TOWN OF MORAGA

Town Council
October 28, 2015

Pavement Management Plan for the Next 17 Years of Measure K

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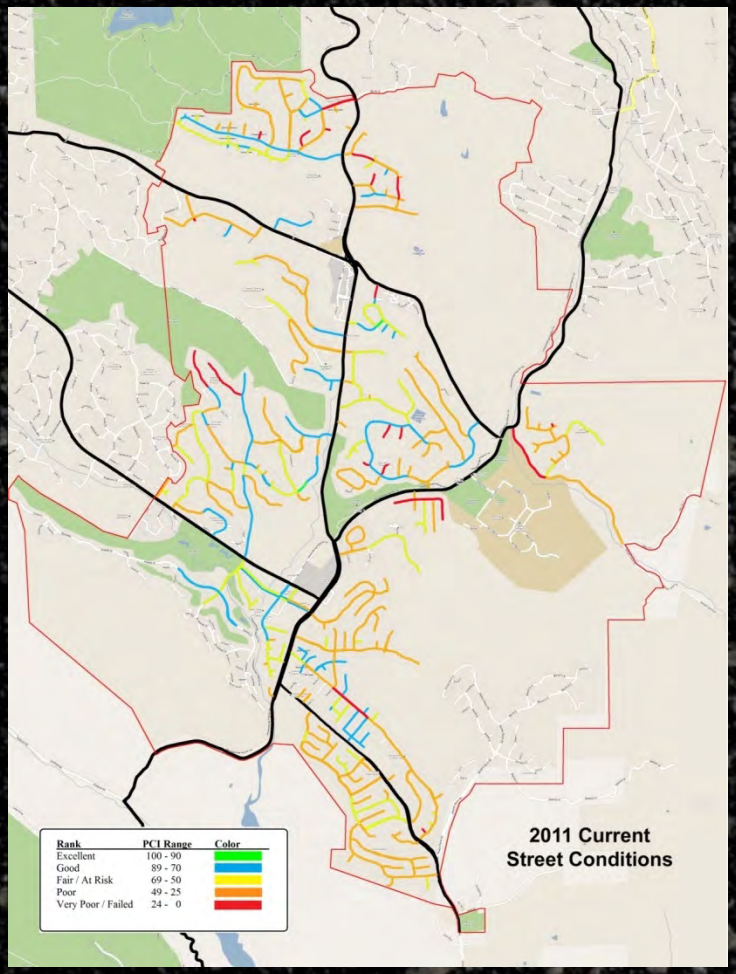
Ryan Shafer, Nichols Consulting Engineers

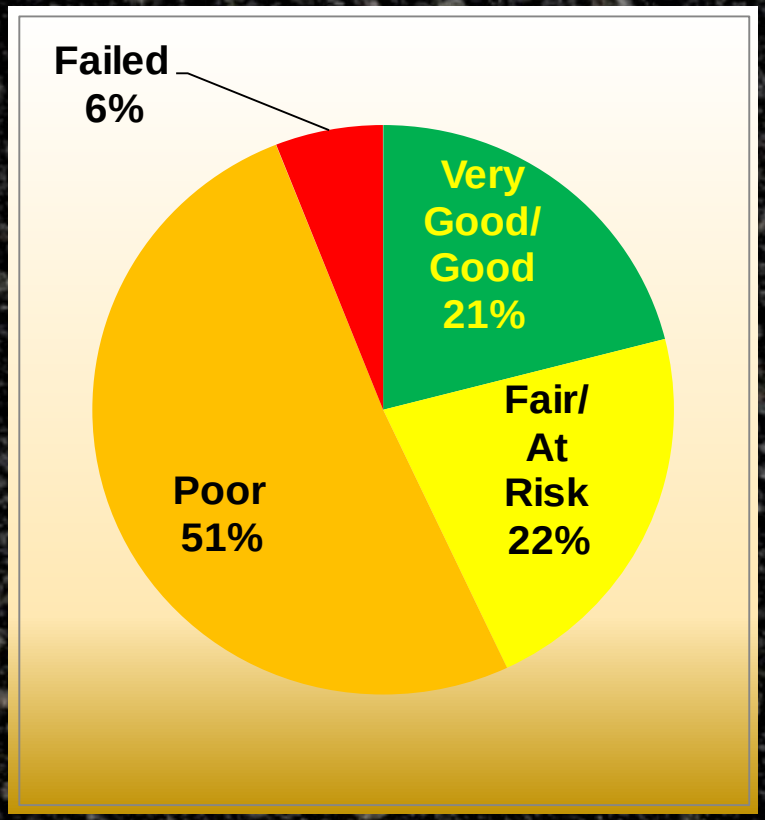
Presentation Outline

- Measure K Background
- Intensive 3-Year Plan
- Results to Date
- Next 17 Years
- Questions

