

## 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.*

<b>Transportation Pooled Fund Program Project #</b> TPF-5(290)		<b>Transportation Pooled Fund Program - Report Period:</b> Quarter 1 (January 1 – March 31, 2019) Quarter 2 (April 1 – June 30, 2019) X Quarter 3 (July 1 – September 30, 2019) Quarter 4 (October 1 – December 31, 2019)	
<b>Project Title:</b> Aurora Program			
<b>Project Manager:</b> Tina Greenfield		<b>Phone:</b> 515-233-7746	<b>E-mail:</b> tina.greenfield@dot.iowa.gov
<b>Project Investigator:</b> Zach Hans		<b>Phone:</b> 515-294-8103	<b>E-mail:</b> zhans@iastate.edu
<b>Lead Agency Project ID:</b> RT 0034	<b>Other Project ID (i.e., contract #):</b> Addendum 156	<b>Project Start Date:</b> January 1, 2013	
<b>Original Project End Date:</b> May 31, 2019	<b>Current Project End Date:</b> – December 31, 2019	<b>Number of Extensions:</b>	

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
\$2,150,000	<del>\$741,204.29</del> <u>\$767,561.29</u>	

**Quarterly** Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
<del>\$67,406.64</del> <u>26,357</u>	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:

- Addressed all board correspondence, administrative items resulting from the Fall 2019 meeting.
- Provided program management in terms of projects and program budgets.
- Planned the Fall 2019 pre-meeting (including financial and contract) and meeting details.
- Supported release of new TPF solicitation (<https://www.pooledfund.org/Details/Solicitation/1496>)
- Participated in the 2019 Road Weather Management Stakeholder Meeting where a number of presentations were given complimenting the benefits of being an Aurora member. Discussed opportunities to join Aurora with two new states (NE, NV).
- Communicated with several states, and one Canadian province, regarding Aurora membership and information (NE, NJ, OK, Ontario).
- Participated in planning calls for 2020 International Road weather and Winter Maintenance Conference & Peer Exchange.
- Tabulated Board votes for four possible projects distributed via Survey Monkey (<https://www.surveymonkey.com/r/WKLSPWZ>).
- Facilitated selection of new projects.
- Obtained new project scopes of work and solicited Board input regarding approval.
- Shared information regarding the Aurora Pooled Fund regarding budget, accomplishments, projects, etc. This information was used by agencies to justify continued participation.
- Shared draft Fall 2019 agenda for Board members to use for out of state travel requests.
- Prepared presentations for Aurora Board members for AASHTO SICOP and RWS.
- Provided quarterly project reports upon request.
- Managed Aurora Board email list.
- Coordinated with Iowa DOT SPR Research Engineer regarding state participation in the new pooled fund, TPF-5(435).
- Initiated a conference call with Clear Roads and SICOP regarding research efforts, particularly coordination regarding topics that may be in another pooled fund's area. This was precipitated by *CR 17-01 Integrating Advanced Technology – Survey*.
  - Distributed the SSI/WSI survey to the Aurora Board ([https://montana.qualtrics.com/jfe/form/SV\\_3UWe6Nivwh3NY3z](https://montana.qualtrics.com/jfe/form/SV_3UWe6Nivwh3NY3z))

### Facilitate Meetings and Conference Calls:

- Facilitated meeting between Iowa DOT, AECOM, Mike Burton (Campbell Scientific) and Iowa State Aurora support staff, regarding RWIS Life Cycle Cost Analysis.
- Continued planning for Fall 2019 meeting, including finalizing dates (October 8 – 10) and venue (Embassy Suites Downtown Convention Center, Tampa, FL).
- Contracted with the hotel for the Fall 2019 meeting.
- Facilitated discussions via [auroraboard@iastate.edu](mailto:auroraboard@iastate.edu).
- Scheduled flights for Board members to attend the Fall 2019 meeting.
- Hosted Board member 60-Minute monthly conference calls on:  
TPF Program Standard Quarterly Reporting Format

- July 11 (Project Updates, New Project Voting, New Aurora Pooled Fund, Fall Meeting)
- August 9 (Fall Board Mtg, Research Updates, New Projects)
- September 12 (Fall Board Mtg Agenda, Research Updates, New Projects, Proposal)

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Processed Spring 2019 meeting reimbursements.

Project-Specific Activities:

- Tracked project status and prepared a summary for recently completed, active, and all prospective new projects.
- 2018-01 RWIS Life Cycle Cost Analysis
  - Distributed invoices to project team for review and approval.
  - Provided contact information for requested vendors – for distribution of survey.
- 2018-02 Non-Invasive Sensors
  - Coordinated with procurement agent.
  - Conveyed to vendors that each sensor would be placed at an existing RWIS site.
  - Began receiving quotes from vendors.
  - Addressed issues regarding equipment costs, including negotiating cost through the procurement agent, and additional equipment needs, e.g. RPUs.
  - Investigated pole needs and requested information and quotes.
  - Began issuing purchase orders.
  - Tracked distribution of equipment.
- 2016-03 Optimal RWIS Sensor Density and Location – Phase II
  - Quarterly reports have been received, monitored and shared with the project team.
  - A one month extension was requested, and approved by the Board, for report completion.
- 2014-01 Demonstration and Inter-comparison of Seasonal Weight Restriction Models, Phase II
  - Several email and phone discussions were held between the Iowa DOT, USDA Forest Service and project subcontractors regarding project continuation.
  - Ultimately, Forest Service will no longer be involved, FROST Associates will be contracted with directly. A new scope and budget is expected early next quarter.
  - Printed and FedEx'ed a poster for presentation at the Low Volume Roads conference.
- Pending projects.
  - Economic Impacts of Atmospheric Rivers in the Transportation Sector: Methodology and Preliminary Case Studies
    - Coordinated with researchers regarding obtaining scope as well as refining scope, budget and project duration.
  - Optimal RWIS Sensor Density and Location - Phase III: Continuous Mapping of Winter Road Surface Conditions via Big Data and Deep Learning
    - Coordinated with researchers regarding obtaining scope as well as refining scope, budget and project duration.
- Continued work associated with assuming control and management of the RWIS training tool (<http://aurorabase.iteris.com/login/?destination=/>), including monthly billing.

**Anticipated work next quarter:**

Program Administrative Activities:

- Process Board travel reimbursements for the Fall 2019 meeting.
- Continue Aurora website updates.

TPF Program Standard Quarterly Reporting Format

- Follow up with states, about possible membership.
- Continue to address mechanisms for Friends of Aurora (FOA) engagement.
- Manage budget.
- Track new solicitation contributions.
- Participate in planning calls for 2020 International Road weather and Winter Maintenance Conference & Peer Exchange.

Facilitate Meetings and Conference Calls:

- Continue monthly Board meeting calls to generate research ideas and discuss important issues.
- Facilitate project correspondence and status reports.
- Begin planning efforts for the Spring 2020 meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Process Board travel reimbursements for the Fall 2019 meeting.

Project-Specific Activities:

- Issue purchase orders for remaining non-invasive sensors and poles.
- Expand list of prospective projects and develop scopes of work.
- Project updates for each project and research team.
- Track project status with champions and team members.
- Track project timelines and distribute project materials.

**Significant Results:**

- Finalized Fall 2019 meeting location, dates and agenda.
- Scheduled Board travel for the Fall 2019 meeting.
- Contracted with hotel for Fall 2019 meeting.
- Continued monthly Board meeting calls.
- Completed one project (2015-05) and published results.
- Continued 2018-02 Non-Invasive Sensors project, including non-invasive sensor procurement.
- Identified two new projects for funding.
- Communications with 4 potential members.
- Outstanding testimonial on the benefits of the Aurora group at the August 2019 RWM in Phoenix, AZ

**Circumstance affecting project or budget:**