

Solano County Pothole Report

2014

Solano Transportation Authority,

Streets and Roads Pavement and Rehabilitation Report

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Executive Summary

How would you build a street and maintain its pavement? Do you know how your public works department maintains your street? Do you believe that they are doing enough to keep the roads in good condition? Do you understand the financial or technical constraints that they are under to perform this critical work?



Figure 1: Pothole Example

The purpose of this report is to produce a comprehensive description of the condition of Solano County’s local streets and roads pavement rehabilitation efforts, and pavement conditions. Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if

the pavement is allowed to deteriorate to the point where major rehabilitation is necessary. (MTC, 2011) With this in mind, an analysis of Solano County’s current roadway investment strategy is appropriate. This report will help to showcase financial shortfalls, which may assist public works staff with project planning and future funding requests. While the Metropolitan Transportation Commission (MTC) and the California Association of Counties (CSAC) produce statewide and bay area wide local streets and roads annual reports, the broad focus of these reports lack the local detail that speaks to local elected officials about the state of their local agency’s street pavement. For instance, how does Solano County’s 10-year \$544M and 28-year \$2.7 B pavement rehabilitation shortfall compare to the state’s 10-year \$82.2 B shortfall or the Bay Area’s 10-year \$12.3B shortfall or 28-year \$29.9 B shortfall? These long-term 10-year and 28-year shortfall projections are difficult to understand when a local government council or board is adopting a public works annual capital improvement program and weighing the pros and cons between another street rehabilitation project, a new community park, a fire station, or a water treatment pipeline. Producing a Solano County specific pothole report will help inform decision makers on the fiscal reality of our roadway infrastructure needs and provide city staff and Solano Transportation Authority (STA) staff valuable information to present to the public.

As of 2013, Solano County and its 7 cities are cumulatively investing roughly half of the \$36M needed annually to maintain local streets and roads with a PCI of 60 “fair condition.” To reach the higher PCI goal of 75 “good condition”, as stated in the Solano Comprehensive Transportation Plan, \$47M additional funds are needed annually over the next 15 years to reach a ‘state of good repair’ – two and a half times more than our current investment. Solano County needs a healthy investment in our roadway infrastructure or pavement quality will decline substantially. More money spent now in long-term roadway maintenance can save our cities millions in the future and strengthen our local economy.

The appendix of this report provides a city-specific summary of pavement conditions for past years, present conditions, and projections for future roadway investment needs.

The Solano County Pothole Report is organized into the following chapters.

Why Care about Street Pavement?

[General issues, PCI statistics and Images, Worst first vs. Best practices]

6.5 Times More Funding Needed to Cost-effectively Maintain Local Streets and Roads

[Bay Area vs. Solano County shortfalls by agency, New Technologies & Local Revenue]

Summary and Conclusion

Appendix of Local Agency Handouts Describing Pavement Conditions, Pavement Maps and Finances

[Seven cities and the county's pavement investment info]

Why Care about Street Pavement?

Your Trips, Your Roads

There are few local infrastructure investments used by almost every citizen. Almost everyone benefits from local streets and roads (LS&R). From sidewalks and crosswalks, to neighborhood streets and 4-lane boulevards, effective LS&R promote mobility for Solano County residents traveling to their jobs, getting to school, and making local purchases. Every trip begins and ends with local streets and roads and every mode of surface travel relies on the local streets and roads infrastructure. Ignoring these critical facilities can cost a city more than its roadway system.

Pavement Condition Index (PCI): What it Means & What it is in Solano County

The Pavement Condition Index (PCI) rates the condition of the surface of a road network. The PCI provides a numerical rating for the condition of road segments within the road network, where 0 represents the worst possible condition and 100 represents the best possible condition. The PCI measures two conditions: (1) The type, extent and severity of pavement surface distresses and (2) the smoothness and ride comfort of the road. The classifications used to rate LS&R pavements are shown in Table 1 below.

Table1: Pavement Condition Categories

Very Good-Excellent (PCI = 80-100)	Pavements are newly constructed or resurfaced and have few if any signs of deterioration.
Good (PCI = 70-79)	Pavements require mostly preventive maintenance and have only low levels of distress, such as minor cracks or peeling or flaking off of the top layer of asphalt as a result of water permeation.
Fair (PCI = 60-69)	Pavements at the low end of this range have significant levels of distress and may require a combination of rehabilitation and preventive maintenance to keep them from deteriorating rapidly.
At Risk (PCI = 50-59)	Pavements are deteriorated and require immediate attention including rehabilitative work. Ride quality is significantly inferior better pavement categories.
Poor (PCI = 25-49)	Pavements have extensive amounts of distress and require major rehabilitation or reconstruction. Pavements in this category affect the speed and flow of traffic significantly.
Failed (PCI = 0-24)	Pavements need reconstruction and are extremely rough and difficult to drive on.

(MTC, 2013)

The average condition of the Bay Area’s LS&R network, which includes nearly 42,500 lane miles, was 66 as of 2012. This PCI rating places the region’s roadway network in the “fair” category. The average condition of Solano County’s LS&R network, which includes approximately 3,465 lane miles of roadway, is also 66. This score is based on a 3-year moving average:

	3-Year Moving Average		
	2010	2011	2012
BENICIA	63	61	60
DIXON	76	78	77
FAIRFIELD	73	73	73
RIO VISTA	42	47	51
SOLANO COUNTY	67	68	71
SUISUN CITY	62	68	67
VACAVILLE	76	73	70
VALLEJO	53	51	51
COUNTYWIDE	66	66	66

Using a three-year average provides a more accurate picture, since not all jurisdictions submit their streets and roads data at the same time, and a single project can cause a significant jump in the annual PCI score for a small city with just a few miles of streets.

What PCI Looks Like

The photos displayed in figure 1 show streets and roads that represent a PCI rating of Excellent/ Good, At-Risk, and Very/Poor Failed. Most of the streets and roads in Solano County fall under the At-Risk (Fair) category. While this condition category may not look so bad on the surface, the costs associated with falling below this threshold can be rather significant. Figure 2: PCI Rating and Visual Condition

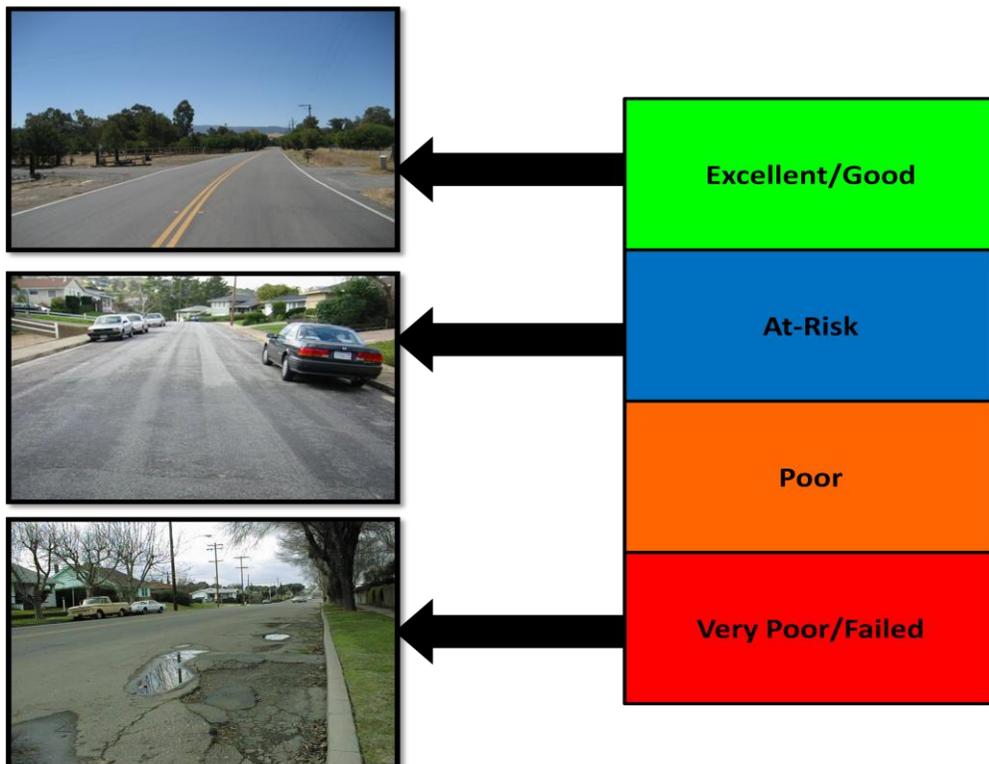
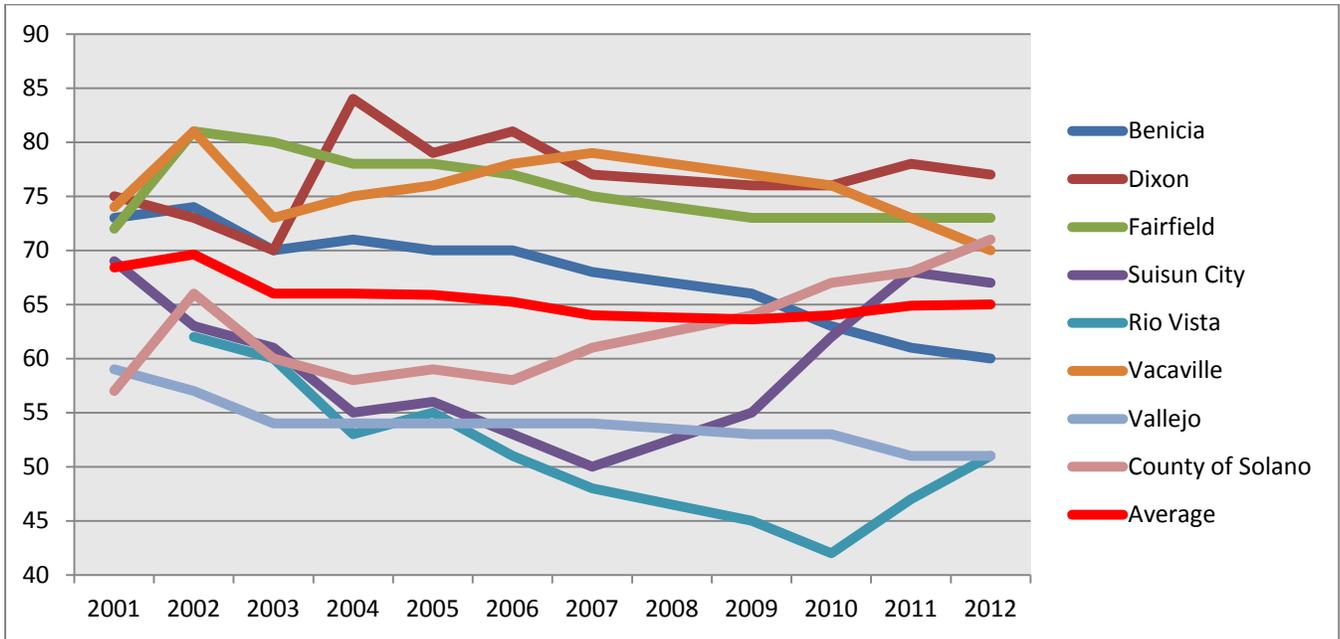


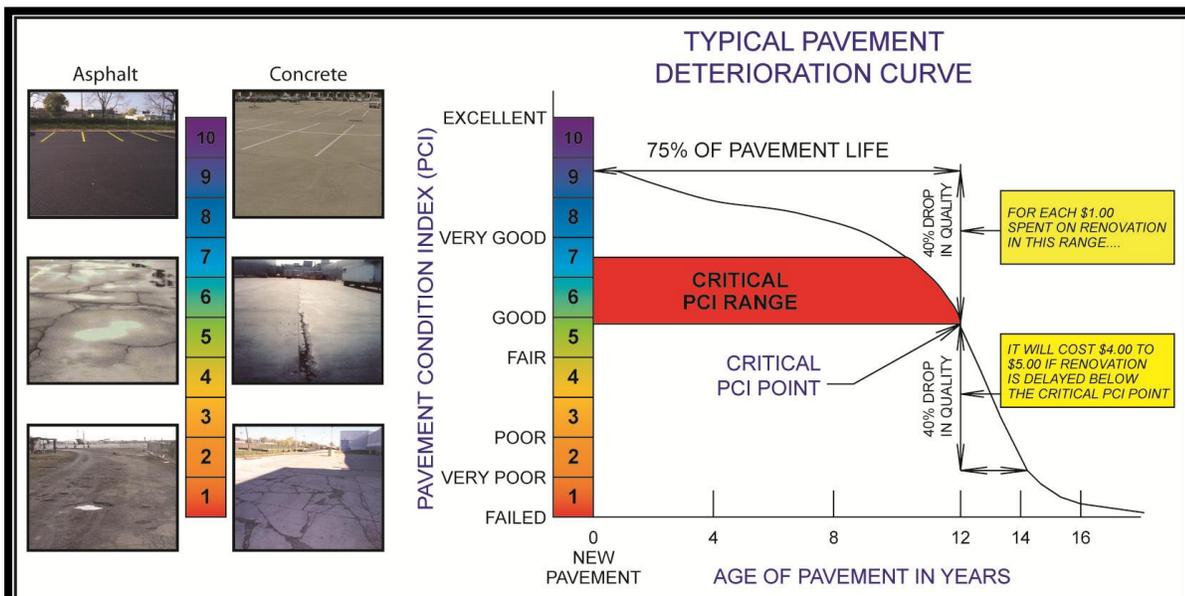
Table 2: Solano County Pavement Condition Index (PCI) from 2001-2012



Bad Roads Mean Big Bills

While a PCI Score of 66 is considered “fair” (PCI 60-69), it is also considered an “at-risk” score because of the rapid increase in rehabilitation costs that occurs once below this threshold. Once a pavement’s condition rating reaches 60, it will begin to deteriorate rapidly. As shown in Figure 1, a new pavement will deteriorate slowly for the first 12 years of its standard 20 year life span. Without any intervention, the pavement will drop from the fair category to the “failed” category in the next five years. This deterioration holds serious implications for the cost of system preservation. Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, a PCI of 66 should be viewed with caution, as it indicates that our local streets and roads are poised on the edge of a maintenance cliff.

Figure 3: PCI Condition and Cost of Rehabilitation



Street Pavement: Local Government Foundations or Credit Cards

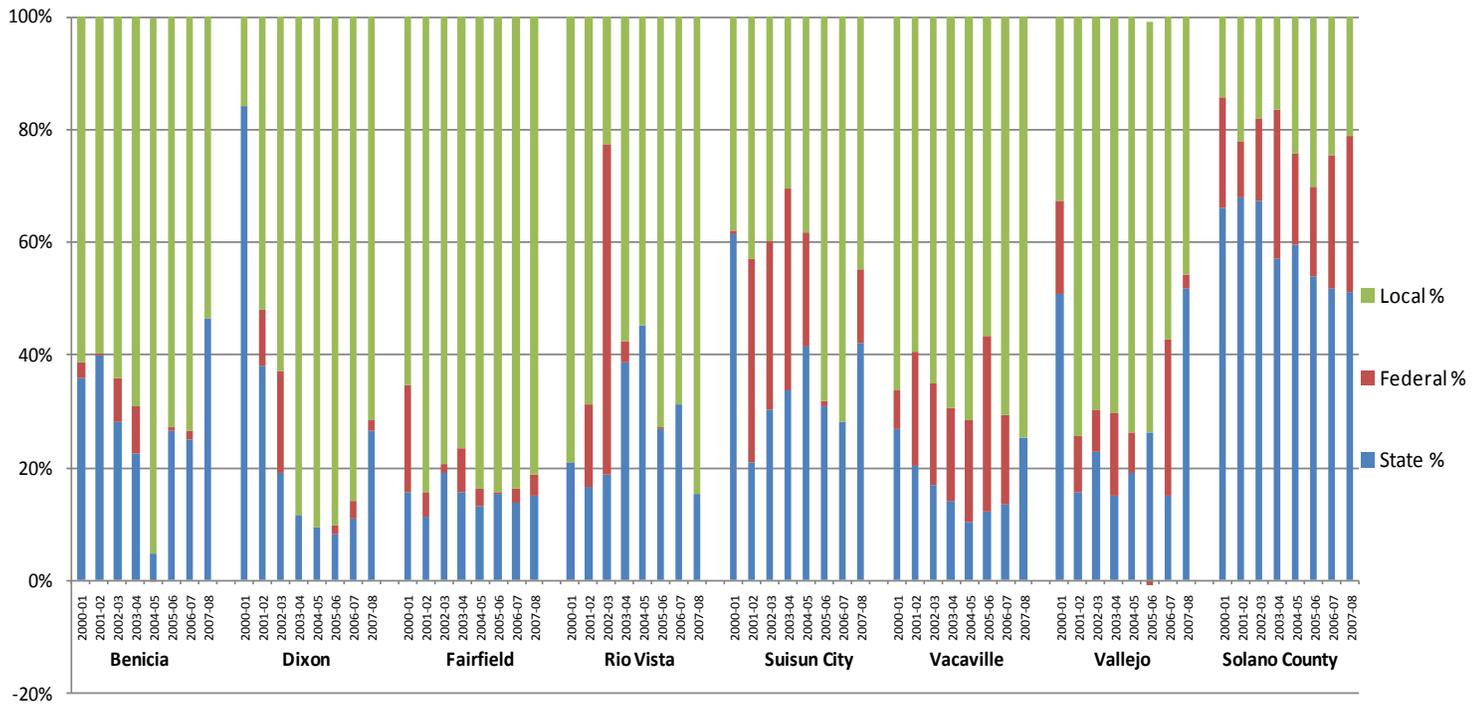
By deferring maintenance, cities balloon the cost of street rehabilitation projects, resulting in uncomfortable tradeoffs for cities (e.g., building new community centers vs. repairing failed streets). When cities wait until streets reach critical and expensive maintenance needs, cities must pay for pavement asphalt at the going cost of oil, potentially magnifying the cost.

Between 2005 and 2009, California cities paid for a greater number of more expensive street repairs with local funding, not federal or state funds. According to the California State Controller, between 2001 and 2009, about 71% of city street rehabilitation funding comes from local sources. The figure below shows how mostly local funding paid for a 53% increase in street reconstruction projects.

Figure 4: Local Funding Pays for an Increasing Number of Expensive California City Street Reconstruction Projects



In Solano County, the investments made between 2001-2008 reflect this trend. The chart below illustrates how the majority of city street rehabilitation funding came from local sources. Figure 5: Local, State and Federal Investments by Solano Jurisdictions, from 2001-2008



6.5 Times More Funding Needed to Cost-effectively Maintain Local Streets and Roads in Solano County

On December 5, 2011, MTC released "Final Draft Local Streets and Roads Long-Range Needs/ Revenue Assessment" for the Plan Bay Area Regional Transportation Plan (RTP). MTC estimated how much funding each Bay Area county needs to maintain current conditions or reach a state of good repair.

Table 1: Draft 28-Year Plan Bay Area LS& R Needs and Revenues (Millions)

Draft 28-Year Plan Bay Area LS&R Capital Needs and Revenues (In Millions)							
County	Revenues for Capital Pavement Rehab Needs*	Cost to "Maintain Existing PCI" Scenario	Cost to reach a "State of Good Repair, PCI 75"	Shortfall, "Maintain Existing PCI" Scenario	Shortfall, "State of Good Repair, PCI 75" Scenario	Ratio of "Maintain Existing PCI" Cost to Revenues	"State of Good Repair, PCI 75" Cost to Revenues
Solano	488	2,186	3,195	1,699	2,707	4.5	6.5
Napa	219	872	1,516	653	1,297	4.0	6.9
Sonoma	994	2,858	5,018	1,863	4,023	2.9	5.0
Marin	393	1,054	1,506	661	852	2.7	3.8
Santa Clara	3,374	8,817	10,894	5,443	7,519	2.6	3.2
Alameda	2,153	5,332	7,798	3,179	5,650	2.5	3.6
San Mateo	1,368	3,317	3,913	1,950	2,471	2.4	2.9
Contra Costa	2,868	4,863	5,786	1,995	2,871	1.7	2.0
San Francisco	2,299	3,263	4,778	965	2,480	1.4	2.1
REGION	14,156	32,563	44,404	18,407	29,869	2.3	3.1

* Revenues include committed sources such as gas taxes, sales taxes, registration fees and other local revenues

Some Solano Cities need as much as 19.7 times more funding

Based on MTC's figures, countywide local streets and roads faces a funding shortfall over the next 28 years of \$1.7 billion to maintain current conditions and \$2.7 billion to reach a state of good repair.

Table 2: Draft 28-Year Solano County LS&R Needs and Revenues (in Millions)

Draft 28-Year Solano County LS&R Capital Needs and Revenues (In Millions)							
Solano Agencies	Revenues for Capital Pavement Rehab Needs*	Cost to "Maintain Existing PCI" Scenario	Cost to reach a "State of Good Repair, PCI 75" Scenario	Shortfall, "Maintain Existing PCI" Scenario	Shortfall, "State of Good Repair, PCI 75" Scenario	Ratio of "Maintain Existing PCI" Cost to Revenues	Ratio of "State of Good Repair, PCI 75" Cost to Revenues
Dixon	5.7	100.2	112.2	94.5	106.5	17.6	19.7
Benicia	16.5	137.3	217.0	120.8	200.5	8.3	13.2
Vallejo	60.2	357.9	874.0	297.6	813.8	5.9	14.5
Fairfield	105.9	561.3	664.6	455.3	558.6	5.3	6.3
Vacaville	119.1	515.9	584.0	396.7	464.8	4.3	4.9
Suisun	35.6	116.4	176.7	80.7	141.0	3.3	5.0
Rio Vista	5.6	15.5	61.6	9.9	56.0	2.8	11.0
County	139.1	382.0	504.8	242.9	365.7	2.7	3.6
TOTAL	487.8	2186.4	3194.8	1698.5	2707.0	4.5	6.5

Exploring New Technologies and Local Revenue Sources to Maintain Local Streets and Roads

The federal gas tax was last raised in 1993, nearly 21 years ago. According to the Federal Highway Administration, the purchasing power of the federal gas tax has dropped approximately 30 percent since 1997. As a result of stagnant funding levels and decreasing purchasing power, current fund sources derived from federal or state gas or excise taxes are insufficient to cost-effectively maintain Solano County's local streets and roads. To combat this shortfall in funding, many cities, such as Fairfield and Vallejo, have passed local measures to help fund and maintain their streets and roads. Solano County is the only county within the San Francisco Bay Area that does not have a local sales measure dedicated to transportation funding.

Exploring New Technologies to Save Tax Dollars

New technologies, such as improved chip seal polymer, Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) pavement technology can recycle pavement and cut project costs in half. A chip seal can extend its life by several years. New polymer chip seals can have improved durability and have been shown to extend pavement life 7-12 years over pavements in good condition; 5-7 years on pavements in fair condition; 3-5 years for pavements in poor condition. This declining return on investment for this technology is another reason to address in roadway maintenance before costs rise.

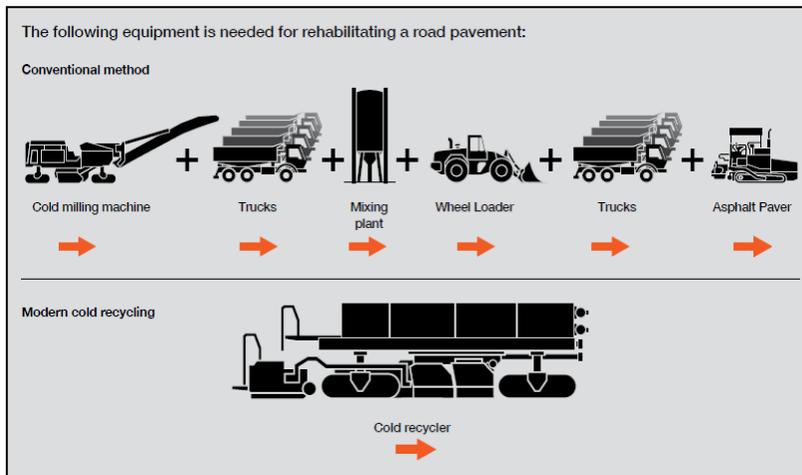


Figure 6: Conventional Method vs. CIR (Source: MTC)

Several Bay Area municipalities already are experimenting with a relatively new technology known as Cold In-Place Recycling (CIR), which eliminates the need for the extraction and processing of raw materials, as well as the transportation and lay-down of finished asphalt-concrete. MTC previously awarded a \$2 million grant through its Climate Initiatives Program to help finance a joint CIR demonstration project by Sonoma County and the city of Napa, with the intention of piloting the use of this technology for possible applications elsewhere in the Bay Area. Solano County and its cities should take advantage of available grant opportunities and explore the possibility of implementing CIR technology on its road rehabilitation projects.

Several Bay Area municipalities already are experimenting with a relatively new technology known as Cold In-Place Recycling (CIR), which eliminates the need for the extraction and processing of raw materials, as well as the transportation and lay-down of finished asphalt-concrete. MTC previously awarded a \$2 million grant through its Climate Initiatives Program to help finance a joint CIR demonstration

Full depth reclamation is a recycling method where all of the existing asphalt pavement is pulverized, combined with underlying materials, and treated with additives, such as asphalt emulsions and chemical agents such as calcium chloride, portland cement, fly ash and lime, to obtain an improved base. This method has been recommended by the US Department of Transportation for pavements with deep rutting, load-associated cracks, nonload associated thermal cracks, reflection cracks, and pavements with maintenance patches such as spray, skin, pothole, and deep hot mix. It is particularly recommended for pavements having a base or subgrade problem. The engineering costs are low for this method and allow for lower material expense during reconstruction.

Summary and Conclusion

Whether commuting to work, dropping the kids off at school, or making a quick stop at the grocery store, nearly every trip begins and ends on local roadways. This is arguably one of the most important infrastructure investments a city can make. How and when we invest in our roads can have major implications on future budgets. Spending \$1 now on timely maintenance to keep a section of roadway in good condition would cost \$5 to restore the same road if the pavement deteriorates to the point of needing major rehabilitation. A quality roadway network promotes the movement of goods and services, which has a positive effect on economic activity.

As of 2013, Solano County and its 7 cities are cumulatively investing \$18M annually in maintaining local streets and roads. In order to achieve an average countywide PCI goal of 65, an additional \$18M annually is needed over the next 15 years. This amount is twice as much as we are now spending just to maintain local streets and roads in “fair condition.” Since the costs of roadway rehabilitation increase substantially when PCI drops below 60 (roads categorized as “at-risk”), having a countywide goal of 65 would poise our roads on the edge of a maintenance cliff. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$47M additional funds are needed annually over the next 15 years to reach a ‘state of good repair’ – two and a half times more than our current investment.

“Strategic investment in infrastructure produces a foundation for long-term growth.”

-Roger McNamee

Without a healthy investment in our roadway infrastructure, Solano County will continue its downward trend in pavement quality. This deterioration hinders Solano County from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save our cities millions in the future and strengthen our local economy.

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Appendix

Local Agency Handouts Describing Pavement Conditions, Pavement Maps, and Finances

Each local agency handout will describe each agency's unique approach to pavement management, including

- Brief introductions to general pavement conditions and issues
- Brief narrative describing the local agency's pavement maintenance and rehabilitation approach
- Current Pavement Condition Maps
- Charts showing the last 5 years of pavement investments
 - Includes non-pavement investments (i.e., curbs and gutters, sidewalks, storm drains, traffic signs, signals and lights)
- Future Pavement and Revenue Needs
- PCI Projection Maps for 2014, 2018, 2023, and 2028 using Current Budget Scenario.
- Budget Scenarios:
 - Current Budget
 - Maintain Current PCI
 - Target PCI 75

15 Year Pavement Cost Projections by Jurisdiction

City of Benicia Pavement Condition

The City of Benicia is responsible for the management, repair, and maintenance of 189 lane miles of pavement, or 552 pavement sections. The table below summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	56	17.14	36.57	62
Collector	45	15.44	30.88	77
Residential/Local	451	61.18	122.24	55
Total	552	93.76	189.70	60 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 60. While this PCI score is considered fair, it is very close to being “at-risk” and Benicia’s PCI has dropped from the previous year (PCI 61 in 2011). Currently, 27% of the City’s pavement area falls under “Excellent or Very Good”, 36% falls under “Good or Fair” and 37% falls under “Poor or Failed”. Again, compared with previous years, this shows a general trend towards the poorer pavement condition categories. If these are not addressed, the quality of the road network will inevitably decline. In order to correct these deficiencies, a cost-effective funding, maintenance and rehabilitation strategy must be implemented.

The City has been utilizing crack seals and surface treatments, such as slurry seals, as a means of preventive maintenance when the pavements are in “fair” condition or above. When the pavement condition deteriorates to lower levels, overlays and reconstruction have been performed.



Poor/Failed Pavement Condition



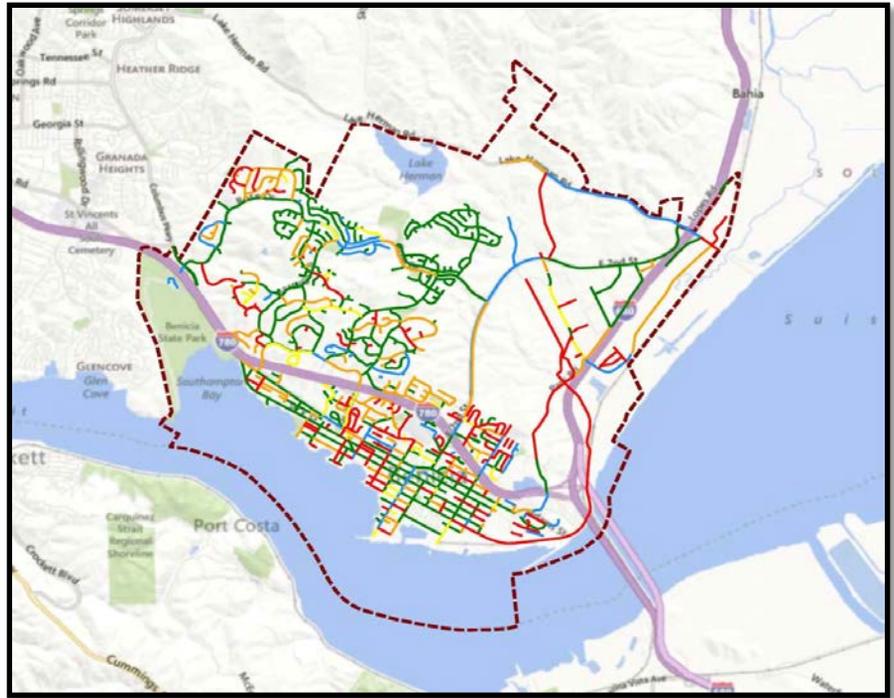
Excellent/Very Good Pavement Condition

Current Pavement Condition Index (PCI) Map

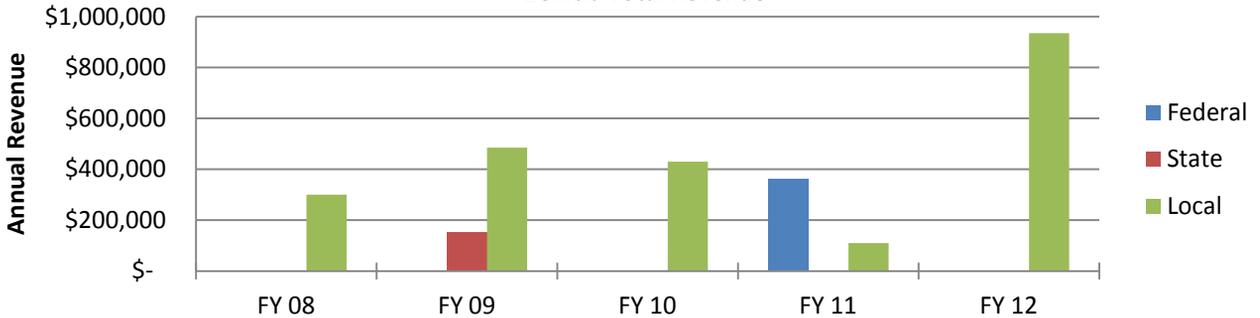
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

Past Streets and Roads Investments

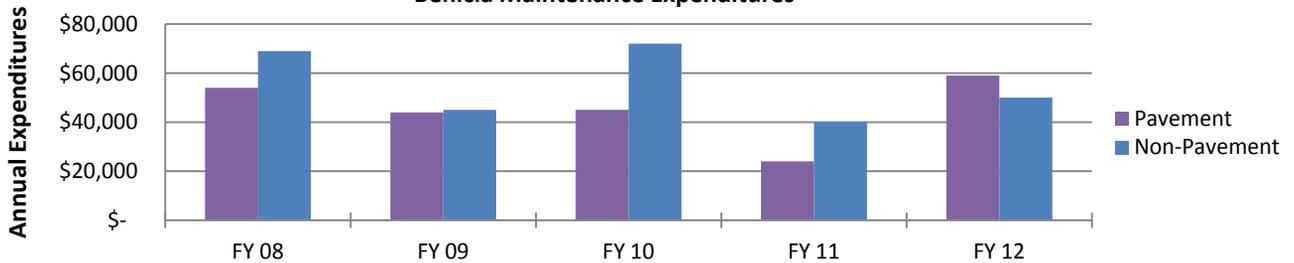
The current PCI reflects the past investments made in Benicia's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Benicia.



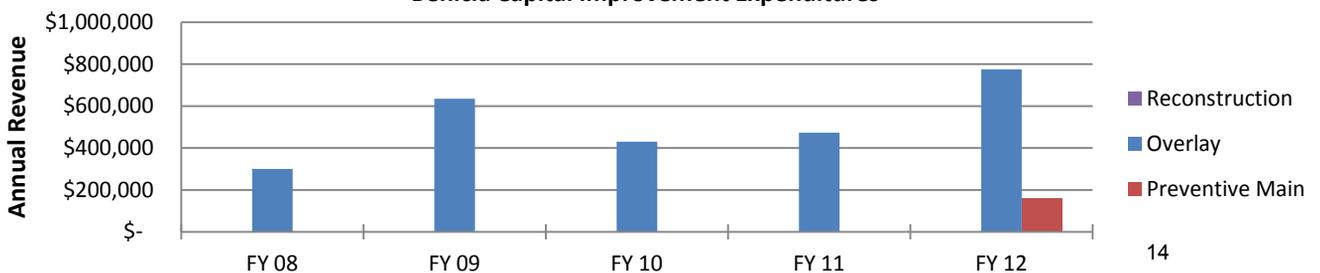
Benicia Total Revenue



Benicia Maintenance Expenditures



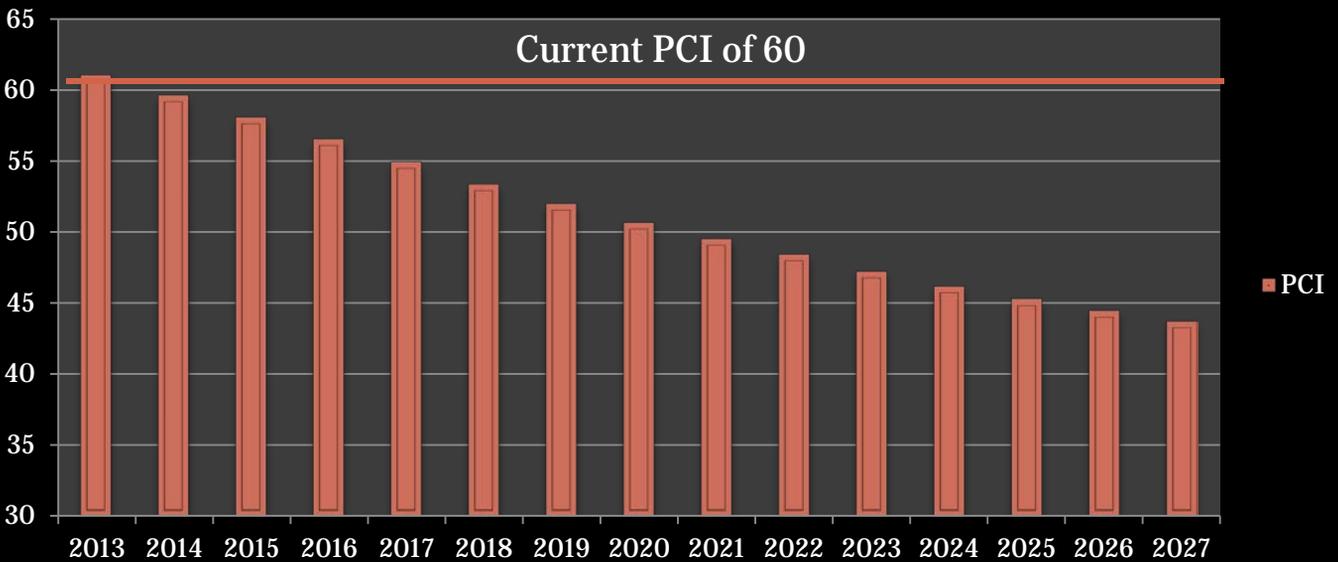
Benicia Capital Improvement Expenditures



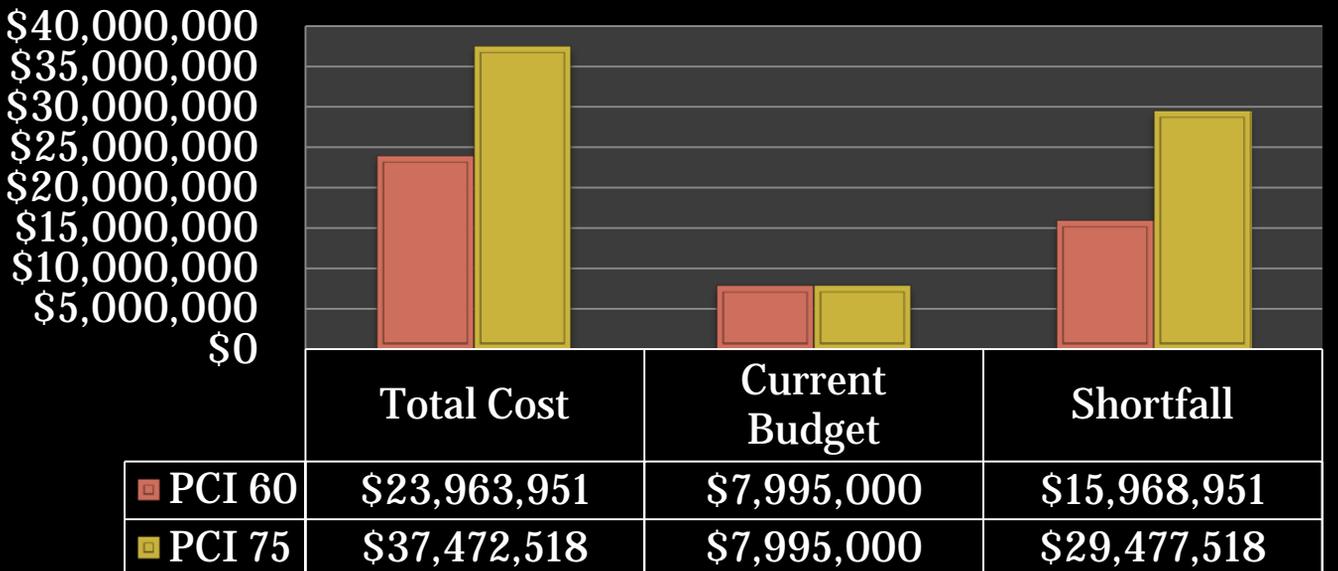
Future Pavement and Revenue Needs

In 2013 Benicia's average PCI was 60, with budget for roadway maintenance of \$533,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 60 (Fair) to 44 (Poor). **To maintain the current average PCI rating of 60 in the City of Benicia**, approximately \$24M would need to be spent over the next 15 years. The current budget provides approximately \$8M over 15 years, leaving a funding shortfall of approximately \$16M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$29M more than what is currently being budgeted would need to be invested in Benicia's roads over the next 15 years.

