

# The Pothole Report:

Can  
Solano  
County  
have  
better  
roads?

June 2011

STA Board Workshop



*Solano Transportation Authority*



# The Pothole Report:

Gravel:  
The new  
road  
standard

June 2011

STA Board Workshop

**STa**

*Solano Transportation Authority*



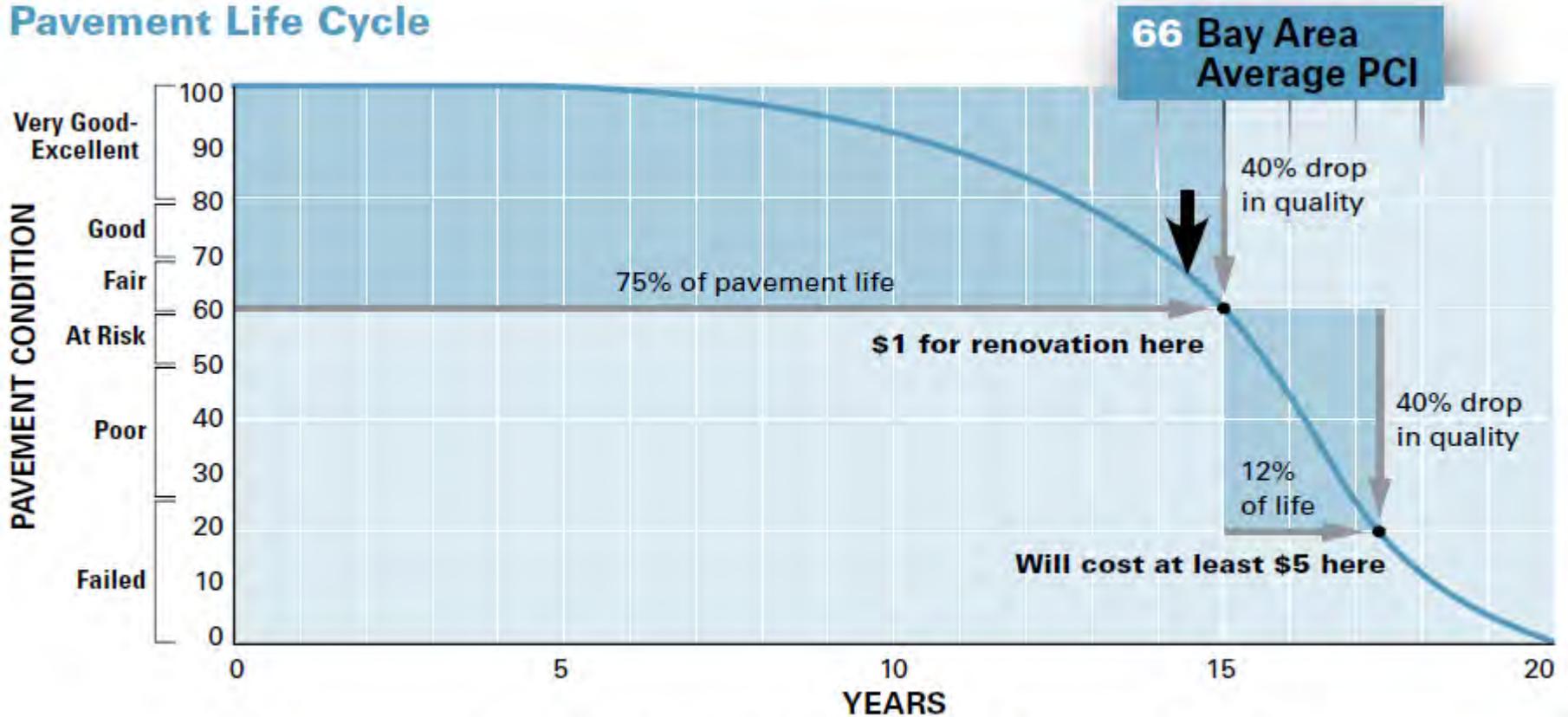
# Overview: Local Streets and Roads

- Understanding pavement conditions, maintenance costs and countywide trends
- Breaking down pavement rehabilitation funding sources used by Solano cities and the County of Solano
- Pavement conditions by agency



# MTC Pavement Life Cycle Chart

## Pavement Life Cycle



*Time varies depending on traffic, climate, pavement design, etc.*

# THE STREETS OF SAN FRANCISCO: A VISUAL GUIDE

	<table border="1"> <tbody> <tr> <td>Rating:</td> <td><b>Very Good - Excellent</b></td> </tr> <tr> <td>PCI Score:</td> <td><b>100 - 85</b></td> </tr> <tr> <td>Treatment Required:</td> <td><b>None</b></td> </tr> <tr> <td>% of SF Blocks:</td> <td><b>20%</b></td> </tr> <tr> <td>Cost/Block:</td> <td><b>\$0</b></td> </tr> </tbody> </table>	Rating:	<b>Very Good - Excellent</b>	PCI Score:	<b>100 - 85</b>	Treatment Required:	<b>None</b>	% of SF Blocks:	<b>20%</b>	Cost/Block:	<b>\$0</b>
Rating:	<b>Very Good - Excellent</b>										
PCI Score:	<b>100 - 85</b>										
Treatment Required:	<b>None</b>										
% of SF Blocks:	<b>20%</b>										
Cost/Block:	<b>\$0</b>										
	<table border="1"> <tbody> <tr> <td>Rating:</td> <td><b>Fair – Good</b></td> </tr> <tr> <td>PCI Score:</td> <td><b>84 - 64</b></td> </tr> <tr> <td>Treatment Required:</td> <td><b>Maintenance</b></td> </tr> <tr> <td>% of SF Blocks:</td> <td><b>31%</b></td> </tr> <tr> <td>Cost/Block:</td> <td><b>\$9,000</b></td> </tr> </tbody> </table>	Rating:	<b>Fair – Good</b>	PCI Score:	<b>84 - 64</b>	Treatment Required:	<b>Maintenance</b>	% of SF Blocks:	<b>31%</b>	Cost/Block:	<b>\$9,000</b>
Rating:	<b>Fair – Good</b>										
PCI Score:	<b>84 - 64</b>										
Treatment Required:	<b>Maintenance</b>										
% of SF Blocks:	<b>31%</b>										
Cost/Block:	<b>\$9,000</b>										



Rating:	<b>At Risk - Fair</b>
PCI Score:	<b>63 - 50</b>
Treatment Required:	<b>Resurfacing</b>
% of SF Blocks:	<b>30%</b>
Cost/Block:	<b>\$97,800</b>



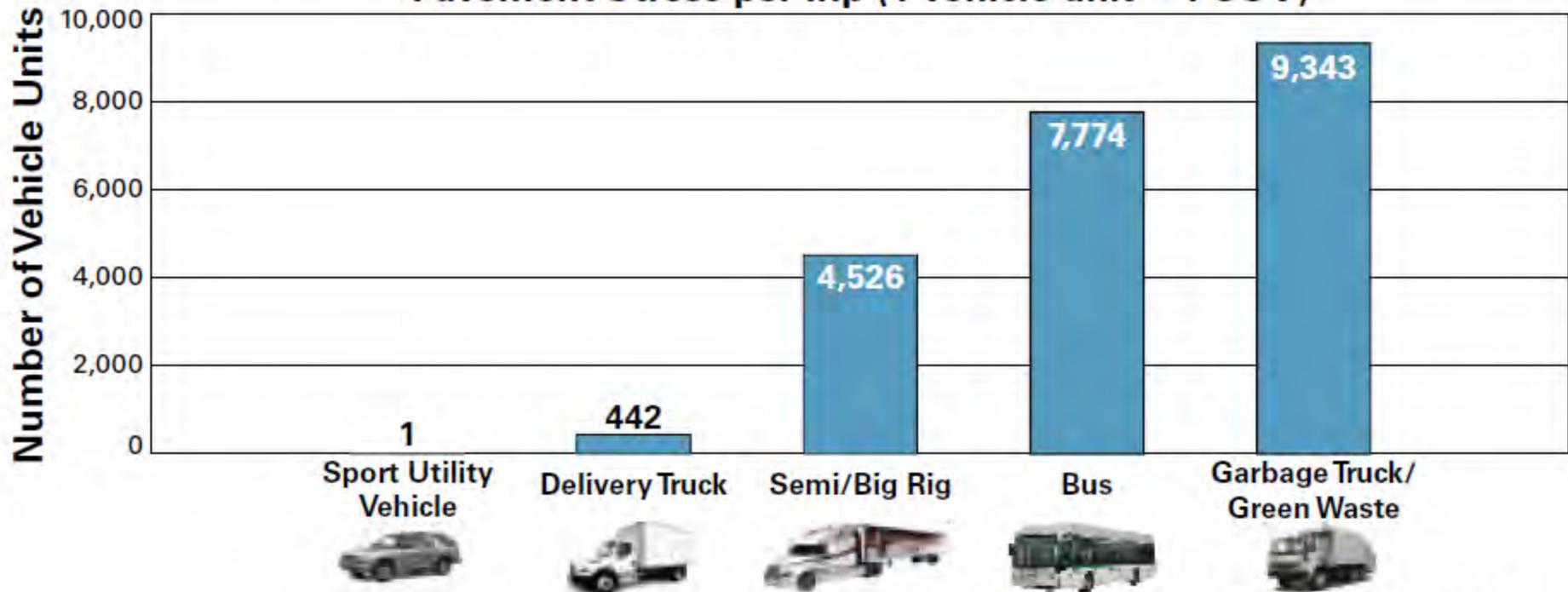
Rating:	<b>Poor - Failed</b>
PCI Score:	<b>49 - 0</b>
Treatment Required:	<b>Reconstruction</b>
% of SF Blocks:	<b>19%</b>
Cost/Block:	<b>\$436,400</b>

# Examples of Streets in "Poor" Condition in the City of Fairfield



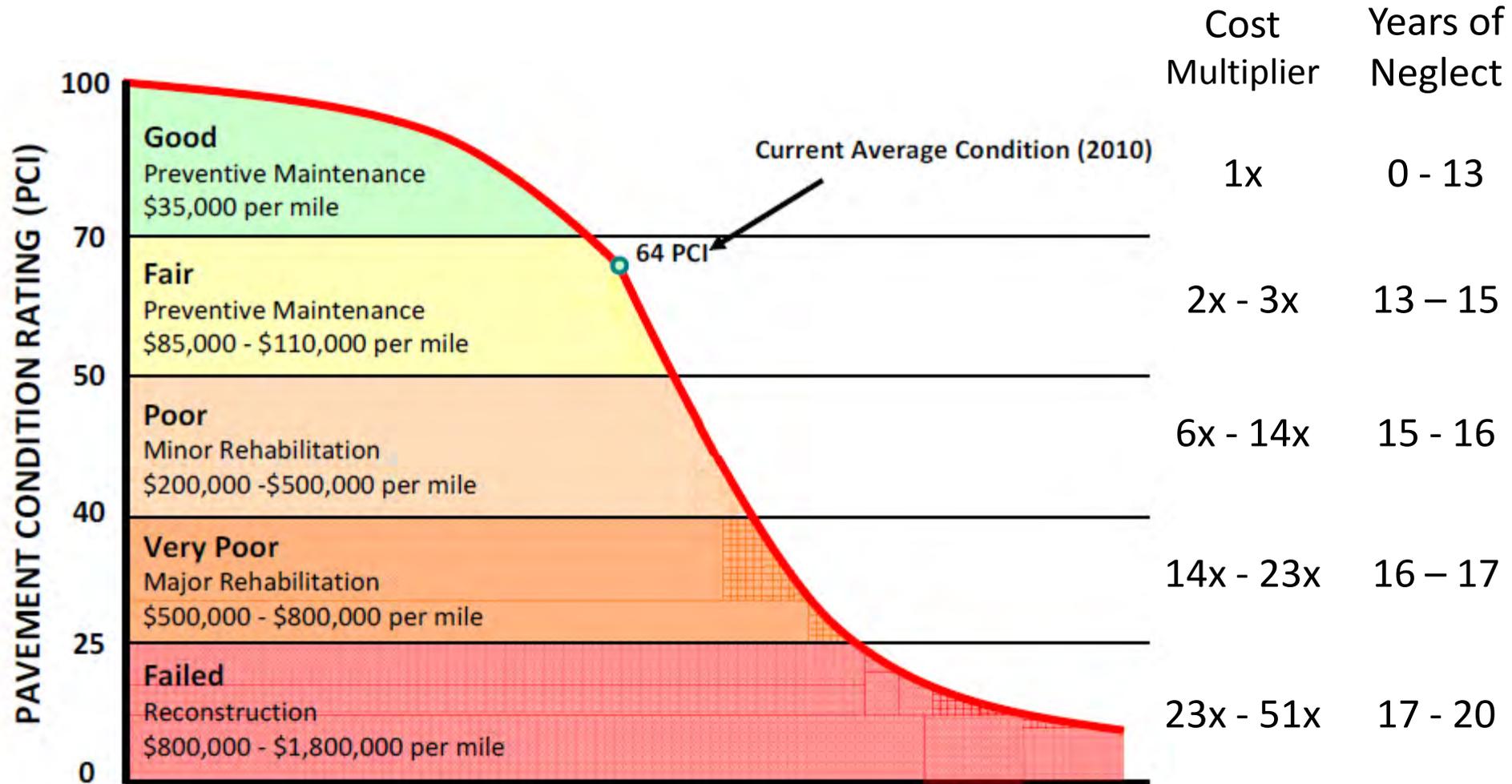
## Relative Impact of Vehicle Types on Pavement Conditions

Pavement Stress per Trip (1 vehicle unit = 1 SUV)



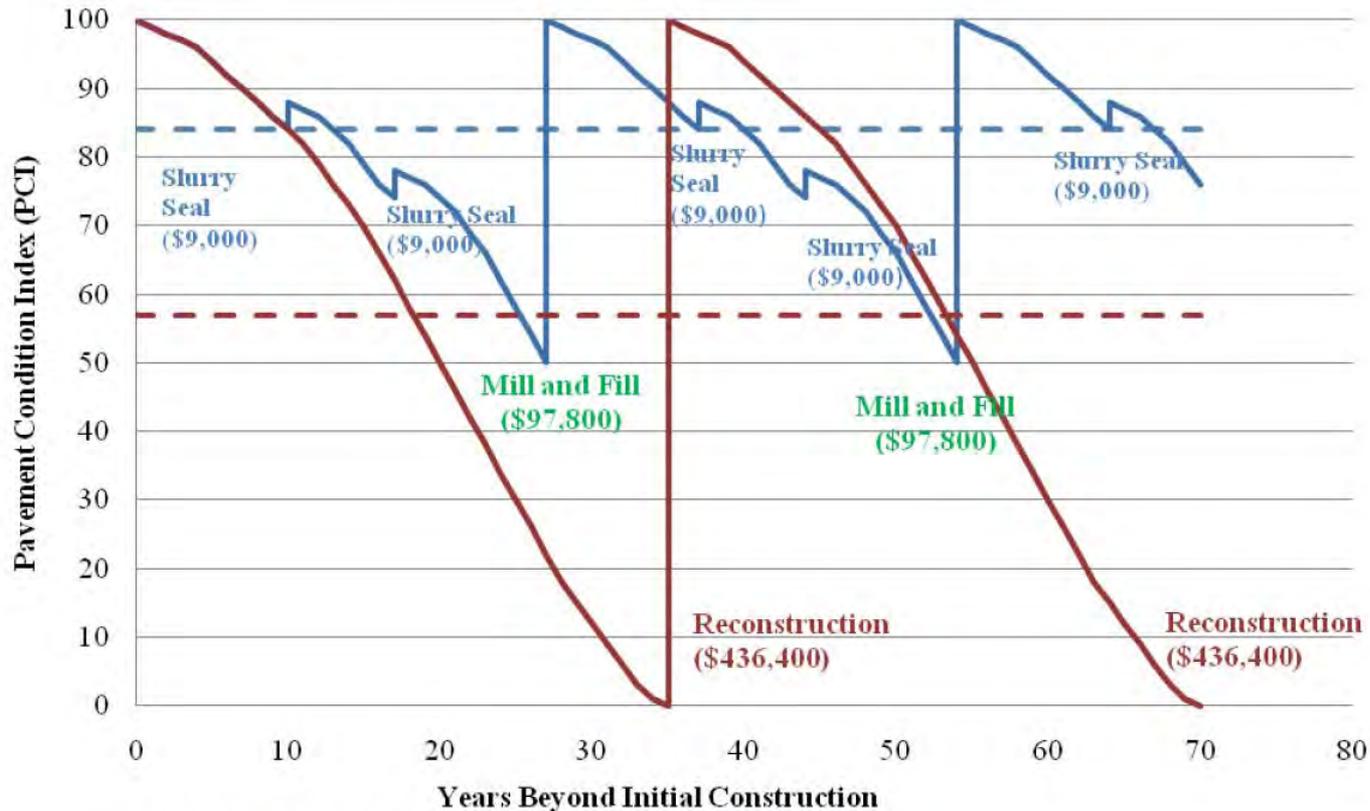
Source: Pavement Engineering, Inc.

# The Cost of Delaying Preventative Maintenance



# No maintenance is 3.6x more expensive than preventative maintenance in the long run

Figure 4: Pavement Life Cycle and Cost Efficiency



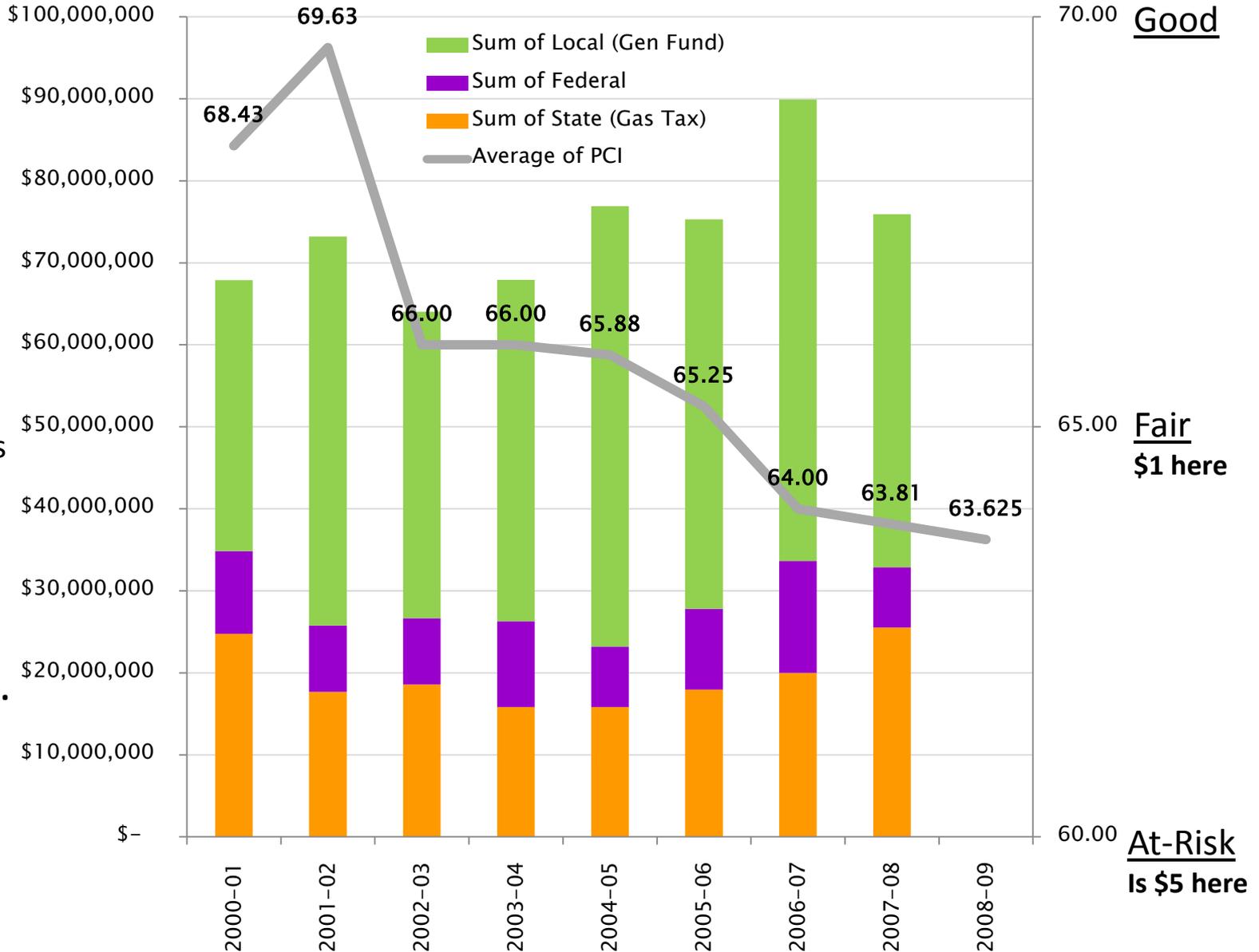
**3.6x**

**NO MAINTENANCE**  
 Total cost = \$872,800 per block  
 - - - - Average PCI = 57

**1x**

**MAINTENANCE**  
 Total cost = \$240,600 per block  
 - - - - Average PCI = 84

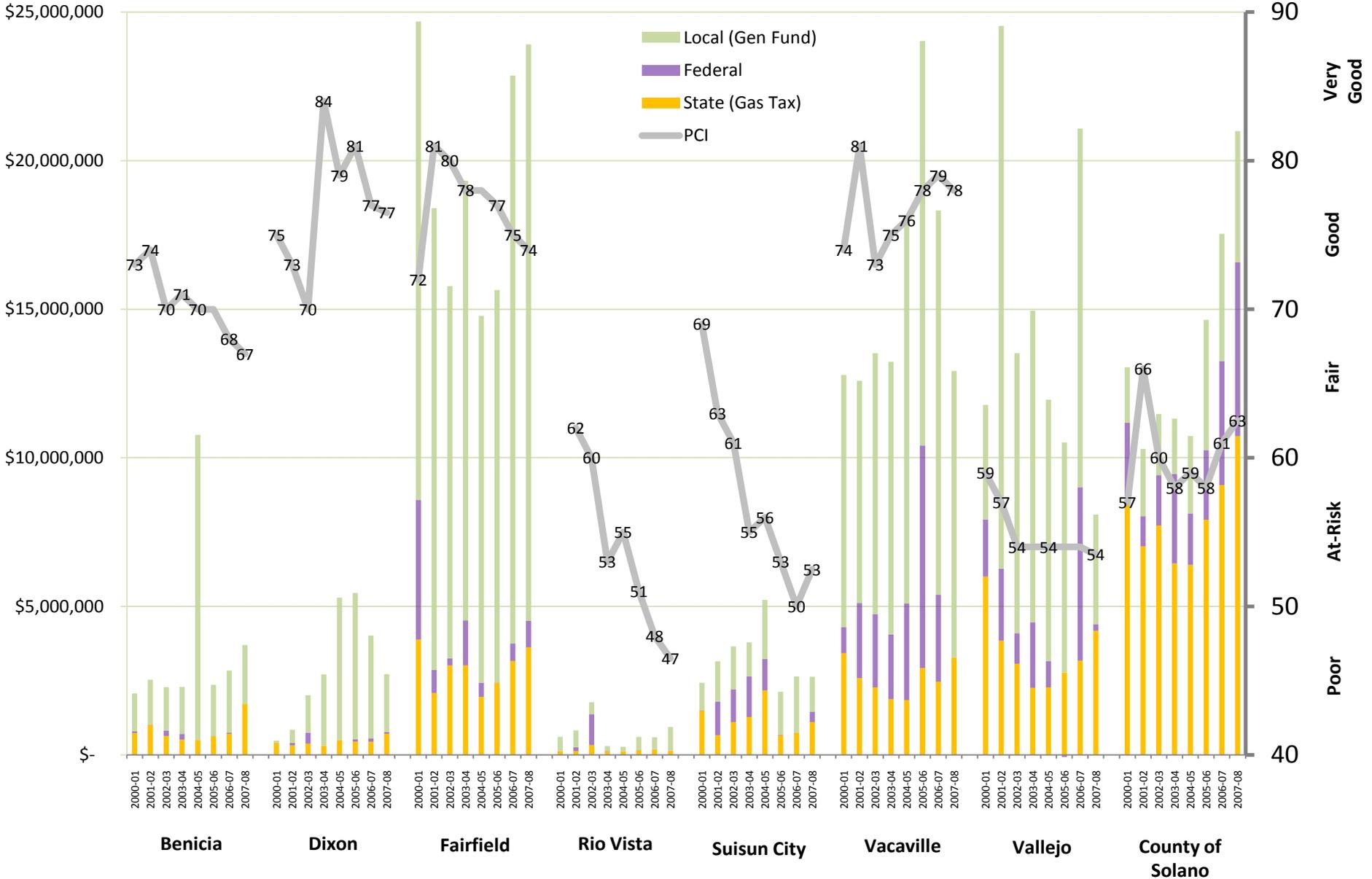
# Countywide LS&R Investments with PCI Average



PCI has dropped about 6 PCI points since 2002, from almost “good” to low in the “fair” range.

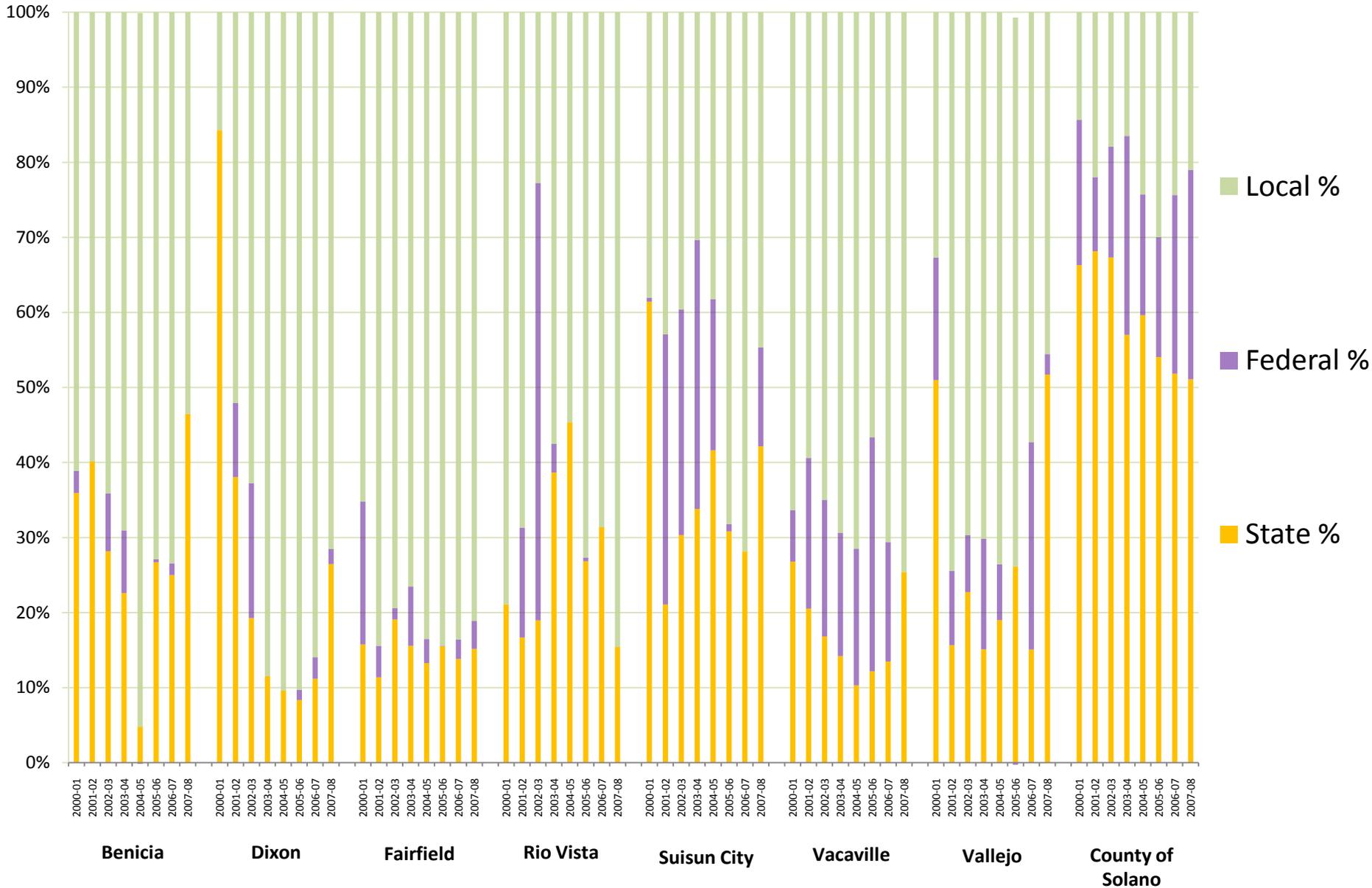
Solano County is closing on “At-Risk” street rehabilitation costs, multiplying costs by **5 times**.

# Pavement Condition over Local, State, and Federal LS&R Investments By Solano Jurisdiction from 2000-01 to 2007-08



Investment Data retrieved from CA State Controller's Office, "Streets and Roads Annual Reports" 2000-01 to 2007-08, [http://www.sco.ca.gov/ard\\_locrep\\_streets.html](http://www.sco.ca.gov/ard_locrep_streets.html)  
 Pavement Condition Index (PCI) Data retrived from the Metropolitan Transportation Commission's (MTC) "State of the System Reports" 2002 to 2009, [http://www.mtc.ca.gov/library/state\\_of\\_the\\_system/](http://www.mtc.ca.gov/library/state_of_the_system/)

# Percent of Local, State, and Federal LS&R Investments By Solano Jurisdiction from 2000-01 to 2007-08



## Projected Pavement Conditions in 2035 Based on Annual Expenditure Level Scenarios

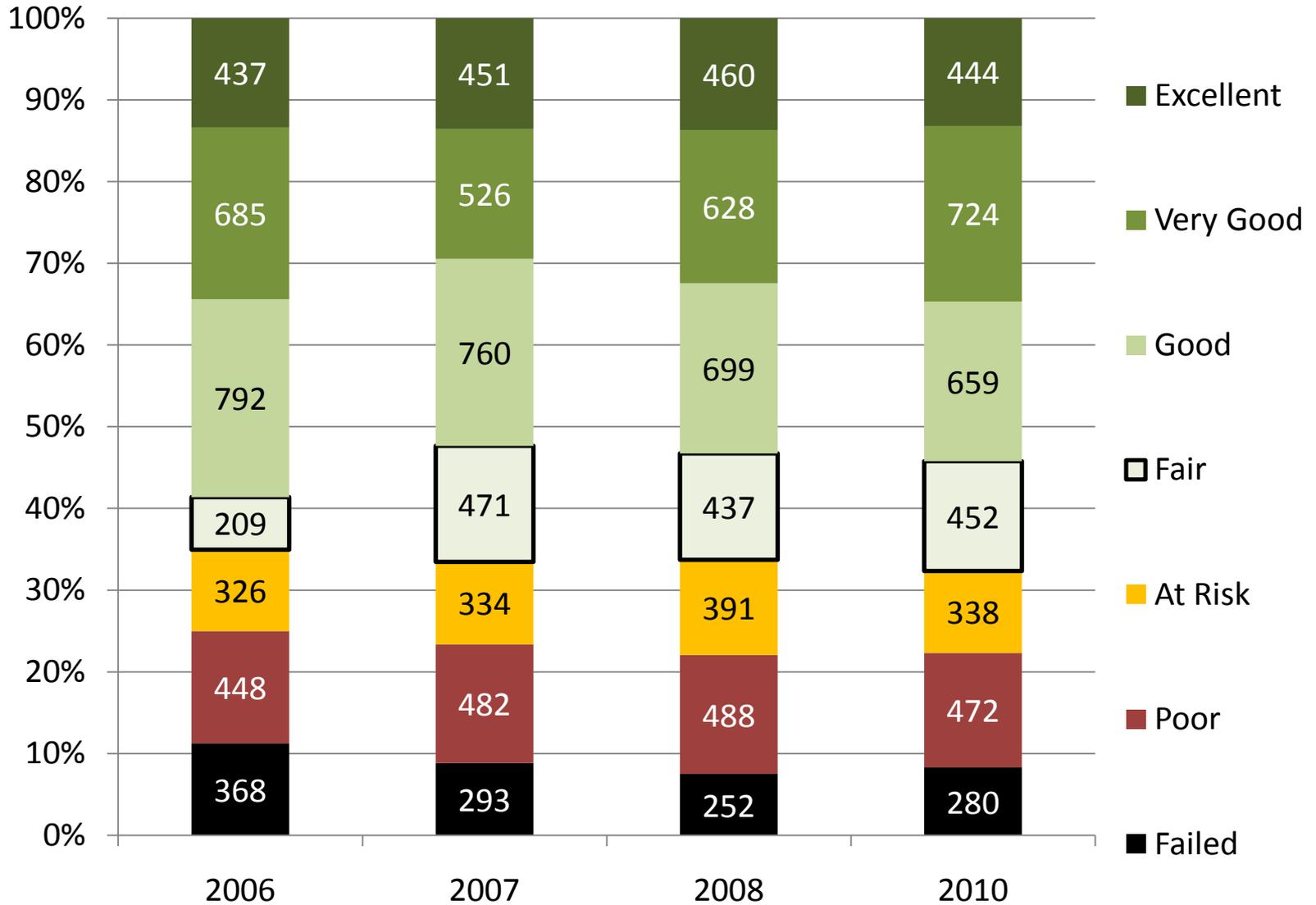
	Existing Funding	Maintain Current Pavement Condition	Improve Conditions*
Average Regional PCI** in 2035	45	66	75
Pavement Condition	Poor	Fair	Good
Average Annual Expenditure Level***	\$351 million	\$740 million	\$975 million
Annual Expenditure/ Lane Mile	\$8,000	\$17,000	\$23,000
Increase Over Current Expenditure Level (%)	0%	110%	177%

\* Improvements do not include Complete Street-type upgrades.

\*\* PCI is the Pavement Condition Index (Scale of 0 to 100, with 100 being the highest PCI).

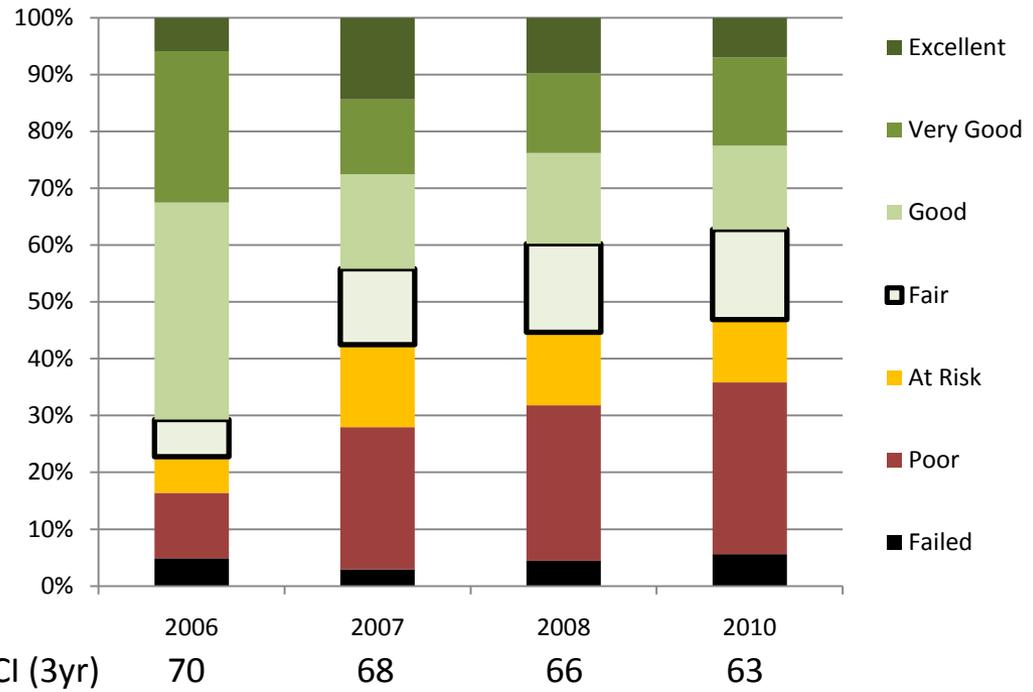
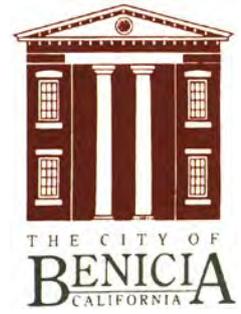
\*\*\* Average Annual Expenditure Level assumes a 3 percent inflation rate.

# Countywide Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



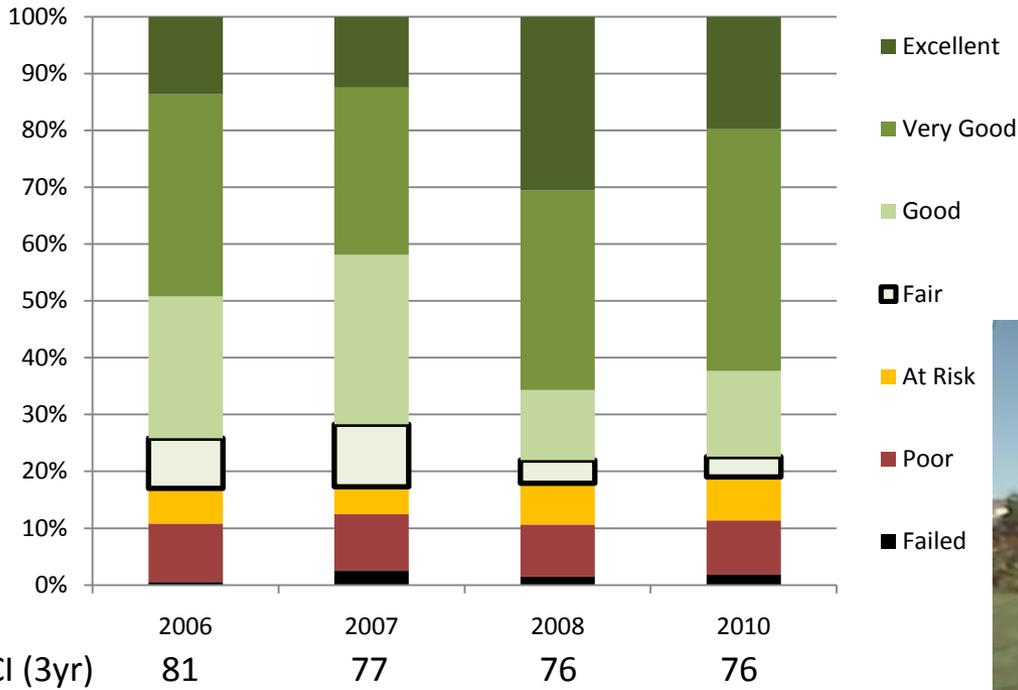
# City of Benicia

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



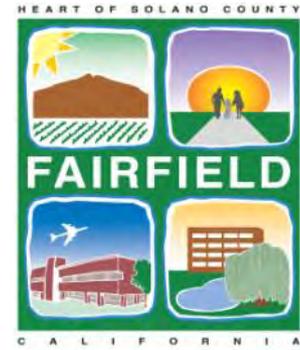
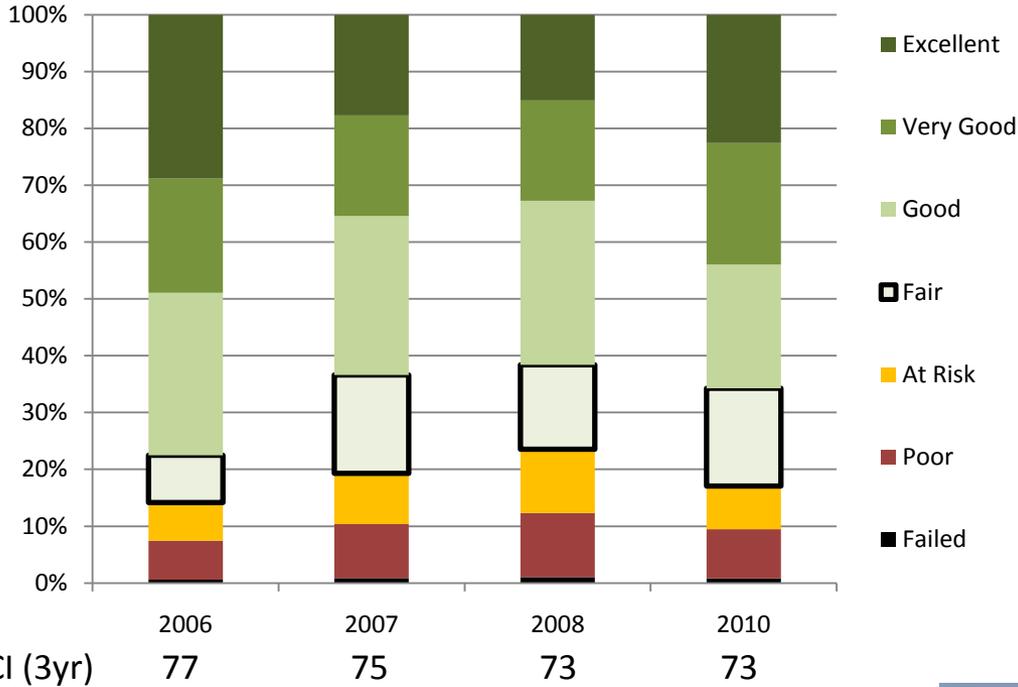
# City of Dixon

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



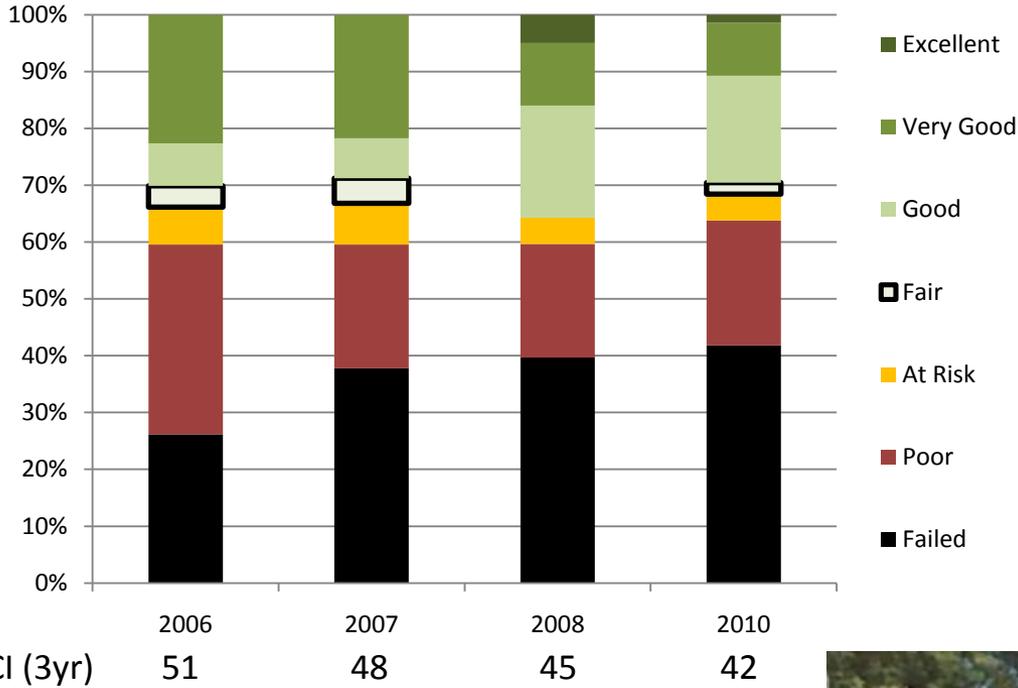
# City of Fairfield

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



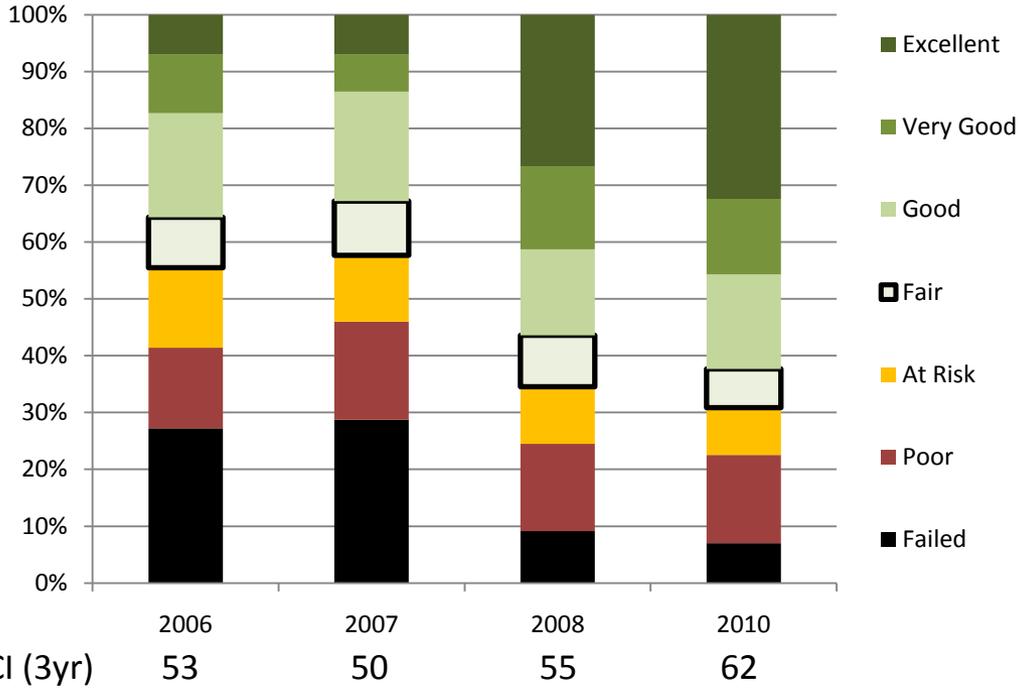
# City of Rio Vista

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



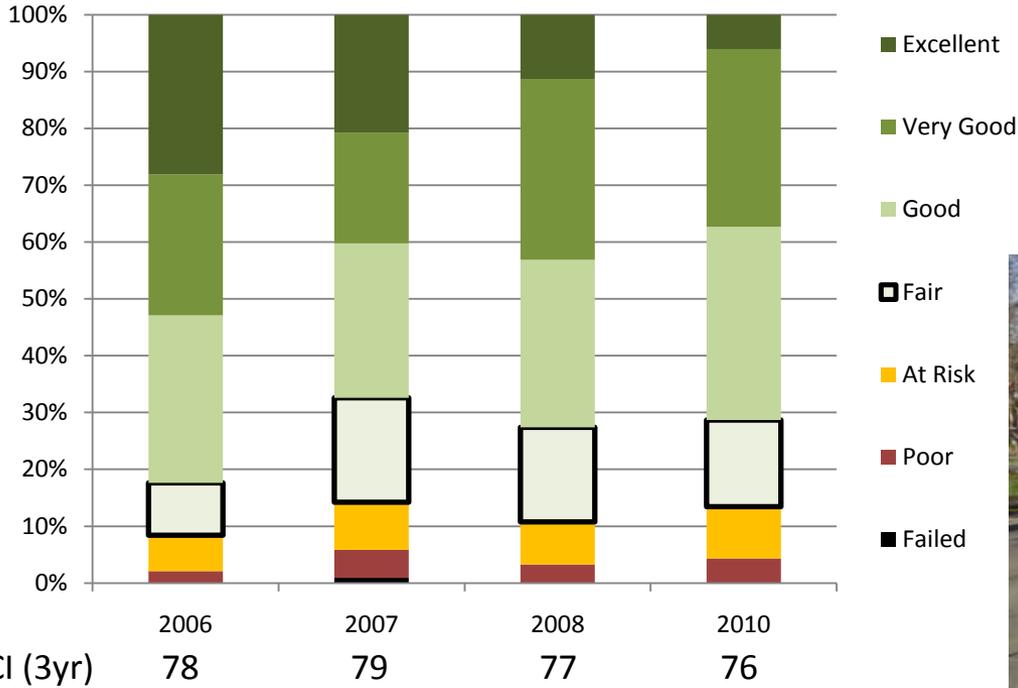
# City of Suisun City

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



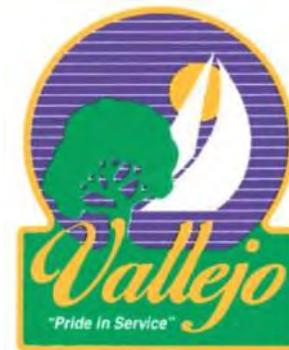
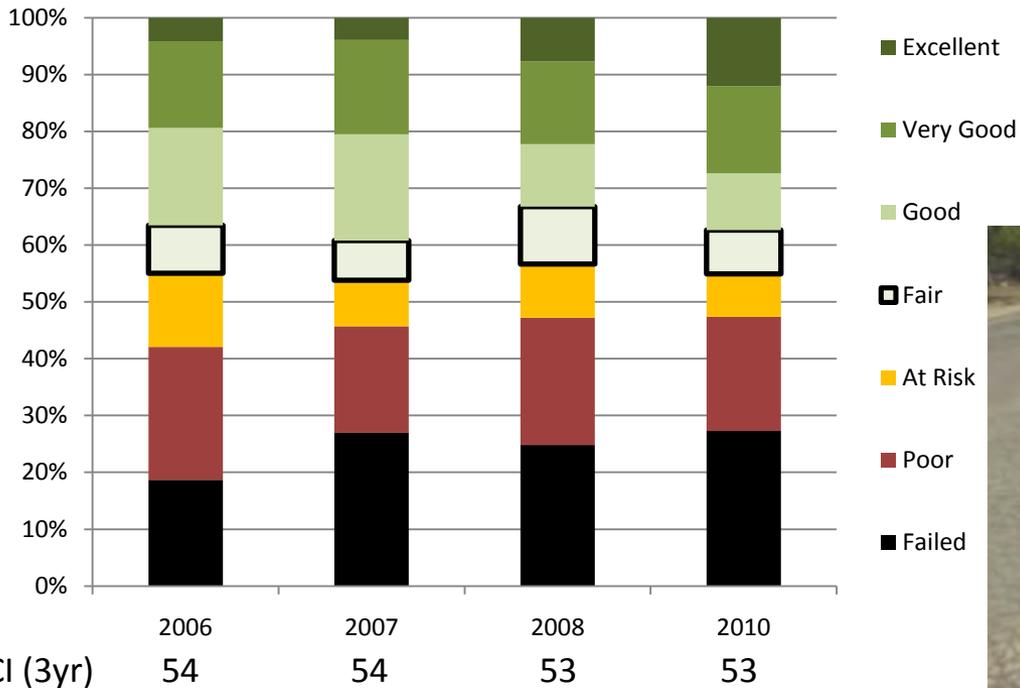
# City of Vacaville

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



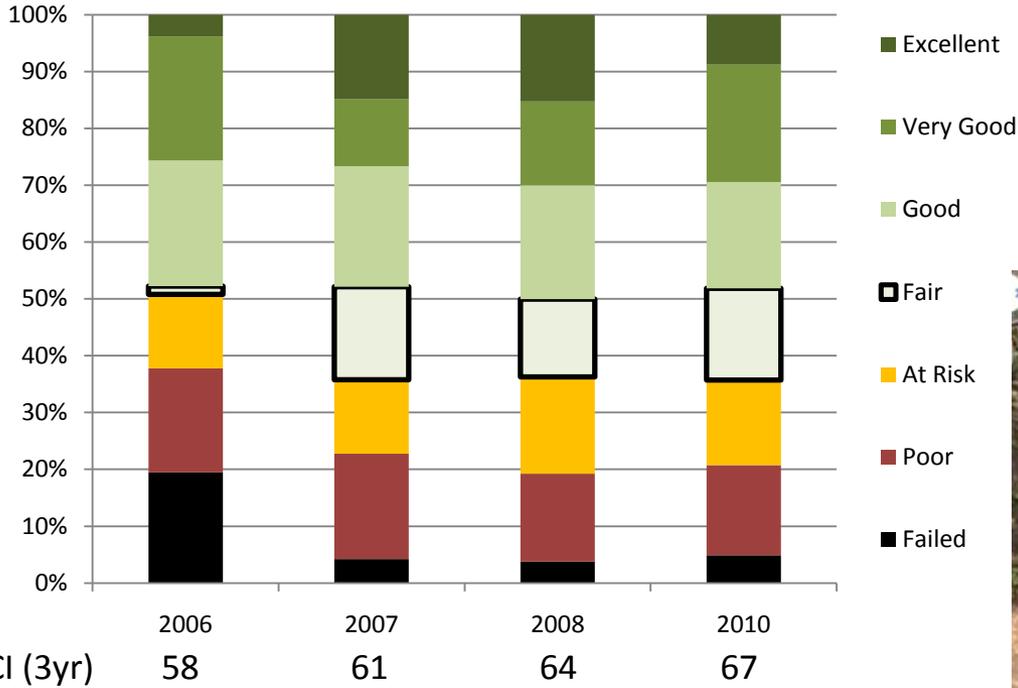
# City of Vallejo

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010

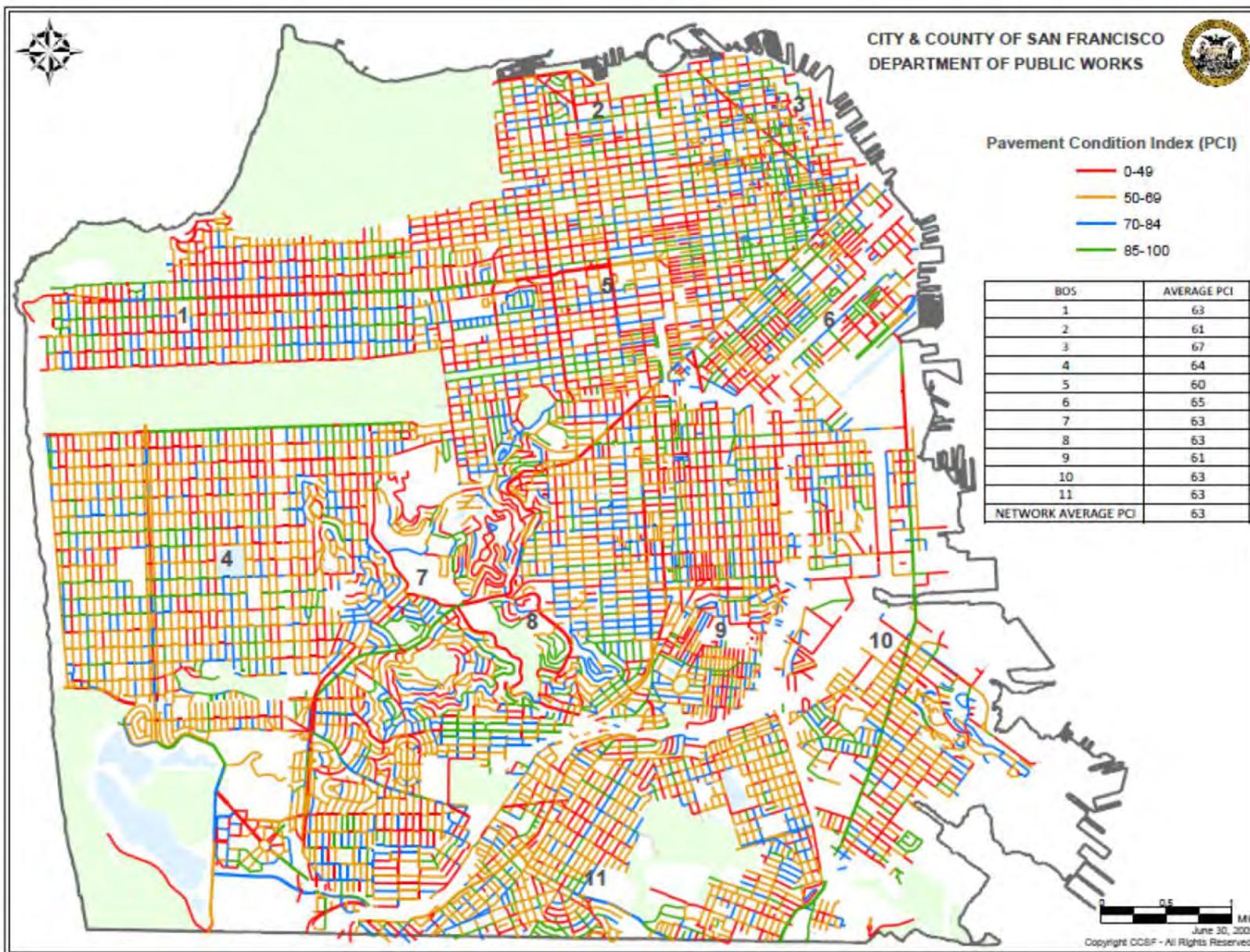


# County of Solano

Pavement Condition as a Percent of Total Lane Miles from 2006 to 2010



# APPENDIX A: MAP OF SAN FRANCISCO STREETS AND PCI SCORES



**MAP D:  
CITY OF WOODLAND  
LOCAL ROADWAYS  
PAVEMENT CONDITION**

SCALE: NTS Basis: 2006 Road Rating

