



# At the Intersection of Operations and the Environment

**The Center for Environmental Excellence by AASHTO** offers diverse products and programs for technical assistance, training, information exchange, partnership-building opportunities, and quick access to environmental tools. The Center helps practitioners incorporate environmental compliance, sustainability, and stewardship into transportation planning, design, construction, maintenance, operations, project delivery and multimodal systems. For more information, please visit <http://environment.transportation.org>.

**How do Operations and Environmental Issues Intersect?** Much of the work of the nation's transportation agencies focuses on operating existing roads, rails, bridges, rights-of-way, and related facilities. Operational strategies that ease traffic congestion and reduce the number of cars on the road can help reduce air emissions from



traffic and lessen the carbon footprint of transportation systems. These include support for carpooling, ridesharing, road pricing, signal timing, traffic incident response, and emergency response. Strategies to improve fuel efficiency – such as eco-driving techniques and intelligent transportation systems – also help reduce environmental impacts and energy consumption. Traffic operation centers across the nation work to monitor conditions and direct resources in event of emergencies or adverse weather conditions. Through a range of **conferences and workshops, publications**, as well as other resources, the Center offers information on operations strategies such as traffic demand management, traffic incident response, communications and traveler information, road weather information systems, winter weather cleanup and de-icing, traffic noise, and intelligent transportation systems. (Photo: Arizona DOT Operations Center)

## Operational Strategies:

States implement a range of strategies to keep transportation operations moving smoothly and to minimize environmental impacts. North Carolina DOT's Drive Green, Save Green Campaign educates drivers on "eco-driving" techniques to reduce fuel use. Georgia DOT has a suite of air quality initiatives involving operations, including diesel retrofits, improvements to highway incident management, and traffic signal optimization as well as its Georgia Commute Options program, which facilitates carpooling and vanpooling. Strategies and resources are highlighted on the Center's **Air Quality topic, Health and Human Environment topic, Vegetation Management topic** as well as other Center resources. (Image: N.C. DOT)

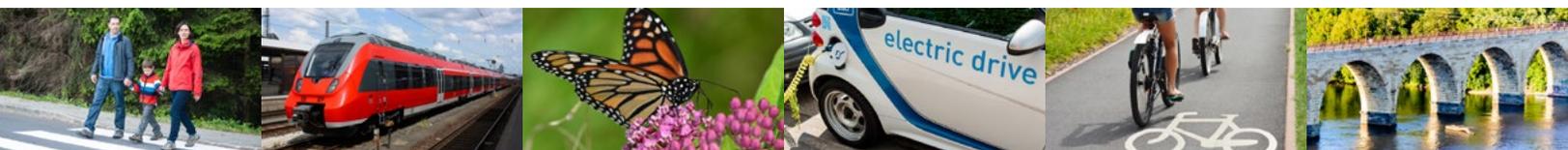


## Emergency Management and Extreme Weather:

Transportation system managers and operators are on the front lines in responding to increasingly frequent and severe weather events including flooding, wildfires, hurricanes, and winter weather. Such events can cause traffic and freight disruptions road closures and detours, and electrical system malfunctions or brownouts. Responding to emergencies and extreme weather events in an effective manner requires not only advanced coordination of the many agencies involved, but also rapid clearing of transportation



lifelines. The Center's **Infrastructure Resilience topic** highlights resources such as a **fact sheet** developed by the Center describing how Transportation Systems Management and Operations personnel can prepare for extreme weather events. (Photo: Vermont Agency of Transportation's response to Tropical Storm Irene, **profiled on the Center website**).





# Resources for Operations Practitioners

The Center web site at <http://environment.transportation.org> offers access to a range of products and services for practitioners. The following resources are relevant to Operations Practitioners.

**The Center website includes 21 separate environmental topics pertinent to transportation.** Information can be sorted by discipline, mode, or state. **Topics of interest include:**

- Air Quality
- Context Sensitive Solutions
- Energy/Greenhouse Gas Emissions
- Environmental Justice
- Environmental Management Systems
- Geographic Information Systems
- Health & Human Environment
- Historic Preservation/Cultural Resources
- Indirect Effects/Cumulative Impacts
- Infrastructure Resilience
- Invasive Species/Vegetation Management
- MAP-21
- NEPA Process
- Noise
- Planning & Environment Linkages
- Project Delivery/Streamlining
- Section 4(f)/Section 6(f)
- Sustainability
- Waste Management/Recycling
- Water Quality/Wetlands
- Wildlife & Ecosystems

• **Practitioner's Handbooks:** These handbooks provide practical advice on a range of environmental issues that arise during the design, construction, planning, development, maintenance, and operation of transportation projects and programs.

• **The Compendium of Environmental Stewardship Practices in Construction and Maintenance:** This resource includes thousands of individual effective practices used by DOTs across the country, including many operational strategies.

• **Transportation and Environmental Research Ideas (TERI) database:** TERI is a storehouse for tracking and sharing transportation and environment research ideas in over 20 topic areas.

• **Conference & Workshop Materials:** The Center hosts a number of conferences and workshops for technical assistance, training, information exchange, partnership-building opportunities. Materials are provided from peer

exchanges on topics including extreme weather events on highway operations.

• **Webcasts/Webinars:** These recordings and materials provide training to advance the state-of-the practice on important topics and are archived on the Center website.

• **Communities of Practice:** The Center facilitates an on-going dialogue with transportation practitioners in the topic areas of air quality, storm water management, and historic bridges.

• **Roadmap for Developing and Implementing Programmatic Agreements and the Programmatic Agreement Tracking Tool:** The Roadmap is a user-friendly web-based tool that guides practitioners through the process to develop and implement a programmatic agreement. The Tracking Tool provides a web-based template for state DOTs to track the benefits of programmatic agreements.

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## Center for Environmental Excellence by AASHTO Contact Information

How can we assist you? If you have a particular need for environmental information, technical assistance, partnership-building, or training, please contact us at [environment@transportation.org](mailto:environment@transportation.org).