PCI with Current Budget (\$533,000 Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Benicia's current PCI of 60 should be viewed with caution, as it indicates that its local streets and roads are poised on the edge of a maintenance cliff.**

Benicia is currently on track to invest approximately 1/3 of the required \$24M necessary to keep the city's PCI at 60 over the next 15 years. If the city were to raise its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$29M more than the \$8M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Benicia will continue its downward trend in pavement quality. This deterioration hinders Benicia from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Benicia millions in the future and strengthen its local economy.



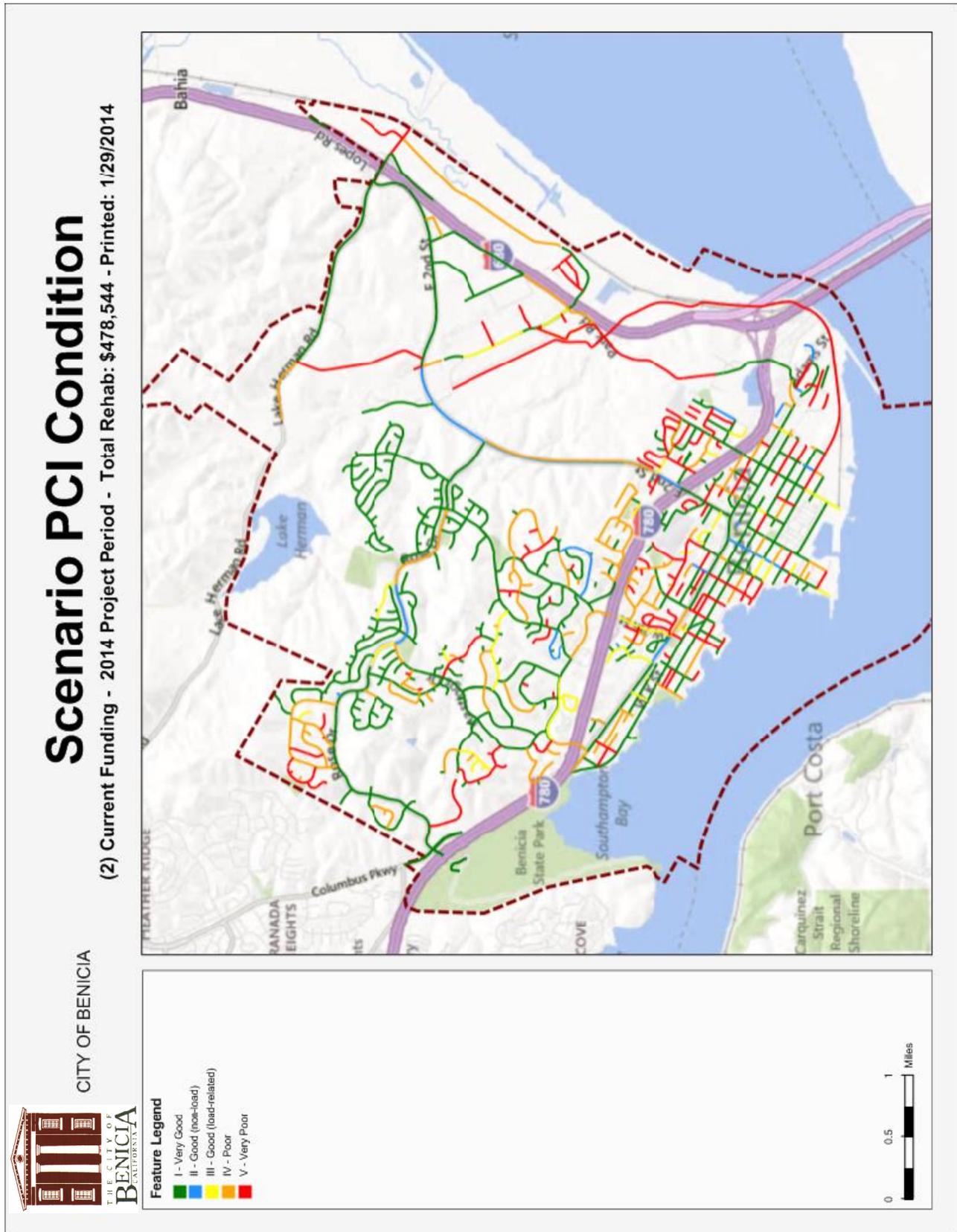
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

What will Benicia's Streets look like in the Future using Current Budget Scenarios?

The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).

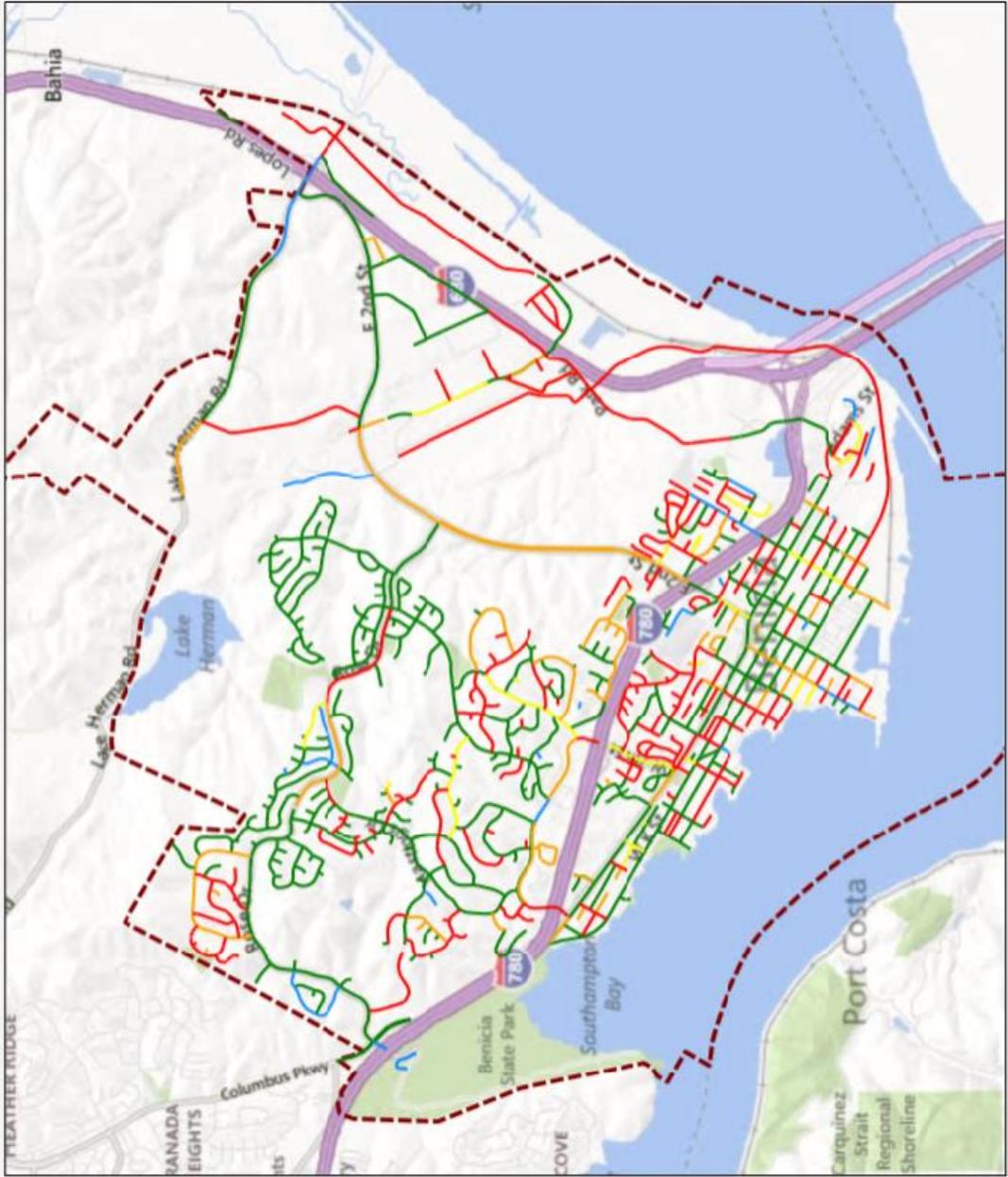




CITY OF BENICIA

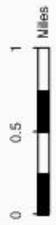
Scenario PCI Condition

(2) Current Funding - 2018 Project Period - Total Rehab: \$475,585 - Printed: 1/29/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

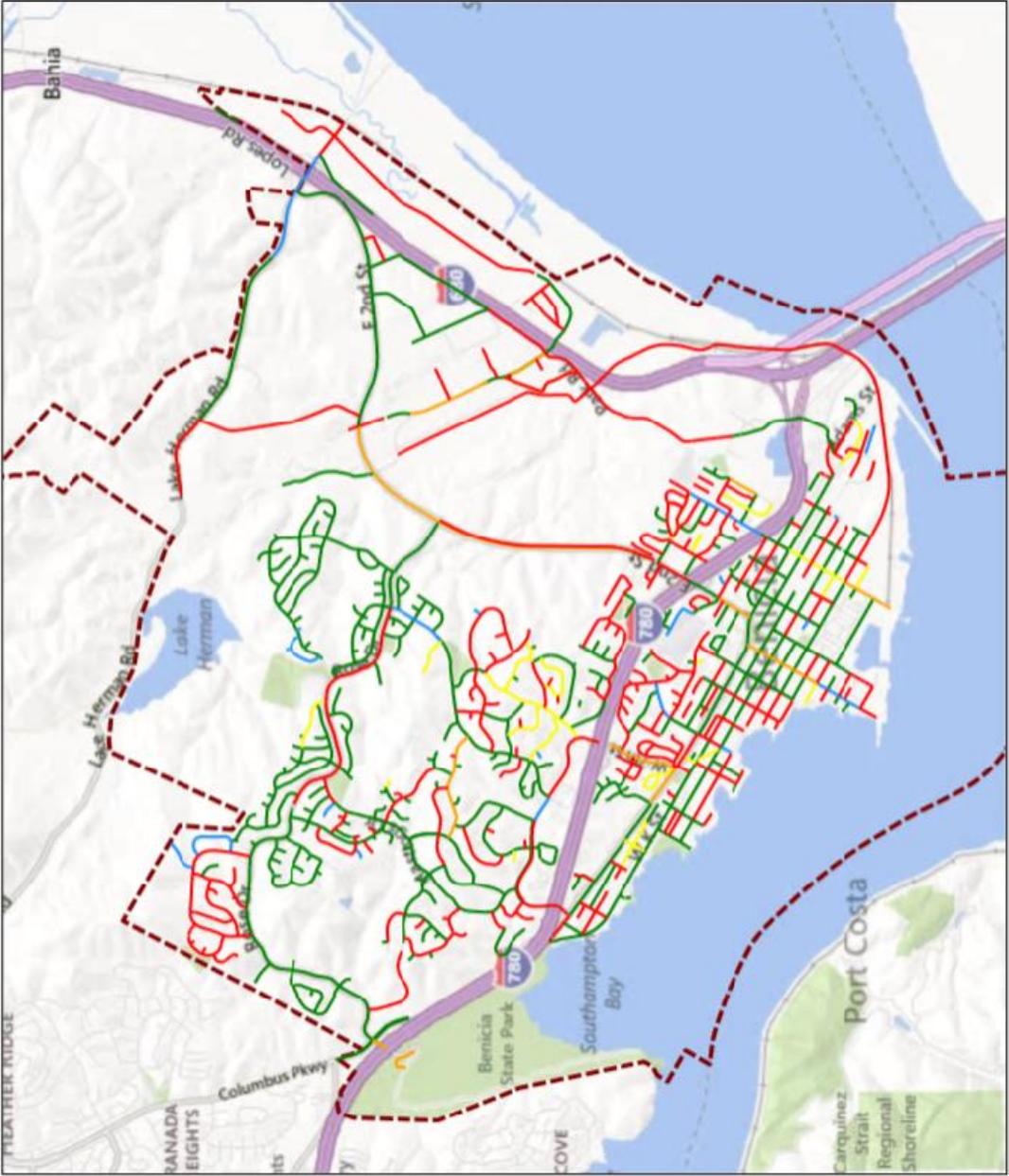




CITY OF BENICIA

Scenario PCI Condition

(2) Current Funding - 2023 Project Period - Total Rehab: \$463,438 - Printed: 1/29/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

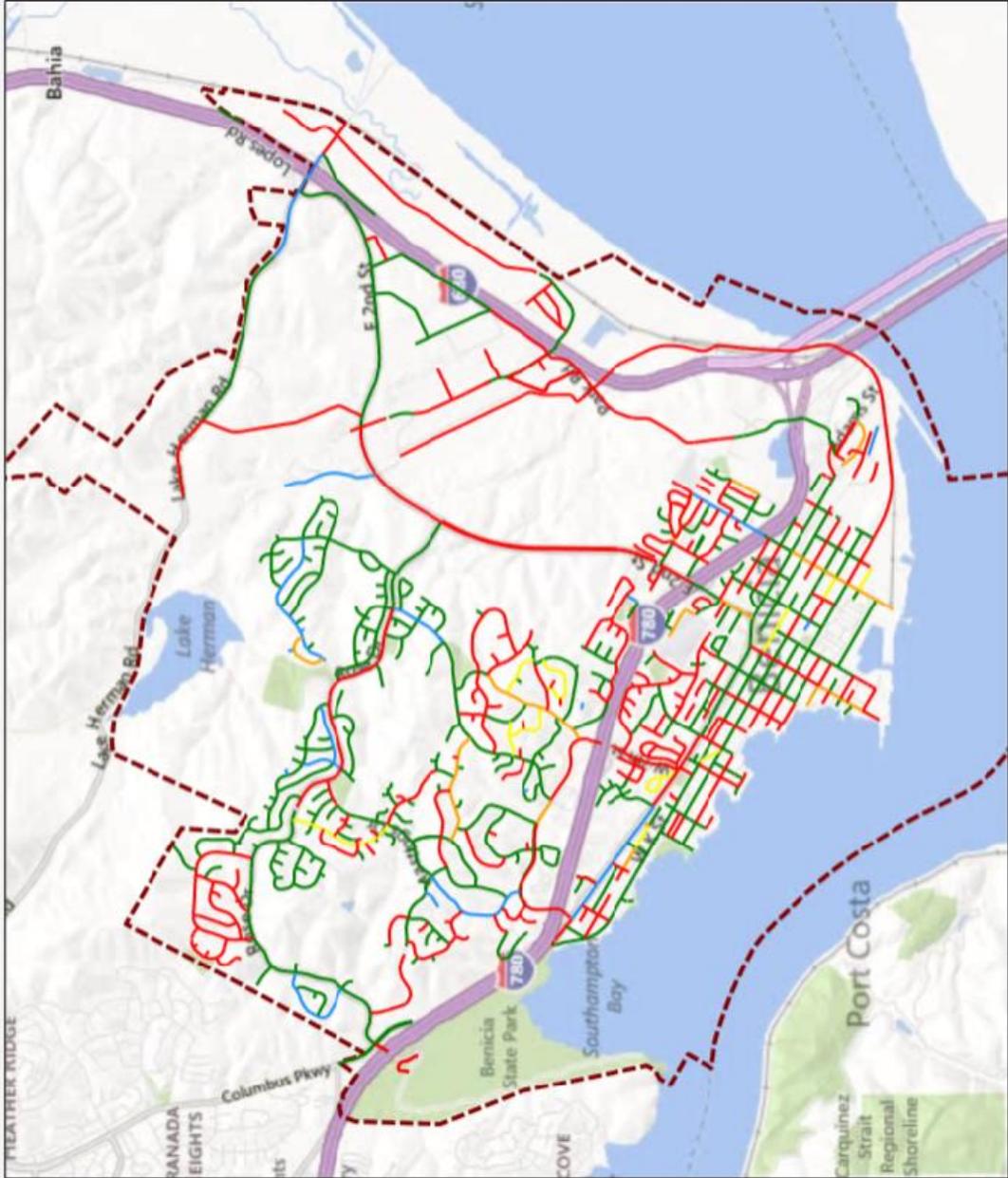




CITY OF BENICIA

Scenario PCI Condition

(2) Current Funding - 2028 Project Period - Total Rehab: \$474,444 - Printed: 1/29/2014



- Feature Legend**
- I - Very Good
 - II - Good (non-load)
 - III - Good (load-related)
 - IV - Poor
 - V - Very Poor



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF BENICIA

REVENUES												
	FY 08		FY 09		FY 10		FY 11		FY 12		TOTAL	
<i>Total Revenue</i>												
Federal	\$	-	\$	-	\$	-	\$	363,299	\$	-	\$	363,299
State	\$	-	\$	150,000	\$	-	\$	-	\$	-	\$	150,000
Local	\$	299,974	\$	485,000	\$	429,791	\$	110,000	\$	934,913	\$	2,259,678
TOTAL BY FISCAL YEAR	\$	299,974	\$	635,000	\$	429,791	\$	473,299	\$	934,913	\$	2,772,977

EXPENDITURES												
	FY 08		FY 09		FY 10		FY 11		FY 12		TOTAL	
<i>Maintenance and Operations</i>												
Pavement	\$	54,000	\$	44,000	\$	45,000	\$	24,000	\$	59,000	\$	226,000
Non-Pavement	\$	69,000	\$	45,000	\$	72,000	\$	40,000	\$	50,000	\$	276,000
<i>Capital Improvement Program</i>												
Reconstruction	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Overlay	\$	299,974	\$	635,000	\$	429,791	\$	473,299	\$	774,913	\$	2,612,977
Preventive Main	\$	-	\$	-	\$	-	\$	-	\$	160,000	\$	160,000
Non-Pavement												
TOTAL BY FISCAL YEAR	\$	422,974	\$	724,000	\$	546,791	\$	537,299	\$	1,043,913	\$	3,274,977

City of Benicia
Current Budget

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	60.063297	61.023648	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2014	57.816413	59.590453	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2015	55.552967	58.051836	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2016	53.236096	56.517064	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2017	50.90164	54.920928	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2018	48.595556	53.343858	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2019	46.36386	51.979814	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2020	44.216208	50.635434	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2021	42.190157	49.506087	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2022	40.174747	48.414035	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2023	38.173194	47.217626	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2024	36.180721	46.172468	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2025	34.236651	45.291072	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2026	32.388731	44.503446	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM
2027	30.554515	43.749083	3	3	PCI > 5	STA - current budget \$522k/yr 8%PM

City of Benicia

Scenario: Current PCI 60

Objective: Minimum Network Average PCI: 60.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,862,876
2014	\$366,146	\$0	\$0	\$0	\$366,146	\$0	\$788,580	\$0	\$1,154,726	\$19,571,596
2015	\$89,819	\$0	\$931,532	\$0	\$1,021,351	\$0	\$644,678	\$0	\$1,666,029	\$23,978,226
2016	\$0	\$597,326	\$1,166,541	\$0	\$1,763,867	\$0	\$41,625	\$0	\$1,805,492	\$25,733,851
2017	\$0	\$399,874	\$3,247,019	\$0	\$3,646,893	\$0	\$46,677	\$0	\$3,693,570	\$27,712,488
2018	\$0	\$14,755	\$1,918,358	\$302,838	\$2,235,951	\$0	\$238,599	\$0	\$2,474,550	\$29,321,473
2019	\$0	\$0	\$641,426	\$1,644,317	\$2,285,743	\$0	\$16,559	\$0	\$2,302,302	\$30,893,885
2020	\$160,329	\$0	\$298,769	\$162,769	\$621,867	\$0	\$848,115	\$0	\$1,469,982	\$36,854,356
2021	\$72,940	\$0	\$0	\$1,444,859	\$1,517,799	\$0	\$222,245	\$0	\$1,740,044	\$39,256,227
2022	\$118,950	\$0	\$54,975	\$820,999	\$994,924	\$0	\$455,694	\$0	\$1,450,618	\$39,612,907
2023	\$95,793	\$15,926	\$0	\$104,020	\$215,739	\$0	\$872,981	\$0	\$1,088,720	\$40,697,291
2024	\$0	\$0	\$298,072	\$884,402	\$1,182,474	\$0	\$431,920	\$0	\$1,614,394	\$41,033,824
2025	\$0	\$0	\$426,937	\$1,195,677	\$1,622,614	\$0	\$117,646	\$0	\$1,740,260	\$41,069,149
2026	\$99,047	\$0	\$0	\$0	\$99,047	\$0	\$876,951	\$0	\$975,998	\$42,893,653
2027	\$50,051	\$0	\$42,487	\$0	\$92,538	\$0	\$694,728	\$0	\$787,266	\$44,123,270

Summary

Functional Class	Rehabilitation	Prev. Maint.	Grand Total:
Arterial	\$4,509,104	\$1,429,635	
Collector	\$2,067,623	\$1,967,304	
Residential/Local	\$11,090,226	\$2,900,059	
Total:	\$17,666,953	\$6,296,998	\$23,963,951

Scenario: Benicia Target PCI 75

Objective: Minimum Network Average PCI: 75.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$313,710	\$960,830	\$4,644,499	\$6,271,764	\$12,190,803	\$0	\$1,121,273	\$0	\$13,312,076	\$4,550,928
2014	\$124,269	\$81,485	\$171,725	\$2,450,722	\$2,828,201	\$0	\$177,309	\$0	\$3,005,510	\$5,165,265
2015	\$42,968	\$446,097	\$1,345,168	\$775,396	\$2,609,629	\$0	\$109,576	\$0	\$2,719,205	\$9,245,020
2016	\$0	\$0	\$1,784,500	\$805,052	\$2,589,552	\$0	\$22,633	\$0	\$2,612,185	\$11,877,054
2017	\$0	\$0	\$1,933,489	\$430,197	\$2,363,686	\$0	\$53,507	\$0	\$2,417,193	\$14,919,998
2018	\$0	\$14,755	\$665,186	\$933,284	\$1,613,225	\$0	\$235,158	\$0	\$1,848,383	\$16,334,111
2019	\$92,609	\$0	\$42,187	\$487,916	\$622,712	\$0	\$909,622	\$0	\$1,532,334	\$16,588,805
2020	\$15,800	\$0	\$0	\$1,237,354	\$1,253,154	\$0	\$374,400	\$0	\$1,627,554	\$15,947,839
2021	\$146,112	\$0	\$0	\$0	\$146,112	\$0	\$918,560	\$0	\$1,064,672	\$17,535,576
2022	\$3,954	\$0	\$0	\$0	\$3,954	\$0	\$902,588	\$0	\$906,542	\$18,077,910
2023	\$15,632	\$0	\$468,131	\$0	\$483,763	\$0	\$918,234	\$0	\$1,401,997	\$17,461,421
2024	\$0	\$0	\$0	\$1,522,278	\$1,522,278	\$0	\$188,857	\$0	\$1,711,135	\$16,427,157
2025	\$43,447	\$0	\$0	\$0	\$43,447	\$0	\$814,605	\$0	\$858,052	\$17,383,592
2026	\$40,081	\$0	\$90,395	\$0	\$130,476	\$0	\$891,136	\$0	\$1,021,612	\$18,117,754
2027	\$8,768	\$279,154	\$42,487	\$883,840	\$1,214,249	\$0	\$219,819	\$0	\$1,434,068	\$17,524,329

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$5,747,463	\$1,863,101	
Collector	\$1,987,611	\$2,047,716	
Residential/Local	\$21,880,167	\$3,946,460	
Total:	\$29,615,241	\$7,857,277	Grand Total: \$37,472,518

City of Dixon

The City of Dixon is responsible for the management, repair, and maintenance of 125 lane miles of pavement, or 288 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	22	5.55	13.71	77
Collector	68	14.89	30.40	79
Residential/Local	198	40.78	80.52	77
Total	288	62.11	124.6	77 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 77. While this network PCI score is considered good, Dixon’s PCI has dropped from the previous year (PCI 78 in 2011). Currently, 61% of the City’s pavement area falls under “Excellent or Very Good”, 28% falls under “Good or Fair” and 11% falls under “Poor or Failed”. Compared to last year, this shows a general trend of sustaining good pavement condition categories.

While the City maintains an aggressive preventative maintenance program to address shortfalls in the residential and collector streets, particular focus on arterials will be needed due to the heavy traffic load on its arterial roadways.

Excellent/Very Good Pavement Condition



Poor/Failed Pavement Condition

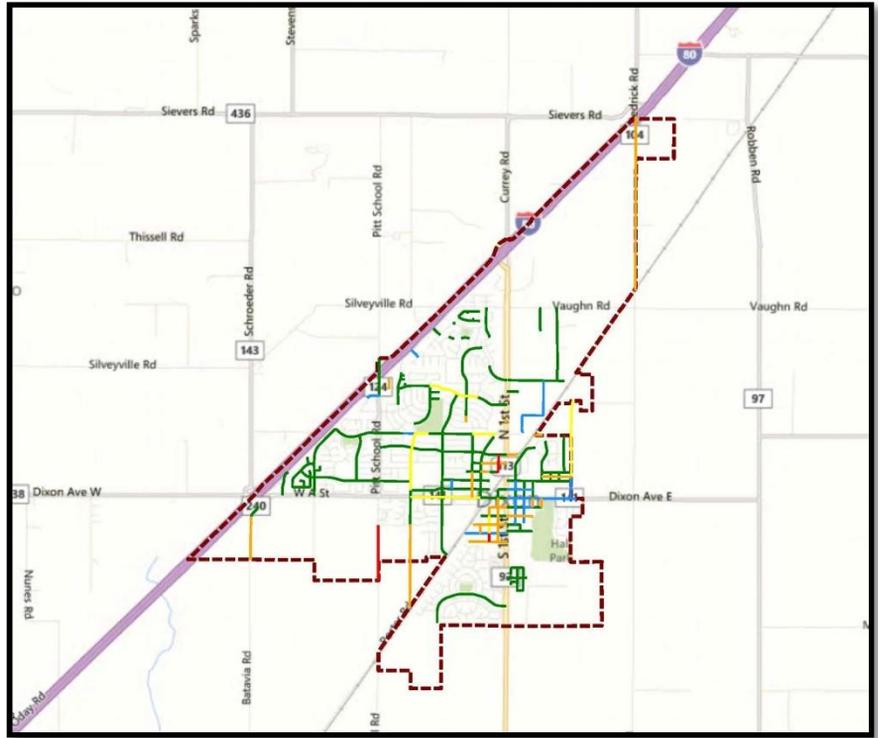


Current Pavement Condition Index (PCI) Map

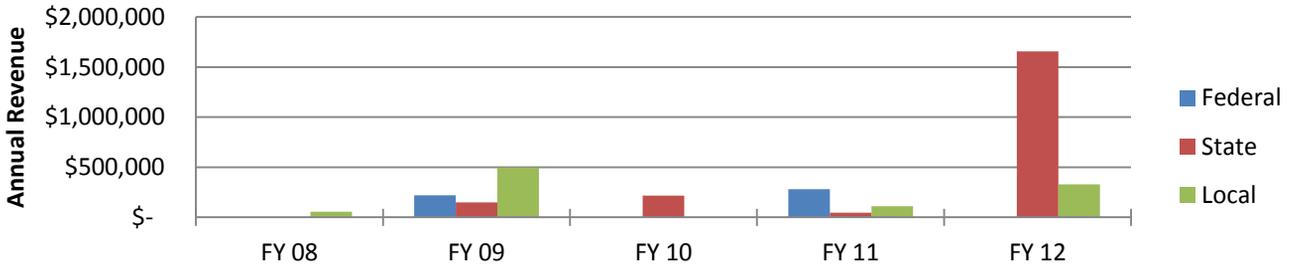
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

Past Streets and Roads Investments

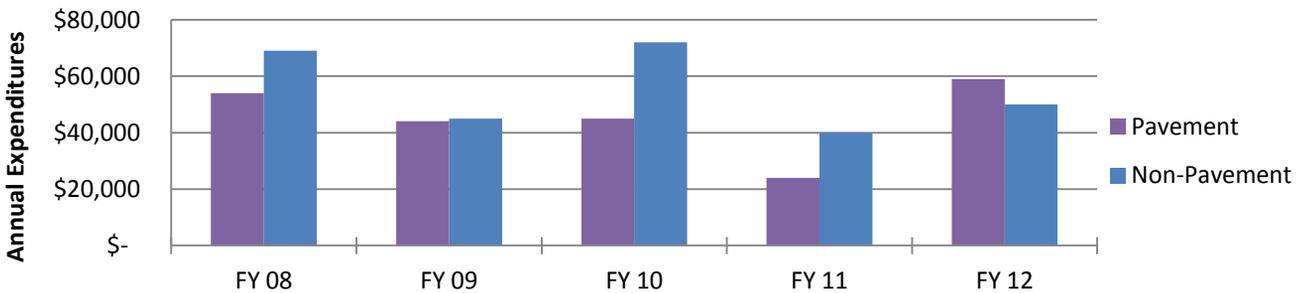
The current PCI reflects the past investments made in Dixon's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Dixon.



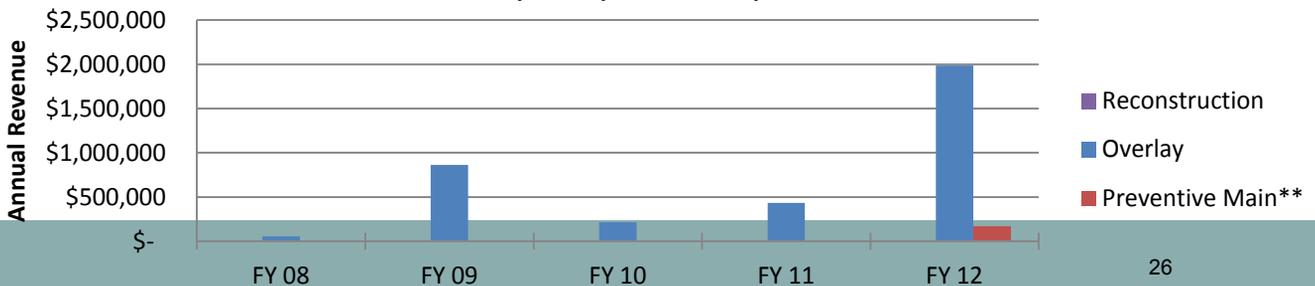
Dixon Total Revenue



Dixon Maintenance Expenditures



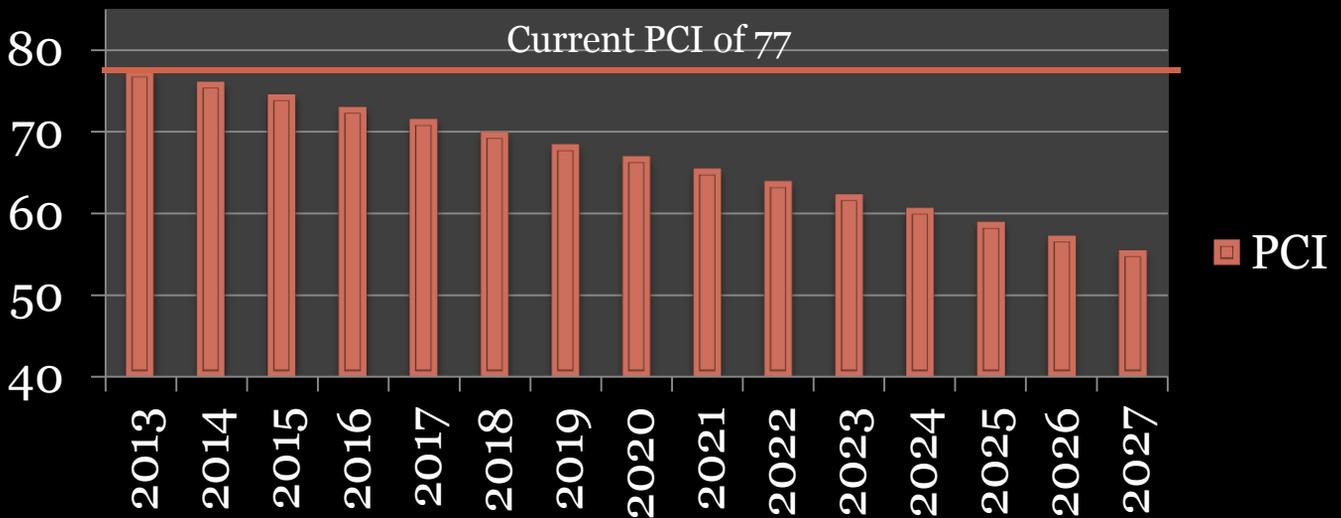
Dixon Capital Improvement Expenditures



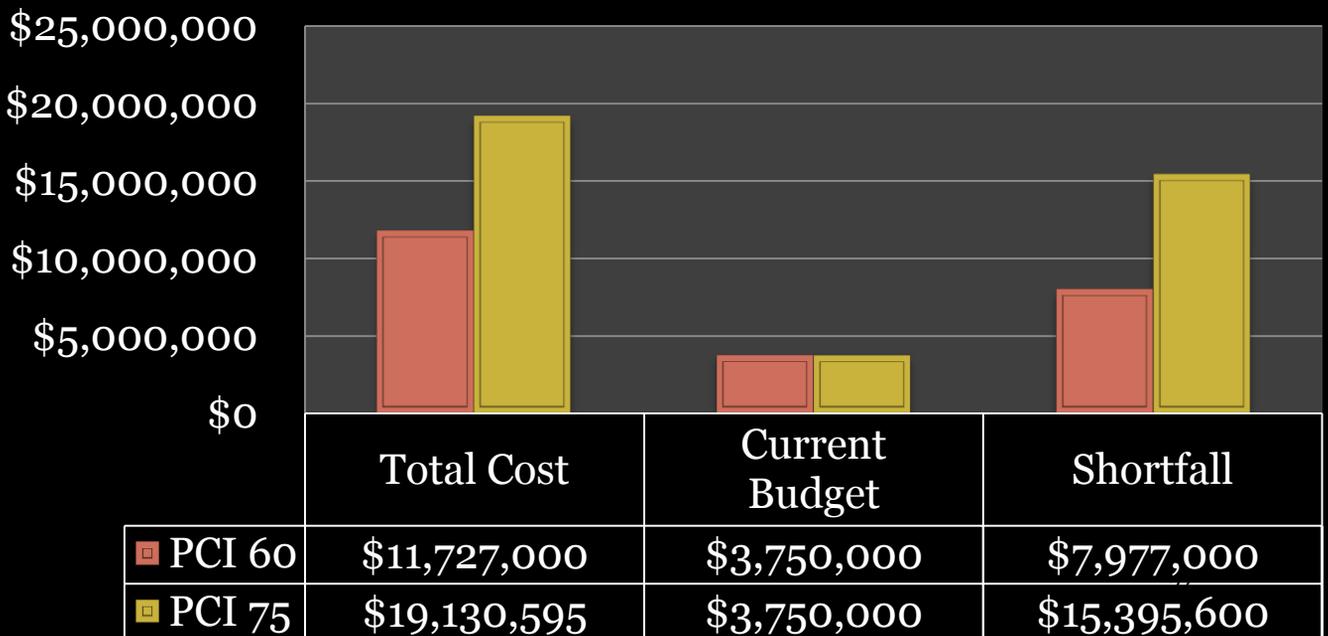
Future Pavement and Revenue Needs

In 2013 Dixon's average PCI was 77, with a budget for roadway maintenance of \$250,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 77 (Good) to 56 (At Risk). **To maintain a minimum average PCI rating of 60 in the City of Dixon**, approximately \$11.7M would need to be spent over the next 15 years. The current budget provides \$3.75M over 15 years, leaving a funding shortfall of approximately \$8M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$15M more than what is currently being budgeted would need to be invested in Dixon's roads over the next 15 years.

PCI with Current Budget (\$250,000 Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Dixon's current PCI of 77 should be viewed with an understanding that maintaining this "good" classification will be cheaper in the long-term than maintaining the roads at a lower PCI score.**

Dixon is currently on track to invest approximately 1/3rd of the required \$12M necessary to keep the city's PCI at 60 over the next 15 years. If the city were to maintain its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$15M more than the \$3.75M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Dixon will continue its downward trend in pavement quality. This deterioration hinders Dixon from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Dixon millions in the future and strengthen its local economy.



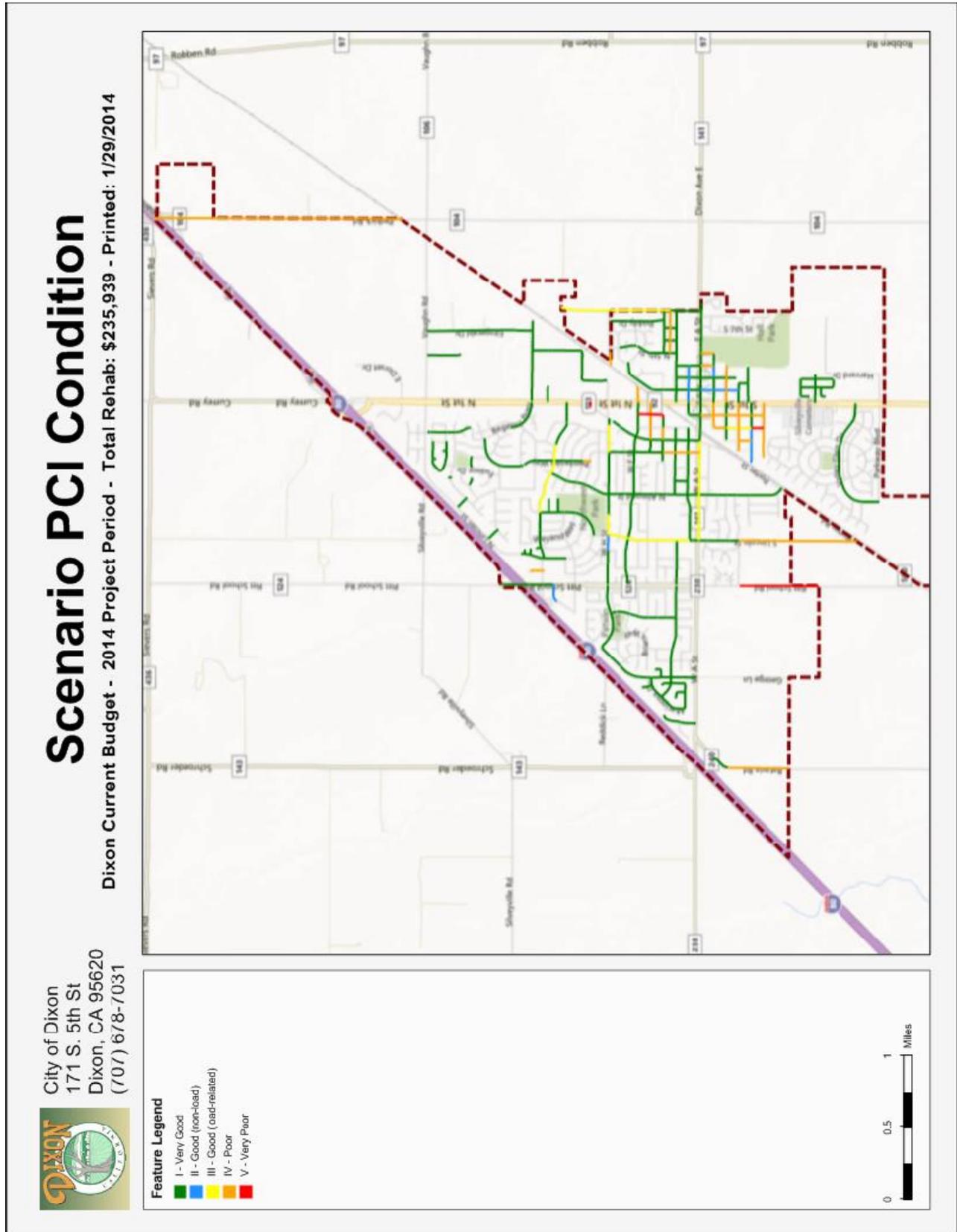
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

What will Dixon's Streets look like in the Future using Current Budget Scenarios?

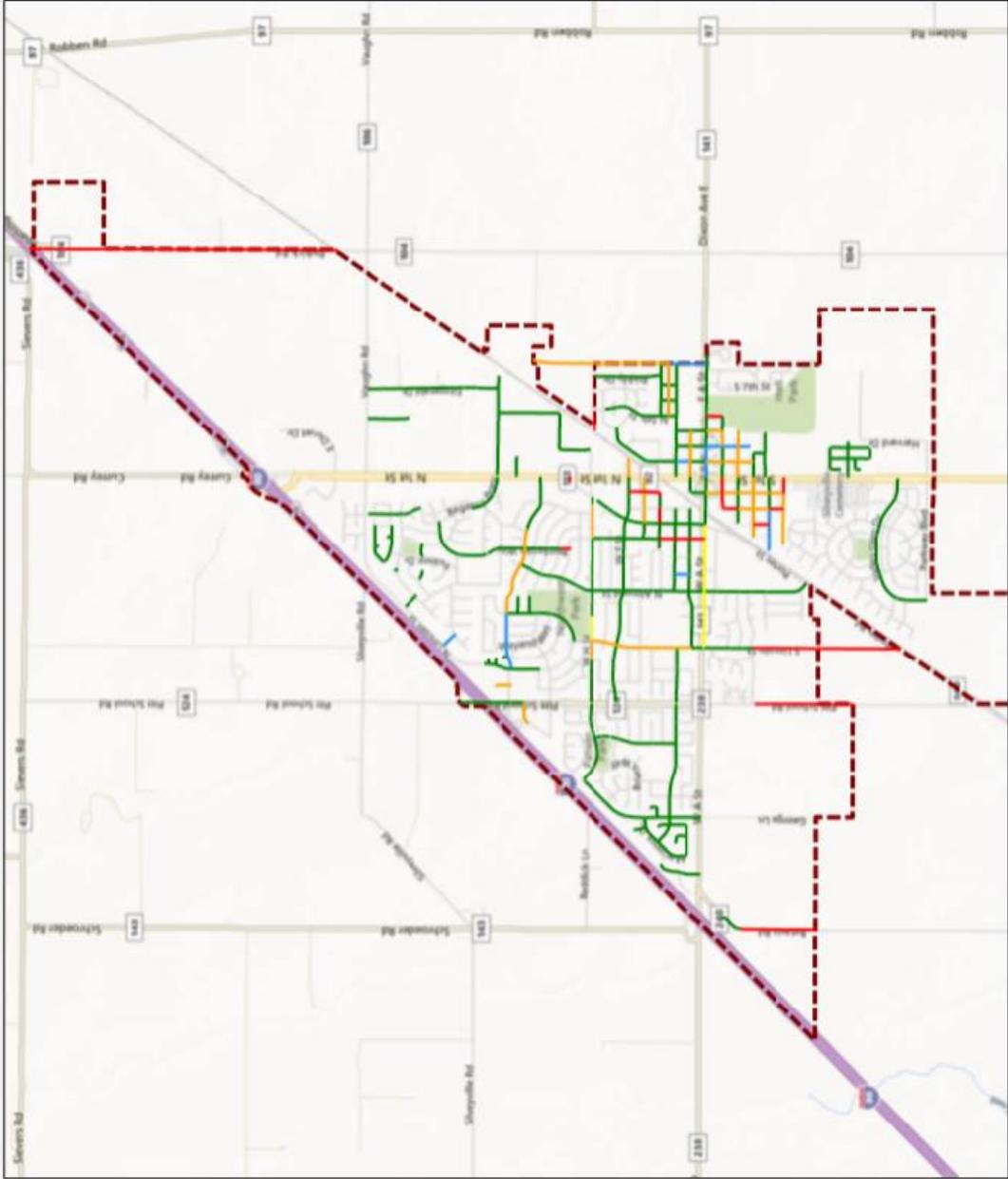
The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).



Scenario PCI Condition

Dixon Current Budget - 2018 Project Period - Total Rehab: \$237,459 - Printed: 1/29/2014

City of Dixon
 171 S. 5th St
 Dixon, CA 95620
 (707) 678-7031



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

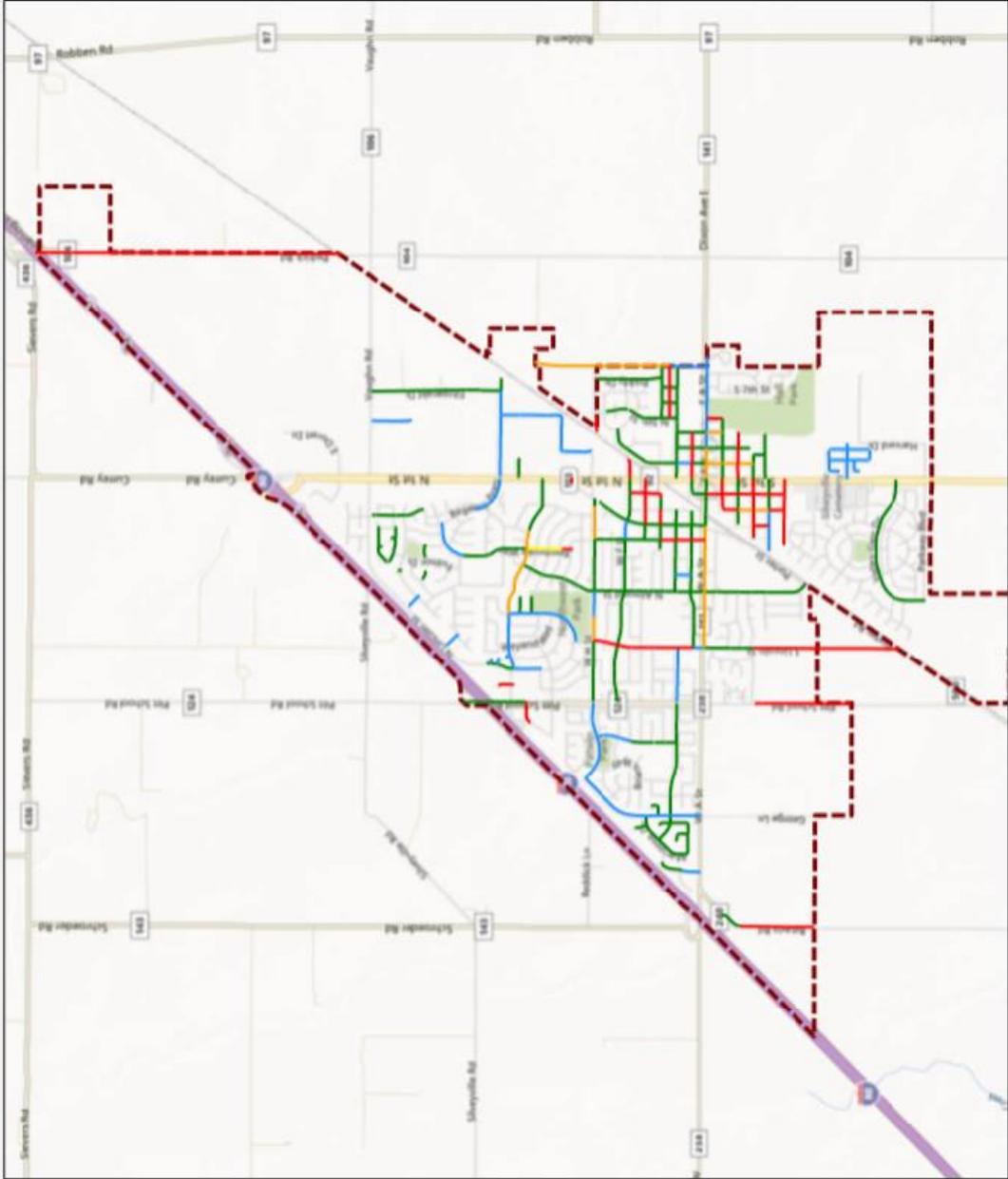




City of Dixon
 171 S. 5th St
 Dixon, CA 95620
 (707) 678-7031

Scenario PCI Condition

Dixon Current Budget - 2023 Project Period - Total Rehab: \$235,845 - Printed: 1/29/2014



Feature Legend

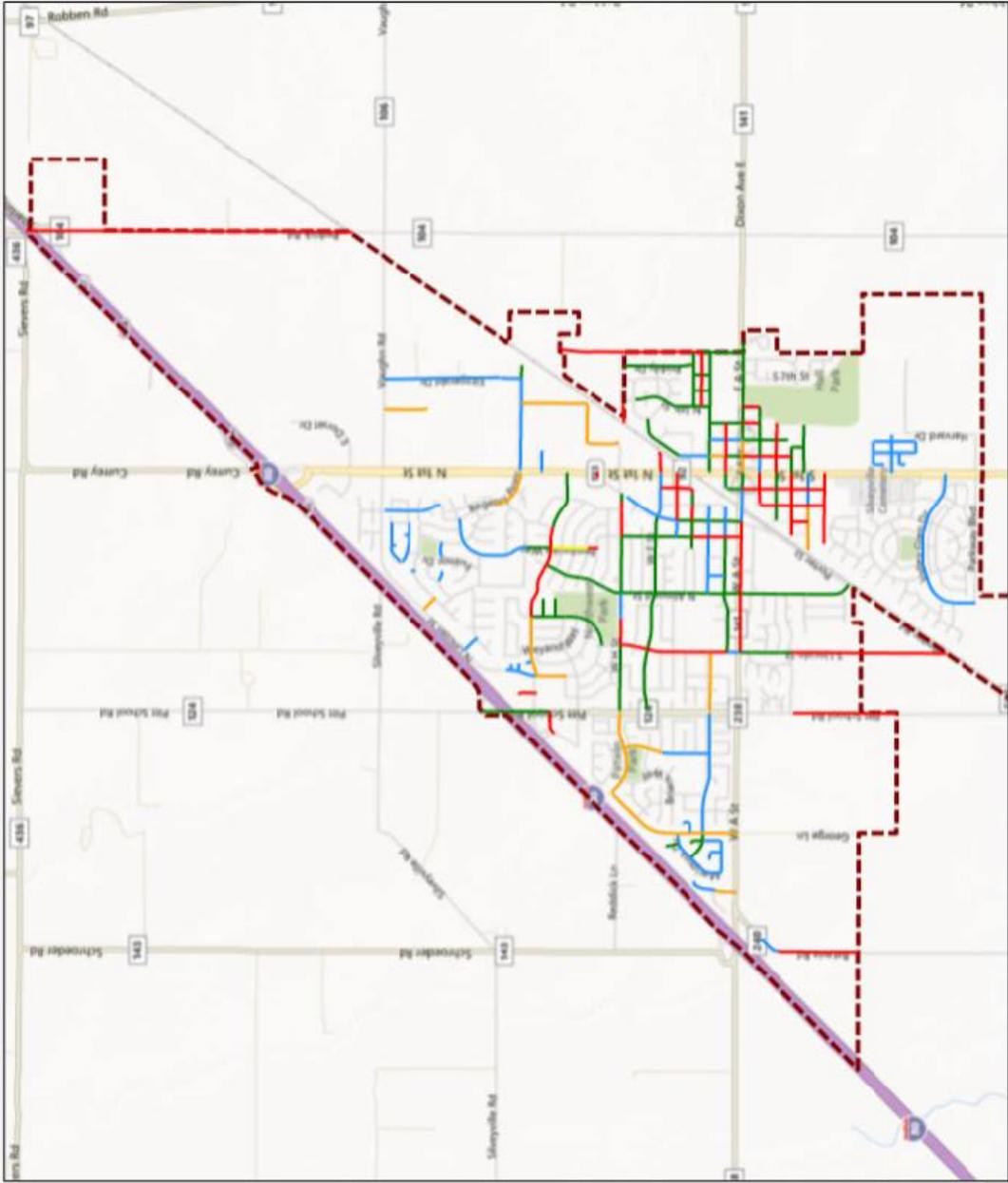
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



Scenario PCI Condition

Dixon Current Budget - 2028 Project Period - Total Rehab: \$233,101 - Printed: 1/29/2014

City of Dixon
 171 S. 5th St
 Dixon, CA 95620
 (707) 678-7031



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF DIXON

REVENUES												
	FY 08		FY 09		FY 10		FY 11		FY 12		TOTAL	
<i>Total Revenue</i>												
Federal	\$	-	\$	219,196	\$	-	\$	279,085	\$	-	\$	498,281
State	\$	-	\$	150,000	\$	215,000	\$	45,516	\$	1,657,545	\$	2,068,061
Local	\$	54,046	\$	495,139			\$	110,000	\$	328,403	\$	987,588
TOTAL BY FISCAL YEAR	\$	54,046	\$	864,335	\$	215,000	\$	434,601	\$	1,985,948	\$	3,553,930

EXPENDITURES												
	FY 08		FY 09		FY 10		FY 11		FY 12		TOTAL	
<i>Maintenance and Operations*</i>												
Pavement	\$	54,000	\$	44,000	\$	45,000	\$	24,000	\$	59,000	\$	226,000
Non-Pavement	\$	69,000	\$	45,000	\$	72,000	\$	40,000	\$	50,000	\$	276,000
<i>Capital Improvement Program</i>												
Reconstruction	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Overlay	\$	54,046	\$	864,335	\$	215,000	\$	434,601	\$	1,985,948	\$	3,553,930
Preventive Main**	\$	-	\$	-	\$	-	\$	-	\$	160,000	\$	160,000
Non-Pavement	\$	-	\$	40,000	\$	10,000	\$	45,516	\$	850,485		
TOTAL BY FISCAL YEAR	\$	177,046	\$	993,335	\$	342,000	\$	544,117	\$	3,105,433	\$	4,215,930

* 30% of \$362,071 annual maintenance budget

** No Preventive Maintenance work done between FY08-12. Used a 3yr floating average from 2 slurry seal projects from FY07 & FY13

**City of Dixon
Current Budget**

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	76.98027	77.435459	3	3		STA - 250k/yr 5%PM
2014	75.134138	76.028732	3	3		STA - 250k/yr 5%PM
2015	73.280584	74.520299	3	3		STA - 250k/yr 5%PM
2016	71.396034	72.956883	3	3		STA - 250k/yr 5%PM
2017	69.47825	71.504683	3	3		STA - 250k/yr 5%PM
2018	67.519857	69.953289	3	3		STA - 250k/yr 5%PM
2019	65.502965	68.454972	3	3		STA - 250k/yr 5%PM
2020	63.475592	66.9858	3	3		STA - 250k/yr 5%PM
2021	61.40865	65.489281	3	3		STA - 250k/yr 5%PM
2022	59.272217	63.936871	3	3		STA - 250k/yr 5%PM
2023	57.077962	62.335255	3	3		STA - 250k/yr 5%PM
2024	54.818351	60.68975	3	3		STA - 250k/yr 5%PM
2025	52.489395	58.984286	3	3		STA - 250k/yr 5%PM
2026	50.126564	57.263294	3	3		STA - 250k/yr 5%PM
2027	47.693062	55.501469	3	3		STA - 250k/yr 5%PM

Dixon

Target PCI

Scenario: bad 10%

Objective: Maximum Percent In Poor Condition: 10.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,778,537
2014	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,513,021
2015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,595,795
2016	\$309,844	\$310,043	\$1,958,831	\$0	\$2,578,718	\$0	\$3,067,493	\$0	\$5,646,211	\$5,164,218
2017	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,871,430
2018	\$0	\$206,549	\$1,026,521	\$0	\$1,233,070	\$0	\$50,931	\$0	\$1,284,001	\$6,897,577
2019	\$0	\$3,344	\$1,269,666	\$0	\$1,273,010	\$0	\$40,299	\$0	\$1,313,309	\$7,271,757
2020	\$0	\$20,846	\$380,055	\$0	\$400,901	\$0	\$431	\$0	\$401,332	\$8,512,451
2021	\$0	\$0	\$1,042,033	\$0	\$1,042,033	\$0	\$3,507	\$0	\$1,045,540	\$10,486,337
2022	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,581,492
2023	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,676,661
2024	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,162,902
2025	\$629,613	\$464,506	\$1,907,993	\$0	\$3,002,112	\$0	\$3,680,554	\$0	\$6,682,666	\$11,978,326
2026	\$0	\$0	\$963,437	\$0	\$963,437	\$0	\$117,115	\$0	\$1,080,552	\$12,335,808
2027	\$0	\$0	\$1,656,113	\$0	\$1,656,113	\$0	\$35,876	\$0	\$1,691,989	\$13,327,526

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$2,312,524	\$628,617	
Collector	\$6,359,445	\$1,433,248	
Other	\$175,053	\$119,651	
Residential/Local	\$3,302,372	\$4,814,690	
Total:	\$12,149,394	\$6,996,206	Grand Total: \$19,145,600

Scenario: Dixon PCI 60

Objective: Minimum Network Average PCI: 60.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,778,537
2014	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,513,021
2015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,595,795
2016	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,810,345
2017	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,878,998
2018	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,819,230
2019	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,349,254
2020	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,006,645
2021	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,344,615
2022	\$48,933	\$0	\$0	\$0	\$48,933	\$0	\$486,924	\$0	\$535,857	\$22,286,538
2023	\$396,642	\$0	\$0	\$0	\$396,642	\$0	\$836,884	\$0	\$1,233,526	\$24,305,000
2024	\$1,077,217	\$0	\$0	\$0	\$1,077,217	\$0	\$216,040	\$0	\$1,293,257	\$23,079,546
2025	\$91,517	\$160,855	\$2,523,301	\$0	\$2,775,673	\$0	\$8,955	\$0	\$2,784,628	\$24,907,036
2026	\$0	\$0	\$2,682,277	\$0	\$2,682,277	\$0	\$26,805	\$0	\$2,709,082	\$31,071,707
2027	\$0	\$24,923	\$3,121,238	\$0	\$3,146,161	\$0	\$24,489	\$0	\$3,170,650	\$34,591,773

Summary

Functional Class	Rehabilitation	Prev. Maint.		
Arterial	\$1,269,589	\$185,396		
Collector	\$7,400,648	\$188,573		
Other	\$0	\$55,222		
Residential/Local	\$1,456,666	\$1,170,906		
Total:	\$10,126,903	\$1,600,097	Grand Total:	\$11,727,000

City of Fairfield

The City of Fairfield is responsible for the management, repair, and maintenance of 713 lane miles of pavement, or 1,640 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	88	57.8	166.2	71
Collector	122	52.1	124.1	68
Residential/Local	1368	200.94	404.1	71
Other (Parking lot, alleys)	62	12.3	18.6	N/A
Total	1640	323.14	713	73 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 73. This network PCI score is considered good, and Fairfield’s PCI has remained consistent from the previous year (PCI 73 in 2011). Currently, 34% of the City’s pavement area falls under “Excellent or Very Good”, 36% falls under “Good or Fair” and 12% falls under “Poor or Failed”. Again, compared with previous years, this shows a consistency in pavement condition categories.

Historically, the City utilizes a program of surface seals and overlays as maintenance and rehabilitation strategies. Surface treatments, such as slurry seals and cape seals, have been usually utilized as a preventive maintenance technique when the pavements are in “Good” condition or above. When the pavement condition deteriorates to lower levels, thin and thick overlays have been performed. Base repairs were typically used as preparation prior to overlays and surface seals as necessary.



Poor/Failed Pavement Condition

Excellent/Very Good Pavement Condition

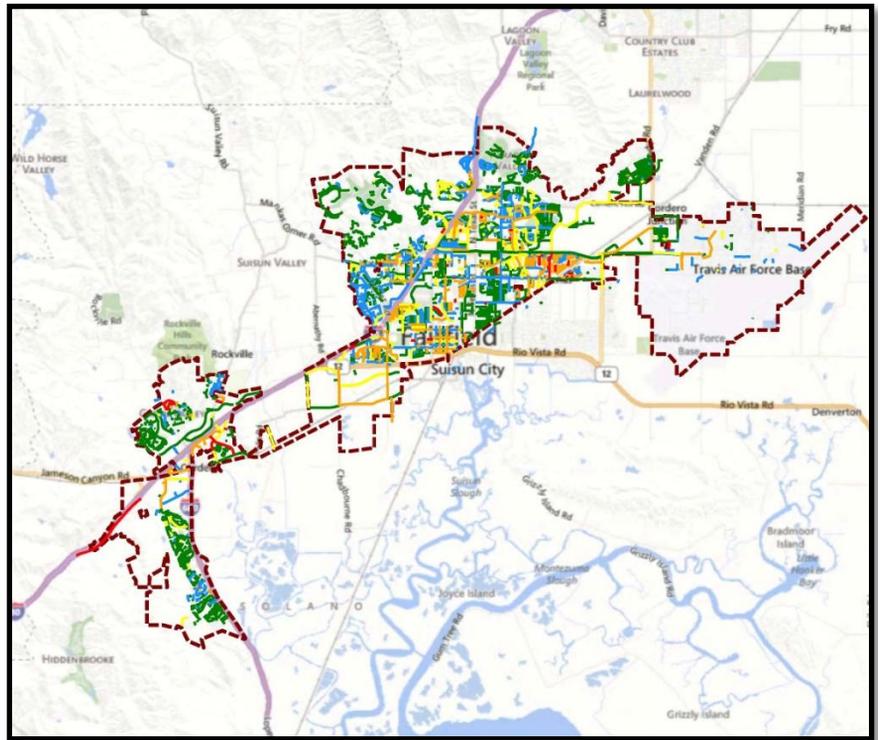


Current Pavement Condition Index (PCI) Map

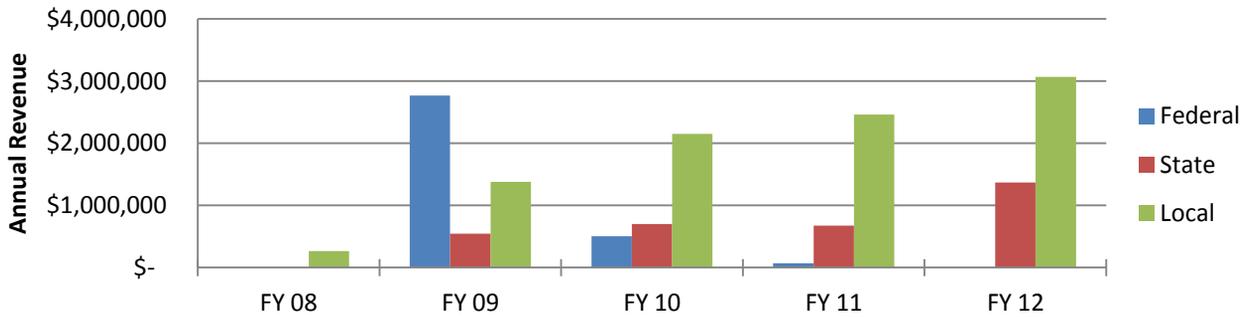
- I - Very Good
- II - Good (non-load)
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- IV - Poor
- V - Very Poor

Past Streets and Roads Investments

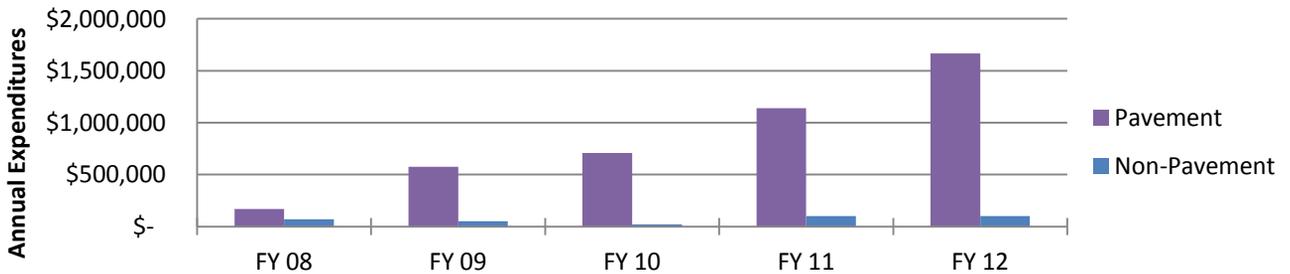
The current PCI reflects the past investments made in Fairfield's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Fairfield.



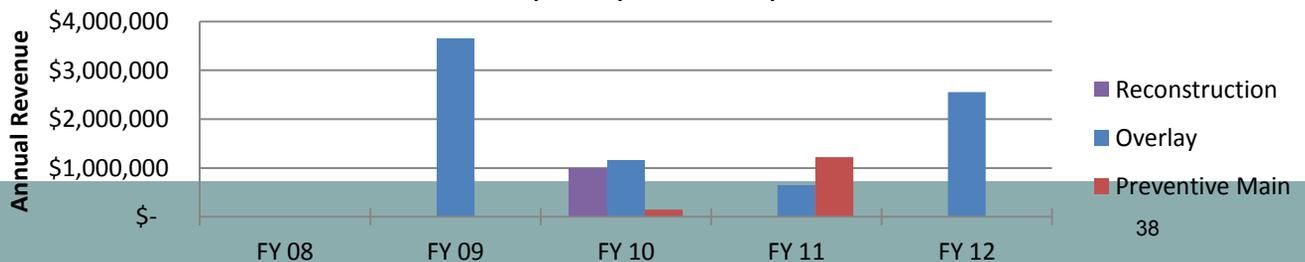
Fairfield Total Revenue



Fairfield Maintenance Expenditures



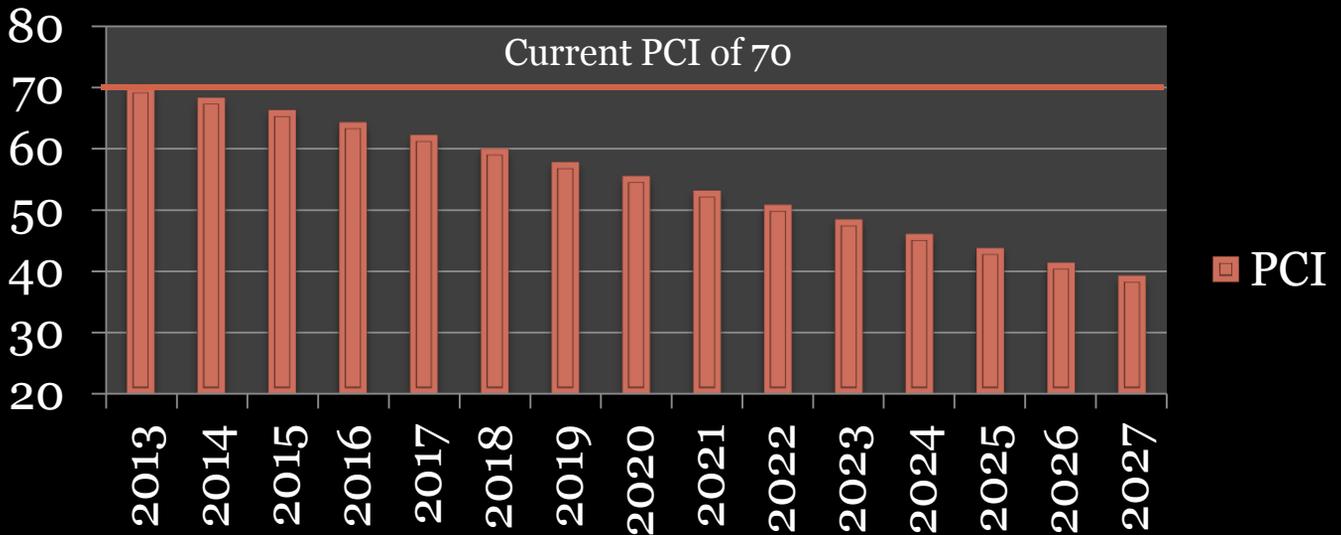
Fairfield Capital Improvement Expenditures



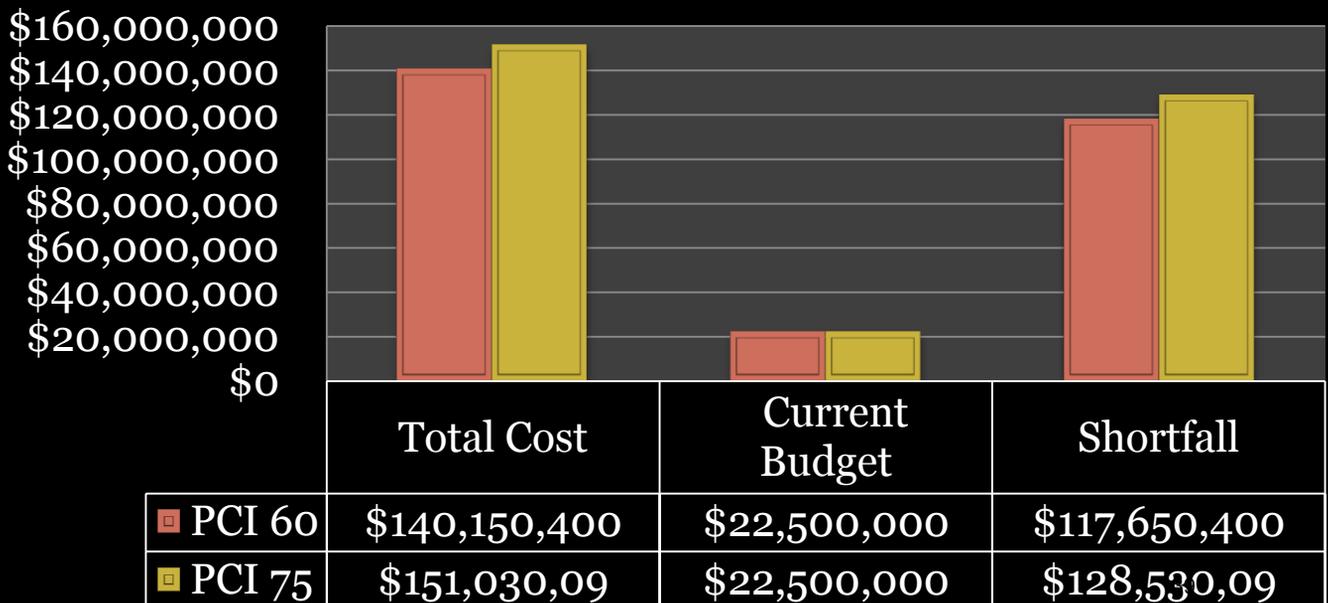
Future Pavement and Revenue Needs

In 2013 Fairfield's average PCI was 70, with a budget for roadway maintenance of \$1,500,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 70 (Good) to 39 (Poor). **To maintain a minimum average PCI rating of 60 in the City of Fairfield**, approximately \$140M would need to be spent over the next 15 years. The current budget provides \$22.5M over 15 years, leaving a funding shortfall of approximately \$117.6M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$15M more than what is currently being budgeted would need to be invested in Fairfield's roads over the next 15 years.

PCI with Current Budget (\$1.5M Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Fairfield's current PCI of 70 should be viewed with an understanding that maintaining this "good" classification will be cheaper in the long-term than maintaining the roads at a lower PCI score.**

Fairfield is currently on track to invest approximately 1/6th of the required \$140M necessary to keep the city's PCI at 60 over the next 15 years. If the city were to raise its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$128M more than the \$22.5M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Fairfield will continue its downward trend in pavement quality. This deterioration hinders Fairfield from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Fairfield millions in the future and strengthen its local economy.



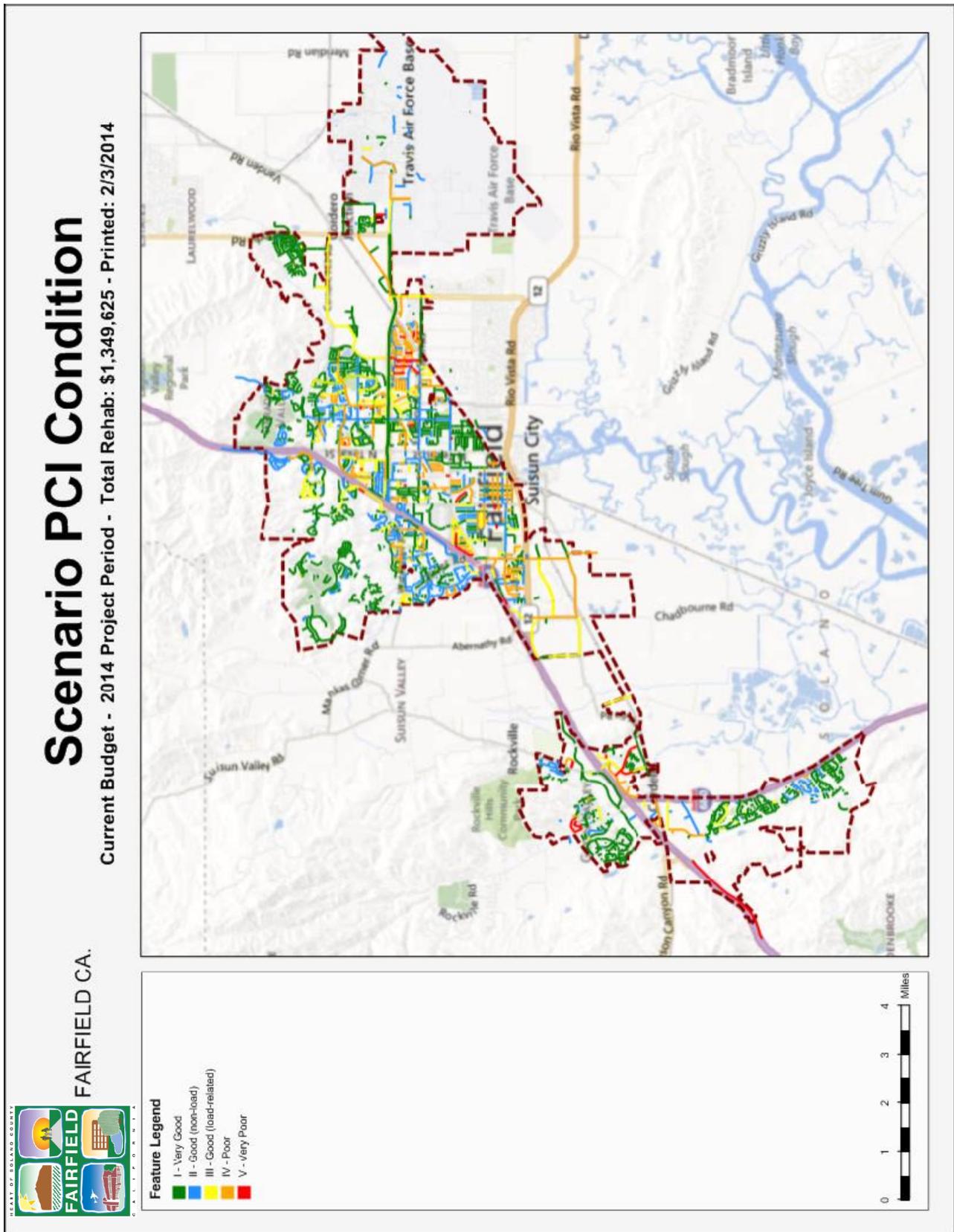
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

What will Fairfield's Streets look like in the Future using Current Budget Scenarios?

