

2014
Rocky Mountain West
Pavement Preservation Partnership
Washington State Report



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WA Basic Demographics



- State Highway System Description
 - 7,000 Total Centerline Miles
 - 18,500 Total Paved Lane-Miles (both asphalt and concrete)
- Number of State Transportation Employees: 6,500
- Total State Transportation Budget (2013-15 Biennium): \$8.9 billion
- Total Pavement Preservation & Rehabilitation Budget: \$ 140 million per year
- Major Pavement Preservation Treatments
 - 2" overlay / mill & fill (resurfacing)
 - Chip seal
 - Crack sealing & asphalt patching
 - Concrete grinding & DBR

Washington Strengths

- Pavement Management System
 - Good pavement data history
 - Added contract cost information
~ 4 years ago
 - Able to forecast future needs
- Tradition of strong pavements
 - Last 50+ years built good pavement foundations
 - Most cracking is top – down
 - Capital projects are primarily resurfacing
(almost no reconstruction... for now)



Washington Strengths (cont.)

- Converting asphalt surfaced pavements to chip seals
 - Chip seals typically have $1/3 - 1/2$ the annual cost (\$/LMY)
 - Over 10 years the lane miles of chip seals will increase by 50%
- More targeted stewardship agreements with FHWA
 - Instead of doing safety and ADA on every qualifying paving project, remove those costs from paving project and create targeted safety and ADA projects to highest priority locations.



Efficiency versus RSL Gain

<u>Project Type</u>	<u>\$/LMY (no user \$)</u>	<u>LMY gained</u>
Reconst.(PCCP)	\$40,000	50
Grinding (PCCP)	\$10,000	15
Rehab (ACP)	\$20,000	14
Chip Seal (BST)	\$ 7,000	6
Crack Seal	\$ 1,500	3

Washington Strengths (cont.)

- Improved coordination between maintenance & capital projects
 - Previously independent “smokestacks”
 - Progress in last 3 – 4 years
 - Emphasizing preservation to extend life of capital resurfacing projects (reduces annual cost: \$/LMY)
 - New resurfacing (capital) project is not allowed unless at least one preservation treatment has been applied.
 - Continued implementation of maintenance data in pavement management system (to better compare treatments with long term performance)



Washington Challenges

- Reduced funding

- 2015 – 2019 capital resurfacing program will be funded at 40% of need

- Communication / Promotion

- Especially legislature and execs
- In Transportation Budget (including bridges), the ratio of funding for Improvement Projects to Preservation & Rehabilitation projects is 85% to 15% (national average is 57% to 43%)

- Additional requirements with federal funds

- Additional time and expense of environmental permitting



Washington: Looking Ahead

- Technology

- PaveIR , Intelligent Compaction, GPR for density
- 3-d pavement condition surveys
- Mobile app. for construction data collection

- Use of more types of preservation treatments

- Most recent is hot applied chip seal (following Oregon's lead)

- Continued evaluation of preservation treatment effectiveness

- Currently have 35 test sections, and will be adding more
- "Clinical trials"



Monitoring of Treatment Segments

