When should preventive maintenance be applied?
Network Performance Life after Preventive Maintenance
Newly Constructed Pavements:
1\textsuperscript{st} SS at year 3, 2\textsuperscript{nd} SS at year 9

![Graph showing predicted performance curves for slurry seals.](image-url)

- **1\textsuperscript{st} slurry seal**
  - Predicted Do-Nothing performance curve
  - Age: 3 years
  - PCI: 100

- **2\textsuperscript{nd} slurry seal**
  - Predicted SS at year 3 performance curve
  - Age: 3 years
  - PCI: 75

12/15/2011
Phase II: Slurry Seal Effectiveness

Relative Benefit = $100 \times \frac{B}{B_0}$

Benefit-Cost Ratio = $\frac{B}{C}$

Pavement Condition Index (PCI)

Age in Years

0 2 4 6 8 10 12 14 16 18 20

0 20 40 60 80 100

B

B_0

NC-C-3-9

University of Nevada Reno,
www.wrsc.unr.edu
Effectiveness Analysis – New Construction

Year of Slurry Seal Application

Relative Benefit

NC-Arterial (A)  NC-Collector (B)  NC-Residential (C)
Treatment Costs ($/sf)

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Type 3 Micro</th>
<th>Type 3 Slurry</th>
<th>Type 2 Slurry</th>
<th>Cape Seal/Dbl Micro</th>
<th>4 Inch Overlay</th>
<th>Rehab Low</th>
<th>Rehab High</th>
<th>Recon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Costs ($)</td>
<td>$0.16</td>
<td>$0.20</td>
<td>$0.10</td>
<td>$0.50</td>
<td>$4.00</td>
<td>$6.00</td>
<td>$8.00</td>
<td>$10.00</td>
</tr>
</tbody>
</table>
The Preservation Paradox

- You should NEVER be under budget

- Your budget needs should INCREASE
Current Projects: Overall Progress  
Effectiveness of Cape Seal Pavement Preservation

- Collected pavement information and performance data.
- Working on data processing and analysis.

**MICROSURFACING 5-5.5 INCH THICKNESS**

**SLURRY SEAL 5-5.5 INCH THICKNESS**
Network Condition Comparison

- Very Poor: 2% All Regional Roads, 0.3% RTP
- Poor: 5% All Regional Roads, 1.2% RTP
- Fair: 21% All Regional Roads, 10.1% RTP
- Good: 72% All Regional Roads, 88.4% RTP

Categories:
- Very Poor
- Poor
- Fair
- Good

Legend:
- All Regional Roads
- RTP
System Equity Provides for Major Opportunity