The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).

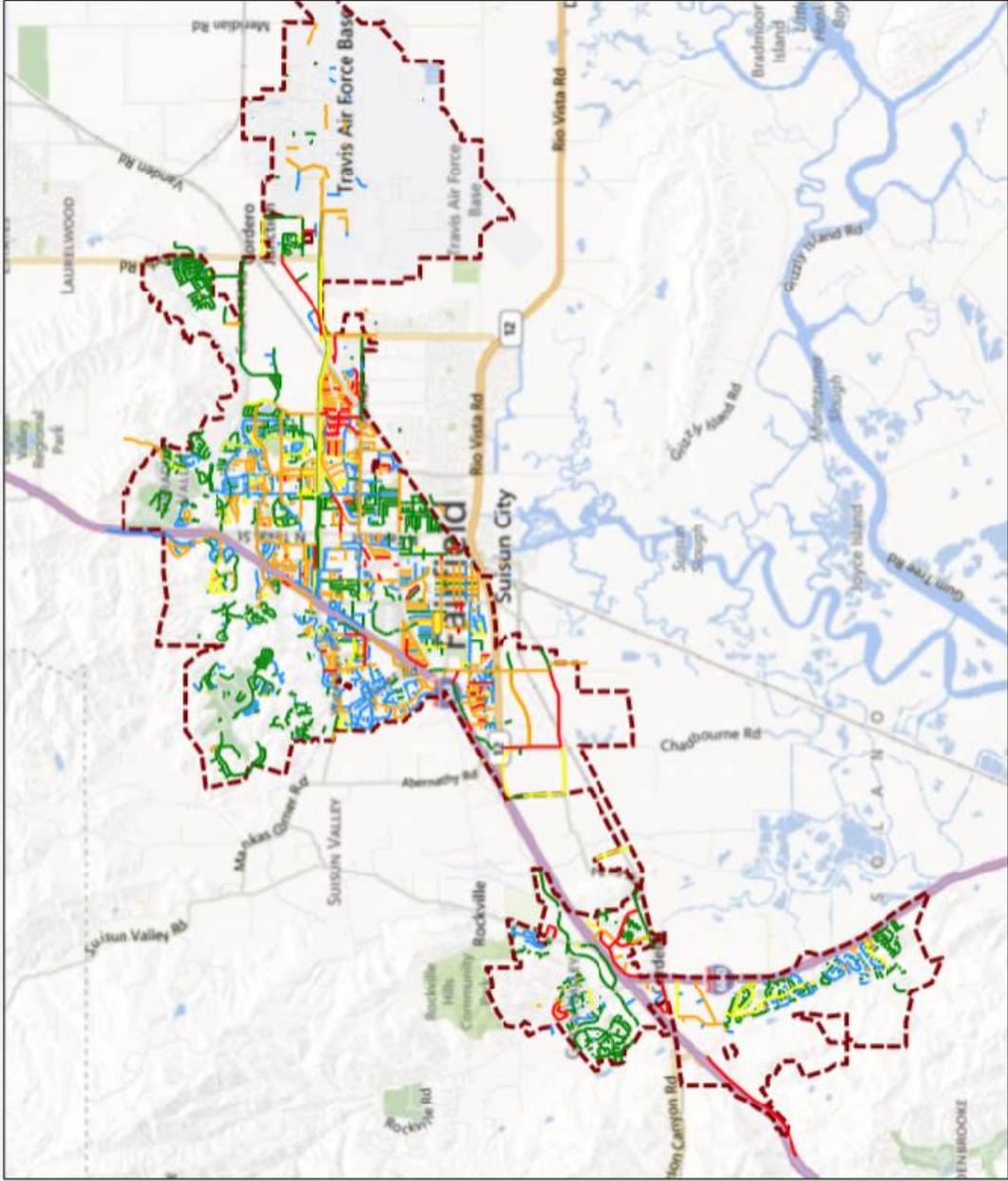




HEART OF SOLANO COUNTY
FAIRFIELD CA.
 A L I C E S O L A N O C O U N T Y

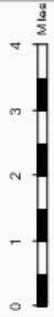
Scenario PCI Condition

Current Budget - 2018 Project Period - Total Rehab: \$1,349,897 - Printed: 2/3/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

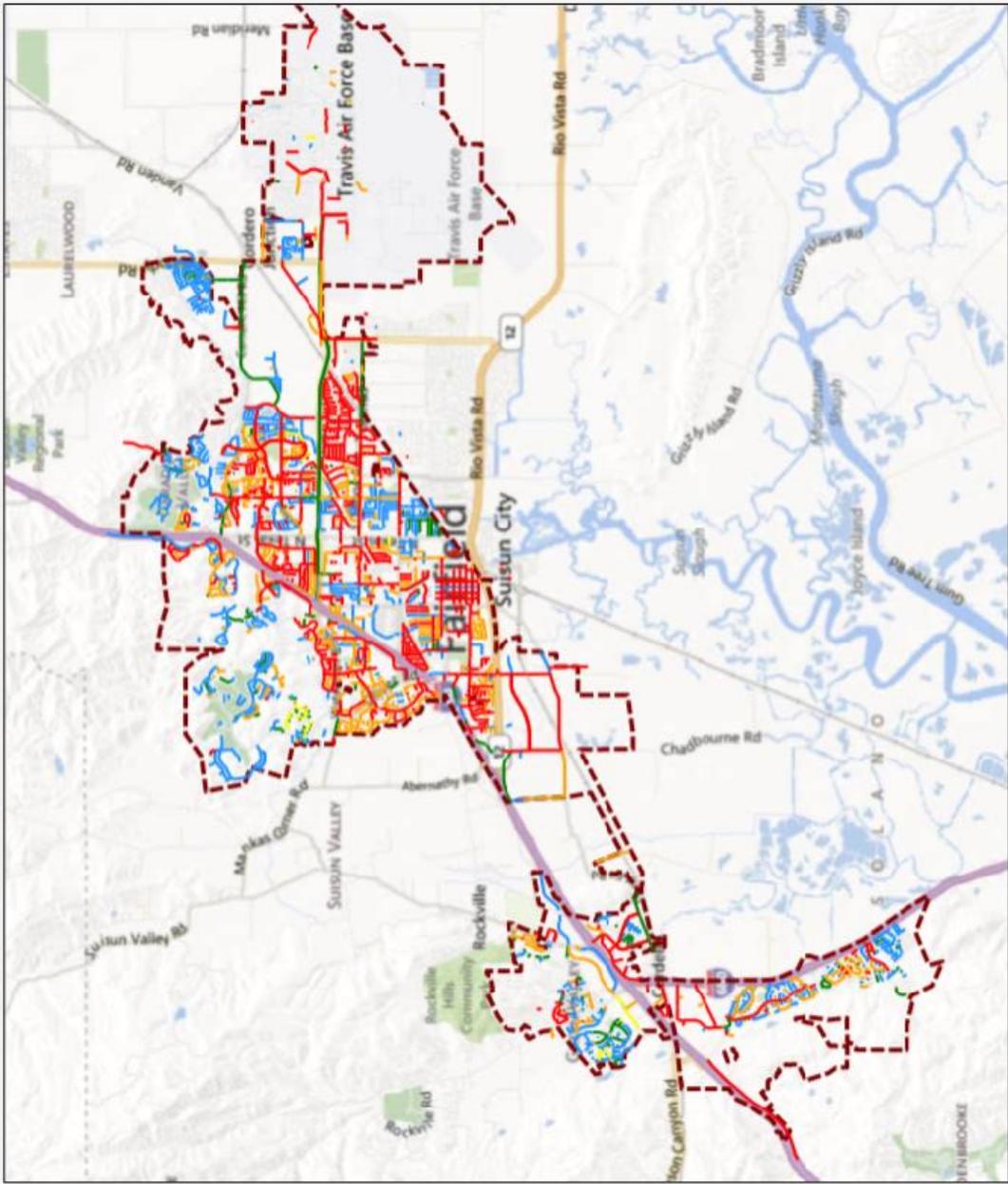




FAIRFIELD CA.

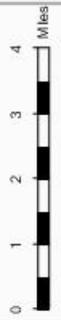
Scenario PCI Condition

Current Budget - 2028 Project Period - Total Rehab: \$1,344,230 - Printed: 2/3/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF FAIRFIELD

REVENUES							
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL	
<i>Total Revenue</i>							
Federal	\$ -	\$ 2,766,917	\$ 502,905	\$ 68,400	\$ 1,370,000	\$	4,708,222
State	\$ 264,885	\$ 1,216,828	\$ 1,426,426	\$ 1,912,733	\$ 1,766,000	\$	6,586,872
Local	\$ -	\$ 709,178	\$ 1,420,971	\$ 1,219,797	\$ 1,304,210	\$	4,654,156
TOTAL BY FISCAL YEAR	\$ 264,885	\$ 4,692,923	\$ 3,350,302	\$ 3,200,930	\$ 4,440,210	\$	15,949,250

EXPENDITURES							
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL	
<i>Maintenance and Operations</i>							
Pavement	\$ 169,000	\$ 575,000	\$ 708,000	\$ 1,140,000	\$ 1,666,000	\$	4,258,000
Non-Pavement	\$ 69,000	\$ 51,000	\$ 20,000	\$ 100,000	\$ 100,000	\$	340,000
<i>Capital Improvement Program</i>							
Reconstruction	\$ -	\$ -	\$ 982,214	\$ -		\$	982,214
Overlay	\$ -	\$ 3,657,116	\$ 1,159,931	\$ 648,733	\$ 2,554,310	\$	8,020,090
Preventive Mair	\$ -	\$ -	\$ 144,069	\$ 1,219,797		\$	1,363,866
Non-Pavement	\$ 26,885	\$ 409,807	\$ 336,088	\$ 92,400	\$ 119,900	\$	985,080
TOTAL BY FISCAL YEAR	\$ 264,885	\$ 4,692,923	\$ 3,350,302	\$ 3,200,930	\$ 4,440,210	\$	15,949,250

**City of Fairfield
Current Budget**

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	Inffac	NeedsCriteria	ScenarioName
2013	69.826632	70.082029	3	3		STA - \$1.5M FF current budget 10%PM
2014	67.644679	68.199282	3	3		STA - \$1.5M FF current budget 10%PM
2015	65.440457	66.238198	3	3		STA - \$1.5M FF current budget 10%PM
2016	63.18201	64.230831	3	3		STA - \$1.5M FF current budget 10%PM
2017	60.855167	62.151913	3	3		STA - \$1.5M FF current budget 10%PM
2018	58.470784	59.978001	3	3		STA - \$1.5M FF current budget 10%PM
2019	56.018455	57.776723	3	3		STA - \$1.5M FF current budget 10%PM
2020	53.485821	55.473497	3	3		STA - \$1.5M FF current budget 10%PM
2021	50.885146	53.148387	3	3		STA - \$1.5M FF current budget 10%PM
2022	48.295019	50.829861	3	3		STA - \$1.5M FF current budget 10%PM
2023	45.688038	48.453031	3	3		STA - \$1.5M FF current budget 10%PM
2024	43.057149	46.094371	3	3		STA - \$1.5M FF current budget 10%PM
2025	40.412074	43.763314	3	3		STA - \$1.5M FF current budget 10%PM
2026	37.800292	41.406328	3	3		STA - \$1.5M FF current budget 10%PM
2027	35.276387	39.297341	3	3		STA - \$1.5M FF current budget 10%PM

Scenario: STA PCI 60 - A & C focus

Objective: Minimum Network Average PCI: 60.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$71,602,723
2014	CondCat II	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86,247,742
2015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$97,646,748
2016	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$113,609,600
2017	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$127,731,926
2018	\$632,678	\$5,148,686	\$3,283,849	\$0	\$9,065,213	\$0	\$2,634,953	\$0	\$11,700,166	\$130,368,449
2019	\$0	\$365,804	\$16,031,199	\$0	\$16,397,003	\$0	\$0	\$0	\$16,397,003	\$132,464,265
2020	\$910,181	\$445,088	\$16,102,776	\$0	\$17,458,045	\$0	\$310,343	\$0	\$17,768,388	\$129,353,139
2021	\$0	\$0	\$16,929,197	\$0	\$16,929,197	\$0	\$475,795	\$0	\$17,404,992	\$133,151,249
2022	\$0	\$0	\$6,429,332	\$7,405,419	\$13,834,751	\$0	\$1,070,566	\$0	\$14,905,317	\$133,975,305
2023	\$490,577	\$0	\$4,829,177	\$3,825,060	\$9,144,814	\$0	\$4,128,049	\$0	\$13,272,863	\$139,134,438
2024	\$0	\$0	\$623,903	\$10,129,350	\$10,753,253	\$0	\$1,503,563	\$0	\$12,256,816	\$140,326,318
2025	\$190,665	\$0	\$561,864	\$9,072,653	\$9,825,182	\$0	\$1,611,422	\$0	\$11,436,604	\$139,782,600
2026	\$0	\$0	\$0	\$10,856,515	\$10,856,515	\$0	\$1,589,986	\$0	\$12,446,501	\$136,249,788
2027	\$0	\$0	\$0	\$11,007,789	\$11,007,789	\$0	\$1,553,961	\$0	\$12,561,750	\$135,070,378

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$59,523,421	\$8,334,251	
Collector	\$65,748,341	\$4,248,669	
Other	\$0	\$71,038	
Residential/Local	\$0	\$2,224,680	
Total:	\$125,271,762	\$14,878,638	Grand Total: \$140,150,400

City of Fairfield

Scenario: STA PCI 75

Objective: Minimum Network Average PCI: 75.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$1,462,537	\$8,929,782	\$3,514,887	\$0	\$13,907,206	\$0	\$7,636,773	\$0	\$21,543,979	\$50,648,833
2014	\$745,880	\$5,686,471	\$5,215,009	\$0	\$11,647,360	\$0	\$1,287,647	\$0	\$12,935,007	\$51,809,594
2015	\$123,300	\$3,289,015	\$6,831,437	\$0	\$10,243,752	\$0	\$1,092,017	\$0	\$11,335,769	\$50,980,073
2016	\$0	\$591,674	\$9,921,348	\$0	\$10,513,022	\$0	\$377,512	\$0	\$10,890,534	\$50,610,900
2017	\$507,194	\$860,341	\$9,861,567	\$0	\$11,229,102	\$0	\$686,162	\$0	\$11,915,264	\$48,455,897
2018	\$1,113,018	\$0	\$6,541,925	\$0	\$7,654,943	\$0	\$3,261,499	\$0	\$10,916,442	\$50,594,406
2019	\$848,416	\$0	\$8,828,360	\$0	\$9,676,776	\$0	\$1,234,086	\$0	\$10,910,862	\$54,142,689
2020	\$0	\$0	\$0	\$0	\$0	\$0	\$7,285,135	\$0	\$7,285,135	\$62,059,966
2021	\$14,980	\$0	\$3,563,651	\$0	\$3,578,631	\$0	\$4,593,967	\$0	\$8,172,598	\$63,344,123
2022	\$70,931	\$0	\$7,072,689	\$0	\$7,143,620	\$0	\$2,400,273	\$0	\$9,543,893	\$62,727,432
2023	\$1,123,094	\$0	\$2,185,665	\$0	\$3,308,759	\$0	\$4,746,332	\$0	\$8,055,091	\$65,339,987
2024	\$883,486	\$0	\$4,739,557	\$109,262	\$5,732,305	\$0	\$3,093,460	\$0	\$8,825,765	\$68,298,378
2025	\$0	\$0	\$1,982,920	\$3,815,745	\$5,798,665	\$0	\$2,254,576	\$0	\$8,053,241	\$66,112,393
2026	\$17,366	\$0	\$170,626	\$2,554,002	\$2,741,994	\$0	\$1,758,656	\$0	\$4,500,650	\$66,067,754
2027	\$0	\$0	\$0	\$0	\$0	\$0	\$6,145,868	\$0	\$6,145,868	\$71,663,485

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$33,861,089	\$14,887,994	
Collector	\$10,474,961	\$6,907,072	
Other	\$5,398,133	\$784,327	
Residential/Local	\$53,441,952	\$25,274,570	
Total:	\$103,176,135	\$47,853,963	Grand Total: \$151,030,098

City of Rio Vista

The City of Rio Vista is responsible for the management, repair, and maintenance of 46 lane miles of pavement, or 146 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	7	1.15	2.30	75
Collector	27	8.98	17.97	70
Residential/Local	112	12.81	25.63	49
Total	146	22.94	45.89	51 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 51. Although Rio Vista’s PCI has increased from the previous year average (PCI 47 in 2011), it is still considered “at-risk.” Currently, 39% of the City’s pavement area falls under “Excellent or Very Good”, 18% falls under “Good or Fair” and 43% falls under “Poor or Failed”. Again, compared with previous years, this shows an improvement in pavement condition categories; however deficiencies in the overall network will need to be addressed. If these are not addressed, the quality of the road network will inevitably decline. In order to correct these deficiencies, a cost-effective funding, maintenance and rehabilitation strategy will need to be implemented.



At-Risk/Poor Pavement Condition

Excellent/Very Good Pavement Condition

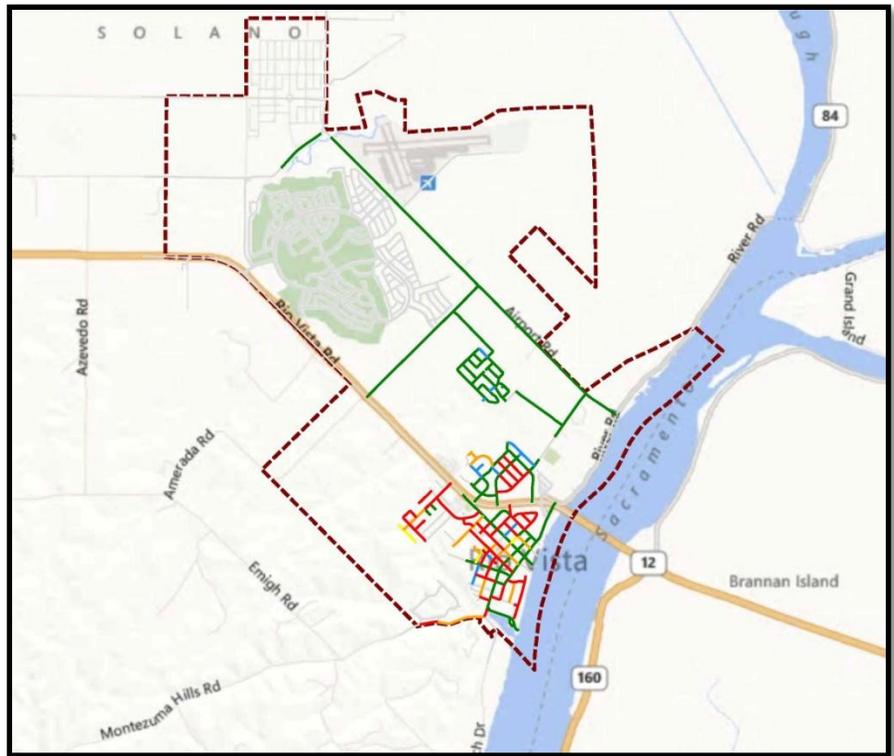


Current Pavement Condition Index (PCI) Map

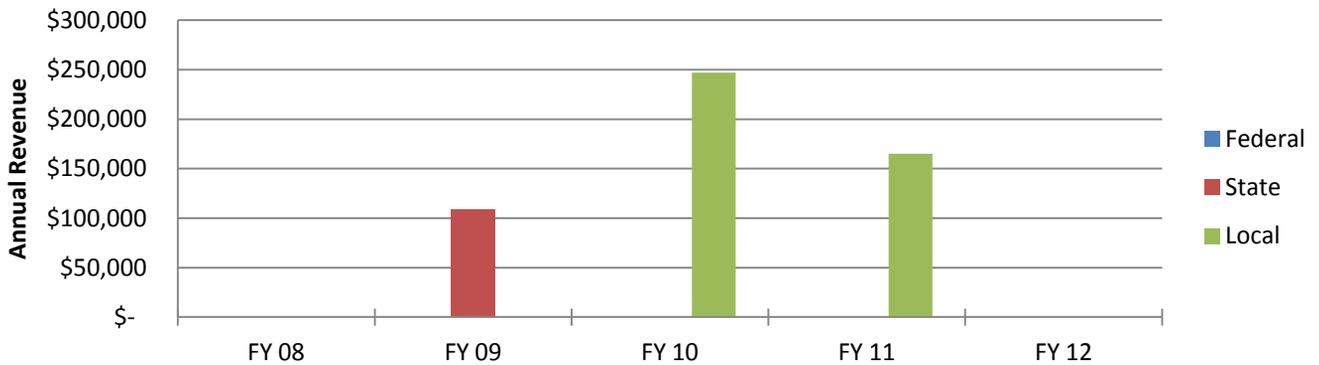
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Past Streets and Roads Investments

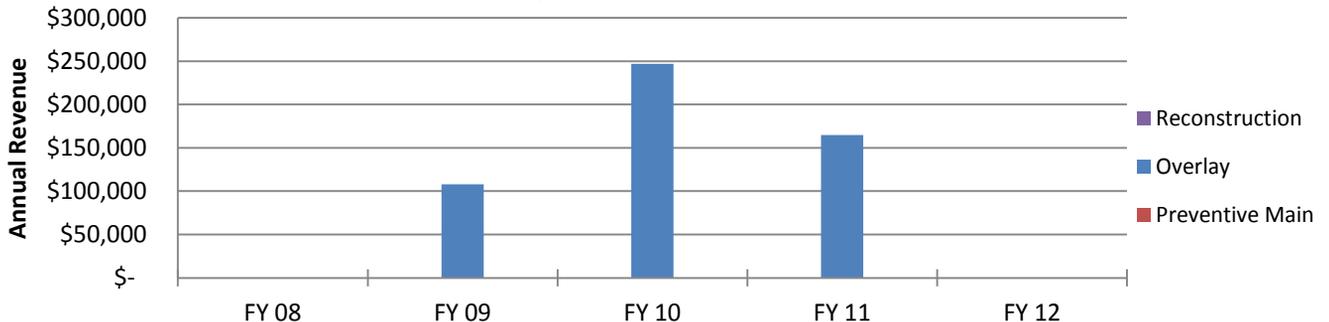
The current PCI reflects the past investments made in Rio Vista's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Rio Vista.



Rio Vista Total Revenue



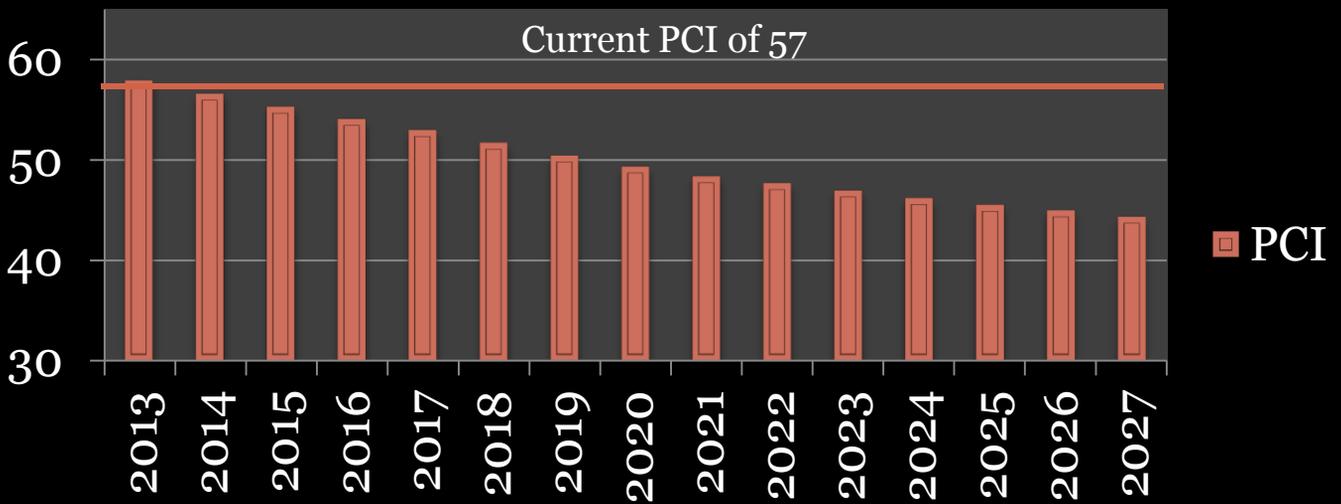
Rio Vista Capital Improvement Expenditures



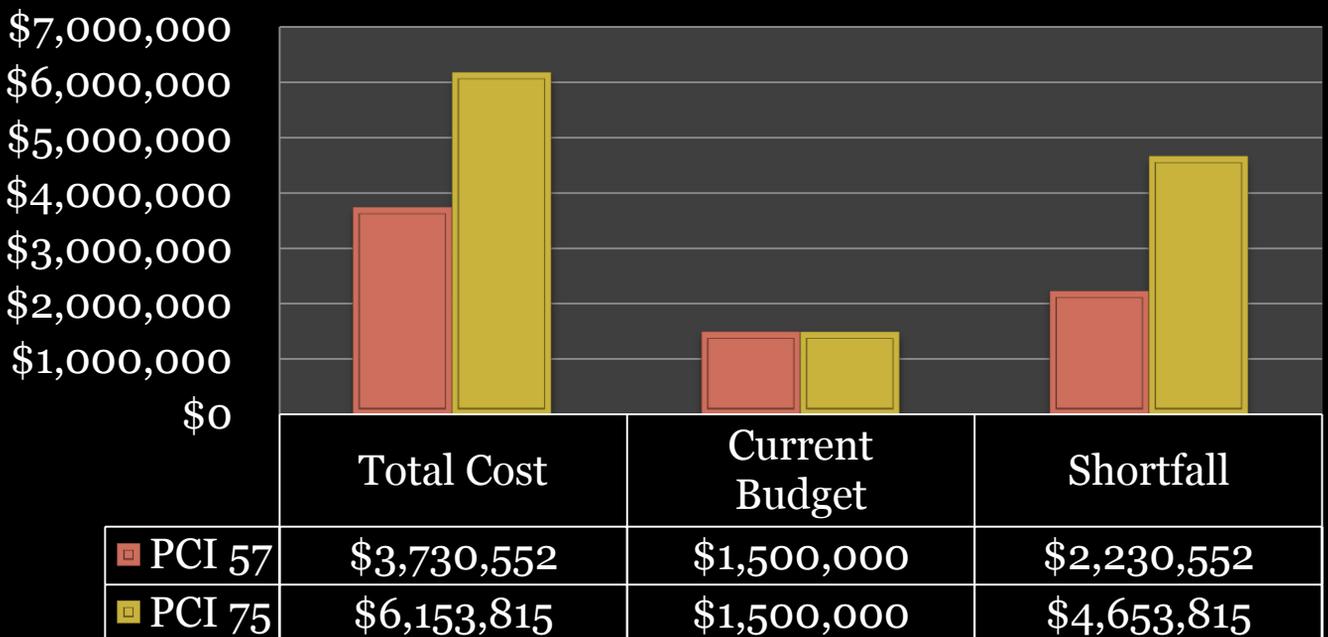
Future Pavement and Revenue Needs

In 2013 Rio Vista's average PCI was 57, with a budget for roadway maintenance of \$100,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 57 (At Risk) to 44 (Poor). **To maintain the current average PCI rating of 57 in the City of Rio Vista**, approximately \$3.7M would need to be spent over the next 15 years. The current budget provides approximately \$1.5M over 15 years, leaving a funding shortfall of approximately \$2.2M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$15M more than what is currently being budgeted would need to be invested in Fairfield's roads over the next 15 years.

PCI with Current Budget (\$100,000 Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Rio Vista's current PCI of 57 should be viewed with caution, as it indicates that its local streets and roads are poised on the edge of a maintenance cliff.**

Rio Vista is currently on track to invest approximately 1/3 of the required \$3.75M necessary to keep the city's PCI at 60 over the next 15 years. If the city were to raise its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$4.6M more than the \$1.5M they are currently on track to spend over the next 15 years.

*“Strategic investment in infrastructure produces a foundation for long-term growth.”
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Rio Vista will continue its downward trend in pavement quality. This deterioration hinders Rio Vista from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Rio Vista millions in the future and strengthen its local economy.



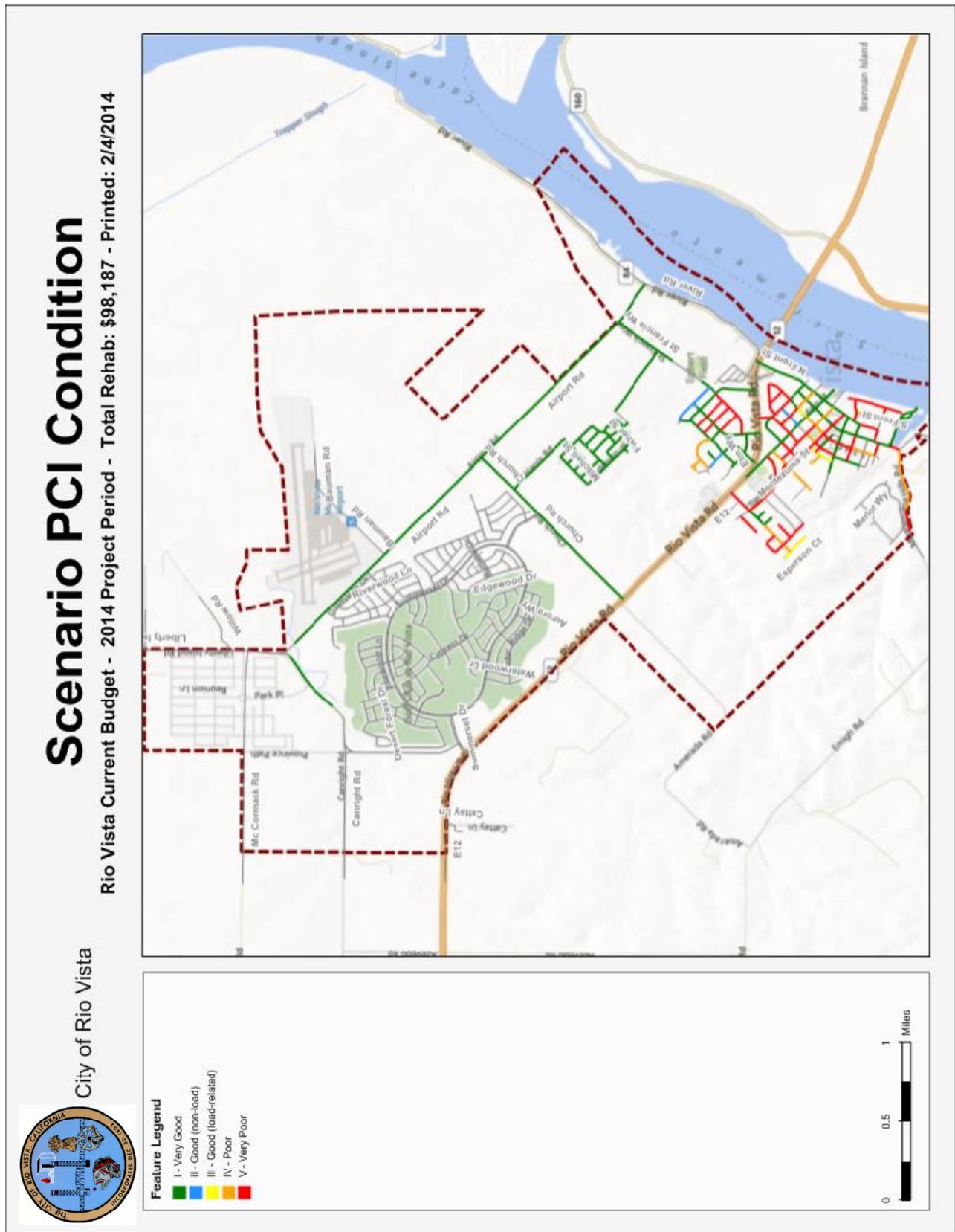
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Investing in caution signs is a poor substitute for roadway maintenance.

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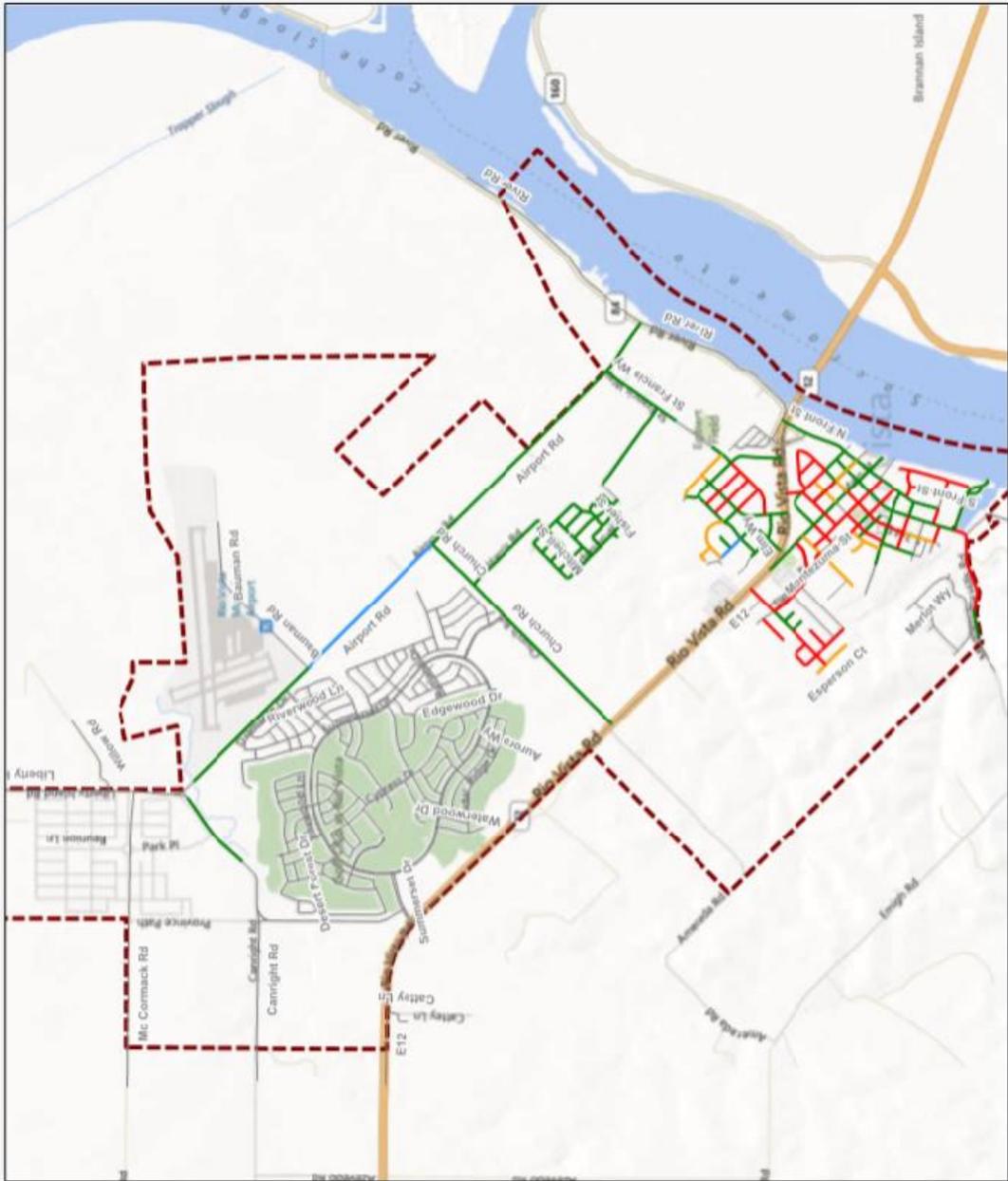




City of Rio Vista

Scenario PCI Condition

Rio Vista Current Budget - 2018 Project Period - Total Rehab: \$99,190 - Printed: 2/4/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- IV - Poor
- V - Very Poor

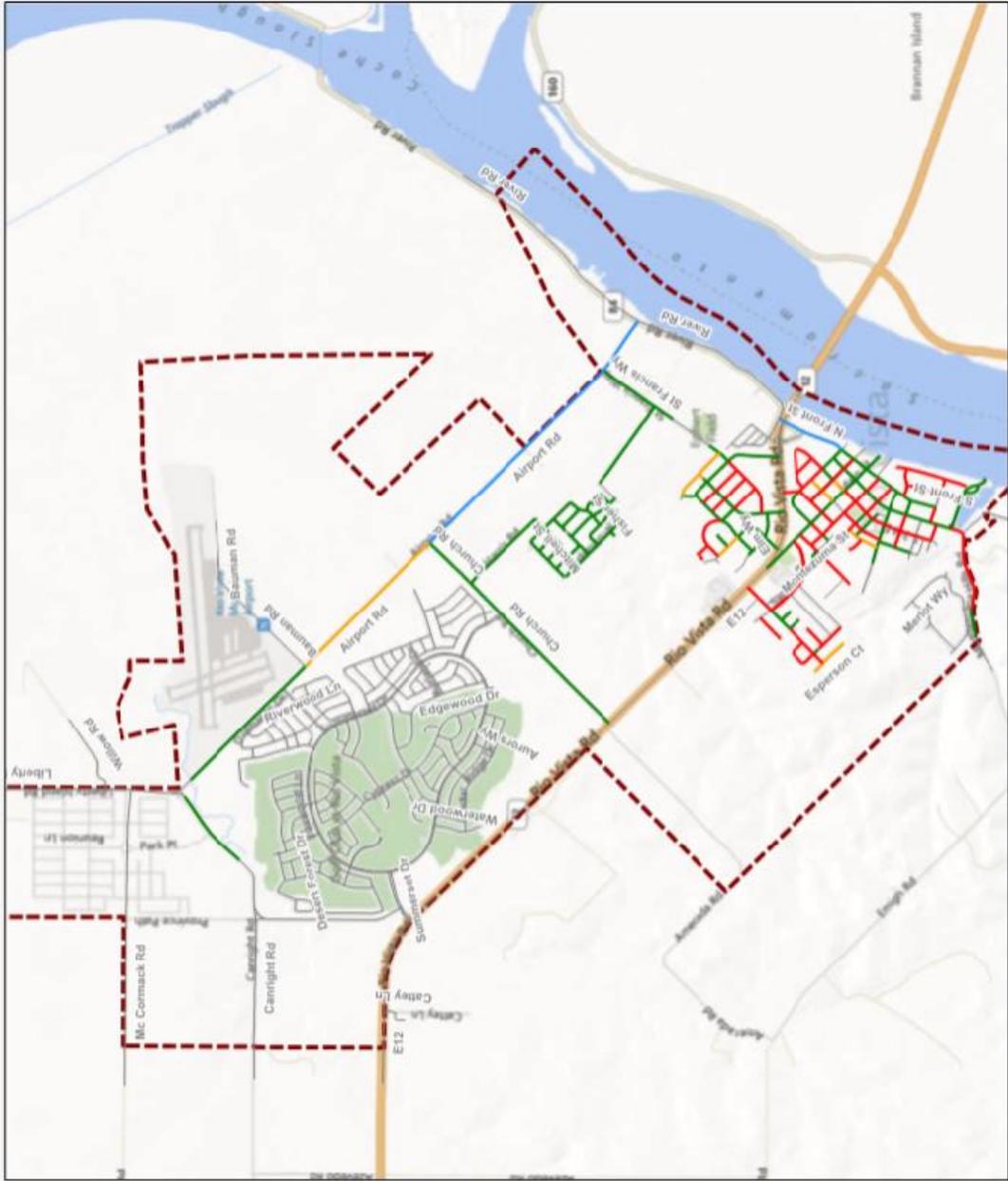




City of Rio Vista

Scenario PCI Condition

Rio Vista Current Budget - 2023 Project Period - Total Rehab: \$77,185 - Printed: 2/4/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- IV - Poor
- V - Very Poor

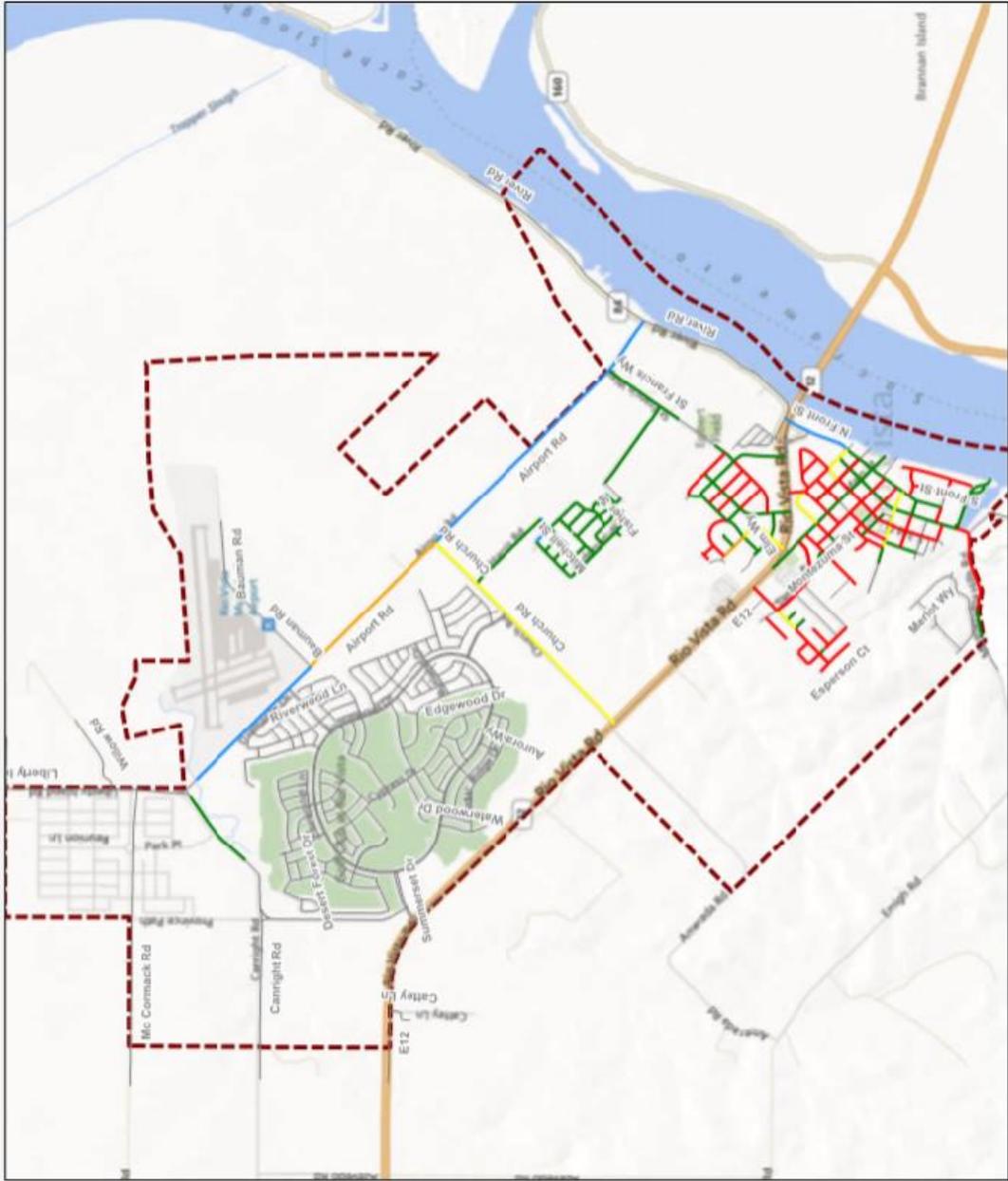




City of Rio Vista

Scenario PCI Condition

Rio Vista Current Budget - 2028 Project Period - Total Rehab: \$98,112 - Printed: 2/4/2014



- Feature Legend**
- I - Very Good
 - II - Good (non-load)
 - III - Good (load-related)
 - IV - Poor
 - V - Very Poor



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF RIO VISTA

REVENUES												
	FY 08		FY 09		FY 10		FY 11		FY 12		TOTAL	
<i>Total Revenue</i>												
Federal	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
State	\$	-	\$	108,000	\$	-	\$	-	\$	-	\$	108,000
Local	\$	-	\$	-	\$	247,000	\$	165,000	\$	-	\$	412,000
TOTAL BY FISCAL YEAR	\$	-	\$	108,000	\$	247,000	\$	165,000	\$	-	\$	520,000

EXPENDITURES												
	FY 08		FY 09		FY 10		FY 11		FY 12		TOTAL	
<i>Maintenance and Operations</i>												
Pavement	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Non-Pavement	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
<i>Capital Improvement Program</i>												
Reconstruction	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Overlay	\$	-	\$	108,000	\$	247,000	\$	165,000	\$	-	\$	520,000
Preventive Main	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Non-Pavement												
TOTAL BY FISCAL YEAR	\$	-	\$	108,000	\$	247,000	\$	165,000	\$	-	\$	520,000

City of Rio Vista
Current Budget

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	57.006017	57.808668	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2014	54.818564	56.491463	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2015	52.667301	55.220773	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2016	50.549568	53.987163	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2017	48.476772	52.899376	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2018	46.405853	51.641116	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2019	44.33927	50.385789	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2020	42.297815	49.268232	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2021	40.357492	48.334422	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2022	38.659358	47.635097	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2023	37.01085	46.903743	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2024	35.328148	46.18761	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2025	33.665858	45.513902	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2026	31.98984	44.946226	3	3		Current Budget \$100k/yr - 5-year avg since 2013
2027	30.305715	44.301077	3	3		Current Budget \$100k/yr - 5-year avg since 2013

Scenario: Current PCI 57

Objective: Minimum Network Average PCI: 57.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,752,189
2014	\$10,370	\$0	\$0	\$0	\$10,370	\$0	\$282,255	\$0	\$292,625	\$3,561,963
2015	\$5,055	\$0	\$48,505	\$83,411	\$136,971	\$0	\$179,984	\$0	\$316,955	\$3,017,250
2016	\$0	\$0	\$0	\$509,375	\$509,375	\$0	\$61,707	\$0	\$571,082	\$2,813,457
2017	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,352,868
2018	\$2,596	\$0	\$0	\$116,289	\$118,885	\$0	\$37,916	\$0	\$156,801	\$4,020,150
2019	\$0	\$0	\$0	\$0	\$0	\$0	\$279,998	\$0	\$279,998	\$4,300,259
2020	\$0	\$0	\$0	\$124,723	\$124,723	\$0	\$303,606	\$0	\$428,329	\$4,308,504
2021	\$0	\$0	\$0	\$175,488	\$175,488	\$0	\$126,550	\$0	\$302,038	\$4,045,871
2022	\$0	\$0	\$0	\$237,495	\$237,495	\$0	\$2,817	\$0	\$240,312	\$3,929,752
2023	\$0	\$0	\$0	\$0	\$0	\$0	\$2,024	\$0	\$2,024	\$4,065,555
2024	\$0	\$0	\$0	\$0	\$0	\$0	\$231,427	\$0	\$231,427	\$4,548,137
2025	\$3,192	\$0	\$0	\$0	\$3,192	\$0	\$272,692	\$0	\$275,884	\$5,021,698
2026	\$0	\$0	\$0	\$0	\$0	\$0	\$302,221	\$0	\$302,221	\$5,145,238
2027	\$0	\$0	\$0	\$209,840	\$209,840	\$0	\$121,016	\$0	\$330,856	\$4,994,321

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$48,505	\$216,293	
Collector	\$1,456,621	\$973,046	
Residential/Local	\$21,213	\$1,014,874	
Total:	\$1,526,339	\$2,204,213	Grand Total: \$3,730,552



Scenario: PCI 75 target

Objective: Minimum Network Average PCI: 75.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$24,154	\$0	\$45,720	\$1,518,146	\$1,588,020	\$0	\$443,488	\$0	\$2,031,508	\$1,720,723
2014	\$1,236	\$0	\$291,935	\$162,098	\$455,269	\$0	\$203	\$0	\$455,472	\$1,309,167
2015	\$5,055	\$0	\$0	\$283,436	\$288,491	\$0	\$0	\$0	\$288,491	\$1,039,685
2016	\$14,081	\$0	\$0	\$94,286	\$108,367	\$0	\$66,963	\$0	\$175,330	\$1,191,659
2017	\$0	\$0	\$0	\$268,821	\$268,821	\$0	\$614	\$0	\$269,435	\$1,410,015
2018	\$0	\$0	\$0	\$0	\$0	\$0	\$253,994	\$0	\$253,994	\$2,171,956
2019	\$2,673	\$0	\$0	\$0	\$2,673	\$0	\$255,944	\$0	\$258,617	\$2,132,644
2020	\$19,392	\$0	\$0	\$0	\$19,392	\$0	\$280,478	\$0	\$299,870	\$2,022,526
2021	\$0	\$0	\$0	\$78,269	\$78,269	\$0	\$219,189	\$0	\$297,458	\$1,833,984
2022	\$0	\$0	\$0	\$181,534	\$181,534	\$0	\$31,719	\$0	\$213,253	\$1,707,471
2023	\$0	\$0	\$0	\$0	\$0	\$0	\$261,354	\$0	\$261,354	\$1,797,077
2024	\$0	\$0	\$0	\$0	\$0	\$0	\$292,761	\$0	\$292,761	\$1,918,862
2025	\$0	\$0	\$0	\$58,561	\$58,561	\$0	\$358,835	\$0	\$417,396	\$2,140,029
2026	\$0	\$0	\$0	\$30,294	\$30,294	\$0	\$263,608	\$0	\$293,902	\$2,283,632
2027	\$0	\$0	\$0	\$282,025	\$282,025	\$0	\$62,949	\$0	\$344,974	\$2,070,118



Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$45,720	\$208,548	
Collector	\$1,148,345	\$1,005,195	
Residential/Local	\$2,167,651	\$1,578,356	
Total:	\$3,361,716	\$2,792,099	Grand Total: \$6,153,815

Solano County

The County of Solano is responsible for the management, repair, and maintenance of 937 lane miles of pavement, or 685 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	25	12	28.31	77
Collector	274	209.2	419.19	67
Residential/Local	377	238.9	477.82	60
Other	9	5.53	11.26	N/A*
Total	685	465.63	936.58	71 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the County is 71. This network PCI score is considered good, and Solano County’s PCI has increased from the previous year (PCI 68 in 2011). Currently, 43% of the City’s pavement area falls under “Excellent or Very Good”, 49% falls under “Good or Fair” and 8% falls under “Poor or Failed”. Again, compared with previous years, this shows an overall improvement in pavement condition categories.

The County typically utilizes a program of surface seals and overlays as maintenance and rehabilitation strategies. Surface treatments, such as slurry seals and chip seals, have been usually utilized as a preventive maintenance technique when the pavements are in “Good” condition or above.



Poor/Failed Pavement Condition

Excellent/Very Good Pavement Condition

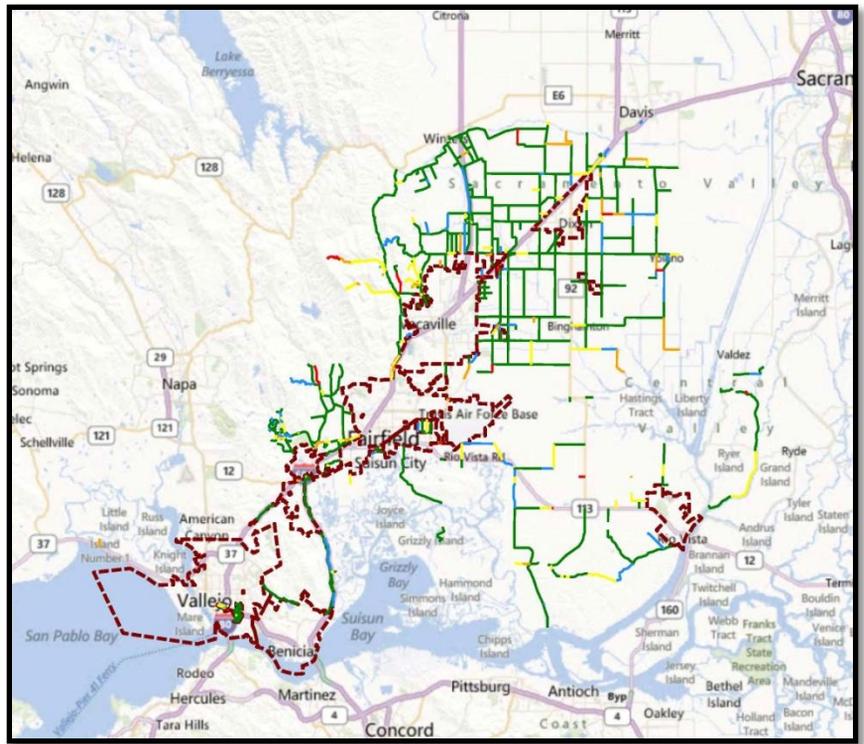


Current Pavement Condition Index (PCI) Map

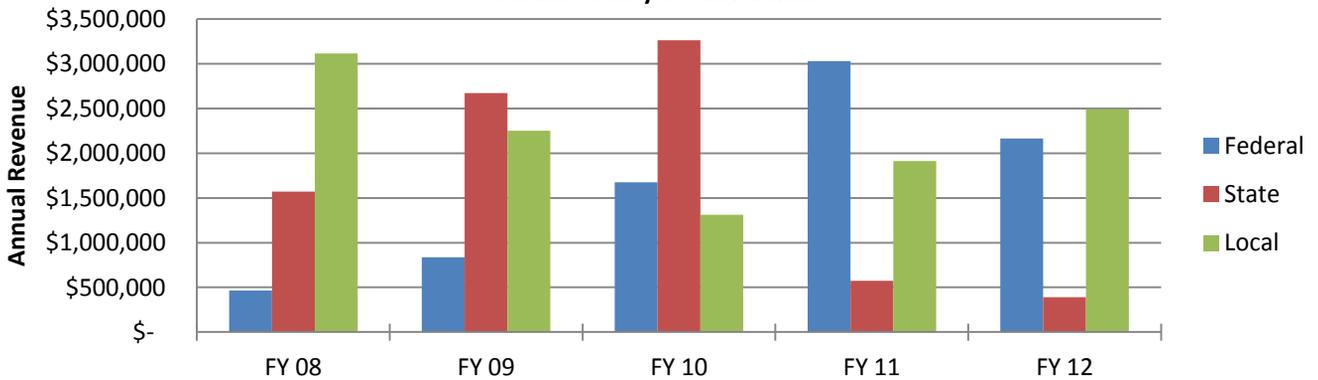
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

Past Streets and Roads Investments

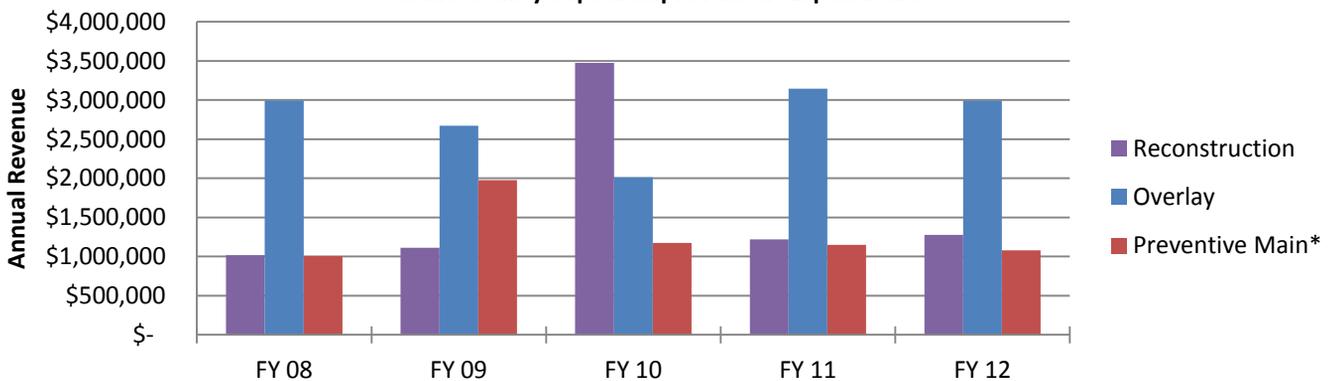
The current PCI reflects the past investments made in Solano County's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in the County.



Solano County Total Revenue



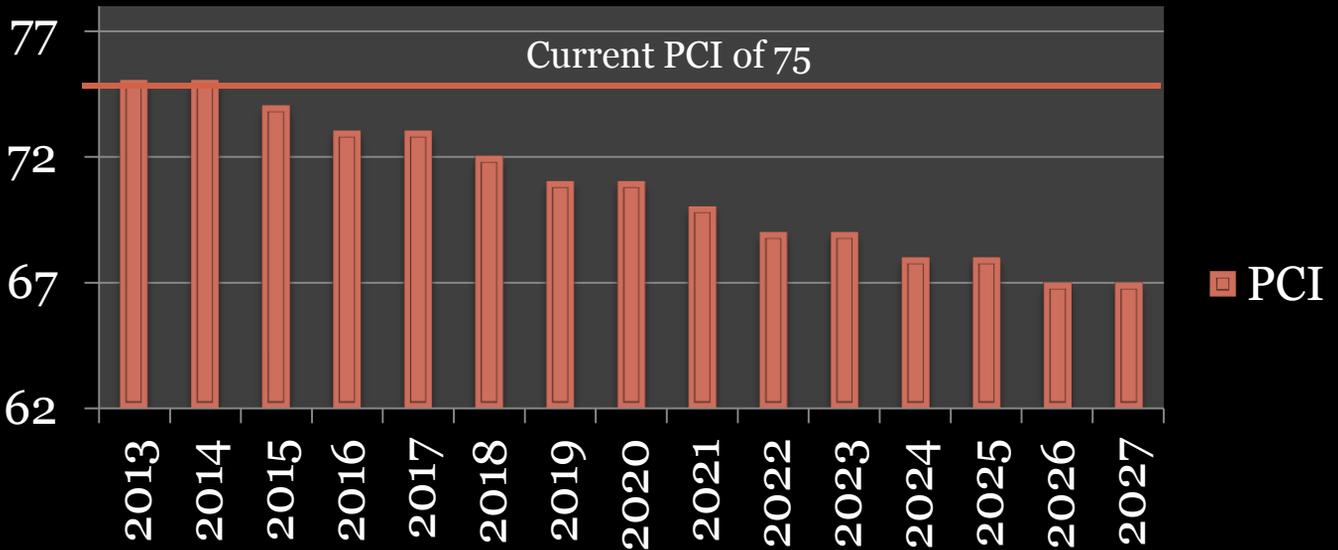
Solano County Capital Improvement Expenditures



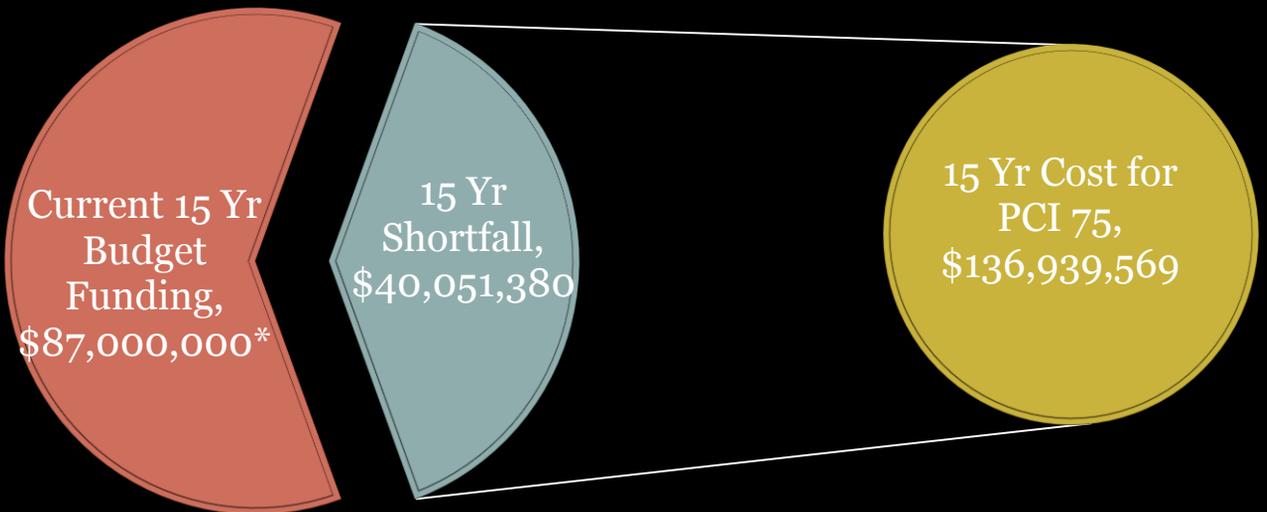
Future Pavement and Revenue Needs

In 2013 Solano County's average PCI was 75, with a budget for roadway maintenance of \$5,800,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the County would drop from its current average rating of 75 (Good) to 67 (Fair). To maintain the current average PCI rating of 75 in Solano County approximately \$137M would need to be spent over the next 15 years. The current budget provides approximately \$87M over 15 years, leaving a funding shortfall of approximately \$50M.

PCI with Current Budget (\$5,800,000 Annually)



15 Year Outlook



*Assuming \$5,800,000 per year over next 15 years.

Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Solano County's current PCI of 75 should be viewed with an understanding that maintaining this "good" classification will be cheaper in the long-term than maintaining the roads at a lower PCI score.**

Solano County is currently on track to invest approximately 2/3rd of the required \$137M necessary to keep the County's PCI at 75 over the next 15 years. The County needs to invest an additional \$50M more than the \$85M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Solano County will continue its downward trend in pavement quality. This deterioration hinders Solano County from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Solano County millions in the future and strengthen its local economy.



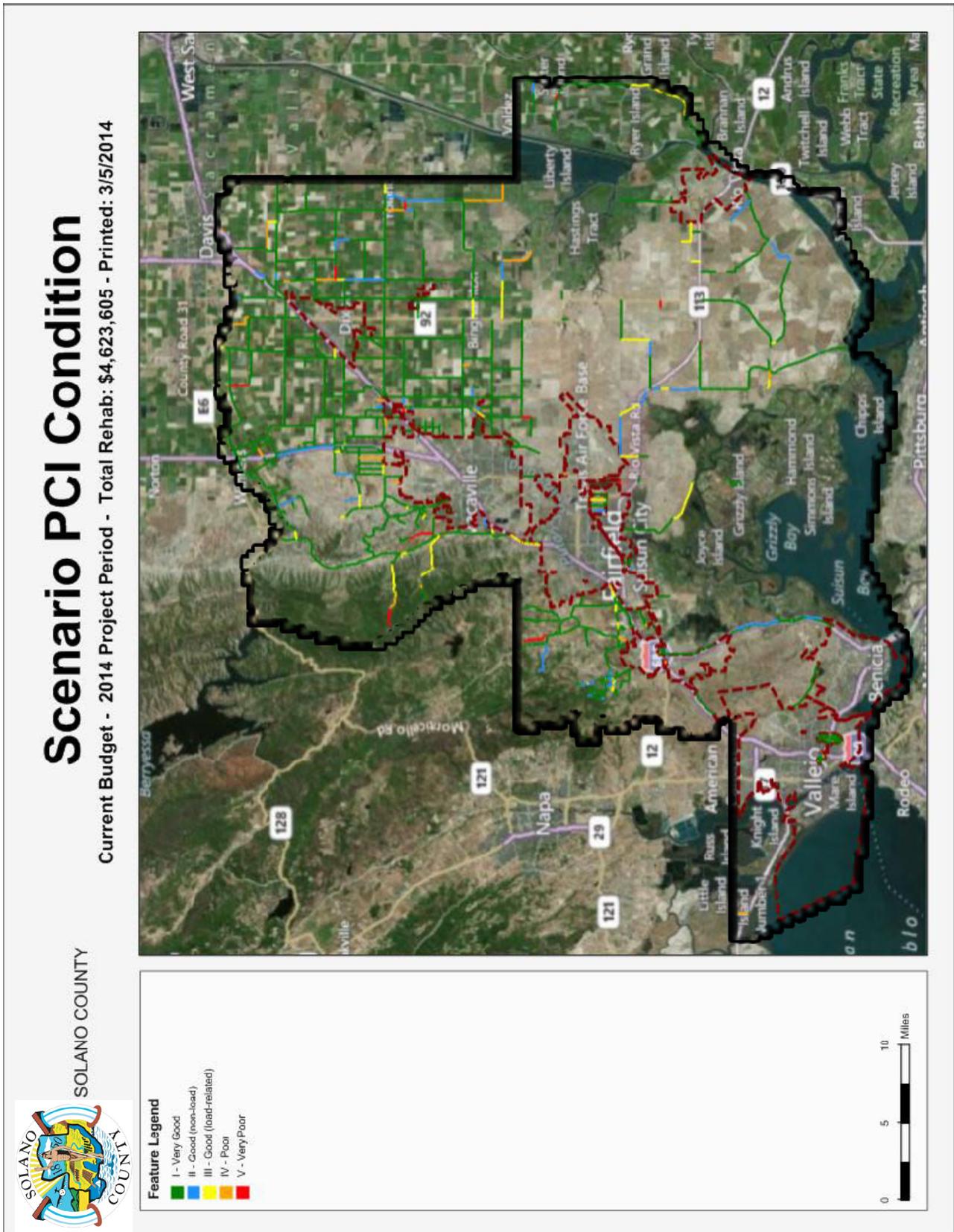
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

What will Solano County's Streets look like in the Future using Current Budget Scenarios?

The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

SOLANO COUNTY

REVENUES							
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL	
<i>Total Revenue</i>							
Federal	\$ 464,000	\$ 837,000	\$ 1,677,000	\$ 3,028,000	\$ 2,165,000	\$ 8,171,000	
State	\$ 1,572,000	\$ 2,671,000	\$ 3,263,000	\$ 575,000	\$ 388,000	\$ 8,469,000	
Local	\$ 3,114,000	\$ 2,253,000	\$ 1,311,000	\$ 1,914,000	\$ 2,494,000	\$ 11,086,000	
TOTAL BY FISCAL YEAR	\$ 5,150,000	\$ 5,761,000	\$ 6,251,000	\$ 5,517,000	\$ 5,047,000	\$ 27,726,000	

EXPENDITURES							
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL	
<i>Maintenance and Operations</i>							
Pavement							
Non-Pavement	\$ -						
<i>Capital Improvement Program</i>							
Reconstruction	\$ 1,017,000	\$ 1,112,000	\$ 3,474,000	\$ 1,221,000	\$ 1,275,000	\$ 8,099,000	
Overlay	\$ 2,994,000	\$ 2,671,000	\$ 2,012,000	\$ 3,146,000	\$ 2,992,000	\$ 10,821,000	
Preventive Main*	\$ 1,007,000	\$ 1,978,000	\$ 1,175,000	\$ 1,150,000	\$ 1,080,000	\$ 6,390,000	
Non-Pavement							
TOTAL BY FISCAL YEAR	\$ 5,018,000	\$ 5,761,000	\$ 6,661,000	\$ 5,517,000	\$ 5,347,000	\$ 25,310,000	

*Preventive Maintenance - Chip Seals at 60 PCI and above

County of Solano
Current Budget

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	73.890111	76.717712	3	3		STA - \$5.8M/yr 20%PM
2014	71.922481	75.472017	3	3		STA - \$5.8M/yr 20%PM
2015	69.988438	75.01647	3	3		STA - \$5.8M/yr 20%PM
2016	68.055692	74.411106	3	3		STA - \$5.8M/yr 20%PM
2017	66.10615	74.137464	3	3		STA - \$5.8M/yr 20%PM
2018	64.109331	74.262807	3	3		STA - \$5.8M/yr 20%PM
2019	62.056557	72.950563	3	3		STA - \$5.8M/yr 20%PM
2020	59.946569	72.160411	3	3		STA - \$5.8M/yr 20%PM
2021	57.754927	71.42622	3	3		STA - \$5.8M/yr 20%PM
2022	55.490094	70.981949	3	3		STA - \$5.8M/yr 20%PM
2023	53.137772	70.887272	3	3		STA - \$5.8M/yr 20%PM
2024	50.714167	68.992898	3	3		STA - \$5.8M/yr 20%PM
2025	48.204721	68.490881	3	3		STA - \$5.8M/yr 20%PM
2026	45.634634	67.599272	3	3		STA - \$5.8M/yr 20%PM
2027	42.990089	66.793143	3	3		STA - \$5.8M/yr 20%PM

County of Solano

Scenario: Min bad 5%

Objective: Maximum Percent In Poor Condition: 5.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$624,228	\$2,567,510	\$4,567,748	\$0	\$7,759,486	\$0	\$3,956,209	\$0	\$11,715,695	\$15,665,311
2014	\$413,715	\$885,107	\$6,103,678	\$0	\$7,402,500	\$0	\$1,969,849	\$0	\$9,372,349	\$17,910,310
2015	\$73,693	\$501,428	\$4,609,729	\$0	\$5,184,850	\$0	\$2,320,457	\$0	\$7,505,307	\$22,418,581
2016	\$49,363	\$238,352	\$6,628,576	\$0	\$6,916,291	\$0	\$3,371,100	\$0	\$10,287,391	\$24,052,311
2017	\$353,076	\$699,587	\$2,673,534	\$0	\$3,726,197	\$0	\$3,754,656	\$0	\$7,480,853	\$26,564,940
2018	\$31,217	\$2,077,027	\$3,861,785	\$0	\$5,970,029	\$0	\$4,039,939	\$0	\$10,009,968	\$25,457,739
2019	\$135,619	\$876,599	\$5,101,178	\$0	\$6,113,396	\$0	\$3,025,869	\$0	\$9,139,265	\$28,465,546
2020	\$71,115	\$451,586	\$5,170,599	\$0	\$5,693,300	\$0	\$5,562,825	\$0	\$11,256,125	\$29,450,848
2021	\$0	\$274,077	\$4,339,963	\$0	\$4,614,040	\$0	\$3,542,365	\$0	\$8,156,405	\$31,841,454
2022	\$0	\$565,765	\$3,006,044	\$0	\$3,571,809	\$0	\$3,116,478	\$0	\$6,688,287	\$33,023,873
2023	\$0	\$1,856,533	\$1,207,738	\$0	\$3,064,271	\$0	\$4,364,557	\$0	\$7,428,828	\$34,602,391
2024	\$104,326	\$1,127,422	\$4,892,217	\$0	\$6,123,965	\$0	\$3,914,454	\$0	\$10,038,419	\$36,941,385
2025	\$18,737	\$631,324	\$6,793,499	\$0	\$7,443,560	\$0	\$4,308,858	\$0	\$11,752,418	\$37,906,429
2026	\$0	\$396,702	\$2,553,195	\$0	\$2,949,897	\$0	\$3,987,256	\$0	\$6,937,153	\$38,892,631
2027	\$0	\$1,881,206	\$4,559,912	\$0	\$6,441,118	\$0	\$2,729,988	\$0	\$9,171,106	\$39,740,609

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$4,783,854	\$4,209,445	
Collector	\$31,424,566	\$36,872,141	
Other	\$274,921	\$1,873	
Residential/Local	\$46,491,368	\$12,881,401	
Total:	\$82,974,709	\$53,964,860	Grand Total: \$136,939,569

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City of Suisun City

The City of Suisun City is responsible for the management, repair, and maintenance of 152 lane miles of pavement, or 512 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	18	6.44	13.85	77
Collector	199	37.63	72.29	67
Residential/Local	295	34	66.07	60
Total	512	78.07	152	67 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 67. While this network PCI score is considered “fair”, Suisun’s PCI has dropped from the previous year (PCI 68 in 2011). Currently, 39% of the City’s pavement area falls under “Excellent or Very Good”, 35% falls under “Good or Fair” and 26% falls under “Poor or Failed”. Again, compared with previous years, this shows a general trend towards the poorer pavement condition categories. If these are not addressed, the quality of the road network will inevitably decline. In order to correct these deficiencies, a cost-effective funding, maintenance and rehabilitation strategy must be implemented.



Poor/Failed Pavement Condition

Excellent/Very Good Pavement Condition

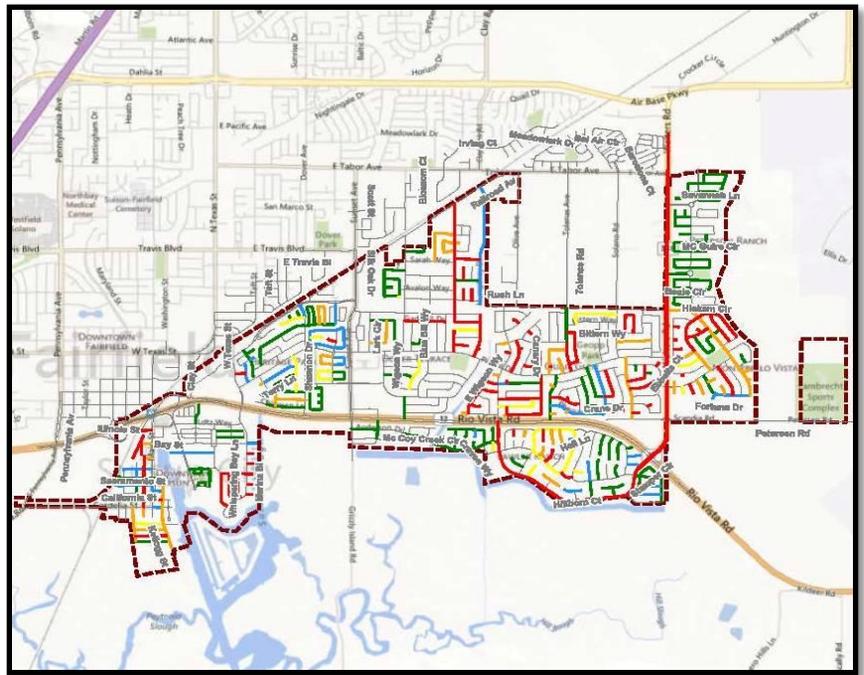


Current Pavement Condition Index (PCI) Map

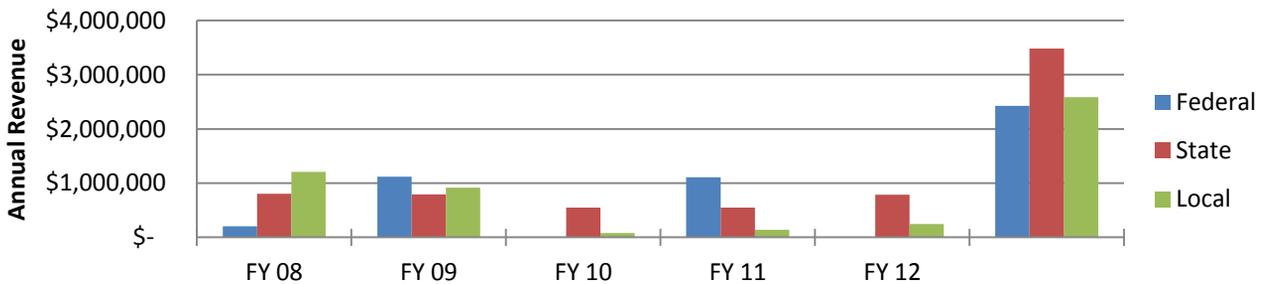
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

Past Streets and Roads Investments

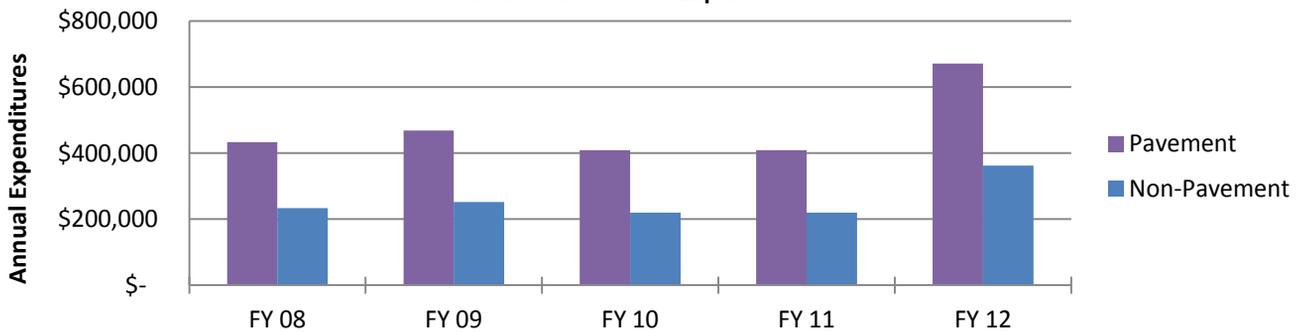
The current PCI reflects the past investments made in Suisun's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Suisun.



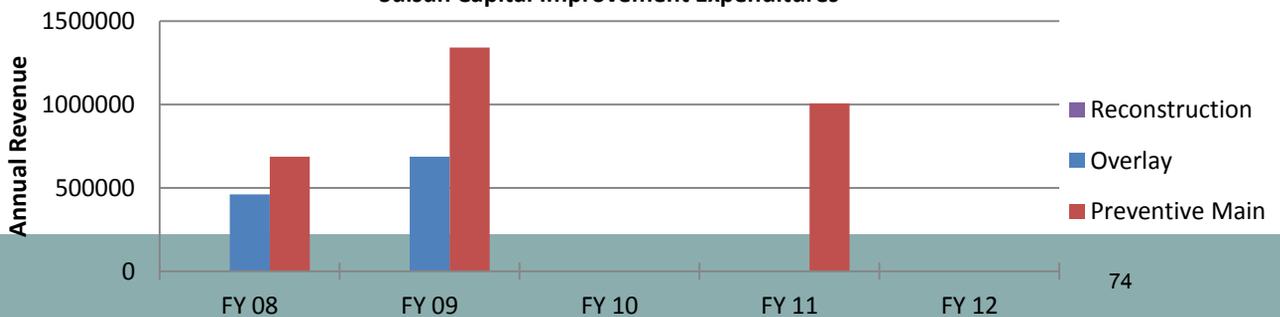
Suisun Total Revenue



Suisun Maintenance Expenditures



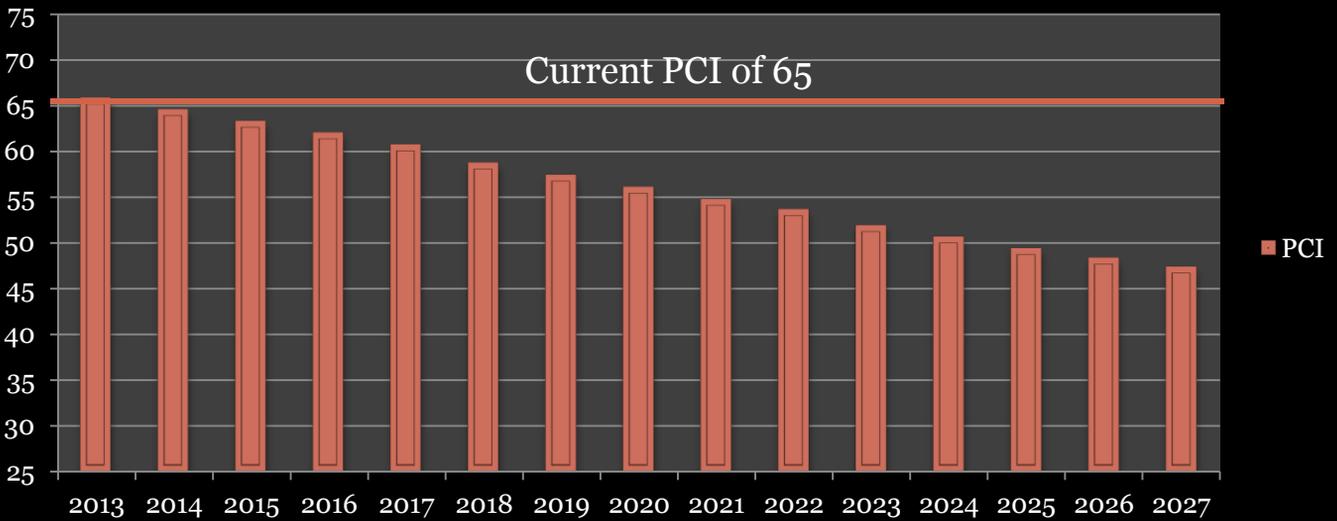
Suisun Capital Improvement Expenditures



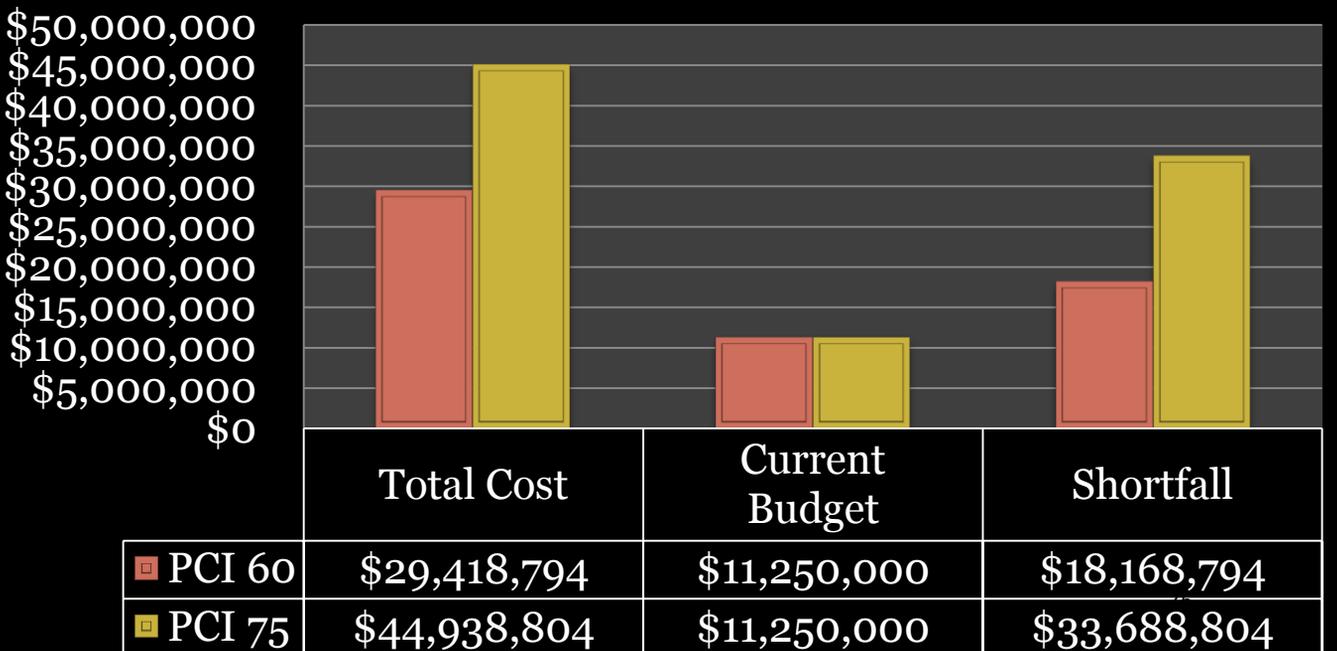
Future Pavement and Revenue Needs

In 2013 Suisun City's average PCI was 65, with a budget for roadway maintenance of \$750,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 65 (Fair) to 47 (Poor). **To maintain a minimum average PCI rating of 60 in the City of Suisun City**, approximately \$29.4M would need to be spent over the next 15 years. The current budget provides approximately \$11.2M over 15 years, leaving a funding shortfall of approximately \$18.2M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$33.6M more than what is currently being budgeted would need to be invested in Suisun City's roads over the next 15 years.

PCI with Current Budget (\$750,000 Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Suisun City's current PCI of 65 should be viewed with caution, as it indicates that its local streets and roads are poised on the edge of a maintenance cliff.**

Suisun City is currently on track to invest approximately 1/3 of the required \$29M necessary to keep the city's PCI at 60 over the next 15 years. If the city were to raise its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$33M more than the \$11.2M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Suisun City will continue its downward trend in pavement quality. This deterioration hinders Suisun City from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Suisun City millions in the future and strengthen its local economy.



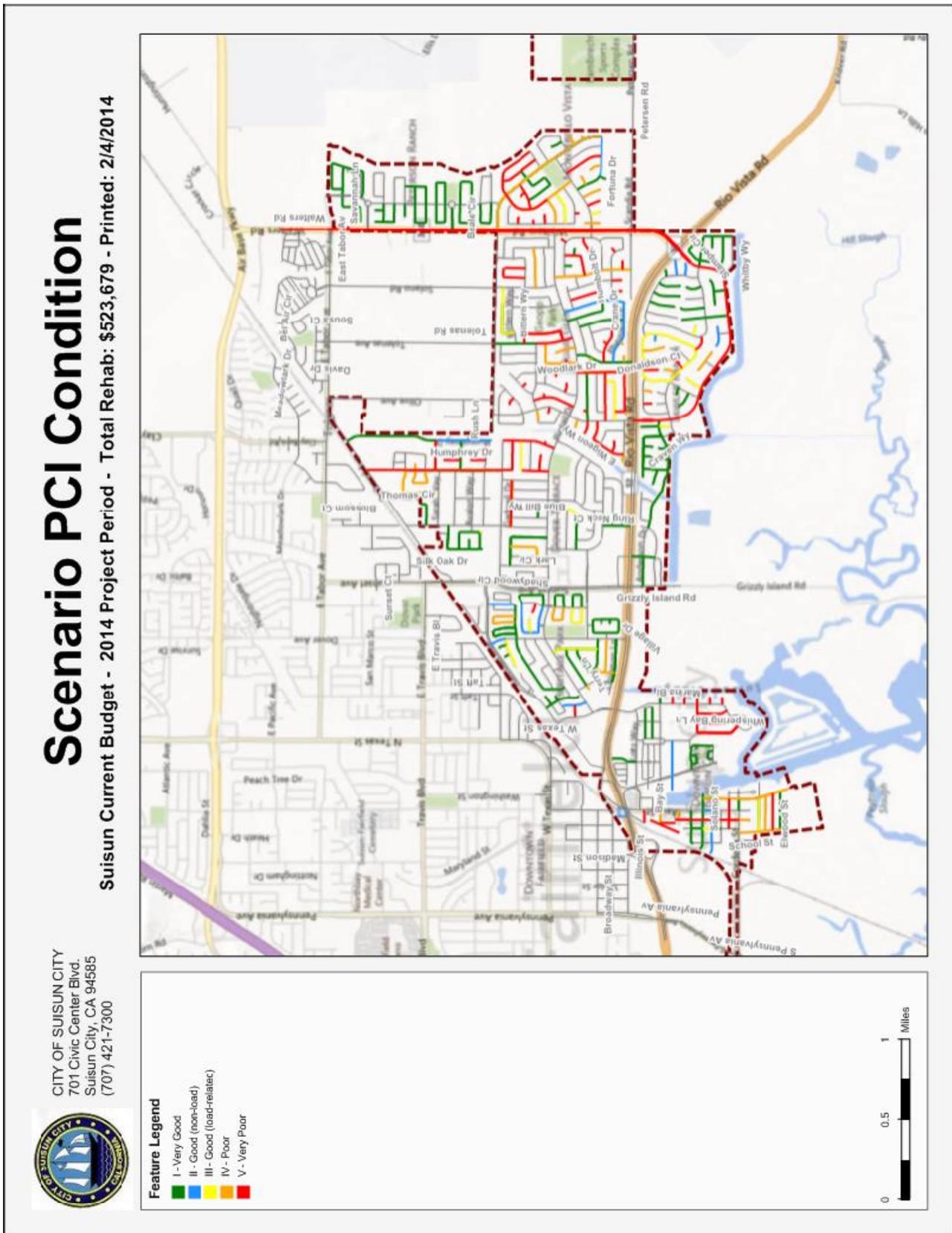
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

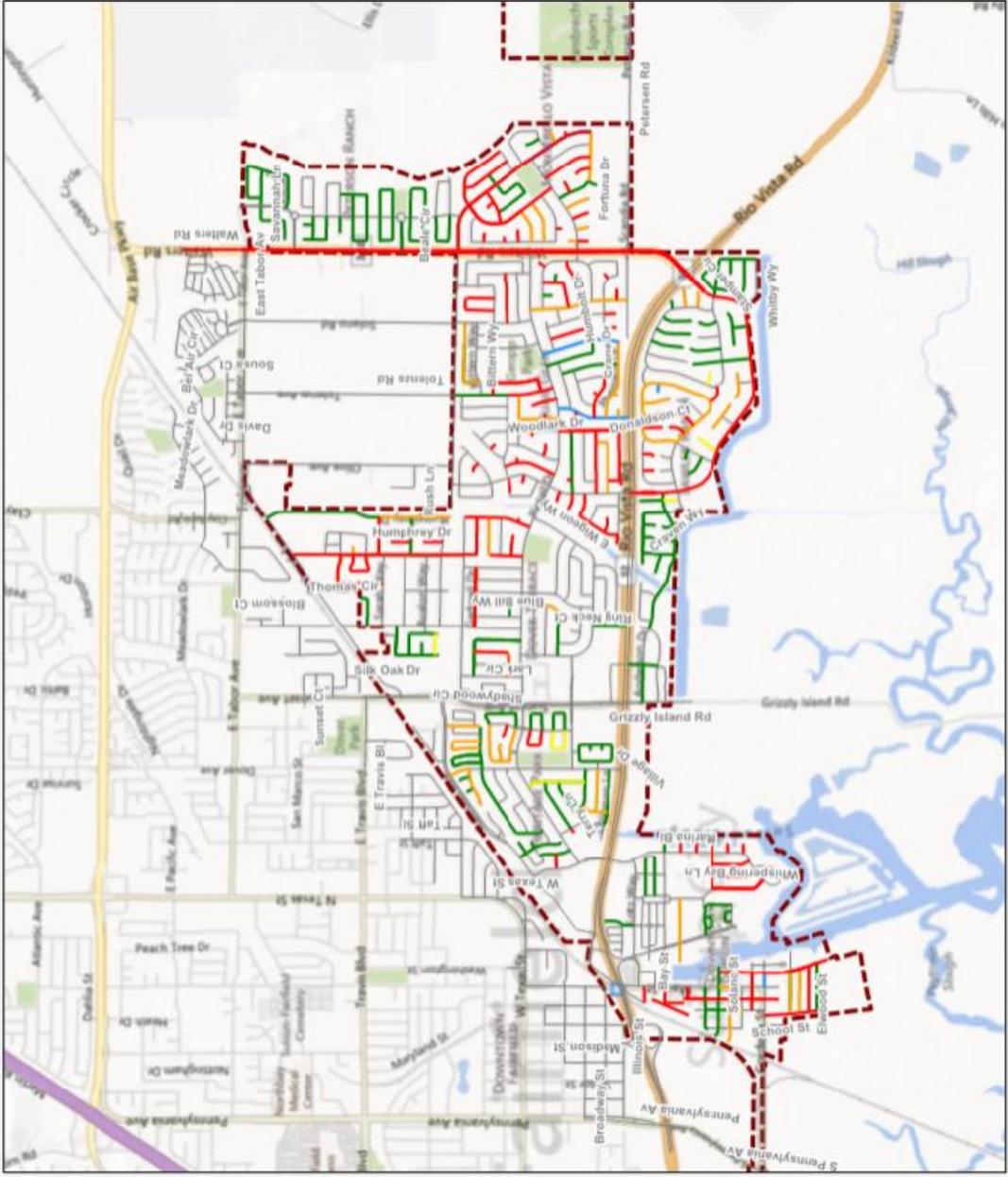
What will Suisun City's Streets look like in the Future using Current Budget Scenarios?

The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).



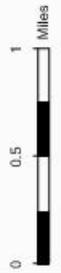
Scenario PCI Condition

Suisun Current Budget - 2018 Project Period - Total Rehab: \$509,725 - Printed: 2/4/2014



Feature Legend

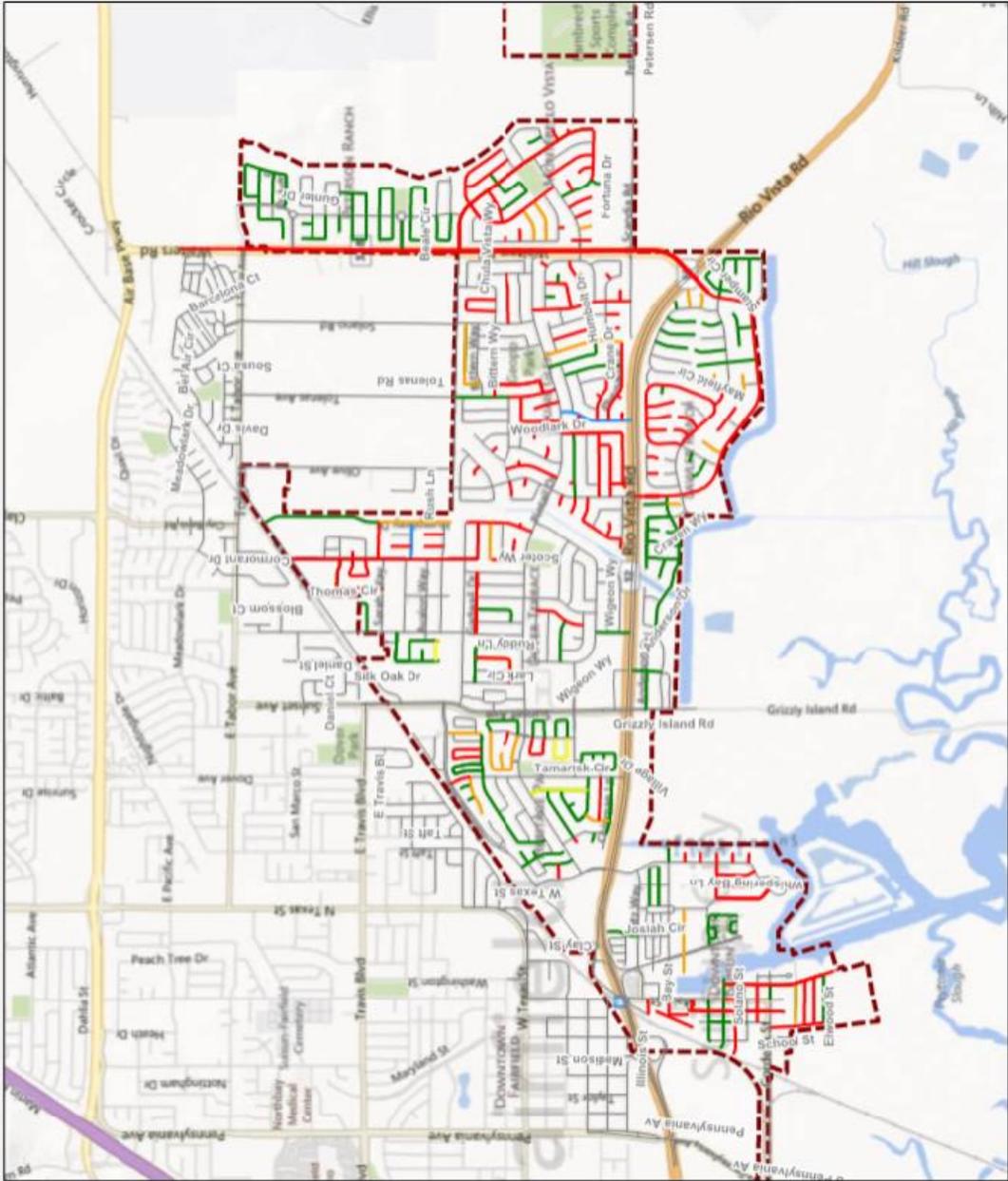
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



Scenario PCI Condition

Suisun Current Budget - 2023 Project Period - Total Rehab: \$514,555 - Printed: 2/4/2014

CITY OF SUISUN CITY
 701 Civic Center Blvd.
 Suisun City, CA 94585
 (707) 421-7300



Feature Legend

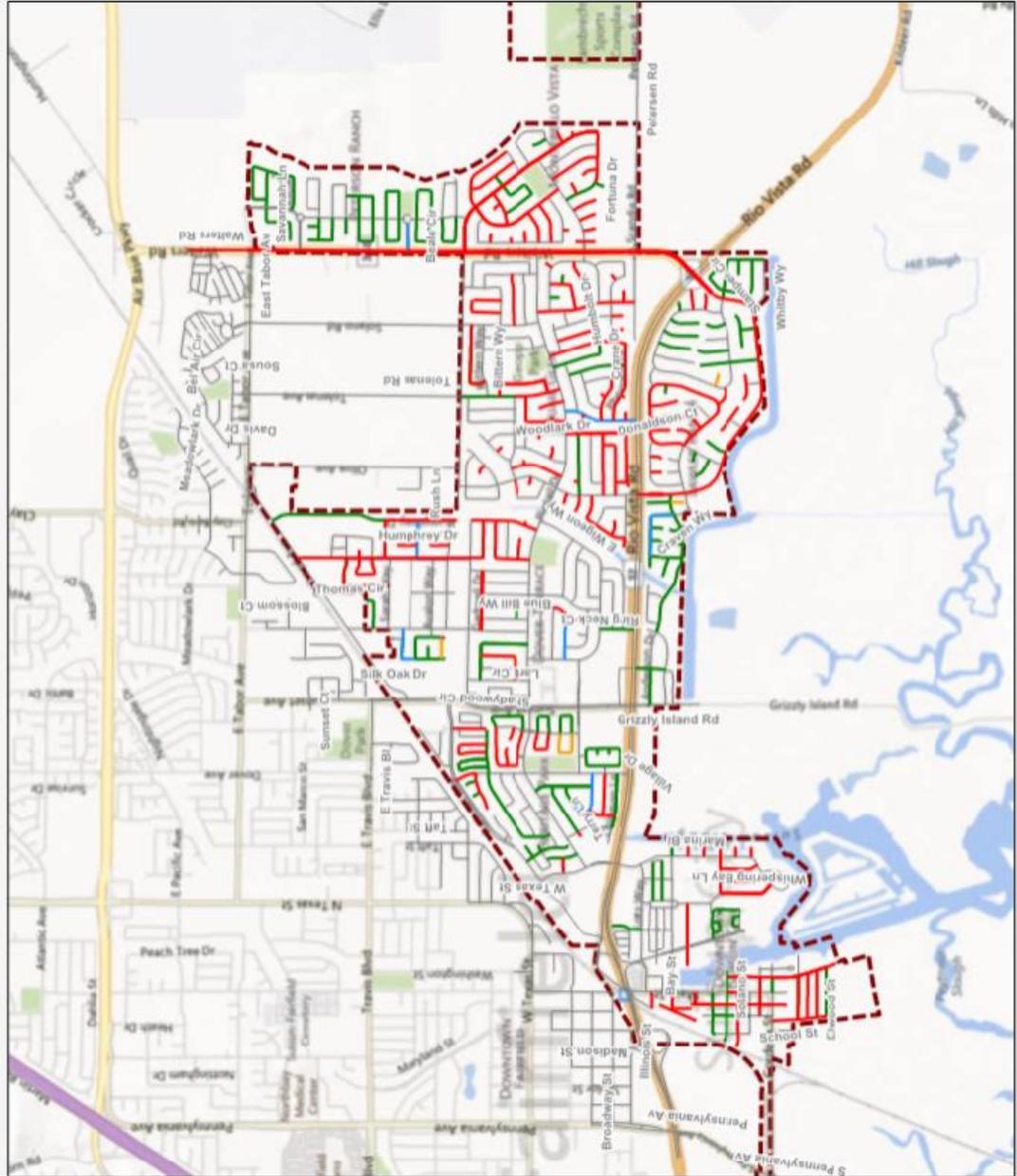
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



Scenario PCI Condition

Suisun Current Budget - 2028 Project Period - Total Rehab: \$517,415 - Printed: 2/4/2014

CITY OF SUISUN CITY
 701 Civic Center Blvd.
 Suisun City, CA 94585
 (707) 421-7300



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF SUISUN CITY

REVENUES							
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL	
<i>Total Revenue</i>							
Federal	\$ 203,000	\$ 1,115,960	\$ -	\$ 1,107,000	\$ -	\$ 2,425,960	
State	\$ 801,845	\$ 794,124	\$ 548,600	\$ 548,600	\$ 788,200	\$ 3,481,369	
Local	\$ 1,210,000	\$ 915,098	\$ 80,000	\$ 137,000	\$ 244,700	\$ 2,586,798	
TOTAL BY FISCAL YEAR	\$ 2,214,845	\$ 2,825,182	\$ 628,600	\$ 1,792,600	\$ 1,032,900	\$ 8,494,127	

EXPENDITURES							
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL	
<i>Maintenance and Operations</i>							
Pavement	\$ 433,550	\$ 468,138	\$ 408,590	\$ 408,590	\$ 671,385	\$ 2,390,253	
Non-Pavement	\$ 233,450	\$ 252,138	\$ 220,010	\$ 220,010	\$ 361,515	\$ 1,287,123	
<i>Capital Improvement Program</i>							
Reconstruction						\$ -	
Overlay	\$ 461,000	\$ 687,304				\$ 1,148,304	
Preventive Main	\$ 686,845	\$ 1,341,297		\$ 1,005,300		\$ 3,033,442	
Non-Pavement	\$ 700,000	\$ 69,000		\$ 328,500	\$ 49,500		
TOTAL BY FISCAL YEAR	\$ 2,514,845	\$ 2,817,877	\$ 628,600	\$ 1,962,400	\$ 1,082,400	\$ 7,859,122	

City of Suisun City
Current Budget

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	65.036787	65.779988	3	3		STA - \$750k/yr 30%PM
2014	62.620017	64.486641	3	3		STA - \$750k/yr 30%PM
2015	60.205879	63.240113	3	3		STA - \$750k/yr 30%PM
2016	57.755542	61.965905	3	3		STA - \$750k/yr 30%PM
2017	55.310457	60.643328	3	3		STA - \$750k/yr 30%PM
2018	52.858624	58.676043	3	3		STA - \$750k/yr 30%PM
2019	50.433515	57.353833	3	3		STA - \$750k/yr 30%PM
2020	47.985382	56.040629	3	3		STA - \$750k/yr 30%PM
2021	45.594854	54.729343	3	3		STA - \$750k/yr 30%PM
2022	43.206267	53.635425	3	3		STA - \$750k/yr 30%PM
2023	40.775452	51.876247	3	3		STA - \$750k/yr 30%PM
2024	38.33443	50.644911	3	3		STA - \$750k/yr 30%PM
2025	36.018211	49.361129	3	3		STA - \$750k/yr 30%PM
2026	33.747262	48.340635	3	3		STA - \$750k/yr 30%PM
2027	31.512665	47.357688	3	3		STA - \$750k/yr 30%PM

Scenario: PCI 60

Objective: Minimum Network Average PCI: 60.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,315,644
2014	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,228,579
2015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$35,380,370
2016	\$0	\$0	\$0	\$0	\$0	\$0	\$528,079	\$0	\$528,079	\$39,718,291
2017	\$2,157,542	\$0	\$0	\$0	\$2,157,542	\$0	\$364,641	\$0	\$2,522,183	\$43,271,137
2018	\$954,248	\$167,308	\$4,120,749	\$0	\$5,242,305	\$0	\$0	\$0	\$5,242,305	\$41,711,162
2019	\$135,057	\$74,997	\$4,032,198	\$1,652,821	\$5,895,073	\$0	\$2,972	\$0	\$5,898,045	\$40,791,236
2020	\$70,638	\$0	\$0	\$0	\$70,638	\$0	\$518,009	\$0	\$588,647	\$52,344,224
2021	\$96,606	\$0	\$3,797,210	\$0	\$3,893,816	\$0	\$184,637	\$0	\$4,078,453	\$56,802,497
2022	\$517,951	\$0	\$0	\$0	\$517,951	\$0	\$462,756	\$0	\$980,707	\$60,184,734
2023	\$30,830	\$0	\$2,133,572	\$1,618,338	\$3,782,740	\$0	\$59,033	\$0	\$3,841,773	\$58,417,900
2024	\$0	\$0	\$0	\$0	\$0	\$0	\$580,445	\$0	\$580,445	\$61,365,884
2025	\$169,151	\$0	\$1,045,283	\$782,759	\$1,997,193	\$0	\$262,240	\$0	\$2,259,433	\$62,531,052
2026	\$16,598	\$0	\$0	\$2,224,435	\$2,241,033	\$0	\$214,402	\$0	\$2,455,435	\$62,670,516
2027	\$0	\$0	\$0	\$0	\$0	\$0	\$443,289	\$0	\$443,289	\$64,754,759

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$4,597,099	\$671,593	
Collector	\$16,048,193	\$1,571,719	
Residential/Local	\$5,152,999	\$1,377,191	
Total:	\$25,798,291	\$3,620,503	Grand Total: \$29,418,794

Scenario: PCI 75

Objective: Minimum Network Average PCI: 75.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$1,034,916	\$1,152,462	\$5,939,674	\$5,148,961	\$13,276,013	\$0	\$722,514	\$0	\$13,998,527	\$11,317,246
2014	\$1,002,196	\$351,322	\$1,455,307	\$2,632,327	\$5,441,152	\$0	\$93,093	\$0	\$5,534,245	\$12,886,294
2015	\$473,589	\$42,448	\$2,685,588	\$897,661	\$4,099,286	\$0	\$65,953	\$0	\$4,165,239	\$16,362,786
2016	\$4,831	\$0	\$2,719,391	\$1,240,273	\$3,964,495	\$0	\$13,447	\$0	\$3,977,942	\$17,572,240
2017	\$0	\$0	\$0	\$0	\$0	\$0	\$567,089	\$0	\$567,089	\$23,154,878
2018	\$0	\$0	\$0	\$0	\$0	\$0	\$568,767	\$0	\$568,767	\$26,347,336
2019	\$455,713	\$0	\$1,957,663	\$0	\$2,413,376	\$0	\$283,086	\$0	\$2,696,462	\$24,406,303
2020	\$449,903	\$0	\$1,099,728	\$1,720,330	\$3,269,961	\$0	\$77,876	\$0	\$3,347,837	\$22,787,108
2021	\$0	\$0	\$0	\$0	\$0	\$0	\$534,363	\$0	\$534,363	\$24,364,908
2022	\$0	\$0	\$998,015	\$1,741,726	\$2,739,741	\$0	\$317,939	\$0	\$3,057,680	\$24,422,324
2023	\$0	\$0	\$0	\$0	\$0	\$0	\$455,820	\$0	\$455,820	\$25,362,950
2024	\$299,516	\$0	\$0	\$1,677,727	\$1,977,243	\$0	\$478,149	\$0	\$2,455,392	\$24,231,919
2025	\$0	\$0	\$0	\$0	\$0	\$0	\$349,911	\$0	\$349,911	\$25,535,044
2026	\$0	\$0	\$0	\$0	\$0	\$0	\$567,464	\$0	\$567,464	\$26,464,066
2027	\$76,070	\$218,297	\$1,774,029	\$273,860	\$2,342,256	\$0	\$319,810	\$0	\$2,662,066	\$26,205,009

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$2,872,621	\$922,653	
Collector	\$28,382,272	\$2,920,714	
Residential/Local	\$8,268,630	\$1,571,914	
Total:	\$39,523,523	\$5,415,281	Grand Total: \$44,938,804

City of Vacaville

The City of Vacaville is responsible for the management, repair, and maintenance of 581 lane miles of pavement, or 1602 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	115	37.3	124.03	74
Collector	255	68.65	140.23	66
Residential/Local	1232	158.5	317.63	66
Total	1602	264.5	581.8	70 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 70. While this network PCI score is considered good, Vacaville’s PCI has dropped from the previous year (PCI 73 in 2011). Currently, 30% of the City’s pavement area falls under “Excellent or Very Good”, 49% falls under “Good or Fair” and 21% falls under “Poor or Failed”. Again, compared with previous years, this shows a slow decline in pavement condition categories.

As far as functional class, arterials are in better condition than collectors and residential roads, which is preferable since they carry the bulk of the traffic and loading; however collectors are next in line. Moving forward, the City of Vacaville will have to set priorities for each classification, and certain streets within each classification.



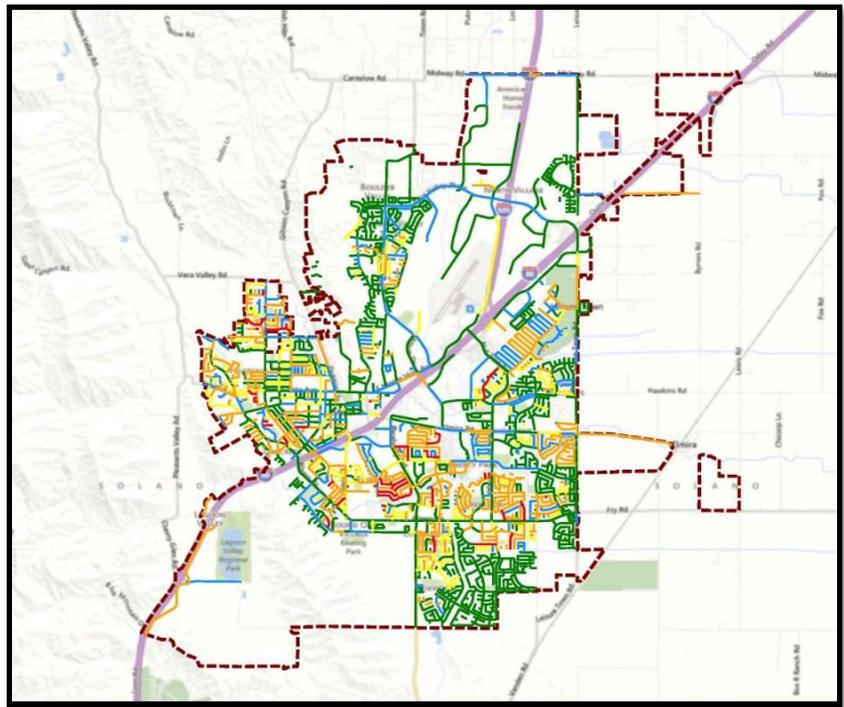
Fair/At-Risk Pavement Condition

Excellent/Very Good Pavement Condition



Current Pavement Condition Index (PCI) Map

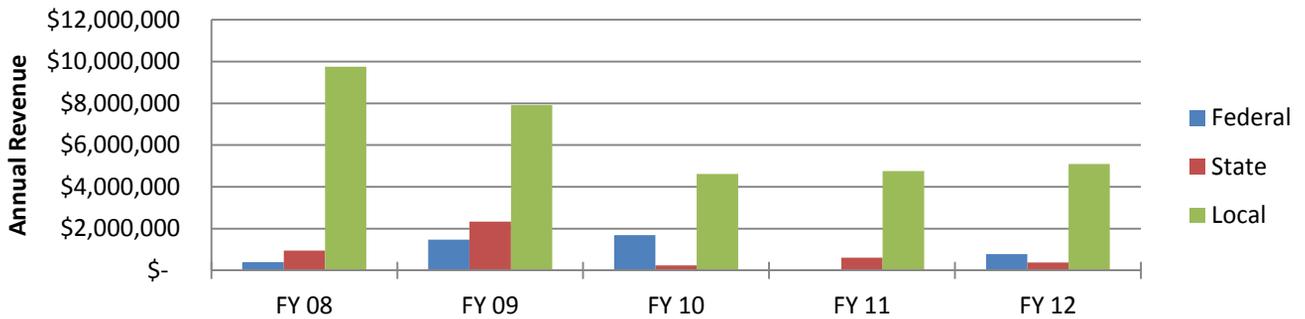
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



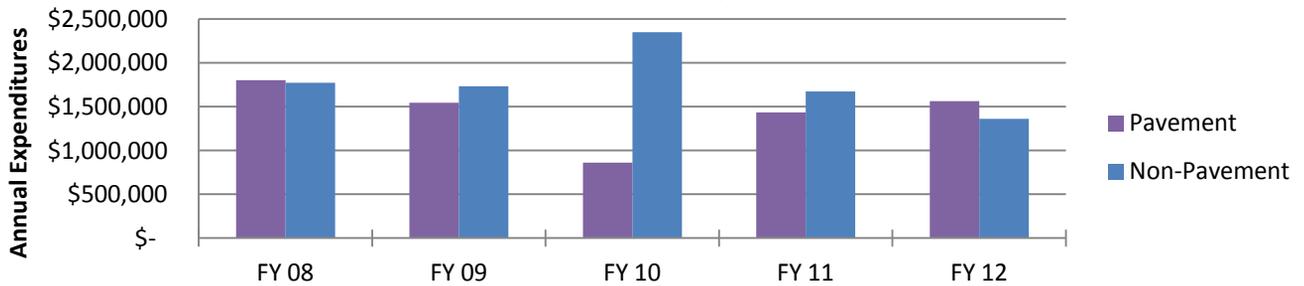
Past Streets and Roads Investments

The current PCI reflects the past investments made in Vacaville's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Vacaville.

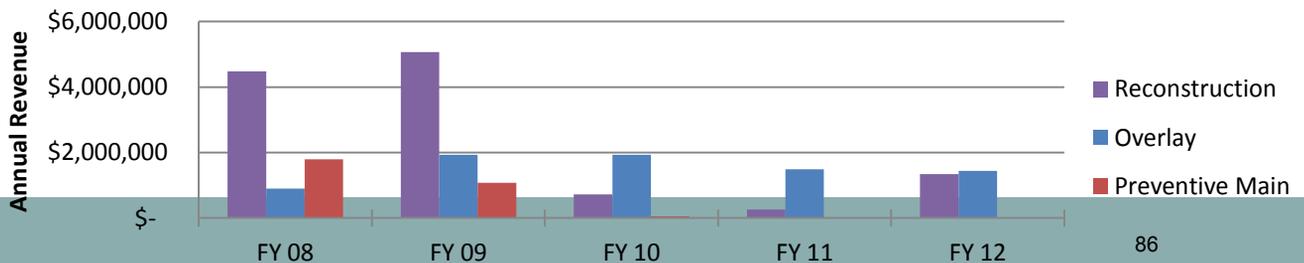
Vacaville Total Revenue



Vacaville Maintenance Expenditures



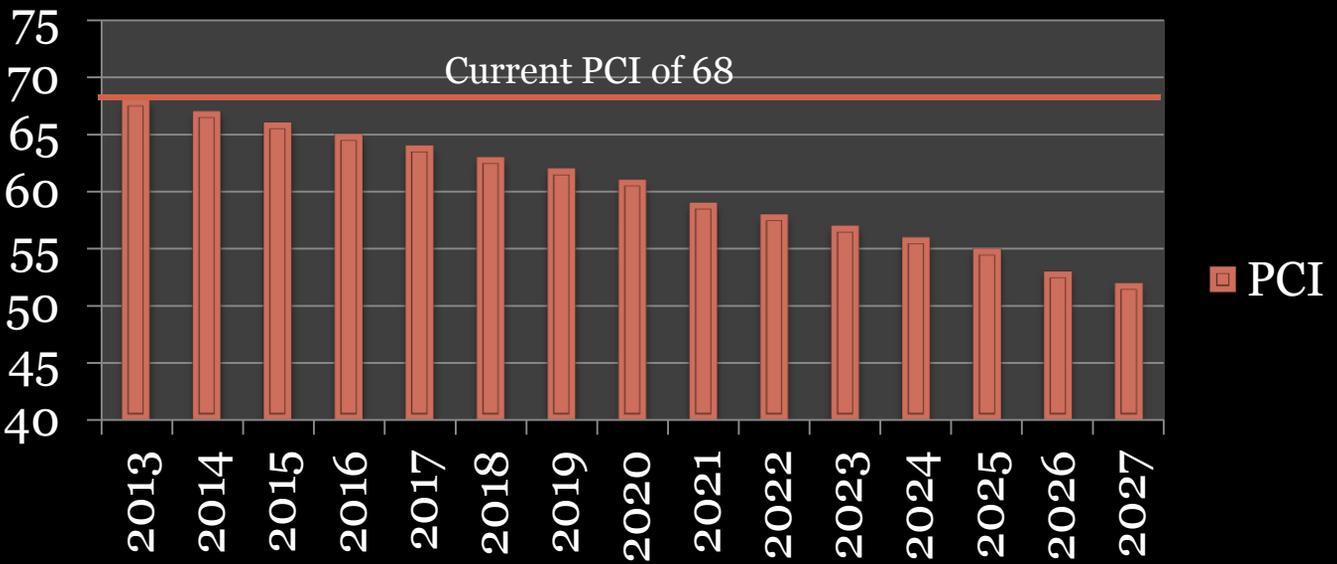
Vacaville Capital Improvement Expenditures



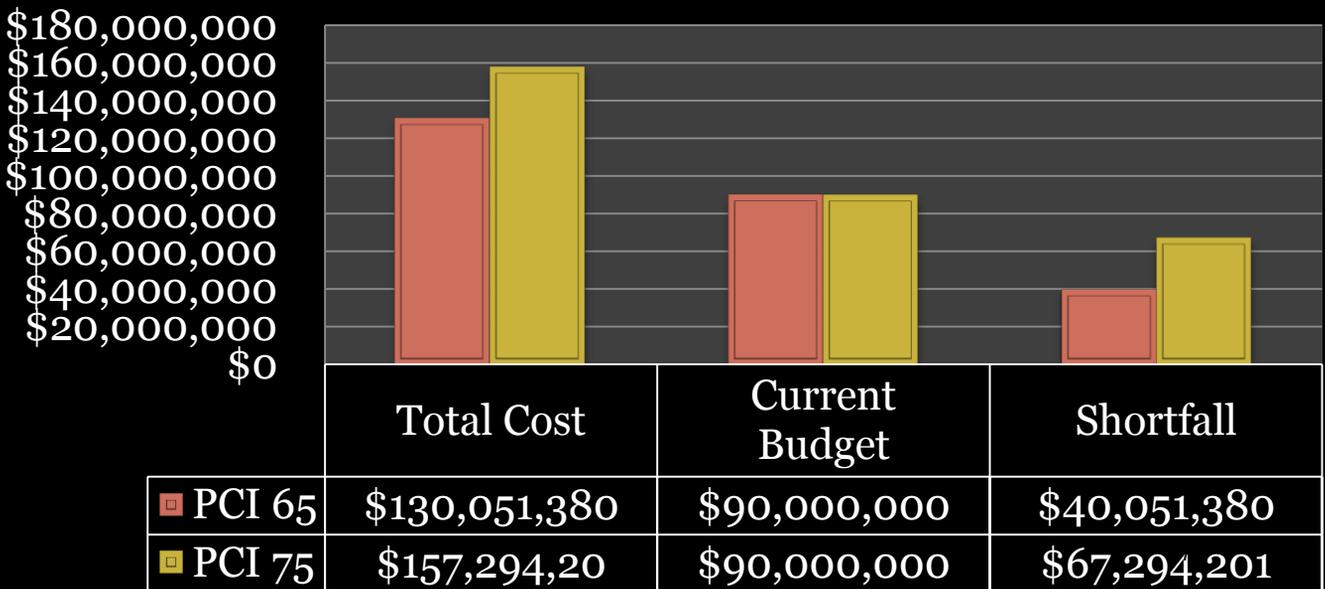
Future Pavement and Revenue Needs

In 2013, Vacaville’s budget for roadway maintenance was \$6,000,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 68 (Fair) to 52 (At Risk). **To maintain a minimum average PCI rating of 65 in the City of Vacaville**, approximately \$130M would need to be spent over the next 15 years. The current budget provides approximately \$90M over 15 years, leaving a funding shortfall of approximately \$40M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$67M more than what is currently being budgeted would need to be invested in Vacaville’s roads over the next 15 years.

PCI with Current Budget (\$6,000,000 Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Vacaville's current PCI of 68 should be viewed with caution, as it indicates that its local streets and roads are poised on the edge of a maintenance cliff.**

Vacaville is currently on track to invest approximately 2/3 of the required \$130M necessary to keep the city's PCI at 65 over the next 15 years. If the city were to raise its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$67M more than the \$90M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Vacaville will continue its downward trend in pavement quality. This deterioration hinders Vacaville from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Vacaville millions in the future and strengthen its local economy.



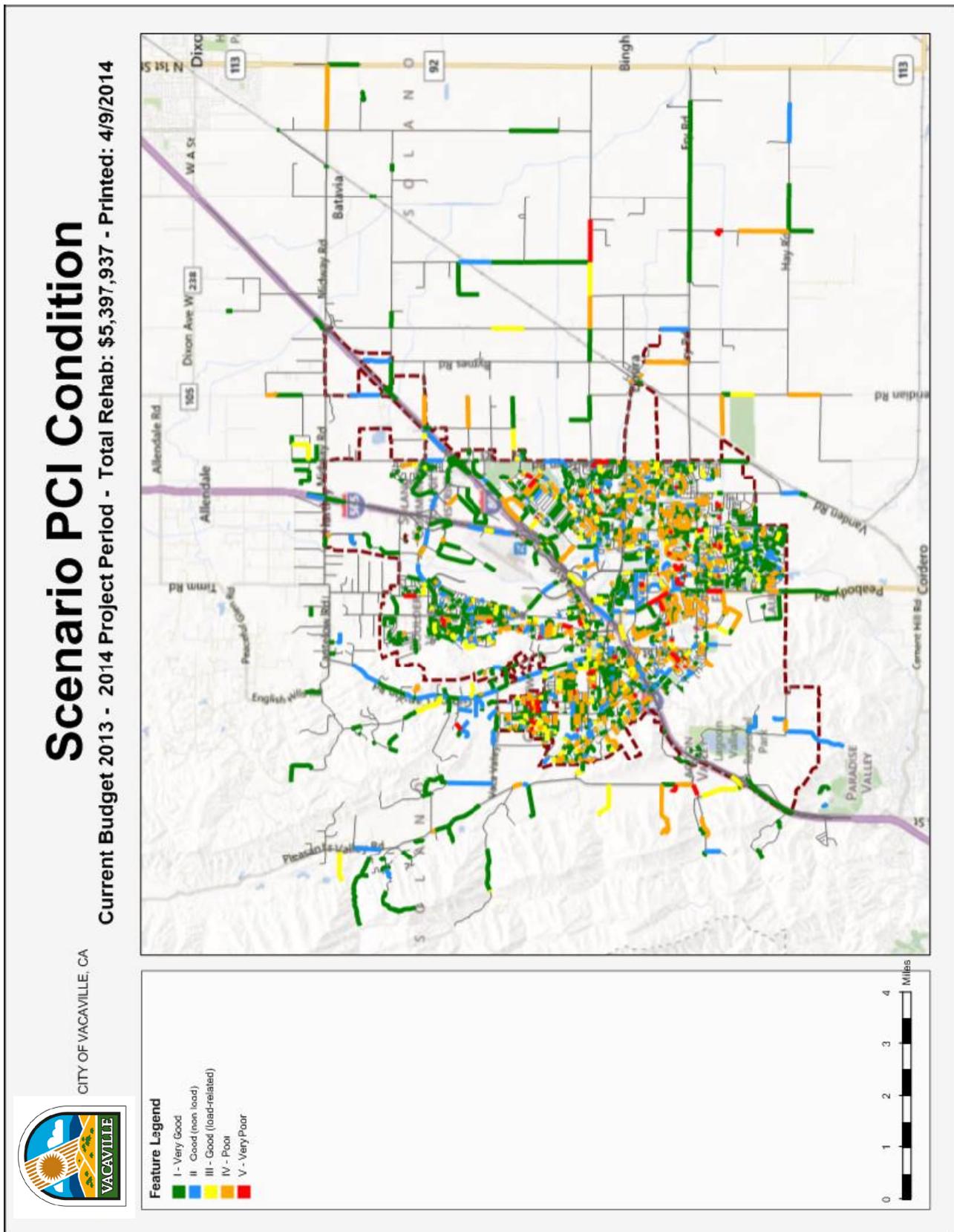
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

What will Vacaville's Streets look like in the Future using Current Budget Scenarios?

The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).

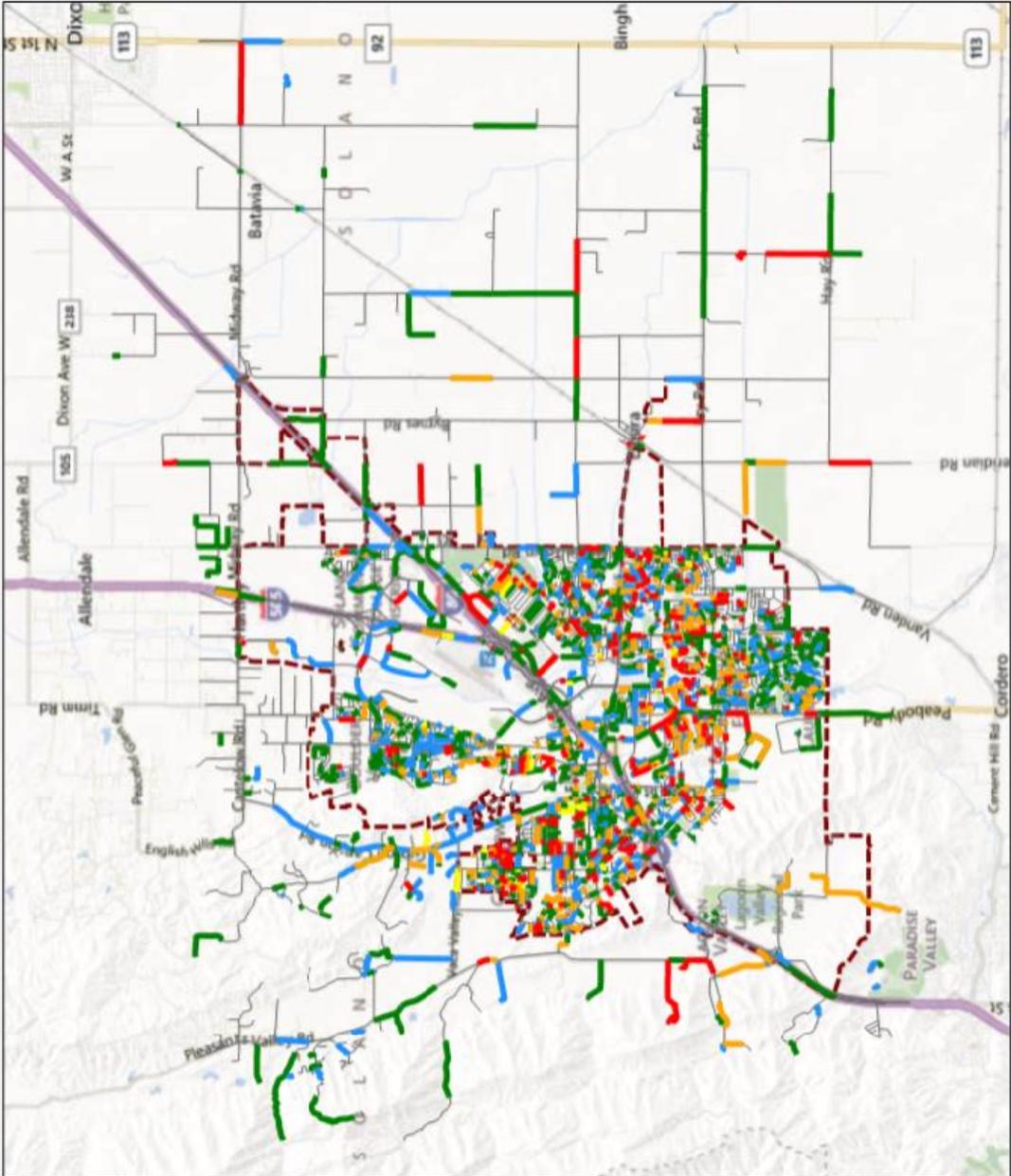




CITY OF VACAVILLE, CA

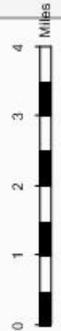
Scenario PCI Condition

Current Budget 2013 - 2018 Project Period - Total Rehab: \$5,399,026 - Printed: 4/9/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

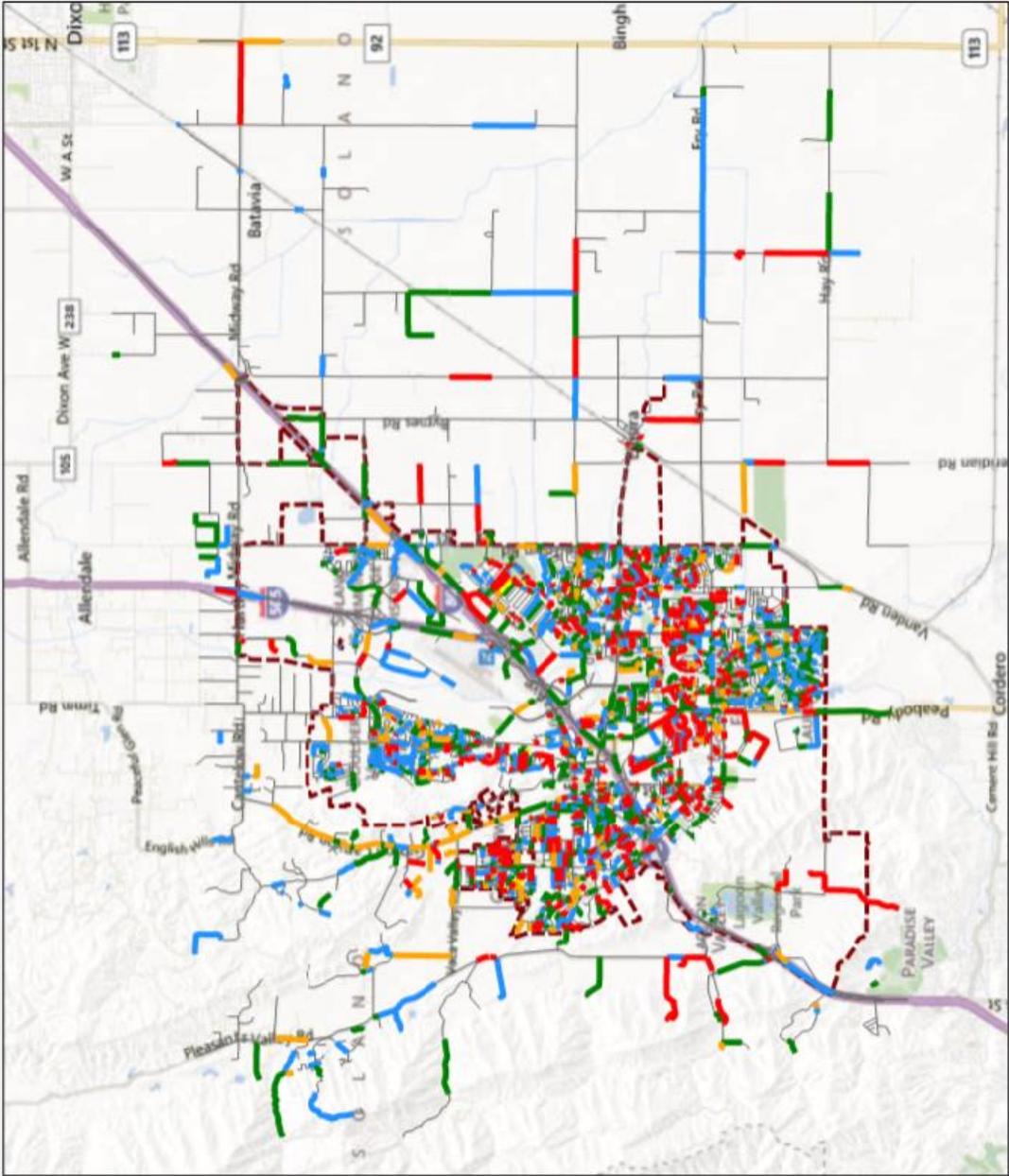




CITY OF VACAVILLE, CA

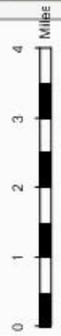
Scenario PCI Condition

Current Budget 2013 - 2023 Project Period - Total Rehab: \$5,397,937 - Printed: 4/9/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

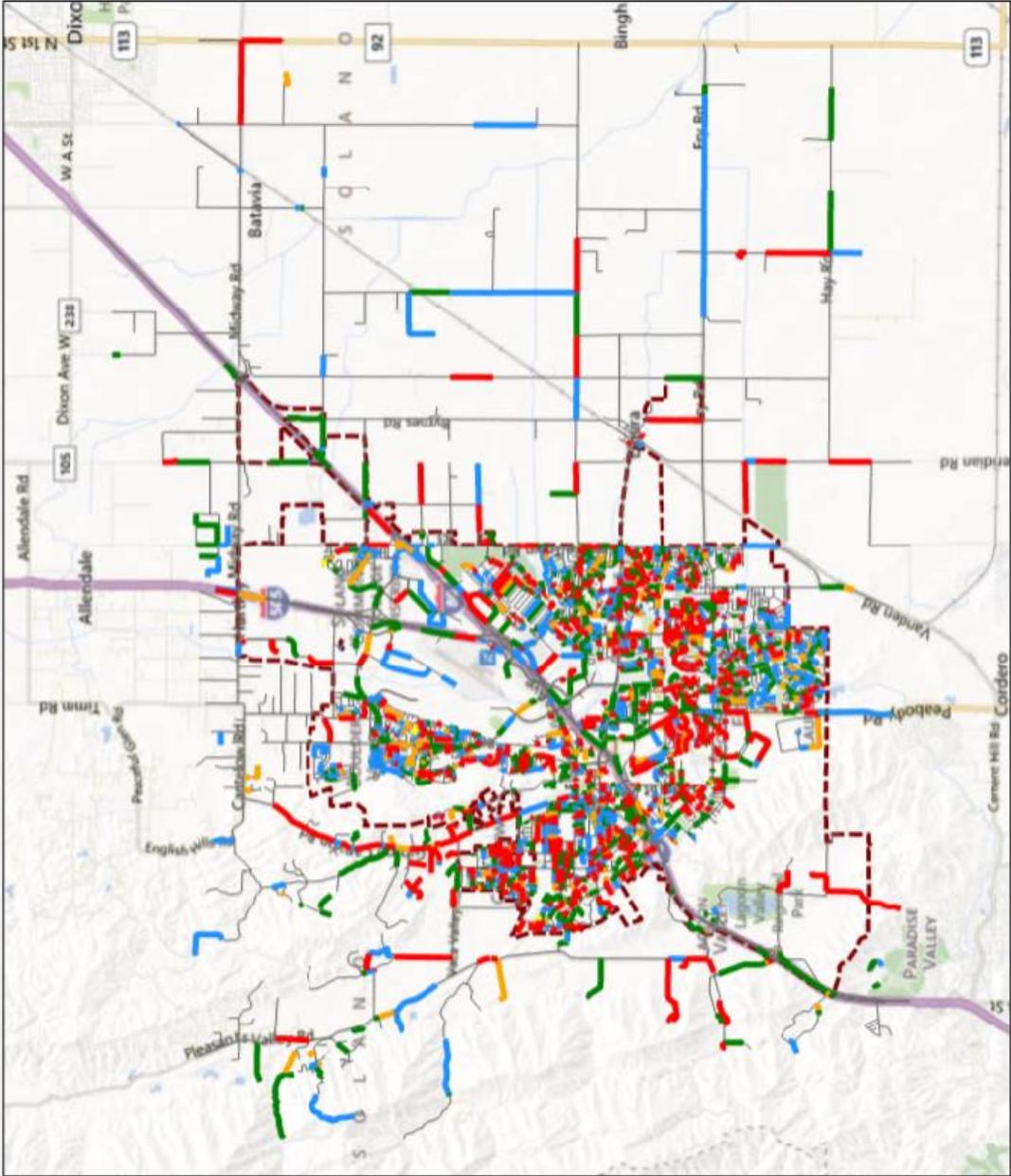




CITY OF VACAVILLE, CA

Scenario PCI Condition

Current Budget 2013 - 2028 Project Period - Total Rehab: \$5,399,254 - Printed: 4/9/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF VACAVILLE

REVENUES								
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL		
<i>Total Revenue</i>								
Federal	\$ 386,293	\$ 1,476,572	\$ 1,694,685	\$ 32,276	\$ 778,858	\$ 4,368,684		
State	\$ 940,678	\$ 2,336,282	\$ 239,454	\$ 613,951	\$ 378,379	\$ 4,508,744		
Local	\$ 9,748,169	\$ 7,913,527	\$ 4,618,464	\$ 4,755,164	\$ 5,088,043	\$ 32,123,367		
TOTAL BY FISCAL YEAR	\$ 11,075,140	\$ 11,726,381	\$ 6,552,603	\$ 5,401,392	\$ 6,245,280	\$ 41,000,795		

EXPENDITURES								
	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL		
<i>Maintenance and Operations</i>								
Pavement	\$ 1,803,940	\$ 1,544,225	\$ 861,174	\$ 1,433,935	\$ 1,563,577	\$ 7,206,850		
Non-Pavement	\$ 1,772,596	\$ 1,733,056	\$ 2,348,719	\$ 1,673,247	\$ 1,362,771	\$ 8,890,389		
<i>Capital Improvement Program</i>								
Reconstruction	\$ 4,478,698	\$ 5,068,112	\$ 717,983	\$ 258,949	\$ 1,339,585	\$ 11,863,328		
Overlay	\$ 896,898	\$ 1,930,305	\$ 1,932,050	\$ 1,489,642	\$ 1,441,825	\$ 7,690,720		
Preventive Mair	\$ 1,794,799	\$ 1,072,118	\$ 53,869	\$ -	\$ 12,768	\$ 2,933,554		
Non-Pavement	\$ 328,208	\$ 378,566	\$ 638,808	\$ 545,618	\$ 524,754	\$ 2,415,955		
TOTAL BY FISCAL YEAR	\$ 11,075,140	\$ 11,726,381	\$ 6,552,603	\$ 5,401,392	\$ 6,245,280	\$ 41,000,795		

**City of Vacaville
Current Budget**

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	66.259108	67.629364	3	3		STA - Current budget \$6M/yr 10%PM
2014	64.048704	66.695698	3	3		STA - Current budget \$6M/yr 10%PM
2015	61.760669	65.675349	3	3		STA - Current budget \$6M/yr 10%PM
2016	59.386165	64.802366	3	3		STA - Current budget \$6M/yr 10%PM
2017	56.929017	63.788653	3	3		STA - Current budget \$6M/yr 10%PM
2018	54.410809	62.794622	3	3		STA - Current budget \$6M/yr 10%PM
2019	51.85392	61.794584	3	3		STA - Current budget \$6M/yr 10%PM
2020	49.263083	60.610649	3	3		STA - Current budget \$6M/yr 10%PM
2021	46.628262	59.389987	3	3		STA - Current budget \$6M/yr 10%PM
2022	43.979962	58.012254	3	3		STA - Current budget \$6M/yr 10%PM
2023	41.349024	56.862964	3	3		STA - Current budget \$6M/yr 10%PM
2024	38.666503	55.638757	3	3		STA - Current budget \$6M/yr 10%PM
2025	36.017886	54.514362	3	3		STA - Current budget \$6M/yr 10%PM
2026	33.396352	53.454005	3	3		STA - Current budget \$6M/yr 10%PM
2027	30.835487	52.160841	3	3		STA - Current budget \$6M/yr 10%PM

City of Vacaville

Scenario: Current PCI 66

Objective: Minimum Network Average PCI: 66.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,957,988
2014	\$0	\$0	\$0	\$0	\$0	\$0	\$4,670,263	\$0	\$4,670,263	\$48,942,637
2015	\$100,147	\$785,916	\$3,714,609	\$0	\$4,600,672	\$0	\$3,269,455	\$0	\$7,870,127	\$50,918,148
2016	\$2,395,977	\$3,061,061	\$4,652,138	\$0	\$10,109,176	\$0	\$0	\$0	\$10,109,176	\$49,165,137
2017	\$0	\$847,928	\$9,142,741	\$0	\$9,990,669	\$0	\$0	\$0	\$9,990,669	\$54,889,406
2018	\$0	\$628,207	\$10,185,014	\$0	\$10,813,221	\$0	\$0	\$0	\$10,813,221	\$66,612,583
2019	\$0	\$284,646	\$2,889,986	\$0	\$3,174,632	\$0	\$5,414,077	\$0	\$8,588,709	\$79,764,564
2020	\$0	\$299,826	\$4,319,123	\$0	\$4,618,949	\$0	\$3,784,556	\$0	\$8,403,505	\$90,722,537
2021	\$0	\$0	\$10,560,687	\$0	\$10,560,687	\$0	\$904,786	\$0	\$11,465,473	\$95,251,892
2022	\$0	\$0	\$7,307,638	\$3,780,755	\$11,088,393	\$0	\$1,078,947	\$0	\$12,167,340	\$99,897,753
2023	\$1,928,828	\$0	\$2,490,210	\$7,325,237	\$11,744,275	\$0	\$1,157,839	\$0	\$12,902,114	\$105,984,911
2024	\$0	\$0	\$76,839	\$0	\$76,839	\$0	\$6,444,388	\$0	\$6,521,227	\$119,081,664
2025	\$0	\$0	\$2,406,349	\$0	\$2,406,349	\$0	\$4,455,140	\$0	\$6,861,489	\$122,815,600
2026	\$497,841	\$0	\$7,167,967	\$0	\$7,665,808	\$0	\$2,127,433	\$0	\$9,793,241	\$128,454,501
2027	\$1,518,585	\$0	\$6,168,214	\$0	\$7,686,799	\$0	\$2,208,027	\$0	\$9,894,826	\$127,897,261

Summary

Functional Class	Rehabilitation	Prev. Maint.		
Arterial	\$35,631,316	\$9,720,569		
Collector	\$26,228,583	\$6,899,445		
Residential/Local	\$32,676,570	\$18,894,897		
Total:	\$94,536,469	\$35,514,911	Grand Total:	\$130,051,380

City of Vacaville

Scenario: PCI 75

Objective: Minimum Network Average PCI: 75.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$1,727,227	\$5,997,332	\$13,172,492	\$0	\$20,897,051	\$0	\$7,553,457	\$0	\$28,450,508	\$15,507,784
2014	\$953,152	\$2,239,316	\$8,858,377	\$0	\$12,050,845	\$0	\$57,577	\$0	\$12,108,422	\$18,163,067
2015	\$1,552,044	\$1,001,389	\$8,401,239	\$0	\$10,954,672	\$0	\$6,894	\$0	\$10,961,566	\$26,041,839
2016	\$2,597,509	\$852,636	\$6,110,074	\$2,659,097	\$12,219,316	\$0	\$0	\$0	\$12,219,316	\$26,533,817
2017	\$1,285,675	\$0	\$5,857,914	\$3,731,624	\$10,875,213	\$0	\$0	\$0	\$10,875,213	\$31,978,570
2018	\$0	\$0	\$0	\$0	\$0	\$0	\$6,203,448	\$0	\$6,203,448	\$50,229,343
2019	\$0	\$0	\$0	\$0	\$0	\$0	\$5,553,614	\$0	\$5,553,614	\$54,638,255
2020	\$1,074,256	\$96,954	\$4,957,111	\$0	\$6,128,321	\$0	\$1,877,895	\$0	\$8,006,216	\$52,416,573
2021	\$900,502	\$0	\$3,575,665	\$4,922,037	\$9,398,204	\$0	\$889,170	\$0	\$10,287,374	\$42,287,023
2022	\$1,390,594	\$0	\$104,954	\$8,646,632	\$10,142,180	\$0	\$809,559	\$0	\$10,951,739	\$34,908,972
2023	\$0	\$0	\$0	\$0	\$0	\$0	\$5,766,572	\$0	\$5,766,572	\$44,196,838
2024	\$0	\$0	\$0	\$0	\$0	\$0	\$5,850,460	\$0	\$5,850,460	\$57,075,090
2025	\$0	\$0	\$3,582,587	\$0	\$3,582,587	\$0	\$3,940,817	\$0	\$7,523,404	\$56,367,346
2026	\$0	\$242,240	\$8,098,819	\$0	\$8,341,059	\$0	\$1,665,303	\$0	\$10,006,362	\$54,185,068
2027	\$1,748,711	\$0	\$1,362,231	\$8,001,532	\$11,112,474	\$0	\$1,417,513	\$0	\$12,529,987	\$43,883,072

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$27,448,366	\$10,138,733	
Collector	\$54,738,062	\$10,478,860	
Residential/Local	\$33,515,494	\$20,974,686	
Total:	\$115,701,922	\$41,592,279	Grand Total: \$157,294,201

City of Vallejo

The City of Vallejo is responsible for the management, repair, and maintenance of 714 lane miles of pavement, or 2067 pavement sections. Table 1 summarizes the length of the road and 2012 pavement condition index (PCI) by functional class.

Table 1

Functional Class	Sections	Centerline Miles	Lane Miles	2012 PCI
Arterial	170	49	157.31	68
Collector	240	50.46	117.64	53
Residential/Local	1657	220.52	439.57	42
Total	2067	320	714.5	51 (3 yr avg)

The PCI is a measurement of pavement grade or condition and ranges from 0 to 100. The average 2012 PCI (based on a 3-year moving average) of the street network of the City is 51. Though Vallejo’s average PCI has remained the same since last year (PCI 51 in 2011), it is considered “at-risk” and is very close to poor. Currently, 24% of the City’s pavement area falls under “Excellent or Very Good”, 27% falls under “Good or Fair” and 49% falls under “Poor or Failed”. Again, compared with previous years, this shows a general trend towards the poorer pavement condition categories. If these are not addressed, the quality of the road network will inevitably decline. In order to correct these deficiencies, a cost-effective funding, maintenance and rehabilitation strategy must be implemented.



Poor/Failed Pavement Condition

Excellent/Very Good Pavement Condition

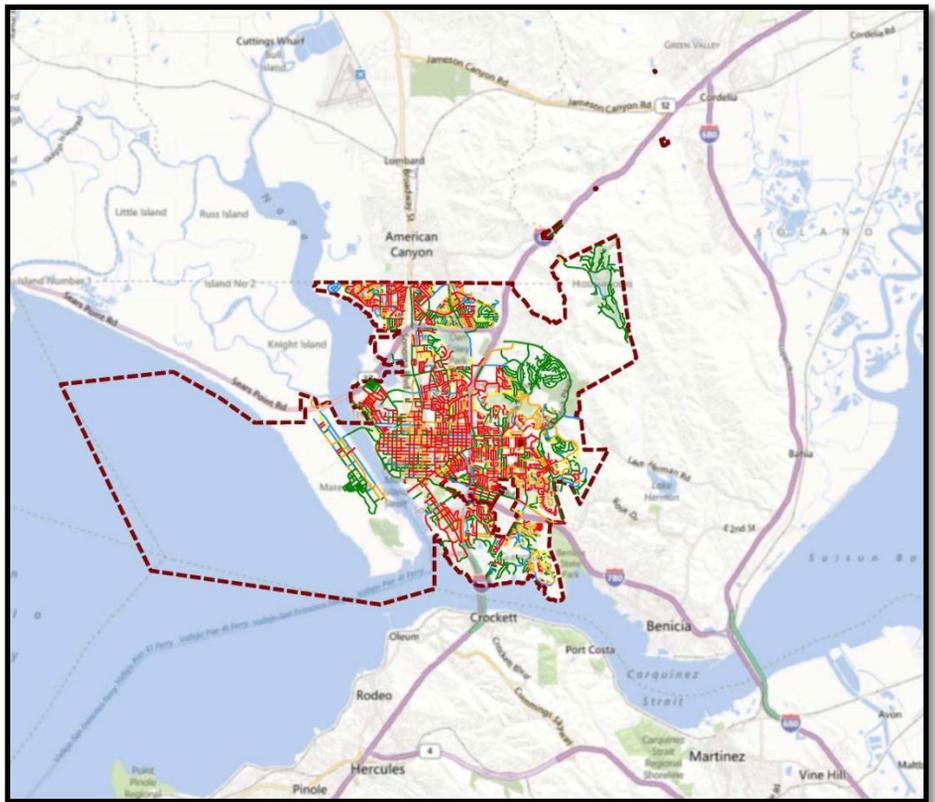


Current Pavement Condition Index (PCI) Map

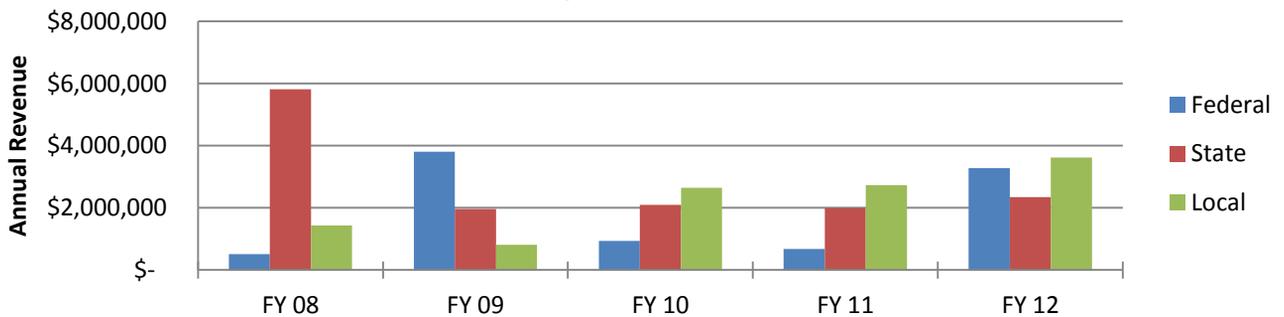
- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

Past Streets and Roads Investments

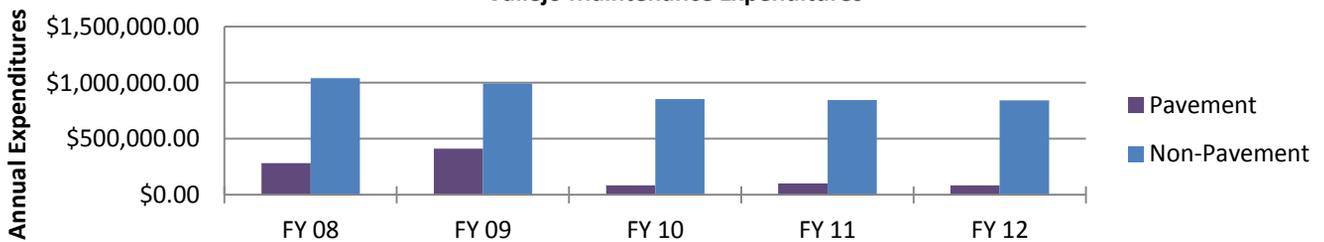
The current PCI reflects the past investments made in Vallejo's streets and roads network. The following charts show 5-year (2008-2012) revenue and expenditure histories for both pavement maintenance and capital projects in Vallejo.



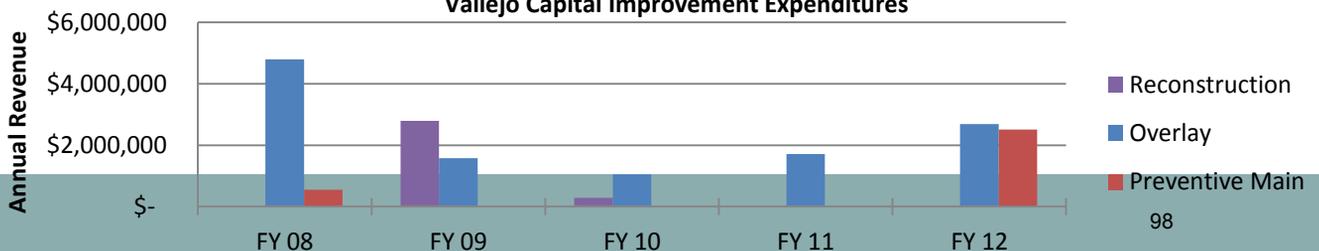
Vallejo Total Revenue



Vallejo Maintenance Expenditures



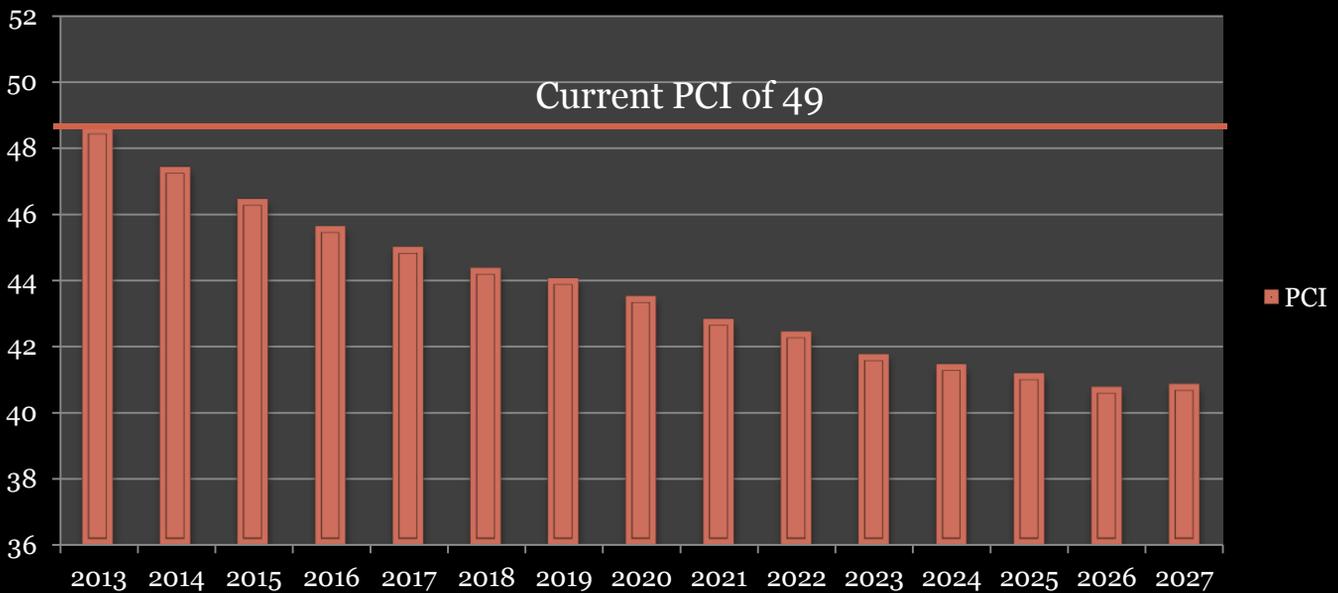
Vallejo Capital Improvement Expenditures



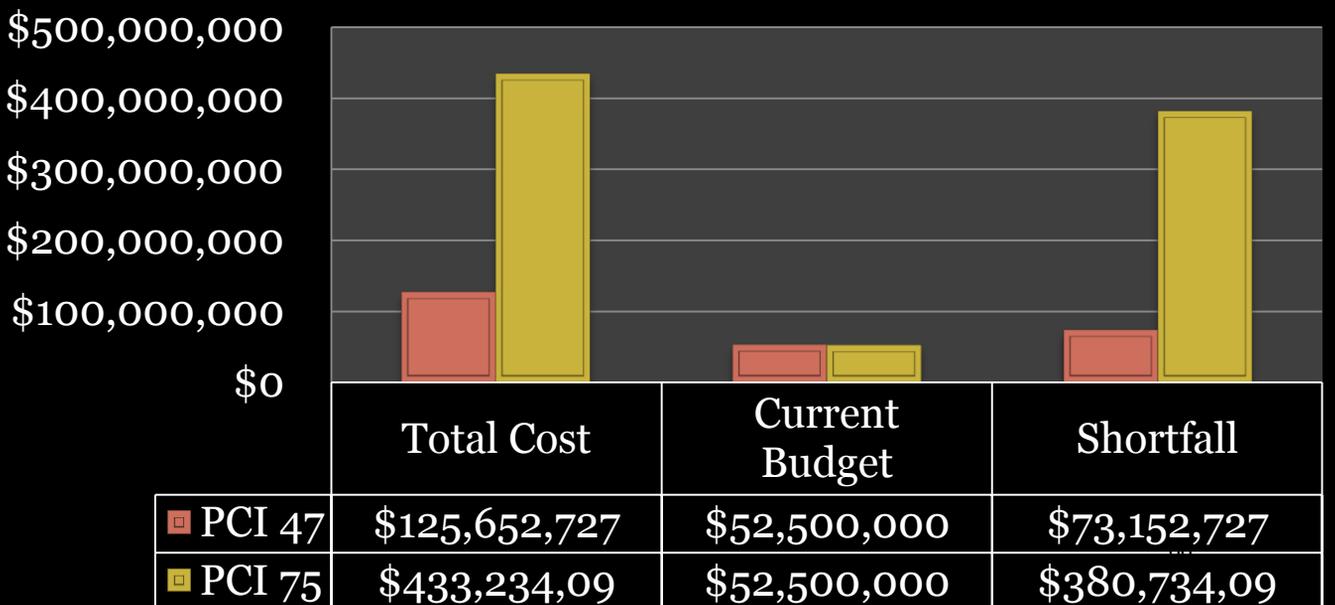
Future Pavement and Revenue Needs

In 2013 Vallejo's average PCI was 49, with a budget for roadway maintenance of \$3,500,000 per year. If that current level of funding were to be applied through the year 2027 (15 years) the average PCI for the City would drop from its current average rating of 49 (Poor) to 41 (Poor). **To maintain an average PCI rating of 47 in the City of Vallejo**, approximately \$125M would need to be spent over the next 15 years. The current budget provides approximately \$52.5M over 15 years, leaving a funding shortfall of approximately \$73.2M. To reach the higher PCI goal of 75, as stated in the Solano Comprehensive Transportation Plan, \$380M more than what is currently being budgeted would need to be invested in Fairfield's roads over the next 15 years.

PCI with Current Budget (\$3,500,000 Annually)



15 Year Outlook



Where Do We Go From Here?

Timely investment in roadway preservation can save cities millions of tax dollars in long-term maintenance costs. A municipality that spends \$1 on timely maintenance to keep a section of roadway in good condition would have to spend \$5 to restore the same road if the pavement is allowed to deteriorate to the point where major rehabilitation is necessary (MTC, 2011). Pavements that are still in good condition (a PCI of 70 or above) can be preventively maintained at a low cost, whereas pavements that need significant rehabilitation or reconstruction require five to 15 times the amount of funding. Thus, **Vallejo's current PCI of 49 should be viewed with caution, as it indicates that its local streets and roads are poised on the edge of a maintenance cliff.**

Vallejo is currently on track to invest approximately 1/3 of the required \$125M necessary to keep the city's PCI at 47 (Poor Condition) over the next 15 years. If the city were to raise its average PCI to 75, the goal stated in the Countywide Transportation Plan, then the city would need to invest an additional \$380M more than the \$52.5M they are currently on track to spend over the next 15 years.

*"Strategic investment in infrastructure produces a foundation for long-term growth."
-Roger McNamee*

Without a healthy investment in its roadway infrastructure, the City of Vallejo will continue its downward trend in pavement quality. This deterioration hinders Vallejo from attracting new jobs, housing, tourism, and business investment. More money spent now in long-term roadway maintenance can save Vallejo millions in the future and strengthen its local economy.



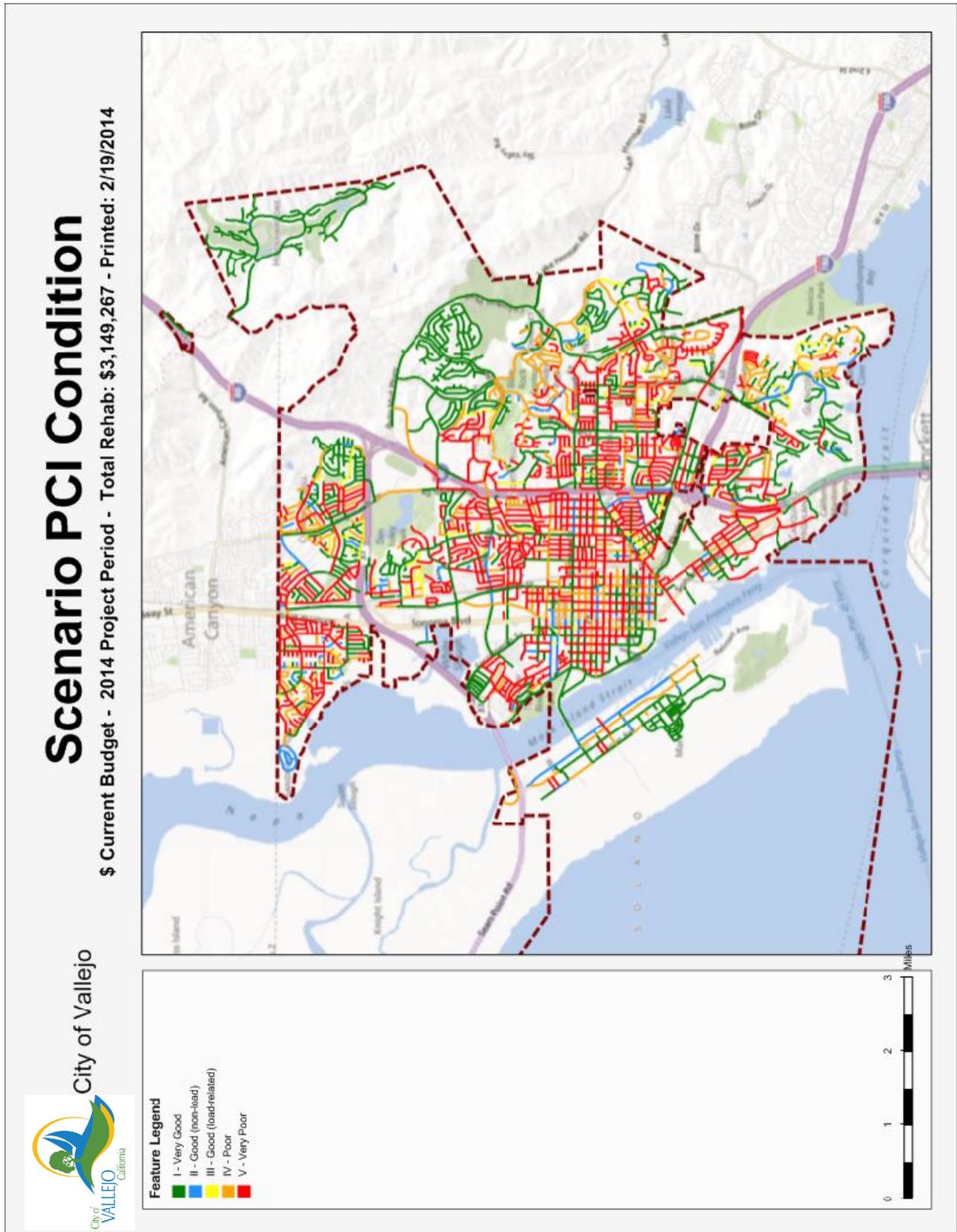
Potholes can grow into major obstacles if not treated quickly.



Investing in caution signs is a poor substitute for roadway maintenance.

What will Vallejo's Streets look like in the Future using Current Budget Scenarios?

The PCI maps below illustrate what streets currently look like and will look like, using current budget scenarios, today (2014), 4 years out (2018), nine years out (2023) and 14 years out (2028).

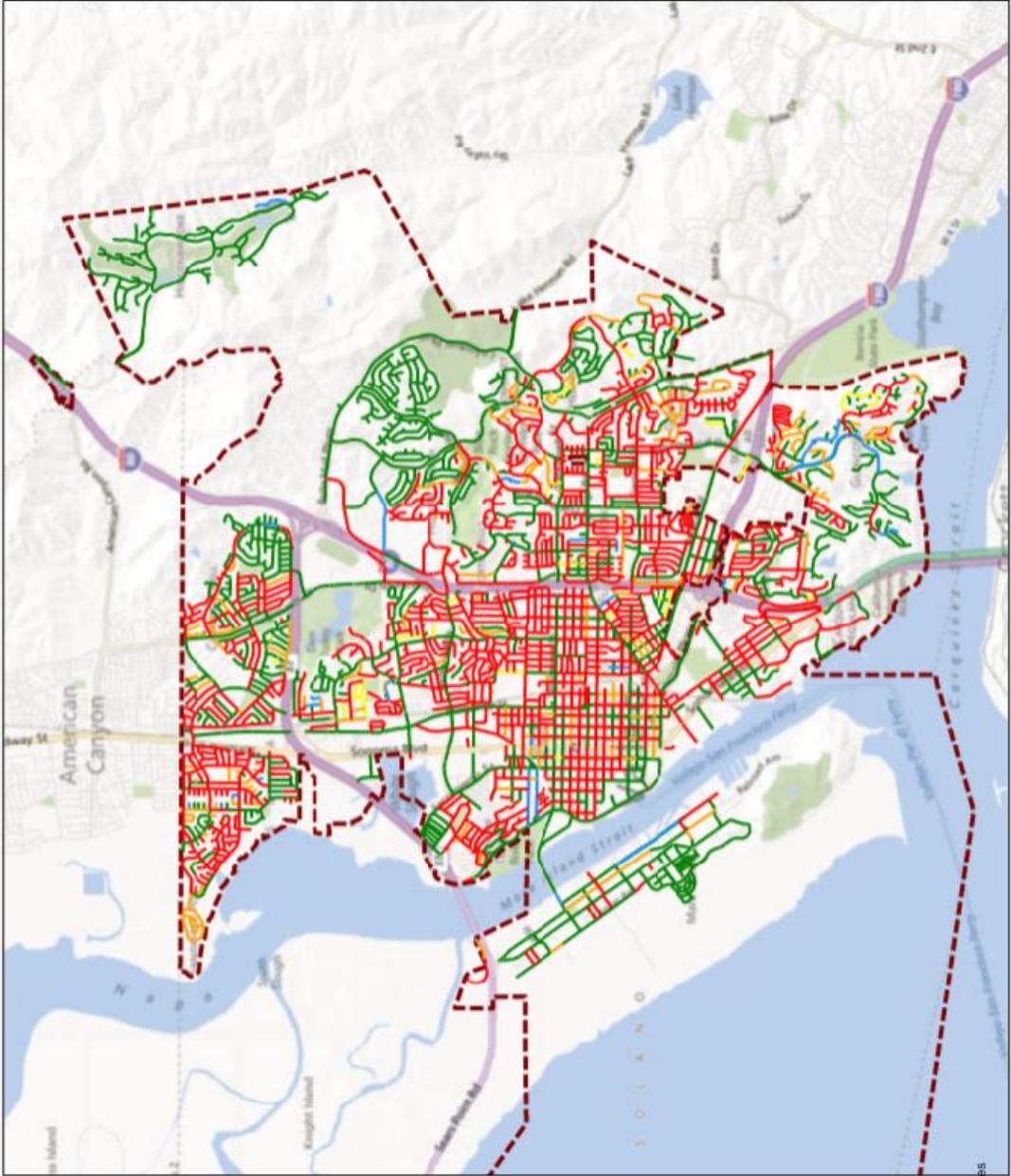


Scenario PCI Condition

\$ Current Budget - 2018 Project Period - Total Rehab: \$3,146,988 - Printed: 2/19/2014



City of Vallejo



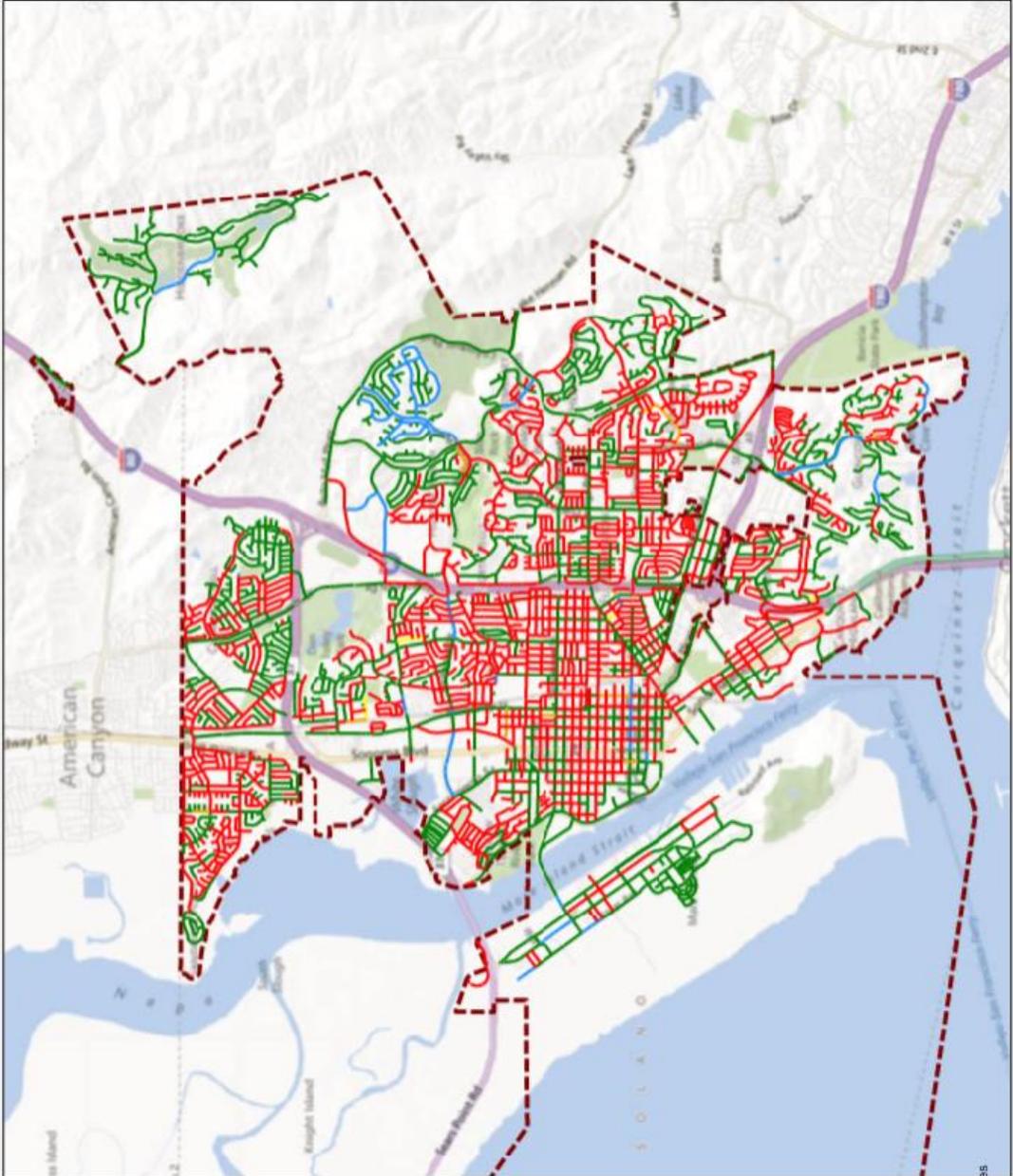
Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



Scenario PCI Condition

\$ Current Budget - 2023 Project Period - Total Rehab: \$3,114,839 - Printed: 2/19/2014



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor

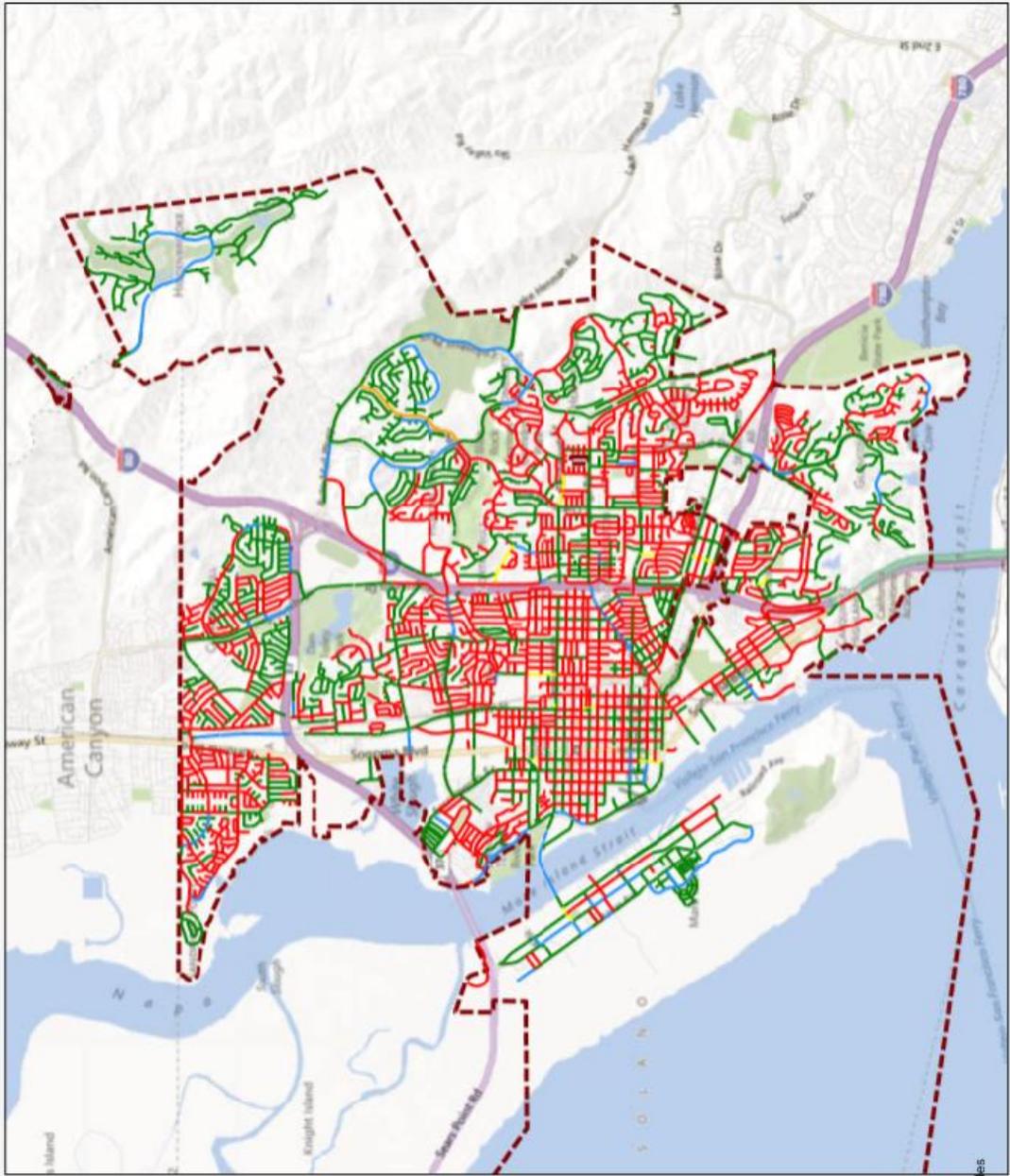


Scenario PCI Condition

\$ Current Budget - 2028 Project Period - Total Rehab: \$3,140,245 - Printed: 2/19/2014



City of Vallejo



Feature Legend

- I - Very Good
- II - Good (non-load)
- III - Good (load-related)
- IV - Poor
- V - Very Poor



SOLONO TRANSPORTATION AUTHORITY

5 Year Local Streets and Roads Budget Info

Fiscal Years 2008 - 2012

CITY OF VALLEJO

REVENUES

	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL
<i>Total Revenue</i>						
Federal	\$ 515,381	\$ 3,807,700	\$ 935,000	\$ 680,045	\$ 3,272,000	\$ 9,210,126
State	\$ 5,818,502	\$ 1,962,514	\$ 2,099,886	\$ 1,990,375	\$ 2,342,060	\$ 14,213,337
Local	\$ 1,432,133	\$ 814,037	\$ 2,643,729	\$ 2,723,899	\$ 3,621,039	\$ 11,234,837
TOTAL BY FISCAL YEAR	\$ 7,766,016	\$ 6,584,251	\$ 5,678,615	\$ 5,394,319	\$ 9,235,099	\$ 34,658,300

EXPENDITURES

	FY 08	FY 09	FY 10	FY 11	FY 12	TOTAL
<i>Maintenance and Operations</i>						
Pavement	\$282,330.00	\$411,690.00	\$85,000.00	\$100,000.00	\$85,000.00	\$ 964,020
Non-Pavement	\$1,040,500.00	\$991,500.00	\$855,000.00	\$845,000.00	\$844,000.00	\$ 4,576,000
<i>Capital Improvement Program</i>						
Reconstruction	\$ -	\$ 2,787,700	\$ 281,765	\$ -	\$ -	\$ 3,069,465
Overlay	\$ 4,799,198	\$ 1,577,537	\$ 1,046,700	\$ 1,711,096	\$ 2,692,330	\$ 11,826,861
Preventive Main	\$ 550,000	\$ -	\$ -	\$ -	\$ 2,508,250	\$ 3,058,250
Non-Pavement						
TOTAL BY FISCAL YEAR	\$ 6,672,028	\$ 5,768,427	\$ 2,268,465	\$ 2,656,096	\$ 6,129,580	\$ 23,494,596

City of Vallejo
Current Budget

ProjectPeriod	UntreatedPCI	TreatedPCI	EUAC	InfFac	NeedsCriteria	ScenarioName
2013	47.105635	48.58362	3	3		STA - 3.5M 10%PM
2014	44.787132	47.396639	3	3		STA - 3.5M 10%PM
2015	42.679791	46.43847	3	3		STA - 3.5M 10%PM
2016	40.700838	45.613843	3	3		STA - 3.5M 10%PM
2017	38.819206	44.990933	3	3		STA - 3.5M 10%PM
2018	37.063535	44.359516	3	3		STA - 3.5M 10%PM
2019	35.371865	44.046009	3	3		STA - 3.5M 10%PM
2020	33.723851	43.508407	3	3		STA - 3.5M 10%PM
2021	32.103016	42.818372	3	3		STA - 3.5M 10%PM
2022	30.492885	42.443963	3	3		STA - 3.5M 10%PM
2023	28.940199	41.757938	3	3		STA - 3.5M 10%PM
2024	27.43883	41.45172	3	3		STA - 3.5M 10%PM
2025	25.956882	41.186237	3	3		STA - 3.5M 10%PM
2026	24.476467	40.772433	3	3		STA - 3.5M 10%PM
2027	23.034807	40.858664	3	3		STA - 3.5M 10%PM

City of Vallejo

Scenario: PCI current 47

Objective: Minimum Network Average PCI: 47.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$334,000,576
2014	\$568,762	\$0	\$1,679,456	\$16,602	\$2,264,820	\$0	\$3,686,700	\$0	\$5,951,520	\$357,721,258
2015	\$1,289,491	\$231,807	\$2,244,080	\$36,808	\$3,802,186	\$0	\$3,380,924	\$0	\$7,183,110	\$378,832,960
2016	\$126,216	\$0	\$4,040,811	\$0	\$4,167,027	\$0	\$2,090,972	\$0	\$6,257,999	\$410,252,746
2017	\$200,444	\$423,731	\$4,308,357	\$0	\$4,932,532	\$0	\$880,049	\$0	\$5,812,581	\$435,031,121
2018	\$172,766	\$47,582	\$3,321,840	\$6,034,668	\$9,576,856	\$0	\$327,382	\$0	\$9,904,238	\$462,172,154
2019	\$374,688	\$0	\$945,757	\$11,449,800	\$12,770,245	\$0	\$354,880	\$0	\$13,125,125	\$480,669,239
2020	\$27,551	\$0	\$826,916	\$7,841,757	\$8,696,224	\$0	\$1,513,750	\$0	\$10,209,974	\$495,465,899
2021	\$200,914	\$0	\$182,922	\$7,975,383	\$8,359,219	\$0	\$2,761,917	\$0	\$11,121,136	\$511,552,590
2022	\$706,796	\$0	\$59,420	\$8,436,519	\$9,202,735	\$0	\$3,222,125	\$0	\$12,424,860	\$525,578,585
2023	\$386,902	\$0	\$0	\$11,499	\$398,401	\$0	\$3,376,256	\$0	\$3,774,657	\$541,759,035
2024	\$255,958	\$0	\$100,416	\$5,811,568	\$6,167,942	\$0	\$3,248,249	\$0	\$9,416,191	\$551,774,930
2025	\$81,648	\$0	\$309,338	\$5,617,963	\$6,008,949	\$0	\$2,426,299	\$0	\$8,435,248	\$562,710,248
2026	\$152,753	\$135,693	\$961,021	\$7,286,401	\$8,535,868	\$0	\$1,520,383	\$0	\$10,056,251	\$572,305,192
2027	\$98,112	\$0	\$0	\$10,491,134	\$10,589,246	\$0	\$1,390,591	\$0	\$11,979,837	\$578,983,039

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$56,110,292	\$10,612,549	
Collector	\$25,736,516	\$4,413,359	
Residential/Local	\$13,625,442	\$15,154,569	
Total:	\$95,472,250	\$30,180,477	Grand Total: \$125,652,727

City of Vallejo

Scenario: PCI 75

Objective: Minimum Network Average PCI: 75.0

Year	CondCat II	CondCat III	CondCat IV	CondCat V	RehabTotal	ProjectTotal	PM Non-Project	PM Project	Total Cost	Deferred
2013	\$1,492,641	\$2,886,825	\$8,500,989	\$217,717,030	\$230,597,485	\$0	\$5,660,555	\$0	\$236,258,040	\$97,742,672
2014	\$393,605	\$255,631	\$2,940,058	\$27,614,062	\$31,203,356	\$0	\$650,299	\$0	\$31,853,655	\$92,873,436
2015	\$893,553	\$0	\$2,341,265	\$13,123,818	\$16,358,636	\$0	\$824,074	\$0	\$17,182,710	\$99,328,095
2016	\$296,320	\$0	\$1,467,722	\$10,227,079	\$11,991,121	\$0	\$2,290,005	\$0	\$14,281,126	\$115,626,401
2017	\$116,401	\$0	\$997,327	\$12,909,133	\$14,022,861	\$0	\$450,625	\$0	\$14,473,486	\$121,324,849
2018	\$42,410	\$0	\$495,551	\$18,828,541	\$19,366,502	\$0	\$314,382	\$0	\$19,680,884	\$115,030,579
2019	\$280,981	\$0	\$233,570	\$12,020,550	\$12,535,101	\$0	\$1,892,983	\$0	\$14,428,084	\$111,888,717
2020	\$111,594	\$0	\$38,471	\$2,224,401	\$2,374,466	\$0	\$6,395,363	\$0	\$8,769,829	\$113,533,392
2021	\$380,819	\$0	\$49,161	\$0	\$429,980	\$0	\$6,293,726	\$0	\$6,723,706	\$123,302,336
2022	\$201,118	\$0	\$47,760	\$0	\$248,878	\$0	\$6,748,110	\$0	\$6,996,988	\$123,303,500
2023	\$287,477	\$0	\$0	\$5,673,266	\$5,960,743	\$0	\$5,128,840	\$0	\$11,089,583	\$118,387,791
2024	\$98,120	\$0	\$0	\$10,169,850	\$10,267,970	\$0	\$2,900,655	\$0	\$13,168,625	\$111,769,567
2025	\$85,860	\$0	\$68,588	\$13,251,120	\$13,405,568	\$0	\$1,510,992	\$0	\$14,916,560	\$101,871,544
2026	\$0	\$135,693	\$2,102,953	\$9,461,192	\$11,699,838	\$0	\$1,464,831	\$0	\$13,164,669	\$95,466,507
2027	\$715,884	\$0	\$0	\$3,772,328	\$4,488,212	\$0	\$5,757,934	\$0	\$10,246,146	\$94,558,146

Summary

Functional Class	Rehabilitation	Prev. Maint.	
Arterial	\$40,385,223	\$12,350,093	
Collector	\$72,978,130	\$11,168,778	
Residential/Local	\$271,587,364	\$24,764,503	
Total:	\$384,950,717	\$48,283,374	Grand Total: \$433,234,091

15 year pavement cost projections (2013 to 2027)

Agency	2013, 15-year Needs				2027, current budget results			2027, Maintain current conditions		2027, cost effective conditions	
	Needs (unlimited money)				Current Budget			Maintain PCI or drop to 65		PCI 75	
	PCI 2013	Needs	Deferred		PCI 2027	Cost	Deferred	Cost	Deferred	Cost	Deferred
Benicia	60	\$ 49,771,088	\$ 17,563,675		44	\$ 7,830,000	\$ 65,931,838	\$ 23,963,951	\$ 44,123,270	\$ 37,472,518	\$ 17,524,329
Dixon	77	\$ 23,625,919	\$ 5,543,770		56	\$ 3,750,000	\$ 30,431,006	\$ 11,727,000	\$ 34,591,773	\$ 19,145,600	\$ 13,327,526
Fairfield	70	\$ 192,512,541	\$ 67,608,611		39	\$ 22,500,000	\$ 297,512,980	\$ 140,150,400	\$ 135,070,378	\$ 151,030,098	\$ 71,663,485
Rio Vista	57	\$ 8,008,413	\$ 3,657,695		44	\$ 1,500,000	\$ 6,602,621	\$ 3,730,552	\$ 4,994,321	\$ 6,153,815	\$ 2,070,118
Suisun	65	\$ 60,720,711	\$ 24,716,118		47	\$ 11,250,000	\$ 88,625,992	\$ 29,418,794	\$ 64,754,759	\$ 44,938,804	\$ 26,205,009
Vacaville	68	\$ 183,760,909	\$ 38,210,247		52	\$ 90,000,000	\$ 180,424,152	\$ 130,051,380	\$ 127,897,261	\$ 157,294,201	\$ 43,883,072
Vallejo	50	\$ 495,876,960	\$ 330,850,661		41	\$ 52,500,000	\$ 646,297,600	\$ 125,652,727	\$ 578,983,039	\$ 433,234,091	\$ 94,558,146
County	75	\$ 201,434,130	\$ 21,703,930		67	\$ 87,000,000	\$ 129,104,553	\$ 84,688,857	\$ 234,030,689	\$ 136,939,569	\$ 37,740,609
Countywide	66	\$ 1,215,710,671	\$ 509,854,708		49	\$ 276,330,000	\$ 1,444,930,741	\$ 549,383,661	\$ 1,224,445,490	\$ 986,208,696	\$ 306,972,294
		440%	100%			100%	283%	199%	240%	357%	60%
		sales tax			54	\$ 381,330,000	\$ 1,339,930,741	69%	\$ 153,039,937	39%	
						138%					

		Current Budget		Maintain PCI or drop to 60		PCI 75	
		Per Year		More \$/yr	ROI by 2027	More \$/yr	ROI by 2027
Benicia	\$ 3,318,073	\$ 522,000	\$ 1,075,597	\$ 5,674,617	\$ 1,976,168	\$ 18,764,991	
Dixon	\$ 1,575,061	\$ 250,000	\$ 531,800	\$ (12,137,767)	\$ 1,026,373	\$ 1,707,880	
Fairfield	\$ 12,834,169	\$ 1,500,000	\$ 7,843,360	\$ 44,792,202	\$ 8,568,673	\$ 97,319,397	
Rio Vista	\$ 533,894	\$ 100,000	\$ 148,703	\$ (622,252)	\$ 310,254	\$ (121,312)	
Suisun	\$ 4,048,047	\$ 750,000	\$ 1,211,253	\$ 5,702,439	\$ 2,245,920	\$ 28,732,179	
Vacaville	\$ 12,250,727	\$ 6,000,000	\$ 2,670,092	\$ 12,475,511	\$ 4,486,280	\$ 69,246,879	
Vallejo	\$ 33,058,464	\$ 3,500,000	\$ 4,876,848	\$ (5,838,166)	\$ 25,382,273	\$ 171,005,363	
County	\$ 13,428,942	\$ 5,800,000	\$ (154,076)	\$ (102,614,993)	\$ 3,329,305	\$ 41,424,375	
Countywide	\$ 81,047,378	\$ 18,422,000	\$ 18,203,577	\$ (52,568,410)	\$ 47,325,246	\$ 428,079,751	
	sales tax	\$ 25,422,000	38%	99%			
		138%	of sales tax	of sales tax			

Return on Investment (ROI) = Reduced Deferred Costs - Additional investment

Example, Benicia ROI by 2027 for PCI 75		
Deferred 2027 Current	\$	65,931,838
Deferred 2027 PCI 75	- \$	17,524,329
Reduced Deferred Costs	\$	48,407,509 (Benefit)
Cost PCI 75	\$	37,472,518
Cost 2027 Current	- \$	7,830,000
Additional Investment	\$	29,642,518 (Cost)
Reduced Deferred Costs	\$	48,407,509
Additional Investment	- \$	29,642,518
	\$	18,764,991 (BCA)
By investing \$29M more, Benicia saves \$48M, for an ROI of \$18.7M.		