



2022 Vermont AOT Research Program Overview

March 14, 2023

10:15am - 11:15am

Today's Focus on:

- ▶ List of Research Activities
- ▶ Research Participation related to VT AOT Recycled Materials Working Group
- ▶ Impacts from FHWA Research Peer Exchanges

List of VT AOT Research Activities

- ▶ Manage External Research Projects
- ▶ Participate in AASHTO Research Advisory Committee (RAC) activities
- ▶ Participate in National Cooperative Highway Research Program (NCHRP) & Transportation Research Board (TRB) activities
- ▶ Participate in FHWA Peer Exchanges
- ▶ Participate in VT AOT Committees
- ▶ Put on Annual Research and Innovation Symposium
- ▶ Publish Quarterly Research and Innovation Newsletter

Recycled Materials Working Group

- ▶ Research sits on the RMWG Committee and helps manage administration of the group
- ▶ RMs: RAS, glass (PGA as sand borrow, FGA, pozzolans), compost, rubber, plastic
- ▶ Help disseminate recycled materials information
 - ▶ TRB webinar March 16 on Plastic Waste in Asphalt

AASHTO R65 Framework for Accepting New Materials

- ▶ Work with Committee Chair on AASHTO R65-14 framework for accepting new recycled materials
 - ▶ Foamed Glass Aggregate
 - ▶ RAS in subbase
 - ▶ For both frameworks
 - ▶ Perform Literature Searches
 - ▶ Reach out to Subject Matter Experts (SMEs)

More RMWG Details to be Presented to STC another time

- ▶ Materials Manager, Nick Van Den Berg
- ▶ Potential external research project: Use of RAS as a FDR Mechanical Stabilizer
- ▶ UVM project funded by U of Maine University Transportation Center: PGA Sand Borrow

FHWA Requirement for Research Peer Exchanges (RPE)

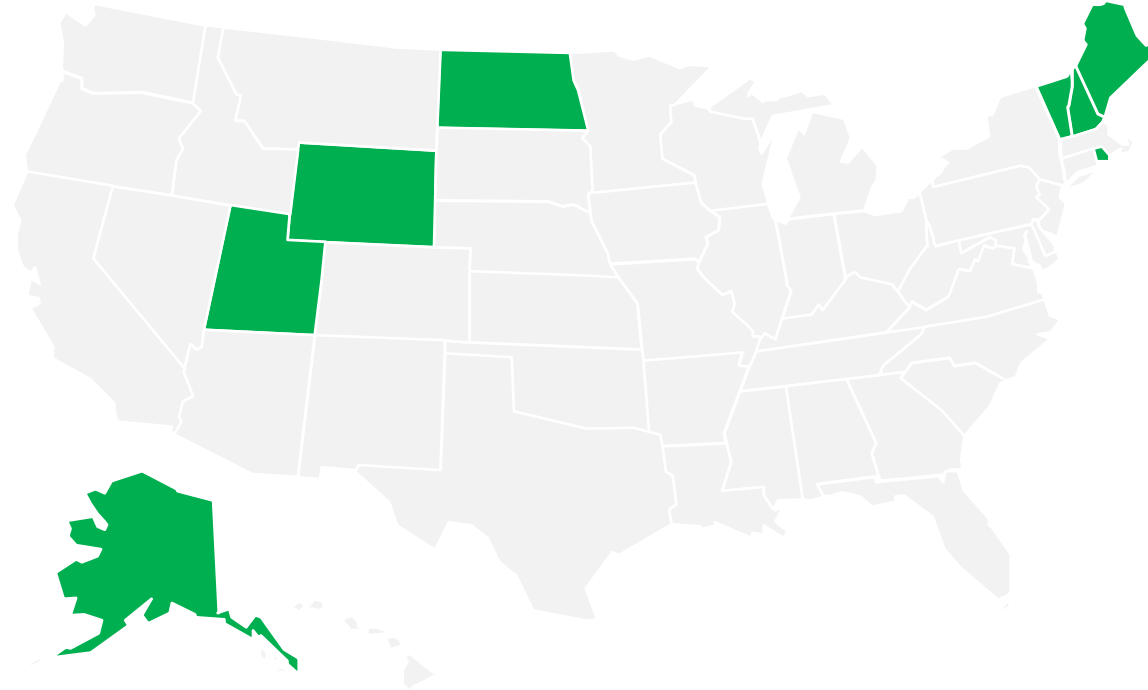
- ▶ Each state holds a RPE every five years
- ▶ 2-3 “days” long
- ▶ Produce a final written report

VT Participation in State DOT Research Peer Exchanges

- ▶ VT Peer Exchange – June 7, 14, 21, 2022 (V)
- ▶ RI Peer Exchange – September 7&8, 2022 (V)
- ▶ Ohio Peer Exchange – November 29&30, 2022
- ▶ Colorado Peer Exchange – February 28-March 2, 2023
- ▶ Oklahoma Peer Exchange – May 23-25 2023 (V)

VT Research Peer Exchange Participants

- ▶ Alaska
- ▶ Maine
- ▶ New Hampshire
- ▶ North Dakota
- ▶ Rhode Island
- ▶ Utah
- ▶ Wyoming
- ▶ Vermont
- ▶ FHWA



VT AOT Peer Exchange Sessions

- ▶ June 7th - Research Interactions with Materials/Pavements Topics and Staff
- ▶ June 14th - Quantitative and Qualitative Research Evaluation
- ▶ June 21st - Research Engagement of Leadership
- ▶ July 18th - Executive Report-Out

Major Takeaways from Vermont Research Peer Exchange

- ▶ We're pretty good with materials staff interactions and engagement of leadership
- ▶ Lots of interest in our Pavement Working Group
 - ▶ Participation from materials, pavement construction, pavement design, pavement management (asset management), research
- ▶ Leadership Engagement with
 - ▶ Annual Symposium
 - ▶ Peer Exchange Summary
 - ▶ Bureau Directors and Asst Division Directors annually select External Research Projects

Qualitative and Quantitative Evaluation

Major Takeaways

- ▶ This is hard; overlaps with Value of Research, Implementation, Tech Transfer
- ▶ Determine what is needed to tell a story about the project
- ▶ Maybe try to quantify only one project a year
- ▶ One framework that applies to all projects may be too hard—especially for a small program
- ▶ FHWA spends a lot of resources on qualitative evaluation

Vermont Impact—Benefits and Implementation Survey

- ▶ All projects—Kickoff, Mid-Project, Draft Final Report Presentation
- ▶ Survey is sent before the Technical Advisory Committee meeting to the TAC members and researchers
- ▶ Survey results are used to facilitate an in-meeting discussion about how we are benefiting from the project and how people plan to use the project results
- ▶ A way to get people thinking about why we're doing the project and how they will use the results—tell a story
- ▶ Interest from ID, MT (RI Exchange), CO (CO Exchange)

RIDOT Peer Exchange Sessions

- ▶ Topic 1 – Alignment of Research Function with Departmental Missions and Goals
- ▶ Topic 2 – Project Solicitation, Selection, and Monitoring
- ▶ Topic 3 – Research Collaboration and Partnerships
- ▶ Topic 4 – Looking Ahead/Reflections on Innovative Practices

RIDOT Peer Exchange Major Takeaways

- ▶ Important to learn from others, taking existing practices and adapting to fit in your state
- ▶ Pooled Funds offer amplification for funding. States with small budgets can extend the reach of their funds within PF projects
- ▶ Important to participate in national-level research to stay up to date on current trends and emerging topics
- ▶ Presenting work in an accessible way. Making sure to encourage implementation of research findings

Ohio DOT Peer Exchange: LTAP/Research Interactions

- ▶ Topic 1 – Structure of the Research Program and LTAP Center
 - ▶ Collaboration between the Research Program and the LTAP Center
 - ▶ Existing barriers to collaboration between the Research Program and the LTAP Center
 - ▶ LTAP Centers: How can the Research Program help you
 - ▶ Research Programs: How can the LTAP Center help you
- ▶ Topic 2 – Opportunities for Collaboration

ODOT Peer Exchange Major Takeaways

- ▶ Selected states run LTAPs with DOT staff
- ▶ Not all of the Research and LTAP programs talk with each other
- ▶ Ohio's relationship may be the one to follow
- ▶ VT Meeting next week to follow up

Colorado DOT Peer Exchange Sessions

- ▶ Topic 1 – Leading Pooled Fund Projects
- ▶ Topic 2 – Research Data Curation
- ▶ Topic 3 – Promoting a Culture of Research
- ▶ Also shared an overview of each of the five participating states: CO, MD, ID, MO, VT
- ▶ Toured the I-70 Tunnel project connecting a divided impoverished neighborhood

Research Data Curation

- ▶ Projects funded with federal \$ should have sharable data available permanently
- ▶ State DOT research programs have struggled with this—only a few have started/mixed results
- ▶ Training didn't sink in until CO

Data Curation--Highlights

- ▶ All projects should have data management plans
- ▶ Data management is only part of data curation
- ▶ Will work with Agency of Data Services
- ▶ ADS already has added language to several research contracts/grants
- ▶ Potential to subcontract Data Curation services

Peer Knowledge Sharing—Research Peer Exchanges

- ▶ Great to learn from peers
- ▶ Vermont has a lot to share
- ▶ As a small state easier to make changes based on what we learn
- ▶ Traditionally in-person; advantages to virtual

Further Interaction with VT AOT Research

- ▶ emily.parkany@vermont.gov
- ▶ <https://vtrans.vermont.gov/planning/research>
- ▶ September Research and Innovation Symposium, September 27, Barre Auditorium (hybrid)