Measure K Background

2011 Pavement Management Report

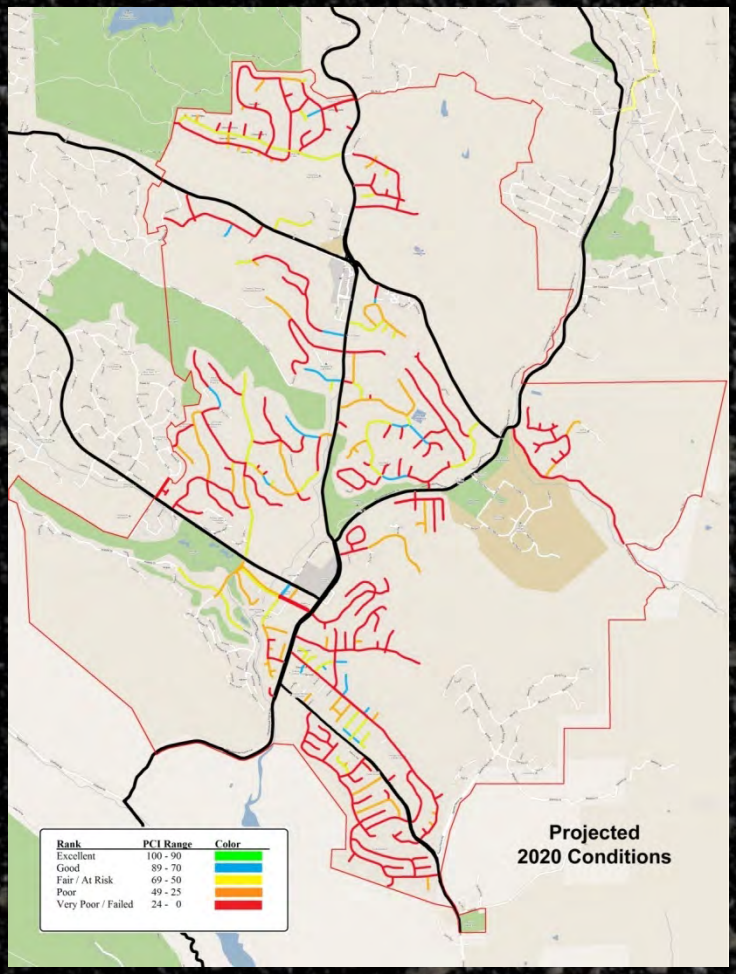


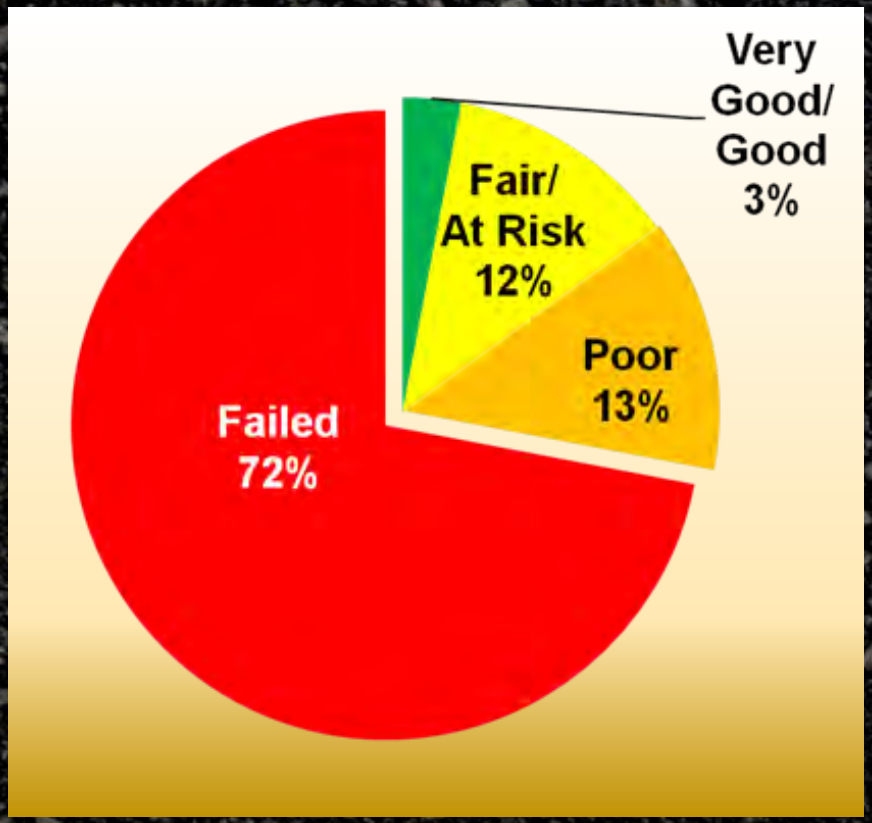


Neighborhood Streets in 2011

Measure K Background

Pavement in 10 Years if Nothing is Done

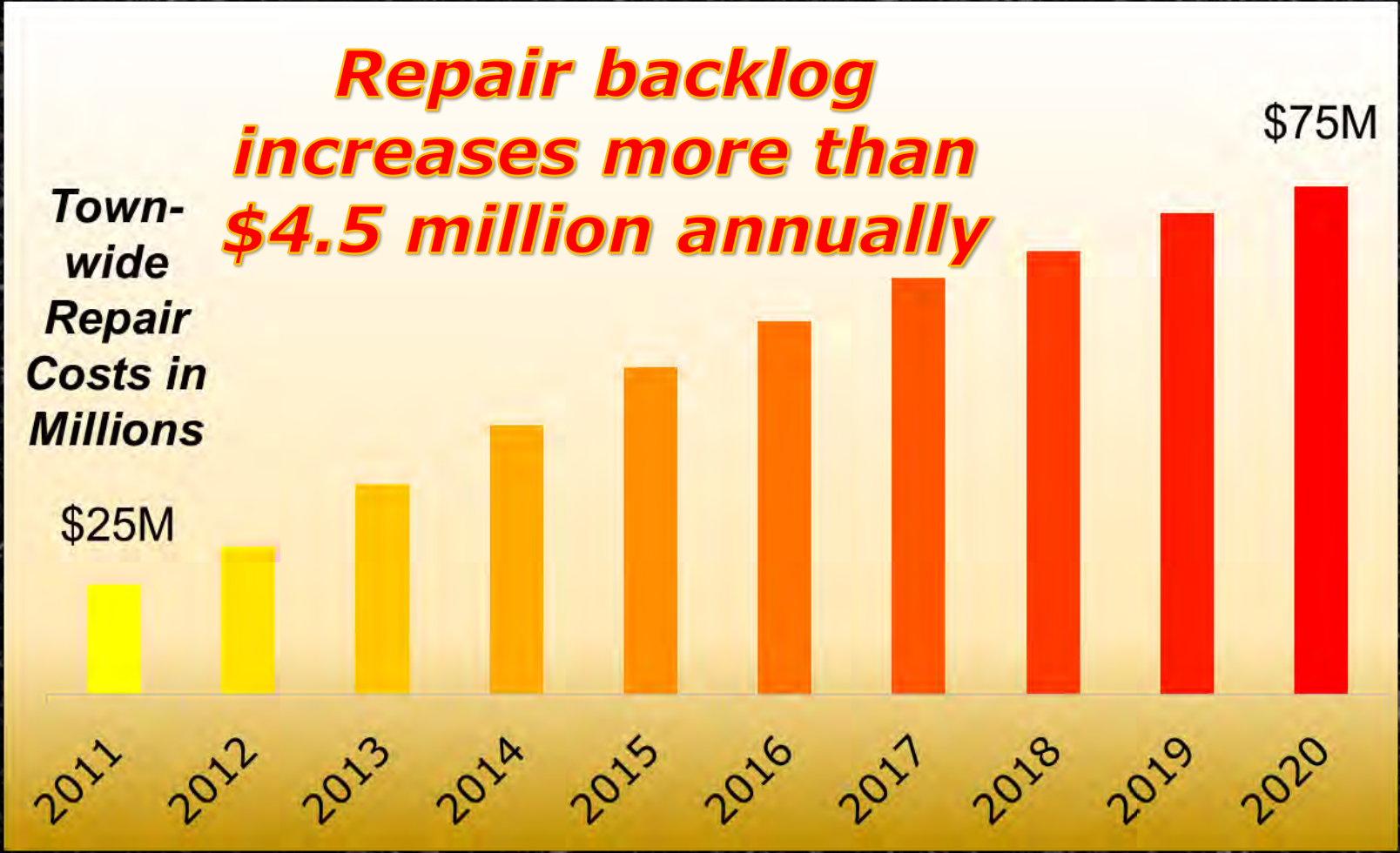




Neighborhood Streets in 10 Years

Measure K Background

If We did Nothing…
Repair Costs will Triple



Measure K Background

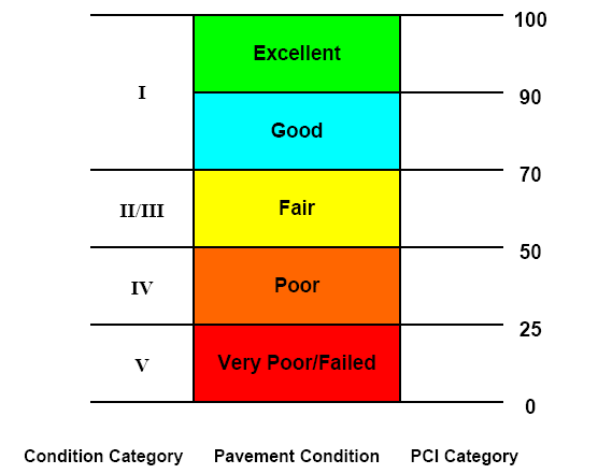
Pavement Program Funding

- Measure K, a 1-cent sales tax initiative passes in 2012 by 70%
- $600K of future annual sales tax leveraged to yield upfront funds of approximately $7.7M to spend on a 3-year intensive pavement program
- Currently, approximately $1.1M remaining non-leveraged annual sales tax and $174K of Garbage Impact Fee to spend on the pavement program

3-Year Intensive Plan

Overview

- 3 Phases, separate by pavement treatment types:
  - 2013: Fair Streets
  - 2014: Poor Streets
  - 2015: Failed Streets
- Why? Increase quantities equals better unit prices.
- Able to pair ideal construction management team with exact experience and qualifications needed for treatment type.



3-Year Intensive Plan

2013 Pavement Repair Project

- <u>2013: Rubberized Cape Seals & Microsurfacing</u>
  - Immediate impact: Nearly ⅓ in miles of neighborhood streets
  - Cost Effective Treatment: Rubberized cape seals in lieu of traditional overlays (roughly 50% savings)
  - Promote Green Technologies: CalRecycle Grant to divert 10,000 tires from landfills

3-Year Intensive Plan

2014 Pavement Repair Project

- 2014: Rubberized Hot Mix Asphalt Overlays
  - Longer Service Life: RHMA offers twice the resistance to reflective cracking and twice the service life
  - Promote Green Technologies: 32,000 tires from landfill
  - Sound Quality: Reduction in traffic noise
  - Pavement Color: Black pavement will oxidize slower

3-Year Intensive Plan

2015 Pavement Reconstruction

- 2015: Surface Reconstruction
  - Surface Reconstruction: 4”-5” remove & replace pavement
  - RHMA: 6 out of 10 streets will have a top layer of RHMA
  - Promote Green Technologies: CalRecycle Grant to divert 11,500 tires from landfills
  - Full-Depth Reclamation: Defer 3 street segments to 2016 due to advance utility work. FDR in lieu of conventional pavement reconstruction (recycling & 30-40% savings)

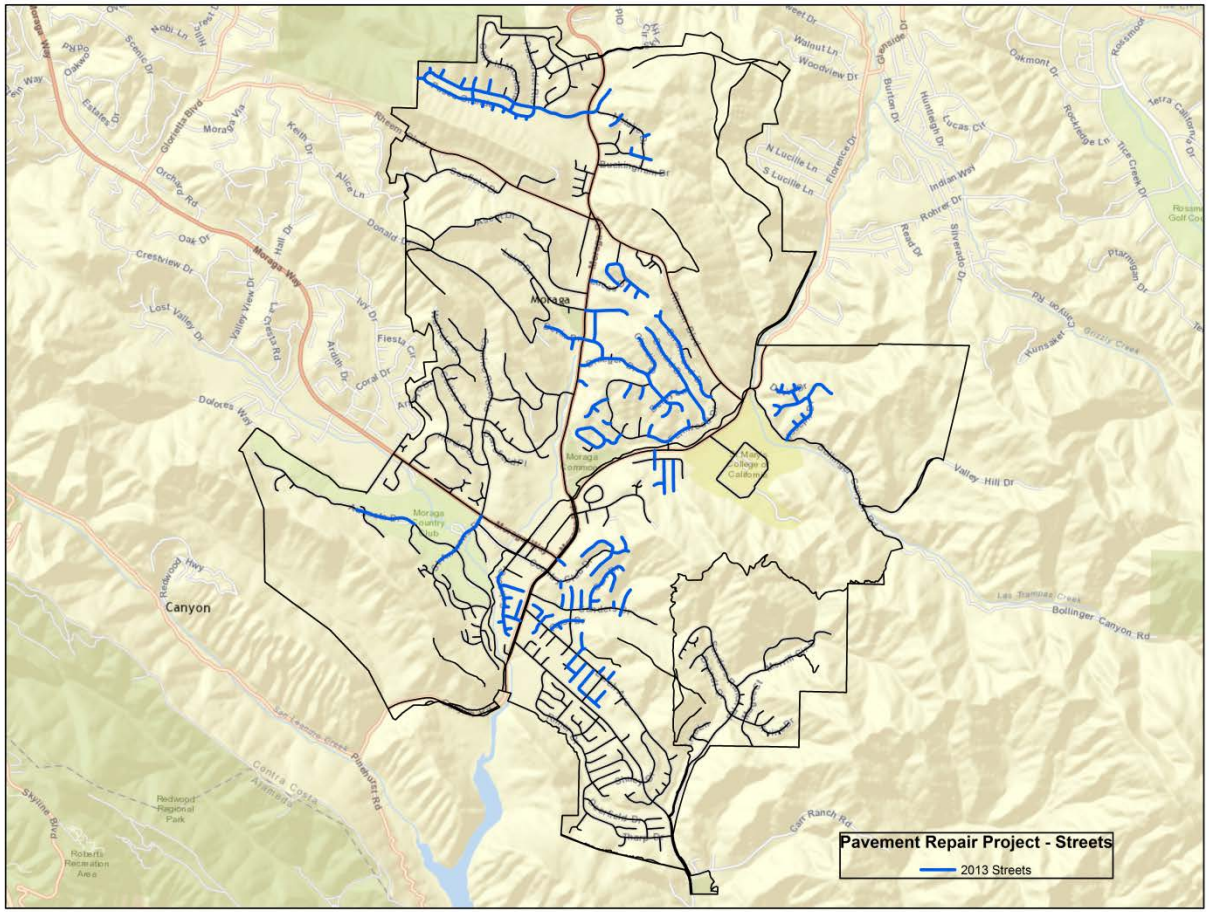
Results to Date

Segments Completed

Year	Completed Segments	Percent of Neighborhood Segments (358)	Percent of Entire Town Network (439)
2013	107	29.9%	24.4%
2014	28	7.8%	6.4%
2015	13	3.6%	3.0%
3-Year Total	**148**	**41.3%**	**33.7%**

