

WisDOT NW Region

Highway System Health and Project Change Management in a Financially Constrained Environment

July 19, 2016



Program Funding Since 2000

Program	2000	2015	Current Value of 2000 Program @ 5% Annual Inflation	Program If Inflation Since 2000 Had Been Covered
3R Allocated	\$291	\$288	\$135	\$600
Backbone	\$129	\$225	\$60	\$268
Major/Mega	\$186	\$567-749*		

Needs Relative to Funding

- ▶ NW Region has 2757 miles of 3R Roads in 20 Counties
 - Assume an initial 18 year pavement life
 - Assume an average \$530K/mile cost (75% pavement costs)
 - Equates to needing \$1.46 Billion budget over 18 year period

**Unfortunately, Region allocation
over same period is \$693 million or about 50% of need.**

Systems Health...Mile-Years of Life

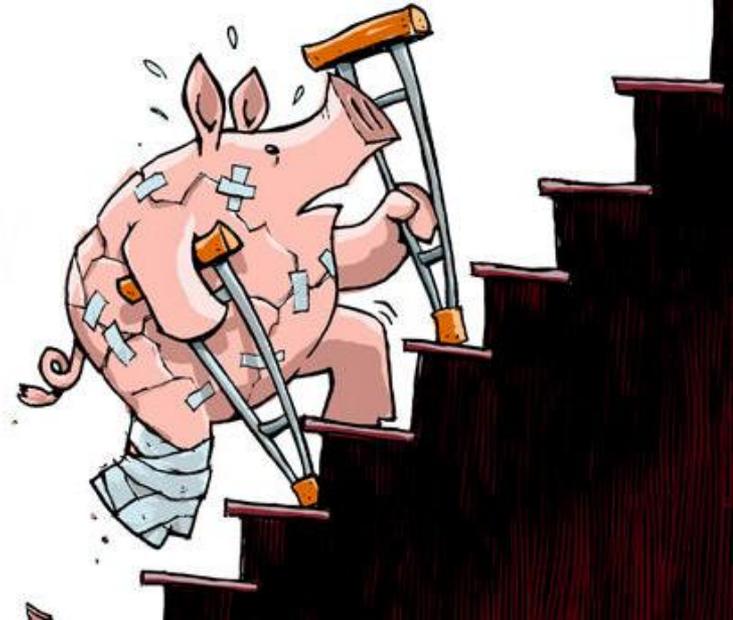
- ▶ NW Region has 2757 miles of 3R Roads in 20 Counties
 - Every year each mile of pavement loses one year of life. *That is one 'mile-year' of system life.*
 - A new pavement with a predicted life of 10 years placed on 1 mile of roadway = 10 Mile-Years of added system life.
 - With 2757 miles of 3R roadways, NW Region needs to schedule 2757 Mile-Years of treatments each year to maintain system health. Example...275 miles of 10-Year pavement projects would give you 2750 Mile-Years of system health.

System Health...Mile-Years

Year	Centerline Miles	Status Quo Mile-Year	Delivered Mile-Years	System Health Mile-Years
2002	1052*	1052	1368	316.00
2003	1052*	1052	1987	935.00
2004	1052*	1052	2184	1132.00
2005	1052*	1052	1808	756.00
2006	2650	2650	2849	199.00
2007	2650	2650	2458	(192.00)
2008	2650	2650	2372	(278.00)
2009	2650	2650	2575	(75.00)
2010	2650	2650	1783	(867.00)
2011	2650	2650	1355	(1295.00)
2012	2650	2650	1719	(931.00)
2013	2650	2650	2910	260.00
2014	2650	2650	1673	(977.00)
2015	2650	2650	1659	(991.00)
2016	2650	2650	1976	(674.00)
2017	2650	2650	2208	(442.00)
2018	2650	2650	1659	(991.00)
2019	2650	2650	1193	(1457.00)
2020	2650	2650	1344	(1306.00)
2021	2650	2650	1005	(1645.00)

Perception Changes

- ▶ Change perception of 'poor pavement'
- ▶ Change perceptions of 'right treatments'
- ▶ Change perceptions of program failure and program success



Program Management vs. Project Management Philosophy

- Project scopes are programmatically constrained.
 - Project scopes are system constrained.
 - Project scopes are not simply what is the 'best' thing to do on that singular project.
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Managing the Reality

- “System” Level Programming
 - Prioritization Model for System Segments
 - Treatment Constraints by System Prioritization Model
 - Accounting for Programmatic Risk and Contingency
- Higher level of coordination with Highway Maintenance to maximize pavement life

Refining Highway Prioritization

Created a class system in 3R Program

(2757.52 total miles)

- **CLASS 3 – Corridors 2030, Principal Arterials**
 - 938.78 miles
- **CLASS 2 – Minor Arterials >2000 AADT**
 - 855.71 miles
- **CLASS 1 – Minor Arterials <2000 AADT, Collectors**
 - 963.03 miles

CLASS 3 Route Treatment Philosophy

- Pavement treatments of RDMTN, RESURF, PVRPLA & RECST
- Capacity or operational improvements consider only when LOS D or worse.
- Safety if HSIP eligible



CLASS 2 Route Treatment Philosophy

- Pavement Treatments limited to RDMTN & RESURF
- Capacity or operational improvements only considered when LOS D or worse.
- Safety if HSIP eligible



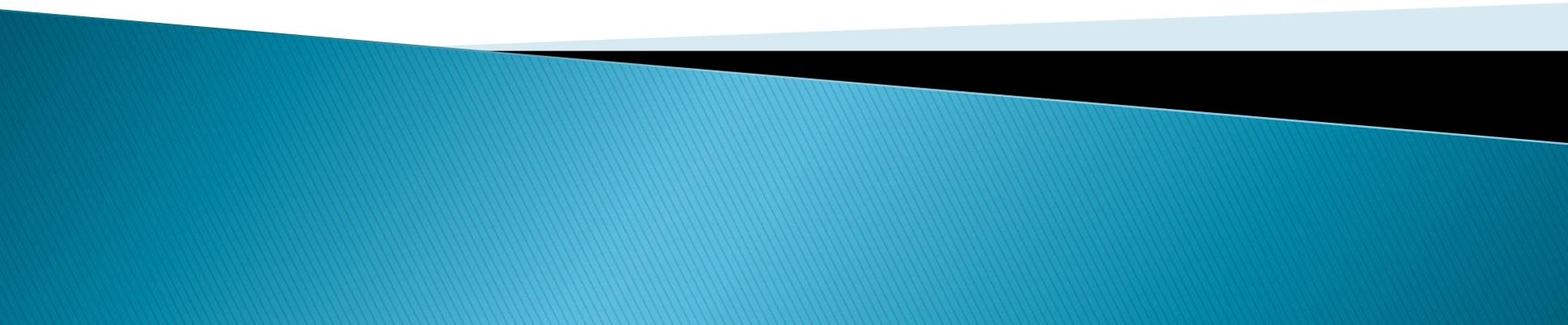
CLASS 1 Route Treatment Philosophy

- Pavement treatments limited to RDMTN & thin RESURF
- Capacity or operational improvements only considers when LOS E or worse.
- Safety if HSIP eligible



NW Region Maintenance Development Program

Partnership in System Health and Preservations



County and Contractor Partnerships

- ▶ Strategic use of Routine and Discretionary Maintenance Funds...adding mile-years through maintenance.
 - ▶ Strategic use of County and Contractors...Optimizing timing and maximizing available colors of money.
 - ▶ Strategic choices for investment and disinvestment.
 - There is no 'free money'. Decision to 'expend to extend' system health always comes with the other decision of which segment won't get the funds.
 - This may prioritize Maintenance funds to a segment where we purposely delay Improvement work on one segment in order to fund Improvement projects elsewhere on the system.
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Local Program...Change Management Concepts



Local Program Change Management

- ▶ Local Program funds assist in the project costs. They should not be assumed to be a source of 100% project funding.
- ▶ State-Municipal Agreement should be viewed as the project budget and a WisDOT funding cap.
 - SMA project approval is part of statewide program approval.
 - Post-approval additions to one project mean deductions from another in order to maintain program balance. Fairness to all.
 - Even items that are 'funding eligible' are not guaranteed to get funded after SMA is signed.
- ▶ Project Scoping needs to occur before the project is submitted to avoid local unit being hit with unexpected additional costs. Scoping doesn't necessarily eliminate these costs, it just makes you aware of them upfront.