



PlanWorks Case Study

North/West Passage Freight Task Force Minnesota Department of Transportation

This case study is an excellent example of collaborating across boundaries to make the best transportation decisions. While Minnesota DOT and partners did not use PlanWorks to inform this collaborative approach to address the North/West Passage needs, the PlanWorks Freight Application will be very useful in helping other agencies interested in this approach.

Executive Summary

The North/West Passage (NWP) is a multi-state operations-focused partnership between the states of Idaho, Minnesota, Montana, North Dakota, South Dakota, Washington, and Wyoming. These states share similar challenges with Interstates 90 and 94 serving as a major passenger and commercial vehicle highway corridors. The partnership is intended to identify the best transportation solutions for these common challenges.

While the seven NWP states have shared operational challenges due to the nature of the I-90/94 corridor that bisects them, they each also have their own vision and goals to fulfill. The NWP FTF has effectively used targeted research and communications to identify where NWP states can achieve the greatest benefits from collaboration, while enhancing their own state research agendas.

This case study provides insight into how multiple State DOTs can cooperate on planning, research, or programming when there are common interests. In particular, it illustrates the communication and collaboration between member States, which have helped the NWP organization endure for the past 15 years.

Agency's Challenge

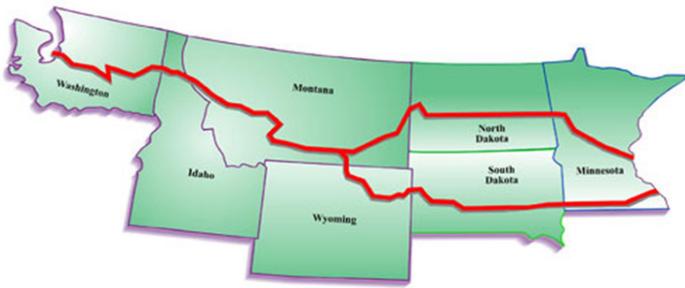
The North/West Passage has its roots as a transportation pooled fund (TPF) study through the Federal Highway Administration (FHWA) in 2003.¹ Both Interstate 90 and 94 are subject to operational challenges due in part to extreme weather conditions. Many of the operational issues are exacerbated for commercial vehicles and are related to a need for truck parking management, traveler information, truck permit harmonization, and other operational issues.

¹ For more information on the transportation pooled fund program, www.pooledfund.org/Home

Project Snapshot

- For 15 years Idaho, Minnesota, Montana, North Dakota, South Dakota, Washington, and Wyoming have been partners in a Transportation Pooled Fund study.
- These states collectively make decisions based on common interests and challenges associated with the Interstate 90 and 94 corridor or the North/West Passage.
- Special task forces are used to implement individual aspects of the NWP vision. The Freight Task Force (FTF) was established to: “Develop effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders.”
- The FTF has developed an engagement process as well as a list of research projects, based on collaboratively-identified funding priorities. These priorities may change over time, but the commitment to the NWP vision remains.

Figure 1: North/West Passage Corridor and Member States
(Source: North/West Passage Corridor)



As a TPF study, NWP members contribute \$25,000 or more annually to the pooled fund. A work plan is developed and approved annually by a Steering Committee that consists of one member from each of the funding state DOTs. FHWA serves as a monitoring body, providing strategic and technical input. The Minnesota Department of Transportation (DOT) serves as the Program Administrator for the overall effort.

On a project-by-project basis, member State DOTs serve in the role of Project Champion. As an example, the Freight Task Force (FTF) was established in 2014 to help realize the NWP Corridor's vision of "developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders" explicitly for the efficient movement of goods. The Idaho Transportation Department serves as Project Champion, managing freight task force activities related to this vision.

Programming

States that contribute to a pooled fund study each have a seat on the Steering Committee. The revenue that is paid to the TFP by member states (as well as funds received from other sources) is used to collaborate on a variety of multi-state research, planning, operations and implementation activities.

The programming process begins with long-range planning in the selection and prioritization of projects for future implementation. The NWP relationship to the PlanWorks key decisions is in the collaborative selection of projects by the multi-state partnership for research program funding, not for specific project implementation.

As part of first-year activities in 2014, the NWP FTF undertook an effort to identify and prioritize projects

that could improve safety and efficiency within the NWP as a business plan for the FTF over the coming 5 years. The initial list of projects was based on industry trends, needs of the corridor, and feedback from FTF members. Members were then formally surveyed and asked to rank the nine projects by each project's importance to the corridor and their respective state DOT. The survey results were averaged across all scores to come up with a consensus ranking of the nine projects. Table 1 displays the projects and the results of the FTF member survey.

Table 1: 2014 Project Prioritization Survey Results

Project	Ave Score	Rank	Est Cost
Pilot Escort Certification and Reciprocity Universal Standard	3.125	1	\$75-100K
Advanced Notice of Truck Parking Availability – Phase 2	3.125	2	N/A
Electronic Display of Oversize/Overweight Permits	4	3	\$50-70K
Pursue a "Toward Zero Deaths" Commercial Vehicles Safety Campaign	4.25	4	\$75-100K
NWP Virtual Weigh Station Initiative	5	5	\$50K
Oversize/Overweight Permitting Uniformity (Mid-long term)	5	6	\$150K
Calibrate Downstream WIM Scales with Permanent Scale Data	5.75	7	\$75-100K
Model Legislation for Autonomous Commercial Vehicle Operation	6.875	8	\$25K
Multistate Commercial Vehicle Platoon Demonstration (Mid-long term)	7.875	9	\$250K

Source: Technical Memorandum 1: Freight Task Force Work Plan, North/West Passage Pooled Fund, October 2014.

Decision Guide Connections

The NWP decision making process includes project identification and prioritization. The PlanWorks programming key decisions are the most relevant shown below.

- **PRO-1-** Revenue for research projects in a TPF is from a number of sources including member contributions and other related programs.
- **PRO-4-** Project prioritization across the seven member States was a robust process accomplished through information gathering, discussion, and member survey.
- **PRO-5-** This consensus point connects available revenue and cost with project priorities. The projects with sufficient state interest and progress are the most reasonable for an active FTF role.

The top three priority projects in 2014 were: 1) Pilot Escort Certification and Reciprocity Universal Standard; 2) Advanced Notice of Truck Parking Availability – Phase 2; and 3) Electronic Display of Oversize/Overweight Permits. As the NWP has limited resources, and the interests of the FTF need to be balanced against the interests of other NWP special task forces, based on the survey results, in the second year of FTF activities, further research was undertaken/funded related to truck parking availability.

After three years had passed, a follow-up survey was conducted in early 2017 asking NWP member states to update their preferences related to previously identified priority projects. A slightly different process was used from the 2014 survey; a process that did not use a set ranking approach.

The results, shown in Figure 3 indicate if a NWP member state 1) has an active project, 2) has a planned project (and the project will be funded and underway within next five years), 3) has an interest in the project (but no current funding), or 4) has no interest (or funding) in the project. Using this approach, the number of states actively implementing FTF priority projects, but not necessarily coordinating with other NWP states is noteworthy, for example, related to

the Toward Zero Deaths Campaign. In addition, the survey showed that projects previously ranked as high priorities had lower interest among stakeholders in 2017. For example, Oversize/Overweight Permitting Uniformity which ranked sixth in 2014, was arguably a project with greatest interest due to the number of active, planned and interested responses.

While each of the projects identified in 2014 continues to have some level of interest by one or more NWP member state, the 2017 survey highlighted that they do not all require or warrant the same level of involvement by the FTF. In some cases there is a misalignment between the readiness of NWP states to implement projects, with some states having already implemented and others at the initial stages of research. In other cases regional or national organizations are taking a lead role, making any efforts by the NWP redundant or counterproductive.

The process used by the NWP FTF to advance research for the corridor is very much a consensus building effort between member states. One challenge to identifying next steps where multiple partners are involved is to find a course of action where each partner can see a benefit. To accomplish this, it was determined that NWP FTF multi-state research efforts would have the greatest benefit to member states by filling gaps in research.

A second challenge was reaching consensus related to funding priorities. Project costs were estimated in 2014 and ranged between \$25,000 and \$250,000. While this range of costs is not inordinately high compared to typical research and planning projects, the costs were weighed against all other state DOT activities. Although state-sponsored NWP pooled funds will likely continue to advance relevant research, higher cost projects (those in excess of \$25,000) will require exploring other sources. Federal funding provides numerous options that align with priority project objectives. Of particular relevance are grant programs, such as TIGER and INFRA (formerly FASTLANE); programs that emphasize providing benefits to goods movement and where multi-jurisdictional and multi-partner projects score well. However, in some cases, these programs have established minimum grant requests (\$5 million, \$25 million, or more), which the NWP priority projects do not meet.

Table 2: Level of Activity and Interest in FreightTask Force Priority Projects

Project	Active	Planned	Interested	Not Interested
Oversize/Overweight Permitting Uniformity	4	1	1	0
Electronic Display of Oversize/Overweight Permits	3	0	1	1
Pursue a "Toward Zero Deaths" Campaign	4	0	1	1
Pilot Escort Certification and Reciprocity Universal Standard	2	0	2	2
Calibrate Downstream WIM Scales with Permanent Scale Data	2	0	2	2
NWP Virtual Weigh Station Initiative	1	0	4	1
Model Legislation for Autonomous Commercial Vehicle Operation	1	0	3	2
Advanced Notice of Truck Parking Availability – Phase 2	1	0	5	0
Multistate Commercial Vehicle Platoon Demonstration	0	0	4	2

Source: North/West Passage Freight Task Force Year 2, Summary Report, North/West Passage Pooled Fund, July 2017.

Note, not all states replied to the survey at the time of the reporting.

Given these challenges, a few "sweet spots" were identified, where the current level of state interest and state of implementation make sense for NWP FTF to take an active role in advancing research or implementation. These projects included:

- Pursue Toward Zero Deaths (TZD) Commercial Vehicles Safety Campaign** – The TZD Commercial Vehicles Safety Campaign project is estimated to take 12 months, with projected costs between \$50,000 and \$100,000. Lessons learned in the implementation of TZD and the development of specific strategies and marketing materials are best funded through the NWP pooled fund. Subsequent outputs or corridor-wide initiatives using technology or other means could be eligible for federally allocated funding and grants. On a state-by-state basis, TZD activities could be funded through Highway Safety Improvement Program (HSIP) funding. HSIP projects or strategies must be included in the state's Strategic Highway Safety Plan, requires additional lead time to add lessons learned and initiatives to those documents.
- North/West Passage Virtual Weigh Station (VWS) Initiative** – The expected cost of the VWS

project ranges from \$20,000 to \$50,000. The research focus of the VWS project makes it most likely to be funded by the NWP pooled fund, but state or federal research programs could also fund the project. Subsequent phases of this research focused on implementation could be funded by federal surface transportation programs depending on the need and intended purpose of the project. Additionally, Federal Motor Carrier Safety Administration (FMCSA) funding sources such as the Motor Carrier Safety Assistance Program (MCSAP) and Innovative Technology Deployment program may present opportunities for funding subsequent steps on the VWS Initiative.

- Calibrate Downstream Weigh In Motion (WIM) Scales** – Phase 1 of the project is expected to take 12-18 months with costs ranging from \$75,000 to \$250,000, depending on research tasks. Given the research focus of the WIM project, Phase 1 is best funded through the NWP pooled fund, although this may stretch the resources of the fund.

At the time of this evaluation, the NWP was conducting research on three projects that were not evaluated for next steps: 1) The Model Legislation for Autonomous Commercial Vehicle Operations, 2) Advanced Notice

of Truck Parking Availability – Phase 2, and 3) Multistate Commercial Vehicle Platoon Demonstration. Subsequently, the NWP FTF began development of its third work plan which will advance additional research on VWS applications in the corridor. This advancement was approved by the NWP Steering Committee.

Stakeholder Collaboration

As a multi-state partnership, the core principle of the NWP FTF is a transparent process that enables each of the member states to have a voice. This process has been used by the FTF as a determinant in what projects should advance for further research, and eventually to programming and implementation. Collaboration for the NWP takes several forms. The seven states that contribute to the transportation pooled fund study each have a seat on the NWP Steering Committee and meet on a monthly basis to cooperatively determine the NWP research agenda and to assess/report on current year work plan progress. One meeting during the year is an Annual Meeting.

The NWP FTF has a less prescriptive membership structure and meeting schedule compared to the Steering Committee. As much technical research is conducted at the task force level, the FTF membership is open to including staff from member states that have an interest in a variety of freight aspects, including planning, operations, engineering and permits staff from DOTs. The FTF also sought public-sector representatives beyond the DOT, such as public safety and state highway patrol staff. Outreach and

collaboration with private sector freight stakeholders are often necessary in order to understand specific corridor-wide topics or problems. The FTF welcomed participation by representatives from each of the member state trucking associations, as well as individual trucking companies, as available. While not all FTF members and interested parties were invited to vote on decisions, they were included to ensure that all freight stakeholders were operating with the same base level of information and that information sharing was truly collaborative. In this way the public and private sectors can each learn from each other.