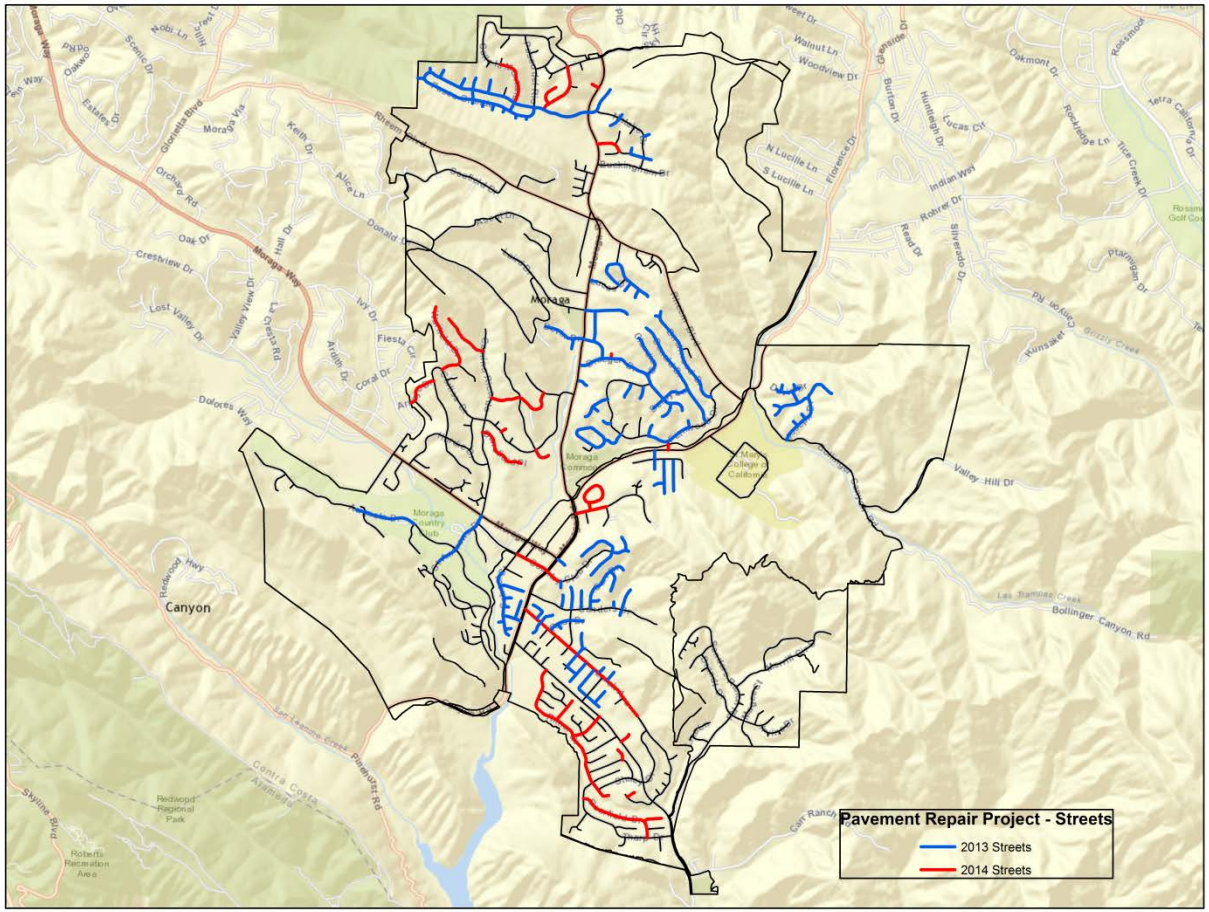
Results to Date

2013 Segments Completed



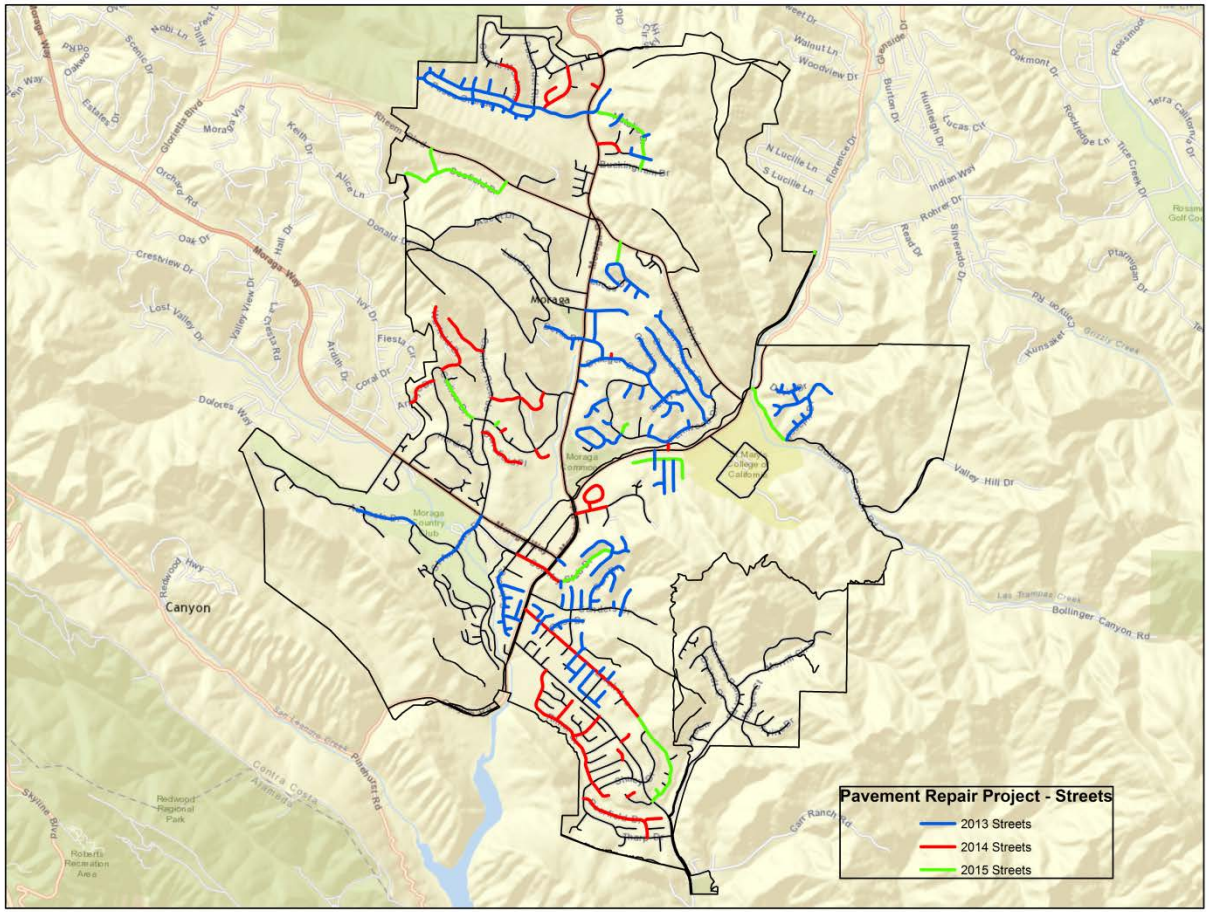
Results to Date

2014 Segments Completed



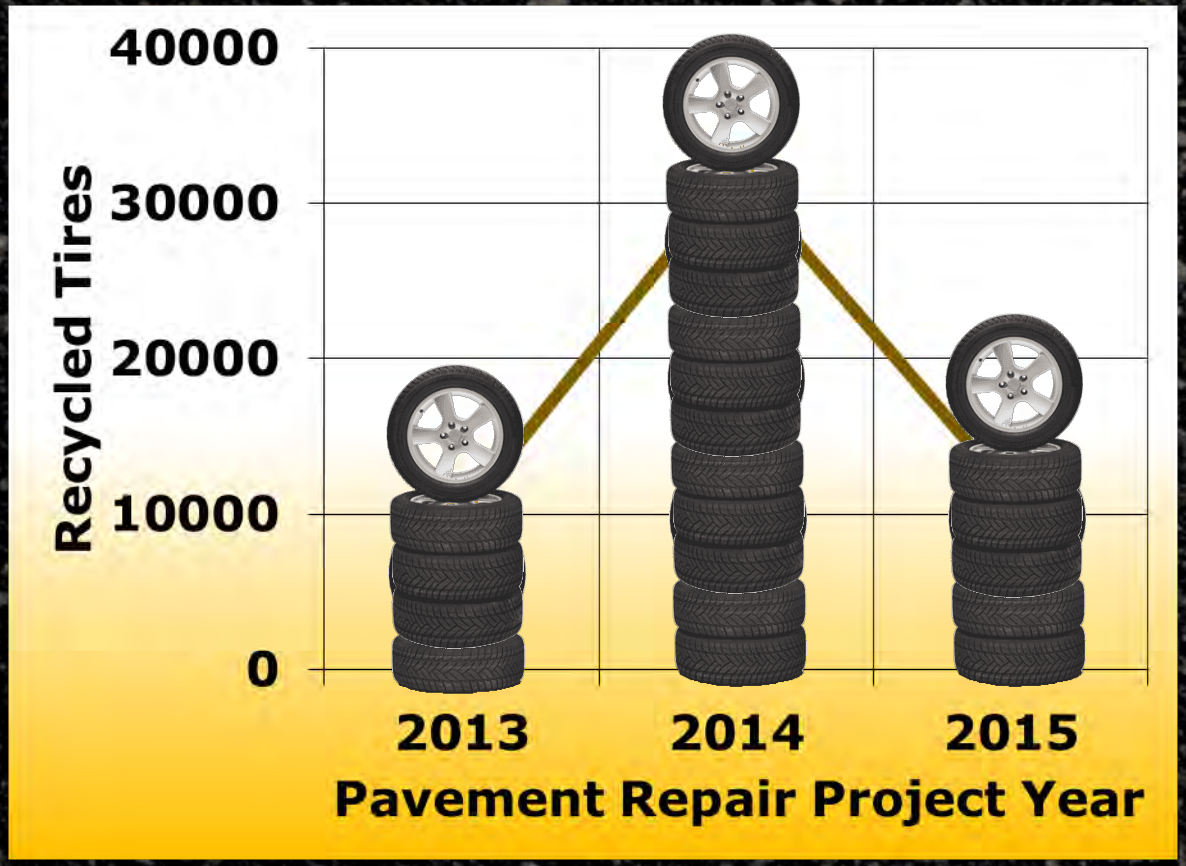
Results to Date

2015 Segments Completed



Results to Date

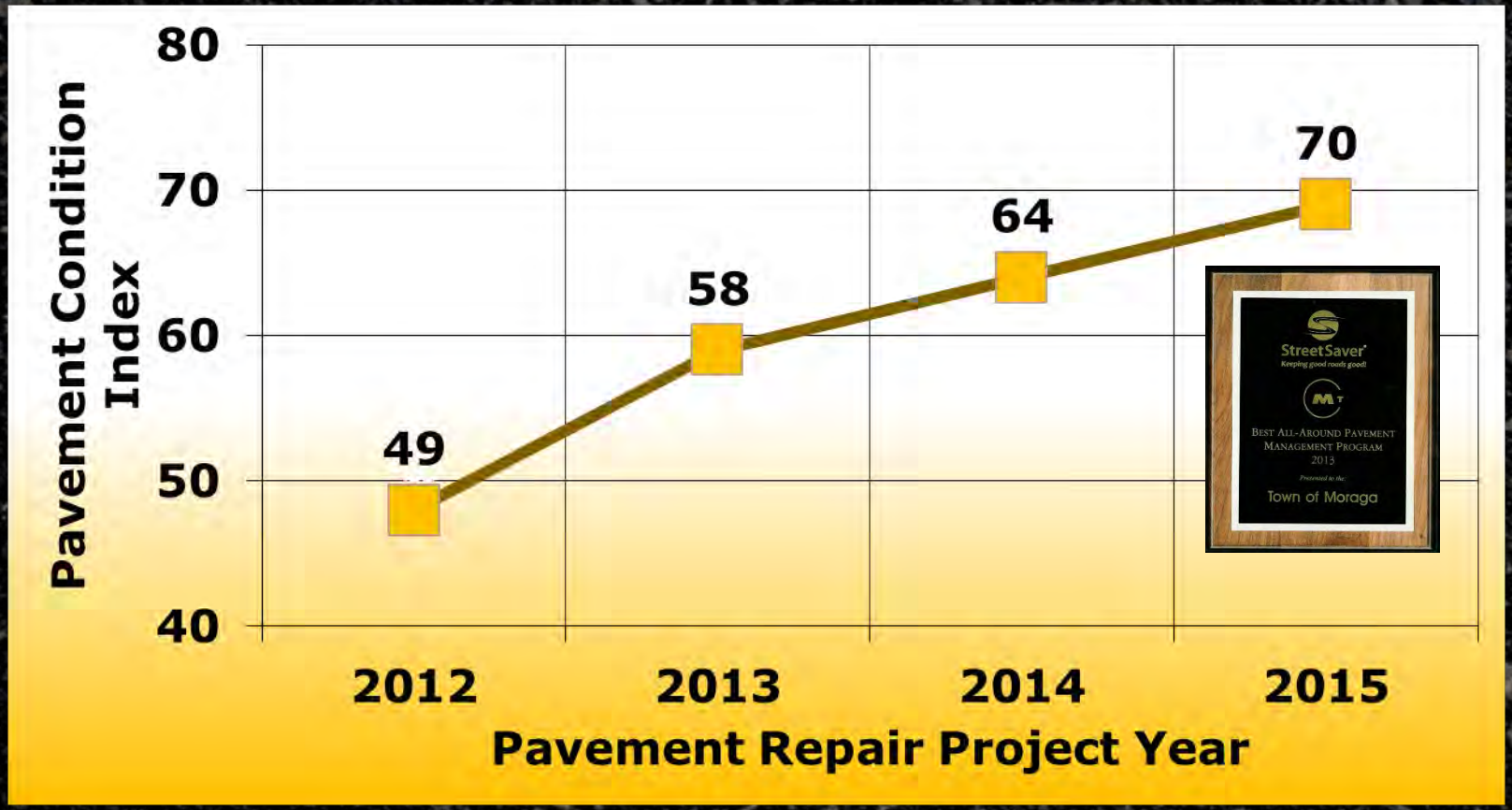
Green is Good



- 53,500 Tires
- $232K CalRecycle Grants
- Beneficial Pavement Properties

Results to Date

Pavement Condition Index



Results to Date

PCI by Functional Class

Street Network Statistics and Average PCI by Functional Class

Functional Class	# of Sections	Centerline Miles	Lane Miles	Avg PCI
Arterial	83	13.79	26.56	71
Collector	123	15.82	31.38	70
Residential	235	26.24	52.48	70
Totals	441	55.85	110.42	70

Results to Date

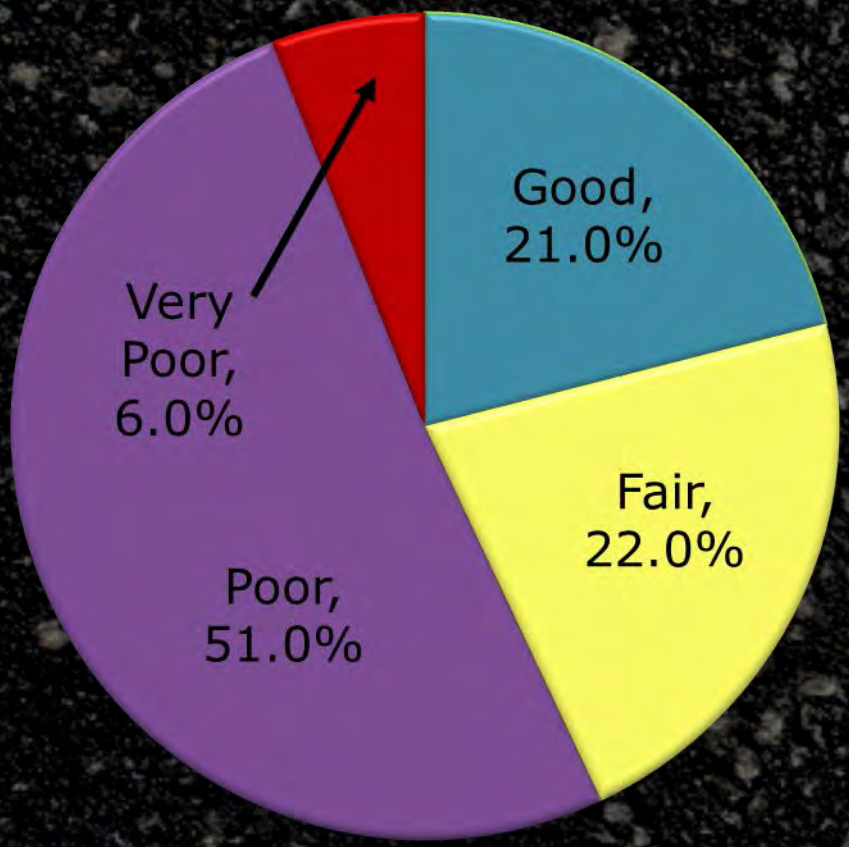
PCI Breakdown by Condition

Percent Network Area by Functional Class and Condition

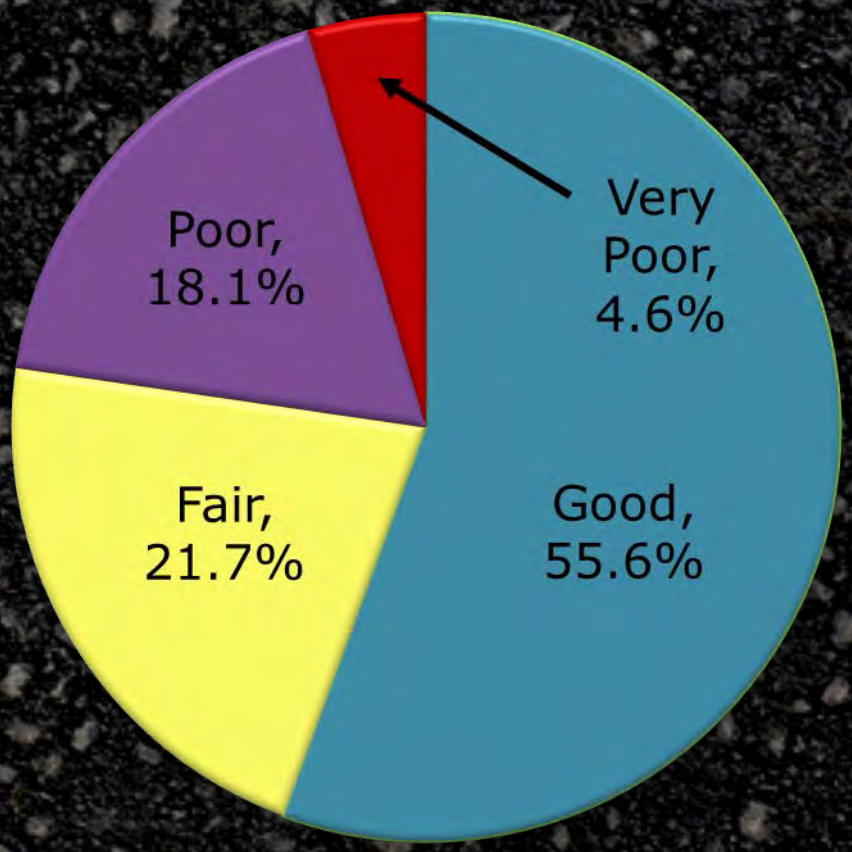
Condition Class	PCI Range	Arterial	Collector	Residential	Total
Good (I)	71-100	13.7%	17.7%	24.2%	**55.6%**
Fair (II/III)	51-70	8.0%	3.2%	10.5%	**21.7%**
Poor (IV)	26-50	4.8%	4.7%	8.5%	**18.1%**
Very Poor (V)	0-25	0.0%	3.3%	1.3%	**4.6%**
Totals		**26.5%**	**28.9%**	**44.5%**	

Results to Date

Before & After Pie Graph



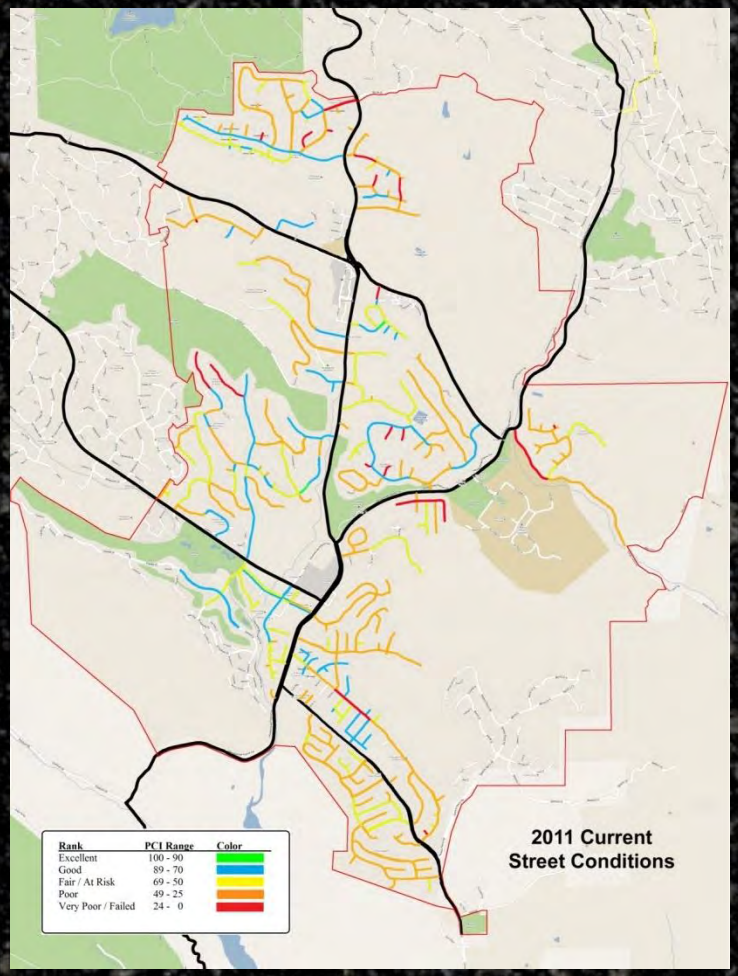
Pre-Measure K



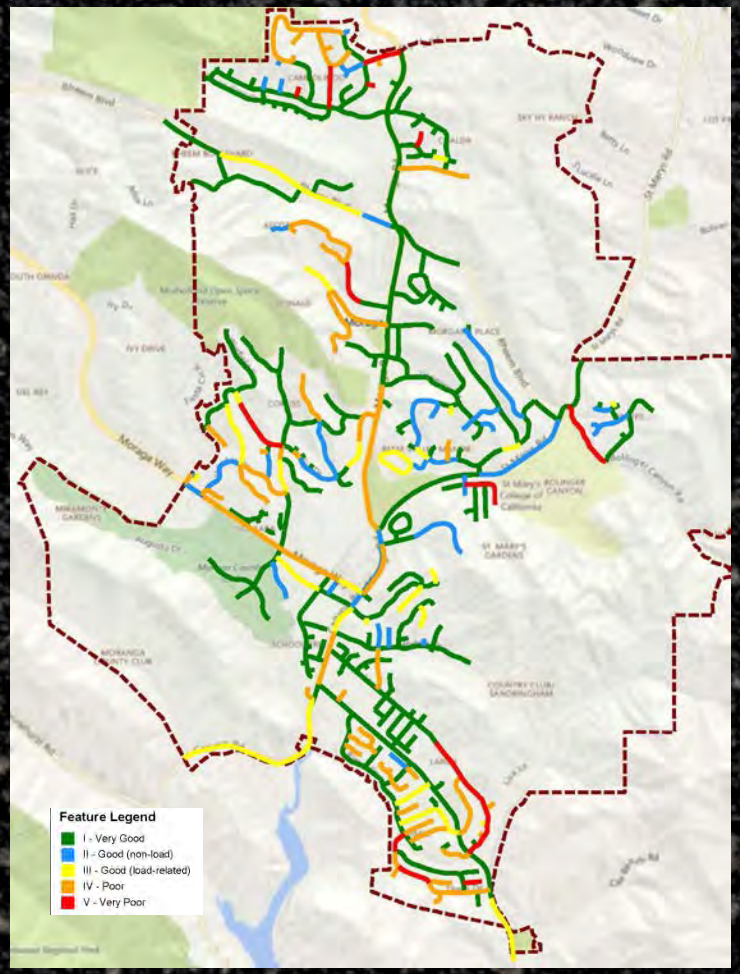
3-Year Results

Results to Date

Before & After Geographically



Pre-Measure K



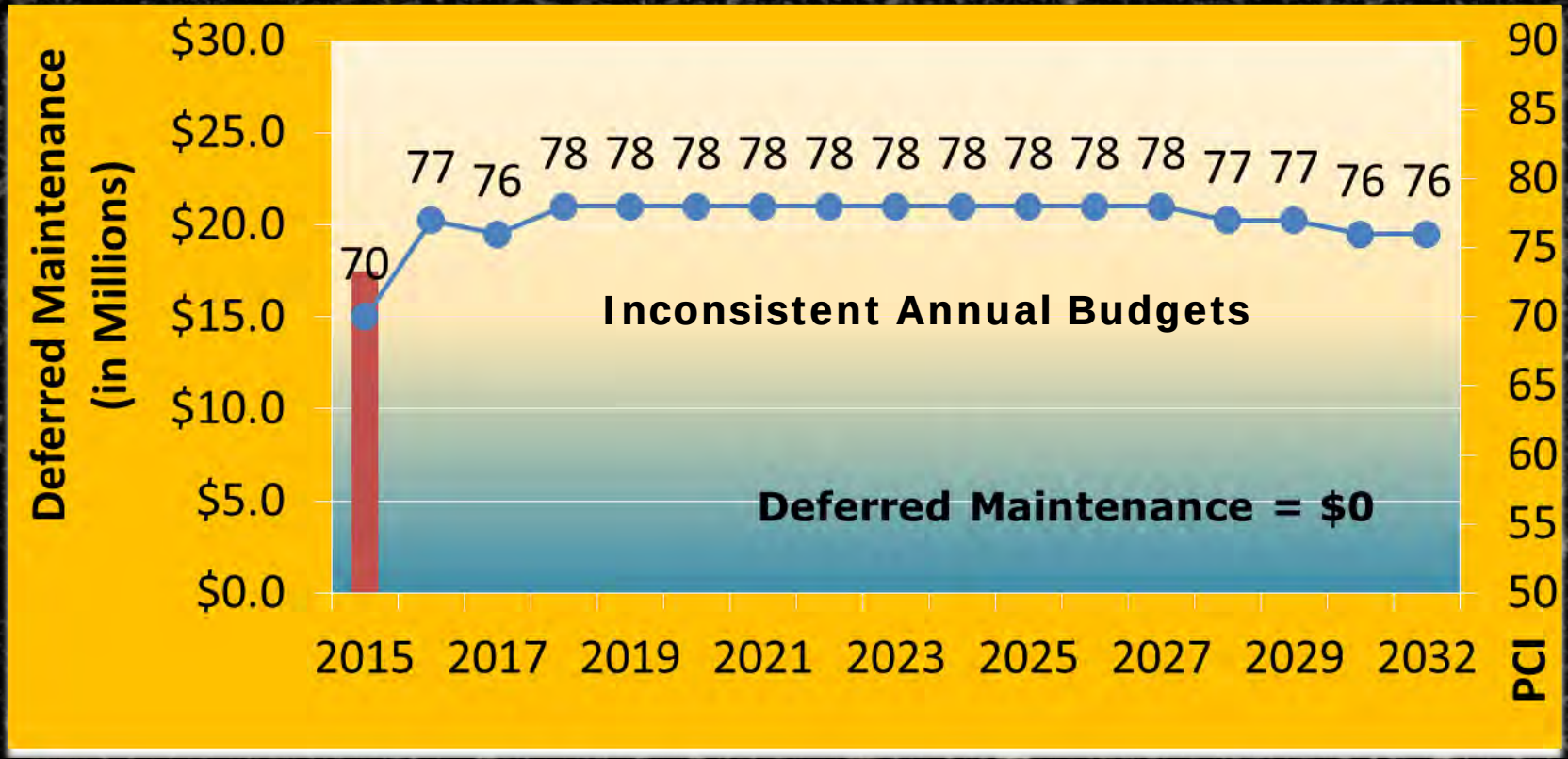
3-Year Results

