

## Roster of Winter Maintenance Organizations December 2019

### **AASHTO - American Association of State Highway and Transportation Officials**

AASHTO is a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail, and water. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system.

AASHTO works to educate the public and key decision makers about the critical role that transportation plays in securing a good quality of life and sound economy for our nation. AASHTO serves as a liaison between state departments of transportation and the Federal government. AASHTO is an international leader in setting technical standards for all phases of highway system development. Standards are issued for design, construction of highways and bridges, materials, and many other technical areas.

<https://www.transportation.org>

### **AASHTO Center for Environmental Excellence, Resilient and Sustainable Transportation Systems Program**

AASHTO's Resilient and Sustainable Transportation Systems Technical Assistance Program (RSTS) is designed to help state DOTs understand the potential effects of climate change and the range of strategies and options for climate change mitigation and adaptation. The RSTS Steering Committee and the tasks being implemented by the Technical Assistance Program help achieve these goals. RSTS is a voluntary pooled-fund program that provides timely information, tools, and technical assistance to AASHTO members in meeting the difficult challenges that arise related to climate change, energy efficiency, energy security, infrastructure adaptation, alternative vehicles and fuels, and other relevant topics. This program is a critical resource for state DOTs to address climate change and energy issues, while also providing the information needed to engage in and influence climate change and energy developments at the federal level.

<https://environment.transportation.org/center/rsts/>

### **AASHTO Snow and Ice Cooperative Program (SICOP)**

SICOP is the Snow and Ice Pooled Fund Cooperative Program. It was developed by AASHTO (The American Association of State Highway and Transportation Officials). SICOP, once a stand-alone collective, has become one of AASHTO's technical service programs, the Winter Maintenance Technical Service Program. A principal mission of the Winter Maintenance Program (WMP) is to ensure that the requisite testing and evaluation of potentially implementable international or domestic winter maintenance technologies are performed and that the results of these efforts are presented and disseminated in such a manner that beneficial winter maintenance technologies are easily understood and integrated into individual state and municipal operational programs. Beyond this principal mission, the WMP works toward establishing a sustainable systems approach to snow and ice control in the

United States—one involving the vehicle, the driver, the equipment, the materials and practices, and the receiving environment for managing roadway and bridge snow and ice.

<https://sicop.transportation.org>

### **AASHTO Committee on Maintenance – Maintenance Operations Technical Working Group**

As a Technical Working Group, the focus is on highway maintenance operations issues including work zone safety, snow and ice control, and emergency response.

<https://maintenance.transportation.org>

### **AASHTO TC3 – Transportation Curriculum Coordination Council**

TC3 is a technical service program within AASHTO that focuses on developing training products for technical staff in the areas of construction, maintenance, and materials. TC3 has a library of 120 on-line training modules covering a variety of topics in the three primary disciplines.

<https://tc3.transportation.org>

### **AASHTO Committee on Transportation System Operations (CTSO)**

CTSO focuses on transportation system operations and associated intelligent transportation systems (ITS) and emerging technology with a goal of improving safety, system reliability, and highway system performance. This committee strives to transform the national transportation community to a transportation systems management and operations (TSMO) culture and guides the National Operations Center of Excellence and the AASHTO Operations Technical Service Program, in collaboration with the Institute of Transportation Engineers (ITE) and the Intelligent Transportation Society of America (ITS America).

<https://systemoperations.transportation.org>

### **AMS - American Meteorological Society**

Founded in 1919, the American Meteorological Society (AMS) is the nation's premier scientific and professional organization promoting and disseminating information about the atmospheric, oceanic, hydrologic sciences. Our more than 13,000 members include scientists, researchers, educators, broadcast meteorologists, students, weather enthusiasts, and other professionals in the fields of weather, water, and climate. AMS is committed to strengthening the incredible work being done across the public, private, and academic sectors. Our community knows that collaboration and information sharing are critical to ensuring that society benefits from the best, most current scientific knowledge and understanding available.

<https://www.ametsoc.org/AMS/>

### **AMS- ITS and Surface Transportation Weather Committee**

Given that weather adversely affects the surface transportation system by leading to increases in crashes and delays, there is a need to improve the operational performance of the surface transportation system (i.e., mobility and safety under adverse weather conditions) through improved development and integration of advanced weather products and services with Intelligent Transportation Systems (ITS). The goal of the ITS/STC is to continue to build and strengthen the bridge between the meteorological and surface transportation communities to support investments (i.e., design, development, deployment, operations and technology

transfer) in inter-disciplinary solutions aimed at reducing human and financial costs of adverse weather on surface transportation system.

<https://www.ametsoc.org/cwwce/index.cfm/committees/committee-on-intelligent-transportation-systemssurface-transportation/>

### **APWA Winter Maintenance Committee**

The American Public Works Association (APWA) Winter Maintenance Subcommittee's mission is to promote the development and use of the safest, most cost effective, efficient and environmentally sensitive winter maintenance technologies, equipment, materials and practices; thus providing citizens with excellent quality of life during the snow and ice season.

[http://www3.apwa.net/technical\\_committees/Transportation-Committee/Subcommittees/Winter-Maintenance](http://www3.apwa.net/technical_committees/Transportation-Committee/Subcommittees/Winter-Maintenance)

### **Aurora Pooled Fund Program**

Aurora is an international partnership of public road agencies working together to perform joint road weather research. Aurora members seek to advance road weather information systems (RWIS) to more fully integrate weather data as part of transportation systems operations in terms of readiness and decision making for efficient highway maintenance, operations, and real-time traveler information. Project areas of interest include information dissemination technologies, decision support systems, weather modeling and analysis, equipment evaluations, standards and architecture, road condition monitoring and performance measures as well as other pertinent areas as identified by member agencies. In addition, Aurora is committed to supporting a more connected and automated future for surface transportation.

<http://www.aurora-program.org>

### **CEDR – Conference of European Directors of Roads**

CEDR is the Road Directors' platform for cooperation and promotion of improvements to the road system and its infrastructure, as an integral part of a sustainable transport system in Europe. Its members represent their respective national road authorities or equivalents and provide support and advice on decisions concerning the road transport system that are taken at national or international level.

<http://www.cedr.eu>

### **Clear Roads Pooled Fund Program**

Clear Roads is a national research consortium focused on rigorous testing of winter maintenance materials, equipment and methods for use by highway maintenance crews. It includes 36-member agencies, each contributing \$25,000 annually to fund research and technology transfer efforts. Representatives from the participating departments of transportation meet twice a year to discuss and prioritize projects, share effective practices, and review research results. Primary Activities include: Evaluating winter maintenance materials, equipment and methods under real-world conditions; Developing specifications and recommendations; Studying and promoting innovative techniques and technologies that will save agencies money, improve safety and increase efficiency; Supporting technology transfer by developing practical field guides and training curriculum to promote the results of research projects

<http://clearroads.org>

### **FHWA Office of Operations Research, Development, and Technology**

The Federal Highway Administration's (FHWA's) Office of Research, Development, and Technology (RD&T) is located at the Turner-Fairbank Highway Research Center (TFHRC), a federally owned and operated national research facility in McLean, Virginia. The center houses more than 16 laboratories, support facilities, and data sets; and conducts applied and exploratory advanced research in vehicle-highway interaction, nanotechnology, and a host of other types of transportation research in safety, pavements, highway structures and bridges, human-centered systems, operations and intelligent transportation systems, and materials. The laboratories at the center provide a vital resource for advancing the body of knowledge that has been created and developed by our researchers.

<https://www.fhwa.dot.gov/research/ffhrc/about/>

### **FHWA Office of Operations, Road Weather Management Program**

The Federal Highway Administration Road Weather Management Program seeks to better understand the safety and mobility impacts of weather on roadways, and promote strategies and tools to mitigate those impacts. More timely, accurate and relevant information about these weather-related impacts to the roads enables transportation managers and travelers to make more effective decisions.

<https://ops.fhwa.dot.gov/weather/index.asp>

### **I-80 Corridor Coalition**

Interstate 80 is a major east-west interstate corridor through the states of California, Nevada, Utah, Wyoming, and Nebraska, and is a major economic freight and traveler corridor which can better service the public through improved and coordinated maintenance and traveler information services. Integration and continuity of Winter Maintenance Operations across the United States is needed to provide consistent traveler information and similar levels of service to achieve a higher degree of boundary transparency and improved mobility, as seen by the traveling public. These five states have initiated a single strategic planning effort to reach consensus on how best to link operational processes and data to maximize winter mobility in their I-80 corridor.

<https://extsites.kimley-horn.com/projects/I-80Coalition/index.html>

### **I-81 Corridor Coalition**

The mission of the I-81 Coalition Corridor is to improve the safety and efficiency of freight and passenger movement. This will allow lives to be saved, costs to be reduced, and economic development opportunities to be expanded. These objectives will be accomplished through the sharing of information and coordinated decision making, management, and operations. The I-81 Corridor Coalition is homed at the Virginia Tech Transportation Institute (VTI).

