

Aurora Program
Pooled Fund Project
(Prior Pooled Fund Project SPR-3(042))

BACKGROUND

The Aurora Program is a consortium of public road agencies focused on collaborative research, evaluation, and deployment of advanced 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. Aurora's research projects are designed to improve the efficiency of highway maintenance operations and distribute effective real-time information to travelers. Its initiatives are expected to result in technological advancement and improvement of existing RWIS, significantly reducing the adverse impacts of inclement weather on mobility.

OBJECTIVES

The program's mission is to support cooperative research, evaluation, and deployment of innovative technologies that advance road weather monitoring and forecasting in highway design, construction, maintenance and operations and to serve as an international advocate for expanded uses of these technologies.

Six primary goals are:

1. To improve dissemination of road weather information to transportation providers and end users, ultimately increasing safety by reducing potential weather-related incidents and improving transportation safety, reliability, and mobility in both urban and rural areas.
2. To improve the efficiency of maintenance operations.
3. To aid in the development of technologies that seamlessly integrate to facilitate the formation of partnerships between maintenance and operations and facilitate the dissemination of road weather information.
4. To develop initiatives that assist public agencies in deploying RWIS technologies and methodologies.
5. To encourage greater cooperation and information exchange between transportation agencies and the other agencies and groups.
6. To support development of expanded uses of RWIS technologies.

Achieving goals:

Results are realized through collaboration, regular TAC meetings, annual face-to-face meetings, and including specific implementation and technology transfer tasks in project contracts.

Defined areas of interest on which to focus its research program are:

- Decision Support Systems
- Meso-scale Modeling
- Standards and Architecture
- Small-scale Modeling and Analysis
- Information Dissemination Technologies
- Equipment Evaluations
- Road Condition Monitoring
- Innovative weather-related Data Collection and Dissemination Instrumentation and Methodologies

STRUCTURE AND FUNDING

The Executive Board is made up of one voting member from each of the agencies and is responsible for the overall direction of the program. Specific project work is undertaken by technical project committees where project management and oversight occurs. For each of the projects, there is a "champion" who acts as the lead project contact and is responsible for its overall success. The Aurora budget comprises fees and contributions from the member agencies, as well as in-kind contributions. As the program continues to develop, it is hoped to attract private sector contributions and federal grants to boost program funding.

Organizational Charter and Operating Rules will be uploaded to the FHWA TPF project solicitation website. These will be reviewed by and updated by the new project's Board.

SCOPE OF WORK

The Aurora Program scope entails:

- Administration: The Aurora Executive Board works with a management consultant to oversee day-to-day administration of the program activities including facilitation of progress reports and meetings.
- Meetings: The program holds periodic administrative meetings by the program chair and vice chair, board web meetings, and semi-annual on-site board meetings to discuss program-level (financial, outreach, project progress, etc.) issues.
- Projects: Members may also serve on research project teams to provide guidance and oversight to the research. Examples of prior projects are listed at <http://www.aurora-program.org/projects-comp.cfm>. Current initiatives are included in the "Project Status Summary" document.
- Outreach: Program members are also involved in various outreach activities to advocate for advancement and use of road weather information systems (RWIS) technologies.

DELIVERABLES

The Aurora Program will fund research and advocacy that supports its vision and goals, including:

- Technical research reports
- Outreach activities
- Participation in RWIS related initiatives at the national and international level
- Webinars

REQUESTED FUNDING

A minimum of 8 states are requested at \$25,000 per year per state for 5 years (2014 through 2018) to allow for a minimum budget of \$200,000/year.

ADDITIONAL INFORMATION

Current Active Study URL: <http://www.aurora-program.org/>

Example Work Plan: <http://www.aurora-program.org/documents/2011-2012WorkPlan.pdf>

THE AURORA PROGRAM
ORGANIZATION CHARTER
Drafted: February 22, 1996
Updated: September 15, 1998
Updated: February 15, 2001
Updated: September 16, 2004

INTRODUCTION

The Aurora Program represents an international forum for collaborative research, development, and deployment ventures comprising the interest of governmental entities and industry groups. This forum will facilitate the sharing of technological and institutional experiences gained from road weather information system (RWIS) programs conceived and initiated by each participating entity. The cooperative and collaborative objectives of the Aurora Program provide for a more efficient use of resources than a series of independent initiatives. The synergistic effect of this forum is an accelerated implementation of RWIS programs.

