

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Iowa Department of Transportation

INSTRUCTIONS:

Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # TPF-5 (435)		Transportation Pooled Fund Program - Report Period: X Quarter 1 (January 1 – March 31, 2022) Quarter 2 (April 1 – June 30, 2022) Quarter 3 (July 1 – September 30, 2022) Quarter 4 (October 4 – December 31, 2022)	
Project Title: Aurora Program			
Project Manager: Tina Greenfield		Phone: 515-233-7746	E-mail: tina.greenfield@dot.iowa.gov
Project Investigator: Zach Hans		Phone: 515-294-8103	E-mail: zhans@iastate.edu
Lead Agency Project ID:	Other Project ID (i.e., contract #): Addendum 731	Project Start Date: January 1, 2020	
Original Project End Date: December 31, 2021	Current Project End Date: 12/31/2023	Number of Extensions:	

Project schedule status:

X On schedule On revised schedule Ahead of schedule Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Total Percentage of Work Completed
\$1,475,000	\$692,621	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$62,948	N/A	

Project Description:

The Aurora Program is a consortium of public agencies focused on collaborative research, evaluation, and deployment of technologies for detailed road weather monitoring and forecasting. Members seek to implement advanced road weather information systems (RWIS) that fully integrate state-of-the-art roadway and weather forecasting technologies with coordinated, multi-agency weather monitoring infrastructures; ultimately lessening adverse impacts of inclement weather.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.). These efforts are identified below.

Program Administrative Activities:

- Managed Aurora website.
- Managed Aurora email list. In some cases, states requested multiple individuals be included in Aurora-related correspondence.
- Coordinated with Iowa DOT regarding recognition plaques for three former, retired Board members.
- Prepared Aurora update presentation for 2023 TRB meeting, specifically for the Winter Maintenance and Road Weather committees. Provided updates during the respective committee meetings.
- Updated draft support scope of work based on Board feedback, particularly a deadline for setting spring/fall meeting dates.
- Shared contact information as follow up to Fall 2022 meeting.
- Responded to questions from a Swedish private company regarding Aurora funding and focus areas.
- 2023 Idea Solicitation
 - Requested research needs statements from TRB Road Weather committee for consideration in the solicitation.
 - Prepared and distributed solicitation to the Aurora Board, Iowa DOT (for distribution to SPR engineers in other DOTs), TRB committees (Road Weather and Winter Maintenance), current and past researchers, past submitters of ideas, SICOP and Friends of Aurora.
 - Addressed questions regarding the solicitation.
 - Received and documented ideas.
 - Prepared and distributed Qualtrics survey of Board members to record interest levels.
- Added new members from Colorado and Alaska and reached out to them.
- In support of Ohio, requested DOT's anti-human trafficking program coordinator or point person.
- In support of Missouri, provided some information regarding RWIS return on investment and benefit-cost studies.
- Facilitated a request for information by Illinois regarding the ITS and RWIS positions within the member DOTs.
- In support of North Dakota, provided information regarding possible exchange of a non-invasive sensor.
- In support of Utah, coordinated with Iowa DOT regarding invoice for Aurora membership.
- Responded to a request from Delaware regarding possibly rejoining Aurora and investigated possible meeting attendance.
- Calculated recent meeting costs.

Facilitate Meetings and Conference Calls:

- Scheduled monthly calls for 2023.
- Spring 2023 Meeting
 - Prepared flight cost estimates for the three recommended meeting locations.
 - Distributed a "When is good" request for meeting availability.
 - Followed up with selected Board members regarding availability during the specific dates.

- Distributed calendar invitation for the meeting.
- Identified venue for the meeting and established contract.
- Prepared several draft meeting agendas, including establishing field trips and lining up virtual presentations.
- Coordinated with Iowa DOT (lead state) regarding requests for two attendees from one state. A new policy was proposed, voted on and approved by the Board.
- Facilitated or participated in all project-related meetings.
- Hosted Board member 60-Minute monthly conference calls on the following dates.
 - January 12, 2023: Board Leadership, Recent Meeting Costs, Spring Meeting Planning, Project Idea Solicitation, Project Updates, TRB Update, Administration Renewal
 - February 9, 2023 – NTCIP 1204 v04.26b, Spring Meeting, Project Idea Solicitation, Project Updates, Administration Renewal
 - March 9, 2023 – New Members, Spring Meeting, Illinois DOT Request, Automating VSL Project, Project Idea Solicitation, TRB International Conference on Road Weather and Winter Maintenance, Project Updates

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Arranged travel for Board members attending the Spring 2023 meeting in-person.
- Identified venue for Spring 2023 meeting and signed contract.

