SD    | SPEARFISH        | 39-7882 | DLY                 | 44.4975  | -103.8717 | 3633           | NCEI    | 11/1892 - 10/2023 |
| SD    | SPEARFISH        | 39-7882 | HLY                 | 44.4975  | -103.8717 | 3633           | NCEI    | 08/1948 - 12/2013 |
| SD    | SPEARFISH        | 39-7882 | 15M                 | 44.4975  | -103.8717 | 3633           | NCEI    | 12/1975 - 12/2013 |
| SD    | VALE             | 39-8552 | DLY                 | 44.6167  | -103.4000 | 2772           | NCEI    | 12/1907 - 07/1978 |
| SD    | WIND CAVE        | 39-9347 | 15M                 | 43.5561  | -103.4794 | 4155           | NCEI    | 09/1973 - 12/2013 |
| SD    | WIND CAVE        | 39-9347 | DLY                 | 43.5561  | -103.4794 | 4155           | NCEI    | 06/1948 - 10/2023 |
| SD    | WIND CAVE        | 39-9347 | HLY                 | 43.5561  | -103.4794 | 4155           | NCEI    | 08/1948 - 12/2013 |

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| UT    | ALLEN'S RCH            | 42-0050 | DLY                 | 40.8997  | -109.1528 | 5490           | NCEI    | 06/1962 - 10/2001 |
| UT    | ALPINE                 | 42-0061 | DLY                 | 40.4644  | -111.7708 | 5100           | NCEI    | 03/1899 - 10/2023 |
| UT    | ALTA                   | 42-0072 | HLY                 | 40.5906  | -111.6369 | 8710           | NCEI    | 11/1950 - 11/1954 |
| UT    | ALTA                   | 42-0072 | DLY                 | 40.5906  | -111.6369 | 8710           | NCEI    | 01/1905 - 10/2023 |
| UT    | ALTAMONT               | 42-0074 | DLY                 | 40.3669  | -110.2986 | 6456           | NCEI    | 04/1953 - 10/2023 |
| UT    | ARGENTA                | 42-0342 | HLY                 | 40.6419  | -111.6797 | 6980           | NCEI    | 03/1977 - 08/2011 |
| UT    | ARGENTA                | 42-0342 | 15M                 | 40.6419  | -111.6797 | 6980           | NCEI    | 09/1977 - 09/2011 |
| UT    | BARTHOLOMEW POWERHOUSE | 42-0449 | DLY                 | 40.1667  | -111.5000 | 5139           | NCEI    | 07/1956 - 09/1994 |
| UT    | BEAR RIVER REFUGE      | 42-0506 | DLY                 | 41.4667  | -112.2667 | 4213           | NCEI    | 06/1937 - 02/1984 |
| UT    | BONANZA                | 42-0802 | DLY                 | 40.0167  | -109.1833 | 5450           | NCEI    | 01/1938 - 02/1993 |
| UT    | BONANZA PUMPING STN    | 42-0810 | DLY                 | 40.0333  | -109.1167 | 5705           | NCEI    | 03/1960 - 05/1966 |
| UT    | BOUNTIFUL BENCH        | 42-0819 | DLY                 | 40.8911  | -111.8503 | 4950           | NCEI    | 08/1974 - 10/2023 |
| UT    | BOUNTIFUL-VAL VERDA    | 42-0820 | HLY                 | 40.8547  | -111.8903 | 4540           | NCEI    | 06/1981 - 12/2013 |
| UT    | BOUNTIFUL-VAL VERDA    | 42-0820 | DLY                 | 40.8547  | -111.8903 | 4540           | NCEI    | 04/1913 - 06/2014 |
| UT    | BOUNTIFUL-VAL VERDA    | 42-0820 | 15M                 | 40.8547  | -111.8903 | 4540           | NCEI    | 01/1984 - 12/2013 |
| UT    | BRIGHAM CITY           | 42-0924 | DLY                 | 41.4833  | -112.0333 | 4344           | NCEI    | 12/1898 - 05/1974 |
| UT    | BRIGHAM CITY WASTE PLT | 42-0928 | DLY                 | 41.5242  | -112.0436 | 4240           | NCEI    | 04/1974 - 10/2023 |
| UT    | CITY CREEK WTP         | 42-1446 | DLY                 | 40.8150  | -111.8322 | 5340           | NCEI    | 02/1955 - 10/2023 |
| UT    | COALVILLE 13 E         | 42-1590 | DLY                 | 40.9383  | -111.1472 | 6510           | NCEI    | 08/1974 - 10/2017 |
| UT    | COALVILLE 13 E         | 42-1590 | HLY                 | 40.9383  | -111.1472 | 6510           | NCEI    | 11/1974 - 12/2013 |
| UT    | COALVILLE 13 E         | 42-1590 | 15M                 | 40.9383  | -111.1472 | 6510           | NCEI    | 11/1974 - 12/2013 |
| UT    | CLG WARD UTAH ST UNIV  | 42-1601 | DLY                 | 41.6667  | -111.9000 | 4491           | NCEI    | 11/1967 - 04/1969 |
| UT    | CORINNE                | 42-1731 | DLY                 | 41.5481  | -112.1106 | 4230           | NCEI    | 01/1896 - 06/2006 |
| UT    | COTTONWOOD WEIR        | 42-1759 | HLY                 | 40.6189  | -111.7836 | 4986           | NCEI    | 07/1948 - 12/2013 |
| UT    | COTTONWOOD WEIR        | 42-1759 | 15M                 | 40.6189  | -111.7836 | 4986           | NCEI    | 05/1971 - 12/2013 |
| UT    | COTTONWOOD WEIR        | 42-1759 | DLY                 | 40.6189  | -111.7836 | 4986           | NCEI    | 03/1917 - 09/2023 |
| UT    | CURRANT CREEK JUNCTION | 42-1907 | DLY                 | 40.2000  | -110.9000 | 6680           | NCEI    | 05/1985 - 06/1996 |
| UT    | CUTLER DAM             | 42-1918 | DLY                 | 41.8331  | -112.0578 | 4290           | NCEI    | 02/1980 - 10/2023 |
| UT    | DEER CREEK DAM         | 42-2057 | DLY                 | 40.4044  | -111.5289 | 5270           | NCEI    | 01/1939 - 10/2023 |

| State | Station name            | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
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| UT    | DINOSAUR NM             | 42-2172 | DLY                 | 40.4333  | -109.3000 | 5082           | NCEI    | 11/1940 - 03/1958 |
| UT    | DINOSAUR NM-QUARRY AREA | 42-2173 | DLY                 | 40.4383  | -109.3069 | 4802           | NCEI    | 10/1915 - 10/2023 |
| UT    | DUCHESNE AP             | 42-2252 | DLY                 | 40.2000  | -110.3833 | 5823           | NCEI    | 01/1974 - 10/1980 |
| UT    | DUCHESNE                | 42-2253 | DLY                 | 40.1703  | -110.3978 | 5551           | NCEI    | 01/1906 - 10/2023 |
| UT    | ECHO DAM                | 42-2385 | DLY                 | 40.9656  | -111.4336 | 5470           | NCEI    | 12/1939 - 09/2023 |
| UT    | ECHO DAM                | 42-2385 | HLY                 | 40.9656  | -111.4336 | 5470           | NCEI    | 11/1949 - 12/2013 |
| UT    | ECHO DAM                | 42-2385 | 15M                 | 40.9656  | -111.4336 | 5470           | NCEI    | 05/1971 - 12/2013 |
| UT    | ELKHORN ASHLEY RNGR ST  | 42-2429 | DLY                 | 40.5500  | -109.9500 | 6810           | NCEI    | 11/1909 - 04/1956 |
| UT    | FARMINGTON              | 42-2721 | DLY                 | 40.9833  | -111.9000 | 4272           | NCEI    | 11/1892 - 05/1965 |
| UT    | FARMINGTON 3 NW         | 42-2726 | DLY                 | 41.0203  | -111.9328 | 4380           | NCEI    | 05/1948 - 09/2016 |
| UT    | FARMINGTON 3 NW         | 42-2726 | HLY                 | 41.0203  | -111.9328 | 4380           | NCEI    | 08/1948 - 12/2013 |
| UT    | FARMINGTON 3 NW         | 42-2726 | 15M                 | 41.0203  | -111.9328 | 4380           | NCEI    | 11/2001 - 12/2013 |
| UT    | FLAMING GORGE           | 42-2864 | 15M                 | 40.9317  | -109.4117 | 6244           | NCEI    | 01/1984 - 06/2000 |
| UT    | FLAMING GORGE           | 42-2864 | HLY                 | 40.9317  | -109.4117 | 6244           | NCEI    | 02/1958 - 08/2001 |
| UT    | FLAMING GORGE           | 42-2864 | DLY                 | 40.9317  | -109.4117 | 6244           | NCEI    | 10/1957 - 10/2023 |
| UT    | FT DUCHESNE             | 42-2996 | DLY                 | 40.2842  | -109.8611 | 5052           | NCEI    | 10/1887 - 10/2023 |
| UT    | FRUITLAND               | 42-3056 | HLY                 | 40.2167  | -110.8500 | 6624           | NCEI    | 08/1948 - 07/1965 |
| UT    | FRUITLAND               | 42-3056 | DLY                 | 40.2167  | -110.8500 | 6624           | NCEI    | 04/1910 - 02/1966 |
| UT    | GARLAND 1 NE            | 42-3122 | DLY                 | 41.7561  | -112.1517 | 4340           | NCEI    | 01/1909 - 10/1979 |
| UT    | GARLAND 1 NE            | 42-3122 | 15M                 | 41.7561  | -112.1517 | 4340           | NCEI    | 10/1987 - 02/2000 |
| UT    | GARLAND 1 NE            | 42-3122 | HLY                 | 41.7561  | -112.1517 | 4340           | NCEI    | 10/1987 - 02/2000 |
| UT    | GENEVA STEEL            | 42-3182 | DLY                 | 40.2833  | -111.7333 | 4554           | NCEI    | 11/1952 - 01/1960 |
| UT    | GENEVA STEEL 2          | 42-3183 | DLY                 | 40.3000  | -111.7333 | 4554           | NCEI    | 12/1959 - 07/1982 |
| UT    | GROUSE CREEK            | 42-3485 | DLY                 | 41.7167  | -113.8667 | 5324           | NCEI    | 11/1892 - 07/1939 |
| UT    | GROUSE CREEK            | 42-3486 | DLY                 | 41.7139  | -113.8694 | 5320           | NCEI    | 01/1959 - 09/2011 |
| UT    | HANNA                   | 42-3624 | DLY                 | 40.4006  | -110.7586 | 6738           | NCEI    | 04/1952 - 05/1994 |
| UT    | HANNA                   | 42-3624 | 15M                 | 40.4006  | -110.7586 | 6738           | NCEI    | 05/1971 - 11/1995 |
| UT    | HANNA                   | 42-3624 | HLY                 | 40.4006  | -110.7586 | 6738           | NCEI    | 07/1965 - 11/1995 |
| UT    | HARDWARE RCH            | 42-3671 | DLY                 | 41.6000  | -111.5667 | 5560           | NCEI    | 11/1955 - 02/1991 |



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| UT    | HEBER                 | 42-3809 | DLY                 | 40.4917  | -111.4261 | 5590           | NCEI    | 11/1892 - 05/2013 |
| UT    | HIGH LINE CITY CREEK  | 42-3929 | DLY                 | 40.8167  | -111.8333 | 5282           | NCEI    | 06/1915 - 01/1956 |
| UT    | HOBBLE CREEK          | 42-4000 | DLY                 | 40.1573  | -111.5308 | 4942           | NCEI    | 11/1946 - 04/1948 |
| UT    | HUNTSVILLE MONASTERY  | 42-4135 | DLY                 | 41.2403  | -111.7131 | 5140           | NCEI    | 09/1976 - 10/2013 |
| UT    | JARVIE RCH            | 42-4321 | DLY                 | 40.8992  | -109.1789 | 5454           | NCEI    | 11/2001 - 02/2020 |
| UT    | JARVIE RCH 1S         | 42-4322 | DLY                 | 40.8836  | -109.1803 | 5674           | NCEI    | 05/2015 - 12/2017 |
| UT    | JENSEN                | 42-4342 | DLY                 | 40.3611  | -109.3464 | 4736           | NCEI    | 01/1925 - 10/2023 |
| UT    | KAMAS                 | 42-4467 | DLY                 | 40.6439  | -111.2822 | 6481           | NCEI    | 08/1948 - 08/2023 |
| UT    | KAYSVILLE 1 SE        | 42-4538 | 15M                 | 41.0200  | -111.9331 | 4380           | NCEI    | 04/1988 - 02/2002 |
| UT    | KAYSVILLE 1 SE        | 42-4538 | HLY                 | 41.0200  | -111.9331 | 4380           | NCEI    | 04/1988 - 02/2002 |
| UT    | LAKETOWN              | 42-4856 | DLY                 | 41.8253  | -111.3206 | 5980           | NCEI    | 11/1899 - 10/2023 |
| UT    | LEWISTON              | 42-5082 | DLY                 | 41.9667  | -111.8333 | 4482           | NCEI    | 07/1924 - 06/1976 |
| UT    | LOGAN RADIO KVNU      | 42-5182 | DLY                 | 41.7350  | -111.8564 | 4475           | NCEI    | 09/1956 - 10/2023 |
| UT    | LOGAN SUGAR FACTORY   | 42-5183 | DLY                 | 41.7000  | -111.8667 | 4482           | NCEI    | 06/1924 - 04/1941 |
| UT    | LOGAN UTAH ST UNIV    | 42-5186 | DLY                 | 41.7456  | -111.8033 | 4790           | NCEI    | 11/1892 - 10/2023 |
| UT    | LOGAN UTAH ST UNIV    | 42-5186 | HLY                 | 41.7456  | -111.8033 | 4790           | NCEI    | 07/1948 - 12/2013 |
| UT    | LOGAN UTAH ST UNIV    | 42-5186 | 15M                 | 41.7456  | -111.8033 | 4790           | NCEI    | 05/1971 - 12/2013 |
| UT    | LOGAN 5 SW EXP FARM   | 42-5194 | DLY                 | 41.6661  | -111.8914 | 4488           | NCEI    | 03/1969 - 10/2023 |
| UT    | LOGAN 5 SW EXP FARM   | 42-5194 | HLY                 | 41.6661  | -111.8914 | 4488           | NCEI    | 10/1976 - 12/2013 |
| UT    | LOGAN 5 SW EXP FARM   | 42-5194 | 15M                 | 41.6661  | -111.8914 | 4488           | NCEI    | 01/1984 - 12/2013 |
| UT    | LOWER AMERI FORK PWHS | 42-5219 | DLY                 | 40.4333  | -111.7500 | 5043           | NCEI    | 11/1913 - 05/1957 |
| UT    | MANILA                | 42-5377 | DLY                 | 40.9900  | -109.7258 | 6393           | NCEI    | 01/1910 - 09/2023 |
| UT    | MIDVALE               | 42-5610 | DLY                 | 40.6000  | -111.9167 | 4344           | NCEI    | 08/1911 - 11/1971 |
| UT    | MILLVILLE             | 42-5705 | DLY                 | 41.6833  | -111.8500 | 4600           | NCEI    | 01/1899 - 11/1924 |
| UT    | MOON LAKE             | 42-5815 | DLY                 | 40.5617  | -110.4925 | 8125           | NCEI    | 05/1935 - 07/1969 |
| UT    | MOON LAKE             | 42-5815 | HLY                 | 40.5617  | -110.4925 | 8125           | NCEI    | 10/1978 - 12/2013 |
| UT    | MOON LAKE             | 42-5815 | 15M                 | 40.5617  | -110.4925 | 8125           | NCEI    | 10/1978 - 05/2013 |
| UT    | MORGAN                | 42-5826 | DLY                 | 41.0575  | -111.6894 | 5100           | NCEI    | 11/1902 - 10/2023 |
| UT    | MTN DELL DAM          | 42-5892 | 15M                 | 40.7486  | -111.7233 | 5420           | NCEI    | 05/1971 - 12/2013 |

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| UT    | MTN DELL DAM           | 42-5892 | HLY                 | 40.7486  | -111.7233 | 5420           | NCEI    | 10/1967 - 12/2013 |
| UT    | MTN DELL DAM           | 42-5892 | DLY                 | 40.7486  | -111.7233 | 5420           | NCEI    | 11/1919 - 10/2023 |
| UT    | MYTON                  | 42-5969 | DLY                 | 40.1942  | -110.0608 | 5085           | NCEI    | 06/1915 - 10/2023 |
| UT    | NEOLA                  | 42-6123 | DLY                 | 40.4178  | -110.0511 | 5950           | NCEI    | 02/1956 - 10/2023 |
| UT    | NEOLA 8 N              | 42-6127 | 15M                 | 40.5358  | -110.0642 | 6924           | NCEI    | 12/1971 - 12/2013 |
| UT    | NEOLA 8 N              | 42-6127 | HLY                 | 40.5358  | -110.0642 | 6924           | NCEI    | 12/1971 - 12/2013 |
| UT    | OAKLEY 3 NE            | 42-6374 | 15M                 | 40.7392  | -111.2414 | 6610           | NCEI    | 05/1971 - 12/2013 |
| UT    | OAKLEY 3 NE            | 42-6374 | HLY                 | 40.7392  | -111.2414 | 6610           | NCEI    | 02/1971 - 12/2013 |
| UT    | OGDEN 2                | 42-6400 | DLY                 | 41.2000  | -111.9500 | 4462           | NCEI    | 11/1892 - 11/1940 |
| UT    | OGDEN PIONEER PH       | 42-6404 | 15M                 | 41.2439  | -111.9467 | 4350           | NCEI    | 10/1971 - 06/2013 |
| UT    | OGDEN PIONEER PH       | 42-6404 | HLY                 | 41.2439  | -111.9467 | 4350           | NCEI    | 10/1971 - 12/2013 |
| UT    | OGDEN PIONEER PH       | 42-6404 | DLY                 | 41.2439  | -111.9467 | 4350           | NCEI    | 11/1901 - 09/2010 |
| UT    | OGDEN NE BENCH         | 42-6405 | DLY                 | 41.2458  | -111.9372 | 4572           | NCEI    | 11/2010 - 10/2023 |
| UT    | OGDEN SUGAR FACTORY    | 42-6414 | 15M                 | 41.2319  | -112.0283 | 4280           | NCEI    | 05/1971 - 12/2013 |
| UT    | OGDEN SUGAR FACTORY    | 42-6414 | HLY                 | 41.2319  | -112.0283 | 4280           | NCEI    | 06/1953 - 12/2013 |
| UT    | OGDEN SUGAR FACTORY    | 42-6414 | DLY                 | 41.2319  | -112.0283 | 4280           | NCEI    | 07/1924 - 03/2009 |
| UT    | OGDEN CAA AP           | 42-6424 | HLY                 | 41.1833  | -112.0167 | 4442           | NCEI    | 07/1948 - 05/1952 |
| UT    | OLMSTEAD PH            | 42-6455 | HLY                 | 40.3158  | -111.6542 | 4830           | NCEI    | 02/1977 - 12/2013 |
| UT    | OLMSTEAD PH            | 42-6455 | 15M                 | 40.3158  | -111.6542 | 4830           | NCEI    | 02/1977 - 12/2013 |
| UT    | OLMSTEAD PH            | 42-6455 | DLY                 | 40.3161  | -111.6539 | 4820           | NCEI    | 12/1976 - 07/2003 |
| UT    | OREM TRTMT PLT         | 42-6538 | DLY                 | 40.2767  | -111.7369 | 4510           | NCEI    | 06/1982 - 05/2010 |
| UT    | OURAY 4NE              | 42-6568 | DLY                 | 40.1344  | -109.6436 | 4674           | NCEI    | 04/1941 - 08/2023 |
| UT    | PARK CITY              | 42-6644 | DLY                 | 40.6558  | -111.5053 | 6900           | NCEI    | 07/1992 - 10/2023 |
| UT    | PARK CITY GC           | 42-6648 | HLY                 | 40.6600  | -111.5156 | 6890           | NCEI    | 12/1987 - 12/2013 |
| UT    | PARK CITY G.C.         | 42-6648 | DLY                 | 40.6600  | -111.5156 | 6890           | NCEI    | 01/1896 - 06/1991 |
| UT    | PARK CITY GC           | 42-6648 | 15M                 | 40.6600  | -111.5156 | 6890           | NCEI    | 12/1987 - 09/2013 |
| UT    | PARK CITY MEADOWS      | 42-6650 | DLY                 | 40.6833  | -111.5000 | 6745           | NCEI    | 08/1978 - 04/1980 |
| UT    | PARK CITY SUMMIT HOUSE | 42-6652 | DLY                 | 40.6333  | -111.5333 | 9275           | NCEI    | 11/1968 - 08/1977 |
| UT    | PARK VALLEY            | 42-6658 | DLY                 | 41.8000  | -113.3500 | 5440           | NCEI    | 02/1911 - 02/1990 |

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| UT    | PERRY                  | 42-6757 | HLY                 | 41.4489  | -112.0369 | 4360           | NCEI    | 12/1987 - 12/2013 |
| UT    | PERRY                  | 42-6757 | 15M                 | 41.4489  | -112.0369 | 4360           | NCEI    | 12/1987 - 12/2013 |
| UT    | PINEVIEW DAM           | 42-6869 | DLY                 | 41.2578  | -111.8378 | 4940           | NCEI    | 11/1934 - 10/2023 |
| UT    | PLEASANT GROVE         | 42-6919 | DLY                 | 40.3678  | -111.7333 | 4692           | NCEI    | 07/1946 - 09/2023 |
| UT    | PLYMOUTH               | 42-6938 | 15M                 | 41.8739  | -112.1486 | 4470           | NCEI    | 01/1971 - 12/2013 |
| UT    | PLYMOUTH               | 42-6938 | DLY                 | 41.8739  | -112.1486 | 4470           | NCEI    | 11/1939 - 09/2023 |
| UT    | PLYMOUTH               | 42-6938 | HLY                 | 41.8739  | -112.1486 | 4470           | NCEI    | 07/1948 - 12/2013 |
| UT    | PROVO BYU              | 42-7064 | HLY                 | 40.2458  | -111.6508 | 4570           | NCEI    | 09/1980 - 12/2013 |
| UT    | PROVO BYU              | 42-7064 | 15M                 | 40.2458  | -111.6508 | 4570           | NCEI    | 01/1984 - 12/2013 |
| UT    | PROVO BYU              | 42-7064 | DLY                 | 40.2458  | -111.6508 | 4570           | NCEI    | 02/1916 - 10/2023 |
| UT    | RANDOLPH               | 42-7165 | DLY                 | 41.6608  | -111.1869 | 6290           | NCEI    | 03/1893 - 10/2023 |
| UT    | RICHMOND               | 42-7271 | DLY                 | 41.9064  | -111.8100 | 4680           | NCEI    | 08/1911 - 10/2023 |
| UT    | RIVERDALE              | 42-7318 | DLY                 | 41.1500  | -112.0000 | 4400           | NCEI    | 11/1913 - 02/1991 |
| UT    | ROOSEVELT RADIO        | 42-7395 | 15M                 | 40.2878  | -109.9586 | 5014           | NCEI    | 11/1980 - 12/2013 |
| UT    | ROOSEVELT RADIO        | 42-7395 | DLY                 | 40.2878  | -109.9586 | 5014           | NCEI    | 05/1948 - 10/2023 |
| UT    | ROOSEVELT RADIO        | 42-7395 | HLY                 | 40.2878  | -109.9586 | 5014           | NCEI    | 07/1948 - 12/2013 |
| UT    | ROSETTE                | 42-7408 | DLY                 | 41.8186  | -113.4133 | 5685           | NCEI    | 05/1990 - 10/2023 |
| UT    | SALT LAKE CITY         | 42-7603 | HLY                 | 40.7667  | -111.8833 | 4304           | NCEI    | 07/1948 - 11/1973 |
| UT    | SALT LAKE TRIAD CTR    | 42-7606 | DLY                 | 40.7708  | -111.8964 | 4280           | NCEI    | 03/1985 - 06/2020 |
| UT    | SALT LAKE TRIAD CTR    | 42-7606 | 15M                 | 40.7708  | -111.8964 | 4280           | NCEI    | 03/1973 - 04/1984 |
| UT    | SALT LAKE TRIAD CTR    | 42-7606 | HLY                 | 40.7708  | -111.8964 | 4280           | NCEI    | 03/1973 - 04/1984 |
| UT    | SALT LAKE CITY E BENCH | 42-7655 | DLY                 | 40.7364  | -111.8172 | 4850           | NCEI    | 04/1990 - 01/2005 |
| UT    | SILVER LAKE BRIGHTON   | 42-7846 | 15M                 | 40.6008  | -111.5842 | 8740           | NCEI    | 05/1971 - 10/2013 |
| UT    | SILVER LAKE BRIGHTON   | 42-7846 | HLY                 | 40.6008  | -111.5842 | 8740           | NCEI    | 07/1948 - 12/2013 |
| UT    | SILVER LAKE BRIGHTON   | 42-7846 | DLY                 | 40.6008  | -111.5842 | 8740           | NCEI    | 05/1915 - 10/2023 |
| UT    | SNAKE CREEK POWERHOUSE | 42-7909 | DLY                 | 40.5453  | -111.5042 | 6010           | NCEI    | 10/1913 - 08/2008 |
| UT    | SNOWVILLE              | 42-7931 | DLY                 | 41.9667  | -112.7167 | 4560           | NCEI    | 01/1893 - 10/1991 |
| UT    | STRAWBERRY DANIELS SUM | 42-8369 | DLY                 | 40.3000  | -111.2500 | 8005           | NCEI    | 09/1935 - 12/1948 |
| UT    | TERMINAL               | 42-8631 | DLY                 | 40.7500  | -112.0000 | 4232           | NCEI    | 04/1940 - 04/1972 |

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| UT    | THIOKOL PROPULSION F S | 42-8668 | DLY                 | 41.7197  | -112.4264 | 4600           | NCEI    | 04/1962 - 12/2009 |
| UT    | TIMPANOGOS CAVE        | 42-8733 | DLY                 | 40.4447  | -111.7075 | 5740           | NCEI    | 10/1946 - 05/2020 |
| UT    | TIMPANOGOS CAVE        | 42-8733 | HLY                 | 40.4422  | -111.7133 | 5510           | NCEI    | 04/2007 - 12/2013 |
| UT    | TIMPANOGOS CAVE        | 42-8733 | 15M                 | 40.4422  | -111.7133 | 5510           | NCEI    | 04/2007 - 12/2013 |
| UT    | TREMONTON              | 42-8817 | DLY                 | 41.7108  | -112.1636 | 4310           | NCEI    | 02/1913 - 04/2010 |
| UT    | TRENTON                | 42-8828 | DLY                 | 41.9153  | -111.9128 | 4455           | NCEI    | 02/1944 - 10/2023 |
| UT    | UNIV OF UTAH           | 42-8922 | DLY                 | 40.7667  | -111.8333 | 4800           | NCEI    | 10/1913 - 02/1990 |
| UT    | UPPER AMERICAN FORK PH | 42-8939 | HLY                 | 40.4378  | -111.7236 | 5330           | NCEI    | 06/1986 - 03/2007 |
| UT    | UPPER AMERICAN FORK PH | 42-8939 | DLY                 | 40.4378  | -111.7236 | 5330           | NCEI    | 07/1957 - 05/1986 |
| UT    | UPPER AMERICAN FORK PH | 42-8939 | 15M                 | 40.4378  | -111.7236 | 5330           | NCEI    | 06/1986 - 03/2007 |
| UT    | VERNAL                 | 42-9111 | DLY                 | 40.4403  | -109.5356 | 5345           | NCEI    | 10/1894 - 10/2023 |
| UT    | WANSHIP DAM            | 42-9165 | DLY                 | 40.7908  | -111.4078 | 5940           | NCEI    | 06/1955 - 10/2023 |
| UT    | WEBER BASIN PUMP PLT 3 | 42-9346 | DLY                 | 41.1092  | -111.9125 | 4900           | NCEI    | 03/1962 - 09/2023 |
| UT    | WOODRUFF               | 42-9595 | DLY                 | 41.5250  | -111.1494 | 6315           | NCEI    | 11/1896 - 10/2023 |
| WA    | ANATONE                | 45-0184 | DLY                 | 46.1333  | -117.1333 | 3573           | NCEI    | 07/1912 - 11/1981 |
| WA    | ASOTIN 14 SW           | 45-0294 | DLY                 | 46.2039  | -117.2472 | 3403           | NCEI    | 05/1976 - 10/2023 |
| WA    | BOUNDARY DAM           | 45-0844 | DLY                 | 48.9947  | -117.3544 | 1837           | NCEI    | 05/1965 - 10/2023 |
| WA    | BOUNDARY DAM 1 W       | 45-0845 | DLY                 | 48.9904  | -117.3716 | 2602           | NCEI    | 10/1970 - 12/1973 |
| WA    | BOUNDARY SWITCHYARD    | 45-0849 | 15M                 | 48.9806  | -117.3586 | 2572           | NCEI    | 05/1971 - 12/2013 |
| WA    | BOUNDARY SWITCHYARD    | 45-0849 | HLY                 | 48.9806  | -117.3586 | 2572           | NCEI    | 01/1971 - 12/2013 |
| WA    | CHEWELAH               | 45-1395 | HLY                 | 48.2733  | -117.7411 | 1644           | NCEI    | 11/1968 - 12/2013 |
| WA    | CHEWELAH               | 45-1395 | DLY                 | 48.2733  | -117.7408 | 1670           | NCEI    | 07/1925 - 10/2023 |
| WA    | CHEWELAH               | 45-1395 | 15M                 | 48.2733  | -117.7411 | 1644           | NCEI    | 05/1971 - 12/2013 |
| WA    | COLFAX                 | 45-1586 | DLY                 | 46.8833  | -117.3647 | 1980           | NCEI    | 12/1891 - 07/2013 |
| WA    | COLVILLE               | 45-1630 | DLY                 | 48.5678  | -117.9356 | 1554           | NCEI    | 07/1899 - 10/2023 |
| WA    | COLVILLE               | 45-1630 | HLY                 | 48.5678  | -117.9356 | 1554           | NCEI    | 06/1993 - 12/2013 |
| WA    | COLVILLE               | 45-1630 | 15M                 | 48.5678  | -117.9356 | 1554           | NCEI    | 06/1993 - 12/2013 |
| WA    | COLVILLE AP            | 45-1650 | DLY                 | 48.5500  | -117.8833 | 1885           | NCEI    | 01/1937 - 10/1987 |
| WA    | COLVILLE AP            | 45-1650 | HLY                 | 48.5500  | -117.8833 | 1885           | NCEI    | 07/1948 - 02/1988 |

| State | Station name      | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| WA    | COLVILLE AP       | 45-1650 | 15M                 | 48.5500  | -117.8833 | 1885           | NCEI    | 04/1978 - 02/1988 |
| WA    | COLVILLE 5 NE     | 45-1654 | 15M                 | 48.5833  | -117.8000 | 1657           | NCEI    | 04/1988 - 02/1993 |
| WA    | COLVILLE 5 NE     | 45-1654 | HLY                 | 48.5833  | -117.8000 | 1657           | NCEI    | 04/1988 - 02/1993 |
| WA    | COLVILLE 5 NE     | 45-1654 | DLY                 | 48.5500  | -117.9000 | 1657           | NCEI    | 07/1988 - 02/1993 |
| WA    | DAYTON 1 WSW      | 45-2030 | DLY                 | 46.3153  | -118.0022 | 1557           | NCEI    | 01/1893 - 10/2023 |
| WA    | DAYTON 1 WSW      | 45-2030 | 15M                 | 46.3153  | -118.0022 | 1557           | NCEI    | 05/1971 - 12/2013 |
| WA    | DAYTON 1 WSW      | 45-2030 | HLY                 | 46.3153  | -118.0022 | 1557           | NCEI    | 04/1962 - 12/2013 |
| WA    | DAYTON 9 SE       | 45-2037 | HLY                 | 46.2167  | -117.8500 | 2343           | NCEI    | 07/1948 - 08/1977 |
| WA    | DAYTON 9 SE       | 45-2037 | DLY                 | 46.2167  | -117.8500 | 2343           | NCEI    | 01/1950 - 09/1951 |
| WA    | DEER PARK         | 45-2064 | HLY                 | 47.9742  | -117.4292 | 2191           | NCEI    | 02/2007 - 12/2013 |
| WA    | DEER PARK AP      | 45-2066 | DLY                 | 47.9667  | -117.4333 | 2201           | NCEI    | 03/1911 - 03/1977 |
| WA    | EWAN              | 45-2706 | DLY                 | 47.1167  | -117.7333 | 1722           | NCEI    | 10/1939 - 12/1973 |
| WA    | LACROSSE          | 45-4338 | DLY                 | 46.8167  | -117.8831 | 1476           | NCEI    | 01/1908 - 07/2021 |
| WA    | LOWER GRANITE DAM | 45-4835 | DLY                 | 46.6580  | -117.4327 | 660            | NCEI    | 10/1965 - 10/1975 |
| WA    | METALINE FALLS    | 45-5317 | DLY                 | 48.8667  | -117.3667 | 2113           | NCEI    | 10/1909 - 05/1965 |
| WA    | NEWPORT           | 45-5844 | DLY                 | 48.1842  | -117.0475 | 2162           | NCEI    | 08/1909 - 08/2023 |
| WA    | NORTHPORT         | 45-5946 | DLY                 | 48.8994  | -117.8289 | 1497           | NCEI    | 01/1899 - 10/2023 |
| WA    | NORTHPORT         | 45-5946 | 15M                 | 48.8994  | -117.8289 | 1497           | NCEI    | 09/1980 - 12/2013 |
| WA    | NORTHPORT         | 45-5946 | HLY                 | 48.8994  | -117.8289 | 1497           | NCEI    | 04/1961 - 12/2013 |
| WA    | POMEROY           | 45-6610 | DLY                 | 46.4672  | -117.5883 | 1934           | NCEI    | 08/1891 - 04/2020 |
| WA    | PULLMAN EXP STN   | 45-6784 | HLY                 | 46.7333  | -117.1667 | 2582           | NCEI    | 11/1949 - 11/1949 |
| WA    | PULLMAN EXP STN   | 45-6784 | DLY                 | 46.7333  | -117.1667 | 2582           | NCEI    | 11/1892 - 02/1954 |
| WA    | PULLMAN 2 NW      | 45-6789 | DLY                 | 46.7603  | -117.1861 | 2515           | NCEI    | 08/1940 - 10/2023 |
| WA    | PULLMAN 2 NW      | 45-6789 | 15M                 | 46.7603  | -117.1861 | 2515           | NCEI    | 01/1984 - 12/2013 |
| WA    | PULLMAN 2 NW      | 45-6789 | HLY                 | 46.7603  | -117.1861 | 2515           | NCEI    | 07/1948 - 12/2013 |
| WA    | ROSALIA           | 45-7180 | DLY                 | 47.2347  | -117.3636 | 2420           | NCEI    | 11/1892 - 10/2023 |
| WA    | ST JOHN           | 45-7267 | DLY                 | 47.0933  | -117.5878 | 1952           | NCEI    | 06/1963 - 10/2020 |
| WA    | SPOKANE           | 45-7933 | DLY                 | 47.6667  | -117.4167 | 1880           | NCEI    | 09/1953 - 10/1983 |
| WA    | SPOKANE INTL AP   | 45-7938 | HLY                 | 47.6217  | -117.5281 | 2353           | NCEI    | 08/1948 - 12/2013 |

| State | Station name           | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|------------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| WA    | SPOKANE WFO            | 45-7941 | HLY                 | 47.6811  | -117.6267 | 2391           | NCEI    | 08/1996 - 11/2005 |
| WA    | SPOKANE WFO            | 45-7941 | DLY                 | 47.6811  | -117.6267 | 2392           | NCEI    | 06/1996 - 10/2023 |
| WA    | SPOKANE WFO            | 45-7941 | 15M                 | 47.6811  | -117.6267 | 2391           | NCEI    | 08/1996 - 11/2005 |
| WA    | SPRAGUE                | 45-7956 | HLY                 | 47.3000  | -117.9833 | 1970           | NCEI    | 07/1948 - 10/1982 |
| WA    | SPRAGUE                | 45-7956 | DLY                 | 47.3000  | -117.9833 | 1970           | NCEI    | 01/1899 - 08/1982 |
| WA    | TEKOA                  | 45-8348 | DLY                 | 47.2275  | -117.0836 | 2495           | NCEI    | 04/1905 - 09/1980 |
| WA    | TEKOA                  | 45-8348 | HLY                 | 47.2275  | -117.0836 | 2495           | NCEI    | 09/1971 - 12/2013 |
| WA    | TEKOA                  | 45-8348 | 15M                 | 47.2275  | -117.0836 | 2495           | NCEI    | 05/1971 - 12/2013 |
| WA    | WAWAWAI 2 NW           | 45-9024 | DLY                 | 46.6500  | -117.4000 | 702            | NCEI    | 11/1927 - 10/1965 |
| WA    | WELLPINIT              | 45-9058 | DLY                 | 47.8964  | -117.9933 | 2490           | NCEI    | 06/1923 - 12/2007 |
| SD    | DEADWOOD               | 52-2207 | DLY                 | 44.3772  | -103.7306 | 4549           | FORTS   | 12/1877 - 12/1887 |
| UT    | FORT DUCHESNE          | 52-2996 | DLY                 | 40.2894  | -109.8561 | 4996           | FORTS   | 12/1887 - 11/1893 |
| CO    | BOULDER 2              | 54-0001 | 15M                 | 40.0340  | -105.2813 | 5427           | NCEI    | 05/1971 - 11/2020 |
| CO    | DINOSAUR NATL MONUMENT | 54-0003 | 15M                 | 40.2441  | -108.9726 | 5960           | NCEI    | 01/1984 - 10/2020 |
| CO    | FORT COLLINS           | 54-0004 | 15M                 | 40.5763  | -105.0857 | 5004           | NCEI    | 01/1984 - 11/2020 |
| CO    | GRAND LAKE 6 SSW       | 54-0005 | 15M                 | 40.1849  | -105.8666 | 8288           | NCEI    | 01/1984 - 11/2020 |
| CO    | GREELEY UNC            | 54-0006 | 15M                 | 40.4022  | -104.6991 | 4715           | NCEI    | 07/1985 - 11/2020 |
| CO    | LONGMONT 6 NW          | 54-0007 | 15M                 | 40.2466  | -105.1463 | 5150           | NCEI    | 05/1971 - 11/2020 |
| CO    | MEEKER                 | 54-0008 | 15M                 | 40.0358  | -107.9058 | 6229           | NCEI    | 01/1993 - 11/2020 |
| CO    | NEDERLAND 5 NNW        | 54-0009 | 15M                 | 40.0361  | -105.5461 | 10010          | NCEI    | 10/1996 - 11/2020 |
| CO    | NORTHGATE              | 54-0011 | 15M                 | 40.9366  | -106.3391 | 7830           | NCEI    | 03/1979 - 11/2019 |
| CO    | NUNN                   | 54-0012 | 15M                 | 40.7063  | -104.7833 | 5196           | NCEI    | 04/1973 - 11/2020 |
| CO    | WILLIAMS FORK DAM      | 54-0013 | 15M                 | 40.0375  | -106.2038 | 7618           | NCEI    | 06/1982 - 11/2020 |
| NE    | BRIDGEPORT             | 54-0117 | 15M                 | 41.6680  | -103.1038 | 3666           | NCEI    | 05/1971 - 10/2020 |
| NE    | CHADRON 3SW            | 54-0118 | 15M                 | 42.8083  | -103.0533 | 3383           | NCEI    | 01/1984 - 02/2020 |
| ND    | AMBROSE 3 N            | 54-0119 | 15M                 | 48.9975  | -103.4877 | 2027           | NCEI    | 11/1977 - 10/2020 |
| ND    | BOWMAN                 | 54-0120 | 15M                 | 46.1936  | -103.3714 | 2983           | NCEI    | 05/1971 - 10/2020 |
| OR    | HALFWAY                | 54-0121 | 15M                 | 44.8773  | -117.1095 | 2653           | NCEI    | 10/1974 - 02/2020 |
| SD    | CAMP CROOK             | 54-0123 | 15M                 | 45.5488  | -103.9744 | 3120           | NCEI    | 01/1984 - 10/2020 |

| State | Station name                 | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
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| SD    | EDGEMONT                     | 54-0124 | 15M                 | 43.3136  | -103.8215 | 3432           | NCEI    | 09/1973 - 10/2020 |
| SD    | EDGEMONT 23 NNW              | 54-0125 | 15M                 | 43.6242  | -103.9172 | 4402           | NCEI    | 11/1977 - 10/2020 |
| SD    | ORAL                         | 54-0126 | 15M                 | 43.4033  | -103.2683 | 2960           | NCEI    | 01/1984 - 10/2020 |
| SD    | PACTOLA DAM                  | 54-0127 | 15M                 | 44.0622  | -103.4819 | 4720           | NCEI    | 06/1978 - 10/2020 |
| UT    | COALVILLE 13 E               | 54-0131 | 15M                 | 40.9383  | -111.1472 | 6510           | NCEI    | 11/1974 - 10/2017 |
| UT    | ECHO DAM                     | 54-0133 | 15M                 | 40.9655  | -111.4336 | 5470           | NCEI    | 05/1971 - 11/2020 |
| UT    | FARMINGTON 3 NW              | 54-0134 | 15M                 | 41.0203  | -111.9328 | 4380           | NCEI    | 11/2001 - 10/2020 |
| UT    | LOGAN UTAH ST U              | 54-0135 | 15M                 | 41.7456  | -111.8033 | 4790           | NCEI    | 05/1971 - 11/2020 |
| UT    | LOGAN 5 SW EXP FARM          | 54-0136 | 15M                 | 41.6661  | -111.8913 | 4488           | NCEI    | 01/1984 - 11/2020 |
| UT    | MOUNTAIN DELL DAM            | 54-0137 | 15M                 | 40.7485  | -111.7232 | 5420           | NCEI    | 06/1971 - 12/2020 |
| UT    | OAKLEY 3 NE                  | 54-0139 | 15M                 | 40.7393  | -111.2415 | 6610           | NCEI    | 05/1971 - 11/2020 |
| UT    | OGDEN SUGAR FACTORY          | 54-0140 | 15M                 | 41.2319  | -112.0283 | 4280           | NCEI    | 05/1971 - 11/2020 |
| UT    | OLMSTEAD PH                  | 54-0141 | 15M                 | 40.3158  | -111.6542 | 4830           | NCEI    | 02/1977 - 11/2020 |
| UT    | PERRY                        | 54-0142 | 15M                 | 41.4489  | -112.0369 | 4360           | NCEI    | 12/1987 - 11/2020 |
| UT    | PLYMOUTH                     | 54-0143 | 15M                 | 41.8740  | -112.1487 | 4470           | NCEI    | 02/1971 - 12/2020 |
| UT    | PROVO BYU                    | 54-0144 | 15M                 | 40.2458  | -111.6508 | 4570           | NCEI    | 01/1984 - 12/2020 |
| UT    | ROOSEVELT RADIO              | 54-0145 | 15M                 | 40.2878  | -109.9586 | 5014           | NCEI    | 11/1980 - 11/2020 |
| WA    | DAYTON 1 WSW                 | 54-0149 | 15M                 | 46.3152  | -118.0022 | 1557           | NCEI    | 05/1971 - 06/2020 |
| WA    | NORTHPORT                    | 54-0150 | 15M                 | 48.8994  | -117.8290 | 1497           | NCEI    | 09/1980 - 06/2018 |
| WA    | PULLMAN 2 NW                 | 54-0151 | 15M                 | 46.7602  | -117.1861 | 2515           | NCEI    | 01/1984 - 12/2019 |
| AB    | ONEFOUR CDA ALTA             | 55-0007 | HLY                 | 49.1170  | -110.4670 | 3068           | NCEI    | 05/2013 - 11/2023 |
| SK    | ROCKGLEN (AUT) SASK          | 55-0009 | HLY                 | 49.1670  | -105.9830 | 3009           | NCEI    | 05/2013 - 12/2023 |
| AB    | WATERTON PARK GATE           | 55-0013 | HLY                 | 49.1330  | -113.8170 | 4229           | NCEI    | 05/2013 - 12/2023 |
| BC    | SPARWOOD CS BC               | 55-0044 | HLY                 | 49.7500  | -114.8830 | 3734           | NCEI    | 05/2013 - 12/2023 |
| CO    | NOVEMBER (GROVER)            | 55-0106 | HLY                 | 40.6330  | -103.8330 | 4787           | NCEI    | 12/2014 - 12/2023 |
| UT    | LOGAN-CACHE AIRPORT          | 55-0134 | HLY                 | 41.7870  | -111.8530 | 4454           | NCEI    | 01/1999 - 12/2023 |
| NE    | CHADRON MUNICIPAL AIRPORT    | 55-0137 | HLY                 | 42.8370  | -103.0980 | 3294           | NCEI    | 12/1972 - 12/2023 |
| NE    | WESTERN NE REGIONAL/HEILIG F | 55-0146 | HLY                 | 41.8710  | -103.5930 | 3945           | NCEI    | 12/1972 - 12/2023 |
| SD    | BUFFALO                      | 55-0200 | HLY                 | 45.6040  | -103.5460 | 3004           | NCEI    | 01/1999 - 12/2023 |

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| OR    | ONTARIO MUNICIPAL AIRPORT   | 55-0236 | HLY                 | 44.0210  | -117.0130 | 2193           | NCEI    | 05/1997 - 12/2023 |
| OR    | BAKER CITY MUNICIPAL ARPT   | 55-0243 | HLY                 | 44.8430  | -117.8090 | 3361           | NCEI    | 10/2001 - 12/2023 |
| ND    | SLOULIN FIELD INTERNATIONAL | 55-0244 | HLY                 | 48.1740  | -103.6370 | 1902           | NCEI    | 01/1973 - 10/2019 |
| WA    | FAIRCHILD AIR FORCE BASE    | 55-0273 | HLY                 | 47.6330  | -117.6500 | 2461           | NCEI    | 01/2007 - 12/2023 |
| WA    | DEER PARK AIRPORT           | 55-0277 | HLY                 | 47.9740  | -117.4290 | 2191           | NCEI    | 07/2010 - 12/2023 |
| NE    | CHADRON MUNICIPAL AP        | 55-0299 | HLY                 | 42.8370  | -103.0980 | 3296           | NCEI    | 08/1948 - 12/1954 |
| CO    | BOULDER 14 W                | 57-0002 | DLY                 | 40.0354  | -105.5407 | 9828           | NCEI    | 09/2003 - 12/2021 |
| CO    | BOULDER 14 W                | 57-0002 | 15M                 | 40.0354  | -105.5407 | 9828           | NCEI    | 12/2005 - 12/2021 |
| CO    | BOULDER 14 W                | 57-0002 | HLY                 | 40.0354  | -105.5407 | 9828           | NCEI    | 09/2003 - 12/2021 |
| SD    | BUFFALO 13 ESE              | 57-0004 | 15M                 | 45.5160  | -103.3017 | 2883           | NCEI    | 12/2005 - 12/2021 |
| SD    | BUFFALO 13 ESE              | 57-0004 | HLY                 | 45.5160  | -103.3017 | 2883           | NCEI    | 09/2004 - 12/2021 |
| SD    | BUFFALO 13 ESE              | 57-0004 | DLY                 | 45.5160  | -103.3017 | 2883           | NCEI    | 09/2004 - 12/2021 |
| CO    | DINOSAUR 2 E                | 57-0007 | HLY                 | 40.2446  | -108.9678 | 6062           | NCEI    | 07/2004 - 12/2021 |
| CO    | DINOSAUR 2 E                | 57-0007 | DLY                 | 40.2446  | -108.9678 | 6062           | NCEI    | 07/2004 - 12/2021 |
| CO    | DINOSAUR 2 E                | 57-0007 | 15M                 | 40.2446  | -108.9678 | 6062           | NCEI    | 07/2006 - 12/2021 |
| UT    | MANILA 18 ESE               | 57-0011 | HLY                 | 40.9226  | -109.3899 | 6536           | NCEI    | 09/2011 - 06/2014 |
| UT    | MANILA 18 ESE               | 57-0011 | DLY                 | 40.9226  | -109.3899 | 6536           | NCEI    | 09/2011 - 05/2014 |
| UT    | MANILA 18 ESE               | 57-0011 | 15M                 | 40.9226  | -109.3899 | 6536           | NCEI    | 09/2011 - 06/2014 |
| CO    | NUNN 7 NNE                  | 57-0017 | HLY                 | 40.8066  | -104.7552 | 5390           | NCEI    | 07/2003 - 12/2021 |
| CO    | NUNN 7 NNE                  | 57-0017 | DLY                 | 40.8066  | -104.7552 | 5390           | NCEI    | 07/2003 - 12/2021 |
| CO    | NUNN 7 NNE                  | 57-0017 | 15M                 | 40.8066  | -104.7552 | 5390           | NCEI    | 12/2005 - 12/2021 |
| UT    | VERNAL 23 SSE               | 57-0022 | DLY                 | 40.1346  | -109.6429 | 4674           | NCEI    | 09/2011 - 05/2014 |
| UT    | VERNAL 23 SSE               | 57-0022 | HLY                 | 40.1346  | -109.6429 | 4674           | NCEI    | 09/2011 - 06/2014 |
| UT    | VERNAL 23 SSE               | 57-0022 | 15M                 | 40.1346  | -109.6429 | 4674           | NCEI    | 09/2011 - 06/2014 |
| BC    | CASTLEGAR A                 | 60-1123 | HLY                 | 49.3000  | -117.6300 | 1624           | EC      | 12/1972 - 03/1996 |
| BC    | CASTLEGAR BCHPA DAM         | 60-1124 | HLY                 | 49.3400  | -117.7700 | 1427           | EC      | 06/1969 - 07/2000 |
| BC    | CRANBROOK A                 | 60-1134 | HLY                 | 49.6100  | -115.7800 | 3084           | EC      | 04/1969 - 11/2002 |
| BC    | CRANBROOK AIRPORT AUTO      | 60-1135 | HLY                 | 49.6200  | -115.7900 | 3038           | EC      | 11/2013 - 08/2021 |
| BC    | KIMBERLEY PCC               | 60-1137 | HLY                 | 49.6300  | -115.9600 | 2917           | EC      | 06/1975 - 12/2005 |



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| BC    | SPARWOOD                       | 60-1138 | HLY                 | 49.7500  | -114.8800 | 3730           | EC      | 04/1980 - 08/2012 |
| AB    | LETHBRIDGE A                   | 60-1165 | HLY                 | 49.6300  | -112.8000 | 3045           | EC      | 04/1960 - 11/1995 |
| AB    | PINCHER CREEK                  | 60-1171 | HLY                 | 49.5000  | -113.9500 | 3789           | EC      | 06/1965 - 05/1979 |
| AB    | PINCHER CREEK A                | 60-1172 | HLY                 | 49.5200  | -114.0000 | 3901           | EC      | 07/1979 - 10/1993 |
| AB    | PINCHER CREEK CLIMATE          | 60-1173 | HLY                 | 49.5200  | -114.0000 | 3904           | EC      | 11/2012 - 08/2021 |
| AB    | MANYBERRIES CDA                | 60-1178 | HLY                 | 49.1200  | -110.4700 | 3064           | EC      | 06/1964 - 10/1990 |
| SK    | ORMISTON                       | 60-1201 | HLY                 | 49.7200  | -105.3700 | 2247           | EC      | 06/1969 - 09/1998 |
| SK    | WEYBURN                        | 60-1202 | HLY                 | 49.6500  | -103.8300 | 1867           | EC      | 10/1960 - 06/2007 |
| SK    | YELLOW GRASS NORTH             | 60-1203 | HLY                 | 49.8200  | -104.1800 | 1896           | EC      | 11/2016 - 08/2021 |
| SK    | ROCKGLEN (AUT)                 | 60-1213 | HLY                 | 49.1700  | -105.9800 | 3009           | EC      | 05/1971 - 08/2021 |
| UT    | LOGAN                          | 61-0014 | DLY                 | 41.6661  | -111.8914 | 4495           | NADP    | 12/1983 - 12/2017 |
| CO    | BUFFALO PASS - DRY LAKE        | 61-0035 | DLY                 | 40.5347  | -106.7811 | 8327           | NADP    | 10/1986 - 12/2017 |
| CO    | PAWNEE                         | 61-0037 | DLY                 | 40.8060  | -104.7560 | 5384           | NADP    | 05/1979 - 12/2017 |
| CO    | ROCKY MOUNTAIN NATIONAL PARK-B | 61-0038 | DLY                 | 40.3639  | -105.5810 | 8127           | NADP    | 05/1980 - 11/2017 |
| CO    | FT COLLINS AERC                | 62-0003 | HLY                 | 40.5833  | -105.1500 | 5062           | AWDN    | 02/1992 - 07/2021 |
| CO    | FT COLLINS AERC                | 62-0003 | DLY                 | 40.5833  | -105.1500 | 5062           | AWDN    | 02/1992 - 06/2021 |
| CO    | PECKHAM                        | 62-0010 | DLY                 | 40.3000  | -104.7333 | 4648           | AWDN    | 03/1992 - 06/2021 |
| CO    | PECKHAM                        | 62-0010 | HLY                 | 40.3000  | -104.7333 | 4648           | AWDN    | 03/1992 - 07/2021 |
| CO    | AULT                           | 62-0012 | DLY                 | 40.5667  | -104.7333 | 4885           | AWDN    | 03/1992 - 06/2021 |
| CO    | AULT                           | 62-0012 | HLY                 | 40.5667  | -104.7333 | 4885           | AWDN    | 03/1992 - 07/2021 |
| CO    | KERSEY                         | 62-0017 | DLY                 | 40.3667  | -104.5333 | 4573           | AWDN    | 04/1992 - 06/2021 |
| CO    | KERSEY                         | 62-0017 | HLY                 | 40.3667  | -104.5333 | 4573           | AWDN    | 04/1992 - 07/2021 |
| NE    | SCOTTSBLUFF 6NW                | 62-0031 | DLY                 | 41.9500  | -103.7000 | 4114           | AWDN    | 07/1996 - 06/2021 |
| NE    | SCOTTSBLUFF 6NW                | 62-0031 | HLY                 | 41.9500  | -103.7000 | 4114           | AWDN    | 07/1996 - 07/2021 |
| ND    | WILLISTON                      | 62-0049 | DLY                 | 48.1167  | -103.7500 | 2099           | AWDN    | 03/1989 - 06/2021 |
| ND    | WILLISTON                      | 62-0049 | HLY                 | 48.1167  | -103.7500 | 2099           | AWDN    | 03/1989 - 07/2021 |
| SK    | MANKOTA                        | 64-0017 | DLY                 | 49.1000  | -107.0170 | 2723           | NCEI    | 11/2012 - 11/2023 |
| AB    | FOREMOST AGDM ALTA             | 64-0019 | DLY                 | 49.4830  | -111.4830 | 2890           | NCEI    | 08/2004 - 11/2023 |
| AB    | BEAVER MINES                   | 64-0025 | DLY                 | 49.4670  | -114.1830 | 4124           | NCEI    | 08/2004 - 11/2023 |

| State | Station name                 | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|------------------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| AB    | MASINASIN AGDM               | 64-0028 | DLY                 | 49.1330  | -111.6500 | 3110           | NCEI    | 08/2004 - 11/2023 |
| SK    | WEYBURN SASK                 | 64-0032 | DLY                 | 49.7000  | -103.8000 | 1932           | NCEI    | 12/1991 - 11/2023 |
| AB    | LETHBRIDGE DEMO FARM AGDM A  | 64-0035 | DLY                 | 49.6830  | -112.7500 | 2963           | NCEI    | 09/2004 - 11/2023 |
| AB    | BOW ISLAND IRRIGATION AGDM   | 64-0038 | DLY                 | 49.8670  | -111.3830 | 2621           | NCEI    | 09/2004 - 03/2022 |
| AB    | RAYMOND AGDM ALTA            | 64-0042 | DLY                 | 49.4830  | -112.6830 | 3074           | NCEI    | 08/2004 - 11/2023 |
| AB    | PINCHER CREEK CLIMATE        | 64-0044 | DLY                 | 49.5170  | -114.0000 | 3904           | NCEI    | 12/1992 - 11/2023 |
| BC    | NELSON BC                    | 64-0046 | DLY                 | 49.4830  | -117.3000 | 1755           | NCEI    | 04/1995 - 11/2023 |
| CO    | MEEKER AIRPORT               | 64-0143 | HLY                 | 40.0440  | -107.8880 | 6367           | NCEI    | 12/2005 - 11/2023 |
| CO    | MEEKER AIRPORT               | 64-0143 | DLY                 | 40.0440  | -107.8880 | 6367           | NCEI    | 12/2005 - 11/2023 |
| CO    | FORT COLLINS DOWNTOWN        | 64-0147 | DLY                 | 40.5880  | -105.0420 | 4939           | NCEI    | 01/1973 - 08/1994 |
| CO    | CRAIG-MOFFAT                 | 64-0176 | DLY                 | 40.5000  | -107.5330 | 6283           | NCEI    | 08/1977 - 12/2005 |
| UT    | SALT LAKE CITY INTERNATIONAL | 64-0184 | HLY                 | 40.7710  | -111.9650 | 4227           | NCEI    | 12/1949 - 11/2023 |
| UT    | SALT LAKE CITY INTERNATIONAL | 64-0184 | DLY                 | 40.7710  | -111.9650 | 4227           | NCEI    | 12/1972 - 11/2023 |
| UT    | HILL AFB AIRPORT             | 64-0193 | HLY                 | 41.1170  | -111.9670 | 4789           | NCEI    | 11/2006 - 11/2023 |
| UT    | HILL AFB AIRPORT             | 64-0193 | DLY                 | 41.1170  | -111.9670 | 4789           | NCEI    | 12/1972 - 11/2023 |
| SD    | ELLSWORTH AIR FORCE BASE     | 64-0235 | DLY                 | 44.1500  | -103.1000 | 3278           | NCEI    | 12/1970 - 11/2023 |
| SD    | ELLSWORTH AIR FORCE BASE     | 64-0235 | HLY                 | 44.1500  | -103.1000 | 3278           | NCEI    | 08/2006 - 11/2023 |
| WA    | SPOKANE INTERNATIONAL AIRPOR | 64-0342 | DLY                 | 47.6220  | -117.5280 | 2355           | NCEI    | 12/1972 - 11/2023 |
| WA    | SPOKANE INTERNATIONAL AIRPOR | 64-0342 | HLY                 | 47.6220  | -117.5280 | 2355           | NCEI    | 08/1948 - 11/2023 |
| WA    | FAIRCHILD AIR FORCE BASE     | 64-0345 | HLY                 | 47.6330  | -117.6500 | 2461           | NCEI    | 01/2007 - 11/2023 |
| WA    | FAIRCHILD AIR FORCE BASE     | 64-0345 | DLY                 | 47.6330  | -117.6500 | 2461           | NCEI    | 10/1947 - 11/2023 |
| WA    | COLVILLE MUNICIPAL ARPT      | 64-0355 | DLY                 | 48.5440  | -117.8840 | 1886           | NCEI    | 12/1989 - 04/2004 |
| NE    | POTTER 1.1 ESE               | 69-0014 | DLY                 | 41.2098  | -103.2978 | 4370           | NCEI    | 04/2004 - 12/2009 |
| CO    | BOULDER 1.4 NNW              | 69-0098 | DLY                 | 40.0311  | -105.2883 | 5456           | NCEI    | 04/2001 - 10/2023 |
| CO    | ALLENS PARK 1.5 ESE          | 69-0103 | DLY                 | 40.1869  | -105.5002 | 8455           | NCEI    | 04/2001 - 10/2023 |
| CO    | BOULDER 1.3 NW               | 69-0123 | DLY                 | 40.0242  | -105.2689 | 5377           | NCEI    | 07/2002 - 10/2023 |
| CO    | LONGMONT 2.8 E               | 69-0186 | DLY                 | 40.1724  | -105.0592 | 4984           | NCEI    | 04/2001 - 05/2014 |
| CO    | LONGMONT 1.8 ENE             | 69-0229 | DLY                 | 40.1848  | -105.0820 | 5060           | NCEI    | 02/2013 - 10/2023 |
| CO    | LONGMONT 1.8 E               | 69-0230 | DLY                 | 40.1697  | -105.0779 | 5014           | NCEI    | 08/2013 - 10/2023 |

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|-------|----------------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| CO    | STERLING 1.8 NW            | 69-0328 | DLY                 | 40.6421  | -103.2376 | 3999           | NCEI    | 03/2001 - 09/2017 |
| CO    | STERLING 1.5 S             | 69-0337 | DLY                 | 40.6290  | -103.2090 | 3938           | NCEI    | 12/2011 - 10/2023 |
| CO    | STERLING 1.5 SSE           | 69-0339 | DLY                 | 40.6309  | -103.2047 | 3937           | NCEI    | 07/2013 - 01/2022 |
| CO    | DRAKE 3.0 NNE              | 69-0438 | DLY                 | 40.4700  | -105.3092 | 6752           | NCEI    | 05/2000 - 09/2020 |
| CO    | ESTES PARK 2.2 NE          | 69-0448 | DLY                 | 40.4018  | -105.4878 | 7772           | NCEI    | 03/2002 - 03/2018 |
| CO    | FCL 2.5 W                  | 69-0461 | DLY                 | 40.5857  | -105.1317 | 5118           | NCEI    | 04/1998 - 10/2023 |
| CO    | FCL 3.0 W                  | 69-0472 | DLY                 | 40.5876  | -105.1473 | 5220           | NCEI    | 04/1998 - 10/2023 |
| CO    | BLV 4.0 NW                 | 69-0634 | DLY                 | 40.6754  | -105.2150 | 5354           | NCEI    | 05/1998 - 10/2023 |
| CO    | HUDSON 4.8 WSW             | 69-1120 | DLY                 | 40.0440  | -104.7254 | 5036           | NCEI    | 11/2002 - 10/2023 |
| CO    | NUNN 1.2 ENE               | 69-1183 | DLY                 | 40.7106  | -104.7595 | 5202           | NCEI    | 09/2010 - 10/2023 |
| CO    | KERSEY 1.3 WSW             | 69-1227 | DLY                 | 40.3802  | -104.5842 | 4643           | NCEI    | 03/2014 - 10/2023 |
| ND    | BEACH 0.3 SSE              | 69-1787 | DLY                 | 46.9095  | -104.0050 | 2803           | NCEI    | 01/2012 - 10/2023 |
| OR    | UNION 0.8 S                | 69-1811 | DLY                 | 45.1969  | -117.8656 | 2772           | NCEI    | 10/2009 - 12/2013 |
| SD    | HERMOSA 0.3 ENE            | 69-1834 | DLY                 | 43.8410  | -103.1854 | 3294           | NCEI    | 09/2009 - 10/2023 |
| SD    | SPEARFISH 0.1 WSW          | 69-1878 | DLY                 | 44.4882  | -103.8493 | 3754           | NCEI    | 03/2011 - 10/2023 |
| UT    | GARLAND 1.0 SE             | 69-1940 | DLY                 | 41.7267  | -112.1482 | 4328           | NCEI    | 12/2009 - 10/2023 |
| UT    | FARMINGTON 1.8 W           | 69-1977 | DLY                 | 40.9874  | -111.9286 | 4239           | NCEI    | 04/2008 - 10/2023 |
| UT    | SALT LAKE CITY 3.3 E       | 69-2008 | DLY                 | 40.7751  | -111.8664 | 4568           | NCEI    | 06/2008 - 10/2023 |
| UT    | SALT LAKE CITY 3.6 SE      | 69-2015 | DLY                 | 40.7336  | -111.8332 | 4590           | NCEI    | 09/2009 - 12/2015 |
| UT    | VERNAL 0.8 S               | 69-2051 | DLY                 | 40.4402  | -109.5355 | 5351           | NCEI    | 04/2016 - 06/2021 |
| UT    | HEBER CITY 2.4 SSE         | 69-2076 | DLY                 | 40.4733  | -111.4020 | 5768           | NCEI    | 09/2009 - 10/2023 |
| WA    | NEWPORT 0.4 W              | 69-2090 | DLY                 | 48.1803  | -117.0593 | 2182           | NCEI    | 09/2008 - 06/2014 |
| BC    | NELSON 0.6 SW              | 70-0007 | DLY                 | 49.4935  | -117.2876 | 1955           | NCEI    | 04/2015 - 10/2023 |
| SK    | WEYBURN 1 E                | 70-0014 | DLY                 | 49.6668  | -103.8454 | 1856           | NCEI    | 12/2014 - 10/2023 |
| BC    | BONNINGTON FALLS           | 71-0002 | DLY                 | 49.4613  | -117.5031 | 1499           | NCEI    | 11/1923 - 11/1939 |
| BC    | CASTLEGAR A                | 71-0005 | DLY                 | 49.3000  | -117.6333 | 1627           | NCEI    | 10/1965 - 10/2023 |
| BC    | CASTLEGAR BCHPA DAM        | 71-0006 | DLY                 | 49.3424  | -117.7641 | 1427           | NCEI    | 04/1969 - 10/2023 |
| BC    | CASTLEGAR ROBSON PUMPHOUSE | 71-0007 | DLY                 | 49.3372  | -117.7314 | 1427           | NCEI    | 08/1998 - 06/2003 |
| BC    | COLUMBIA GARDENS           | 71-0008 | DLY                 | 49.0500  | -117.6000 | 1421           | NCEI    | 06/1937 - 05/1970 |

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|-------|--------------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| BC    | COLUMBIA GARDENS NORTH   | 71-0009 | DLY                 | 49.0667  | -117.6000 | 1601           | NCEI    | 04/1970 - 05/1976 |
| BC    | CRESTON                  | 71-0012 | DLY                 | 49.1000  | -116.5167 | 2001           | NCEI    | 04/1912 - 06/2015 |
| BC    | KASLO                    | 71-0017 | DLY                 | 49.9167  | -116.9167 | 1969           | NCEI    | 05/1894 - 09/2018 |
| BC    | KINGSGATE                | 71-0018 | DLY                 | 49.0000  | -116.1833 | 2690           | NCEI    | 11/1923 - 04/1962 |
| BC    | NELSON                   | 71-0022 | DLY                 | 49.4875  | -117.3025 | 1772           | NCEI    | 11/1903 - 10/1955 |
| BC    | NELSON NE                | 71-0023 | DLY                 | 49.5861  | -117.2064 | 1870           | NCEI    | 12/1982 - 08/2023 |
| BC    | NELSON 2                 | 71-0026 | DLY                 | 49.5000  | -117.2833 | 1982           | NCEI    | 09/1955 - 12/1982 |
| BC    | NELSON VOCATIONAL SCHOOL | 71-0027 | DLY                 | 49.4833  | -117.3000 | 2228           | NCEI    | 06/1972 - 01/1978 |
| BC    | NELSON CS                | 71-0029 | DLY                 | 49.4914  | -117.3053 | 1755           | NCEI    | 09/1992 - 10/2023 |
| BC    | ROBSON                   | 71-0032 | DLY                 | 49.3333  | -117.7000 | 1450           | NCEI    | 12/1945 - 03/1980 |
| BC    | ROSSLAND CITY YARD       | 71-0033 | DLY                 | 49.0833  | -117.8000 | 3409           | NCEI    | 11/1899 - 10/2000 |
| BC    | ROSSLAND MACLEAN         | 71-0034 | DLY                 | 49.0833  | -117.8000 | 3560           | NCEI    | 07/1963 - 03/1990 |
| BC    | SOUTH SLOCAN             | 71-0037 | DLY                 | 49.4548  | -117.5212 | 1499           | NCEI    | 08/1940 - 12/2008 |
| BC    | TRAIL SUNNINGDALE        | 71-0040 | DLY                 | 49.1181  | -117.7211 | 1421           | NCEI    | 08/1959 - 12/1970 |
| BC    | WANETA                   | 71-0041 | DLY                 | 49.0072  | -117.5927 | 1831           | NCEI    | 12/1912 - 08/1977 |
| BC    | WARFIELD                 | 71-0042 | DLY                 | 49.0974  | -117.7450 | 1988           | NCEI    | 04/1928 - 12/2002 |
| BC    | WARFIELD RCS             | 71-0043 | DLY                 | 49.1122  | -117.7385 | 1860           | NCEI    | 05/2002 - 10/2023 |
| BC    | NELSON RIXEN CREEK       | 71-0048 | DLY                 | 49.5123  | -117.3988 | 2577           | NCEI    | 05/1990 - 10/2023 |
| BC    | CRANBROOK                | 71-0055 | DLY                 | 49.5000  | -115.7833 | 3015           | NCEI    | 07/1901 - 03/1939 |
| BC    | CRANBROOK A              | 71-0056 | DLY                 | 49.5333  | -115.7667 | 3012           | NCEI    | 12/1937 - 02/1968 |
| BC    | CRANBROOK A              | 71-0057 | DLY                 | 49.6167  | -115.7833 | 3084           | NCEI    | 01/1968 - 11/2012 |
| BC    | CRANBROOK MT BAKER       | 71-0059 | DLY                 | 49.5000  | -115.7333 | 3301           | NCEI    | 06/1972 - 08/1977 |
| BC    | CRANBROOK A              | 71-0060 | DLY                 | 49.6167  | -115.7833 | 3084           | NCEI    | 09/2012 - 10/2023 |
| BC    | ELKO                     | 71-0062 | DLY                 | 49.3000  | -115.1167 | 3054           | NCEI    | 08/1923 - 05/1995 |
| BC    | FERNIE                   | 71-0063 | DLY                 | 49.4833  | -115.0667 | 3284           | NCEI    | 10/1913 - 10/2023 |
| BC    | CRANBROOK CITY           | 71-0065 | DLY                 | 49.5167  | -115.7667 | 3038           | NCEI    | 05/1979 - 03/2003 |
| BC    | FT STEELE DANDY CRK      | 71-0067 | DLY                 | 49.5167  | -115.4667 | 2808           | NCEI    | 01/1968 - 10/2023 |
| BC    | KIMBERLEY PCC            | 71-0074 | DLY                 | 49.6333  | -115.9667 | 2917           | NCEI    | 04/1975 - 10/2023 |
| BC    | MARYSVILLE               | 71-0075 | DLY                 | 49.6333  | -115.9500 | 3150           | NCEI    | 06/1972 - 09/2009 |

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| BC    | NATAL KAISER RESOURCES    | 71-0079 | DLY                 | 49.7500  | -114.8833 | 3701           | NCEI    | 03/1969 - 03/1980 |
| BC    | NEWGATE                   | 71-0080 | DLY                 | 49.0219  | -115.1861 | 2513           | NCEI    | 01/1914 - 07/1960 |
| BC    | SPARWOOD                  | 71-0081 | DLY                 | 49.7500  | -114.8833 | 3734           | NCEI    | 01/1980 - 02/2020 |
| BC    | WARDNER KTNV HATCHERY     | 71-0084 | DLY                 | 49.4667  | -115.4667 | 2493           | NCEI    | 08/1971 - 02/2021 |
| BC    | WASA                      | 71-0085 | DLY                 | 49.8167  | -115.6333 | 3182           | NCEI    | 11/1923 - 12/2017 |
| AB    | BOW ISLAND                | 71-0093 | DLY                 | 49.8667  | -111.3833 | 2621           | NCEI    | 03/2003 - 07/2004 |
| AB    | BOW ISLAND EXP ST         | 71-0094 | DLY                 | 49.8667  | -111.3667 | 2621           | NCEI    | 11/1954 - 12/1959 |
| AB    | BOW ISLAND RIVERS DEV     | 71-0096 | DLY                 | 49.8667  | -111.3667 | 2621           | NCEI    | 07/1958 - 04/1976 |
| AB    | CALDWELL                  | 71-0099 | DLY                 | 49.1667  | -113.6333 | 4219           | NCEI    | 09/1910 - 12/1990 |
| AB    | CARDSTON                  | 71-0100 | DLY                 | 49.1333  | -113.2500 | 3914           | NCEI    | 06/1918 - 03/2005 |
| AB    | CARWAY                    | 71-0103 | DLY                 | 49.0000  | -113.3833 | 4442           | NCEI    | 06/1914 - 11/2011 |
| AB    | CARWAY                    | 71-0104 | DLY                 | 49.0000  | -113.3833 | 4442           | NCEI    | 11/2011 - 10/2023 |
| AB    | CONNELLY CREEK            | 71-0107 | DLY                 | 49.6167  | -114.2167 | 4098           | NCEI    | 08/1978 - 12/2011 |
| AB    | COWLEY OLIN CREEK         | 71-0111 | DLY                 | 49.7000  | -114.0667 | 4049           | NCEI    | 05/1961 - 06/2001 |
| AB    | CLARESHOLM MEADOW CREEK   | 71-0113 | DLY                 | 49.9333  | -113.7333 | 3396           | NCEI    | 08/1912 - 03/2005 |
| AB    | FOREMOST                  | 71-0117 | DLY                 | 49.4833  | -111.4500 | 2927           | NCEI    | 06/1915 - 03/2005 |
| AB    | FOREMOST AGDM             | 71-0118 | DLY                 | 49.4833  | -111.4833 | 2890           | NCEI    | 10/2002 - 10/2023 |
| AB    | FOREMOST EXP ST           | 71-0120 | DLY                 | 49.4833  | -111.4500 | 2920           | NCEI    | 11/1953 - 07/1960 |
| AB    | FORT MACLEOD              | 71-0121 | DLY                 | 49.7167  | -113.4000 | 3117           | NCEI    | 07/1877 - 03/1988 |
| AB    | LETHBRIDGE                | 71-0138 | DLY                 | 49.6333  | -112.8000 | 3048           | NCEI    | 11/2010 - 10/2023 |
| AB    | LETHBRIDGE A              | 71-0140 | DLY                 | 49.6333  | -112.8000 | 3048           | NCEI    | 11/1937 - 07/2008 |
| AB    | LETHBRIDGE A CR10         | 71-0141 | DLY                 | 49.6333  | -112.8000 | 3048           | NCEI    | 02/1996 - 11/2007 |
| AB    | LETHBRIDGE AWOS A         | 71-0142 | DLY                 | 49.6333  | -112.8000 | 3048           | NCEI    | 11/2005 - 01/2011 |
| AB    | LETHBRIDGE CDA            | 71-0144 | DLY                 | 49.7000  | -112.7667 | 2986           | NCEI    | 12/1907 - 10/2020 |
| AB    | LETHBRIDGE DEMO FARM AGDM | 71-0147 | DLY                 | 49.6833  | -112.7500 | 2963           | NCEI    | 05/2004 - 10/2023 |
| AB    | MONARCH                   | 71-0152 | DLY                 | 49.8167  | -113.1667 | 3107           | NCEI    | 08/1980 - 11/2012 |
| AB    | MOUNTAIN VIEW             | 71-0153 | DLY                 | 49.1333  | -113.6333 | 4393           | NCEI    | 08/1912 - 03/2006 |
| AB    | PINCHER CREEK             | 71-0158 | DLY                 | 49.5167  | -114.0000 | 3904           | NCEI    | 05/2011 - 10/2023 |
| AB    | PINCHER CREEK             | 71-0159 | DLY                 | 49.5000  | -113.9500 | 3789           | NCEI    | 06/1960 - 05/1979 |

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| AB    | PINCHER CREEK A        | 71-0160 | DLY                 | 49.5167  | -114.0000 | 3904           | NCEI    | 04/1979 - 03/1994 |
| AB    | PINCHER CREEK (AUT)    | 71-0161 | DLY                 | 49.5167  | -114.0000 | 3904           | NCEI    | 10/1992 - 06/2011 |
| AB    | PINCHER CREEK CLIMATE  | 71-0162 | DLY                 | 49.5167  | -114.0000 | 3904           | NCEI    | 02/1996 - 10/2023 |
| AB    | PINCHER CREEK TOWN     | 71-0166 | DLY                 | 49.5167  | -113.9667 | 3757           | NCEI    | 06/1893 - 03/1963 |
| AB    | RAYMOND                | 71-0168 | DLY                 | 49.4500  | -112.7000 | 3140           | NCEI    | 03/1910 - 12/1976 |
| AB    | SEVEN PERSONS          | 71-0170 | DLY                 | 49.8333  | -110.9000 | 2480           | NCEI    | 11/1910 - 11/2007 |
| AB    | TABER                  | 71-0174 | DLY                 | 49.8000  | -112.1167 | 2661           | NCEI    | 12/1906 - 09/2023 |
| AB    | WINNIFRED              | 71-0177 | DLY                 | 49.9000  | -111.2000 | 2726           | NCEI    | 10/1928 - 01/1967 |
| AB    | ALTAWAN                | 71-0182 | DLY                 | 49.2500  | -110.0167 | 3100           | NCEI    | 09/1965 - 09/2007 |
| AB    | MANYBERRIES CDA        | 71-0196 | DLY                 | 49.1167  | -110.4667 | 3064           | NCEI    | 03/1928 - 12/1993 |
| AB    | MASINASIN              | 71-0199 | DLY                 | 49.1333  | -111.6500 | 3127           | NCEI    | 10/1980 - 09/2008 |
| AB    | ONEFOUR CDA            | 71-0207 | DLY                 | 49.1167  | -110.4667 | 3068           | NCEI    | 11/1994 - 10/2023 |
| AB    | BEAVER MINES           | 71-0219 | DLY                 | 49.4667  | -114.1833 | 4124           | NCEI    | 09/1912 - 03/2012 |
| AB    | CAMERON FALLS          | 71-0225 | DLY                 | 49.0500  | -113.9167 | 4301           | NCEI    | 12/1974 - 12/1995 |
| AB    | COLEMAN                | 71-0230 | DLY                 | 49.6333  | -114.5833 | 4400           | NCEI    | 08/1912 - 09/1997 |
| AB    | LUNDBRECK              | 71-0239 | DLY                 | 49.9167  | -114.1333 | 4452           | NCEI    | 01/1911 - 09/1958 |
| AB    | MOUNTAIN VIEW BIRDSEYE | 71-0241 | DLY                 | 49.1167  | -113.7333 | 4619           | NCEI    | 07/1916 - 04/1981 |
| AB    | WATERTON PARK GATE     | 71-0249 | DLY                 | 49.1333  | -113.8167 | 4229           | NCEI    | 07/1994 - 10/2023 |
| AB    | WATERTON PARK HQ       | 71-0259 | DLY                 | 49.0500  | -113.9167 | 4199           | NCEI    | 11/1943 - 03/1973 |
| AB    | WATERTON RIVER CABIN   | 71-0261 | DLY                 | 49.1167  | -113.8333 | 4203           | NCEI    | 07/1949 - 12/1995 |
| SK    | AMULET                 | 71-0269 | DLY                 | 49.6167  | -104.7333 | 2388           | NCEI    | 10/1970 - 05/2002 |
| SK    | CEYLON                 | 71-0271 | DLY                 | 49.4667  | -104.6000 | 2339           | NCEI    | 01/1922 - 06/1978 |
| SK    | DAHINDA                | 71-0273 | DLY                 | 49.7333  | -105.0333 | 2349           | NCEI    | 03/1973 - 03/2012 |
| SK    | LAKE ALMA              | 71-0277 | DLY                 | 49.0667  | -104.2500 | 2375           | NCEI    | 03/1973 - 12/2006 |
| SK    | MACOUN                 | 71-0278 | DLY                 | 49.2333  | -103.2333 | 1873           | NCEI    | 06/1971 - 03/2017 |
| SK    | MIDALE                 | 71-0281 | DLY                 | 49.4000  | -103.4000 | 1909           | NCEI    | 04/1922 - 10/1991 |
| SK    | ORMISTON               | 71-0282 | DLY                 | 49.7167  | -105.3667 | 2251           | NCEI    | 05/1951 - 12/1998 |
| SK    | RADVILL                | 71-0285 | DLY                 | 49.5000  | -104.2833 | 2077           | NCEI    | 07/1951 - 05/1996 |
| SK    | WEYBURN                | 71-0290 | DLY                 | 49.6500  | -103.8333 | 1870           | NCEI    | 05/1900 - 12/2012 |

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| SK    | WEYBURN 2           | 71-0291 | DLY                 | 49.6667  | -103.8500 | 1870           | NCEI    | 06/1975 - 12/1993 |
| SK    | YELLOW GRASS        | 71-0292 | DLY                 | 49.8167  | -104.1833 | 1903           | NCEI    | 06/1911 - 07/2017 |
| SK    | WEYBURN             | 71-0293 | DLY                 | 49.7000  | -103.8000 | 1932           | NCEI    | 10/1992 - 10/2023 |
| SK    | ANEROID             | 71-0294 | DLY                 | 49.7167  | -107.3000 | 2474           | NCEI    | 03/1916 - 04/2005 |
| SK    | ASSINIBOIA          | 71-0295 | DLY                 | 49.7333  | -105.9667 | 2375           | NCEI    | 04/1915 - 07/1997 |
| SK    | ASSINIBOIA AIRPORT  | 71-0296 | DLY                 | 49.7333  | -105.9500 | 2382           | NCEI    | 10/1992 - 10/2023 |
| SK    | CYPRESS HILLS       | 71-0299 | DLY                 | 49.6667  | -109.4667 | 3924           | NCEI    | 03/1981 - 10/2014 |
| SK    | GARDEN HEAD         | 71-0301 | DLY                 | 49.8167  | -108.5667 | 2969           | NCEI    | 01/1911 - 11/1972 |
| SK    | GRAVELBOURG         | 71-0303 | DLY                 | 49.8833  | -106.5500 | 2297           | NCEI    | 06/1911 - 10/1994 |
| SK    | GULL LAKE CDA EPF   | 71-0305 | DLY                 | 49.9500  | -108.4667 | 2976           | NCEI    | 11/1955 - 10/1991 |
| SK    | ILLERBRUN           | 71-0308 | DLY                 | 49.8833  | -108.3667 | 2927           | NCEI    | 09/1910 - 09/1949 |
| SK    | KINCAID             | 71-0310 | DLY                 | 49.6667  | -107.0000 | 2425           | NCEI    | 04/1951 - 09/2000 |
| SK    | KLINTONEL           | 71-0311 | DLY                 | 49.6833  | -108.9167 | 3524           | NCEI    | 06/1910 - 01/1994 |
| SK    | LIMERICK            | 71-0313 | DLY                 | 49.5000  | -106.2500 | 2490           | NCEI    | 04/1951 - 08/1993 |
| SK    | MAPLE CREEK         | 71-0314 | DLY                 | 49.9000  | -109.4667 | 2516           | NCEI    | 10/1992 - 10/2023 |
| SK    | MAPLE CREEK         | 71-0315 | DLY                 | 49.9000  | -109.4833 | 2507           | NCEI    | 03/1884 - 07/1982 |
| SK    | MAPLE CREEK NORTH   | 71-0316 | DLY                 | 50.0000  | -109.4667 | 2507           | NCEI    | 06/1951 - 03/2008 |
| SK    | MAPLE CREEK CDA EPF | 71-0317 | DLY                 | 49.9073  | -109.4793 | 2500           | NCEI    | 11/1953 - 08/1961 |
| SK    | MAPLE CREEK H S     | 71-0318 | DLY                 | 49.9000  | -109.4833 | 2516           | NCEI    | 04/1984 - 06/1985 |
| SK    | SHAUNAVON           | 71-0322 | DLY                 | 49.6500  | -108.4000 | 3009           | NCEI    | 04/1915 - 01/1979 |
| SK    | SHAUNAVON 2         | 71-0324 | DLY                 | 49.6500  | -108.4167 | 2999           | NCEI    | 07/1971 - 10/2003 |
| SK    | SHAUNAVON 3         | 71-0325 | DLY                 | 49.9000  | -108.4167 | 2927           | NCEI    | 07/1971 - 03/2008 |
| SK    | WOODROW             | 71-0327 | DLY                 | 49.5667  | -106.7833 | 2395           | NCEI    | 02/1962 - 01/2008 |
| SK    | CLAYDON             | 71-0333 | DLY                 | 49.1333  | -109.1000 | 3199           | NCEI    | 05/1971 - 08/2017 |
| SK    | CONSUL              | 71-0335 | DLY                 | 49.3000  | -109.5167 | 3054           | NCEI    | 10/1921 - 09/1970 |
| SK    | CONSUL              | 71-0336 | DLY                 | 49.3000  | -109.4833 | 3091           | NCEI    | 11/1950 - 11/1989 |
| SK    | CORONACH            | 71-0337 | DLY                 | 49.1167  | -105.5167 | 2536           | NCEI    | 04/1971 - 04/2018 |
| SK    | CORONACH SPC        | 71-0339 | DLY                 | 49.0500  | -105.4833 | 2480           | NCEI    | 10/1980 - 10/2023 |
| SK    | CYPRESS HILLS PARK  | 71-0340 | DLY                 | 49.6333  | -109.5167 | 4170           | NCEI    | 10/1992 - 10/2023 |

| State | Station name                   | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset  | Period of Record  |
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| SK    | CYPRESS HILLS PARK             | 71-0341 | DLY                 | 49.6689  | -109.4992 | 3950           | NCEI     | 05/1918 - 06/1972 |
| SK    | MANKOTA                        | 71-0353 | DLY                 | 49.1000  | -107.0167 | 2723           | NCEI     | 06/1962 - 10/2023 |
| SK    | NASHLYN                        | 71-0357 | DLY                 | 49.2000  | -109.5167 | 3100           | NCEI     | 11/1910 - 01/1979 |
| SK    | ROCKGLEN (AUT)                 | 71-0360 | DLY                 | 49.1667  | -105.9833 | 3009           | NCEI     | 10/1970 - 10/2023 |
| SK    | VAL-MARIE                      | 71-0363 | DLY                 | 49.3667  | -107.8500 | 2651           | NCEI     | 01/1937 - 05/2010 |
| SK    | WEST POPLAR RIVER              | 71-0369 | DLY                 | 49.0000  | -106.3833 | 2874           | NCEI     | 10/1956 - 06/2002 |
| SK    | WILLOW CREEK                   | 71-0370 | DLY                 | 49.0167  | -109.9167 | 2733           | NCEI     | 10/1910 - 08/1974 |
| CO    | CRAIG-MOFFAT ARP               | 72-0001 | HLY                 | 40.4930  | -107.5239 | 6181           | SYNOPTIC | 01/2000 - 12/2023 |
| CO    | MEEKER ARP                     | 72-0002 | HLY                 | 40.0444  | -107.8883 | 6365           | SYNOPTIC | 12/1998 - 12/2023 |
| OR    | ONTARIO MUNC ARP               | 72-2837 | HLY                 | 44.0142  | -117.0081 | 2185           | SYNOPTIC | 12/1998 - 12/2023 |
| OR    | ROME                           | 72-2839 | HLY                 | 42.5902  | -117.8646 | 4055           | SYNOPTIC | 12/1998 - 12/2023 |
| SD    | BELLE FOURCHE RIV @ WY/SD STAT | 72-2970 | HLY                 | 44.7497  | -104.0469 | 3096           | SYNOPTIC | 03/2007 - 12/2023 |
| UT    | VERNAL ARP                     | 72-3113 | HLY                 | 40.4430  | -109.5127 | 5262           | SYNOPTIC | 12/1999 - 12/2023 |
| WA    | DEER PK, DEER PK ARP           | 72-3741 | HLY                 | 47.9742  | -117.4283 | 2205           | SYNOPTIC | 12/1999 - 12/2023 |
| WA    | SPOKANE, FELTS FLD             | 72-3744 | HLY                 | 47.6856  | -117.3203 | 1952           | SYNOPTIC | 12/1999 - 12/2023 |
| WA    | CHEWELAH                       | 72-3829 | HLY                 | 48.2732  | -117.7410 | 1644           | SYNOPTIC | 06/2016 - 10/2021 |
| CO    | DINOSAUR N.M.                  | 76-0006 | HLY                 | 40.5086  | -108.9106 | 5960           | RAWS     | 07/1998 - 10/2021 |
| CO    | ERNIE GULCH                    | 76-0008 | HLY                 | 40.0458  | -108.2000 | 7000           | RAWS     | 07/1984 - 09/2013 |
| CO    | ESTES PARK                     | 76-0009 | HLY                 | 40.3667  | -105.5500 | 7820           | RAWS     | 03/2001 - 10/2021 |
| CO    | LODORE                         | 76-0014 | HLY                 | 40.7386  | -108.8367 | 5940           | RAWS     | 06/1987 - 10/2021 |
| CO    | NOVEMBER 01                    | 76-0015 | HLY                 | 40.6314  | -103.8367 | 4794           | RAWS     | 10/1999 - 03/2013 |
| CO    | PINTO                          | 76-0017 | HLY                 | 40.0097  | -108.4597 | 6940           | RAWS     | 01/1989 - 10/2021 |
| ND    | SAND CREEK                     | 76-0333 | HLY                 | 46.5456  | -103.5183 | 2700           | RAWS     | 08/1997 - 11/2021 |
| ND    | SCOTTS BLUFF                   | 76-0334 | HLY                 | 41.8167  | -103.7000 | 4224           | RAWS     | 08/2001 - 11/2021 |
| ND    | WATFORD CITY                   | 76-0336 | HLY                 | 47.7803  | -103.2867 | 2165           | RAWS     | 07/1997 - 11/2021 |
| ND    | BAKER PARK                     | 76-0337 | HLY                 | 43.9792  | -103.4250 | 4674           | RAWS     | 10/2001 - 11/2021 |
| ND    | CAMP CROOK                     | 76-0338 | HLY                 | 45.5625  | -103.9917 | 3120           | RAWS     | 05/1990 - 07/2007 |
| ND    | CUSTER                         | 76-0340 | HLY                 | 43.7500  | -103.6333 | 5200           | RAWS     | 05/2000 - 11/2021 |
| ND    | WICA-ELK MOUNTAIN              | 76-0341 | HLY                 | 43.5576  | -103.4835 | 4110           | RAWS     | 06/1996 - 11/2021 |



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| ND    | NEMO                           | 76-0345 | HLY                 | 44.1917  | -103.5097 | 4644           | RAWS    | 05/1993 - 11/2021 |
| ND    | RED CANYON                     | 76-0347 | HLY                 | 43.4258  | -103.7589 | 4644           | RAWS    | 05/1993 - 11/2021 |
| NV    | LONG HOLLOW                    | 76-0357 | HLY                 | 41.5386  | -116.2175 | 5820           | RAWS    | 09/1986 - 10/2021 |
| OR    | BLUE CANYON                    | 76-0366 | HLY                 | 44.6700  | -117.9336 | 4200           | RAWS    | 09/1986 - 10/2021 |
| OR    | EDEN                           | 76-0370 | HLY                 | 45.9267  | -117.5883 | 4200           | RAWS    | 05/1990 - 10/2021 |
| OR    | FLAGSTAFF HILL                 | 76-0371 | HLY                 | 44.8142  | -117.7289 | 3945           | RAWS    | 03/1999 - 10/2021 |
| OR    | GRASSY MOUNTAIN                | 76-0373 | HLY                 | 42.6261  | -117.3950 | 4560           | RAWS    | 01/1985 - 10/2021 |
| OR    | KELSAY BUTTE                   | 76-0375 | HLY                 | 43.9014  | -117.9858 | 5187           | RAWS    | 01/1985 - 10/2021 |
| OR    | OWYHEE RIDGE                   | 76-0381 | HLY                 | 43.5833  | -117.2333 | 4400           | RAWS    | 01/1985 - 10/2021 |
| OR    | ROBERTS BUTTE                  | 76-0386 | HLY                 | 45.6817  | -117.2064 | 4263           | RAWS    | 10/1998 - 10/2021 |
| UT    | CART CREEK                     | 76-0393 | HLY                 | 40.8847  | -109.4122 | 6900           | RAWS    | 07/1985 - 10/2021 |
| UT    | DIAMOND RIM                    | 76-0395 | HLY                 | 40.6172  | -109.2428 | 7730           | RAWS    | 11/1983 - 10/2021 |
| UT    | HEWINTA                        | 76-0398 | HLY                 | 40.9503  | -110.4842 | 9515           | RAWS    | 07/1984 - 10/2021 |
| UT    | KINGS POINT - DUTCH JOHN 16ESE | 76-0399 | HLY                 | 40.8606  | -109.1022 | 5670           | RAWS    | 09/1985 - 10/2021 |
| UT    | PLEASANT GROVE                 | 76-0406 | HLY                 | 40.4311  | -111.7500 | 5200           | RAWS    | 06/1997 - 10/2021 |
| UT    | YAMPA PLATEAU - JENSEN 7SSE    | 76-0418 | HLY                 | 40.2780  | -109.2888 | 5240           | RAWS    | 02/1984 - 10/2021 |
| UT    | YELLOWSTONE - ALTAMONT 13NNW   | 76-0419 | HLY                 | 40.5436  | -110.3294 | 7800           | RAWS    | 06/1983 - 10/2021 |
| SD    | BUFFALO ASOS                   | 78-0001 | 15M                 | 45.6044  | -103.5464 | 3004           | NCEI    | 03/2005 - 10/2021 |
| NE    | CHADRON MUNI AP                | 78-0013 | 15M                 | 42.8374  | -103.0981 | 3294           | NCEI    | 03/2005 - 10/2021 |
| CO    | MEEKER AIRPORT                 | 78-0021 | 15M                 | 40.0442  | -107.8886 | 6366           | NCEI    | 03/2005 - 10/2021 |
| OR    | ONTARIO                        | 78-0046 | 15M                 | 44.0206  | -117.0128 | 2193           | NCEI    | 03/2005 - 10/2021 |
| UT    | SALT LAKE CITY INTL AP         | 78-0058 | 15M                 | 40.7781  | -111.9694 | 4225           | NCEI    | 01/2000 - 10/2021 |
| SD    | ELLSWORTH AFB                  | 79-0016 | DLY                 | 44.1500  | -103.1000 | 3215           | NCEI    | 11/1948 - 12/1970 |
| NE    | CHADRON MUNI AP                | 79-0017 | DLY                 | 42.8375  | -103.0953 | 3318           | NCEI    | 06/2000 - 10/2023 |
| NE    | SCOTTSBLUFF HEILIG AP          | 79-0023 | DLY                 | 41.8706  | -103.5931 | 3945           | NCEI    | 11/1892 - 10/2023 |
| CO    | CRAIG MOFFAT CO AP             | 79-0031 | DLY                 | 40.4953  | -107.5211 | 6186           | NCEI    | 01/1998 - 10/2023 |
| UT    | OGDEN HILL AFB                 | 79-0038 | DLY                 | 41.1167  | -111.9667 | 4787           | NCEI    | 04/1946 - 12/1970 |
| WA    | FAIRCHILD AFB                  | 79-0041 | DLY                 | 47.6333  | -117.6500 | 2438           | NCEI    | 11/1948 - 12/1970 |
| UT    | COALVILLE                      | 79-0043 | DLY                 | 40.9139  | -111.3983 | 5550           | NCEI    | 11/1893 - 05/2012 |

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| UT    | SALT LAKE CITY INTL AP    | 79-0046 | DLY                 | 40.7781  | -111.9694 | 4225           | NCEI    | 11/1947 - 10/2023 |
| OR    | BAKER CITY MUNI AP        | 79-0047 | DLY                 | 44.8428  | -117.8086 | 3361           | NCEI    | 03/1943 - 10/2023 |
| WA    | SPOKANE INTL AP           | 79-0068 | DLY                 | 47.6217  | -117.5281 | 2353           | NCEI    | 06/1889 - 10/2023 |
| OR    | ONTARIO MUNI AP           | 79-0072 | DLY                 | 44.0206  | -117.0128 | 2190           | NCEI    | 01/1998 - 10/2023 |
| UT    | SALT LAKE CITY            | 79-0074 | DLY                 | 40.7667  | -111.8833 | 4304           | NCEI    | 11/1927 - 07/1954 |
| OR    | BAKER KBKR                | 79-0075 | DLY                 | 44.7667  | -117.8333 | 3445           | NCEI    | 11/1927 - 12/1981 |
| ND    | WILLISTON SLOULIN INTL AP | 79-0080 | DLY                 | 48.1739  | -103.6367 | 1902           | NCEI    | 11/1893 - 10/2019 |
| UT    | VERNAL MUNICIPAL AP       | 79-0083 | DLY                 | 40.4422  | -109.5144 | 5260           | NCEI    | 01/1998 - 10/2023 |
| SD    | BUFFALO ASOS              | 79-0085 | DLY                 | 45.6044  | -103.5464 | 3004           | NCEI    | 02/1998 - 10/2023 |
| CO    | MEEKER AP                 | 79-0086 | DLY                 | 40.0489  | -107.8853 | 6390           | NCEI    | 07/1998 - 10/2023 |
| OR    | ROME ST AP                | 79-0106 | DLY                 | 42.5906  | -117.8644 | 4050           | NCEI    | 08/1949 - 10/2023 |
| WA    | DEER PARK AP              | 79-0107 | DLY                 | 47.9742  | -117.4283 | 2191           | NCEI    | 09/1998 - 10/2023 |
| UT    | LOGAN CACHE AP            | 79-0108 | DLY                 | 41.7872  | -111.8533 | 4454           | NCEI    | 08/1998 - 10/2023 |
| WA    | SPOKANE FELTS FLD         | 79-0114 | DLY                 | 47.6831  | -117.3214 | 1953           | NCEI    | 08/1998 - 10/2023 |
| CO    | UNIVERSITY CAMP           | 80-0010 | DLY                 | 40.0300  | -105.5800 | 10300          | NCEI    | 08/1978 - 10/2023 |
| UT    | DANIELS-STRAWBERRY        | 80-0222 | DLY                 | 40.3000  | -111.2600 | 8037           | NCEI    | 08/1978 - 10/2023 |
| OR    | ANEROID LAKE #2           | 86-0302 | DLY                 | 45.2133  | -117.1926 | 7400           | SNOTEL  | 10/1980 - 11/2023 |
| OR    | ANEROID LAKE #2           | 86-0302 | HLY                 | 45.2133  | -117.1926 | 7400           | SNOTEL  | 10/1980 - 02/2022 |
| NV    | BEAR CREEK                | 86-0321 | DLY                 | 41.8338  | -115.4528 | 8040           | SNOTEL  | 10/1978 - 11/2023 |
| NV    | BEAR CREEK                | 86-0321 | HLY                 | 41.8338  | -115.4528 | 8040           | SNOTEL  | 10/1978 - 02/2022 |
| CO    | BEAR LAKE                 | 86-0322 | HLY                 | 40.3118  | -105.6467 | 9500           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | BEAR LAKE                 | 86-0322 | DLY                 | 40.3118  | -105.6467 | 9500           | SNOTEL  | 10/1980 - 11/2023 |
| UT    | BEAVER DIVIDE             | 86-0330 | DLY                 | 40.6123  | -111.0978 | 8280           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | BEAVER DIVIDE             | 86-0330 | HLY                 | 40.6123  | -111.0978 | 8280           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | BEN LOMOND PEAK           | 86-0332 | DLY                 | 41.3760  | -111.9441 | 7689           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | BEN LOMOND PEAK           | 86-0332 | HLY                 | 41.3760  | -111.9441 | 7689           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | BEN LOMOND TRAIL          | 86-0333 | DLY                 | 41.3829  | -111.9210 | 5972           | SNOTEL  | 09/1980 - 11/2023 |
| UT    | BEN LOMOND TRAIL          | 86-0333 | HLY                 | 41.3829  | -111.9210 | 5972           | SNOTEL  | 10/1980 - 02/2022 |
| NV    | BIG BEND                  | 86-0336 | DLY                 | 41.7617  | -115.6931 | 6898           | SNOTEL  | 10/1978 - 11/2023 |

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| NV    | BIG BEND           | 86-0336 | HLY                 | 41.7617  | -115.6931 | 6898           | SNOTEL  | 10/1978 - 02/2022 |
| SD    | BLIND PARK         | 86-0354 | DLY                 | 44.1077  | -103.9769 | 6890           | SNOTEL  | 06/1990 - 11/2023 |
| SD    | BLIND PARK         | 86-0354 | HLY                 | 44.1077  | -103.9769 | 6890           | SNOTEL  | 06/1990 - 02/2022 |
| UT    | BRIGHTON           | 86-0366 | DLY                 | 40.5994  | -111.5817 | 8766           | SNOTEL  | 09/1986 - 11/2023 |
| UT    | BRIGHTON           | 86-0366 | HLY                 | 40.5994  | -111.5817 | 8766           | SNOTEL  | 09/1986 - 02/2022 |
| UT    | BROWN DUCK         | 86-0368 | DLY                 | 40.5810  | -110.5859 | 10574          | SNOTEL  | 10/1978 - 11/2023 |
| UT    | BROWN DUCK         | 86-0368 | HLY                 | 40.5810  | -110.5859 | 10574          | SNOTEL  | 10/1978 - 02/2022 |
| NV    | BUCKSKIN LOWER     | 86-0373 | HLY                 | 41.7507  | -117.5318 | 6930           | SNOTEL  | 10/1980 - 02/2022 |
| NV    | BUCKSKIN LOWER     | 86-0373 | DLY                 | 41.7507  | -117.5318 | 6930           | SNOTEL  | 10/1980 - 11/2023 |
| UT    | BUG LAKE           | 86-0374 | HLY                 | 41.6854  | -111.4199 | 7987           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | BUG LAKE           | 86-0374 | DLY                 | 41.6854  | -111.4199 | 7987           | SNOTEL  | 10/1978 - 11/2023 |
| WA    | BUNCHGRASS MDW     | 86-0376 | DLY                 | 48.6869  | -117.1763 | 5000           | SNOTEL  | 10/1981 - 11/2023 |
| WA    | BUNCHGRASS MDW     | 86-0376 | HLY                 | 48.6869  | -117.1763 | 5000           | SNOTEL  | 10/1981 - 02/2022 |
| UT    | CHALK CREEK #1     | 86-0392 | DLY                 | 40.8546  | -111.0477 | 9171           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | CHALK CREEK #1     | 86-0392 | HLY                 | 40.8546  | -111.0477 | 9171           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | CHALK CREEK #2     | 86-0393 | DLY                 | 40.8853  | -111.0695 | 8208           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | CHALK CREEK #2     | 86-0393 | HLY                 | 40.8853  | -111.0695 | 8208           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | CHEPETA            | 86-0396 | DLY                 | 40.7746  | -110.0105 | 10499          | SNOTEL  | 09/1980 - 11/2023 |
| UT    | CHEPETA            | 86-0396 | HLY                 | 40.7746  | -110.0105 | 10499          | SNOTEL  | 10/1980 - 02/2022 |
| CO    | COLUMBINE          | 86-0408 | HLY                 | 40.3948  | -106.6041 | 9160           | SNOTEL  | 02/1979 - 02/2022 |
| CO    | COLUMBINE          | 86-0408 | DLY                 | 40.3948  | -106.6041 | 9160           | SNOTEL  | 03/1979 - 11/2023 |
| CO    | COPELAND LAKE      | 86-0412 | HLY                 | 40.2078  | -105.5686 | 8600           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | COPELAND LAKE      | 86-0412 | DLY                 | 40.2078  | -105.5686 | 8600           | SNOTEL  | 10/1980 - 11/2023 |
| CO    | CROSHO             | 86-0426 | DLY                 | 40.1674  | -107.0575 | 9100           | SNOTEL  | 10/1986 - 11/2023 |
| CO    | CROSHO             | 86-0426 | HLY                 | 40.1674  | -107.0575 | 9100           | SNOTEL  | 10/1986 - 02/2022 |
| UT    | CURRANT CREEK      | 86-0432 | DLY                 | 40.3575  | -111.0899 | 7915           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | CURRANT CREEK      | 86-0432 | HLY                 | 40.3575  | -111.0899 | 7915           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | DANIELS-STRAWBERRY | 86-0435 | HLY                 | 40.2953  | -111.2568 | 8008           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | DANIELS-STRAWBERRY | 86-0435 | DLY                 | 40.2953  | -111.2568 | 8008           | SNOTEL  | 10/1978 - 11/2023 |

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|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| CO    | DEADMAN HILL      | 86-0438 | HLY                 | 40.8057  | -105.7699 | 10220          | SNOTEL  | 10/1978 - 02/2022 |
| CO    | DEADMAN HILL      | 86-0438 | DLY                 | 40.8057  | -105.7699 | 10220          | SNOTEL  | 10/1978 - 11/2023 |
| NV    | DRAW CREEK        | 86-0454 | HLY                 | 41.6610  | -115.3234 | 7332           | SNOTEL  | 10/1983 - 02/2022 |
| NV    | DRAW CREEK        | 86-0454 | DLY                 | 41.6610  | -115.3234 | 7332           | SNOTEL  | 10/1983 - 11/2023 |
| UT    | DRY BREAD POND    | 86-0455 | HLY                 | 41.4129  | -111.5377 | 8302           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | DRY BREAD POND    | 86-0455 | DLY                 | 41.4129  | -111.5377 | 8302           | SNOTEL  | 10/1978 - 11/2023 |
| CO    | DRY LAKE          | 86-0457 | HLY                 | 40.5340  | -106.7813 | 8400           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | DRY LAKE          | 86-0457 | DLY                 | 40.5340  | -106.7813 | 8400           | SNOTEL  | 10/1980 - 11/2023 |
| OR    | EILERTSON MEADOWS | 86-0464 | HLY                 | 44.8689  | -118.1139 | 5510           | SNOTEL  | 10/1980 - 02/2022 |
| OR    | EILERTSON MEADOWS | 86-0464 | DLY                 | 44.8689  | -118.1139 | 5510           | SNOTEL  | 10/1980 - 11/2023 |
| CO    | ELK RIVER         | 86-0467 | HLY                 | 40.8478  | -106.9687 | 8700           | SNOTEL  | 10/1978 - 02/2022 |
| CO    | ELK RIVER         | 86-0467 | DLY                 | 40.8478  | -106.9687 | 8700           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | FARMINGTON        | 86-0474 | DLY                 | 40.9746  | -111.8098 | 7902           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | FARMINGTON        | 86-0474 | HLY                 | 40.9746  | -111.8098 | 7902           | SNOTEL  | 10/1978 - 02/2022 |
| NV    | FAWN CREEK        | 86-0476 | HLY                 | 41.8210  | -116.1015 | 7031           | SNOTEL  | 10/1980 - 02/2022 |
| NV    | FAWN CREEK        | 86-0476 | DLY                 | 41.8210  | -116.1015 | 7031           | SNOTEL  | 10/1980 - 11/2023 |
| UT    | FIVE POINTS LAKE  | 86-0481 | DLY                 | 40.7178  | -110.4672 | 10943          | SNOTEL  | 08/1980 - 11/2023 |
| UT    | FIVE POINTS LAKE  | 86-0481 | HLY                 | 40.7178  | -110.4672 | 10943          | SNOTEL  | 08/1980 - 02/2022 |
| NV    | GRANITE PEAK      | 86-0498 | DLY                 | 41.6703  | -117.5667 | 8503           | SNOTEL  | 10/1980 - 11/2023 |
| NV    | GRANITE PEAK      | 86-0498 | HLY                 | 41.6703  | -117.5667 | 8503           | SNOTEL  | 10/1980 - 02/2022 |
| UT    | LAKEFORK BASIN    | 86-0513 | DLY                 | 40.7379  | -110.6212 | 10885          | SNOTEL  | 01/1982 - 11/2023 |
| UT    | LAKEFORK BASIN    | 86-0513 | HLY                 | 40.7379  | -110.6212 | 10885          | SNOTEL  | 03/1982 - 02/2022 |
| UT    | HAYDEN FORK       | 86-0517 | HLY                 | 40.7967  | -110.8847 | 9130           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | HAYDEN FORK       | 86-0517 | DLY                 | 40.7967  | -110.8847 | 9130           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | HEWINTA           | 86-0521 | DLY                 | 40.9501  | -110.4842 | 9500           | SNOTEL  | 09/1985 - 11/2023 |
| UT    | HEWINTA           | 86-0521 | HLY                 | 40.9501  | -110.4842 | 9500           | SNOTEL  | 10/1985 - 02/2022 |
| UT    | HICKERSON PARK    | 86-0522 | DLY                 | 40.9066  | -109.9629 | 9122           | SNOTEL  | 09/1985 - 11/2023 |
| UT    | HICKERSON PARK    | 86-0522 | HLY                 | 40.9066  | -109.9629 | 9122           | SNOTEL  | 10/1985 - 02/2022 |
| UT    | HOLE-IN-ROCK      | 86-0528 | HLY                 | 40.9217  | -110.1862 | 9168           | SNOTEL  | 09/1985 - 02/2022 |

| State | Station name     | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| UT    | HOLE-IN-ROCK     | 86-0528 | DLY                 | 40.9217  | -110.1862 | 9168           | SNOTEL  | 09/1985 - 11/2023 |
| UT    | HORSE RIDGE      | 86-0533 | HLY                 | 41.3137  | -111.4462 | 8199           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | HORSE RIDGE      | 86-0533 | DLY                 | 41.3137  | -111.4462 | 8199           | SNOTEL  | 10/1978 - 11/2023 |
| NV    | JACK CREEK UPPER | 86-0548 | DLY                 | 41.5467  | -116.0052 | 7377           | SNOTEL  | 10/1978 - 11/2023 |
| NV    | JACK CREEK UPPER | 86-0548 | HLY                 | 41.5467  | -116.0052 | 7377           | SNOTEL  | 10/1978 - 02/2022 |
| NV    | JACKS PEAK       | 86-0549 | HLY                 | 41.5136  | -116.0117 | 8424           | SNOTEL  | 10/1981 - 02/2022 |
| NV    | JACKS PEAK       | 86-0549 | DLY                 | 41.5136  | -116.0117 | 8424           | SNOTEL  | 10/1981 - 11/2023 |
| CO    | JOE WRIGHT       | 86-0551 | HLY                 | 40.5322  | -105.8870 | 10120          | SNOTEL  | 10/1978 - 02/2022 |
| CO    | JOE WRIGHT       | 86-0551 | DLY                 | 40.5322  | -105.8870 | 10120          | SNOTEL  | 10/1978 - 11/2023 |
| UT    | KINGS CABIN      | 86-0559 | HLY                 | 40.7163  | -109.5440 | 8728           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | KINGS CABIN      | 86-0559 | DLY                 | 40.7163  | -109.5440 | 8728           | SNOTEL  | 10/1978 - 11/2023 |
| CO    | LAKE IRENE       | 86-0565 | HLY                 | 40.4143  | -105.8198 | 10700          | SNOTEL  | 10/1978 - 02/2022 |
| CO    | LAKE IRENE       | 86-0565 | DLY                 | 40.4143  | -105.8198 | 10700          | SNOTEL  | 10/1978 - 11/2023 |
| UT    | LAKEFORK #1      | 86-0566 | HLY                 | 40.5971  | -110.4332 | 10128          | SNOTEL  | 10/1978 - 02/2022 |
| UT    | LAKEFORK #1      | 86-0566 | DLY                 | 40.5971  | -110.4332 | 10128          | SNOTEL  | 10/1978 - 11/2023 |
| NV    | LAMANCE CREEK    | 86-0569 | HLY                 | 41.5154  | -117.6320 | 6395           | SNOTEL  | 10/1980 - 02/2022 |
| NV    | LAMANCE CREEK    | 86-0569 | DLY                 | 41.5154  | -117.6320 | 6395           | SNOTEL  | 10/1980 - 11/2023 |
| NV    | LAUREL DRAW      | 86-0573 | HLY                 | 41.7764  | -116.0296 | 6682           | SNOTEL  | 10/1979 - 02/2022 |
| NV    | LAUREL DRAW      | 86-0573 | DLY                 | 41.7764  | -116.0296 | 6682           | SNOTEL  | 10/1979 - 11/2023 |
| UT    | LILY LAKE        | 86-0579 | DLY                 | 40.8649  | -110.7981 | 9133           | SNOTEL  | 10/1980 - 11/2023 |
| UT    | LILY LAKE        | 86-0579 | HLY                 | 40.8649  | -110.7981 | 9133           | SNOTEL  | 10/1980 - 02/2022 |
| UT    | LITTLE BEAR      | 86-0582 | DLY                 | 41.4056  | -111.8261 | 6548           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | LITTLE BEAR      | 86-0582 | HLY                 | 41.4056  | -111.8261 | 6548           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | LOOKOUT PEAK     | 86-0596 | DLY                 | 40.8373  | -111.7096 | 8161           | SNOTEL  | 06/1988 - 11/2023 |
| UT    | LOOKOUT PEAK     | 86-0596 | HLY                 | 40.8373  | -111.7096 | 8161           | SNOTEL  | 06/1988 - 02/2022 |
| CO    | LYNX PASS        | 86-0607 | DLY                 | 40.0781  | -106.6703 | 8880           | SNOTEL  | 10/1980 - 11/2023 |
| CO    | LYNX PASS        | 86-0607 | HLY                 | 40.0781  | -106.6703 | 8880           | SNOTEL  | 10/1980 - 02/2022 |
| UT    | MILL-D NORTH     | 86-0628 | HLY                 | 40.6588  | -111.6368 | 8963           | SNOTEL  | 10/1988 - 02/2022 |
| UT    | MILL-D NORTH     | 86-0628 | DLY                 | 40.6588  | -111.6368 | 8963           | SNOTEL  | 10/1988 - 11/2023 |

| State | Station name      | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| UT    | MONTE CRISTO      | 86-0634 | HLY                 | 41.4655  | -111.4969 | 8932           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | MONTE CRISTO      | 86-0634 | DLY                 | 41.4655  | -111.4969 | 8932           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | MOSBY MTN.        | 86-0643 | HLY                 | 40.6080  | -109.8881 | 9553           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | MOSBY MTN.        | 86-0643 | DLY                 | 40.6080  | -109.8881 | 9553           | SNOTEL  | 10/1978 - 11/2023 |
| OR    | MOSS SPRINGS      | 86-0647 | DLY                 | 45.2717  | -117.6875 | 5760           | SNOTEL  | 10/1980 - 11/2023 |
| OR    | MOSS SPRINGS      | 86-0647 | HLY                 | 45.2717  | -117.6875 | 5760           | SNOTEL  | 10/1980 - 02/2022 |
| OR    | MT. HOWARD        | 86-0653 | DLY                 | 45.2652  | -117.1737 | 7910           | SNOTEL  | 10/1980 - 11/2023 |
| OR    | MT. HOWARD        | 86-0653 | HLY                 | 45.2652  | -117.1737 | 7910           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | NIWOT             | 86-0663 | HLY                 | 40.0352  | -105.5443 | 9910           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | NIWOT             | 86-0663 | DLY                 | 40.0352  | -105.5443 | 9910           | SNOTEL  | 10/1980 - 11/2023 |
| UT    | PARLEYS SUMMIT    | 86-0684 | DLY                 | 40.7618  | -111.6292 | 7585           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | PARLEYS SUMMIT    | 86-0684 | HLY                 | 40.7618  | -111.6292 | 7585           | SNOTEL  | 10/1978 - 02/2022 |
| CO    | PHANTOM VALLEY    | 86-0688 | HLY                 | 40.3994  | -105.8476 | 9030           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | PHANTOM VALLEY    | 86-0688 | DLY                 | 40.3994  | -105.8476 | 9030           | SNOTEL  | 10/1980 - 11/2023 |
| WA    | QUARTZ PEAK       | 86-0707 | HLY                 | 47.8793  | -117.0894 | 4700           | SNOTEL  | 10/1986 - 02/2022 |
| WA    | QUARTZ PEAK       | 86-0707 | DLY                 | 47.8793  | -117.0894 | 4700           | SNOTEL  | 10/1986 - 11/2023 |
| CO    | RABBIT EARS       | 86-0709 | DLY                 | 40.3678  | -106.7404 | 9400           | SNOTEL  | 10/1986 - 11/2023 |
| CO    | RABBIT EARS       | 86-0709 | HLY                 | 40.3678  | -106.7404 | 9400           | SNOTEL  | 10/1986 - 02/2022 |
| CO    | RIPPLE CREEK      | 86-0717 | HLY                 | 40.1081  | -107.2941 | 10340          | SNOTEL  | 10/1986 - 02/2022 |
| CO    | RIPPLE CREEK      | 86-0717 | DLY                 | 40.1081  | -107.2941 | 10340          | SNOTEL  | 10/1986 - 11/2023 |
| CO    | ROACH             | 86-0718 | HLY                 | 40.8750  | -106.0460 | 9700           | SNOTEL  | 10/1980 - 02/2022 |
| CO    | ROACH             | 86-0718 | DLY                 | 40.8750  | -106.0460 | 9700           | SNOTEL  | 10/1980 - 11/2023 |
| UT    | ROCK CREEK        | 86-0720 | HLY                 | 40.5488  | -110.6929 | 7886           | SNOTEL  | 10/1980 - 02/2022 |
| UT    | ROCK CREEK        | 86-0720 | DLY                 | 40.5488  | -110.6929 | 7886           | SNOTEL  | 09/1980 - 11/2023 |
| OR    | SCHNEIDER MEADOWS | 86-0736 | DLY                 | 45.0011  | -117.1652 | 5400           | SNOTEL  | 10/1980 - 11/2023 |
| OR    | SCHNEIDER MEADOWS | 86-0736 | HLY                 | 45.0011  | -117.1652 | 5400           | SNOTEL  | 10/1980 - 02/2022 |
| NV    | SEVENTYSIX CREEK  | 86-0746 | HLY                 | 41.7373  | -115.4722 | 7350           | SNOTEL  | 10/1978 - 02/2022 |
| NV    | SEVENTYSIX CREEK  | 86-0746 | DLY                 | 41.7373  | -115.4722 | 7350           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | SMITH MOREHOUSE   | 86-0763 | HLY                 | 40.7893  | -111.0919 | 7631           | SNOTEL  | 10/1978 - 02/2022 |

| State | Station name      | SID     | Formatting Interval | Latitude | Longitude | Elevation (ft) | Dataset | Period of Record  |
|-------|-------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| UT    | SMITH MOREHOUSE   | 86-0763 | DLY                 | 40.7893  | -111.0919 | 7631           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | SNOWBIRD          | 86-0766 | HLY                 | 40.5691  | -111.6585 | 9177           | SNOTEL  | 08/1989 - 02/2022 |
| UT    | SNOWBIRD          | 86-0766 | DLY                 | 40.5691  | -111.6585 | 9177           | SNOTEL  | 08/1989 - 11/2023 |
| UT    | STEEL CREEK PARK  | 86-0790 | HLY                 | 40.9086  | -110.5046 | 10158          | SNOTEL  | 10/1978 - 02/2022 |
| UT    | STEEL CREEK PARK  | 86-0790 | DLY                 | 40.9086  | -110.5046 | 10158          | SNOTEL  | 10/1978 - 11/2023 |
| UT    | STRAWBERRY DIVIDE | 86-0795 | DLY                 | 40.1648  | -111.2066 | 8123           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | STRAWBERRY DIVIDE | 86-0795 | HLY                 | 40.1648  | -111.2066 | 8123           | SNOTEL  | 10/1978 - 02/2022 |
| NV    | TAYLOR CANYON     | 86-0811 | DLY                 | 41.2287  | -116.0293 | 6325           | SNOTEL  | 10/1980 - 11/2023 |
| NV    | TAYLOR CANYON     | 86-0811 | HLY                 | 41.2287  | -116.0293 | 6325           | SNOTEL  | 10/1980 - 02/2022 |
| OR    | TAYLOR GREEN      | 86-0812 | HLY                 | 45.0771  | -117.5507 | 5740           | SNOTEL  | 10/1979 - 02/2022 |
| OR    | TAYLOR GREEN      | 86-0812 | DLY                 | 45.0771  | -117.5507 | 5740           | SNOTEL  | 10/1979 - 11/2023 |
| UT    | THAYNES CANYON    | 86-0814 | HLY                 | 40.6235  | -111.5332 | 9230           | SNOTEL  | 06/1988 - 02/2022 |
| UT    | THAYNES CANYON    | 86-0814 | DLY                 | 40.6235  | -111.5332 | 9230           | SNOTEL  | 06/1988 - 11/2023 |
| UT    | TIMPANOGOS DIVIDE | 86-0820 | DLY                 | 40.4282  | -111.6163 | 8140           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | TIMPANOGOS DIVIDE | 86-0820 | HLY                 | 40.4282  | -111.6163 | 8140           | SNOTEL  | 10/1978 - 02/2022 |
| WA    | TOUCHET           | 86-0824 | HLY                 | 46.1187  | -117.8505 | 5530           | SNOTEL  | 10/1980 - 02/2022 |
| WA    | TOUCHET           | 86-0824 | DLY                 | 46.1187  | -117.8505 | 5530           | SNOTEL  | 10/1980 - 11/2023 |
| CO    | TOWER             | 86-0825 | DLY                 | 40.5374  | -106.6768 | 10500          | SNOTEL  | 08/1979 - 11/2023 |
| CO    | TOWER             | 86-0825 | HLY                 | 40.5374  | -106.6768 | 10500          | SNOTEL  | 09/1979 - 02/2022 |
| UT    | TRIAL LAKE        | 86-0828 | HLY                 | 40.6780  | -110.9487 | 9992           | SNOTEL  | 10/1978 - 02/2022 |
| UT    | TRIAL LAKE        | 86-0828 | DLY                 | 40.6780  | -110.9487 | 9992           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | TROUT CREEK       | 86-0833 | DLY                 | 40.7390  | -109.6728 | 9518           | SNOTEL  | 10/1978 - 11/2023 |
| UT    | TROUT CREEK       | 86-0833 | HLY                 | 40.7390  | -109.6728 | 9518           | SNOTEL  | 10/1978 - 02/2022 |
| CO    | UNIVERSITY CAMP   | 86-0838 | DLY                 | 40.0328  | -105.5761 | 10300          | SNOTEL  | 10/1978 - 11/2023 |
| CO    | UNIVERSITY CAMP   | 86-0838 | HLY                 | 40.0328  | -105.5761 | 10300          | SNOTEL  | 10/1978 - 02/2022 |
| CO    | WILLOW CREEK PASS | 86-0869 | HLY                 | 40.3470  | -106.0943 | 9540           | SNOTEL  | 10/1978 - 02/2022 |
| CO    | WILLOW CREEK PASS | 86-0869 | DLY                 | 40.3470  | -106.0943 | 9540           | SNOTEL  | 10/1978 - 11/2023 |
| CO    | WILLOW PARK       | 86-0870 | DLY                 | 40.4325  | -105.7334 | 10700          | SNOTEL  | 07/1980 - 11/2023 |
| CO    | WILLOW PARK       | 86-0870 | HLY                 | 40.4325  | -105.7334 | 10700          | SNOTEL  | 07/1980 - 02/2022 |

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| UT    | HARDSCRABBLE                   | 86-0896 | DLY                 | 40.8683  | -111.7187 | 7250           | SNOTEL  | 10/1993 - 11/2023 |
| UT    | HARDSCRABBLE                   | 86-0896 | HLY                 | 40.8683  | -111.7187 | 7250           | SNOTEL  | 10/1993 - 02/2022 |
| SD    | NORTH RAPID CREEK              | 86-0920 | DLY                 | 44.2062  | -103.7876 | 6130           | SNOTEL  | 10/1996 - 11/2023 |
| SD    | NORTH RAPID CREEK              | 86-0920 | HLY                 | 44.2062  | -103.7876 | 6130           | SNOTEL  | 09/1996 - 02/2022 |
| UT    | PARRISH CREEK                  | 86-0971 | DLY                 | 40.9342  | -111.8137 | 7740           | SNOTEL  | 10/1999 - 11/2023 |
| UT    | PARRISH CREEK                  | 86-0971 | HLY                 | 40.9342  | -111.8137 | 7740           | SNOTEL  | 08/1999 - 02/2022 |
| WA    | SPRUCE SPRINGS                 | 86-0984 | HLY                 | 46.1829  | -117.5415 | 5700           | SNOTEL  | 07/2000 - 02/2022 |
| WA    | SPRUCE SPRINGS                 | 86-0984 | DLY                 | 46.1829  | -117.5415 | 5700           | SNOTEL  | 10/2000 - 11/2023 |
| UT    | TEMPLE FORK                    | 86-1013 | DLY                 | 41.7930  | -111.5461 | 7406           | SNOTEL  | 11/2001 - 11/2023 |
| UT    | TEMPLE FORK                    | 86-1013 | HLY                 | 41.7930  | -111.5461 | 7406           | SNOTEL  | 11/2001 - 02/2022 |
| UT    | LIGHTNING RIDGE                | 86-1056 | DLY                 | 41.3589  | -111.4875 | 8215           | SNOTEL  | 10/2004 - 11/2023 |
| UT    | LIGHTNING RIDGE                | 86-1056 | HLY                 | 41.3589  | -111.4875 | 8215           | SNOTEL  | 07/2004 - 02/2022 |
| SD    | ANGOSTURA RESERVOIR (CHEYENNE  | 87-0003 | 15M                 | 43.3433  | -103.4383 | 3200           | USBR    | 03/2004 - 02/2022 |
| SD    | ANGOSTURA RESERVOIR (CHEYENNE  | 87-0003 | HLY                 | 43.3433  | -103.4383 | 3200           | USBR    | 03/2004 - 03/2022 |
| SD    | BELLE FOURCHE RVR @ WYOMING-SO | 87-0143 | 15M                 | 44.7497  | -104.0469 | 3100           | USBR    | 06/2000 - 11/2018 |
| SD    | BELLE FOURCHE RVR @ WYOMING-SO | 87-0143 | HLY                 | 44.7497  | -104.0469 | 3100           | USBR    | 06/2000 - 11/2018 |
| SD    | CHEYENNE RIVER AT EDGEMONT, SO | 87-0644 | HLY                 | 43.3056  | -103.8206 | 3415           | USBR    | 01/1985 - 03/2022 |
| SD    | CHEYENNE RIVER AT EDGEMONT, SO | 87-0644 | 15M                 | 43.3056  | -103.8206 | 3415           | USBR    | 01/1985 - 02/2022 |
| WY    | NORTH PLATTE RIVER AT WYOMING- | 87-1044 | 15M                 | 41.9903  | -104.0492 | 4021           | USBR    | 05/1989 - 02/2022 |
| WY    | NORTH PLATTE RIVER AT WYOMING- | 87-1044 | HLY                 | 41.9903  | -104.0492 | 4021           | USBR    | 05/1987 - 03/2022 |
| NE    | MITCHELL GERING CANAL NEAR STA | 87-1394 | HLY                 | 41.9828  | -104.0578 | 4028           | USBR    | 04/1989 - 10/2021 |
| NE    | MITCHELL GERING CANAL NEAR STA | 87-1394 | 15M                 | 41.9828  | -104.0578 | 4028           | USBR    | 04/1989 - 10/2021 |
| NE    | WEATHER STATION AT MINATARE DA | 87-2374 | 15M                 | 41.9178  | -103.4842 | 4144           | USBR    | 10/1989 - 02/2022 |
| NE    | WEATHER STATION AT MINATARE DA | 87-2374 | HLY                 | 41.9178  | -103.4842 | 4144           | USBR    | 10/1989 - 03/2022 |
| OR    | BALTZOR RANCH NEAR SHEAVILLE,  | 87-2631 | HLY                 | 43.1070  | -117.0604 | 4620           | USBR    | 09/1982 - 03/2022 |
| OR    | BALTZOR RANCH NEAR SHEAVILLE,  | 87-2631 | 15M                 | 43.1070  | -117.0604 | 4620           | USBR    | 09/1982 - 02/2022 |
| OR    | BAKER VALLEY, OREGON AGRIMET W | 87-2761 | HLY                 | 44.8828  | -117.9628 | 3420           | USBR    | 05/2001 - 03/2022 |
| OR    | BAKER VALLEY, OREGON AGRIMET W | 87-2761 | 15M                 | 44.8828  | -117.9628 | 1042           | USBR    | 04/2012 - 02/2022 |
| OR    | DANNER, OR                     | 87-3121 | 15M                 | 42.9403  | -117.3404 | 4225           | USBR    | 11/1982 - 02/2022 |



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|-------|--------------------------------|---------|---------------------|----------|-----------|----------------|---------|-------------------|
| OR    | DANNER, OR                     | 87-3121 | HLY                 | 42.9403  | -117.3404 | 4225           | USBR    | 10/1982 - 03/2022 |
| OR    | HEREFORD, OREGON AGRIMET WEATH | 87-3671 | HLY                 | 44.4881  | -118.0200 | 3600           | USBR    | 04/1998 - 03/2022 |
| OR    | HEREFORD, OREGON AGRIMET WEATH | 87-3671 | 15M                 | 44.4881  | -118.0200 | 1097           | USBR    | 04/2012 - 02/2022 |
| OR    | MCDERMITT, OR 26N              | 87-4061 | 15M                 | 42.4106  | -117.8628 | 4464           | USBR    | 10/1982 - 02/2022 |
| OR    | MCDERMITT, OR 26N              | 87-4061 | HLY                 | 42.4106  | -117.8628 | 4464           | USBR    | 10/1982 - 03/2022 |
| OR    | ONTARIO, OREGON AGRIMET WEATHE | 87-4351 | HLY                 | 43.9778  | -117.0153 | 2260           | USBR    | 05/1992 - 03/2022 |
| OR    | ONTARIO, OREGON AGRIMET WEATHE | 87-4351 | 15M                 | 43.9778  | -117.0153 | 689            | USBR    | 03/2012 - 02/2022 |
| CO    | NUNN #1                        | 88-2017 | HLY                 | 40.8667  | -104.7333 | 5900           | SCAN    | 10/1994 - 05/2022 |
| CO    | NUNN #1                        | 88-2017 | DLY                 | 40.8667  | -104.7333 | 5900           | SCAN    | 10/1994 - 06/2022 |

*Table A.1.5. Metadata for n-minute stations used in derivation of 5- and 10-minute scaling factors (see Section 4.6.3) showing each station's state, name, SID, latitude, longitude, elevation, dataset identifier (see Table 4.2.1), and the period of record.*

| State | Station Name            | SID     | Latitude | Longitude | Elevation<br>(ft) | Dataset | Period of<br>Record |
|-------|-------------------------|---------|----------|-----------|-------------------|---------|---------------------|
| SD    | BUFFALO ASOS            | 78-0001 | 45.6044  | -103.5464 | 3004              | NCEI    | 03/2005-10/2021     |
| NE    | SCOTTSBLUFF HEILIG AP   | 78-0002 | 41.8705  | -103.5930 | 3945              | NCEI    | 01/2000-10/2021     |
| MT    | BAKER MUNI AP           | 78-0003 | 46.3583  | -104.2500 | 2971              | NCEI    | 03/2005-10/2021     |
| MT    | BILLINGS INTL AP        | 78-0004 | 45.8069  | -108.5422 | 3581              | NCEI    | 01/2000-10/2021     |
| OR    | BAKER CITY AP           | 78-0005 | 44.8428  | -117.8086 | 3361              | NCEI    | 03/2005-10/2021     |
| ID    | BOISE AIR TERMINAL      | 78-0006 | 43.5666  | -116.2405 | 2872              | NCEI    | 01/2000-10/2021     |
| WY    | BIG PINEY MARBLETON AP  | 78-0007 | 42.5844  | -110.1075 | 6970              | NCEI    | 03/2005-10/2021     |
| MT    | BUTTE BERT MOONEY AP    | 78-0008 | 45.9647  | -112.5006 | 5506              | NCEI    | 03/2005-10/2021     |
| WY    | BUFFALO JOHNSON CO AP   | 78-0009 | 44.3814  | -106.7211 | 4967              | NCEI    | 03/2005-10/2021     |
| ID    | BURLEY MUNI AP          | 78-0010 | 42.5416  | -113.7661 | 4154              | NCEI    | 03/2005-10/2021     |
| MT    | BOZEMAN GALLATIN FLD AP | 78-0011 | 45.7880  | -111.1608 | 4427              | NCEI    | 03/2005-10/2021     |
| CO    | CRAIG MOFFAT COUNTY AP  | 78-0012 | 40.4928  | -107.5242 | 6190              | NCEI    | 03/2005-10/2021     |
| NE    | CHADRON MUNI AP         | 78-0013 | 42.8374  | -103.0981 | 3294              | NCEI    | 03/2005-10/2021     |
| WY    | CASPER-NATRONA CO AP    | 78-0014 | 42.8978  | -106.4737 | 5318              | NCEI    | 01/2000-10/2021     |
| MT    | CUT BANK AP             | 78-0015 | 48.6033  | -112.3752 | 3838              | NCEI    | 03/2005-10/2021     |
| SD    | CUSTER CO AP            | 78-0016 | 43.7331  | -103.6114 | 5545              | NCEI    | 03/2005-10/2021     |
| WY    | CHEYENNE WSFO AP        | 78-0017 | 41.1578  | -104.8069 | 6113              | NCEI    | 01/2000-10/2021     |
| WA    | DEER PARK AP            | 78-0018 | 47.9742  | -117.4292 | 2191              | NCEI    | 03/2005-10/2021     |
| WY    | CONVERSE CO AP ASOS     | 78-0019 | 42.7961  | -105.3803 | 4936              | NCEI    | 03/2005-10/2021     |
| MT    | DILLON AP               | 78-0020 | 45.2575  | -112.5544 | 5200              | NCEI    | 03/2005-10/2021     |
| CO    | MEEKER AIRPORT          | 78-0021 | 40.0442  | -107.8886 | 6366              | NCEI    | 03/2005-10/2021     |
| WY    | EVANSTON BURNS FLD      | 78-0022 | 41.2731  | -111.0306 | 7163              | NCEI    | 03/2005-10/2021     |
| WY    | GILLETTE CAMPBELL AP    | 78-0023 | 44.3394  | -105.5419 | 4354              | NCEI    | 03/2005-10/2021     |
| WA    | SPOKANE INTL AP         | 78-0024 | 47.6216  | -117.5280 | 2353              | NCEI    | 01/2000-10/2021     |
| WY    | GREYBULL S BIG HORN AP  | 78-0025 | 44.5169  | -108.0822 | 3933              | NCEI    | 03/2005-10/2021     |
| MT    | GLASGOW INTL AP         | 78-0026 | 48.2138  | -106.6214 | 2285              | NCEI    | 01/2000-10/2021     |

| State | Station Name           | SID     | Latitude | Longitude | Elevation<br>(ft) | Dataset | Period of<br>Record |
|-------|------------------------|---------|----------|-----------|-------------------|---------|---------------------|
| MT    | KALISPELL GLACIER AP   | 78-0027 | 48.3042  | -114.2636 | 2957              | NCEI    | 11/2005-10/2021     |
| MT    | GREAT FALLS AP         | 78-0028 | 47.4733  | -111.3822 | 3664              | NCEI    | 01/2000-10/2021     |
| MT    | HELENA AP ASOS         | 78-0029 | 46.6056  | -111.9636 | 3828              | NCEI    | 01/2000-10/2021     |
| MT    | HAVRE AP ASOS          | 78-0030 | 48.5428  | -109.7633 | 2585              | NCEI    | 01/2000-10/2021     |
| ID    | IDAHO FALLS FAA AP     | 78-0031 | 43.5190  | -112.0639 | 4733              | NCEI    | 03/2005-10/2021     |
| MT    | JORDAN AP              | 78-0032 | 47.3258  | -106.9475 | 2662              | NCEI    | 03/2005-10/2021     |
| ID    | JEROME CO AP           | 78-0033 | 42.7267  | -114.4564 | 4048              | NCEI    | 03/2005-10/2021     |
| WY    | LARAMIE AP             | 78-0034 | 41.3167  | -105.6833 | 7266              | NCEI    | 03/2005-10/2021     |
| UT    | LOGAN CACHE AP         | 78-0035 | 41.7872  | -111.8533 | 4454              | NCEI    | 03/2005-10/2021     |
| ID    | CHALLIS AP             | 78-0036 | 44.5228  | -114.2150 | 5072              | NCEI    | 03/2005-10/2021     |
| WY    | LANDER AP              | 78-0037 | 42.8154  | -108.7261 | 5592              | NCEI    | 01/2000-10/2021     |
| MT    | LIVINGSTON AP          | 78-0038 | 45.6983  | -110.4408 | 4643              | NCEI    | 03/2005-10/2021     |
| ID    | LEWISTON AP            | 78-0039 | 46.3747  | -117.0156 | 1442              | NCEI    | 01/2000-10/2021     |
| MT    | LEWISTOWN AP           | 78-0040 | 47.0492  | -109.4578 | 4145              | NCEI    | 03/2005-10/2021     |
| ID    | MULLAN PASS VOR/DME    | 78-0041 | 47.4569  | -115.6450 | 6028              | NCEI    | 03/2005-10/2021     |
| MT    | MILES CITY AP          | 78-0042 | 46.4266  | -105.8825 | 2624              | NCEI    | 03/2005-10/2021     |
| MT    | MISSOULA INTL AP       | 78-0043 | 46.9208  | -114.0925 | 3192              | NCEI    | 01/2000-10/2021     |
| ID    | MCCALL AP              | 78-0044 | 44.8889  | -116.1017 | 5013              | NCEI    | 03/2005-10/2021     |
| MT    | WOLF POINT INTL AP     | 78-0045 | 48.0944  | -105.5744 | 1986              | NCEI    | 03/2005-10/2021     |
| OR    | ONTARIO                | 78-0046 | 44.0206  | -117.0128 | 2193              | NCEI    | 03/2005-10/2021     |
| WY    | YELLOWSTONE LAKE       | 78-0047 | 44.5444  | -110.4211 | 7835              | NCEI    | 03/2005-10/2021     |
| ID    | LOWELL THREE RIVERS    | 78-0048 | 46.1442  | -115.5964 | 1480              | NCEI    | 03/2005-10/2021     |
| ID    | POCATELLO RGNL AP      | 78-0049 | 42.9202  | -112.5711 | 4452              | NCEI    | 01/2000-10/2021     |
| WA    | PULLMAN MOSCOW RGNL AP | 78-0050 | 46.7439  | -117.1086 | 2551              | NCEI    | 03/2005-10/2021     |
| OR    | ROME STATE AP          | 78-0051 | 42.5906  | -117.8644 | 4050              | NCEI    | 03/2005-10/2021     |
| WY    | RIVERTON RGNL AP       | 78-0052 | 43.0642  | -108.4589 | 5445              | NCEI    | 03/2005-10/2021     |
| WY    | ROCK SPRINGS AP        | 78-0053 | 41.5947  | -109.0530 | 6742              | NCEI    | 03/2005-10/2021     |
| WY    | RAWLINS AP             | 78-0054 | 41.8000  | -107.2000 | 6736              | NCEI    | 03/2005-10/2021     |

| State | Station Name               | SID     | Latitude | Longitude | Elevation<br>(ft) | Dataset | Period of<br>Record |
|-------|----------------------------|---------|----------|-----------|-------------------|---------|---------------------|
| ID    | REXBURG MADISON CO AP      | 78-0055 | 43.8321  | -111.8075 | 4862              | NCEI    | 03/2005-10/2021     |
| WA    | SPOKANE FELTS FLD          | 78-0056 | 47.6831  | -117.3214 | 1953              | NCEI    | 03/2005-10/2021     |
| WY    | SHERIDAN AP                | 78-0057 | 44.7694  | -106.9688 | 3945              | NCEI    | 01/2000-10/2021     |
| UT    | SALT LAKE CITY INTL AP     | 78-0058 | 40.7781  | -111.9694 | 4225              | NCEI    | 01/2000-10/2021     |
| ID    | STANLEY RS                 | 78-0059 | 44.1708  | -114.9269 | 6495              | NCEI    | 12/2004-10/2021     |
| WY    | TORRINGTON MUNI AP         | 78-0060 | 42.0613  | -104.1584 | 4199              | NCEI    | 03/2005-10/2021     |
| ID    | TWIN FALLS SUN VLY RGNL AP | 78-0061 | 42.4819  | -114.4869 | 4151              | NCEI    | 03/2005-10/2021     |
| UT    | VERNAL MUNI AP             | 78-0062 | 40.4428  | -109.5128 | 5270              | NCEI    | 03/2005-10/2021     |
| WY    | WORLAND                    | 78-0063 | 43.9658  | -107.9508 | 4172              | NCEI    | 03/2005-10/2021     |

*Table A.1.6. List of stations for which additional data were digitized (Section 4.2) showing each station's state, name, SID, formatting interval, dataset identifier (Table 4.2.1), and the period(s) of record for which data were digitized.*

| <b>State</b> | <b>Station Name</b>      | <b>SID</b> | <b>Formatting Interval</b> | <b>Dataset</b> | <b>Period of Record</b> |
|--------------|--------------------------|------------|----------------------------|----------------|-------------------------|
| ID           | POCATELLO WB CITY        | 99-0001    | DLY                        | NCEI           | 07/1899-01/1949         |
| WY           | BIG HORN                 | 99-0680    | DLY                        | NCEI           | 06/1984-05/2005         |
| MT           | BOULDER                  | 99-1008    | DLY                        | NCEI           | 11/1891-06/1948         |
| MT           | BUSBY                    | 99-1297    | DLY                        | NCEI           | 07/1944-06/1948         |
| WY           | CASPER                   | 99-1565    | DLY                        | NCEI           | 03/1937-12/1943         |
| WY           | CASPER                   | 99-1566    | DLY                        | NCEI           | 09/1913-07/1948         |
| ID           | FORT SHERMAN             | 99-1956    | DLY                        | NCEI           | 10/1894-04/1898         |
| WY           | ELK MOUNTAIN             | 99-2995    | DLY                        | NCEI           | 05/1905-07/1948         |
| WY           | FORT LARAMIE             | 99-3490    | DLY                        | NCEI           | 07/1931-12/1951         |
| ID           | SHEEP HILL               | 99-4450    | DLY                        | NCEI           | 02/1909-07/1948         |
| WY           | KIRTLEY                  | 99-5170    | DLY                        | NCEI           | 06/1904-07/1948         |
| WY           | KNOWLES                  | 99-5226    | DLY                        | NCEI           | 06/1909-05/1943         |
| WY           | LYMAN                    | 99-5836    | DLY                        | NCEI           | 02/1922-02/1943         |
| WY           | MIDDLE FORK              | 99-6185    | DLY                        | NCEI           | 12/1916-07/1948         |
| WY           | PINE BLUFFS              | 99-7235    | DLY                        | NCEI           | 04/1900-12/1918         |
| MT           | SCOBAY                   | 99-7424    | DLY                        | NCEI           | 01/1938-06/1948         |
| WY           | RAWLINS AP               | 99-7533    | DLY                        | NCEI           | 11/1898-12/1940         |
| WY           | REDBIRD                  | 99-7555    | DLY                        | NCEI           | 10/1941-07/1948         |
| WY           | SARATOGA                 | 99-7990    | DLY                        | NCEI           | 03/1900-07/1948         |
| WY           | WHALEN DAM USBR          | 99-9604    | DLY                        | NCEI           | 10/1991-12/2011         |
| WY           | YELLOWSTONE PARK MAMMOTH | 99-9905    | DLY                        | NCEI           | 01/1887-05/1941         |

## Appendix A.2. Annual maximum series trend analysis

### 1. Selection of statistical tests for detection of trends in AMS

The precipitation frequency analysis methods used in NOAA Atlas 14 assume that annual maximum series (AMS) data used in the analysis are stationary. Several parametric and non-parametric statistical tests were used for the detection of trends in AMS mean and variance. The selection of statistical tests was made in consideration of the data tested and the limitations of each of the tests.

First, AMS were graphed to observe types of trends in the data for all stations in the project area at 1-hour and 1-day durations. Visual inspection of time series plots did not detect any abrupt changes or apparent cycles in the AMS but suggested the possibility of slight trends at some locations. Changes appeared to be gradual and approximately linear.

The null hypotheses that there are no trends in AMS mean and/or variance were tested on 1-day and 1-hour AMS data at each station in the project area. The hypotheses were tested at the level of significance  $\alpha = 5\%$ . The hypothesis that there are no trends in the relative magnitude of AMS values for each climate region (see Figure 4.1.3) as a whole was also tested.

Levene's test (Levene, 1960) was used to test for homogeneity of variance in the AMS data. The test has been proven to be less sensitive to non-normality in data than some other commonly used tests (such as the Barlett test). The test statistic,  $W$ , is defined as follows:

$$W = \frac{(N-k) \sum_{i=1}^k N_i (Z_{i.} - Z_{..})^2}{(k-1) \sum_{i=1}^k \sum_{j=1}^{N_i} N_i (Z_{ij} - Z_{i.})^2}$$

where  $k$  is the number of sub-groups,  $N$  is the sample size,  $N_i$  is the sample size of the  $i^{\text{th}}$  subgroup,  $Y_{ij}$  is the value of the  $j^{\text{th}}$  sample from the  $i^{\text{th}}$  subgroup, and  $Z_{ij}$  is the absolute deviation of  $Y_{ij}$  from the mean of the  $i^{\text{th}}$  subgroup. Levene's test rejects the hypothesis that the variances are equal if

$W > F_{\alpha, k-1, N-k}$ , where  $F_{\alpha, k-1, N-k}$  is the upper critical value of the  $F$  distribution with  $k-1$  and  $N-k$  degrees of freedom at a significance level of  $\alpha$ .

At-station trends in AMS were inspected using the parametric  $t$ -test and non-parametric Mann-Kendall test (e.g., Maidment, 1993). Both tests are extensively used for trend analysis in environmental sciences and are appropriate for records that have undergone a gradual change. The tests are fairly robust, readily available, and easy to use and interpret. Since each test is based on different assumptions and different test statistics, the rationale was that if both tests have similar outcomes there can be more confidence about the results; if the outcomes are different, it would provide an opportunity to investigate reasons for discrepancies.

Parametric tests in general have been shown to be more powerful than nonparametric tests when the data are approximately normally distributed and when the assumption of homoscedasticity (homogeneous variance) holds (e.g., Hirsch et al., 1991), but are less reliable when those assumptions do not hold. The parametric  $t$ -test for trend detection is based on linear regression, and therefore checks only for a linear trend in data. A linear trend assumption seemed adequate here, since time series plots indicated, if any, monotonic, linear changes in AMS. The Pearson correlation coefficient ( $r$ ) was used as a measure of linear association between annual maximum series data and time for the  $t$ -test. The hypothesis that the data are not dependent on time (and also that they are independent and normally distributed values) was tested using the  $t$ -statistic that follows Student's distribution defined as:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

where  $n$  is the record length of the AMS. The hypothesis is rejected when the absolute value of the computed  $t$ -statistic is greater than the critical value obtained from Student's distribution with  $(n - 2)$  degrees of freedom and exceedance probability of  $\alpha/2$  %, where  $\alpha$  is the significance level. The sign of the  $t$ -statistic indicates the direction of the trend, positive or negative.

Non-parametric tests have advantages over parametric tests since they make no assumption of probability distribution and are performed without specifying whether trend is linear or nonlinear. They are also more resilient to outliers in data because they do not operate on data directly. One of the disadvantages of non-parametric tests is that they do not account for the magnitude of the data. The Mann-Kendall test (M-K test) was selected among various non-parametric tests because it can accommodate missing values in a time series, which was a frequent occurrence in the AMS data. The Mann-Kendall test compares the relative magnitudes of annual maximum data. If annual maximum values are indexed based on time, and  $x_i$  is the annual maximum value that corresponds to year  $t_i$ , then the Mann-Kendall statistic is given by:

$$S = \sum_{k=1}^{n-1} \sum_{i=k+1}^n \text{sign}(x_i - x_k)$$

The test statistic  $Z$  is then computed using a normal approximation and standardization of the statistic  $S$ . The null hypothesis that there is no trend in the data is rejected at significance level  $\alpha$  if the computed  $Z$  value is greater, in absolute terms, than the critical value obtained from a standard normal distribution that has probability of exceedance of  $\alpha/2$  %. The sign of the statistic indicates the direction of the trend, positive or negative.

In addition to an at-station trend analysis, any trend in the relative magnitude of AMS for each climate region (see Figure 4.1.3) as a whole was assessed by linear regression techniques. For each region, all 1-hour or 1-day station-specific AMS for stations with at least 40 years of data for the 1-hour duration and with at least 70 years of data for the 1-day duration were rescaled by corresponding mean annual maximum values and then regressed against time. The regression results were tested against a null hypothesis of the slope coefficient being equal to zero (zero correlation between rescaled AMS and time).

## 2. Trend analysis results and conclusion

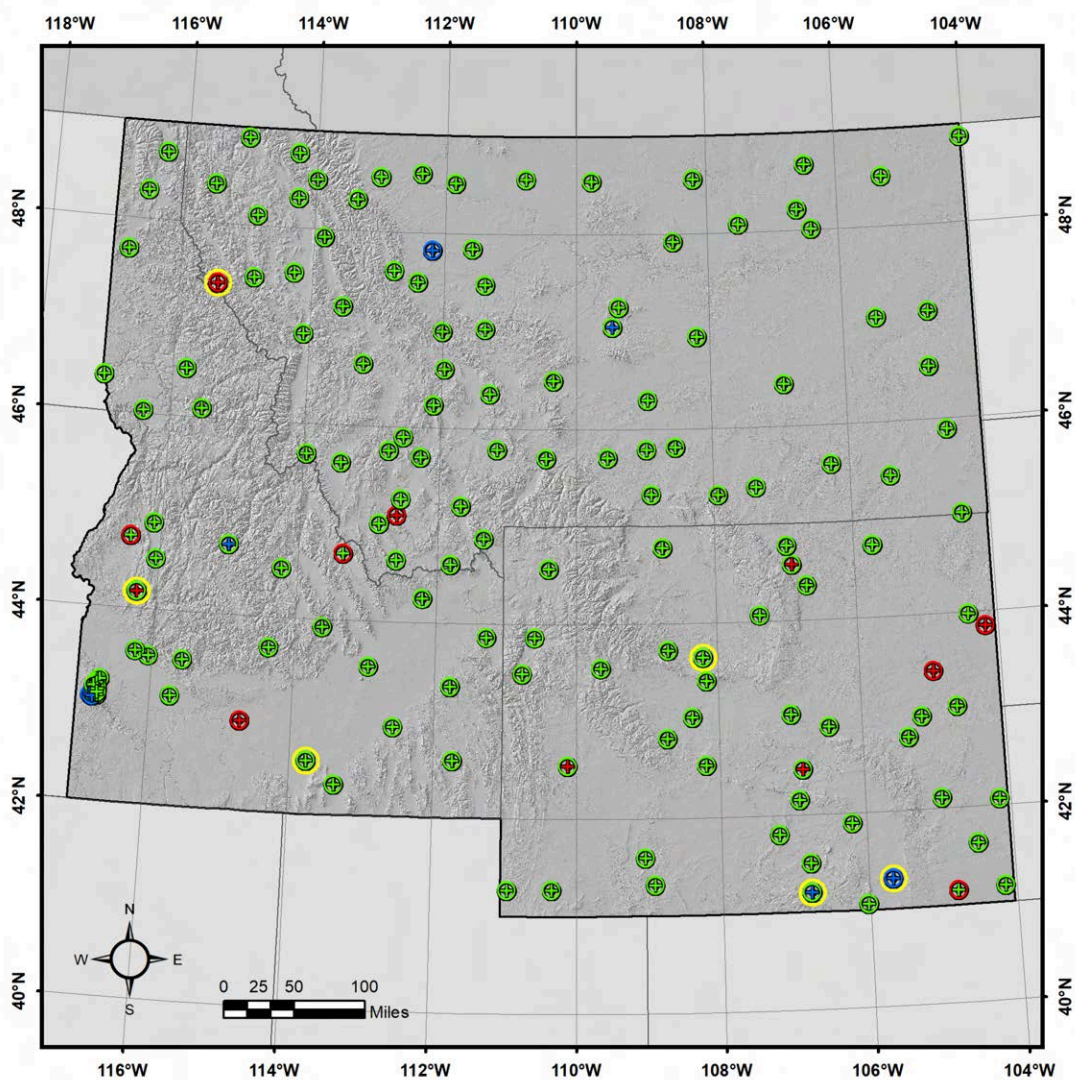
The stationarity assumption was tested by applying a parametric  $t$ -test and non-parametric Mann-Kendall test for trends in means and Levene's test for trends in variance in the 1-day and 1-hour AMS data at 5% significance level. For the 1-day duration, testing was done on stations with at least 70 years of data; for the 1-hour duration, the minimum number of data years was lowered to 40 to increase the sample size. 153 and 313 stations satisfied the record length criterion for the 1-hour duration and 1-day duration, respectively. For 1-hour, the  $t$ -test and Mann-Kendall test indicated no statistically significant trends at about 90% and 92% of stations, respectively. In the 1-day dataset, the  $t$ -test and Mann-Kendall test results, no trends were detected at about 88% and 90% of stations, respectively. Levene's test indicated non-homogeneous variance in less than 4% of stations for the 1-hour duration and less than 10% for the 1-day duration. More details are provided in Table A.2.1. The spatial distribution of the results for all three tests for 1-hour and 1-day AMS are shown in Figures A.2.1 and A.2.2, respectively. Small clusters of stations where tests indicated positive trends are often due to AMS data sampled from the same storm events at several nearby locations.

Results from the regional trend analysis also indicated that the null hypothesis, that there are no trends in the relative AMS values, could not be rejected at the 5% significance level for either climate region for the 1-day duration and the Northern U.S. Rockies region for the 1-hour duration. For the Northern Great Plains region at 1-hour, the regression slope coefficient was found to be significant but very small. Both the slope coefficient and the  $R^2$  for the regression model were on the order of 0.001. Any trend of this magnitude would have only a small impact on estimates, and likely be within confidence limits.

Because tests at both the 1-hour and 1-day durations indicated no significant trends in the data, the assumption of stationary AMS was accepted for this project area and no adjustment to AMS data was recommended.

*Table A.2.1. Trend analysis results for 1-hour and 1-day AMS data.*

| Number of stations | 1-hour         |     |          | 1-day          |     |          |
|--------------------|----------------|-----|----------|----------------|-----|----------|
|                    | <i>t</i> -test | M-K | Levene's | <i>t</i> -test | M-K | Levene's |
| no trend           | 137            | 141 | 147      | 274            | 281 | 284      |
| positive trend     | 9              | 8   | 6        | 20             | 21  | 29       |
| negative trend     | 7              | 4   |          | 19             | 11  |          |



*Figure A.2.1. Spatial distribution of results of *t*-, Mann-Kendall, and Levene's tests for 1-hour AMS. Circles (except yellow) were used to present *t*-test results and plus signs were used to present Mann-Kendall test results. Red color indicates positive trends, green no trend, and blue negative trends. Yellow circles show locations where Levene's test detected changes in variance.*



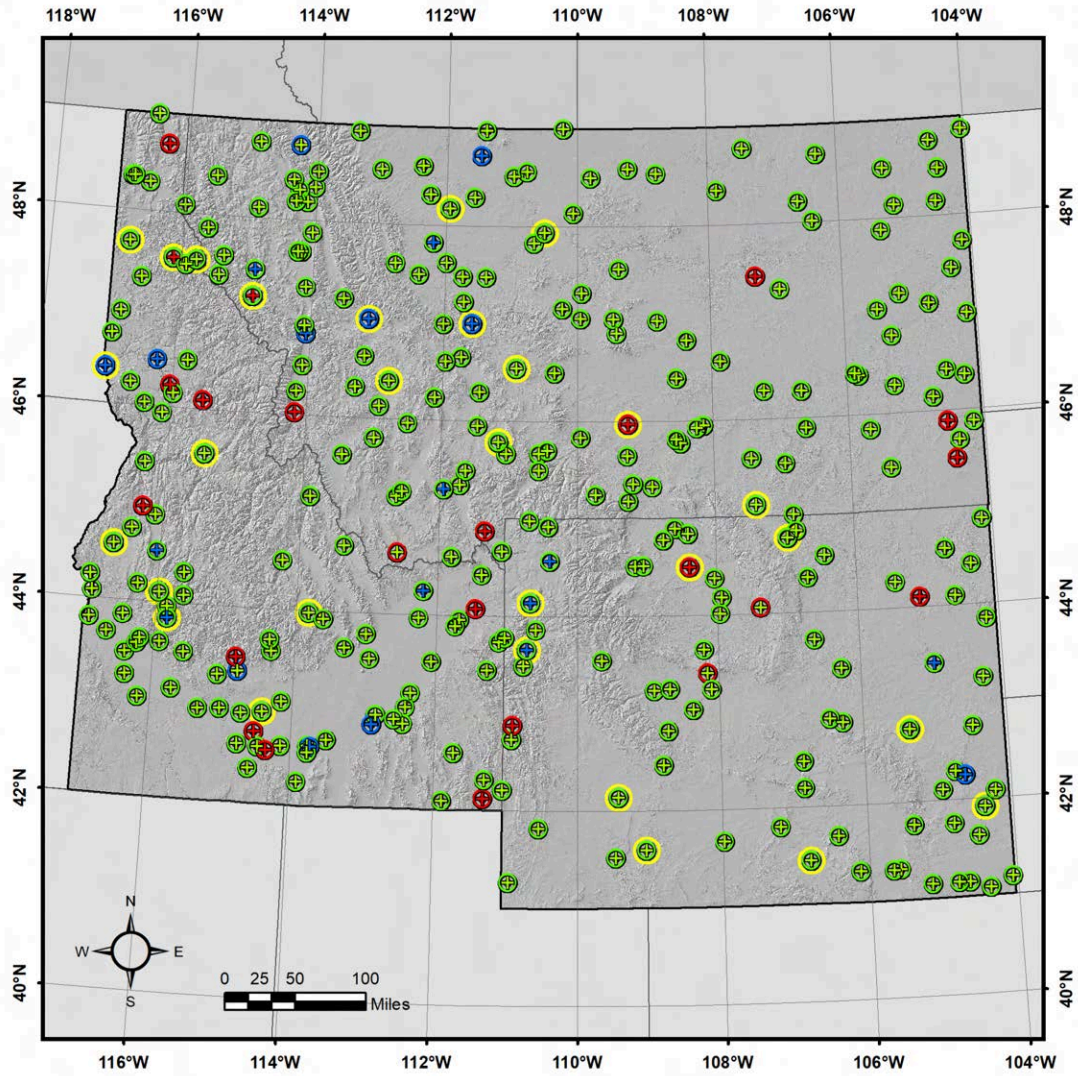


Figure A.2.2. Same as in Figure A.2.1, but for 1-day duration.

**Final Report**  
**Production of Rainfall Frequency Grids for Idaho, Montana, and Wyoming Using a Specifically  
Optimized PRISM System**

**Prepared for**  
National Weather Service, Hydrologic Design Service Center  
Silver Spring, Maryland

**Prepared by**  
Dr. Christopher Daly  
PRISM Climate Group  
Northwest Alliance for Computational Science and Engineering  
College of Engineering  
Oregon State University

June 2024

## **1. Project Goal**

The Hydrometeorological Design Studies Center (HDSC) within the OWP/NWS has been updating precipitation frequency estimates for various parts of the United States and affiliated territories that are published in NOAA Atlas 14. NOAA Atlas 14 is divided into volumes based on geographic sections of the country and affiliated territories. Since May 2021, HDSC has been working on updating precipitation frequency estimates for the states of Montana and Idaho as Volume 12. This volume also includes areas within the state of Wyoming. In order to complete the spatial interpolation of point precipitation frequency estimates across a range of durations, HDSC required spatially interpolated grids of mean annual maximum (MAM) precipitation at various durations. The contractor, the PRISM Climate Group at Oregon State University (OSU), was tasked with producing a series of grids for rainfall frequency estimation using an optimized system based on the Parameter-elevation Regressions on Independent Slopes Model (PRISM) and HDSC-calculated point estimates for Idaho, Montana, and Wyoming (IDMTWY).

## **2. Background**

HDSC used an L-moment based regional frequency analysis approach to estimate precipitation frequencies. In this approach, the mean of the underlying precipitation frequency distribution is estimated at point locations with a sufficient history of observations. The form of the distribution and its parameters are estimated regionally. Once the form of the distribution has been selected and its parameters have been estimated, precipitation frequency estimates can be computed from grids of the MAM. The grids that are the subject of this report are spatially interpolated grids of the point estimates of the MAM for various precipitation durations. The point estimates of the MAM were provided by HDSC. HDSC selected an appropriate precipitation frequency distribution along with regionally estimated parameters and used this information with the grids of the MAM to derive grids of precipitation frequency estimates.

The PRISM Climate Group has performed similar work previously to produce spatially interpolated MAM grids for updates of precipitation frequency estimates in the Semiarid Southwest United States, the Ohio River Basin and Surrounding States, Puerto Rico/US Virgin Islands, Hawaiian Islands, California, Midwest/Southeast states, Texas, and Alaska study areas.

### 3. Report

This report describes tasks performed to produce mean annual maximum (MAM) grids for 17 precipitation durations: 15 and 30 minutes; 1, 2, 3, 6, and 12 hours; and 1, 2, 3, 4, 7, 10, 20, 30, 45, and 60 days for IDMTWY. The tasks described were not necessarily performed in the order described, nor were they performed just once. The process was dynamic and had numerous feedbacks.

#### 3.1. Adapting the PRISM system

The PRISM modeling system was adapted for use in this project after a small investigation was performed for the Semiarid Southwest United States, and subsequently used in the Ohio River Basin and Surrounding States, Puerto Rico/Virgin Islands, Hawaiian Islands, California, Alaska, Midwest/Southeast states, Texas, and Northeast study areas. This investigation and adaptation procedure is summarized below.

PRISM is a knowledge-based system that uses point data, a digital elevation model (DEM), and many other geographic data sets to generate gridded estimates of climatic parameters (Daly et al. 1994, 2002, 2003, 2006, 2008) at monthly to daily time scales. Originally developed for precipitation estimation, PRISM has been generalized and applied successfully to map precipitation, dew point, minimum and maximum temperature, and vapor pressure deficit over the United States, Canada, China, and other countries. Details on PRISM formulation can be found in Daly et al. (2002, 2003, 2008, 2015, 2021), which are available from <http://prism.oregonstate.edu/docs/>.

Adapting the PRISM system for mapping precipitation frequencies required an approach slightly different than the standard modeling procedure. The amount of station data available to HDSC for precipitation frequency was much less than that available for high-quality precipitation maps, such as the peer-reviewed PRISM 1971-2000 mean precipitation maps (Daly et al. 2008). Data sources suitable for long-term mean precipitation but not for precipitation frequency included snow courses, short-term COOP stations, remote storage gauges, and others. In addition, data for precipitation durations of less than 24 hours were available from hourly precipitation stations only. This meant that mapping precipitation frequency using HDSC stations only would sacrifice a significant amount of the spatial detail present in the long-term mean precipitation maps.

A pilot project to identify ways of capturing more spatial detail in the precipitation frequency maps was undertaken. Early tests showed that mean annual precipitation (MAP) was an excellent predictor of precipitation frequency in a local area, much better than elevation, which is typically used as the underlying, gridded predictor variable in PRISM applications. In these initial tests, the DEM, the predictor grid in PRISM, was replaced by the official USDA digital map of MAP for the lower 48 states (USDA-NRCS 1998, Daly et al. 2000). Detailed information on the creation of the USDA PRISM precipitation grids is available from Daly and Johnson (1999). MAP was found to have superior predictive capability over the DEM for locations in the southwestern US. The relationships between MAP and precipitation frequency were strong because many of the effects of various physiographic features on mean precipitation patterns had already been incorporated into the MAP grid from PRISM. Preliminary PRISM maps of 2-year and 100-year, 24-hour precipitation were made for the Semiarid Southwest and compared to hand-drawn HDSC maps of the same statistics. Differences were minimal, and mostly related to differences in station data used.

Further investigation found that the square-root transformation of MAP produced more linear, tighter and cleaner regression functions, and hence, more stable predictions, than the untransformed values; this transformation was incorporated into subsequent model applications. Square-root MAP was a good local

predictor of not only longer-duration precipitation frequency statistics, but for short-duration statistics, as well. Therefore, it was determined that a modified PRISM system that used square-root MAP as the predictive grid was suitable for producing high-quality precipitation frequency maps for this project.

For this study, the latest official USDA grid of MAP for the study region (1991-2020 average) was used (Figure 1). This grid was developed under funding from the USDA Risk Management Agency and is an update to the 1981-2010 grids. The 1991-2020 normals are available online from <https://prism.oregonstate.edu/normals/>.

### 3.2. PRISM configuration and operation for IDMTWY

In general, PRISM interpolation consists of a local moving-window regression function between a predictor grid and station values of the element to be interpolated. The regression function is guided by an encoded knowledge base and inference engine (Daly et al., 2002, 2008). This knowledge base/inference engine is a series of rules, decisions and calculations that set weights for the station data points entering the regression function. In general, a weighting function contains knowledge about an important relationship between the climate field and a geographic or meteorological factor. The inference engine sets values for input parameters by using default values, or it may use the regression function to infer grid cell-specific parameter settings for the situation at hand. PRISM acquires knowledge through assimilation of station data, spatial data sets such as MAP and others, and a control file containing parameter settings.

The other center of knowledge and inference is that of the user. The user accesses literature, previously published maps, spatial data sets, and a graphical user interface to guide the model application. One of the most important roles of the user is to form expectations for the modeled climatic patterns, i.e., what is deemed “reasonable.” Based on knowledgeable expectations, the user selects the station weighting algorithms to be used and determines whether any parameters should be changed from their default values. Through the graphical user interface, the user can click on any grid cell, run the model with a given set of algorithms and parameter settings, view the results graphically, and access a traceback of the decisions and calculations leading to the model prediction.

For each grid cell, the moving-window regression function for MAM vs. MAP took the form

$$\text{MAM value} = \beta_1 * \text{sqrt}(\text{MAP}) + \beta_0 \quad (1)$$

where  $\beta_1$  is the slope and  $\beta_0$  is the intercept of the regression equation, and MAP is the grid cell value of mean annual precipitation.

Upon entering the regression function, each station was assigned a weight that is based on several factors. For PRISM MAP mapping (used as the predictor grid in this study), the combined weight of a station was a function of distance, elevation, cluster, vertical layer, topographic facet, coastal proximity, and effective terrain weights, respectively. A full discussion of the general PRISM station weighting functions is available from Daly et al. (2008).

Given that the MAP grid incorporated detailed information about the complex spatial patterns of precipitation, only a subset of these weighting functions was needed for this study. For IDMTWY, the combined weight of a station was a function of distance and clustering, respectively. A station is down-weighted when it is relatively distant from the target grid cell, or when it is clustered with other stations (which can lead to over-representation).

The moving-window regression function was populated by station data provided by the HDSC. A PRISM GUI snapshot of the moving-window relationship between sqrt(MAP) and 24-hour MAM in northwestern Montana is shown in Figure 2.

There were relatively few stations with data for durations of 12 hours or less from which to perform the interpolation. In addition, it was clear that the spatial patterns of durations of 12 hours or less could be very different than those of durations of 24 hours or more. This issue was encountered in a previous study for Puerto Rico. During that study the following procedure was developed, and adopted here:

- (1) Convert available  $\leq 12$ -hour station values to an MAM/24-hr MAM ratio (termed R24) by dividing by the 24-hour values;
- (2) using the station R24 data in (1), interpolate R24 values for each  $\leq 12$ -hour duration (15, 30, and 60 minutes; and 2, 3, 6, and 12 hours) using PRISM;
- (3) using bi-linear interpolation from the cells in the R24 grids from (2), estimate R24 at the location of each station having data for  $\geq 24$ -hour durations only;
- (4) multiply the estimated R24 values from (3) by the 24-hour value at each  $\geq 24$ -hour station to obtain estimated  $\leq 12$ -hour values;
- (5) append the estimated stations from (4) to the  $\leq 12$ -hour station list to generate a station list that matches the density of that for  $\geq 24$  hours; and
- (6) interpolate MAM values for  $\leq 12$ -hour durations with PRISM, using MAP as the predictor grid.

Investigation of the little available data failed to provide convincing evidence that the spatial patterns of R24 values in IDMTWY were strongly affected by topographic facets, or other physiographic factors. Therefore, the slope of the moving-window regression function for R24 vs. MAP of the form

$$R24 = \beta_1 * \text{sqrt}(\text{MAP}) + \beta_0 \quad (2)$$

was forced to zero everywhere. This meant that the interpolated value of R24 was a function of distance and cluster weighting only (essentially inverse-distance weighting).

Relevant PRISM parameters for applications to 60-minute R24 and 24-hour MAM statistics are listed in Tables 1 and 2, respectively. Further explanations of these parameters and associated equations are available in Daly et al. (2002, 2008).

The values of radius of influence ( $R$ ), the minimum number of total ( $s_i$ ) stations required in the regression were based on information from user assessment via the PRISM graphical user interface, and on a jackknife cross-validation exercise, in which each station was deleted from the data set one at a time, a prediction made in its absence, and mean absolute error statistics compiled (see Results section).

The input parameter that changed readily among the various durations was the default slope ( $\beta_{1d}$ ) of the regression function. Slopes are expressed in units that are normalized by the average observed value of the precipitation in the regression data set for the target cell. Evidence gathered during PRISM model development indicates that this method of expression is relatively stable in both space and time (Daly et al. 1994).

Bounds were put on the slopes to minimize unreasonable slopes that might occasionally be generated due to local station data patterns; if the slope is out of bounds and cannot be brought within bounds by the PRISM outlier deletion algorithm, the default slope is invoked (Daly et al., 2002). The maximum slope bound was set to a uniformly high value of 30.0, to accommodate a large range of valid slopes; lower values were not needed to handle extreme values, because all values were within reasonable ranges. Slope default values were based on PRISM diagnostics that provided information on the distribution of

slopes across the modeling region. The default value was set to approximate the average regression slope calculated by PRISM. For these applications, default slopes typically increased with increasing duration (Table 3). In general, the longer the duration, the larger the slope. This is primarily a result of higher precipitation amounts at the longer durations, and the tendency for longer-duration MAM statistics to bear a stronger and steeper relationship with MAP than shorter-duration statistics.

### **3.3. Preparation and review of draft grids**

Draft grids for the 1-hour, 6-hour, 24-hour, 4-day, 10-day, and 60-day durations were produced and made available to HDSC for evaluation. All of the necessary station data were provided by HDSC. The process began with a careful scrutiny of the station data and PRISM behavior. A version of PRISM which predicts for stations locations in the absence of each station (termed jackknifing) was run, and stations predicted poorly by PRISM were identified, and sent to HDSC for review. HDSC removed the stations, modified their values, or determined that the stations were accurate as-is. This process was performed iteratively, until an acceptable station data set was produced. The draft PRISM grids were subsequently completed and submitted to HDSC for review. HDSC submitted the draft PRISM grids for external review and revised the station data accordingly.

### **3.4. Final grids**

Having found the revised draft grids acceptable, HDSC requested that grids for all durations be completed. Before delivering the final grids to HDSC, the PRISM Climate Group checked them for internal consistency. In other words, the value of the MAM at each grid point for each duration must have been greater than the value for shorter durations at the same grid point. If an inconsistency of this nature occurred, the 60-day duration was used as a baseline, and shorter durations were set to slightly lower values.

The final delivered grids inherited the spatial resolution of the latest 1991-2020 PRISM mean annual precipitation grids for IDMTWY, which is 30 arc-seconds (~800 meters). The grid cell units are in mm. Final MAM grids delivered to HDSC are as follows:

15-minute  
30-minute  
60-minute  
2-hour  
3-hour  
6-hour  
12-hour  
24-hour  
48-hour  
3-day  
4-day  
7-day  
10-day  
20-day  
30-day  
45-day  
60-day

Total: 17

### 3.5. Performance evaluation

PRISM cross-validation statistics for 60-minute/24-hour MAM ratio and the 60-minute and 24-hour MAM intensities were compiled and summarized in Table 4. These errors were estimated using an omit-one jackknife method, where each station is omitted from the data set, estimated in its absence, then replaced. Since the 60-minute/24-hour MAM ratio was expressed as a percent, the percent bias and mean absolute error are the given as the bias and MAE in the original percent units (not as a percentage of the percent).

For the 60-minute/24-hour MAM ratio, the overall percent bias was -1.18% and the mean absolute error (MAE) 3.67 percent. For the 60-minute, 24-hour, and 10-day MAM intensities, biases were less than one percent except for the 60-minute duration, with a bias of -4.11 percent. Overall, MAEs ranged from 4-6 percent at the 1-hour to 60-day durations. The very small values at the 15- and 30-minute durations pushed the MAEs to about 7 and 13 percent, respectively.

Table 1. Values of relevant PRISM parameters for interpolation of 60-minute/24-hour mean annual maximum ratio (60-minute R24) for IDMTWY. See Daly et al. (2002) for details on PRISM parameters.

| Name                       | Description                                                                   | Value            |
|----------------------------|-------------------------------------------------------------------------------|------------------|
| <u>Regression Function</u> |                                                                               |                  |
| $R$                        | Radius of influence                                                           | 10 km*           |
| $s_t$                      | Minimum number of total stations desired in regression                        | 45 stations      |
| $\beta_{lm}$               | Minimum valid regression slope                                                | 0.0 <sup>+</sup> |
| $\beta_{lx}$               | Maximum valid regression slope                                                | 0.0 <sup>+</sup> |
| $\beta_{ld}$               | Default valid regression slope                                                | 0.0 <sup>+</sup> |
| <u>Distance Weighting</u>  |                                                                               |                  |
| $A$                        | Distance weighting exponent                                                   | 2.0              |
| $F_d$                      | Importance factor for distance weighting                                      | 1.0              |
| $D_m$                      | Minimum allowable distance                                                    | 0.0 km           |
| <u>Elevation Weighting</u> |                                                                               |                  |
| $B$                        | MAP weighting exponent                                                        | NA/NA            |
| $F_z$                      | Importance factor for MAP weighting                                           | NA/NA            |
| $\Delta z_m$               | Minimum station-grid cell MAP difference below which MAP weighting is maximum | NA/NA            |
| $\Delta z_x$               | Maximum station-grid cell MAP difference above which MAP weight is zero       | NA/NA            |

\* Expands to encompass minimum number of total stations desired in regression ( $s_t$ ).

<sup>+</sup> Slopes are expressed in units that are normalized by the average observed value of the precipitation in the regression data set for the target cell. Units here are  $1/[\text{sqrt}(\text{MAP}(\text{mm}))*1000]$ .

Table 2. Values of relevant PRISM parameters for modeling of 24-hour mean annual maximum statistics for IDMTWY. See Daly et al. (2002) for details on PRISM parameters.

| Name                       | Description                                                                                    | Value             |
|----------------------------|------------------------------------------------------------------------------------------------|-------------------|
| <u>Regression Function</u> |                                                                                                |                   |
| $R$                        | Radius of influence                                                                            | 3 km*             |
| $s_t$                      | Minimum number of total stations desired in regression                                         | 25 stations       |
| $\beta_{lm}$               | Minimum valid regression slope                                                                 | 0.0 <sup>+</sup>  |
| $\beta_{lx}$               | Maximum valid regression slope                                                                 | 30.0 <sup>+</sup> |
| $\beta_{ld}$               | Default valid regression slope                                                                 | 2.8 <sup>+</sup>  |
| <u>Distance Weighting</u>  |                                                                                                |                   |
| $A$                        | Distance weighting exponent                                                                    | 2.0               |
| $F_d$                      | Importance factor for distance weighting                                                       | 1.0               |
| $D_m$                      | Minimum allowable distance                                                                     | 0.0 km            |
| <u>Elevation Weighting</u> |                                                                                                |                   |
| $B$                        | Elevation weighting exponent                                                                   | 0.0               |
| $F_z$                      | Importance factor for elev weighting                                                           | 0.0               |
| $\Delta z_m$               | Minimum station-grid cell elev difference below which MAP weighting is maximum                 | NA                |
| $\Delta z_x$               | Maximum station-grid cell elevation difference above which station is eliminated from data set | NA                |

\* Expands to encompass minimum number of total stations desired in regression ( $s_t$ ).

<sup>+</sup> Slopes are expressed in units that are normalized by the average observed value of the precipitation in the regression data set for the target cell. Units here are  $1/[\text{sqrt}(\text{MAP}(\text{mm}))*1000]$ .



Table 3. Values of PRISM slope parameters for modeling of MAM statistics for IDMTWY for all durations. For durations of 12 hours and below, station data were expressed as the ratio of the given duration's MAM value to the 24-hour MAM value and interpolated; this was followed by an interpolation of the actual MAM values. See text for details. See Table 1 for definitions of parameters.

| Duration      | Slope Parameters |              |              |
|---------------|------------------|--------------|--------------|
|               | $\beta_{lm}$     | $\beta_{lx}$ | $\beta_{ld}$ |
| 15m/24h ratio | 0.0              | 0.0          | 0.0          |
| 30m/24h ratio | 0.0              | 0.0          | 0.0          |
| 1h/24h ratio  | 0.0              | 0.0          | 0.0          |
| 2h/24h ratio  | 0.0              | 0.0          | 0.0          |
| 3h/24h ratio  | 0.0              | 0.0          | 0.0          |
| 6h/24h ratio  | 0.0              | 0.0          | 0.0          |
| 12h/24h ratio | 0.0              | 0.0          | 0.0          |
| 15 minute MAM | 0.0              | 30.0         | 2.3          |
| 30 minute MAM | 0.0              | 30.0         | 2.3          |
| 1 hour MAM    | 0.0              | 30.0         | 2.3          |
| 2 hour MAM    | 0.0              | 30.0         | 2.3          |
| 3 hour MAM    | 0.0              | 30.0         | 2.4          |
| 6 hour MAM    | 0.0              | 30.0         | 2.5          |
| 12 hour MAM   | 0.0              | 30.0         | 2.7          |
| 24 hour MAM   | 0.0              | 30.0         | 2.8          |
| 48 hour MAM   | 0.0              | 30.0         | 3.0          |
| 3 day MAM     | 0.0              | 30.0         | 3.1          |
| 4 day MAM     | 0.0              | 30.0         | 3.2          |
| 7 day MAM     | 0.0              | 30.0         | 3.6          |
| 10 day MAM    | 0.0              | 30.0         | 3.8          |
| 20 day MAM    | 0.0              | 30.0         | 4.2          |
| 30 day MAM    | 0.0              | 30.0         | 4.5          |
| 45 day MAM    | 0.0              | 30.0         | 4.6          |
| 60 day MAM    | 0.0              | 30.0         | 4.8          |

Table 4. PRISM cross-validation errors for 60-minute/24-hour MAM ratio, and 60-minute, 24-hour, and 10-day MAM applications to IDMTWY. Since the 60-minute/24-hour MAM ratio was expressed as a percent, the percent bias and mean absolute error are given as the bias and MAE in the original percent units (not as a percentage of the percent).

| <b>Statistic</b>       | <b>N</b> | <b>% Bias</b> | <b>% MAE</b> |
|------------------------|----------|---------------|--------------|
| 60-min/24-hr MAM ratio | 737      | -1.18         | 3.67         |
| 60-minute MAM          | 1320     | -4.11         | 5.95         |
| 24-hour MAM            | 1320     | 0.19          | 6.12         |
| 10-day MAM             | 1320     | 0.71          | 5.88         |

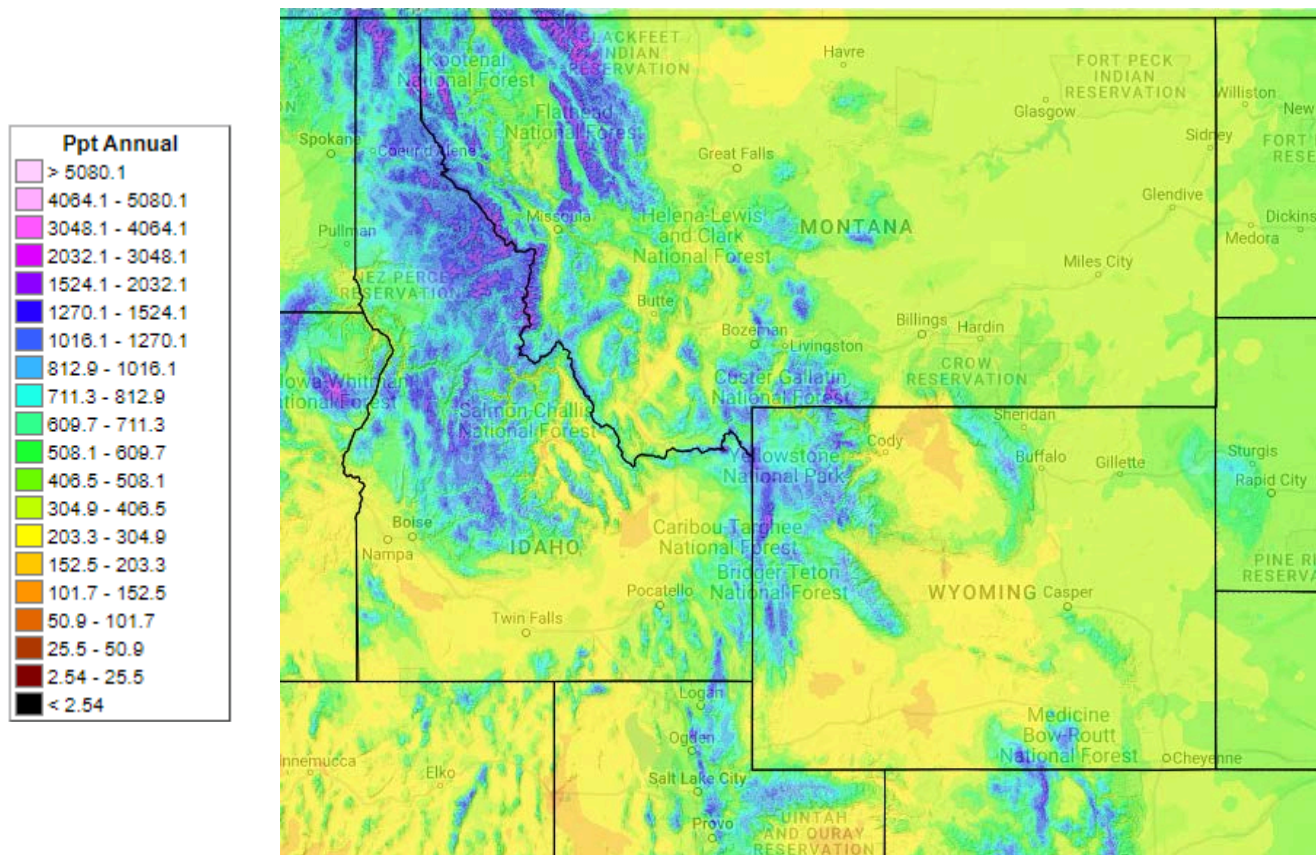


Figure 1. PRISM 1991-2020 mean annual precipitation (MAP) grid for the IDMTWY study region. Units are millimeters/year.

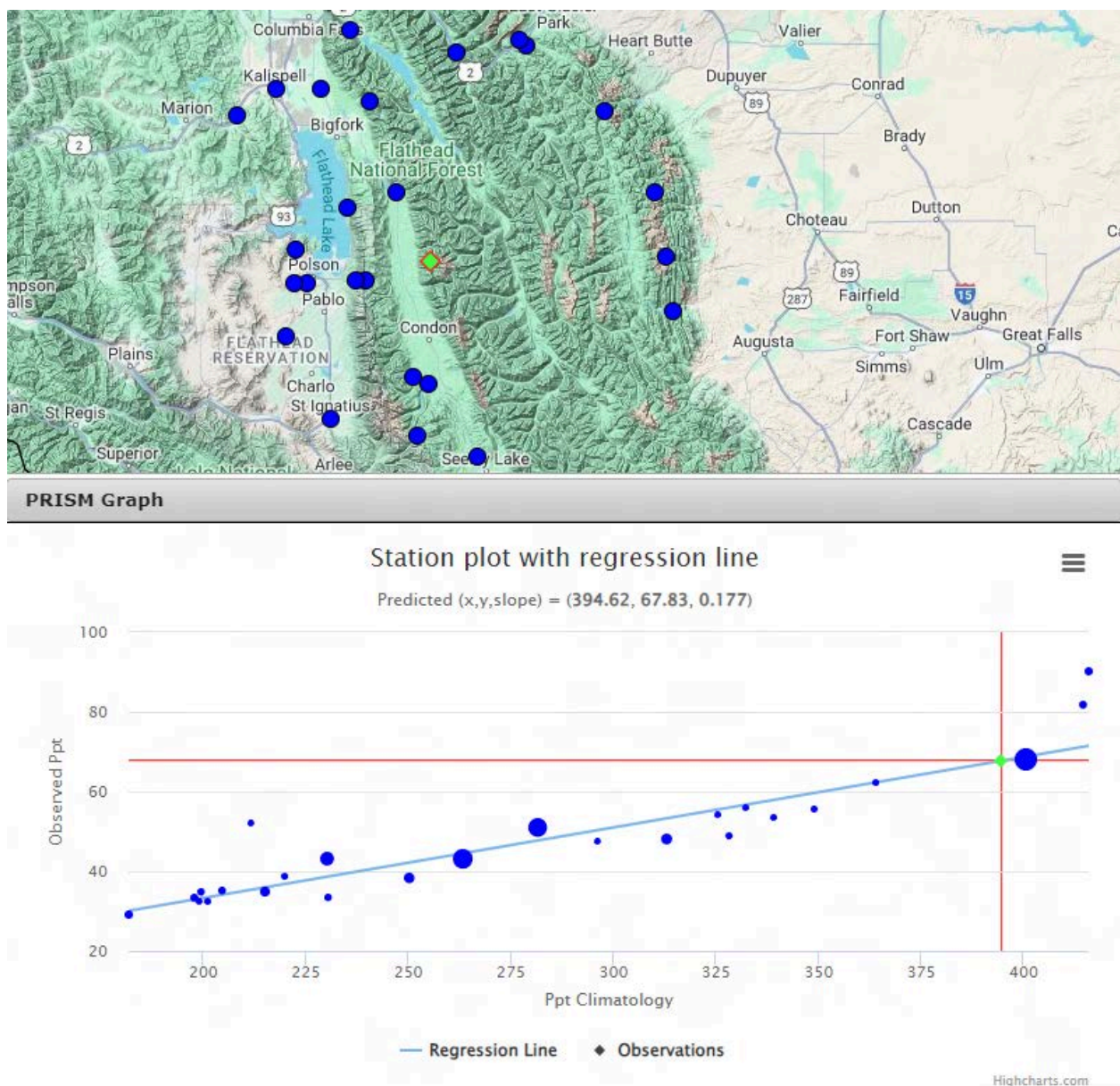


Figure 2. PRISM GUI snapshot of the moving-window weighted regression between the square root of mean annual precipitation (x100) and 24-hour mean annual maximum precipitation (MAM, mm) in northwestern Montana. Model is being run for the green diamond location on the map; stations are shown as blue circles.

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## Appendix A.4. Peer review comments and responses

A peer review of preliminary results for the NOAA Atlas 14 (NA14) Volume 12 precipitation frequency project was carried out in the period between 10 October 2023 and 22 December 2023. An invitation for the review was sent to individuals who expressed interest in updates to the Volume 12 project area and/or subscribed to the HDSC mailing list server. In January 2024, all comments were consolidated and reviewed, and began to be addressed accordingly.

The review package included the following items:

- a. Station metadata. Reviewers were asked to examine the accuracy of stations' metadata and provide comments on suggested stations' deletions and merges. A total of 15,305 stations from 34 datasets were grouped into three categories: a) stations within the Interior Northwest (INW) used in the analysis, b) stations outside the INW used in the analysis, and c) stations that were examined but not retained for the analysis. The metadata tables included information on each station's name, state, abbreviation used to identify the agency that provided data for the station, agency-assigned ID, latitude, longitude, elevation, and period of record. The tables also included basic information on other stations that contributed data to that station for sub-hourly, hourly, and daily durations, if applicable. If station data was collected but not used in the analysis, a brief comment was also provided on why the data was not used. Generally, stations were not used either because there was another nearby station with a longer period of record, station data were assessed unreliable for this specific purpose, or the station's period of record was not long enough and the station was not a candidate for merging with any nearby station.
- b. Spatially-interpolated estimates. Reviewers were invited to comment on the overall and local spatial patterns in spatially-interpolated precipitation frequency estimates for 2-year and 100-year ARIs and for 60-minute, 6-hour, 24-hour, and 10-day durations. To illustrate how much estimates changed in the project area, cartographic maps showing differences between preliminary NOAA Atlas 14 and superseded NOAA estimates (see Section 3.5 of this Appendix) for 100-year ARI and 6-hour and 24-hour durations were also shared. Figure 7 in Section 3.5 of this Appendix shows, as an example, a difference map between NA14 and NA2 100-year 24-hour precipitation frequency estimates.
- c. At-station depth-duration-frequency (DDF) curves. Reviewers were asked to examine the DDF curves only for stations within the project states retained in the analysis for 60-minute to 10-day durations and for 2-year through 100-year average recurrence intervals and to comment on their reasonableness.

Comments were received from ten individuals representing various federal and state agencies, as well as the private sector. Their reviews provided critical feedback that improved the estimates. Reviewers' comments and HDSC's responses (in italic font) are shown below. The comments and their respective HDSC responses have been grouped have been grouped into four categories:

1. Period of record
2. Patterns of spatially interpolated precipitation frequency estimates
3. Comparison with other studies
4. Miscellaneous.



## 1. PERIOD OF RECORD

- 1.1. The data used in the analysis ends in 3/2022. There was a significant flood event in NW WY in June 2022 (Yellowstone NP flooding). It was a mix of snowmelt and heavy rain, but the rainfall totals were impressive in that area and in a fairly short time frame. If possible, I would strongly urge to look to incorporate that data into the analysis. I know it's late in the process, but as with the 2017 Texas analysis, I think it will be a pretty important event to include as it was a significant event in an area that normally does not get heavy rainfall.

*After a peer review process, completed in October 2023, we updated most readily available datasets through the water year 2023. Most agency datasets were available for data download, while some agencies sent us their data directly. Stations from the datasets sent to us directly typically have data through water year 2021, while datasets available online, such as NCEI's Global Historical Climatology Network daily (GHCNd) and USDA's automated Snow Telemetry (SNOTEL) networks, were updated through water year 2023.*

*As a result, the Yellowstone NP, Wyoming flooding event of June 2022 is included in the final estimates, and includes stations that captured heaviest precipitation totals, such as 3.60 inches measured in 1-day at station Fisher Creek (Snotel 480). The same storm system also produced the heaviest 24-hour precipitation amount ever measured west of the Continental Divide in Montana at the Noisy Basin SNOTEL station, with 7.1 inches on June 13-14.*

- 1.2. It was not mentioned specifically in the peer review but are the precipitation-frequency values based on the total period of record or for a certain fixed period for all stations? For example, if a station has a record from 1940 to 2000 and another station has a record from 2000 to 2022 will these stations be treated equally in the analysis? There could be possible trends in these data due to climate change.

*The preliminary estimates are based on the total period of record, though stations with longer records are more highly weighted in the development of mean annual maximum grids and in calculation of the regional statistics. This allows us to develop more robust estimates and better assess any trends at a location over the historical period. We also want to identify any trends in annual maximum series (AMS) because the method used in NOAA Atlas 14 assumes a stationary climate. Using the parametric t-test and non-parametric Mann-Kendall test for trends in means and Levene's test for trends in variance, we found that approximately 90% of stations with sufficient record lengths did not show statistically significant trends in AMS data. Please see Appendix A.2 for more information.*

*Furthermore, we are currently developing a revised version of the Precipitation Frequency Standard, referred to as NOAA Atlas 15, with funding support from the Bipartisan Instructure Law. This revised standard will account for temporal trends in historical data, when that trend exists, and future climate variability using climate model outputs. For more information on this project, please see [https://www.weather.gov/media/owp/hdsc\\_documents/NOAA\\_Atlas\\_15\\_Flyer.pdf](https://www.weather.gov/media/owp/hdsc_documents/NOAA_Atlas_15_Flyer.pdf).*

- 1.3. Some stations have a period of record ending prior 1990, it is worth re-evaluating these stations for suitability due to the potential impacts of climate change and land-use land-cover change.

Of the stations selected for analysis, a majority of the stations contain periods of record after the year 2000. However, there are many stations with the period of record ending before 1990 (10-0282, 10-0491, 10-2071, 24-1460, 24-1765, 24-1919, 48-8845, 48-8748, as a few examples). Given the potential impact of climate change (i.e. change in mean precipitation) as well as land-use land-cover changes, it may be worth to re-evaluate these early ending stations for suitability and extend the period of record with co-located stations where possible.

*In NOAA Atlas 14 Volume 12, we merge stations in order to increase record lengths whenever possible. This is to ensure we use all reliable data, without impacting the statistical analysis, which requires at least 20 years of record for sub-daily data and 30 years of record for daily data.*

*It is common for a station to be decommissioned at one location and for another station to be established at a nearby location, resulting in a break of observing period. In such cases, we merge stations (often within a 5-mile radius) if they belong to the same or similar climatological regions. In the instances of 10-0282, 10-0491, 10-2071, 24-1460, 24-1765, 24-1919, 48-8845, and 48-8748, where records end before 2000, only two of these stations had records merged.*

*Table A.1.1 in Appendix A.1 gives detailed information on all stations whose data were used in the frequency analysis, including if a station was merged and has additional data from other contributing stations. For example, 48-8748 was merged with and has contributing data from 48-7420, while 10-0491 was merged with two contributing stations, 10-0494 and 10-0493. Stations without data after 1990 just didn't have any suitable merges to add more recent data.*

## 2. PATTERNS OF SPATIALLY INTERPOLATED PRECIPITATION FREQUENCY ESTIMATES

- 2.1. The map in Figure 6 shows 5 relatively high areas of locally high 100-year 24-hour precipitation. These look suspicious. There are obviously many more mountain ranges in central Montana. Why do these other mountain ranges not show similar high values? Is it because there are no precipitation stations in these other mountain ranges?

*We aren't certain of the five specific areas being referenced, but there are four distinct isolated mountain island ranges in Central MT, where 100-year 24-hour estimates exceed 7 inches within each of these areas. In this response, we address these four areas and the gauges that are driving estimates in these locations. These four areas are the Highwood Mtns, Bear Paw Mtns, Big Snowy Mtns, and Little Rocky Mtns; all of these areas have isolated gauges within these mountain ranges or in their vicinity and locally high 100-year 24-hour estimates are supported by the station data. Five gauges at these locations have observed some of the largest 1-day (daily stations) or 24-hour (hourly stations) precipitation events ever measured within the State of Montana. These stations have measured the following: (1) 24-8693 (daily), 8.72 inches in 1-day on June 7, 1906, 5.72 inches in 1-day on June 27, 1998; (2) 24-7148 (hourly), 6.73 inches in 24-hour on June 26-27, 1998, 6.04 inches in 24-hour on May 6-7, 2024 (24-hr); (3) 24-9900 (hourly), 6.49 inches in 24-hour on June*



21-22, 2019 (24-hr); (4) 24-7540 (daily), 6.52 inches in 1-day on June 3, 1953, 5.80 inches in 1-day on September 12, 1978; (5) 86-0427 (hourly), 6.10 inches in 24-hour on April 29-30, 2010, 5.70 inches in 24-hour on May 30-31, 2013.

*As a result, 100-year 24-hour estimates are going higher in these areas that are driven by these gauges that have measured extreme events in their data record. Aside from receiving some of the largest daily precipitation values measured within the state, some of these locations have the highest 24-hour mean annual maxima (MAM) amounts, within central Montana. Post-peer review, we evaluated many of these mountain peaks and refined spatial patterns, according to the feedback received. As a result the 100-year 24-hour estimates went down slightly in the Big Snowy Mtns, but decreased more dramatically in the Highwood Mtns. The largest decrease occurred at 24-7540 (Shonkin 7 S) which was 8.12 in the peer review and has a final estimate of 7.37 inches. There were no significant changes to 100-year 24-hour estimates in the Bear Paw Mtns and Little Rocky Mtns.*

- 2.2. Along the border of MT and WY Figure 6 shows a dramatic reduction in the 100-year 24-hour precipitation. On the MT side it shows a significant area of higher precipitation (blue and green colors) and south of the border in WY it shows lower precipitation (brown shades). This looks suspicious. Why does the change happen right at the border of the two states?

*Figure 6 is showing the preliminary 100-year 24-hour precipitation estimates for the entire project area. In the vicinity of the Pryor Mountains in southern Montana just north of the border, there is a tight gradient in estimates south of these mountains into northern Wyoming. This gradient is supported by the data at stations within this area. For example, the Montana RAWS station 76-0275 (Pryor Mountain) has a final 24-hour estimate of 5.80 inches, while the closest station south of the border in Wyoming 31 miles away, 48-2415 (Deaver) has an estimate of only 2.37 inches. The resulting patterns between these two stations are primarily following the terrain in this area. Upon closer inspection, it was determined that the gradient was a bit too tight, as estimates actually increased above 6 inches in a small area 10-12 miles south of 76-0275, so we placed an anchor (pseudo) station nearby to improve the PRISM interpolation in this area. The transition between these two stations now looks more reasonable compared to the pattern shown in preliminary estimates. This overall pattern is consistent with estimates developed in Atlas 2, which go from above 5 inches in the vicinity 76-0275 and decrease to as low as below 2 inches in northern WY. This is reflected in Figure 7 which shows the difference between NA14 preliminary estimates and Atlas 2 estimates for 100-yr 24-hour.*

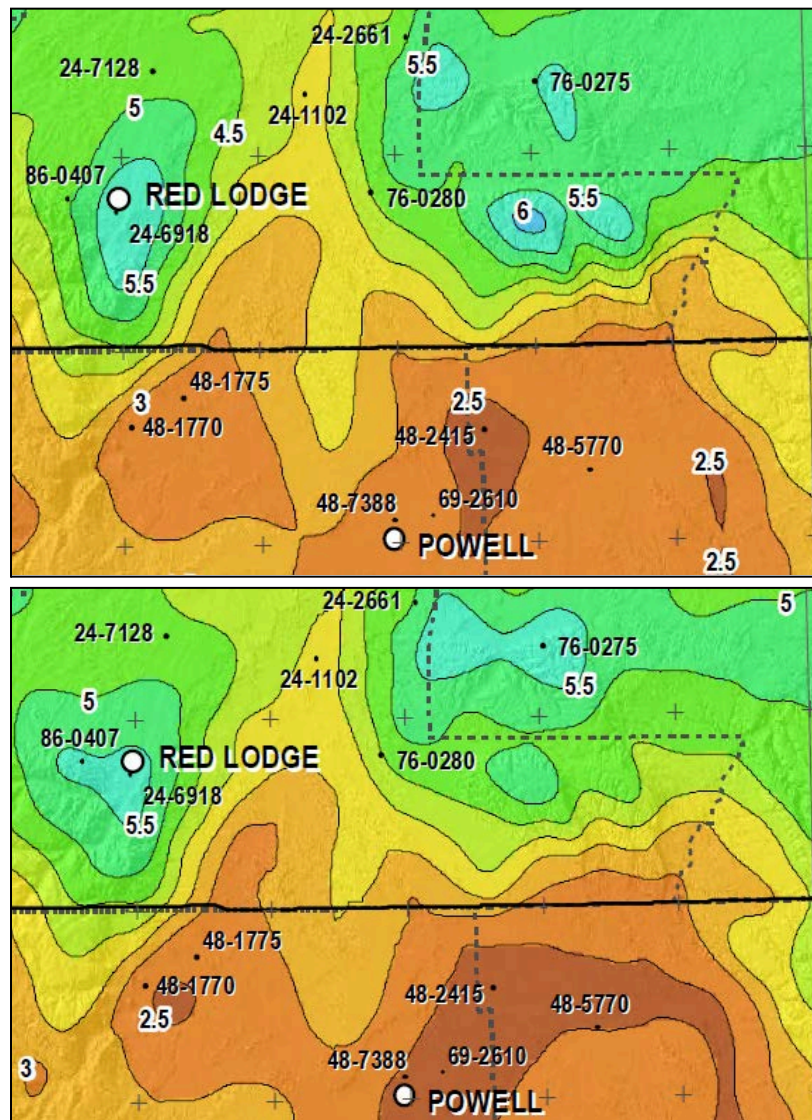
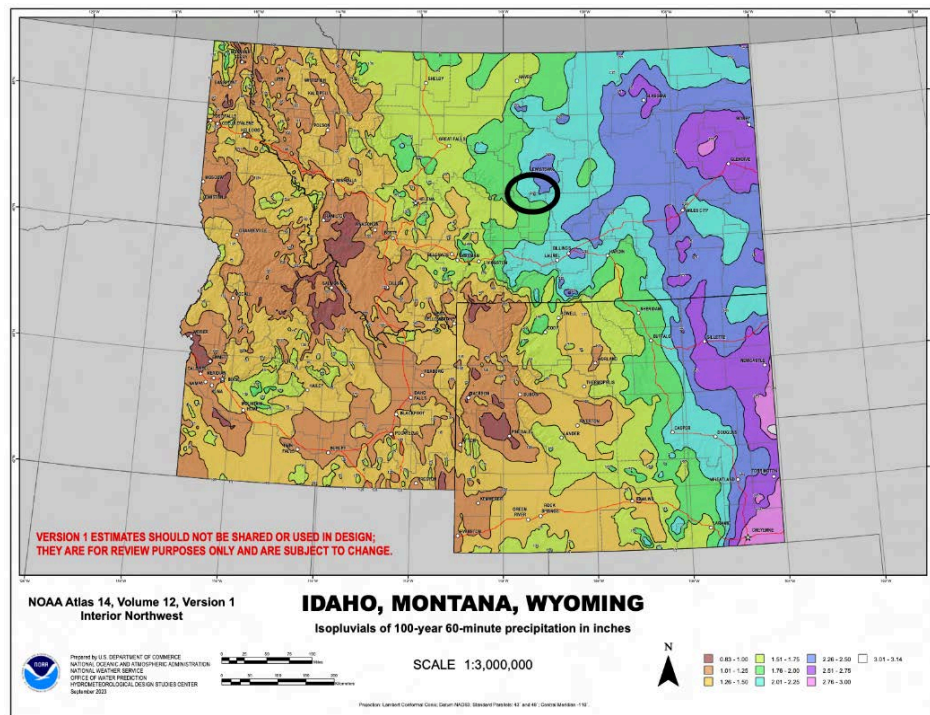
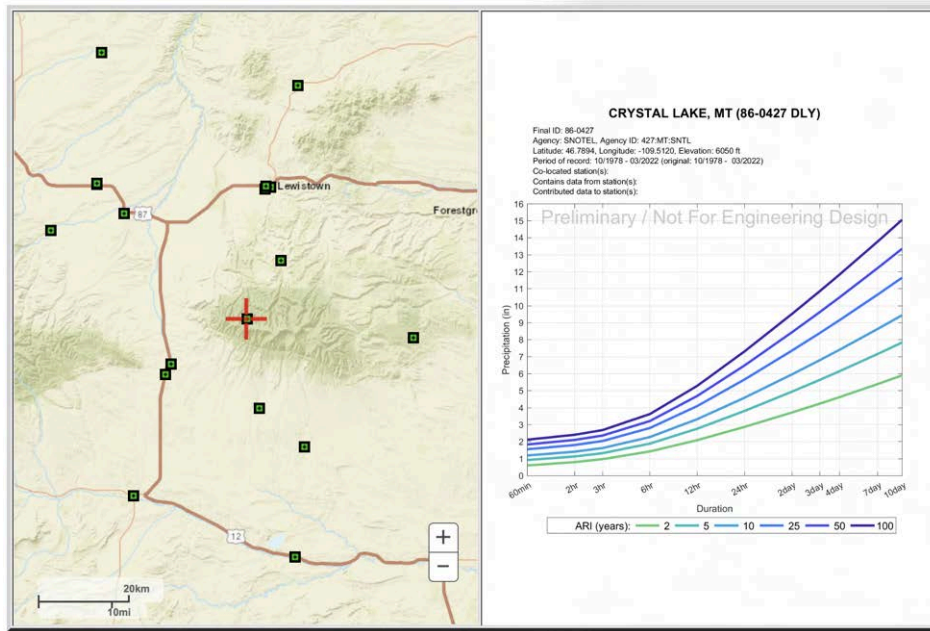
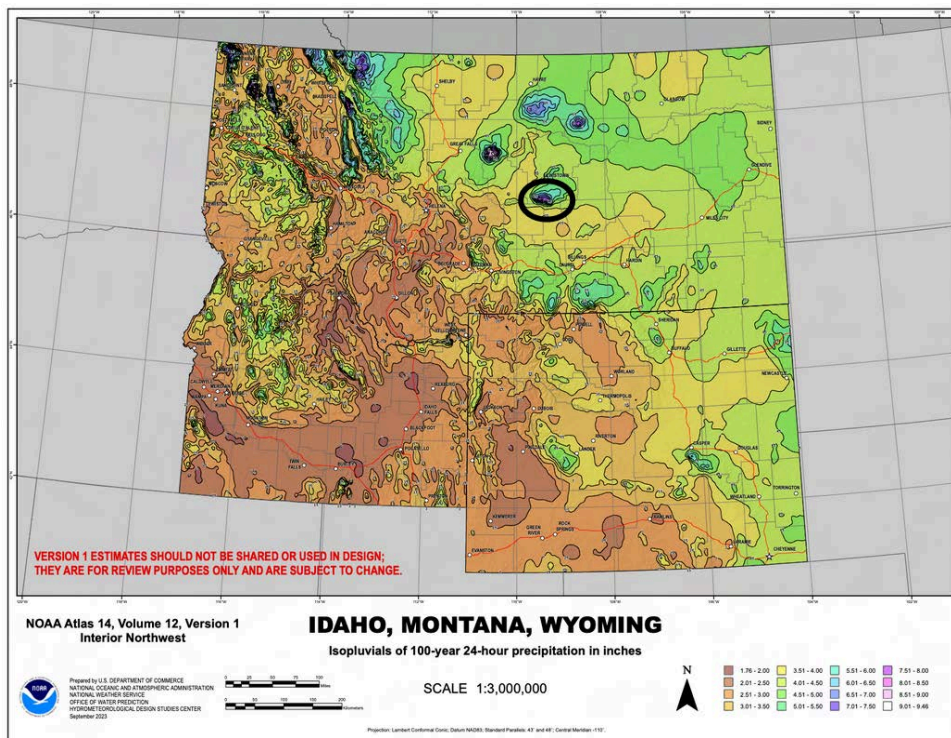
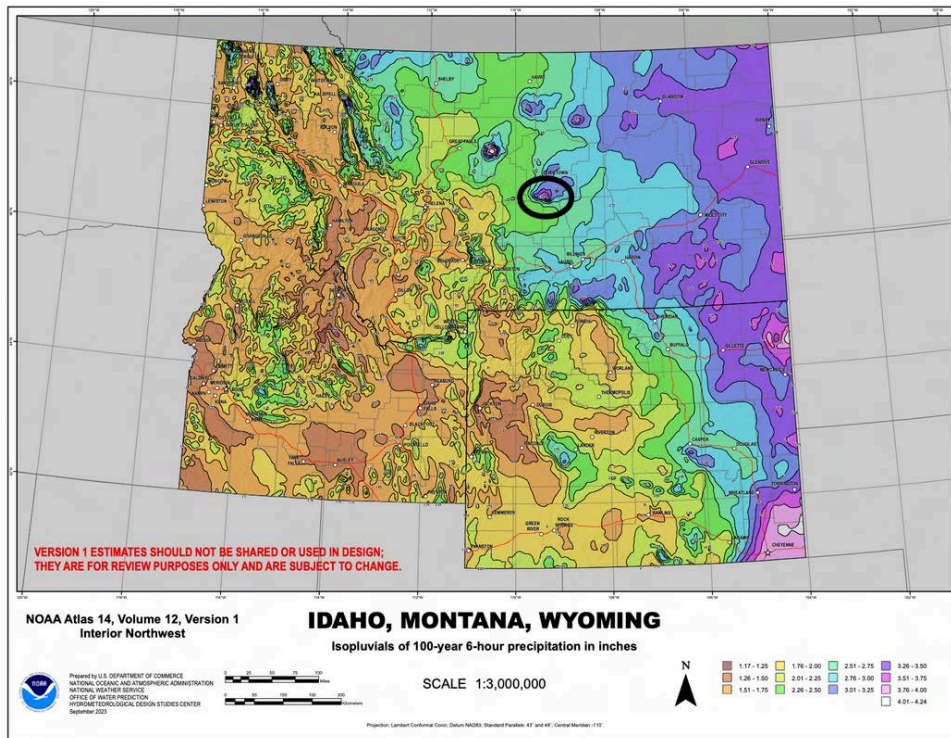


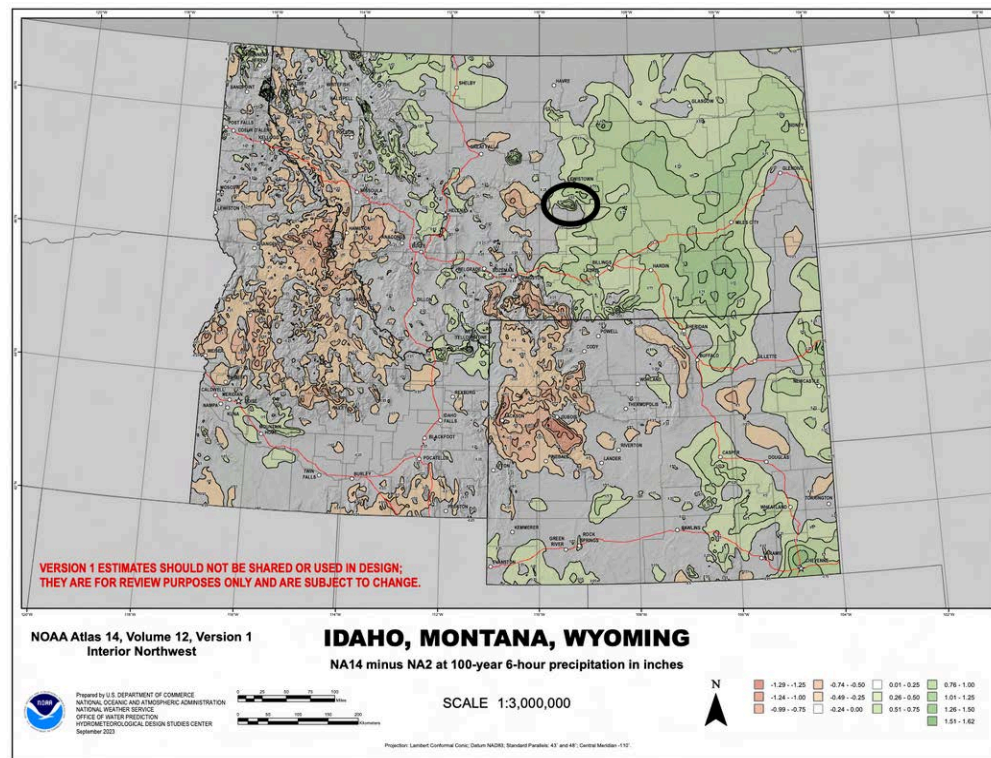
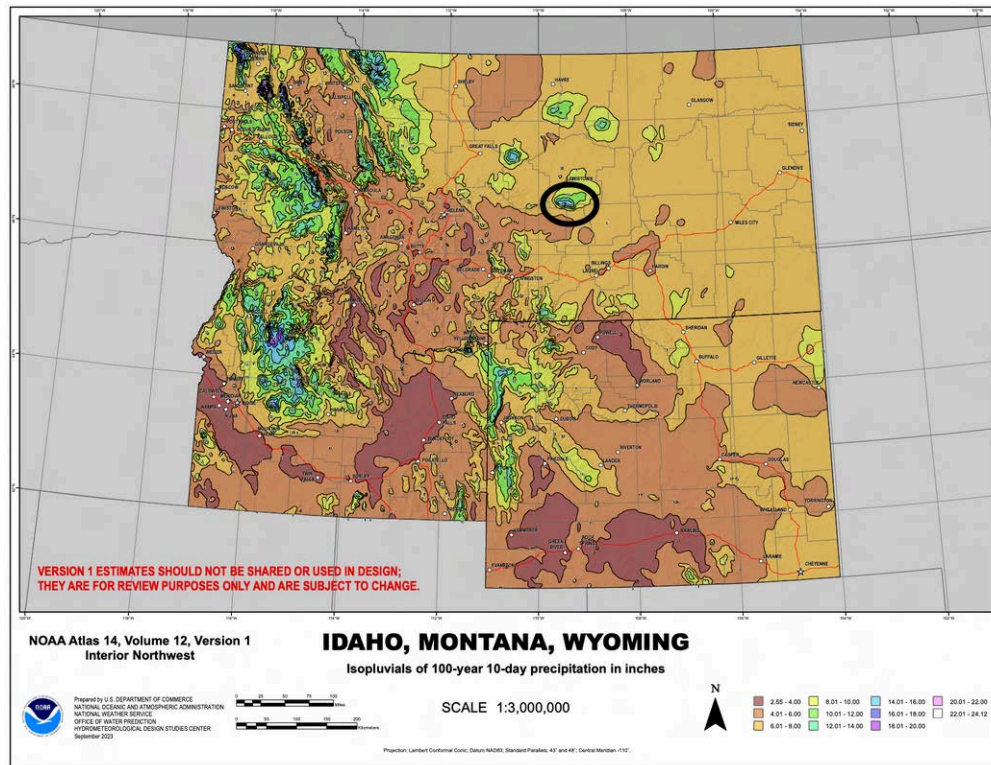
Figure A.4.1. Comparison of preliminary (top) and final 100-yr 24-hour estimates along MT/WY border.

- 2.3. In the area of the black circle in the attached google presentation file [excerpted below], durations 6-hours and greater show a local maxima while the 60-minute duration does not. (No maxima in slide 1). Stations in the blue circle in the higher, presumably upslope terrain SSW of Lewistown, MT are daily only (not hourly or sub-hourly) and therefore capture presumably higher rainfall at longer durations and have no observed data for shorter durations. There are hourly and sub hourly stations near or in Lewistown. I suspect that the mechanism that causes the higher values (estimates) at longer durations also exists at shorter durations but is not captured due to the lack of data.

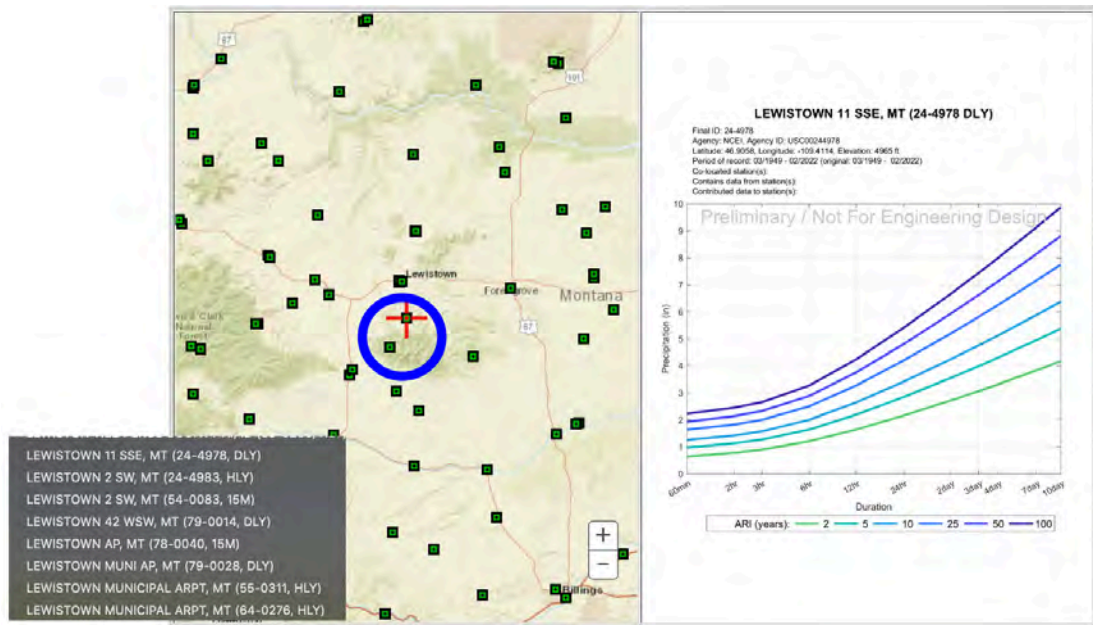












*One of the challenges with developing estimates for shorter durations is indeed the lack of data which impacts the uncertainty of hourly estimates at remote gauge locations. We agree with your comment that estimates should be spatially consistent across durations.*

*At Crystal Lake, MT, there are co-located daily and hourly SNOTEL stations (86-0427). However, due to the short record of the hourly station and reliability of the data, 1-hour mean annual maximum amounts (MAM) at this location seem to be lower in comparison to MAM values at 6-hour and 1-day. As a result of this feedback, we refined 1-hour MAM grids and the final 1-hour MAM increased from 2.11 to 2.24 at 100-year average recurrence intervals (ARI). This higher value is now more spatially consistent with surrounding stations, and while still not quite as high as other locations south of Lewistown, it's still higher than stations south of Crystal Lake, where estimates quickly drop below 2 inches due to decrease in elevation from the mountains to the prairies.*

- 2.4. This is not my area of expertise, so I didn't initially have any comment to offer. However, we do notice a large increase in precipitation amounts compared to NOAA Atlas 2 for all ARI levels over the Highwood Mountains, and the Snowy Mountain Ranges in Central Montana. These appear to be influenced strongly by the Shonkin 7S (247540), and Crystal Lake (860427) records, respectively.

I have no reason to discount the quality of either the Shonkin or Crystal Lake observational record. However, based on my personal experience exploring these island ranges, they do not appear to be ecologically different from other island ranges (for example, consider tree biomass density), nor do they appear to suffer from extreme rainfall or debris flow producing events compared to other areas of Central Montana.

So, the only comment I have in terms of peer review is to ask that the relative influence of these two locations be examined more closely.

*The Shonkin 7S (24-7540) data consistently receives heavy daily precipitation events, including 19.9 inches in a 12-day period of June of 1953, which was one of the most extreme longer duration events ever measured in Central MT. As a result of consistent heavy daily precipitation events, this location*

has the highest 2-year 24-hr precipitation estimate in Montana east of the Continental Divide at 2.95 inches. In comparison, the Crystal Lake SNOTEL site (86-0427) appears to be the 2nd largest at 2.85 inches.

The large differences between preliminary NA14 Volume 12 and NOAA Atlas 2 estimates in these island mountain areas is likely due to differences in record length and station density. According to the documentation for NA2, the 24-7540 only had 10-14 years of data when it was first analyzed in the early 1970s, at the time of this study publication, while in our study, this station now has 61 years of data.

Post-peer review, we have improved these areas by appending underlying data to include two additional data years (2022 and 2023) and improving mean annual maximum precipitation (MAM) grids. After closely reviewing this station's statistics and making improvements to its region, the new 24-hour 100-year estimate decreased from 8.12 inches to 7.37 inches. The Crystal Lake SNOTEL site also reduced slightly from the peer review estimate of 7.36 to the final estimate of 7.12 inches.

## 2.5. The spatial coverage of stations inside the INW domain and surrounding buffer is relatively good.

Based on the Köppen climate classification, Figure 1 depicts the climate zones of the Interior Northwest (INW), as well as the stations used to develop Atlas 14 Volume 12. Out of over 15000 available stations, 1892 (in INW) and 892 (outside INW) stations are used for precipitation frequency analysis and development of gridded precipitation frequency estimates. Each climate zone in the INW has appropriate spatial coverage to be used for analysis. Additionally, the stations selected outside the INW provide a reasonable buffer for complete coverage and development of gridded precipitation frequency estimates.

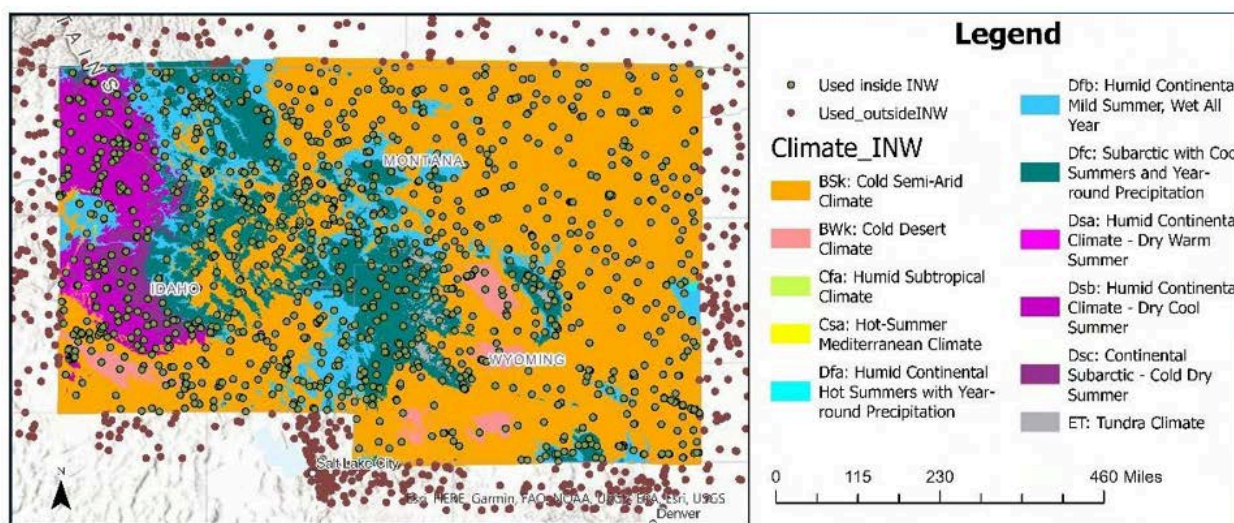


Figure 1. Atlas 14 Stations, Climate Regions in Interior North West (INW).

*Thank you, we agree with your comment about the spatial coverage.*

- 2.6. The method of interpolation of precipitation grids is appropriate, consistent with other volumes.

The same interpolation method applied to other Atlas 14 volumes is also applied to INW region. The stations provide full spatial coverage of the project area. Thus, given the frequency analysis properly estimated precipitation depth, the precipitation grids are deemed to be properly interpolated and consistent with other Atlas 14 volumes.

*We agree with your conclusion. For NOAA Atlas 14 Volume 12, the interpolation method, based on corresponding mean annual maximum grids at 30 arc-seconds resolution using a hybrid statistical-geographic approach for mapping climate data named Parameter-elevation Regressions on Independent Slopes Model, has been applied to the INW region. This is the same interpolation method applied to other NOAA Atlas Volumes.*

- 2.7. In previous NOAA Atlas 14 Volumes, I believe we added "synthetic" or "anchor" stations to aid the prism interpolation in select areas where data for certain durations existed but not other durations, for example, most frequently when daily data existed but hourly or sub hourly did not or the daily data was a much longer (period of record) than hourly data.

This [referring to question 2.3] is just one example that I found but I suspect there may be more. Maybe you could come up with some routine to automatically check every daily-only station? Or come up with some automated routine to pick out return periods that have local maxima or minima for 24-hour and greater durations that do not have maxima for hourly durations? However, if you suspect there is a different mechanism or regime that could explain the difference in maxima vs. no maxima in different durations then some of this would not be needed. However, I suspect similar regimes at all durations from such things and enhanced upslope flow conditions etc. I also suspect the same could be true for local minima.

*In NOAA Atlas 14 Volume 12, as in the previous NOAA Atlas 14 volumes, we added hourly anchor (pseudo) stations at 1-hour and 6-hour to aid PRISM interpolation during the development of MAM grids. In this project area due to complex terrain, for the first time, we used the SNOTEL hourly stations to help us estimate hourly values at daily SNOTEL stations. This network has a very short record and data quality issues, so we primarily used these stations where data matched the quality controlled daily SNOTEL data.*

*We reviewed spatial maps for reasonable patterns across durations both during the development of gridded MAM and final estimates. We also reviewed all station DDF curves where inconsistencies between hourly and daily durations were noticeable. We generally expect less variability at shorter durations like 1-hour, which may contribute to fewer maxima/minima compared to longer durations. High elevation areas that record heavy long-duration precipitation (e.g. orographic/upslope precipitation) compared to nearby areas at lower elevations may not have conditions suitable for heavy short-duration precipitation (e.g. driven by localized convection) of a similar magnitude.*



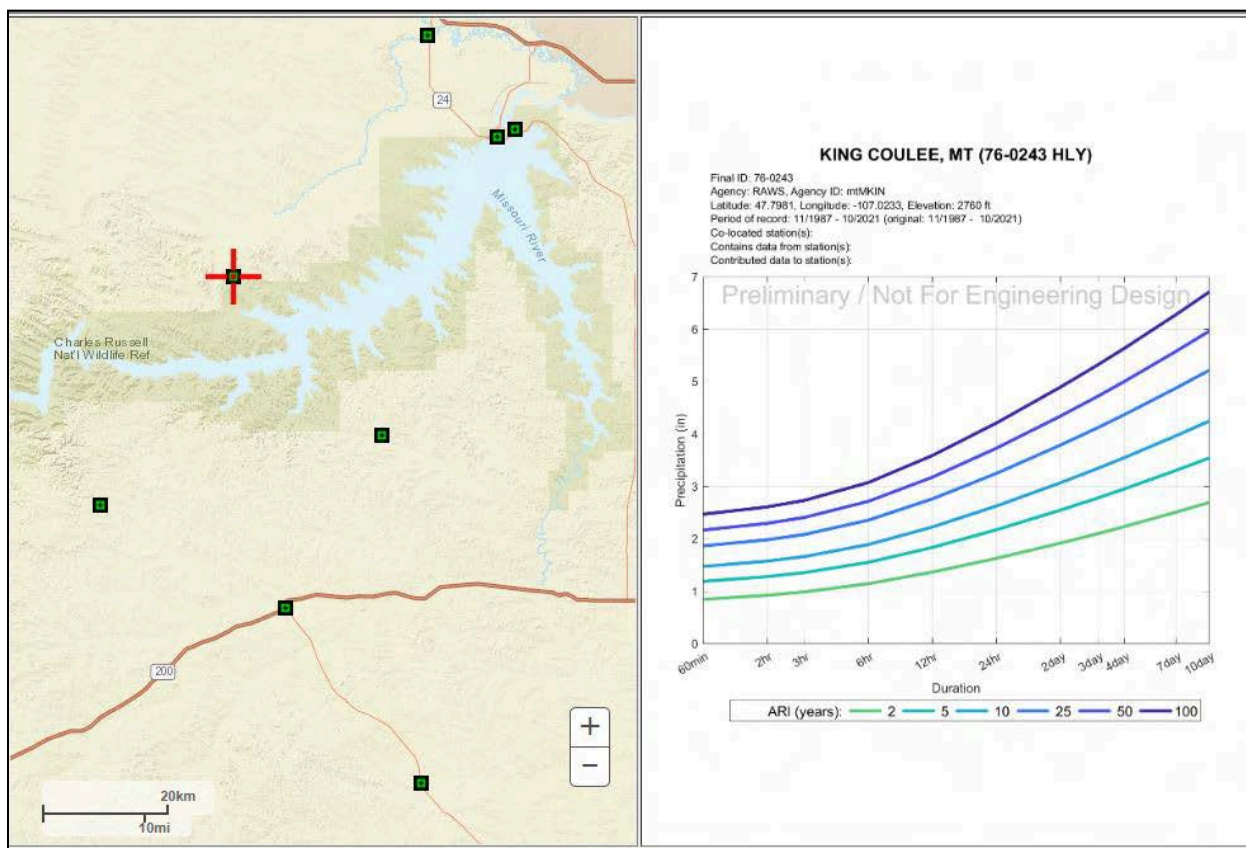
### 3. COMPARISON WITH OTHER STUDIES

- 3.1. Looking at the differences between Atlas 14 and 2, the only area I flagged was southeast Idaho southeast of Burley, ID where there were inconsistencies between the 6 and 24 hour 100-year event. Some areas on the 24-hr showed positive differences for example while the 6 hours had a negative change. I would just double check that area to see if there might be a gage impact there.

*In the mountains southeast of Burley, estimates are primarily being driven by a single SNOTEL station, 86-0534. After reviewing this area, we agree that the 24-hour estimate at this location is increasing more than 1 inch relative to Atlas 2, while 6-hour is relatively unchanged and has a slight decrease away from the mountain peak.*

*Through redefining the regionalization and MAM grids, it was determined that 6-hour 100-yr estimates were low in this area and were increased accordingly. The SNOTEL station (86-0534) increased from the peer review amount of 2.28 to the final estimate of 2.48 inches, resulting in this location being the highest 100-yr estimate for 6-hour in this part of the state. The 24-hour estimate at 86-0534 station at 100-yr was decreased from 4.86 to 4.54 after reviewing spatial patterns in this area and inspecting the at-station DDF curve. It is now more in line with the 24-hour estimates at another SNOTEL station, 86-0484 to the east, which is at 4.40 inches.*

- 3.2. Randomly selecting several stations within different climate zones, station locations are deemed to be reasonable. Two examples from the “Cold Semi-Arid Climate”:
- (1) Atlas 14 yields higher precipitation depth compared to Atlas 2 at station King Coulee, MT (Figure 2).
  - (2) Atlas 14 again yields higher precipitation depth compared to Atlas2 at station Oregon Trail Crossing (Figure 3). This is an example of co-located stations (Hourly and 15-min) with contributing station (15- min). These stations are well presented.



| Map              | Precipitation (inches) |
|------------------|------------------------|
| 2-year 6-hour    | 1.08                   |
| 2-year 24-hour   | 1.56                   |
| 100-year 6-hour  | 2.60                   |
| 100-year 24-hour | 3.77                   |

Figure 2. Estimates for King Coulee MT (76-0243, HLY) in Cold Semi-Arid Climate region from Atlas 14 (top) and from Atlas 2 (bottom) using the same latitude-longitude.

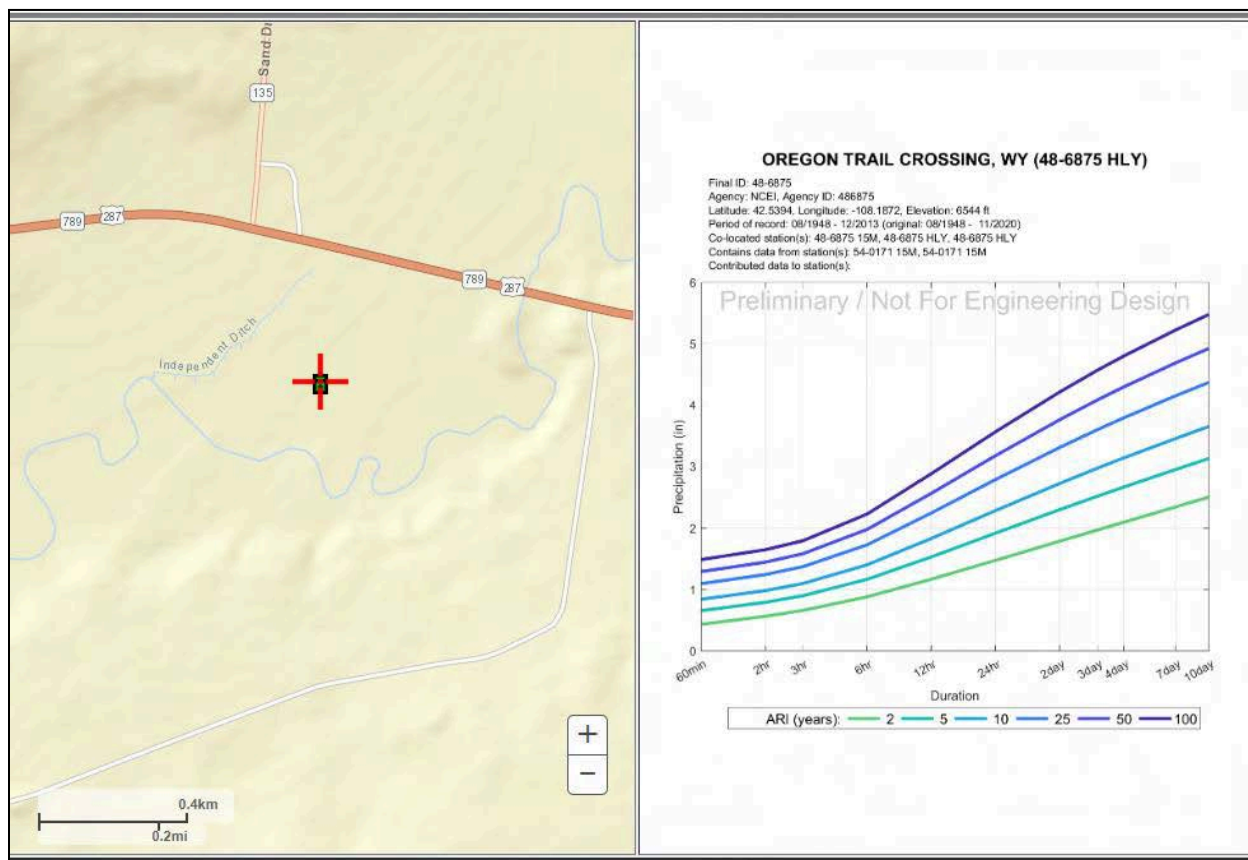


Figure 3. Estimates for Oregon Trail Crossing (co-located HYL/15-MIN-48-6875), contributing (54-0171 15-min) in Cold Semi-Arid Climate region from Atlas 14 (top) and from Atlas 2 (bottom) using the same latitude-longitude.

*Upon review of spatial patterns and DDF curves, it was determined that the PRISM-interpolated 24-hour MAM amount at the location of 48-6875 was going high relative to the at-station AMS data for this station, resulting in unrealistic patterns on the 100-year 24-hour map. We addressed this discrepancy between the AMS data and the 24-hour MAM by manually decreasing both the 2-year and 100-year estimates. This resulted in estimates being more comparable with the closest station 48-4925, while still slightly higher, and resulted in improved spatial patterns in the vicinity of 48-6875. A summary table of the difference between final NA14 and NA2 estimates for King Coulee, MT (76-0243) and Oregon Trail Crossing, WY (48-6875) locations are provided below. For a full comparison between final NA14 estimates and past NOAA publications, please see Section 7.*

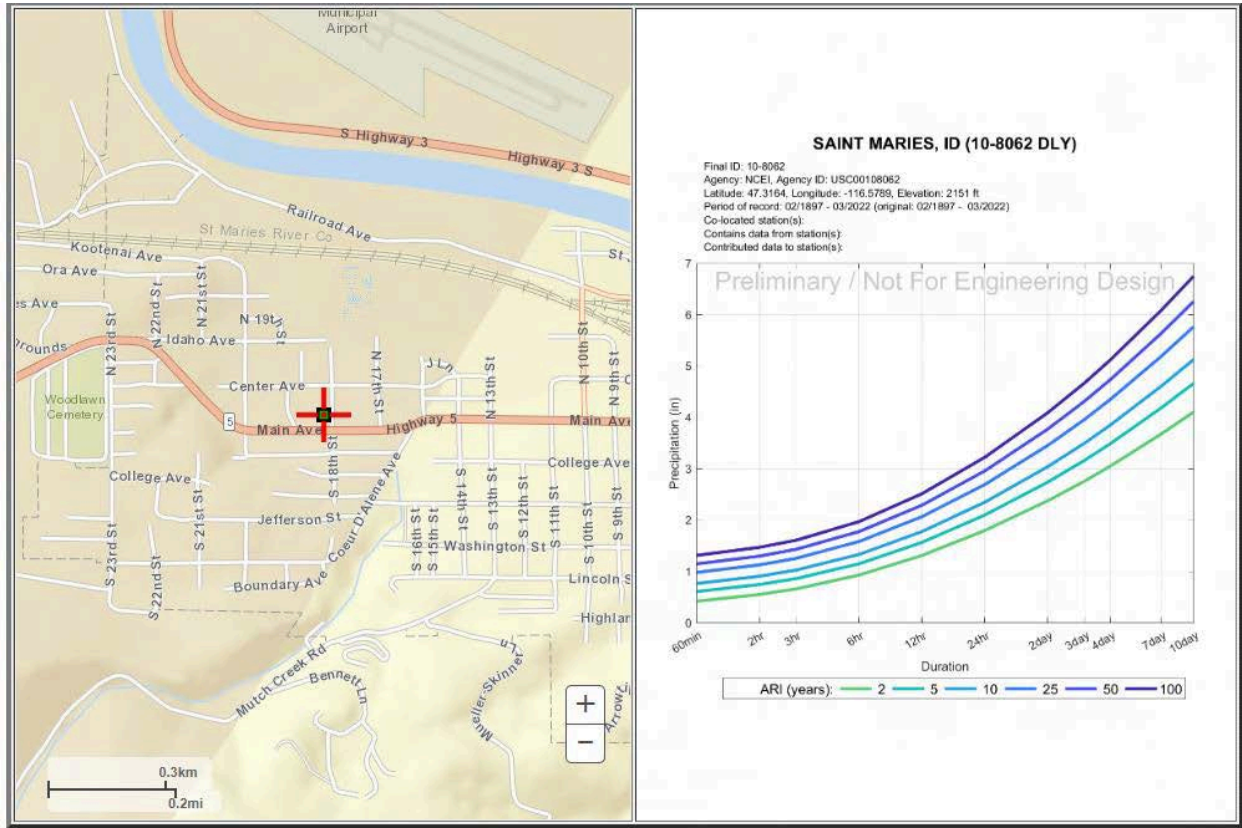
*Table A.4.1. Comparison between preliminary and final NA14 estimates and past NOAA publication for selected durations (6-hour, and 24-hour) and AEP (2-year, and 100-year) for King Coulee, MT (76-0243) location.*

| <b>Map</b>       | <b>NA2 Precipitation<br/>(inches)</b> | <b>Preliminary NA14 Precipitation<br/>(inches)</b> | <b>Final NA14 Precipitation<br/>(inches)</b> |
|------------------|---------------------------------------|----------------------------------------------------|----------------------------------------------|
| 2-year 6-hour    | 1.08                                  | 1.13                                               | 1.16                                         |
| 2-year 24-hour   | 1.56                                  | 1.62                                               | 1.64                                         |
| 100-year 6-hour  | 2.60                                  | 3.04                                               | 3.07                                         |
| 100-year 24-hour | 3.77                                  | 4.21                                               | 4.26                                         |

*Table A.4.2. Comparison between preliminary and final NA14 estimates and past NOAA publication for selected durations (6-hour, and 24-hour) and AEP (2-year, and 100-year) for Oregon Trail Crossing, WY (48-6875) location.*

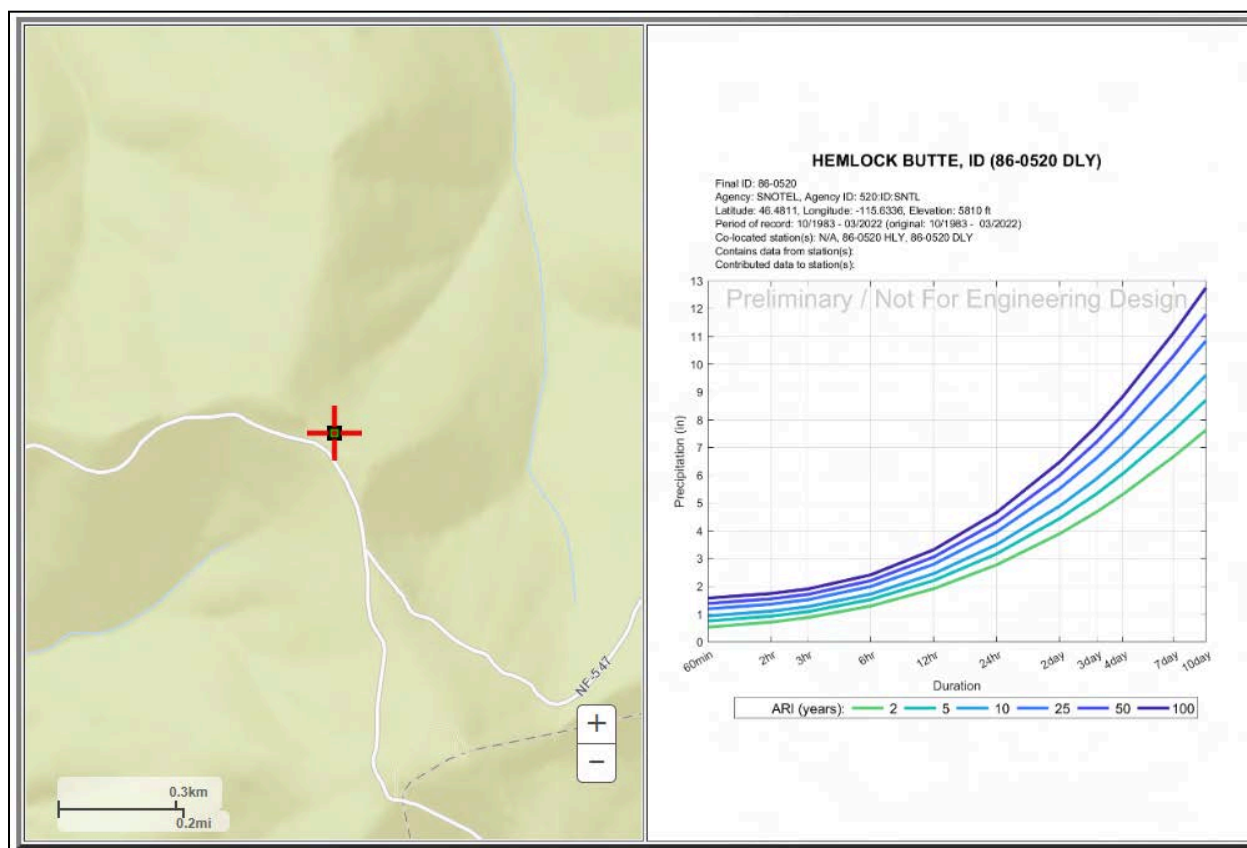
| <b>Map</b>       | <b>NA2 Precipitation<br/>(inches)</b> | <b>Preliminary NA14 Precipitation<br/>(inches)</b> | <b>Final NA14 Precipitation<br/>(inches)</b> |
|------------------|---------------------------------------|----------------------------------------------------|----------------------------------------------|
| 2-year 6-hour    | 0.75                                  | 0.86                                               | 0.86                                         |
| 2-year 24-hour   | 1.15                                  | 1.48                                               | 1.41                                         |
| 100-year 6-hour  | 2.01                                  | 2.16                                               | 2.26                                         |
| 100-year 24-hour | 2.95                                  | 3.60                                               | 3.32                                         |

- 3.3.** Randomly selected examples within “Humid Continental Climate-Dry Cool Summer” (dbf):
- 1) Atlas 14 yields similar precipitation to Atlas 2 at station Saint Maries, ID (Figure 4)
  - 2) Atlas 14 yields similar precipitation to Atlas 2 at station Hemlock Butte, ID. This is an example from a SNOTEL station (Figure 5)



| Map              | Precipitation (inches) |
|------------------|------------------------|
| 2-year 6-hour    | 0.89                   |
| 2-year 24-hour   | 1.66                   |
| 100-year 6-hour  | 1.79                   |
| 100-year 24-hour | 3.25                   |

Figure 4. Estimates for Saint Maries, ID (10-8062, DLY) in Humid Continental Climate – Dry Cool Summer from Atlas 14 (top) and from Atlas 2 (bottom) using the same latitude-longitude.



| Map              | Precipitation (inches) |
|------------------|------------------------|
| 2-year 6-hour    | 1.20                   |
| 2-year 24-hour   | 2.21                   |
| 100-year 6-hour  | 2.42                   |
| 100-year 24-hour | 4.22                   |

Figure 5. Estimates for Hemlock Butte, ID (86-0520 DLY) in Humid Continental Climate – Dry Cool Summer from Atlas 14 (top) and from Atlas 2 (bottom) using the same latitude-longitude.

*Estimates at Saint Maries and Hemlock Butte didn't change significantly between preliminary and final estimates. Any differences between preliminary and final estimates can be attributed to the AMS data update of 2022 and 2023, improvement of MAM grids, refinement in regionalization and spatial patterns, and smoothing of DDF curves. For a full comparison between final NA14 estimates and past NOAA publications, please see Section 7, and below please find a summary of the final estimates for these two stations in comparison to Atlas 2.*

*Table A.4.3. Comparison between preliminary and final NA14 estimates and past NOAA publication for selected durations (6-hour, and 24-hour) and AEP (2-year, and 100-year) for Saint Maries, ID (10-8062) location.*

| <b>Map</b>       | <b>NA2 Precipitation<br/>(inches)</b> | <b>Preliminary NA14 Precipitation<br/>(inches)</b> | <b>Final NA14 Precipitation<br/>(inches)</b> |
|------------------|---------------------------------------|----------------------------------------------------|----------------------------------------------|
| 2-year 6-hour    | 0.89                                  | 0.91                                               | 0.96                                         |
| 2-year 24-hour   | 1.66                                  | 1.78                                               | 1.76                                         |
| 100-year 6-hour  | 1.79                                  | 1.94                                               | 1.93                                         |
| 100-year 24-hour | 3.25                                  | 3.20                                               | 3.15                                         |

*Table A.4.4. Comparison between preliminary and final NA14 estimates and past NOAA publication for selected durations (6-hour, and 24-hour) and AEP (2-year, and 100-year) for Hemlock Butte, ID (86-0520) location.*

| <b>Map</b>       | <b>NA2 Precipitation<br/>(inches)</b> | <b>Preliminary NA14 Precipitation<br/>(inches)</b> | <b>Final NA14 Precipitation<br/>(inches)</b> |
|------------------|---------------------------------------|----------------------------------------------------|----------------------------------------------|
| 2-year 6-hour    | 1.20                                  | 1.26                                               | 1.31                                         |
| 2-year 24-hour   | 2.21                                  | 2.73                                               | 2.70                                         |
| 100-year 6-hour  | 2.42                                  | 2.33                                               | 2.46                                         |
| 100-year 24-hour | 4.22                                  | 4.59                                               | 4.59                                         |

- 3.4. Finally, station Nez Perce Camp, MT is located in the “Subarctic with Cool Summer and Year-Round Precipitation Climate”. Compared to Atlas 2, a reduction of precipitation is projected according to Atlas 14 estimates (Figure 6).



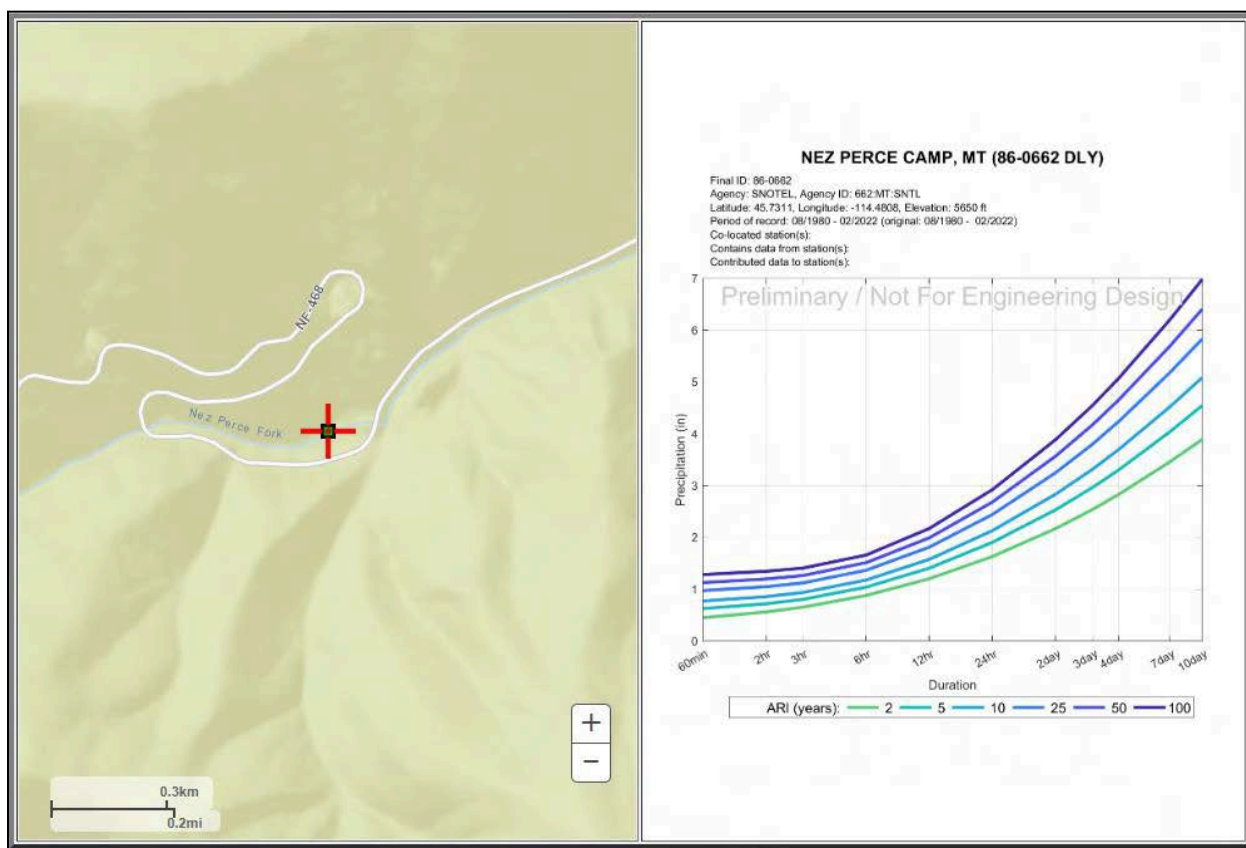


Figure 6. Estimates for Nez Perce Camp, MT (86-0662 DLY) in Subarctic with Cool Summer and Year-Round Precipitation Climate from Atlas 14 (top) and from Atlas 2 (bottom) using the same latitude-longitude.

*The 100-year 24-hr estimate is notably lower than NA2 at Nez Perce Camp (86-0662), but this reduction is consistent with a large area along the ID/MT border where estimates have decreased by as much as 47%. There are a few reasons we can attribute to differences between the two studies, including the statistical estimation procedure (L-moments) and spatial interpolation schemes that are much improved over what was available in the 1970s and can considerably impact estimates at ungauged locations. Also, the increase in the amount of available data from NA2 to NA14, both in the number of stations (spatial coverage) and their record lengths, has a considerable effect on estimates. NA2 only used data through 1970, so potentially more than 50 additional years of data are available at existing stations for the NA14 analyses. Many stations that weren't suitable for frequency analysis in NA2 due to short records most likely are included in NA14. In NA2, the*



*location of 86-0662 and surrounding mountainous areas was extremely lacking of data, which would've made it difficult to develop reliable estimates here. For a full comparison between final NA14 estimates and past NOAA publications, please see Section 7, and below please find a summary of the final estimates of this station in comparison to Atlas 2.*

*Table A.4.5. Comparison between preliminary and final NA14 estimates and past NOAA publication for selected durations (6-hour, and 24-hour) and AEP (2-year, and 100-year) for Nez Perce Camp, MT (86-0662) location.*

| <b>Map</b>       | <b>NA2 Precipitation<br/>(inches)</b> | <b>Preliminary NA14 Precipitation<br/>(inches)</b> | <b>Final NA14 Precipitation<br/>(inches)</b> |
|------------------|---------------------------------------|----------------------------------------------------|----------------------------------------------|
| 2-year 6-hour    | 1.04                                  | 0.86                                               | 0.89                                         |
| 2-year 24-hour   | 2.05                                  | 1.61                                               | 1.61                                         |
| 100-year 6-hour  | 2.23                                  | 1.58                                               | 1.66                                         |
| 100-year 24-hour | 4.20                                  | 2.90                                               | 2.90                                         |

- 3.5. Compared to Atlas 2, there are multiple hotspots identified with abnormal differences in magnitude and spatial extent. It is necessary to evaluate and document the reasoning for abrupt (abnormal) changes.

We focus on the difference in 100-year 24-hour frequency grids as the example. Compared to Atlas 2, the 100-year 24-hour precipitation may decrease as much as 2.4 inches or increase as much as 5.15 inches at some locations (Figure 7). Spatially, decreases in Atlas 14 tend to be seen in Idaho, Western Montana, and Western Wyoming, in areas of complex topography. Conversely, the increases in Atlas 14 precipitation tends to be more widespread and seen in Eastern Montana and Wyoming, as well as the leeward side of the Northern Rockies in Montana. Our goal is to evaluate whether the hot spots (abnormal increases/decreases) are reasonable based on the current draft version.

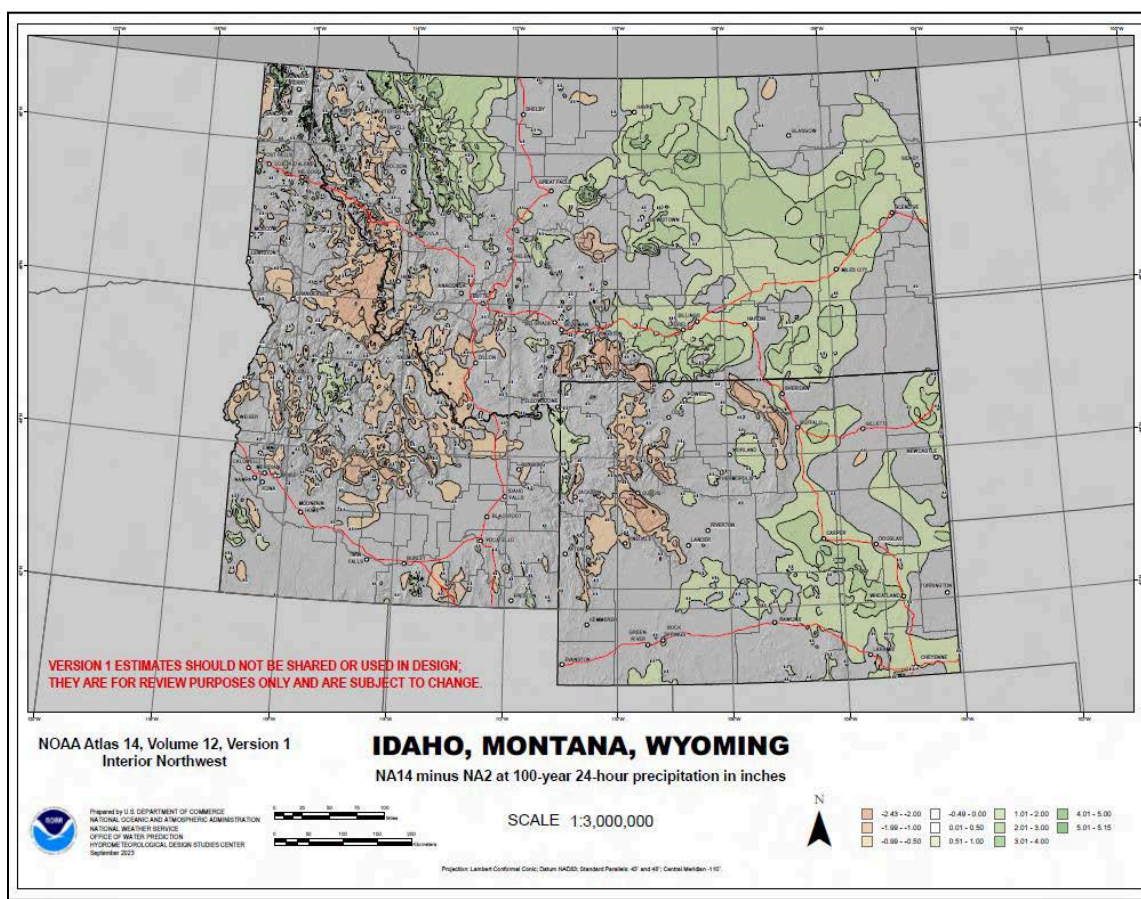


Figure 7. Difference between Atlas 14 and Atlas 2 100-year 24-hour precipitation in inches

An example of a large hotspot can be seen around Great Falls, MT (Figure 8). An increase in precipitation as high as 4 inches is estimated, which seems abnormally high. After reviewing the stations in the surrounding area (Figure 9), Table 1 lists the 100-year 24-hour precipitation depths extracted from Atlas 14 and Atlas 2. Of the stations evaluated, over 50% increase (about 3 inches) is identified at Station Shonkin 7S (NA2-5.1 in; NA14-8 in), which is not comparable amongst three stations with similar elevation and in same dfb climate zone. As a result, it may be necessary to re-evaluate the hotspots with abrupt/abnormal changes.

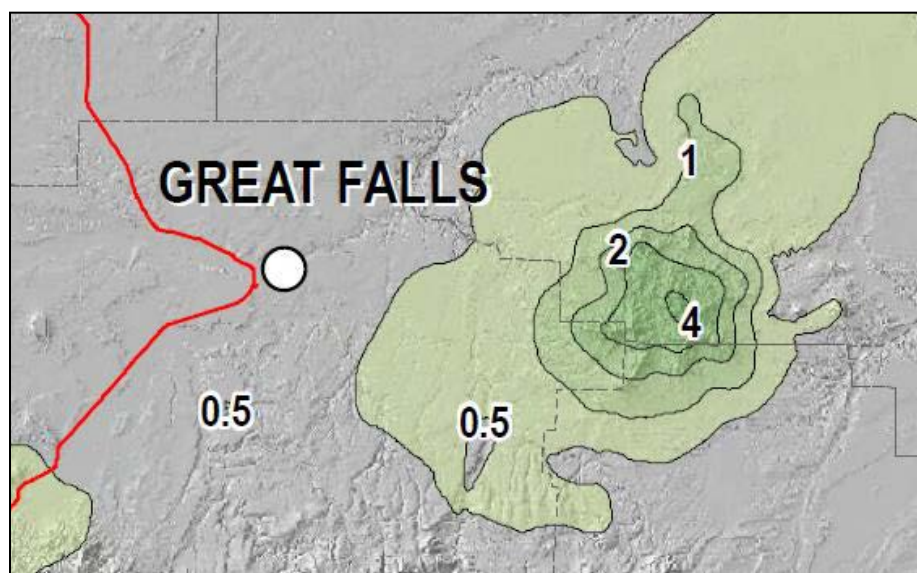


Figure 8. Hot spot example around Great Falls, MT.

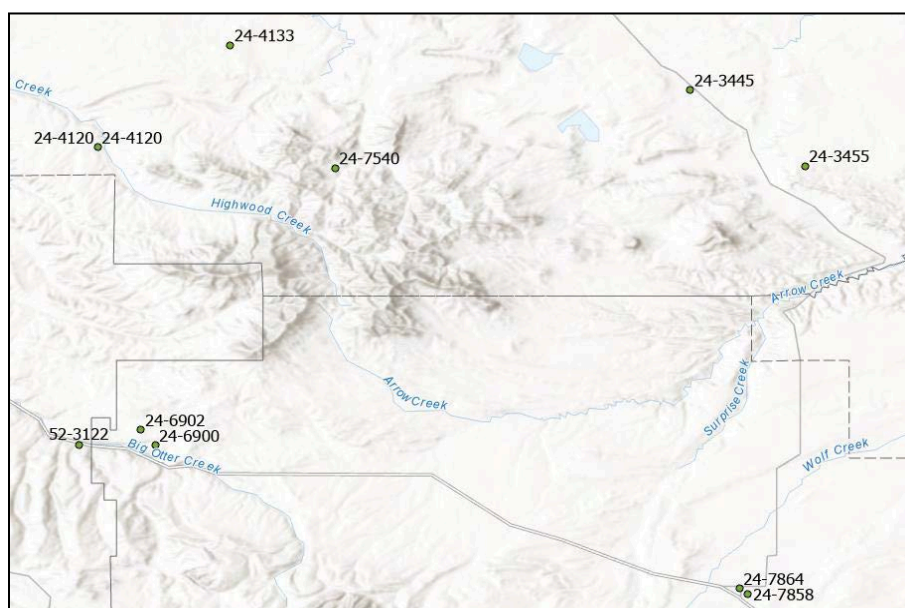


Figure 9. Stations around hot spot in Great Falls, MT.

Table 1. Stations near Great Falls, MT hotspot location

| Station           | ID             | LAT            | LONG             | Climate <sup>#</sup> | NA14 <sup>*</sup> | NA2        | difference |
|-------------------|----------------|----------------|------------------|----------------------|-------------------|------------|------------|
| Highwoods         | 24-4120        | 47.55          | -110.7833        | dfb                  | 5                 | 4.53       | 0.47       |
| Raynesord 2NNW    | 24-6902        | 47.2972        | -110.7456        | dfb                  | 4.8               | 4.15       | 0.65       |
| <b>Shonkin 7S</b> | <b>24-7540</b> | <b>47.5317</b> | <b>-110.5764</b> | <b>dfb</b>           | <b>8</b>          | <b>5.1</b> | <b>2.9</b> |
| Geraldine         | 24-3445        | 47.6014        | -110.2669        | bsk                  | 4.6               | 4.12       | 0.48       |
| Stanford          | 24-7864        | 47.155         | -110.2239        | bsk                  | 4                 | 3.76       | 0.24       |

<sup>\*</sup>: approximated by reading from the DDF curve.  
<sup>#</sup>: dfb-humid continental mild summer, wet all year; bsk-cold semi-arid

The final 24-hour 100-yr estimate for station 24-7540 decreased from 8.12 inches to 7.37 inches, while the final 6-hour 100-yr estimate at this location increased from 3.77 to 3.94 inches. These changes are the result of appending underlying data to include two additional data years (2022 and 2023), improving mean annual precipitation (MAM) grids, and refining regionalization. This revision produced a more reasonable DDF curve that is comparable to estimates at the other mountain ranges.

Any large scale differences between NA2 and NA14 are supported by the data. In the final estimates, for example, in the vicinity of Station Shonkin 7S, NA2 100-year 24-hour is somewhere in the range 5.0 - 5.39 inches, while NA14 has a range of 7 - 8.12 inches. While the final estimates have decreased in comparison to the peer review in this area, NA14 estimates are still more than 2 inches higher relative to NA2, considerably less than the difference of 3-4+ inches between NA2 and preliminary estimates

- 3.6. Applied Weather Associates, LLC completed a study for WY state dated 2014, which includes a 100-year 24 hr precipitation map. The final report of this study can be found at: Wyoming Water Development Commission (state.wy.us). There appears to be differences between NOAA's map in Figure 6 and the map created by Applied Weather Associates. Some of this is no doubt due to the difference in scales between the maps. In a broad general comparison, the isopluvial lines show similar values of precipitation between the maps. But when you study them closer, the NOAA map in Figure 6 does not appear to capture the significance of the orographic effects. Especially in the western mountain ranges of Wyoming. Also, the isopluvial lines on NOAA's map do not show the same level of detail as the map by Applied Weather Associates in the high deserts and plains areas of Wyoming. If all anomalies are only due to the scale of the maps, then maybe there are no concerns. If not, then consideration of the differences may be warranted.

We reviewed both AWA study images of grids and grids itself, available by request from the Wyoming Water Development Commission. Some of the differences between the preliminary NA14 and AWA study may be attributed to differences in the scale of the contours; AWA study shows 0.25 inches contours while NA14 peer review maps every 0.50 inches.

For our comparison, we used the grids available by request from the Wyoming Water Development Commission, given that those represent the final version of the datasets. The differences between the 2-year and 100-year gridded estimates are mostly due to the difference in the data networks and record lengths used in these two studies. The AWA study used data only through 2010, while we used data through 2023, adding 13 more years of observations and leading to the inclusion of additional stations from networks with shorter record lengths such as SNOTEL. Many SNOTEL were likely



omitted from the AWA analysis because at the time they had not yet met the 30-year record length threshold, and we expect that the resulting grids rely on the interpolation method, rather than observations, in the vicinity of those stations, resulting in overestimation in those areas.

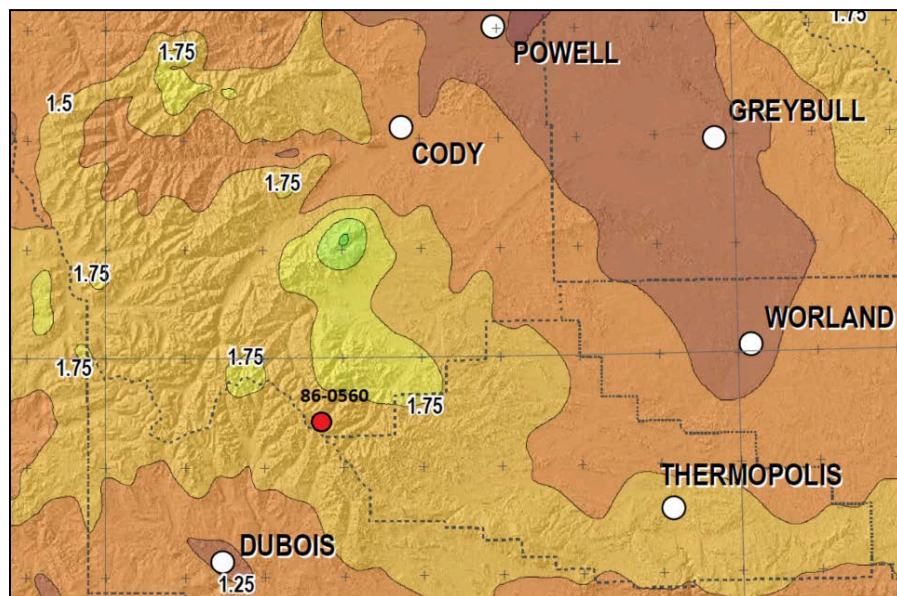


Figure A.4.2. NA14 2-year 24-hour precipitation estimates in the vicinity of station Kirwin, WY (86-0560) location.

In NOAA Atlas 14, Figure 6 of the peer review maps show locations supported by data coming from SNOTEL stations. For example, SNOTEL station Kirwin, WY (86-0560) in NA14 has a 2-year 24-hour estimate of 1.59 inches, while the gridded amount from AWA is 2.08 inches for this location, a large difference of 0.49 inches. This station however has only ever measured one instance of 2.00 inches or more in a day (constrained midnight to midnight measurement) over the past 44 years. This large difference at 2-year likely propagated to 100-year grids, and this is likely the main reason why the 100-year 24-hr gridded value from AWA is about 1 inch higher than the final estimate from NA14. The table below shows the largest ten 1-day precipitation events measured in the record for 86-0560 over the period from 1980 - 2023. In the case of this station, we don't know for certain, but we suspect the station wasn't directly used to develop 2-year 24-hour estimates because of the large discrepancy between the at-station data and the gridded estimates from AWA.

Table A.4.6. Largest ten 1-day precipitation events for Kirwin, ID (86-0560) location in the record from 1980 - 2023.

| Rank | Precipitation<br>(inches) | Date       |
|------|---------------------------|------------|
| 1    | 2.40                      | 5/5/2007   |
| 2    | 1.80                      | 5/5/1993   |
| 3    | 1.80                      | 6/15/1992  |
| 4    | 1.70                      | 5/28/2019  |
| 5    | 1.70                      | 5/27/2019  |
| 6    | 1.70                      | 5/7/2016   |
| 7    | 1.70                      | 9/19/1990  |
| 8    | 1.60                      | 10/12/2023 |
| 9    | 1.60                      | 5/30/2022  |
| 10   | 1.60                      | 9/13/1982  |

#### 4. MISCELLANEOUS

- 4.1. I've reviewed through the proposed updates for the precipitation frequency estimates for ID/MT/WY. I don't have any comment about the new data itself, but am wondering if there will be any notable discontinuities across state boundaries (e.g. North Dakota/Montana). It would seem that your use of the buffer stations outside the domain would mitigate this, but have you created any plan view plots of, for instance, the 100-year ARI for 24-hour precipitation that include the bordering states? If there are discontinuities, how would you plan to address them?

*In the NOAA Atlas 14 Volumes, the discontinuities between the volume boundaries exist due to the reimbursable funding model that provides the funding at different times, and sometimes, the updates between the volumes span more than 20 years. The boundary issue between Volume 12 and Volumes 8 and 1 will be evident and will not be addressed in this update.*

*We are currently developing the revised version of the Precipitation Frequency Standard, referred to as the Atlas 15 estimates with the funding support of the Bipartisan Instructure Law. This revised standard is currently being developed as a seamless national analysis. The final publication of the Atlas 15 estimates over the contiguous United States is planned for publication in 2026. For more information on this project, please see*

*[https://www.weather.gov/media/owp/hdsc\\_documents/NOAA\\_Atlas\\_15\\_Flyer.pdf](https://www.weather.gov/media/owp/hdsc_documents/NOAA_Atlas_15_Flyer.pdf)*

- 4.2. The interactive website is very neat.

*The preliminary peer review pages are designed for the peer review process. The final estimates are published on the Precipitation Frequency Data Server (PFDS), available here:*

*<https://hdsc.nws.noaa.gov/pfds/>*

- 4.3. I have no issue with the data. I spot checked some with the IDF curves we currently use and they seem relatively similar, as I would expect they ought. I appreciate Fig 7 showing the differences.

Thank you for taking time and effort to review the Volume 12 preliminary estimates.

- 4.4. The current web data under Cartographic Maps of Precipitation Frequency Estimates jumps from 2-year to 100-year as precip options. Will this subsection be expanded to include the usual 5, 10, 25, and 50 estimates?

*For the purpose of peer review, we have only provided the preliminary 2-year and 100-year cartographic maps. The final publication includes an expanded set of cartographic maps, as seen in the table below. We provide cartographic maps for select frequencies, and durations as these are intended to be used as visual aids since estimates can be obtained directly from high resolution grids available through the PFDS interface. These grids are available for 1-year through 1000-year estimates, durations 5-minute through 60-day.*

| ARI<br>(years) | Duration |      |       |       |        |        |        |
|----------------|----------|------|-------|-------|--------|--------|--------|
|                | 60-min   | 6-hr | 24-hr | 2-day | 10-day | 30-day | 60-day |
| 2              | ✓        | ✓    | ✓     | ✓     | ✓      | ✓      | ✓      |
| 5              | ✓        | ✓    | ✓     |       |        |        |        |
| 10             | ✓        | ✓    | ✓     |       |        |        |        |
| 25             | ✓        | ✓    | ✓     |       |        |        |        |
| 50             | ✓        | ✓    | ✓     |       |        |        |        |
| 100            | ✓        | ✓    | ✓     | ✓     | ✓      | ✓      | ✓      |

Figure A.4.3. A list of provided NOAA Atlas 14 cartographic maps of precipitation frequency estimates in the PDF format for selected average recurrence intervals (ARIs) and durations.

- 4.5. For the data used, the only question I have is did you weight the gages based on the quality of the network. All networks are not equal. For example, due to the location in the country, heated gages should always be weighted more. When not heated 8 inch should take precedence over 4 inch CoCoRHaS type gages. It was not clear in the metadata if all were treated equally when creating the objective analysis. I assume they were.

*We collect individual networks that have reliable and long records of precipitation. Less reliable networks that have much shorter record lengths, such as real-time transportation networks were not used for this analysis. Once all data is collected, we then quality control extreme time series extracted at each station and we consider only stations that have more than 20 years at sub-daily and more than 30 years for daily gauges. This criteria alone eliminates many stations where quality is an issue.*

*We agree that location of this project plays a part in the quality of networks. The majority of our data comes from the NCEI networks, mainly the Hourly Precipitation Data (HPD), Local Climatological Data (LCD), and Global Historical Climatology Network daily (GHCNd), which are weighted equally. For this analysis we are mostly interested in extreme precipitation events which often come in the form of liquid precipitation, even in high elevation areas. This is particularly true for events at sub-daily durations. For this reason, having heated or unheated gauge networks becomes less important for this analysis for shorter durations but can impact the results for longer durations events if a station doesn't reliably measure frozen precipitation. We agree that location of this project plays a part in the quality of networks.*

*In developing statistics for each gauge location, we are weighing stations based on the number of data years, which means we are assigning more weights to the most reliable stations. Stations with longer recording periods usually come from NCEI networks, such as COOP stations (GHCN-Daily) and long record hourly stations at airports (Local Climatological Data). Since most CoCoRaHS gauges don't have 30 years of data, they could not be used on their own unless merged with a nearby station. In the merging procedure, we typically prioritize COOP data over CoCoRaHS and in that sense we implicitly weight COOP 8-inch standard gauges more than other networks. It is important to note that many CoCoRaHS gauges are transitioning to COOP IDs in recent years, though they retain the 4-inch plastic rain gauge. For example, COOP ID 48-2399 with a period of record from 1951 to present used a Standard Rain Gauge (SRG) from 1951 to the end of 2015, and a 4-inch plastic rain gauge until the present (<https://www.ncei.noaa.gov/access/homr/#ncdcstnid=20023063&tab=PHR>). This is the equivalent of merging a COOP gauge with a CoCoRaHS gauge in recent years, due to data availability / observer changes.*

- 4.6. Page 2, Data. There are no stations listed with n-minute precipitation data. On page 10, Part C, first paragraph, precipitation estimates will be published at durations as short as 5-minutes. Other volumes of NOAA Atlas 14 have had some stations with n-minute precipitation data and precipitation-frequency values for short durations such as 5-minute and 10-minutes have been based on analyses of these data. Is there a list or map showing where these stations are?

*N-minute data availability was limited to 63 Automated Surface Observing System (ASOS) stations for this project. For the peer review analysis, we provide a subset of durations (1-hour, 6-hours, 24-hours, and 10-days) only, and as a result, N-minute stations were not explicitly identified. In the development of the final estimates, the N-minute station data were used to calculate scaling factors applied to 15-minute estimates to derive 5- and 10-minute precipitation frequency estimates. All N-minute stations used for the final publication are listed in the Appendix A.5 (Table A.1.5).*

- 4.7. Are the maps of 2-year and 100-year ARI based on AMS (annual maximum series) or PDS (partial duration series)?

*The maps shown are based on the frequency analyses carried out on annual maximum series (AMS). In the final published estimates, both PDS and AMS estimates are available.*

*PDS-based precipitation frequency estimates were calculated indirectly from the Langbein's formula that transforms a PDS-based average recurrence interval (ARI) to an annual exceedance probability (AEP). PDS-based 2-year estimates are approximately equal to the 2.54-year AMS-based estimates. Please see Section 4.1 for more details.*

- 4.8. Thanks for sending the review form. I wonder if there is any particular standard for the gage type used in the study. I am guessing given the nature of data available, both tipping bucket and weighing gages could have been included? Wind shields? Given all the studies you have done, I am sure you have given some thought to this, although any type of long term gage is certainly valuable. Still If there is some information on gage type I would take a look at it if it is available.

*As with all NOAA Atlas 14 Volumes, the primary source of data is the NOAA's National Centers for Environmental Information (NCEI). The NCEI is the most reliable data source network in the United States. The NCEI's precipitation data alone may not be sufficient to support the objectives of NOAA Atlas 14. Since the NOAA Atlas 14 estimates are based on the statistical analysis of the historical*



*record of the observed precipitation data, denser spatial coverage may be needed to compute the robust and reliable precipitation frequency estimates.*

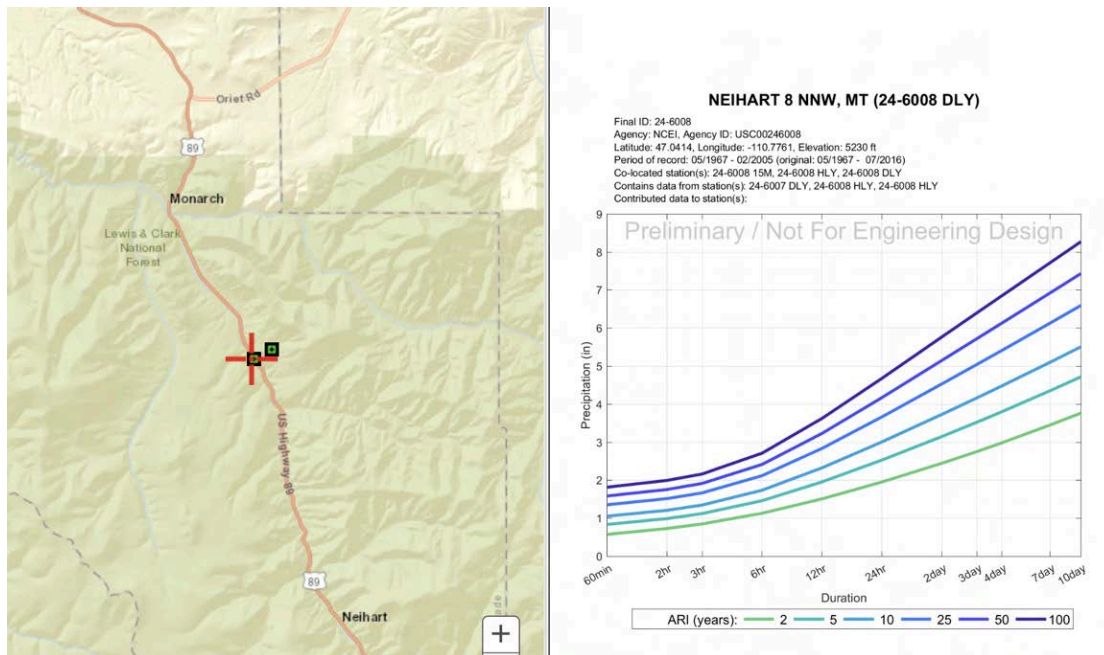
*The NCEI maintains several daily, hourly and sub-hourly networks and these networks contain gauges, including standard 8-inch non-recording gauges and various types of automated recording gauges. Recording gauges are typically unshielded Fischer and Porter (FP), but tipping-bucket gauges (TB) and universal weighing gauges (WG) are also used. The bulk of our analysis is made up of COOP unshielded gauges as they have the longest record of daily precipitation with record lengths over 120 years in some cases. Some of the automated gauge sub-hourly networks, such as the Automated Surface Observing System (ASOS) gauges are unshielded except for at some airports where there can be shielding. Additional automated gauge networks from NCEI used in Volume 12 that contain shielded gauges are SNOTEL, and U.S. Climate Reference Network (USCRN). Gauge type information for NCEI gauges can be found per-station in the “Element-Level (PHR) Data” tab in the [Historical Observing Metadata Repository \(HOMR\)](#), or in bulk by downloading the Publication History Report (PHR) [here](#).*

*Reference:*

[https://journals.ametsoc.org/view/journals/atot/16/5/1520-0426\\_1999\\_016\\_0602\\_iorasn\\_2\\_0\\_co\\_2.xml](https://journals.ametsoc.org/view/journals/atot/16/5/1520-0426_1999_016_0602_iorasn_2_0_co_2.xml)

- 4.9. As far as the peer review process it would be nice to have a better, easier way to compare things, such as observed data and estimates. Tools such as the ability to point and click the interpolated maps such that IDF curves would be displayed, even for PRISM interpolated areas. It would also be advantageous to be able to overlay two or more grids and turn one on and off or have a slider to compare spatial patterns more effectively at different durations and/or frequencies.

As an example, with this interface I got confused between these two stations (below) that are apparently merged. It would be nice to be able to tell easier which stations were merged on the map. Maybe use connecting lines or color coding to show merges? I know there is a spreadsheet list of station data and merges but it is challenging to match those to stations on a map.



*Thanks for your ideas and suggestions. We will consider this for future projects.*

**4.10.** We look forward to having a modernized, digital precipitation Atlas in effect for our region!

*Thank you.*

## Appendix A.5. Temporal distributions

### 1. Introduction

Temporal distributions of precipitation amounts exceeding precipitation frequency estimates for the 2-year recurrence interval are provided for 6-, 12-, 24-, and 96-hour durations. The temporal distributions are expressed in probability terms as cumulative percentages of precipitation totals at various time steps. To provide detailed information on the varying temporal distributions, separate temporal distributions were also derived for four precipitation cases defined by the duration quartile in which the greatest percentage of the total precipitation occurred.

Stations were grouped into two climate regions, shown in Figure 4.1.3, and separate temporal distributions were derived for each climate region. Regions were delineated based on the climatology of extreme precipitation and the seasonality analysis of annual maxima from stations through the project area.

### 2. Methodology and results

The methodology used to produce the temporal distributions is like the one developed by Huff (1967) except in the definition of precipitation cases. In accordance with the way a precipitation case (“event”) was defined for the precipitation frequency analysis, a precipitation case for the temporal distribution analysis was computed as the total accumulation over a specific duration (6-, 12-, 24-, or 96-hours) and may contain parts of one or more storms. Because of that, temporal distribution curves presented here may be different from corresponding temporal distribution curves obtained from the analysis of single storms. Also, precipitation cases for this project always start with precipitation but do not necessarily end with precipitation, resulting in potentially more front-loaded cases when compared with distributions derived from the single storm approach. Cases were selected from all events of a given duration that exceeded the 2-year average recurrence interval at each station.

For each precipitation case, cumulative precipitation amounts were converted into percentages of the total precipitation amount at one-hour time increments. All cases for a specific duration were then combined and probabilities of occurrence of precipitation totals were computed at each hour. The temporal distribution curves for nine deciles (10% to 90%) were smoothed using a linear programming method (Bonta and Rao, 1988) and plotted in the same graph.

The cases were further divided into four categories by the quartile in which the greatest percentage of the total precipitation occurred. Table A.5.1 shows the total number of precipitation cases and number of cases in each quartile for each region and duration. Unlike the cases of 12-, 24-, and 96-hour durations in which the number of data points can be equally divided by four, the cases of 6-hour duration contain only six data points and they cannot be evenly distributed into four quartiles. Therefore, in this analysis, for the 6-hour duration, the first quartile contains precipitation cases where the most precipitation occurred in the first hour, the second quartile contains precipitation cases where the most precipitation occurred in the second and third hours, the third quartile contains precipitation cases where the most precipitation occurred in the fourth hour, and the fourth quartile contains precipitation cases where the most precipitation occurred in the fifth and sixth hours. This uneven distribution affects the number of cases contained in each quartile for the 6-hour duration.

From the [PFDS page](#), regional temporal distribution data are available in a tabular form for a selected location under the “Supplementary information” tab or through the [Temporals](#) page. For 6-, 12- and

24-hour durations, temporal distribution data are provided in 0.5-hour increments and for 96-hour duration in hourly increments.

*Table A.5.1. Total number of precipitation cases and number (and percent) of cases in each quartile for selected durations for Northern U.S. Rockies (1) and Northern Great Plains (2) regions.*

| <b>Duration</b> | <b>Region</b> | <b>All</b> | <b>First quartile</b> | <b>Second quartile</b> | <b>Third quartile</b> | <b>Fourth quartile</b> |
|-----------------|---------------|------------|-----------------------|------------------------|-----------------------|------------------------|
| 6-hour          | 1             | 7,517      | 1,796 (24%)           | 1,966 (26%)            | 2,299 (31%)           | 1,456 (19%)            |
|                 | 2             | 10,568     | 2,226 (21%)           | 2,700 (26%)            | 3,132 (29%)           | 2,510 (24%)            |
| 12-hour         | 1             | 9,226      | 2,053 (22%)           | 2,531 (28%)            | 2,551 (27%)           | 2,091 (23%)            |
|                 | 2             | 9,568      | 2,122 (22%)           | 2,238 (24%)            | 2,500 (26%)           | 2,708 (28%)            |
| 24-hour         | 1             | 9,507      | 1,867 (20%)           | 2,477 (26%)            | 2,562 (27%)           | 2,601 (27%)            |
|                 | 2             | 8,274      | 1,839 (22%)           | 1,830 (22%)            | 2,059 (25%)           | 2,546 (31%)            |
| 96-hour         | 1             | 11,446     | 2,371 (21%)           | 2,352 (20%)            | 2,503 (22%)           | 4,220 (37%)            |
|                 | 2             | 7,253      | 1,215 (17%)           | 1,293 (18%)            | 1,650 (22%)           | 3,095 (43%)            |

### 3. Interpretation

Figures A.5.1 through A.5.4 show, as an example, temporal distribution curves for the first-, second-, third-, and fourth-quartile cases in the Northern U.S. Rockies region for 6-hour, 12-hour, 24-hour and 96-hour durations, respectively. First-quartile plots show temporal distribution curves for cases where the greatest percentage of the total precipitation fell during the first quarter of the duration (e.g., the first 3 hours of a 12-hour duration). The second, third, and fourth quartile plots are similarly for cases where the most precipitation fell in the second, third, or fourth quarter of the duration. Figure A.5.5 shows the temporal distribution curves of all precipitation cases in the Northern U.S. Rockies region for the 6-, 12-, 24-, and 96-hour durations. For these plots, time steps were converted into percentages of total durations for easier comparison.

The temporal distribution curves represent averages of many cases and illustrate the temporal distribution patterns with 10% to 90% occurrence probabilities in 10% increments. For example, the 10% curve in any figure indicates that 10% of the corresponding precipitation cases had distributions that fell above and to the left of the curve. Similarly, 10% of the cases had temporal distribution falling to the right and below the 90% curve. The 50% curve represents the median temporal distribution.

Temporal distribution curves are provided in order to show the range of possibilities. Care should be taken in the interpretation and use of temporal distribution curves. For example, the use of different temporal distribution data in hydrologic models may result in very different peak flow estimates. Therefore, they should be selected and used in a way to reflect users' objectives.

The following is an example of how to interpret the results using the figure in the upper left panel of Figure A.5.1 for 6-hour first-quartile cases in the Northern U.S. Rockies region (region 1):

- In 10% of the first-quartile cases, 50% of the total precipitation fell in about 1.25 hours and 90% of the total precipitation fell in 4.25 hours.
- A median case of this type will drop half of the precipitation (50% on the y-axis) in approximately 2.5 hours.
- In 90% of the cases, 50% of the total precipitation fell by three hours and 90% of precipitation fell in approximately 5.6 hours.

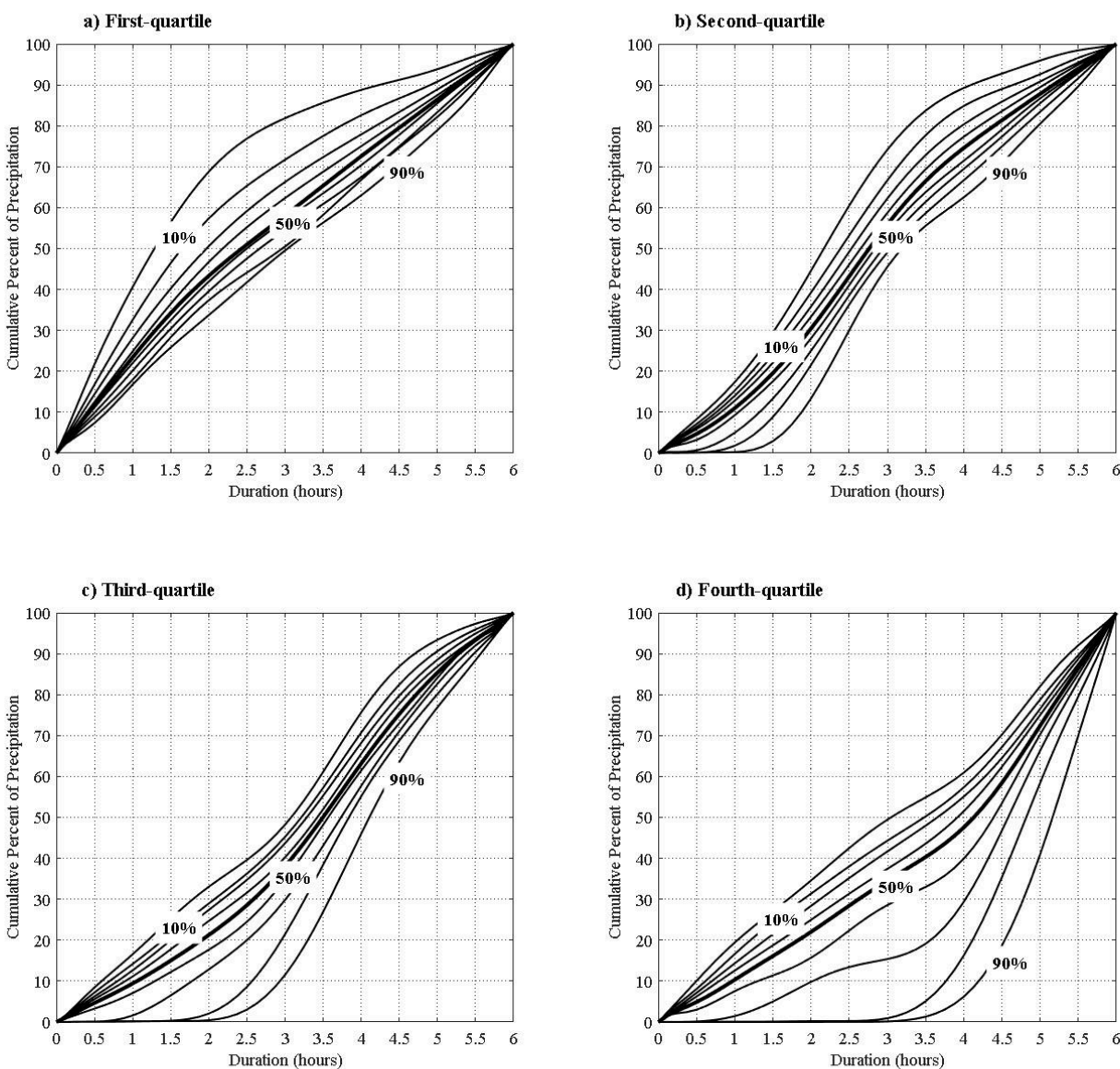
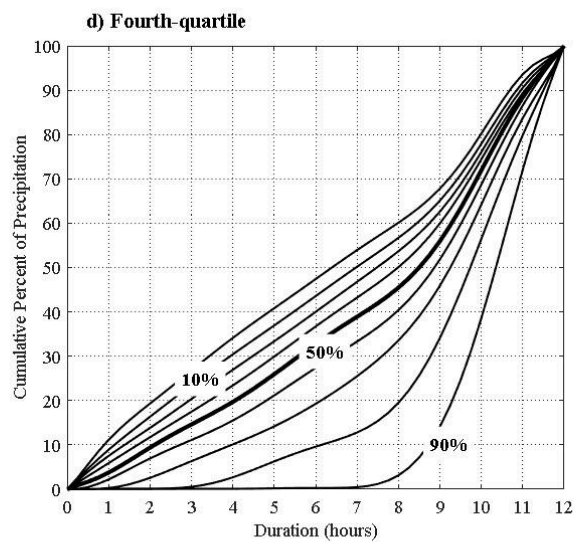
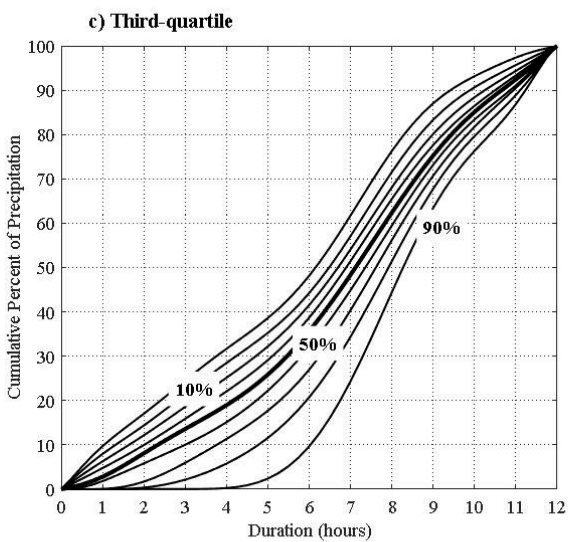
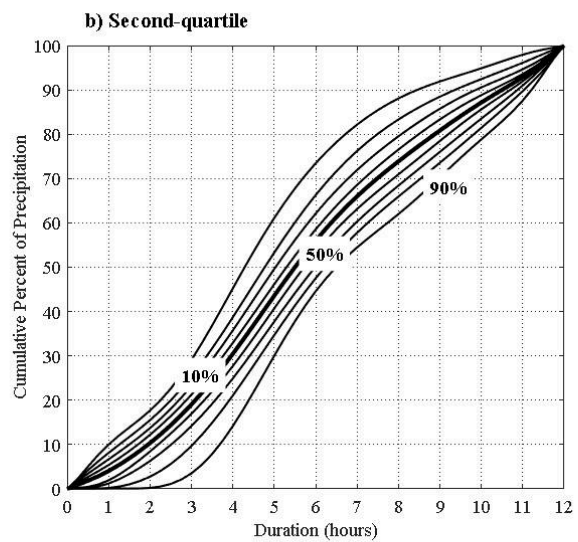
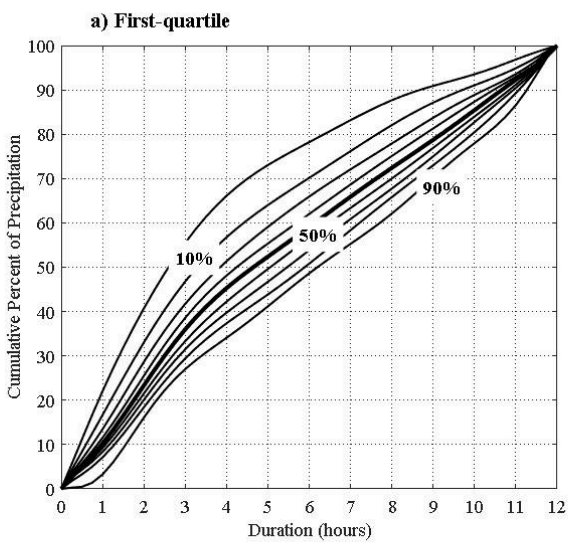


Figure A.5.1. 6-hour temporal distribution curves for the Northern U.S. Rockies region (region 1):  
a) first-quartile, b) second-quartile, c) third-quartile, and d) fourth-quartile cases.



*Figure A.5.2. 12-hour temporal distribution curves for the Northern U.S. Rockies region (region 1):  
a) first-quartile, b) second-quartile, c) third-quartile, and d) fourth-quartile cases.*

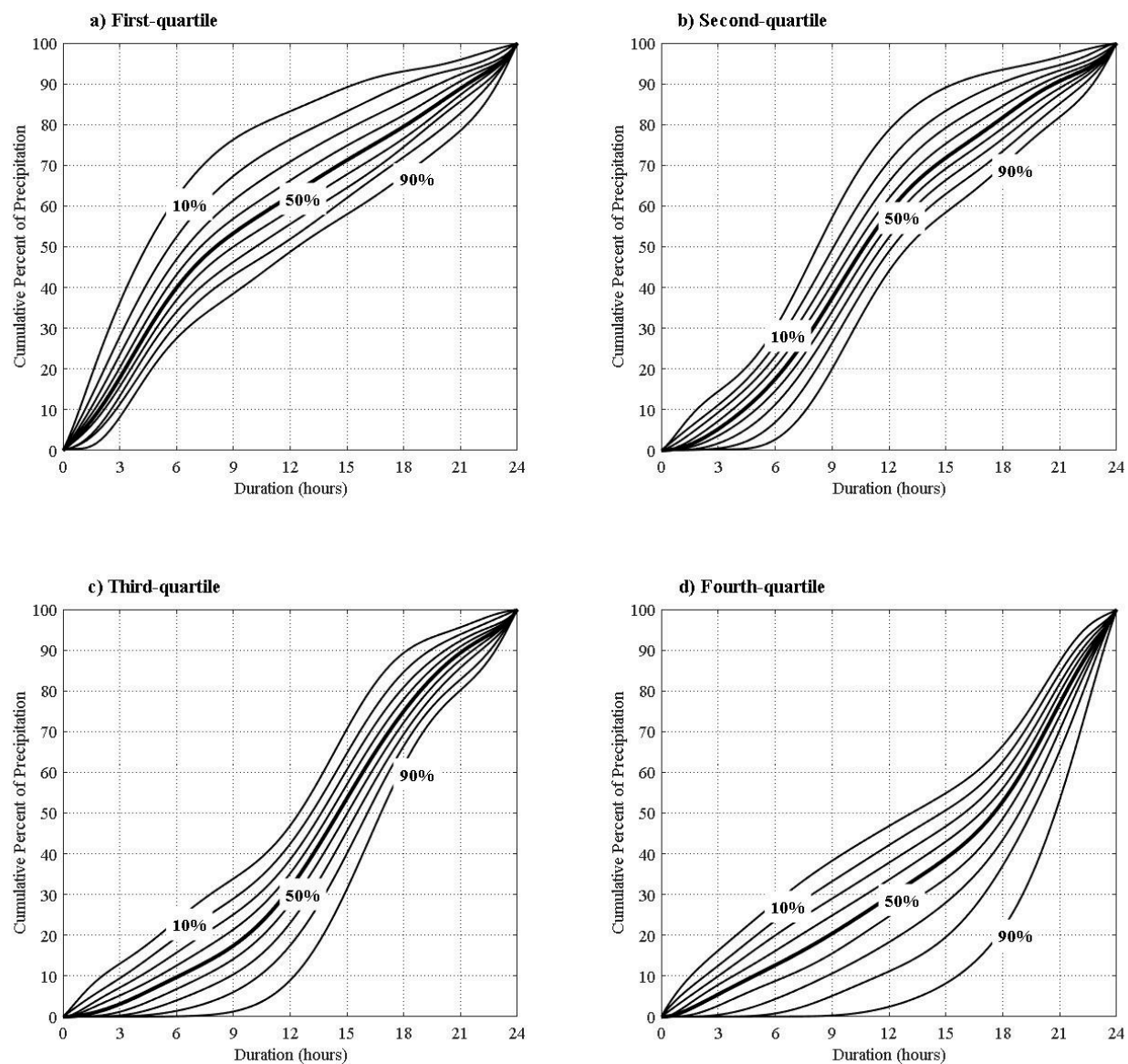
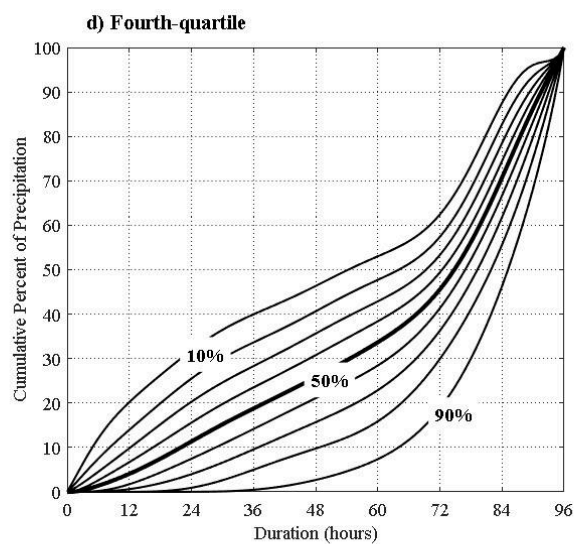
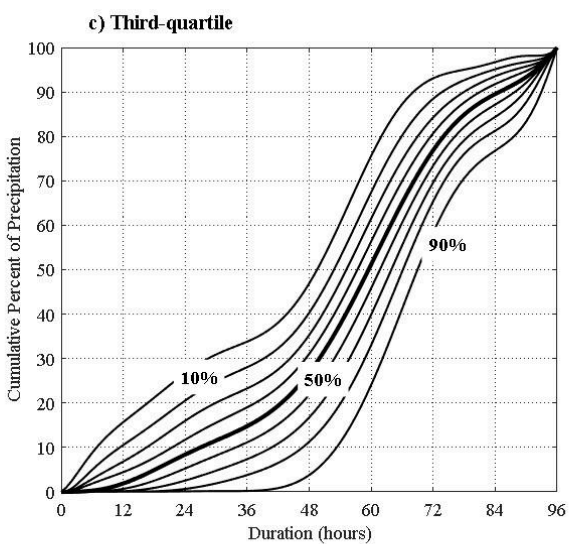
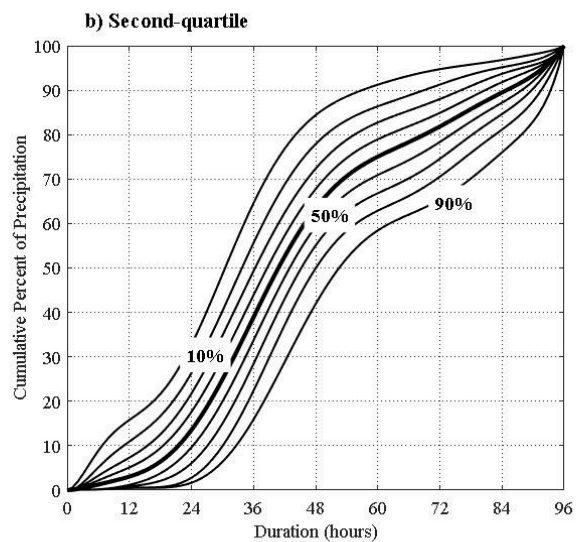
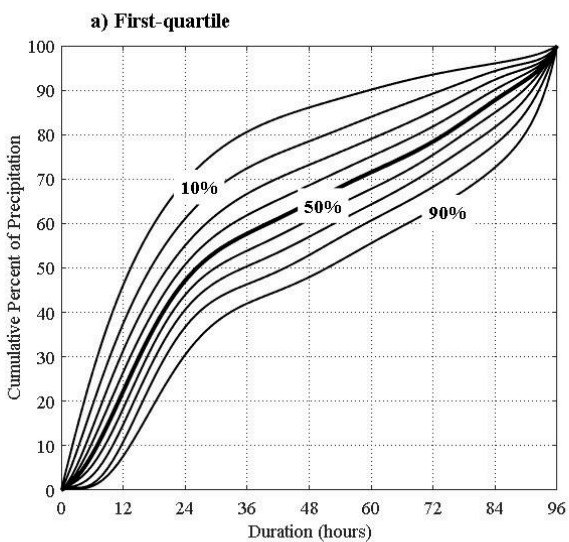


Figure A.5.3. 24-hour temporal distribution curves for the Northern U.S. Rockies region (region 1):  
a) first-quartile, b) second-quartile, c) third-quartile, and d) fourth-quartile cases.



*Figure A.5.4. 96-hour temporal distribution curves for the Northern U.S. Rockies region (region 1):  
a) first-quartile b) second-quartile, c) third-quartile, and d) fourth-quartile cases.*



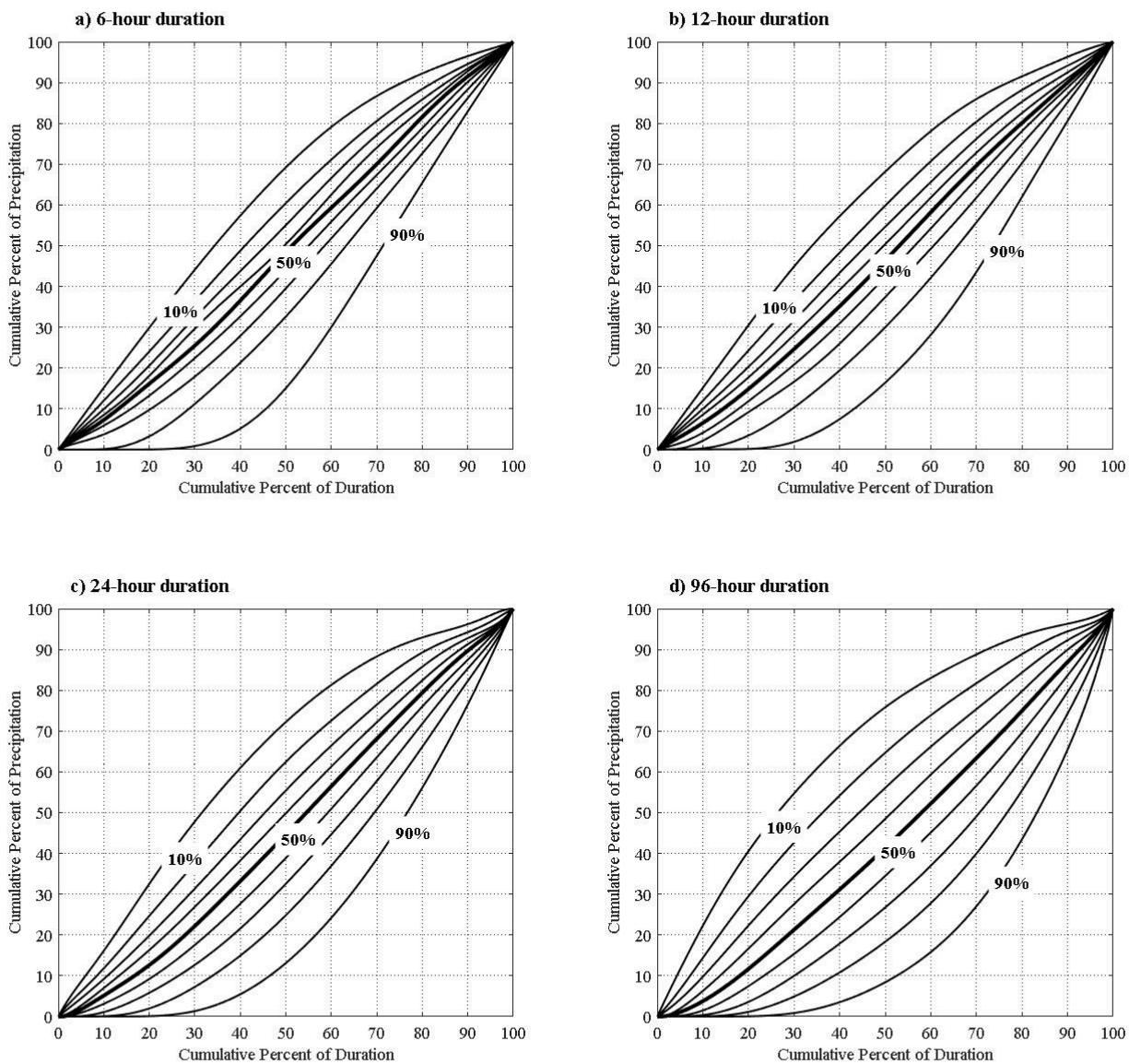


Figure A.5.5. Temporal distribution curves of all precipitation cases for the Northern U.S. Rockies region (region 1) for: a) 6-hour, b) 12-hour, c) 24-hour, and d) 96-hour durations.

## **Appendix A.6. Seasonality**

### **1. Introduction**

To portray the seasonality of extreme precipitation throughout the project area, annual maxima that exceeded precipitation frequency estimates (quantiles) with selected annual exceedance probabilities (AEPs) for chosen durations were examined for the two climate regions described in Section 4.1. Graphs showing the monthly variation of the exceedances for a region are provided for each location in the project area via the [Precipitation Frequency Data Server \(PFDS\)](#). For a selected location, seasonal exceedance graphs can be viewed by selecting “V. Seasonality analysis” from the “Supplementary information” tab on the output page.

### **2. Method**

Separate seasonal exceedance graphs were created for each delineated region shown in Figure 4.1.3. They show the percentage of annual maxima for a given duration from all stations in a region that exceeded corresponding precipitation frequency estimates at selected AEP levels in each month. Results are provided for 60-minute, 24-hour, 2-day, and 10-day durations and for AEPs of 1/2, 1/5, 1/10, 1/25, 1/50, and 1/100.

To prepare the graphs, first the number of annual maxima exceeding the precipitation frequency estimate at a station for a given AEP was tabulated for each duration. Those numbers were then combined for all stations in the region, sorted by month, normalized by the total number of data years in the region, and finally plotted via the PFDS.

### **3. Results**

The exceedance graphs for a selected location (Figures A.6.1 and A.6.2) indicate percent of annual maxima exceeding the quantiles with selected AEPs for various durations. The percentages are based on regional statistics. On average, 1% of annual maxima for a given duration in a year (i.e., the sum of percentages of all twelve months) are expected to exceed the 1/100 AEP quantile, 4% is expected to exceed the 1/25 AEP quantile, etc.

Note that seasonality graphs are not intended to be used to derive seasonal precipitation frequency estimates.

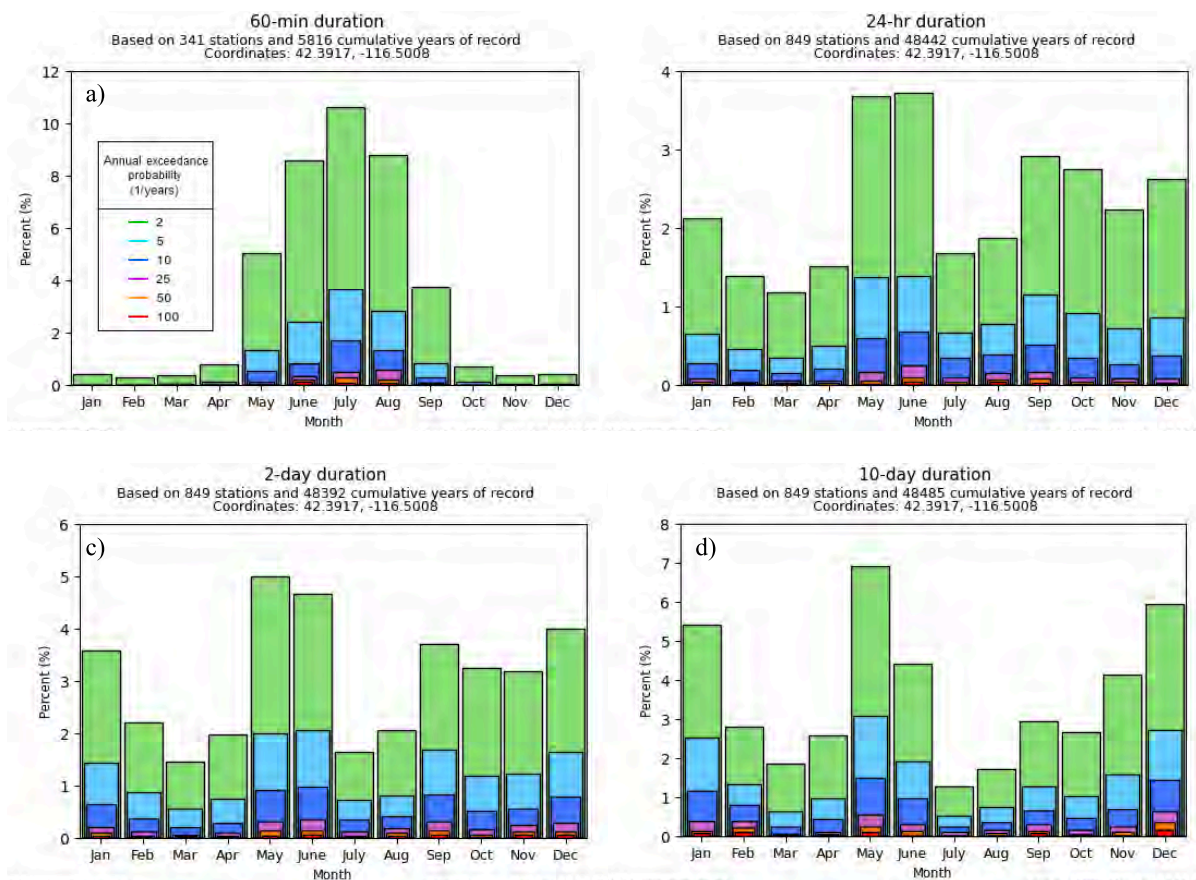


Figure A.6.1. Seasonal exceedance graphs for a location in the Northern U.S. Rockies region (region 1) for the: a) 60-minute, b) 24-hour, c) 2-day, and d) 10-day durations.

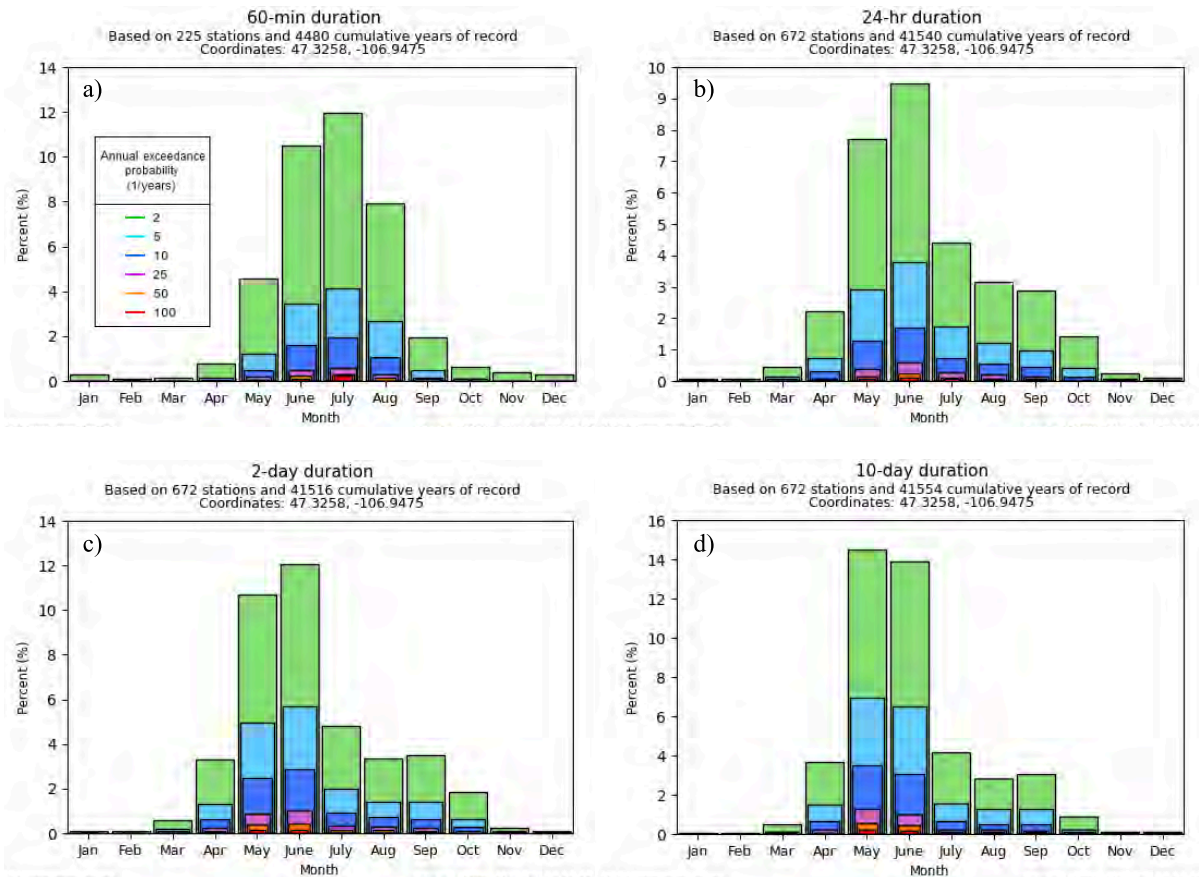


Figure A.6.2. Seasonal exceedance graphs for a location in the Northern Great Plains region (region 2) for the: a) 60-minute, b) 24-hour, c) 2-day, and d) 10-day durations.

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## Acronyms, abbreviations

(For a list of abbreviations used to identify data sources, please see Table 4.2.1.)

|       |                                                             |
|-------|-------------------------------------------------------------|
| AEP   | Annual Exceedance Probability                               |
| AM    | Annual Maximum                                              |
| AMS   | Annual Maximum Series                                       |
| ARI   | Average Recurrence Interval                                 |
| ASCII | American Standard Code for Information Interchange          |
| ASOS  | Automated Surface Observing System                          |
| CDMP  | Climate Database Modernization Program                      |
| COOP  | NWS Cooperative Observer Program                            |
| CV    | Coefficient of Variation                                    |
| DEM   | Digital Elevation Model                                     |
| GEV   | Generalized Extreme Value                                   |
| GHCN  | Global Historical Climatology Network                       |
| HDSC  | Hydrometeorological Design Studies Center                   |
| INW   | Interior Northwest                                          |
| MAM   | Mean Annual Maximum                                         |
| MAP   | Mean Annual Precipitation                                   |
| NA14  | NOAA Atlas 14                                               |
| NA2   | NOAA Atlas 2                                                |
| NCEI  | National Centers for Environmental Information              |
| NOAA  | National Oceanic and Atmospheric Administration             |
| NWS   | National Weather Service                                    |
| OWP   | Office of Water Prediction                                  |
| PCHIP | Piecewise Cubic Hermite Interpolating Polynomial            |
| PDS   | Partial Duration Series                                     |
| PFDS  | Precipitation Frequency Data Server                         |
| PMP   | Probable Maximum Precipitation                              |
| POR   | Period of Record                                            |
| PRISM | Parameter-Elevation Regressions on Independent Slopes Model |
| SID   | Station Identification Number                               |
| TP    | Technical Publication                                       |
| USDA  | U.S. Department of Agriculture                              |
| USGS  | U.S. Geological Survey                                      |

## Glossary

*(All definitions are given relative to precipitation frequency analyses in NOAA Atlas 14 Volume 12.)*

**ANNUAL EXCEEDANCE PROBABILITY (AEP)** – The probability associated with exceeding a given amount in any given year at least once; the inverse of AEP provides a measure of the average time between years (and not events) in which a particular value is exceeded at least once. The term is associated with analysis of annual maximum series (see also **AVERAGE RECURRENCE INTERVAL**).

**ANNUAL MAXIMUM (AM)** – Largest precipitation amount in a continuous 12-month period (calendar or water year) for a specified duration at a given station.

**ANNUAL MAXIMUM SERIES (AMS)** – Time series of the largest precipitation amounts in a continuous 12-month period (calendar or water year) for a specified duration at a given station.

**ASCII GRID** – Grid format with a 6-line header, which provides location and size of the grid and precedes the actual grid data. The grid is written as a series of rows, which contain one ASCII integer or floating point value per column in the grid. The first element of the grid corresponds to the upper-left corner of the grid.

**AVERAGE RECURRENCE INTERVAL (ARI; a.k.a. RETURN PERIOD, AVERAGE RETURN PERIOD)** – Average time between *cases of a particular precipitation magnitude* for a specified duration and at a given location; the term is associated with the analysis of partial duration series. However, ARI is frequently calculated as the inverse of AEP for the annual maximum series; in this case it represents the average period between years in which a given precipitation magnitude is exceeded at least once.

**CONSTRAINED OBSERVATION** – A precipitation measurement or observation bound by clock hours and occurring in regular intervals. This observation requires conversion to an unconstrained value (see **UNCONSTRAINED OBSERVATION**) because maximum 60-minute or 24-hour amounts seldom fall within a single hourly or daily observation period.

**DATA YEARS** – See **RECORD LENGTH**.

**DEPTH-DURATION-FREQUENCY (DDF) CURVE** – Graphical depiction of precipitation frequency estimates in terms of depth, duration, and frequency (ARI or AEP).

**DISTRIBUTION FUNCTION (CUMULATIVE DISTRIBUTION FUNCTION)** – Mathematical description that completely describes frequency distribution of a random variable, here precipitation. Distribution functions commonly used to describe precipitation data include 3-parameter distributions such as Generalized Extreme Value (GEV), Generalized Normal, Generalized Pareto, Generalized Logistic, and Pearson type III, the 4-parameter Kappa distribution, and the 5-parameter Wakeby distribution.

**FREQUENCY** – General term for specifying the average recurrence interval or annual exceedance probability associated with specific precipitation magnitude for a given duration.

**FREQUENCY ANALYSIS** – Process of derivation of a mathematical model that represents the relationship between precipitation magnitudes and their frequencies.

**FREQUENCY ESTIMATE** – Precipitation magnitude associated with specific average recurrence interval or annual exceedance probability for a given duration.

**INTENSITY-DURATION-FREQUENCY (IDF) CURVE** – Graphical depiction of precipitation frequency estimates in terms of intensity, duration and frequency.

**INTERNAL CONSISTENCY** – Term used to describe the required behavior of the precipitation frequency estimates from one duration to the next or from one frequency to the next. For instance, it is

required that the 100-year 3-hour precipitation frequency estimates be greater than (or at least equal to) corresponding 100-year 2-hour estimates.

**L-MOMENTS** – L-moments are summary statistics for probability distributions and data samples. They are analogous to ordinary moments, providing measures of location, dispersion, skewness, kurtosis, and other aspects of the shape of probability distributions or data samples, but are computed from linear combinations of the ordered data values (hence the prefix L).

**MEAN ANNUAL PRECIPITATION (MAP)** – The average precipitation for a year (usually calendar) based on the whole period of record or for a selected period (usually 30 year period such as 1971-2000).

**PARTIAL DURATION SERIES (PDS)** – Time series that includes all precipitation amounts for a specified duration at a given station above a predefined threshold regardless of year; it can include more than one event in any particular year.

**PRECIPITATION FREQUENCY DATA SERVER (PFDS)** – The on-line portal for all NOAA Atlas 14 deliverables, documentation, and information (<https://hdsc.nws.noaa.gov/hdsc/pfds/>).

**PARAMETER-ELEVATION REGRESSIONS ON INDEPENDENT SLOPES MODEL (PRISM)**  
–Hybrid statistical-geographic approach to mapping climate data developed by Oregon State University's PRISM Climate Group.

**QUANTILE** – Generic term to indicate the precipitation frequency estimate associated with either ARI or AEP.

**RECORD LENGTH** – Number of years in which enough precipitation data existed to extract meaningful annual maxima in a station's period of record (or data years).

**UNCONSTRAINED OBSERVATION** – A precipitation measurement or observation for a defined duration. However, the observation is not made at a specific repeating time, rather the duration is a moveable window through time.

**WATER YEAR** – Any 12-month period, usually selected to begin and end during a relatively dry season. In Volume 12, it is defined as October 1 to September 30.



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