<https://www.i-81coalition.org>

### **National LTAP and TTAP Association**

The National Local Technical Assistance Program Association (NLTAPA) is a not-for-profit organization representing and serving the 52 LTAP and TTAP Member-Centers in the United States and Puerto Rico. Each of these Centers provides training and technical assistance to local and county government personnel. In snowbelt states,

training on snow and ice control is performed routinely and is an excellent means to educate and update local personnel on current and best practices. The Association also has formal partnerships with AASHTO, NACE, and the Salt Institute. All Centers work together as an Association and the website is <http://www.nltapa.org/>

**MDSS – Maintenance Decision Support System Pooled Fund Program**

Controlling snow and ice buildup on roadways during winter weather events presents several challenges for winter maintenance personnel. Among these challenges is the need to make effective winter maintenance decisions (treatment types, timing, rates, and locations), as these decisions have a considerable impact on roadway safety and efficiency. Additionally, poor decisions can have adverse economic and environmental consequences. In an effort to mitigate the challenges associated with winter maintenance decisions, the Federal Highway Administration (FHWA) Office of Transportation Operations (HOTO) initiated a program in 2001 aimed at developing a winter road Maintenance Decision Support System (MDSS). [https://ral.ucar.edu/projects/rdwx\\_mdss/](https://ral.ucar.edu/projects/rdwx_mdss/)  
<http://mdss.iteris.com/mdss/pfs/>

**NCAR - National Center for Atmospheric Research, Research Applications Laboratory**

The Research Applications Laboratory is one of five laboratories within NCAR. Its mission is to conduct directed research that contributes to fundamental understanding of the atmosphere and related physical, biological, and social systems; to support, enhance, and extend the capabilities of the scientific community; and to develop and transfer knowledge and technology for the betterment of life on Earth. RAL has grown from a small research and development program at NCAR in the early 1980s to its current status as an NCAR laboratory with six divisions focused on specific applications areas. The staff is comprised of over 200 persons with a diverse set of skills and experience in the physical sciences, social sciences, mathematics, software engineering, project management and administration. RAL staff work across disciplines to address the impact of weather and climate on issues of real importance to society such as water and energy resources, transportation, national security, and human health. <https://ral.ucar.edu/>

**NOAA - National Oceanic and Atmospheric Association**

NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.

<http://www.noaa.gov/>

**NOAA National Weather Service**

The mission of the National Weather Service (NWS) is to provide weather, water, and climate data forecasts and warnings for the protection of life and property and enhancement of the national economy. The NWS vision is of a Weather-Ready Nation where society is prepared for and responds to weather-dependent events.

<http://www.weather.gov/>

**NOAA Office of Federal Coordinator for Meteorology**

The Office of the Federal Coordinator for Meteorological Services and Supporting Research, more briefly known as the Office of the Federal Coordinator for Meteorology (OFCM), is an interdepartmental office established to coordinate federal meteorological activities. OFCM is the Federal Weather Enterprise's (FWE) resource for the following:

- Coordinating the exchange of information, plans, and concerns among the FWE agencies, to help the Nation get the most effective use from the \$5.3 billion collectively spent annually by the partner agencies.
- Providing a strategic view of interagency Federal weather efforts, to support related decisions at executive leadership levels of partner agencies.

Producing and maintaining a variety of foundational meteorological documents including Federal Meteorological Handbooks, the Federal Plan for Meteorological Services and Supporting Research, among others.

<https://www.ofcm.gov>

**Northwest Passage Pooled Fund Program**

Interstates 90 and 94 between Washington and Minnesota 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, and Wyoming are predominantly rural and face similar transportation issues related to traffic management, traveler information, and commercial vehicle operations.

<https://www.nwpassage.info>

**PIARC - Permanent International Association of Road Congresses**

The World Road Association-PIARC is a global forum for exchange of knowledge and experience on roads and road transport policies and practices. It brings together the road administrations of 121 governments and has members -individuals, companies, authorities and organizations- in over 140 countries.

<https://www.piarc.org/en/>

### **PIARC - Winter Service Technical Committee**

Road networks are particularly vulnerable to the adverse effects of winter weather. Maintaining acceptable levels of service in a constrained financial environment can be particularly challenging. Issues such as sustainability and the impact to the environment of wide-spread treatments and practices are to be considered. Technical Committee B.2 (Winter Service) will study these issues in addition to actively preparing the technical program for the 2018 Winter Road Congress.

<https://www.piarc.org/en/Technical-Committees-World-Road-Association/Strategic-Theme-Access-Mobility/Technical-Committee-Winter-Service/>

### **PNS – Pacific Northwest Snow-fighters**

The mission of PNS is to “strive to serve the traveling public by evaluating and establishing specifications for products used in winter maintenance that emphasize safety, environmental preservation, infrastructure protection, cost-effectiveness and performance.

<http://pnsassociation.org>

### **PSA - Professional Snowfighters Association**

The Professional Snowfighters Association is a North American based non-profit professional association dedicated to creating a community of practice, based upon adherence to sound science as it seeks to improve knowledge and practices in the pursuit of safe and sustainable snowfighting by the winter maintenance community.

<https://professionalsnowfightersassociation.org>

### **SIRWEC – Standing International Road Weather Commission**

The Standing International Road Weather Commission (SIRWEC) operates as a forum for the exchange of information relevant to the field of road meteorology. This includes management, maintenance, road safety, meteorology, environmental protection and any other area of interest considered relevant by the Commission.

<http://www.sirwec.org/index.htm>

### **Transportation Association of Canada**

The Transportation Association of Canada (TAC) is a not-for-profit, national technical association that focusses on road and highway infrastructure and urban transportation. Our 500 corporate members include all levels of governments, private sector companies, academic institutions, and other associations. TAC provides a neutral, non-partisan forum for those organizations, and their thousands of staff, to come together to share ideas and information, build knowledge, and pool resources in addressing transportation issues and challenges.

<http://www.tac-atc.ca/>

### **TRB Maintenance Equipment Committee (AHD60)**

This committee is concerned with all aspects of equipment fleet asset management from replacement planning and acquisition; through in-service maintenance and fueling; to end of life-cycle disposal. The focus of the committee is to stay abreast of changes in the industry related to technology, regulation, environmental stewardship, asset management principles, and innovative practices. The

committee facilitates research and communication of these issues to members so that highway equipment fleet managers can better support the cost effective and productive delivery of highway infrastructure maintenance activities.

<http://www.trb.org/AHD60/AHD60.aspx>

**TRB Maintenance Operations and Personnel Committee (AHD15)**

TRB Committee dedicated to information and resources pertaining to the personnel policies of the various transportation organizations relative to maintenance and operations; and the selection and training of maintenance and operations personnel

<http://www.trb.org/AHD15/AHD15.aspx>

**TRB Maintenance Operations Management Committee (AHD10)**

TRB Committee dedicated to information and resources pertaining to the use of performance measurement in a broad range of transportation applications

<http://www.trb.org/AHD10/AHD10.aspx>

**TRB Surface Transportation Weather Committee (AH010)**

This committee is concerned with the exchange of information on the effects of weather on all modes of surface transportation both within and between the transportation and meteorological communities; identification and development of research needs and technology transfer on techniques to better manage surface transportation; and promotion of efforts to minimize the impacts of weather and maximize safety and mobility.

<http://www.trb.org/AH010/AH010.aspx>

**TRB Winter Maintenance Committee (AHD65)**

This committee promotes research that will provide winter maintenance professionals with current and reliable information for effective procurement and implementation of materials, technologies and processes for controlling snow and ice on highways. The committee does this by promoting and facilitating research, technology transfer and education in technical areas that impact winter maintenance operations. Subjects that are important to the committee include: physical properties, geographical distribution and management of winter precipitation (frost, ice, snow, fog) and frozen ground, and their impact on road safety, traffic flow and traffic control; the management of winter maintenance forces through performance measures and standards of service; storage of winter materials and their environmental impacts; mobile and road-based equipment for monitoring and controlling snow and ice accumulation.

<https://sites.google.com/site/trbcommitteeahd65/>

**TRB Tech Transfer Committee (ABG30)**

TRB Committee dedicated to information and resources pertaining to information exchange and research on the processes and methods for technology transfer

<http://www.trb.org/ABG30/ABG30.aspx>



**U.S. DOT Intelligent Transportation Systems Joint Program Office**

The ITS Joint Program Office (ITS JPO), within the Office of the Assistance Secretary for Research and Technology (OST-R), is charged with executing the Intelligent Transportation System Research program (ref. Public Law 109-59 Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, enacted August 10, 2005). The vision of the ITS JPO is to transform the way society moves. The office's mission is to conduct research, development, and education activities to facilitate the adoption of information and communication technology to enable society to move more safely and efficiently.

<https://www.its.dot.gov/index.htm>

**VTI - Swedish National Road and Transport Research Institute**

The Swedish National Road and Transport Research Institute (VTI), is an independent and internationally prominent research institute in the transport sector. Our principal task is to conduct research and development related to infrastructure, traffic and transport. We are dedicated to the continuous development of knowledge pertaining to the transport sector, and in this way contribute actively to the attainment of the goals of Swedish transport policy.

<https://www.vti.se/en/>

**Western States Rural Transportation Consortium**

The Western States Rural Transportation Consortium (WSRTC), comprised of California, Oregon, Washington and Nevada, has been established to facilitate and enhance safe, seamless travel throughout the western United States. The Consortium seeks to promote innovative partnerships, technologies and educational opportunities to meet these objectives. Additionally, the Consortium seeks to provide a collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues among western states related to technology, operations and safety. Consequently, activities of the Consortium are focused on technology transfer/education (Western States Rural Transportation Technology Implementers Forum) and incubator projects (small scale research projects intended to serve as a "proof of concept" for larger subsequent efforts) centered on the Consortium pillars of technology, operations and safety

<http://www.westernstates.org>