

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: Quarter 1 (January 1 – March 31, 2022) Quarter 2 (April 1 – June 30, 2022) x 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: 12/31/2022	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	\$629,673	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$121,920	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.
- Addressed question regarding possible inclusion of standard language in papers (e.g. TRB) to acknowledge Aurora.
- Addressed questions regarding timing/interval of research project invoicing.
- Participated in Weather Data Environment User Group meeting (July 21, 2022).
- Requested MDOT MARWIS survey and distributed it to the Board.
- Participated in NOCoE Road Weather Spotlight meetings (August 3, 2022 and September 7, 2022).
- Reviewed listing of Clear Roads 2022 projects (<https://clearroads.org/clear-roads-selects-2022-research-projects/>).
- Updated Colorado board member from Nick Barlow to Jamie Yount.
- Shared information/inquiry about a flash flood warning system with FOA.
- Upon request, shared current FOA list with the board and IJJA spreadsheet (presented during the September monthly meeting).
- Updated the FOA list, including reaching out to possible interested companies at board member request.
- Responded to questions from a researcher regarding the Aurora noninvasive sensor project.
- Participated in TRB Road Weather Mid-year Meeting (8/12/2022).
- Facilitated final selection of projects for funding during 2022.

Facilitate Meetings and Conference Calls:

- Fall 2022 meeting.
 - Investigated and selected venue.
 - Negotiated and signed contract with venue.
 - Invited Friends of Aurora (FOA) to one day of the meeting.
 - Prepared website for FOA meeting registration.
 - Addressed questions regarding the meeting from board members and FOA.
 - Prepared draft agenda and updated as necessary.
 - Arranged speakers and field trips (e.g. MnDOT, University of Minnesota and DTN).
- Considered possible spring meeting in Bozeman, Montana.
- Facilitated or participated in all project-related meetings.
- Hosted Board member 60-Minute monthly conference calls on the following dates. Notes were distributed for the August meeting for those unable to attend.
 - July 14, 2022
 - Spring 2022 Project Selection
 - Fall 2022 Meeting Save the Date
 - Other Action Items

- Spring 2022 Meeting Cost
 - Non-Invasive Report Completed
 - Miscellaneous
- August 11, 2022
 - NTCIP 1204 v4 – Tony Coventry (FHWA)
 - Spring 2022 Project Update
 - Evaluation of Spring Load Restriction Removal Protocols (8/15/2022 – 2/15/2024)
 - Automating Variable Speed Limits Using Weather, Traffic and Friction Data (10/2022?)
 - Application for Network-level Integration of Connected Vehicles and RWIS (TBD) -- Dashboard deliverable?
 - Integration of Connected Vehicles and RWIS Technologies White Paper (9/2022?)
 - Fall 2022 Meeting Update
 - Other action items
- September 8, 2022
 - AASHTO Funding Matrix – Kyle Garrett
 - Fall 2022 Meeting Update (Minnesota)
 - Project Update
 - Kick Off Meeting: Evaluation of Spring Load Restriction Removal Protocols
 - Final Report: Friction Modeling
 - Spring Project Contracting
 - Other action items

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Arranged travel for Board members attending the Fall 2022 meeting in-person.

Project-Specific Activities:

- Tracked project status and prepared a summary for recently completed and active projects.
- Distributed quarterly reports and invoices for project team approval.
- Upon approval, submitted invoices to the Iowa DOT for payment.
- Facilitated final selection of projects for 2022 funding.
- Coordinated with Iowa DOT regarding contracting of projects selected for 2022 funding.
 - 2022-07 “Evaluation and/or Modification of SLR Removal Protocols”
 - 2022-08 “Integration of Connected Vehicle and RWIS Technologies”
 - 2022-09 “Application for network-level Integration of Connected Vehicle and RWIS”
 - 2022-10 “Automating Variable Speed Limits Using Weather, Traffic, and Friction Data”
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Distributed quarterly report to project team and invoices, for approval, to project team.
- 2020-03 Roadway Friction Modeling
 - Distributed invoices and quarterly report to project team for review and approval.
 - Requested April-June 2022 quarterly report on July 18, 2022.
 - Solicited input of possible time frame for final project meeting.
 - Participated in final project meeting on September 19, 2022.
- 2021-06 Automated Extraction of Weather Variables from Imagery
 - Distributed quarterly reports and invoices for project team approval.
 - Requested April-June 2022 quarterly report on July 18, 2022.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV

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- 2022-07 Evaluation of Spring Load Restriction Removal Protocols
 - Facilitated and participated in project kick off meeting on September 6, 2022.

Anticipated work next quarter:

Program Administrative Activities:

- Continue Aurora website updates.
- Manage budget.
- Track new solicitation contributions.
- Update the Aurora Charter, Work Plan and Associate Members, as needed.

Facilitate Meetings and Conference Calls:

- Continue monthly Board meeting calls to generate research ideas, discuss important issues and have vendor presentations.
- Hold Fall 2022 meeting.
- Distribute Fall 2022 draft meeting minutes.
- Begin planning for Spring 2023 meeting.
- Have discussion regarding Peer Exchange.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Begin processing reimbursement requests for the Fall 2022 meeting.
- Process Fall 2022 meeting expenses.

Project-Specific Activities:

- 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.
- Support finalizing of contracts of new projects.
 - 2022-08 “Integration of Connected Vehicle and RWIS Technologies”
 - 2022-09 “Application for network-level Integration of Connected Vehicle and RWIS”
 - 2022-10 “Automating Variable Speed Limits Using Weather, Traffic, and Friction Data”
- 2022-07 “Evaluation and/or Modification of SLR Removal Protocols”
 - Facilitate project activities as needed.
 - Continue to receive and distribute project updates and invoices.
 - Coordinate updates, if necessary.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Have meeting with research team regarding project status.
 - Facilitate project activities as needed.
 - Continue to receive and distribute project updates and invoices.
 - Coordinate updates, if necessary.
- 2020-03 “Roadway Friction Modeling”
 - Coordinate project team review, editing and publication of final report.
- 2021-06 Automated Extraction of Weather Variables from Imagery
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- Facilitate project activities as needed.
- Coordinate receipt, project team review, editing and publication of final report.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Continue to receive and distribute project updates and invoices.
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.

Significant Results:

- Planned Fall 2022 meeting, including agenda, venue and scheduling travel.
- Updated FOA list.
- Facilitated final selection of projects for funding in 2022.
- Continued monthly Board meeting calls.
- Held project-related meetings and tracked projects.
- Facilitated project kick-off meeting for 2022-07 “Evaluation and/or Modification of SLR Removal Protocols”
- Facilitated final project meeting for 2020-03 “Roadway Friction Modeling”.

Circumstance affecting project or budget: