

Montana Department of Transportation

In-Place Recycling Presentation

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Denver, CO

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Montana Demographics

- State Highway System Description
 - 11,357 Total Centerline Miles (not including gravel)
- Construction Program
 - Average # Annual Projects: 100 – 120
 - Budget
 - Avg Total Annual Letting: ~\$350M (CN \$ only)
 - Pavement Preservation: \$48M in 2015
- Pavement Preservation Treatments
 - Seal and Cover
 - Overlay
 - Mill – Fill
 - Microsurfacing
 - In-Place Recycle

State Animal

- Is: Grizzly Bear



- Should Be: Bobcat



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In-Place Methods

- Pulverizing (FDR)
- Cold In-Place
- Hot In-Place



Pulverizing

- MDT's most common in-place recycle method
- 72 projects, beginning in mid 90's
 - 25 in the past 5 years
 - 10 stabilized with cement
- Design standards greatly limit when we pulverize
 - Primarily road width restrictions & existing pavement thickness
- Spec states that final product has max 50% PMS



Cold In-Place

- 16 projects
 - 6 in the past 5 years
- Cracking Concerns
 - Reflective cracking – sometimes immediate, sometimes not
 - When immediate, it leaves us wondering
- Currently – Always overlay over a CIPR
 - Is CIPR beneficial at this point (compared to a mill-fill?)



Hot In-Place Recycle

- 2 Projects, ~ 20 years ago
- 2013, MDT met with Pave Over to discuss HIPR
- 2014, MDT with Dustrol and Gallagher Asphalt
- 2014, MDT Maintenance Division has potential candidate
 - Moving forward with HIPR, but as an Alternate

How is it Working?

- Pulverize
 - Good/Continued success
 - Need proper project, quality survey
 - Biggest C.O. history of MDT was a pulverization project
 - Formed Subgrade Stabilization Team (creating formal process)
- CIPR
 - Varied success
 - Must question if it's worthwhile and cost effective
 - Mill/Fill will produce a smoother ride and isn't much more expensive
 - Increased risk to MDT
- HIPR
 - Minimal experience
 - Learning more about it
 - Need a successful project to help "sell the process"
 - Maintenance likely moving forward with bidding alternate