

# North/West Passage Pooled Fund Study

TPF-5(190)

## Work Plan 9



**FINAL**

August 12, 2014

## **North/West Passage Transportation Pooled Fund Work Plan 9 - FINAL**

### **Background**

Interstates 90 and 94 between Wisconsin and Washington function as major corridors for commercial and recreational travel. Extreme winter weather conditions, prevalent in the northern states within this corridor, pose significant operational and travel-related challenges. Idaho, Minnesota, Montana, North Dakota, South Dakota, Washington, Wisconsin, and Wyoming are predominantly rural and face similar transportation issues related to traffic management, traveler information, and commercial vehicle operations.

Recognizing the value of coordinated, cross-border collaboration for Intelligent Transportation System (ITS) deployment to address these issues, Minnesota initiated a meeting in 2002 with representatives from each of the states within the corridor. The group established itself as a Transportation Pooled Fund (TPF-5(093)) in 2003 through the Federal Highway Administration (FHWA). The TPF number was then changed to TPF-5 (190) when FHWA transitioned to a new reporting system.

The vision of the North/West Passage Corridor is to focus on developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders.

The North/West Passage Corridor has developed an ITS Integrated Strategic Plan and has successfully implemented seven work plans containing 38 projects including development of a corridor-wide traveler information website ([www.i90i94travelinfo.com](http://www.i90i94travelinfo.com)). Currently the group is completing its eighth work plan consisting of seven projects. Complete details on previous work plans and individual projects are available through the program web site at [www.nwpassage.info](http://www.nwpassage.info).

### **Awards**

At the Opening Session of the 2010 National Rural ITS Conference, the North/West Passage Program was recognized as the winner of the 2010 Best of ITS Rural Award. The Best of ITS Rural Awards is the only program in the world that recognizes the best and brightest of the rural ITS community.

### **Accomplishments**

Some accomplishments of the corridor include:

- North and South Dakota 511 callers can select to receive information on Minnesota's highways.
- Development of one proposal to hire a contractor to perform work in two bordering states.
- Each state uses their own phrases to describe road events. The NWP defined and agreed upon a set of consistent event description phrases to use across the I-90 and I-94 corridor.
- Provided a forum for state patrol/police and DOT staff to discuss integration of systems.
- Held a workshop to create action plans for increased cross-border O&M collaboration.

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- Participated in the USDOT Clarus initiative. The result of the project was an example of all NWP states working together to develop a corridor Concept of Operations document.
- Shared the details of Wyoming's Enhanced Citizen Assisted Reporting Program for expansion to additional states. Idaho has implemented a citizen assisted reporting system.
- Signed a Corridor-Wide MOU for corridor wide coordination of traveler information.
- Created a benefit/cost spreadsheet tool for typical rural ITS projects.
- Held a webinar to open a dialogue with the freight industry.
- Evaluated coordination during major events of traveler information tools.
- Documented how each state plans and prioritizes ITS deployments.
- Assessed each state's conformance to SAFETEA-LU 1201 regarding real-time system management information program.
- Held a peer exchange on the development of a concept for rural TMC/TOC operations.

### **Financial Status**

North/West Passage members contribute \$25,000 or more annually to the pooled fund and are reimbursed for program travel. The eight North/West Passage member agencies are anticipated to contribute financially to the projects included in this work plan.

### **Projects**

At the June, 2014 North/West Passage Annual Meeting in Bozeman, Montana the states reviewed the North/West Passage goals, objectives and projects completed to-date in order to gauge interest in continuing to work as a pooled fund. The states all agreed that goals are being met and the work being done is of value to warrant continuation of the pooled fund. A list of prospective projects for Work Plan 9 was then discussed in detail. The prospective projects were based on member suggestions and the Strategic Plan. These projects were scored at the Annual Meeting based on anticipated benefits to the corridor, likelihood of success, compatibility with vision and strategic plan, and timeliness of the project.

The voting results are presented in Table 1.

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**Table 1: Voting Results for Work Plan 9 Projects**

<b>Project Name</b>	<b>Total Points Voted</b>	<b>Rank by Points</b>
Operations Task Force (Project 9.1)	678	1
Rural Incident Management Information Sharing (Project 9.2.1)	676	2
Peer Exchange Meetings (Project 9.2)	664	3
Virtual Scanning Tour of “On the Road Technologies” (Project 9.3)	657	4
NWP ITS Efficiencies Sharing (Project 9.2.2)	647	5
Freight or Operations Related Project(s) (Project 9.4)	606	6
Planning and Preparing for Major Events (9.1.1)	605	7
Rural Variable Speed Limit Information Sharing (9.2.3)	586	8
Freight Task Force*	586	9
Operations Academy Exchange (9.1.2)	548	10
Research Need for Corridor Performance Measures	509	11
Assessment of International Border Crossing Operational Coordination	502	12
NWP Benefit/Cost Tool Application, Outreach and Evaluation	457	13
Update TOC/TMC Coordination Map (Google Map)	371	14
Procure and Integrate Third Party Data for NWP Corridor	286	15
Trial Use of Roadwork Map Display	219	16

*\*It was agreed to include the Freight Task Force for consideration in Work Plan 10. The current task force recently kicked off and will be completed just prior to Work Plan 10 voting.*

After discussing the voting results the states agreed to pursue as many of the projects listed in Table 1 as could be accomplished with available funding.

Table 1 provides a funding plan for Work Plan 9 that includes several other expenses in addition to the projects. Program administration support is as an overarching contractor task to support the Program Administrator with meeting preparations, writing conference papers, preparing presentations, etc. The states are also planning their annual meeting in the coming year and the estimated cost consists of associated travel expenses.

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**Table 2: Work Plan 9 Funding Plan**

<b>Expense</b>	<b>Estimated Costs</b>	<b>Project Champion(s)</b>
<b>Project Cost</b>		
Project 9.1 Operations Task Force <ul style="list-style-type: none"> <li>9.1.1 Planning and Preparing for Major Events</li> <li>9.1.2 Operations Academy Exchange*</li> </ul>	\$20,000	Bill Legg
Project 9.2 Peer Exchange <ul style="list-style-type: none"> <li>Project 9.2.1 Rural Incident Management</li> <li>Project 9.2.2 ITS Efficiencies</li> <li>Project 9.2.3 Rural Variable Speed Limits</li> </ul>	\$45,000**	TBD
Project 9.3 Virtual Scanning Tour of “On the Road Technologies”	\$15,000	Bill Legg
Project 9.4 Freight or Operations Related Project(s)***	\$65,000	Bob Koeberlein Bill Legg
Project 9.5 Research Need for Corridor Performance Measures	\$10,000	TBD
<b>Total Work Plan 9 Cost</b>	<b>\$ 155,000</b>	
<b>Administrative Cost</b>		
Program Administration Support	\$ 30,000	
Program Website Maintenance ( <a href="http://www.nwpassage.info">www.nwpassage.info</a> )	\$ 5,000	
Member Travel Support (one in person meeting)	\$ 10,000	
<b>Total Administrative Cost</b>	<b>\$ 45,000</b>	
<b>Revenue</b>		<b>Estimated Revenue</b>
State Contributions (8 states@ \$25,000/state)		\$ 200,000
<b>Total (Revenue vs. Expenses)</b>	<b>\$ 200,000</b>	<b>\$ 200,000</b>

*\*The Operations Academy Exchange will be funded from carry over funds from Project 8.5: Member Outreach from Work Plan 8.*

*\*\*Funds will be contracted to the program support consultant to assist with materials preparation and coordination in addition the budget also includes member travel.*

*\*\*\*Projects to be selected after completion of the Freight Task Force Work Plan and Operations Task Force work plans. The final budget will be determined based on estimated costs from Work Plan 9 and may also include carry-over funds from previous work plans.*

The states will be directly involved with finalizing contractor cost estimates, scopes of work and schedules for each of the projects to ensure concurrence with the final mix of projects contracted for Work Plan 9.

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The details of projects 9.1 – 9.5 are included on the following pages. For each project, a title, description, and recommended champion are provided, in addition to a prospective approach. Also provided are planning level cost estimates. This planning level information was used as the basis to develop this work plan and will be used to arrange contractor services to execute the individual projects.

<b>Project Title</b>	<b>9.1 Operations Task Force</b>
<b>Project Champion</b>	Bill Legg, Washington State DOT
<b>Project Purpose</b>	To continue meeting as a task force for another year.
<b>Budget</b>	\$20,000
<b>Background / Current Status</b>	<p>Currently North/West Passage supports an Operations Task Force. The task force was scheduled to operate for one year. At the conclusion of the year, a survey was distributed to the task force and it was recommended to continue the task force for another year.</p> <p>This project will support periodic task force meetings to complete the work plan tasks identified by the task force members.</p>
<b>Approach</b>	<p><i>Develop a work plan.</i> The task force will develop a work plan outlining their discussion topics and tasks for the next year. The task force meetings will be held every month for 30 minutes via webinar. The purpose of the meetings will be to complete tasks from the operations task force work plan, provide guidance or input to North/West Passage operations related efforts, and provide an opportunity for peer exchange among task force members on topics of interest. The consultant will be responsible for arranging all meeting logistics, gathering information to support meeting discussions and facilitating the meetings.</p> <p>There are two activities that the Steering Committee has recommended to include in the work plan. The work plan may also include executing one major event exercise in the coming year to allow the states to rehearse their coordinated response outside of an actual event and then conduct an after action review of their response based on the work plan developed.</p> <p><u>9.1.1 Planning and Preparing for Major Events</u></p> <p>This project will focus on enhancing coordination among the states before planned major events occur. One such event that has benefited from such coordination is the Sturgis Motorcycle Rally. Although there are few recurring events the magnitude of Sturgis that occur in the corridor, there are numerous smaller yet significant events that affect travel along I-90/I-94. The most prominent of these events are those involving construction.</p> <p>Using the threshold defined by North/West Passage for major events, this project will gather TMC/TOC operations staff from each of the states to identify and describe major events planned along the corridor in the coming year.</p> <p><i>Identify major events.</i> The states will be asked to identify major events along the corridor using the threshold defined by North/West Passage. Up to three (3) events will be selected, with input from the states, for additional pre-event planning of the coordination desired for the corridor. The pre-event planning will be similar to the</p>

**Project Title****9.1 Operations Task Force**

planning completed for the Sturgis Motorcycle Rally in 2013 and 2013.

*Develop a structured meeting agenda.* Up to three (3) meetings will be held via webinar to support pre-event planning among the relevant states. The meetings will require structure around the information that must be gathered before and exchanged during the meeting. The structured agenda will give participants the instructions needed to prepare for and actively contribute to the meeting.

*Host, facilitate and summarize meetings.* The approximately two-hour meetings will be scheduled during a time that is identified as convenient for the participants. The meetings will be facilitated according to the structured agenda to ensure everyone has time to share and decisions are made. Information will be recorded and summarized in an easily referenced format following each meeting.

*Conducted post-event debriefing.* As the major events conclude, those involved in the pre-event planning discussions will be asked to participate in a short debriefing. The debriefing may be done by survey, 30-minute webinar, phone interview with an event representative. The focus of the debriefing will be on how much and how well the pre-event planning went.

#### 9.1.2 Operations Academy Exchange

The Operations Academy is competitive program based on the concept of total immersion in the subject of transportation management and operations, using a mix of classroom instruction, workshops, and analysis of existing systems to ensure the retention of the principles being presented. The classroom instruction is organized around the six fundamental principles of management and operations: (1) Operations as a system, (2) Leveraging Improved Mobility and Safety through Operations, (3) Performance Measurement, (4) Customer Service, (5) Organization, (6) Management. Workshops include small group exercises, with specific roles assigned to each participant. Regional workshops are being offered as another option for participation in the program. The approach for this project will be to support North/West Passage member's participation in the regional workshop. This may include providing member travel to attend the workshop.

**Goals Addressed**

This project will further enhance the states' efforts to develop and promote cross-jurisdictional coordination of traveler information (Goal 1) for North/West Passage.

<b>Project Title</b>	<b>9.2 Peer Exchange Meetings</b>
<b>Project Champion</b>	TBD
<b>Project Purpose</b>	Identify peer exchange topics of interest to the members, research the selected topics and conduct a meeting (webinar or in person) to exchange information.
<b>Budget</b>	\$45,000 (Note: This budget includes supporting North/West Passage member travel to participate in peer exchange meetings)
<b>Background / Current Status</b>	<p>The North/West Passage states have continuously identified peer exchange opportunities as an important benefit as a member to the corridor program. Learning from others and not duplicating efforts is an important focus for the members. Peer exchange opportunities for the past 10 years have occurred once a year at the in person North/West Passage Steering Committee Annual Meetings or during selected projects. For example Project 8.2: Concept for Rural TMC/TOC Operations included a peer exchange meeting held in Cheyenne, Wyoming to share lessons learned from states with TMC/TOC operations to assist those states that are considering developing a TMC/TOC. Peer exchange opportunities are also available during the monthly calls held by the members.</p> <p>This project would conduct meeting(s) via webinar or in person to share information on the member-identified topics of:</p> <p><u>9.2.1 Rural Incident Management</u></p> <p>Unique characteristics of rural incident management make it difficult to apply approaches that have been developed for traffic incident management, which is primarily based on urban characteristics. Some of the characteristics unique to the rural environment include fewer avenues to detect an incident, greater traveling distances for maintenance vehicles, and fewer historical events to reference for estimating durations.</p> <p>The North/West Passage states have different operating procedures and varying degrees of experience with rural incident management. A significant part of this project will involve reviewing procedures and talking with TMC/TOC operations staff to understand how incidents are currently managed in rural parts of the corridor. It may also be desirable to gather similar information from other states beyond North/West Passage.</p> <p>The information gathered and shared through this peer exchange, can then be further considered by the states independent of the project to determine how they might be folded into their own practices.</p> <p><u>9.2.2 ITS Efficiencies</u></p> <p>Public transportation agencies often have an interest in demonstrating cost savings through efficiencies in the capital development, maintenance, and operations of transportation systems. With the increasing challenge of reduced funding, it is not</p>

<b>Project Title</b>	<b>9.2 Peer Exchange Meetings</b>
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uncommon for a State DOT to have a goal of achieving X% cost savings through efficiencies in their annual capital and/or operations budget (e.g. by implementing innovative approaches or other strategies that reduce the overall needed budget or expanding services.).

One benefit of the North/West Passage Pooled fund is the open communication between members. This peer exchange will facilitate a set of information exchanges between members to allow agencies to share their ‘best practices’ for how they have achieved cost savings through efficiencies, with the intent of other members possibly adopting some of the approaches and recognizing cost savings.

9.2.3 Rural Variable Speed Limits

Variable Speed Limits are used in Washington State on I-90 in rural areas (e.g. Snoqualmie Pass and Stevens Pass) and along urban areas in the Seattle area. Wyoming DOT also uses VSL to provide safe speeds for truck traffic along I-90.

The purpose of this peer exchange would be share best practices of VSL in North/West Passage member states as well as other states.

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<b>Approach</b>	<p><i>Research the topic.</i> The consultant will research the topics of interest to provide background that will focus be used to focus the peer exchange discussion. This may include interviewing or surveying North/West Passage member states to identify best practices to share or other transportation agencies as needed.</p> <p><i>Identify Presenters.</i> Based on the research collected the consultant will work with the project champion to identify presenters for the peer exchange.</p> <p><i>Conduct webinars/meetings.</i> The consultant will be responsible for inviting presenters and prepare all meeting logistics (webinar format or in-person format). This may include reserving conference rooms and hotel space as well as coordinating travel instructions. The consultant will also be responsible for facilitating the meetings.</p> <p><i>Summarize peer exchange.</i> The consultant will be responsible for summarizing and documenting the peer exchange meetings and providing any follow up from discussions during the peer exchange.</p>
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<b>Goals Addressed</b>	This project will further enhance the states’ efforts to develop and promote cross-jurisdictional coordination of traveler information (Goal 1) for North/West Passage.
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<b>Project Title</b>	<b>9.3 Virtual Scanning Tour of “On the Road Technologies”</b>
<b>Project Champion</b>	Bill Legg, Washington State DOT
<b>Project Purpose</b>	This project would allow North/West Passage members to learn more about evolving technologies and test an enhanced use of webinars.
<b>Budget</b>	\$15,000
<b>Background / Current Status</b>	<p>There are a number of field deployment technologies that North/West Passage members have interest in and/or have deployed. This project would first identify a prioritized list of the technologies most beneficial to be ‘scanned’ as part of the project. Once the technologies are identified, interactive and dynamic webinars would be created to provide a “virtual scanning tour”. For example: on-site video might be captured to illustrate systems in use or allow webinar attendees to understand the quality of the systems. This project would allow NWP members to learn more about evolving technologies, and test an enhanced use of webinars.</p> <p>The desired outcome of this project is twofold:</p> <ul style="list-style-type: none"> <li>• NWP member agencies will learn about technologies they are considering deploying; and</li> <li>• A higher level of webinars will be tested, and members will share their views on whether the webinars are worth the added commitment to prepare (vs. the traditional webinars that include PPT presentations).</li> </ul>
<b>Approach</b>	<p><i>Identify technologies of interest.</i> The consultant will work with the North/West Passage members to identify approximately five (5) technologies to consider for the ‘virtual scanning tour’ for this project. This list will then be prioritized by the members. As a preliminary list, the following technologies would be considered: Intersection Conflict Warning Systems (ICWS); Virtual Weigh Stations; and Dual mode cameras.</p> <p><i>Identify a Deployment, Demonstration, or Testing of Selected Technologies.</i> The selected consultant will work with North/West Passage member states and other states to identify locations of any deployments, demonstration or testing of the selected technologies that could be the focus of a ‘virtual scanning tour’.</p> <p><i>Conduct Interactive and Dynamic Webinars.</i> Once locations of deployments, demonstrations or testing of the technologies are selected the consultant will begin to plan for an interactive and dynamic webinar. This may include on-site video footage to capture a technology, video of interviews with users of the technology, or demonstrations of the technology. The consultant will then put together the webinar content and be responsible for facilitating the webinars. Other responsibilities of the consultant will include inviting participants and distributing webinar materials. The consultant will also prepare a set of survey questions to assist North/West Passage members in planning future similar webinars.</p>

<b>Project Title</b>	<b>9.3 Virtual Scanning Tour of “On the Road Technologies”</b>
	The remainder of the project would be dedicated to creating very interactive and dynamic webinars to allow as many staff from within the NWP member states to learn as much as possible about the field technologies.
<b>Goals Addressed</b>	This project will further enhance the states’ efforts to develop and promote cross-jurisdictional coordination of operations (Goal 2) for the North/West Passage.

Project Title	9.4 Freight/Operations Related Projects
<b>Project Champion</b>	Bob Koeberlein, Idaho Transportation Department Bill Legg, Washington State DOT
<b>Project Purpose</b>	The purpose of this project is to fund selected projects identified in the work plan developed for the Freight Task Force and Operations Task Force.
<b>Budget</b>	\$65,000
<b>Background / Current Status</b>	<p>In March 2014 the North/West Passage members hired a consultant to lead a Freight Task Force. The goals of the task force are to:</p> <ul style="list-style-type: none"> <li>• Develop a North/West Passage Freight Task Force Work Plan that will identify projects to maintain North/West passage understanding of freight issues and support freight movement along I-90 and I-94.</li> <li>• Identify and track programs (e.g. AASHTO MCOM Program) for funding North/West Passage Freight Task Force projects and support proposal development.</li> <li>• Conduct a feasibility study and develop a concept of operations document for a corridor-wide commercial vehicle portal based on the Wyoming commercial vehicle portal.</li> </ul> <p>Currently North/West Passage supports an Operations Task Force. The task force recently completed its first year and is moving forward with a second year of coordination. The first task is to create a work plan for the task force for the next year.</p> <p>This project would fund selected project identified in the work plans approved by the Freight Task Force and Operations Task Force.</p>
<b>Approach</b>	TBD
<b>Goals Addressed</b>	This project will further enhance the states' efforts to develop and promote cross-jurisdictional coordination of traveler information (Goal 1) for North/West Passage.

<b>Project Title</b>	<b>9.5 Research Need for Corridor Performance Measures</b>
<b>Project Champion</b>	TBD
<b>Project Purpose</b>	Research current requirements and trends with corridor performance measures and determine if measures should be established for North/West Passage.
<b>Budget</b>	\$10,000
<b>Background / Current Status</b>	<p>Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) has created a surface transportation program with additional emphasis on performance-based measures. MAP-21 calls for states to establish performance goals, and then to report to FHWA on progress towards meeting these performance measures.</p> <p>The Federal Highway Administration recently concluded a project to study how states can work together to use performance management elements to improve corridor performance in the MAP-21 goal areas of safety, infrastructure condition, freight movement and economic vitality, and congestion reduction and system reliability. The project was called, “How to Improve Performance on Corridors of National Significance.” A key goal of the project was to incorporate current information on performance management along with corridor-level planning, management and operational practices. North/West Passage is included in a summary of noteworthy practices from among selected coalitions across the country in the project report.</p> <p>The focus of this North/West Passage project will be to determine if, and to what extent, performance measures can and should be established for the corridor.</p>
<b>Approach</b>	<p><i>Summarize corridor performance management.</i> MAP-21 and the FHWA Corridors of National Significance effort will be reviewed and summarized for key findings that may relate to NWP. An inquiry will also be made with FHWA to determine if, and what, further activities related to Corridors of National Significance are planned.</p> <p><i>Identify potential performance measures.</i> To help the states further consider if, and to what extent, performance measures could be established for North/West Passage, a list of potential measures will be developed. For each measure, background will be provided on any current use of it, reporting processes, application to decision-making, and considerations for NWP discussion.</p> <p><i>Conduct meeting to discuss performance measures.</i> An approximately two-hour meeting will be held to review potential performance measures and gather feedback from the states on them. The meeting will represent the decision point for determining if performance measures will be developed for North/West Passage.</p> <p><i>Prepare summary report.</i> A summary report will be prepared of the information gathered, measures considered and decision to further develop (or not) corridor</p>

<b>Project Title</b>	<b>9.5 Research Need for Corridor Performance Measures</b> performance measures.  Note: If performance measures are desired, the summary report could set the stage for further development of the measures in a subsequent project. Such development would involve establishing processes for gathering data, analyzing data, developing a report and applying the findings to NWP or individual state decision-making.
<b>Goals Addressed</b>	Goal 3: Coordinate the planning and deployment of ITS projects for the NWP Corridor into the state, regional, and local planning and programming processes.