A key component of 2017 FTF activities were monthly web meetings focused on presenting relevant information on current and emerging freight trends and best practices that could be relevant to and/or have the potential to affect all NWP states. The web meetings served a twofold purpose, 1) to provide information to attendees and 2) to solicit discussion and conversation between presenters and NWP member states. The output of the monthly web meetings was both a more informed task force, as well as presentations and contact information for other member states and external resources to be leveraged in the future.

The NWP FTF Project Champion and other members of the FTF were surveyed in order to develop a list of topics for the web meetings. Table 3 displays the web meeting held during the project, the topic discussed, and the presenters.

Table 3: Summary of Web Meetings Held

Month	Topic	Presenters
July 2016	Introduction to Freight Task Force Web Series, Topic Solicitation	Bob Koeberlein, ITD; Erika Witzke, CPCS
August 2016	FAST Act Freight Provisions Overview	Jeff Purdy and Chip Millard, FHWA
September 2016	Freight Data	Donald Ludlow, CPCS ; Dan Murray, ATRI
October 2016	Truck Parking	Davonna Moore, KSDOT; John Tompkins, MnDOT; Dan Murray, ATRI
November 2016	Connected Trucks (I-80 Pilot)	Tony English, TriHydro
January 2017	Toward Zero Deaths	Kristine Hernandez, MnDOT; John Milton, WSDOT
February 2017	Truck Platooning 101	Steve Boyd and Geoff Johnson, Peloton Technologies
March 2017	State Freight Plan Best Practices	Ernie Perry, University of Wisconsin CFIRE
May 2017	NWP Annual Meeting (select invitations)	Erika Witzke, CPCS; Jeff Marker, ITD; Beverly Kuhn, TTI
July 2017	Truck Platooning Roundtable (select invitations)	Erika Witzke and Alex Marach, CPCS
July 2017	Summary of Freight Task Force Year 2 Activities	Erika Witzke, CPCS; Alex Marach, CPCS

Key Outcomes

The NWP has been active since the early 2000's and is currently in their twelfth phase of collaborative work program development. While the NWP has several special task forces, this case study illustrates an excerpt of activities underway by one of those groups, the Freight Task Force, and how the process can be linked to the PlanWorks key decisions:

- **Be aware of available funding.** The NWP has limited resources for its annual research program. While certainly a constraint, the program ensures that the research which advances is in the best interest of all member states.
- **Keep priorities current.** While there were worthwhile projects identified in the NWP in 2014, the results of the 2017 NWP member survey indicated that the original slate of projects may not reflect current priorities. This list should be updated with projects added/deleted and, where possible, new projects crafted that could potentially link to freight-related competitive grant programs.
- **Know your role.** In a multi-state coalition where each party is involved in both similar and disparate activities – both on their own and in partnership with others – it is critical to carve out an appropriate role for the coalition that can further the research agenda without competing activities. For the NWP it was found that the role of the FTF will

vary from project to project and could fall within categories related to conducting research, leading implementation, no role, or role to be determined based on on-going activities.

- **Take gradual steps to implementation.** While the NWP has been active for the past 15 years, the FTF is just embarking on its third year of work plan activities. The FTF is first taking gradual steps, focusing on building relationships and conducting small research projects to fill information gaps and provide direction for future FTF activities.
- **Include a neutral voice.** Both the NWP as a whole and the FTF, specifically, have enlisted consultant support to facilitate conversations between multiple interests, conduct research, and serve as a guide to balance interests in the NWP agenda.

While the seven NWP states have shared operational challenges due to the nature of the I-90/94 corridor that bisects them, they each also have their own vision and goals to fulfill. The NWP FTF has effectively used targeted research and communications to identify where NWP states can achieve the greatest benefits from collaboration, while enhancing their own state research agendas.

For more information

Contact

Tony Ernest, ITD
NWP Freight Task Force Project Champion
Travel Services Coordinator
(208) 334-8836
Tony.Ernest@itd.idaho.gov

Resources

- **NWP Freight Task Force.** <https://www.nwpassage.info/projects/?phase=12&project=2>
- **North/West Passage Freight Task Force Year 2, Summary Report,** North/West Passage Pooled Fund, July 2017
- **Technical Memorandum 1: Freight Task Force Work Plan,** North/West Passage Pooled Fund, October 2014.