

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: 12/31/2022	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
\$850,391	\$395,382	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$78,154	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 email list. In some cases, states requested multiple individuals be included in Aurora-related correspondence.
- Updated the California DOT (CalTrans) representative to Mohammad Iraki.
- Updated the Ohio DOT representative to Heather Krannitz.
- Continued tracking state commitments.
- Prepared presentation and provided Aurora updates at TRB to Road Weather Committee and Winter Maintenance Committee.
- Responded to vendor request regarding Aurora idea submission deadline.
- Facilitated discussions via auroraboard@iastate.edu, including,
 - Non-invasive sensors (initiated by Colorado DOT)
 - Request for current RWIS standards and specifications (initiated by vendor)
 - Lufft MARWIS Mobile Advanced Road Weather Information Sensor (initiated by Virginia)
 - Equipment parts list and compatibility chart (initiated by Ohio DOT)
- Collected and assimilated member submissions of equipment parts list and compatibility chart. Distributed the updated list, upon request.
- Provided program management in terms of projects and program budgets.
- Updated Aurora website content, including new welcoming new representatives, soliciting project ideas and announcing Spring 2022 meeting date and location.
- Prepared solicitation for project ideas and distributed it various individuals and agencies, including past and current Aurora researchers, individuals who previously submitted ideas, past university meeting contacts (ASU), TRB Road Weather Committee and Winter Maintenance Committee, Iowa DOT SPR engineer (for distribution among peers), Friends of Aurora and other suggested individuals/agencies.
- Initiated contract (cost extension) for Aurora support through calendar year 2022.
- Followed up with AASHTO SICOP regarding possible peer exchange or joint meeting with Clear Roads in Fall 2022.
- Coordinated with Iowa DOT regarding California contributions.
- Responded to Iowa DOT regarding Aurora project candidates for high value research.
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Facilitate Meetings and Conference Calls:

- Held a meeting with CalTrans to introduce the new representative to Aurora.
- Held a meeting with Ohio DOT to introduce the new representative to Aurora.
- Reached out to Virginia DOT to provide update on the January 2022 interstate storm for discussion during the March monthly call.
- Requested Board availability for the Spring 2022 meeting.
- Facilitated or participated in all project-related meetings, including:
- Spring Meeting in Portland, Oregon, May 17 – 19, 2022

TPF Program Standard Quarterly Reporting Format

- Investigated Board proposed meeting cities, i.e. Portland, Oregon and Jackson, Wyoming. This included estimating and comparing member flight costs and contacting possible venues. Jackson became unviable due to the airport being closed for upgrades.
- Negotiated and contracted with venue in Portland, Oregon. This is the same venue that the cancelled Spring 2020 meeting was going to be held.
- Prepared draft meeting agenda and meeting details for Board members to use for travel authorization requests.
- Began arranging travel for Board members attending in-person, including utilizing flight credits from the spring 2020 meeting that went entirely virtual.
- Hosted Board member 60-Minute monthly conference calls on the following dates.
- January 13, 2022
 - New Chair – Jon!
 - New Vice Chair – Tonya!
 - Spring Meeting Planning
 - Project Idea Solicitation
 - Project Updates
 - Optimal RWIS Sensor Density and Location – Phase IV: Automated Winter Road Surface Condition Monitoring and Estimation using RWIS and Fleet Dash Cameras
 - Non-Invasive Sensors
 - Other Business
 - Potential Fall joint meeting
 - FOA engagement – potentially with Fall Meeting
 - eNews Topics
 - RWIS Equipment Parts List and Compatibility Chart
 - Other Action Items
- February 10, 2022
 - New Members
 - Mohammad Iraki (California)
 - Heather Krannitz (Ohio)
 - Doug Gow (Washington)
 - Spring Meeting
 - May 16
 - April 25
 - Colorado Request: Luftt Non-Invasive Sensors
 - Project Idea Solicitation
 - State Reports
 - Other Action Items
- March 10, 2022
 - VADOT Interstate Storm After Action – Jimmy White
 - Spring Meeting
 - May 17 – 19, Portland, Oregon
 - Travel authorizations, flights
 - Draft agenda
 - Suggestions
 - Project Idea Solicitation
 - Topics
 - Deadline
 - State Reports

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Began arranging travel for Board members attending in-person, including utilizing flight credits from the spring 2020 meeting that went entirely virtual.

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 and invoices, for approval, to project team.
 - Collaborated with Iowa DOT and project team regarding a requested, nine month no cost project extension.
- 2020-03 Roadway Friction Modeling
 - Distributed invoices to project team for review and approval.
 - Requested and distributed quarterly report for to support invoice(s).
 - Participated in a follow up meeting with the research team.
 - Participated in a project meeting with the research team and Aurora project team. Based on discussions during this meeting, the research team will submit a revised scope of work and budget. The MNROAD facility will no longer be used. Pertinent data was acquired from the research team of a past Clear Roads project. Additional data will be obtained from international source(s).
 - Addressed invoicing payment issue.
 - Coordinate among WTI and pertinent Board members about return of loaned non-invasive sensors.
- 2021-06 Automated Extraction of Weather Variables from Imagery
 - Distributed invoices for approval.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Began trying to schedule a project kick-off meeting. Due to conflicts, the meeting will be held during the Spring 2022 meeting.
- Pending “Applications and Integration of Connected Vehicle Data and RWIS”
 - Updated and distributed scope to project team. Upon receiving feedback, finalized scope for inclusion in the 2020 idea solicitation.

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 Spring 2022 meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Continue to process travel requests for the Spring 2022 meeting and process travel reimbursements following the meeting.

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 updates, if necessary.
- 2020-03 Roadway Friction Modeling
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.
- 2021-06 Automated Extraction of Weather Variables from Imagery
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Hold kick-off meeting.
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.

Significant Results:

- Prepared and distributed 2022 idea solicitation.
- Organized the Spring 2022 meeting and began addressing travel.
- Continued monthly Board meeting calls.
- Communicated with new Aurora representatives.
- Held project-related meetings.

Circumstance affecting project or budget: