

## 2018 Research Symposium

## Recycled Materials

## & STIC Annual Meeting

### RESEARCH PROJECT TITLE

Recycled Materials

### STUDY TIMELINE

Spring 2016-Present

### SOV CONTACTS

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This fact sheet was prepared for the 2018 VTrans Research and Innovation Symposium & STIC Annual Meeting held at the State House in Montpelier, VT, on **September 12, 2018** from **8:00 am– 1:00 pm**.

Fact sheets can be found for additional projects featured at the 2018 Symposium at

<http://vtrans.vermont.gov/planning/research/2018symposium>

Additional information about the **VTrans Research Program** can be found at

<http://vtrans.vermont.gov/planning/research>

Additional information about the **VTrans STIC Program** can be found at <http://vtrans.vermont.gov/boards-councils/stic>

### Introduction

The agencies of Transportation and Natural Resources are working in collaboration to find uses for recycled materials in transportation infrastructure projects. Research staff are working with the Recycled Materials Working Group to foster the application of recycled asphalt shingles (RAS), shredded tires, and recycled glass into VTrans projects. Recycling and reuse of these materials will reduce the need for landfill space, and if successfully implemented could create a market for recycled materials that improve outcomes with their reuse.

### Action Taken

#### RAS

*Shoulder Material:* Recycled shingles are being included in shoulder mix in five 2018 projects. Projects in 2016 and 2017 used a total of 2352 Tons of RAS.

*Gravel Roads:* VTrans together with ANR-DEC is working to aid towns in piloting the use of RAS in their town gravel roads. Pownal will be reconstructing 750ft of gravel road with an 80/20 gravel/RAS blend. Additional towns are in discussions to do the same.



#### Glass Aggregate: Glass Aggregate: Recycled

Materials Working Group has worked with the Chittenden County Solid Waste District in their efforts to have processed glass aggregate accepted as sand borrow. Discussion is underway about the potential for an experimental feature project to trial the use of glass aggregate sand borrow.

**Shredded Tires:** Two projects in the 2019 season are planned for a trial of shredded tires to replace the underdrain aggregate. Testing plans are being developed to allow for ANR-DEC testing of effluent samples, to ensure no reduction in water quality.

### Next Steps

VTrans and ANR-DEC continue to work toward finding uses for Recycled Materials. Hurdles exist that prevent the adoption of new materials in existing construction practices, including cost, performance, and impression. The goal is to find applications for recycled materials that are similar cost replacement or beneficial inclusion, ideally both.

### Potential Impacts and VTrans Benefits

Using Recycled Materials could provide beneficial improvements to existing practices, as well as improve environmental impact through recycling over landfilling.