In order to guide the deliberations of the forum participants, an agreement is required on the management structure and operating rules. An organizational charter provides a basis for this requirement.

GUIDING PRINCIPLES

A set of principles is intended to guide the Aurora Program and the creation of this charter.

These principles are simply stated as follows:

- (1) the individual components of the program are locally organized and managed under the direction of a state-level program,
- (2) individual states provide for the coordination with local level participants, both government and industry,
- (3) each state-level organizational structure and program activity reflects individual priorities,
- (4) comparison of state-level programs and interests will allow for the identification of joint program activities, and
- (5) the Aurora Program management functions will require a minimum level of support.

From these principles an organizational structure, duties, and operating rules can be formulated.

1.0 EXECUTIVE BOARD

The purpose of the Executive Board (the "Board") is to develop the Pooled-Fund Study's budget, oversee the work program, and related matters of policy. The Board consists of a representative of each of the active member entities of the Aurora Program. Active membership is defined as a public entity contributing **\$25,000** or more per year to the Program. In addition, on a case-by-case basis, the Executive Board may consider allowing an entity to become an active member through an in-kind contribution. Additional voting and non-voting members may be appointed to the Executive Board from international, national, or regional organizations, public or private, through a vote of approval by the existing Board members. The Executive Board is responsible for organizing itself, establishing operating rules and for conducting business with a quorum of members.

The Board shall be presided over and directed by the Program Chair, who shall be a representative of one of the voting member agencies. The Program Vice Chair, who shall also be a representative of one of the voting member agencies, shall be responsible for supporting the Chair in their role, and may temporarily assume the duties of the Chair when requested to do so by the Chair. The Chair and Vice Chair shall be elected by a vote of all Board members with voting privileges.

The Vice Chair shall succeed the Chair following the Chair's term of duty, and at this time a new Vice Chair shall be elected by the Board.

An Executive Committee will deal with administrative issues not requiring Board approval or when designated by the Board. The executive Committee will consist of the Chairman, Vice Chairman and the immediate past chairman.

1.1 Policies and Procedures

The Board will adopt such Program policies and procedures as deemed appropriate, including selection of the Chair and the Vice Chair.

1.2 Funding

Pooled funding will be derived from contributions received from participating entities. For U.S. states utilizing pooled SP&R funds, uniform treatment of funding is assured under existing FHWA mechanisms for such pooled funding projects.

1.3 Appointments

The Board is responsible for creating and terminating various committees or other organizational units as required to satisfy program requirements.

1.4 Budget and Work Program

The Board will approve a budget and a work program for the Pooled Study after consideration by the Program Administrator.

1.5 Active Membership

Active membership in Aurora is open to public organizations. Active membership of a private sector organization, or of a public organization seeking to join using non-SP&R funds, will require approval of the Executive Board.

For a designated member of the Board to continue active membership the participating entity must continue annual financial support of at least **\$25,000**. If an entity fails to meet its annual commitment, it may, at the discretion of the Board, be assigned non-voting member status until such time as its financial participation is continued.

On a case-by-case basis, the Board may consider allowing an organization to become a member of Aurora through an in-kind contribution. For continued active membership beyond the first year, this entity must contribute annual financial support of at least **\$25,000**. As with other agencies, if an entity fails to meet its annual commitment, it may, at the discretion of the Executive Board, be assigned non-voting member status until such time as its financial participation is continued.

1.6 Voting Rights

The representative of a public agency active Executive Board member is eligible to vote on all program issues. The representative of a private sector active Board member will have non-voting status. The voting members of the Aurora Board may choose to allow a private sector member to vote on an issue where it is determined that no potential for a conflict of interest exists. The public sector agencies of the Board may choose to go into executive session to prevent potential conflicts from occurring.

1.7 Approval of RFP's/Selection Processes

If external resources are required, committees of the Board will organize, review, and approve RFPs to assure their consistency with the work program and budget. Committees will recommend the selection of consultants, after consideration of a list of qualified consultants prepared by the Program Administrator. Committee consultant selection will assure consistent treatment of consultants and that the qualified list is consistent with the approved consultant selection process.

1.8 Review Products/Recommend Alternatives

Committees will be responsible for establishing a degree of expertise in their given areas of research. This expertise will facilitate in-depth analysis and detailed presentations before the Board. The Committees will review the products of their respective consultant teams and make recommendations to the Board.

1.9 Product Acceptance

The Board is responsible for acceptance of final products from consultant teams.

1.10 Coordination and Education

The Board is responsible for maintaining a high degree of coordination with impacted parties and for creating educational programs to increase awareness of the needs, benefits and impacts.

2.0 PROGRAM ADMINISTRATION

A single state approved by the Board will administer the Program's resources and will provide the Program Administrator ("Administrator").

2.1 General Support

The Administrator will be responsible for drafting RFPs, developing a proposal ranking and consultant selection process for the Board's approval, presentation of lists of consultants and RFP response materials to Committees of the Board.

2.2 Contract Administration

The Administrator is responsible for distributing RFPs, preparing contract documents and performing other functions related to contracts administration and management. The Administrator will assure that contracts, schedules, work plans, and project descriptions are followed. The Administrator will be responsible for quality control and evaluation, recommendations regarding preparation of contract documents, change order requests, and authorizing progress payments. The Administrator is responsible for providing contract progress reports to the Board.

2.3 Management Budget

The Administrator is responsible for administering a management budget, which may include travel and per diem payments for active participants or their designated representatives. Per diem and travel will be administered for each entity consistently with the policies of the Administrator and that entity's prevailing per diem and travel policies.

2.4 Management Consultant

The Administrator may recommend to the Executive Board a Management Consultant to help coordinate technical studies and to prepare and administer various meeting agendas and related duties.

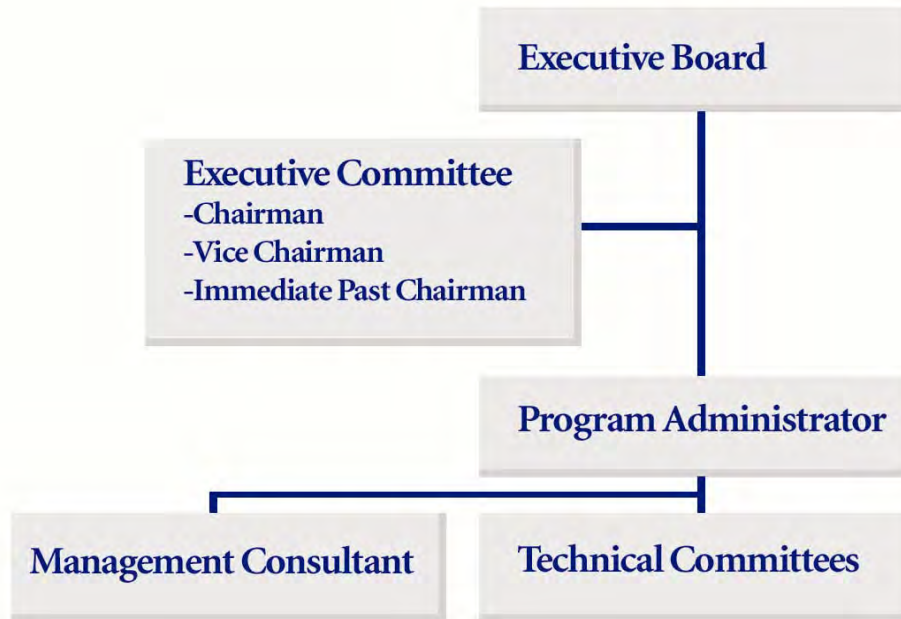
3.0 AMENDMENTS

This Charter may be amended by a 4/5 vote of the voting membership. If a quorum is not present the entire membership shall be polled.

4.0 ORGANIZATION CHART

The attached figure represents the Aurora Program organization presented herein.

Figure 1: Aurora Organizational Chart



THE AURORA PROGRAM
OPERATING RULES
Drafted: February 22, 1996
Updated: February 15, 2001
Updated: September 16, 2004
Updated: September 13, 2006

Quorum

A quorum of the Board, any committee or subcommittee shall consist of more than one-half of the voting membership. Voting members and non-voting members carrying written proxies in actual attendance at any meeting shall count toward a quorum.

Proxy Votes

All proxy votes shall be in writing and dated as to effective date and date of cancellation. Board members may identify in writing or via e-mail an individual to serve as proxy for a one-time event, or for all events at which the Board member is not present. The proxies may cover all issues subject to vote or may be limited to specific issues, as stated in writing. One-time proxy votes shall be delivered to the Executive Board or appropriate Committee Chair at the start of each meeting and recorded in the meeting minutes.

Voting Procedures

All votes may be cast by voice or by a show of hands. Any voting member may request a roll call vote.

For decision-making between meetings, voting by telephone, email, or facsimile polling may be undertaken when deemed suitable by the appropriate Board or Committee Chair. All voting members will be polled with a quorum required for approval.

Contracting Procedures

The Aurora Administrative State will administer all contracts unless the Board designates another agency to administer a specific contract. The Board may designate another agency as administrator by a majority vote of the voting membership. If a quorum is not present the entire membership will be polled. All contracts will follow the guidelines of the agency administering the contract.

Committee Size and Structure

A committee shall have a minimum of three voting members. There shall be no limit on non-voting members. Each Aurora member organization shall have no more than one voting representative on a committee. The Committee Chair shall be selected by the Executive Board, and shall be responsible for determining committee membership and reporting to the Board on committee activities.

Lists of Qualified Consultants

Mailing lists of qualified consultants shall be maintained by the Program Administrator and submitted to each committee for suggested additions or changes.

Aurora Newsletter

At the discretion of the Board, an Aurora newsletter or electronic newsletter will be developed with the objective of a wide yet targeted circulation. The Board will determine the appropriate body to be charged with preparing this newsletter.

Reports of Technical Consultants

Technical consultants will make presentations to committees of the Board and will be responsible for presenting committee approved final products to the Executive Board for acceptance.

Travel Support

The Board member or designated representative of each active member agency will be eligible for reimbursement of reasonable costs for travel, including registration fees, accommodation, and sustenance, to attend approved Aurora meetings. Travel costs of attendance at Aurora meetings by others may also be reimbursable in special cases approved in advance by the Aurora Program Administrator or the Executive Board.

Travel costs are to be kept to a minimum whenever possible. The Program Administrator and management consultant are charged with coordinating events requiring travel as appropriate to minimize travel costs.

If approved by the Executive Board, reasonable travel costs for attendance by Board members or designated representatives at other events germane to the Aurora program may be reimbursed. The procedure to obtain travel reimbursement in these cases is as follows:

- Those desiring to use Aurora funds to travel will submit an email request to the Aurora Chairman and the Program Administrator stating the 1) purpose of the trip, 2) start and end dates of the trip, and 3) estimated cost of the trip.
- Approval of the request will be based on 1) the person or purpose of the trip has been approved by the Aurora Board and 2) funding exists within the Aurora program to cover the anticipated travel costs.
- Approval by both the Chairman and the Program Administrator will be authorization for the person to travel and obtain reimbursement from Aurora
- The Chairman and Program Administrator are responsible for notifying the Management Consultant of action they take.
- Reimbursement will follow the same procedure and dollar limits currently used to reimburse qualifying members who attend Aurora meetings.

At the discretion of the Program Administrator, or if approved by the Board, reasonable travel costs for attendance of invited guests at Aurora meetings or other related events may be reimbursed.

Meetings and Registration Fees

From time to time, Aurora will hold general meetings open to members and nonmembers alike. The fee for attendance at these meetings will be \$350 per person unless lowered or waived by the Executive Board or the Program Administrator. Fees may be lowered or waived differently for Executive Board members or their representatives, invited guests or speakers, or other general meeting attendees. Friends of Aurora (FOA) will pay reduced registration fees as determined by the Program Administrator.

Other Aurora meetings, including business meetings, committee meetings and working sessions, will generally be restricted to Board or committee members, their designated representatives, and other invited guests. At the discretion of the Executive Board or appropriate Committee Chair, however, these meetings may be opened to broader participation. The registration fees for such meetings will be set by the Executive Board, Program Administrator or Committee Chair, as appropriate.

Registration fees collected by the host state in excess of the meeting facilities costs are the property of Aurora and are to be used to defray the cost of other Aurora expenses. Host states, or the Management Consultant, shall provide a meeting expense summary to the Program Administrator after each meeting.

Internet Web Site

The Aurora Program will maintain an Internet web site for use by members and non-members. The public portion of the web site will be used to disseminate information deemed important by the Executive Board to non-member agencies, and will include general information concerning the Aurora Program, information on member agencies, and any information relating to completed projects. In addition, a portion of the web site will be restricted to Aurora members only. This section will include meeting and conference call minutes and project status reports.

Mailing Lists

The Program Administrator will maintain a mailing list of all organizations and individuals eligible to receive approved Aurora materials. This will be used as the basis for distribution of minutes of general meetings, meeting announcements, approved technical reports, press releases and newsletters (if available).

All active member entities will be included on this mailing list.

Organizations or individuals which are not on the mailing list, but which attend or pay the registration fee for a general Aurora meeting, may receive minutes and other materials associated with that meeting.

Technical Committee Procedures

Aurora technical committees study those areas of interest identified by the Executive Board. To date, two technical committees have been established by the Executive Board. These committees are the Membership Outreach Committee and the Web Site Review Committee.

The Membership Outreach Committee is responsible for keeping up on potential new membership opportunities by assisting the management consultant in the development of outreach materials and to be the key point of contact for potential new members. The Membership Outreach Committee will meet as necessary, as instructed by the Executive Board to address issues that arise concerning membership. The Executive Board will assign participation in the Membership Committee.

The Web Site Review Committee is responsible for monitoring web site items and reviewing potential new changes to the site, including proposed links to RWIS-related Internet sites. The Web Site Review Committee consists of the Program Chair, Vice-Chair, and Immediate Past Chair. The process for adding Internet links to the Aurora web site is as follows:

- 1) An item (Internet link, paper, etc.) is sent to the management contractor to have posted on the “members only” side of the Aurora web site for one month.
- 2) Upon receipt and posting of the item, the management contractor will send out an e-mail through the “Aurora Reflector” notifying the Aurora Board of the posting.
- 3) After one month, the suggested link will move to the public “links” section of the web site.
- 4) During that one-month, an Internet Review Committee (consisting of the chair, vice chair, and immediate past chair) will contact the management consultant and express support or non-support for the posting. Unanimous support of the committee is needed for movement to the public Links page.
- 5) Any Aurora Board member can call for a vote of the membership concerning the appropriateness of a posting. Majority vote of the members voting rules. This vote will usually occur at an Aurora Board meeting or conference call.

THE AURORA PROGRAM
MEMORANDUM OF UNDERSTANDING WITH ENTERPRISE POOLED FUND
Drafted: May 2, 2002

Introduction

This Memorandum of Understanding ["MOU"] serves as a non-binding agreement between the ENTERPRISE Pooled Fund and the Aurora Program, hereafter referred to as the "parties".

The ENTERPRISE Pooled Fund and the Aurora Program have acknowledged that developing a formal relationship will leverage both parties' resources on a project basis where cooperation would result in mutual benefit. This agreement identifies two specific mechanisms by which the parties of this agreement may cooperate. Both of these mechanisms are described in a generic fashion. The cooperation mechanisms identified herein may be modified or amended with approval of both parties. Signatures on this agreement do not bind either organization to any cooperation; rather they indicate recognition of the mechanisms by which the organizations may cooperate. Should either mechanism be executed, specific arrangements will be agreed at the time, and documented either by email exchanges or minutes of conference calls or meetings.

Anticipated Benefits

The anticipated benefits of this agreement are as follows:

- Expedited cooperation between groups to complete projects that are of mutual benefit to both parties; and
- The ability to use and leverage the technical and financial resources of both parties without formal agreements for each coordinated activity.

Candidate Mechanisms for Cooperation

Both cooperation mechanisms described below have proven successful between pooled fund projects in other coordinated efforts. This MOU documents these potential cooperation mechanisms and allows the parties to select the most appropriate arrangement for each coordinated effort.

The following summaries describe the proposed mechanisms for cooperation between the parties specified:

Mechanism #1 – Exchange of Funds for Cooperative Efforts:

In the event that the parties wish to cooperate on a project and leverage member states' resources, either party may transfer funds to the other party for participation in a selected project. In this event, funds from the Administrative state of either Aurora or ENTERPRISE may transfer funds to the Administrative state of the other party. It is expected that the expenditure of these funds would be in accordance with the Annual Work plan of both ENTERPRISE and Aurora, or through an approved amendment to the annual work plan.

Participation in the activities of each project will be determined on a case-by-case basis. However, as in past cooperative efforts, should the parties agree to jointly fund a project, both parties would be active in the review of deliverables, and feedback given to contractors performing the efforts. A member of one party will be designated as Project Champion, and will be responsible for oversight of the project. The parties would also agree to coordinate on progress of project tasks, as necessary, and keep each agency informed on progress.

Mechanism #2 – Cooperation Without Exchange of Funds:

In the event that the parties of this agreement wish to cooperate together to perform a project by leveraging efforts without the exchange of funds, each party may use resources, such as information exchanges, best practices, in-kind contributions of member agencies, and lessons learned available through one or both parties. Under this mechanism, in the event that either ENTERPRISE or Aurora are performing or considering a project that requires additional complementary efforts that are suited to the resources available to the other party, the parties may request a cooperation where ENTERPRISE or Aurora would perform one or more tasks using resources available to them. Should both parties of this agreement determine it is appropriate to cooperate, the parties agree to coordinate on progress of project tasks, and to keep each agency informed on progress.

Signatures:

For ENTERPRISE:

Mr. Manny Agah
ENTERPRISE Chair

Date

For AURORA:

Mr. Alfred Uzokwe
Aurora Program Chair

Date

Memorandum of Understanding Between the Clear Roads and Aurora Pooled Fund Programs

Introduction

This Memorandum of Understanding ["MOU"] serves as a non-binding agreement between the Clear Roads and Aurora pooled fund programs, hereafter referred to as the "parties".

The Clear Roads and Aurora Program pooled fund programs have acknowledged that developing a formal relationship will leverage both parties' resources on a project basis where cooperation would result in mutual benefit. This agreement identifies two specific mechanisms by which the parties of this agreement may cooperate. Both of these mechanisms are described in a generic fashion. The cooperation mechanisms identified herein may be modified or amended with approval of both parties. Signatures on this agreement do not bind either organization to any cooperation; rather they indicate recognition of the mechanisms by which the organizations may cooperate. Should either mechanism be executed, specific arrangements will be agreed at the time, and documented either by email exchanges or minutes of conference calls or meetings.

Anticipated Benefits

The anticipated benefits of this agreement are as follows:

- Expedited cooperation between groups to complete projects that are of mutual benefit to both parties; and
- The ability to use and leverage the technical and financial resources of both parties without formal agreements for each coordinated activity.

Candidate Mechanisms for Cooperation

Both cooperation mechanisms described below have proven successful between pooled fund projects in other coordinated efforts. This MOU documents these potential cooperation mechanisms and allows the parties to select the most appropriate arrangement for each coordinated effort.

The following summaries describe the proposed mechanisms for cooperation between the parties specified:

Mechanism #1 – Joint Funding for Cooperative Efforts:

In the event that the parties wish to cooperate on a project and leverage member states' resources, each party will determine the level of participation and funding each party will allocate for participation in a selected project. It is expected that the expenditure of these funds would be in accordance with the annual work plan of both Clear Roads and Aurora, or through an approved amendment to the annual work plan. Participation in the activities of each project will be determined on a case-by-case basis. However, as in past cooperative efforts, should the parties agree to jointly fund a project, both parties would be active in the review of deliverables, and feedback given to contractors performing the efforts. A member from each party may be designated as Project Champions, and will be responsible for oversight of the project. The parties

would also agree to coordinate on progress of project tasks, as necessary, and keep each agency informed on progress.

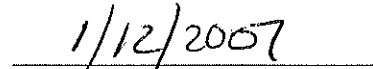
Mechanism #2 -- Cooperation Without Exchange of Funds:

In the event that the parties of this agreement wish to cooperate together to perform a project by leveraging efforts without the exchange of funds, each party may use resources, such as information exchanges, best practices, in-kind contributions of member agencies, and lessons learned available through one or both parties. Under this mechanism, in the event that either Clear Roads or Aurora are performing or considering a project that requires additional complementary efforts that are suited to the resources available to the other party, the parties may request a cooperation where Clear Roads or Aurora would perform one or more tasks using resources available to them. Should both parties of this agreement determine it is appropriate to cooperate, the parties agree to coordinate on progress of project tasks, and to keep each agency informed on progress.

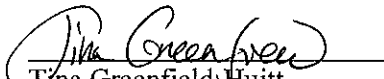
Signatures:

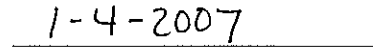
For Clear Roads:


Tom Martinelli
Wisconsin Department of Transportation
Clear Roads Chair


Date

For AURORA:


Tina Greenfield-Huitt
Iowa Department of Transportation
Aurora Program Chair


Date

Aurora Program - Ongoing Project Status

June 25, 2013

FY 2007 through FY2009

- 2007-05: Multiple-Use ITS Data Collection Practices (\$15,000) = 40% complete
- 2009-01: Summary and Comparison of Agency Experience w/ Sensors (\$5,000) = 85% complete

FY 2010

- 2010-02: Mobile Weather Data Collection Guidelines (\$5,000) = 80% complete
- 2010-03: Results-Based Winter Road Maintenance Standards (\$155,000) = 85% complete
- 2010-04: RWIS Sensor Density and Location (\$100,000) = 50% complete
- 2010-05: Determining RPU and Sensor Failure (\$5,000) = 20% complete

FY 2011

- 2011-02: RWIS Training Tool (\$265,000) = 10% complete
- 2011-04: Study of MDSS Costs (\$5,000) = 75% complete
- 2011-05: Funding Sources Identification (\$5,000) = 10% complete

FY 2012

- 2012-01: Validate the Accuracy of Pavement Condition Predictions (\$100,000) = 5% complete
- 2012-02: Winter Weather Severity Index, Phase 2 (\$5,000) = 50% complete
- 2012-03: Cameras and Operational Impact of Remote ... Monitoring (\$20,000) = 20% complete
- 2012-04: Communicating and Publicizing Information (\$30,000) = 5% complete
- 2012-05: Seasonal Weight Restrictions Demonstration (\$250,000) = 5% complete

FY 2013

- 2013-01: 2013 National Winter Maintenance Peer Exchange (\$35,000) = 45% complete
- 2013-02: Transition of Clarus to MADIS (\$5,000) = 10% complete
- 2013-03: Improving Estimation ... for Performance Measurement (\$130,000) = 5% complete
- 2013-04: Quantifying Salt Concentration on Pavement (\$150,000) = 5% complete
- 2013-05: Knowledge Base Content Management and Marketing (\$10,000) = 10% complete
- 2013-06: Make the Aurora Winter Severity Index Available to All (\$30,000) = 10% complete