Project-Specific Activities:

- Tracked project status and prepared a summary for recently completed and active projects.
- Distributed quarterly reports.
- Reviewed and approved invoices and submitted to the Iowa DOT for payment.
- Coordinated with Iowa DOT regarding addressing questions about a project the Board ultimately decided not to fund after contracting was initiated.
- 2020-02 Roadway Ice/snow Detection using a Novel Infrared Thermography Technology
 - Requested project update from research team.
- 2020-03 Roadway Friction Modeling
 - Provided the research team's responses to editorial changes to the Pubs group.
 - Provided the Pubs group the research team's feedback regarding the tech transfer document.
 - Addressed several changes recommended by the Iowa DOT (lead state).
 - Published the final report and tech transfer and distributed to appropriate links to the Board, FHWA, SICOP and Iowa DOT (lead state).
- 2021-06 Automated Extraction of Weather Variables from Imagery
 - Reviewed and approved invoices.
 - Corresponded with the research team regarding status of final report.
 - Provided the draft final report to the project team to review.
 - Provided editorial changes to the research team for review.
 - Provided the research team's responses to editorial changes to the Pubs group.
 - Requested review of final edits by Iowa DOT prior to posting.
 - Published the final report and tech transfer and distributed to appropriate links to the Board, FHWA, SICOP and Iowa DOT (lead state).
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Distributed quarterly reports.
 - Reviewed and approved invoices.
- 2022-07 Evaluation of Spring Load Restriction Removal Protocols

- Approved invoices and shared with NDOT.
- 2022-08 Integration of Connected Vehicle and RWIS Technologies
 - Reviewed and provided feedback on draft agency survey.
 - Distributed draft survey to project team for feedback.
- 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data
 - Scheduled and held project kick off meeting.
 - Provided recorded kick off meeting video to research team.
 - Added project team member for Utah.
 - Obtained several VSL-related documents and resources from SICOP and shared them with the research team.
 - Shared information regarding possible interested states with the research team.
 - Distributed kick-off meeting materials to the project team.
- 2011-02 RWIS Training Tool
 - Processed monthly invoices for AWS hosting.

Anticipated work next quarter:

Program Administrative Activities:

- Continue Aurora website updates.
- Manage budget.
- Estimate research budget.
- Summarize Board voting on submitted ideas.
- Coordinate with Board to prioritize highly rated ideas.
- Request full proposals for select ideas.
- Coordinate with Board to select ideas for funding.
- Update the Aurora Charter, Work Plan and Associate Members, as needed.
- Address requests, as needed.

Facilitate Meetings and Conference Calls:

- Continue monthly Board meeting calls to generate research ideas, discuss important issues and have vendor presentations.
- Hold Spring 2023 meeting in San Diego, California (May 16-18).

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Continue booking flights for Spring 2023 meeting.
- Arrange surface transportation for Spring 2023 meeting.
- Process Spring 2023 meeting expenses.
- Begin processing travel reimbursement requests for the Spring 2023 meeting.

Project-Specific Activities:

- Select projects for funding.
- Track project status and timelines.
- Request quarterly reports from research teams.
- Distribute project materials/updates and invoices (for approval) to project teams.
- Schedule and host project meetings.
- Maintain list of project champions and team members.

TPF Program Standard Quarterly Reporting Format

- For all current projects:
 - Facilitate project activities as needed.
 - Continue to receive and distribute project updates.
 - Coordinate updates, if necessary.
 - Review invoices.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Assess project status.
 - Schedule final project meeting, if possible.
 - Coordinate receipt, project team review, editing and publication of final report.
 - Publish final report, if possible.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Have project update meeting during Spring 2023 meeting.
- 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data
 - Track project progress.
- 2022-08 Integration of Connected Vehicle and RWIS Technologies
 - Track project progress.
- 2022-07 Evaluation of Spring Load Restriction Removal Protocols
 - Track project progress.

Significant Results:

- Solicited project ideas.
- Planned Spring 2023 meeting, including arranging travel, identifying venue, preparing draft agenda (with field trips).
- Published two final reports and tech transfer documents (2020-03 Roadway Friction Modeling and 2021-06 Automated Extraction of Weather Variables from Imagery)
- Held kick-off meeting for 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data
- Continued monthly Board meeting calls.
- Held project-related meetings and tracked projects.

Circumstance affecting project or budget: