



# Department of Public Works

## Bureau of Street Services

### **Pothole Politics: The Road To Pavement Preservation**

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Director

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# Potholes Are Like Diamonds...



They're Forever!

# HOW BIG IS LOS ANGELES?

CITY	SQUARE MILES
<b>City of Los Angeles</b>	<b>468.85</b>
Boston, MA	49
Cleveland, OH	199.4
Manhattan, NY	31
Milwaukee, WI	95
Minneapolis, MN	58.7
Pittsburgh, PA	55.5
St. Louis, MO	160.3
San Francisco, CA	46.7





# CITY OF LOS ANGELES

Largest municipal street system in  
the United States

6,500 Centerline Miles

28,000 Lane Miles

69,507 Segments



# Current Condition Assessment

- Pavement Condition Index (PCI) 62
- Approximately 1,000 miles of failed streets
- \$2.3 Billion Backlog (PCI 80)
- Overall system condition is a D+

# How Did We Get In This Mess?

- Prior to World War II the City was comprised of approximately 2,500 miles of paved streets and the Annual Resurfacing Program (ARP) consisted of 50 miles.
- After World War II, and the rapid growth of the San Fernando Valley the street system grew to 6,500 miles.
- Up until 1986, the ARP still consisted of only 50 miles of resurfacing.
- From 1987 to the early 1990's, the ARP was increased to approximately 150 miles.
- Fiscal Year 1994-95, the Bureau was funded for its first 200 mile ARP.
- This year the ARP is funded at 235 miles.

# Strategic Game Plan

- Identify the goal.
- Create a pavement preservation plan.
- Budget Allocation.
- Pavement Management/ Micro PAVER™.
- Recycle, Recycle, Recycle
- Telling the Story.

# Identify The Goal

- Verify current condition of the street system.
- Where do you want to go?
- Where will current funding levels take you?
- With a \$2.3 billion backlog LA had one choice...slow the rapid deterioration of the street system – Save Streets.



# Pavement Preservation Plan

- Identify the elements of your program.
- What's the mix...how much of each.
- What will get me the biggest bang for my buck – In LA it was Rubberize Slurry Seal.
- Look for innovative processes.
- Commit to the plan and stay flexible.

# Maintenance and Rehabilitation (M&R) Work Planning

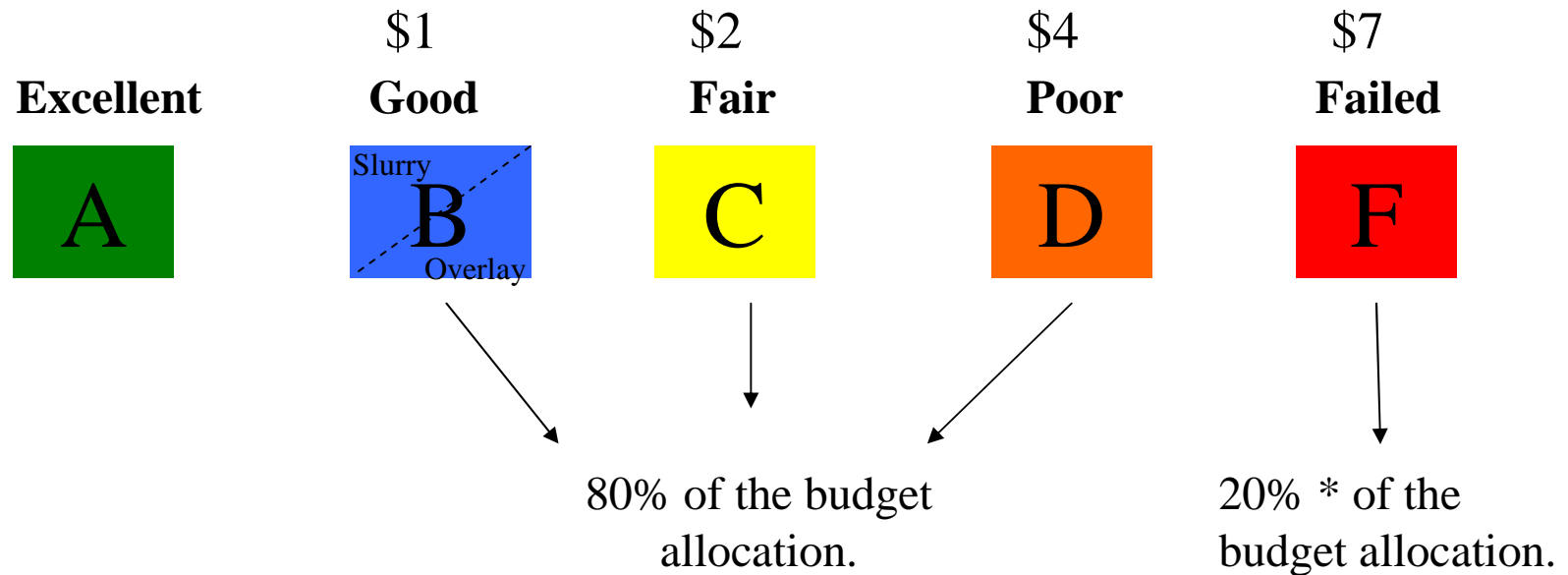


- Maintenance
  - Pothole Repairs
  - Crack Sealing
  - Slurry Sealing
- Rehabilitation
  - Overlays
  - Resurfacing
  - Reconstruction

# Budget Allocation

Where do I put my money to get the greatest benefit?

## MicroPaver



\*Typically 20% of the budget is allocated towards failed streets.

# Budget Allocation Formula

## Old Method

$$\text{Council District Allocation} = \frac{\text{Total Maintained Centerline Miles in CD}}{\text{Total Maintained Centerline Miles Citywide}} \times 100\%$$

# Budget Allocation Formula

## Current Method

**Three factors are contemplated in the BAF:**

- **Pavement Condition:**

The condition factor is included to address the need for Pavement Resurfacing or Reconstruction due to deteriorated conditions in a particular district and to take into account user comfort.

- **Pavement Area:**

The area factor is considered due to the varying size of the pavement areas (or lane miles) in the different Council Districts.

- **Bus/Truck Traffic:**

The bus/truck traffic factor is included to address the effects of buses/trucks traffic factor on increase pavement thickness and consequently on the cost of resurfacing or reconstruction.

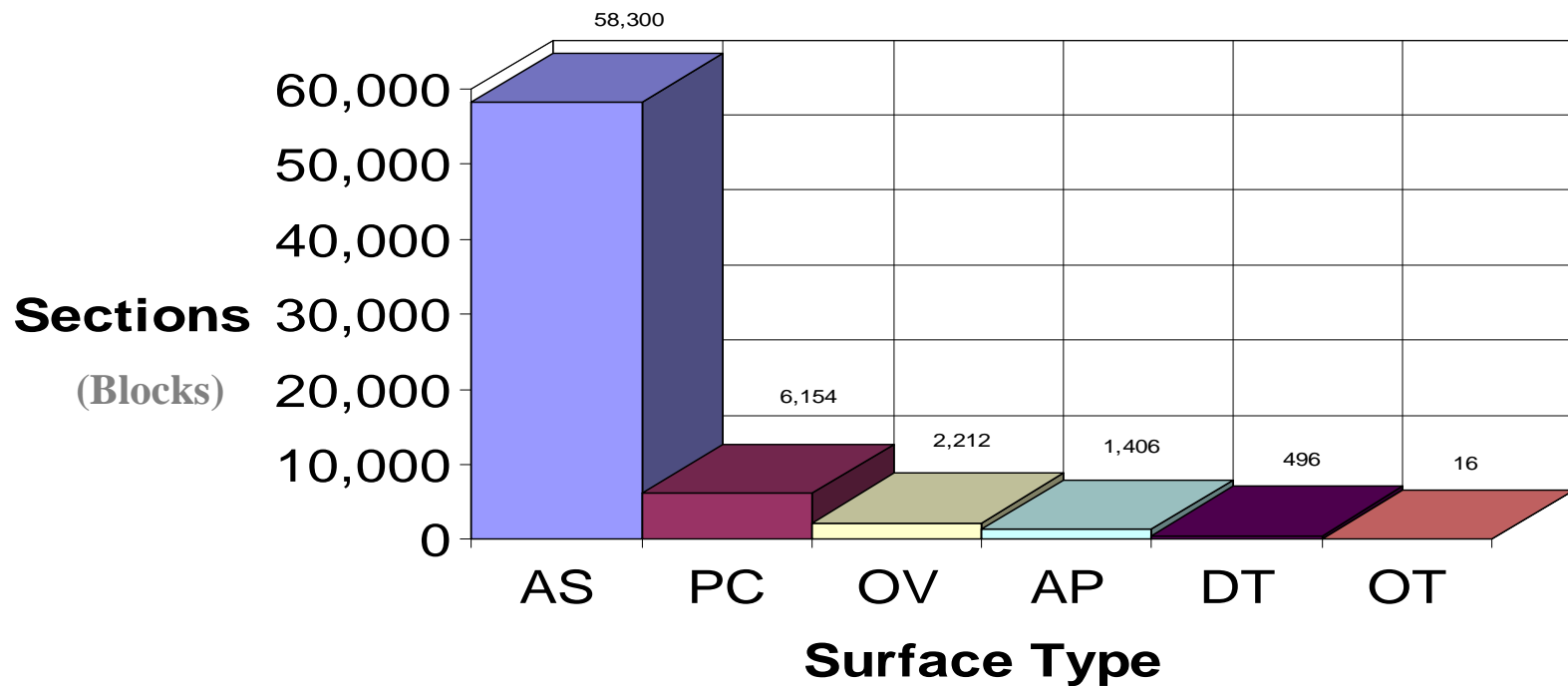
# Pavement Management Program

- Justifies different funding level requests.
- Provides information to make efficient use of available resources.
- Produces quantified and accurate information.
- Tracks pavement performance.
- Identifies current and future maintenance & rehabilitation (M&R) needs.
- Selects cost-effective repair strategies.
- Predicts future pavement condition based on different budget scenarios.



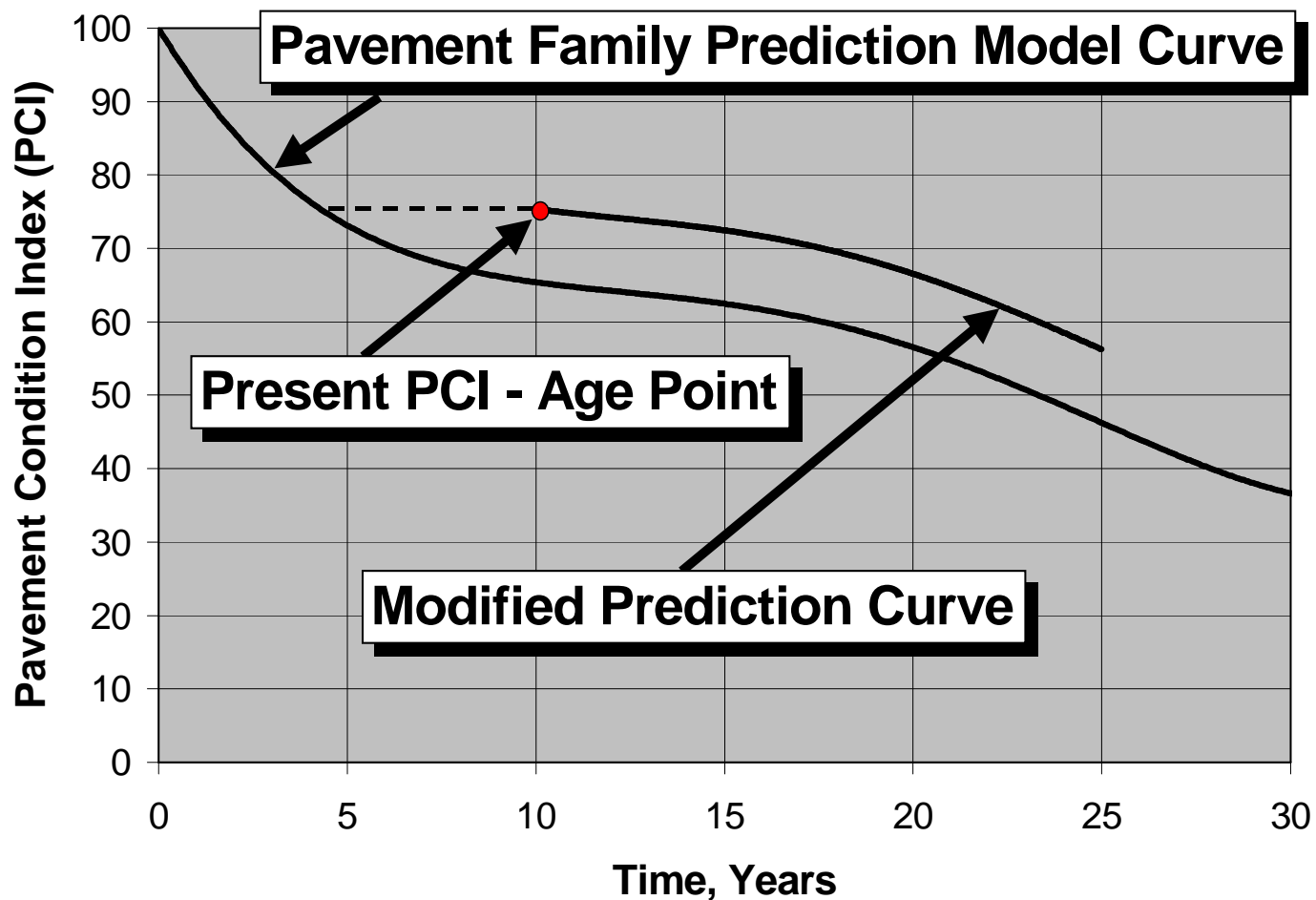
# Street Sections Inventory Graph

## SUMMARY



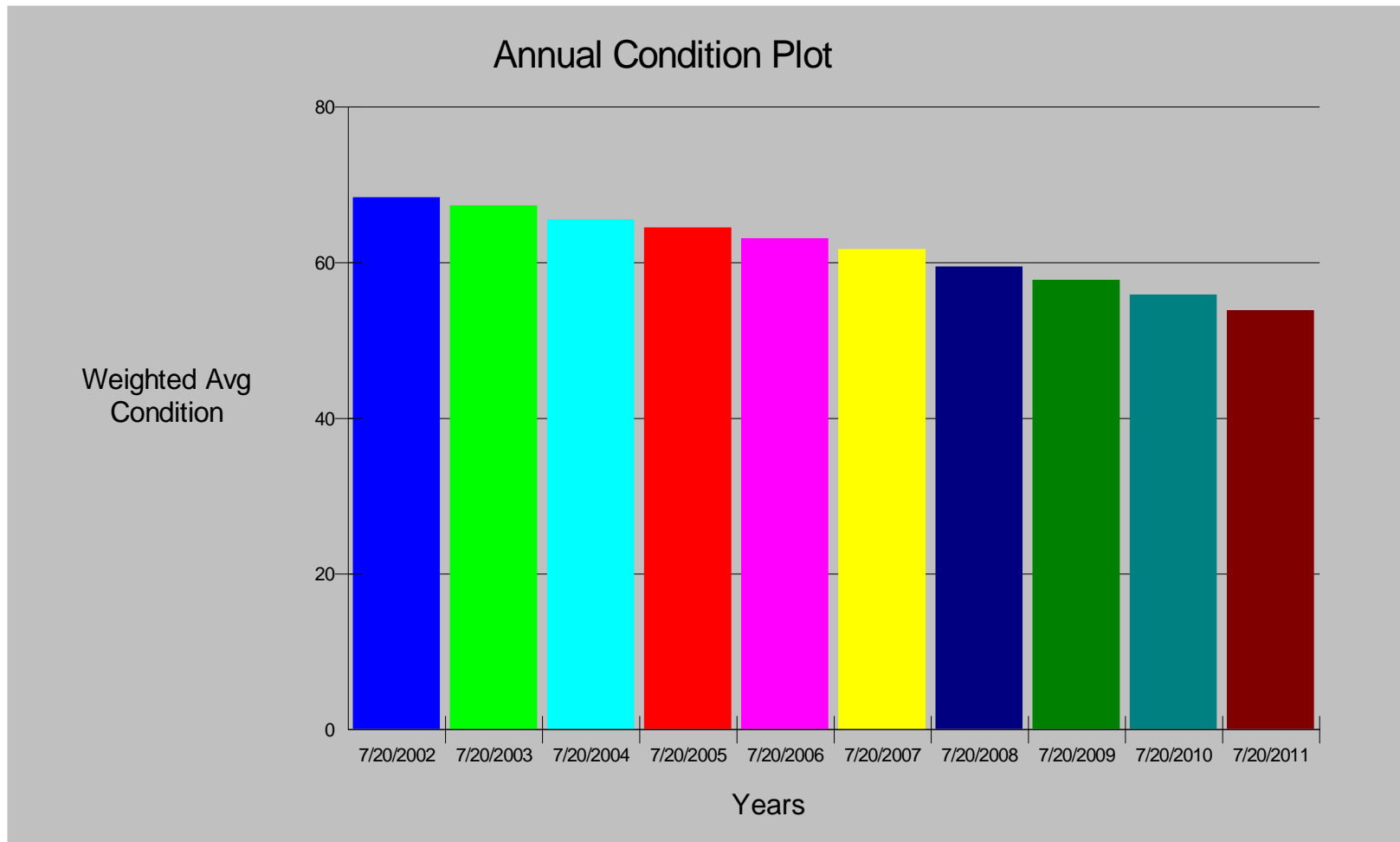
# Condition Prediction Modeling

## Section Prediction in relation to Family Model



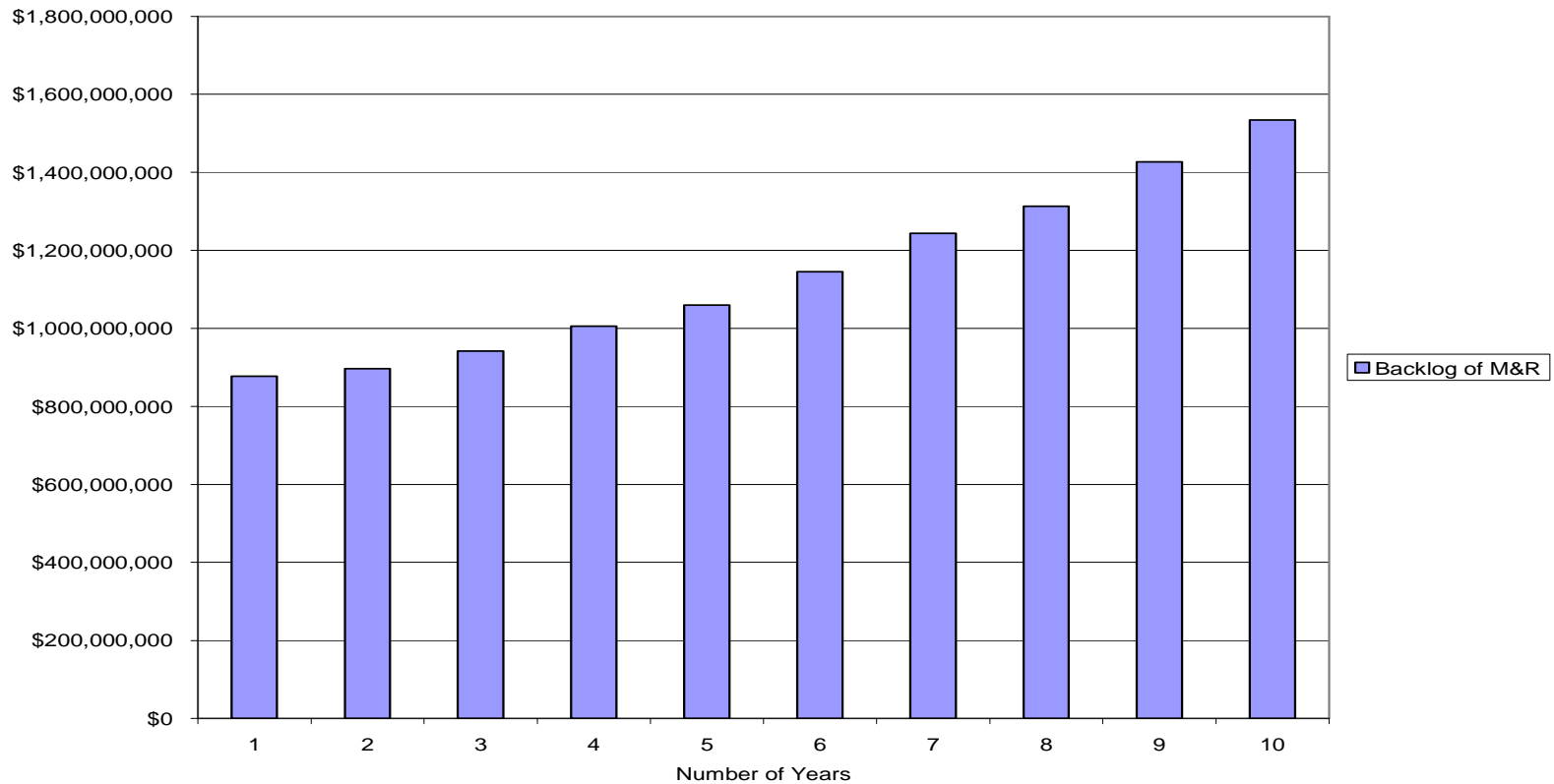
# Reports

## Average Condition



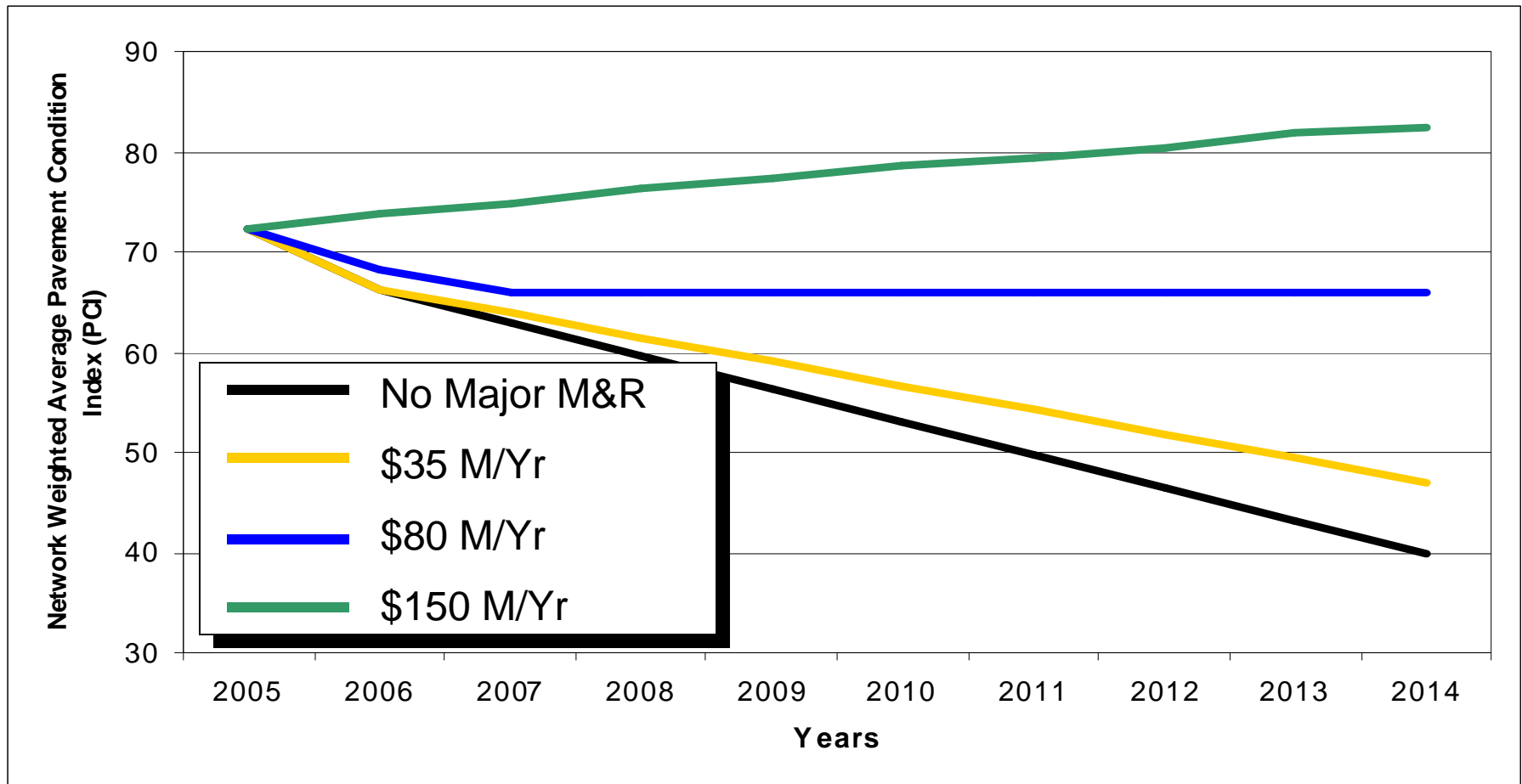
# Reports

## Backlog of Maintenance and Rehabilitation



# Work Planning

Compare various budget scenarios



# Innovations In Asphalt Technology

Cold In-Place Recycling – The key to addressing failed streets in our neighborhoods.

- 25% to 35% more cost effective than conventional reconstruction.
- Less invasive to local neighborhoods.







# Innovations In Asphalt Technology

- Rubberized Slurry Seal – 400 miles
- Environmentally friendly, 25,935 waste tires are recycled for every 100 miles of streets slurry sealed.
- Pre-mixed at centralized plant and delivered ready for application.





Fresh, clean, and new appearance for neighborhoods.



# Innovations In Asphalt Technology

- Installation of RAP Gators at both Municipal Asphalt Plants.
- Increase recycled content from 15 to 20 percent.
- Reduce cost for processing RAP material.







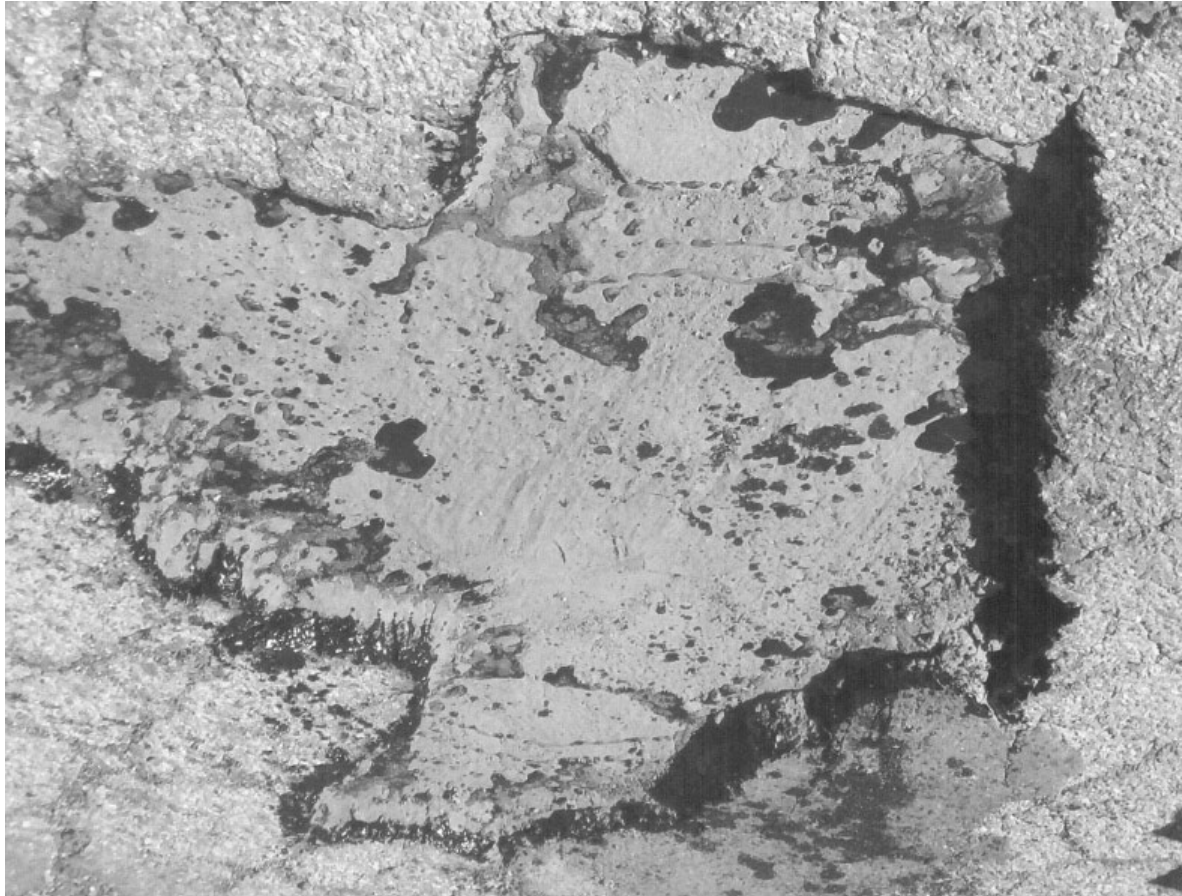
# Reaching For The Stars

- Establishing and working with non-traditional asphalt industries to identify new products



# PAVEMENT PRESERVATION

A Challenge That Goes “To  
Infinity And Beyond”



Name the crater and the planet.

# PROFESSOR POTHOLE



Tell it like it is...

# Telling The Story

- Public Outreach – 89 Certified Neighborhood Councils
- Outreach to Elected Officials and their staffs.
- Embrace the Media.
- Working with local Colleges and Universities.

# Public Outreach

## Neighborhood Councils As Advocates

- Be straightforward, forthright, and tell the truth.
- Give them a historical view of the condition of the street system.
- Tell them what you do with the money you receive.
- Provide condition assessments.
- Ask them for their Strategic Plan.

# Elected Officials & Staff

- Focus on their staff.
- Provide training on issues that affect service delivery.
- Keep the elected officials informed.
- Use your Pavement Management Program to make your point for Preservation.

# Working With The Forces Of Evil (Media & Press)

- Be honest...build trust.
- Be accessible.
- Tell them the same story you tell elected officials and the public.
- Spin the positive.
- Keep your website updated.



# Colleges & Universities

- Contact and establish a relationship with their Schools of Policy, Planning and Development.
- Volunteer to be a guest speaker at classes.
- Use Graduate Students as a resource.
- Provide information regarding key issues to professors for class discussions.

# Where The Road Has Taken Us

- Pavement Preservation Program has grown from 310 miles in 2002 to 735 miles in 2008...137 percent increase.
- Ten million dollars allocated to rebuild the Metro Asphalt Plant to run a 50-50 recycled mix.
- For the first time since World War II the overall street system's PCI will not decline.

The Road to Pavement  
Preservation Is Never Finished.

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