

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.

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| Transportation Pooled Fund Program Project # TPF-5 (435) | | Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2021) x Quarter 2 (April 1 – June 30, 2021) Quarter 3 (July 1 – September 30, 2021) Quarter 4 (October 4 – December 31, 2021) | |
| Project Title: Aurora Program | | | |
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| 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: 12/31/2021 | 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 |
|----------------------|--------------------------------|------------------------------------|
| \$850,000 | \$153,550.14 | |

Quarterly Project Statistics:

| Total Project Expenses This Quarter | Total Amount of Funds Expended This Quarter | Percentage of Work Completed This Quarter |
|-------------------------------------|---|---|
| \$41,855.04 | 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:

- Coordinated with states regarding new (or interim) Board representative.
- Managed Aurora email list. In some cases, states requested multiple individuals be included in Aurora-related correspondence.
- Continued tracking state commitments.
- Facilitated discussions via auroraboard@iastate.edu.
- Provided program management in terms of projects and program budgets.
- Updated Aurora website content.
- Addressed inquiry from Ontario Ministry of Transportation deicing salt applications.
- Addressed questions from Wisconsin regarding the pooled fund.
- Distributed request from NOAA regarding the availability of state crash data.
- Addressed Friends of Aurora question from Vaisala.
- Coordinated with Utah and Iowa DOT to provide Utah with a pooled fund contribution invoice.
- Upon request, confirmed Arizona's contributions.
- Upon request, confirmed Ohio's contributions.
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- Addressed question from AASHTO SICOP regarding the possible timing of the next peer exchange.
- Coordinated regarding future eNews, including timing and content.
- Coordinated interview with Aurora Board member Kevin DUBY (Arizona) for April 4, 2021.
- Updated Friends of Aurora list, based on returned emails associated with project idea solicitation.
- Relating to the 2021 Aurora Spring Meeting
 - Coordinated presentations from FHWA, SICOP and researchers.
 - Prepared financial details, including commitment, encumbrances and available funds.
 - Solicited project ideas for the 2021 Aurora Spring Meeting. A total of 14 ideas were received.
 - Prepared spreadsheet for project voting.
 - Organized and distributed project ideas and voting spreadsheet to Aurora Board.
 - Obtained and integrated voting results for discussion during the spring meeting.
 - Prepared and distributed questions to the proposers of the five highest rated project ideas. Conference calls were also held with two of the proposers
 - Early next quarter, responses will be organized and distributed to the Board for review and re-voting.
 - Distributed meeting minutes.

Facilitate Meetings and Conference Calls:

- Held 2021 Aurora Spring Meeting
 - May 11, 1:00 – 3:00 pm
 - May 12, 1:00 – 3:00 pm
 - May 13, 1:00 – 3:00 pm
- TPF Program Standard Quarterly Reporting Format

- Facilitated or participated in all project-related meetings, including:
 - Roadway friction modeling scope change.
 - Discussion regarding 2021 Project Idea “Optimal RWIS Sensor Density and Location - Phase IV”.
 - Discussion regarding 2021 Project Idea “Connected Vehicles as Friction Probes and Mobile RWISs”.
 - Discussion regarding scoping and RFP development for “Integration of Connected Vehicle and RWIS Technologies”
- Hosted Board member 60-Minute monthly conference calls on the following dates. The May meeting was held in conjunction with the Aurora Spring meeting.
 - April 8, 2021
 - Financials
 - Membership
 - Submitted ideas
 - Additional solicitation
 - June 10, 2021
 - Project idea update
 - Project update
 - Other action items – equipment compatibility, data logger use

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- None this quarter.

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.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Distributed quarterly report to project team.
 - Had project update presentation during the spring meeting.
- 2020-03 Roadway Friction Modeling
 - Facilitated sharing of some sensors in support of the project.
 - Collaborated in project re-scoping.
 - Distributed quarterly reports and invoices.

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.
- Organize and distribute short-list of project ideas and proposer responses for re-voting.
- Request formal project proposals upon project idea re-voting results.
- Finalize and distribute RFP to experienced vendors for “Integration of Connected Vehicle and RWIS Technologies”
- Plan for fall meeting, anticipating it may be onsite with a virtual option.

Facilitate Meetings and Conference Calls:

TPF Program Standard Quarterly Reporting Format

- Continue monthly Board meeting calls to generate research ideas, discuss important issues and have vendor presentations.
- Plan for the fall meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Depending on fall meeting details (onsite vs. virtual only), begin processing travel requests.

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.
- 2020-02 "Roadway Ice/snow Detection using a Novel Infrared Thermography Technology".
 - Continue to receive and distribute project updates.
 - Coordinate presentation, if necessary.
- 2020-03 Roadway Friction Modeling
 - Facilitate project activities as needed.
 - Hold Task 2, Task 3 update meeting in July or August.
- Get new projects under contract and hold kick-off meetings, if possible.

Significant Results:

- Held virtual spring meeting.
- Continued monthly Board meeting calls.
- Communicated with new Aurora representatives.
- Solicited additional project ideas.
- Obtained and distributed project ideas.
- Held several project-related meetings.
- Collaborated in project scope change and budget change.

Circumstance affecting project or budget: