California Statewide Needs Assessment
2016 Update

Mendocino County

CALIFORNIA STATEWIDE NEEDS ASSESSMENT PROJECT
WWW.SAVECALIFORNIASTREETS.ORG
Average Pavement Condition Index

- Good / Excellent
- At Risk
- Poor
- Very Poor / Failed

- 68 (Cities)
- 65 (Counties)
- 51 Mendocino 2008
- 35 Mendocino 2016
Statewide Trends

87% of counties have pavements that are “at risk” or “poor”
The County of Mendocino has an average PCI of 35. This is down from 51 in 2008.
Condition of Existing Roadways

Although the roads exhibited reasonable structural integrity, there was a significant degree of fatigue cracking, minor potholing, and various types of patch repairs. The pavement was also severely oxidized.
Condition of Existing Roadways
Layer 1 – Micro Surfacing
The Leveling Course
Layer 1 - The Leveling Course

The first step of the Multi-Layer process is the application of a Type III Micro Surfacing layer - this has the ability to act as a mass crackfiller while allowing minimal traffic disruption to the public.

For Mendocino – the Micro Surfacing was used as a crack buffer – emulsifying cracks to create a leveled surface for the second layer – the Asphalt Rubber Chip Seal membrane.
Layer 2 – Asphalt Rubber Chip Seal
The Inter Layer Membrane

With a rate of recycling 10 million tires per year, the benefits of AR are creating a platform for the evolution of pavement preservation and extension of resources.

The rubber reacts in the hot asphalt cement sufficiently to cause swelling of rubber particles, creating > 95% chip retention.
Layer 2 – Asphalt Rubber Chip Seal

Asphalt Rubber Chip Seal is one of the premiere technologies for recycling Ground Tire Rubber (GTR).

The visco-elastic properties of the Asphalt Rubber binder allows for high application rates which results in a thick water resistant membrane and has enhanced stone retention properties.
Asphalt Rubber Field Blend

Asphalt Rubber – Field Blended for minimal disruption and maximum performance of Asphalt Binders
Layer 3 – Slurry Seal

The Wearing Course

Slurry Seal or Micro Surfacing methods are the standard when it comes to cost effective Wearing Courses.
Existing roadway conditions exhibit slight structural damage and cracking.

**Step 1:** Apply Type III Micro Surfacing as the Leveling Course

**Step 2:** Apply Asphalt Rubber Chip Seal 0.5” hot, pre-coated chips – for the inter layer membrane
Step 3: Apply Type II Slurry Seal as the Wearing Course… and enjoy for 10 – 15 years.
MCOG Update to 2010 Regional Transportation Plan for Unsurfaced Roads

- Resource/Recreation Access Roads (some 60 miles)
- Very Low Volume, Remote Residential Roads (some 250 miles)
- Higher Volume Residential Roads (some 50 miles)
## Total Transportation Needs

<table>
<thead>
<tr>
<th>Transportation Asset</th>
<th>Needs ($B)</th>
<th>Funding ($B)</th>
<th>Shortfall ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pavement</td>
<td>$72.4</td>
<td>$13.3</td>
<td>$(59.1)</td>
</tr>
<tr>
<td>Essential Components</td>
<td>$30.5</td>
<td>$8.7</td>
<td>$(21.8)</td>
</tr>
<tr>
<td>Bridges</td>
<td>$4.3</td>
<td>$3.0</td>
<td>$(1.3)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$107.2</strong></td>
<td><strong>$25.1</strong></td>
<td><strong>$(82.1)</strong></td>
</tr>
</tbody>
</table>

56 cents/gal or 76 cents/day!
Cost to Fix Needs

Cost of Mendocino to raise PCI to Good
$602 million (down from $625 million)