Next 17 Year Plan

Budget Scenarios

Scenario 1: Optimum Budget

$47.7M yields a 76 PCI with $0 Deferred Maintenance

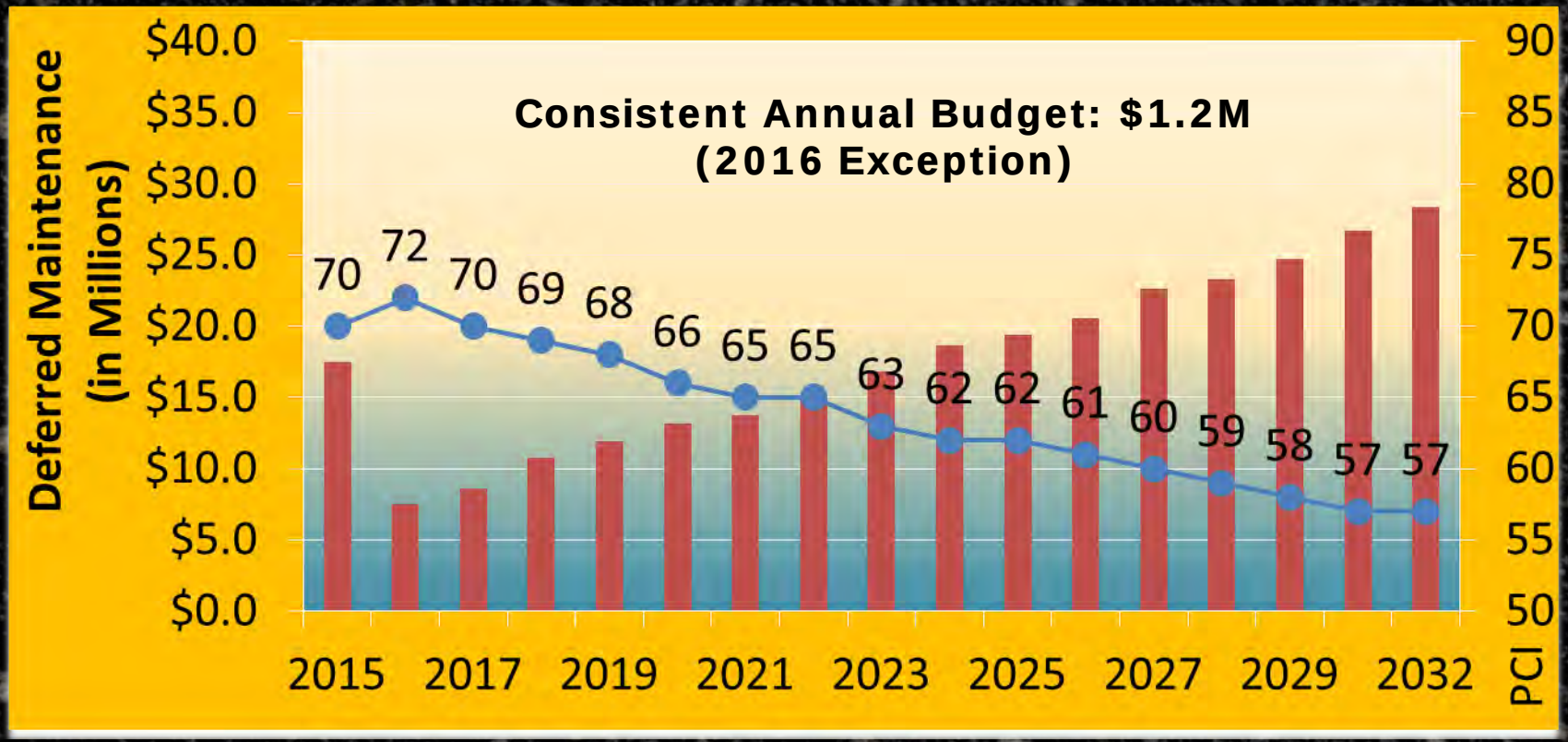


Next 17 Year Plan

Budget Scenarios

Scenario 2: Current Investment Level

$24.8M yields a 57 PCI with $28.4M Deferred Maintenance

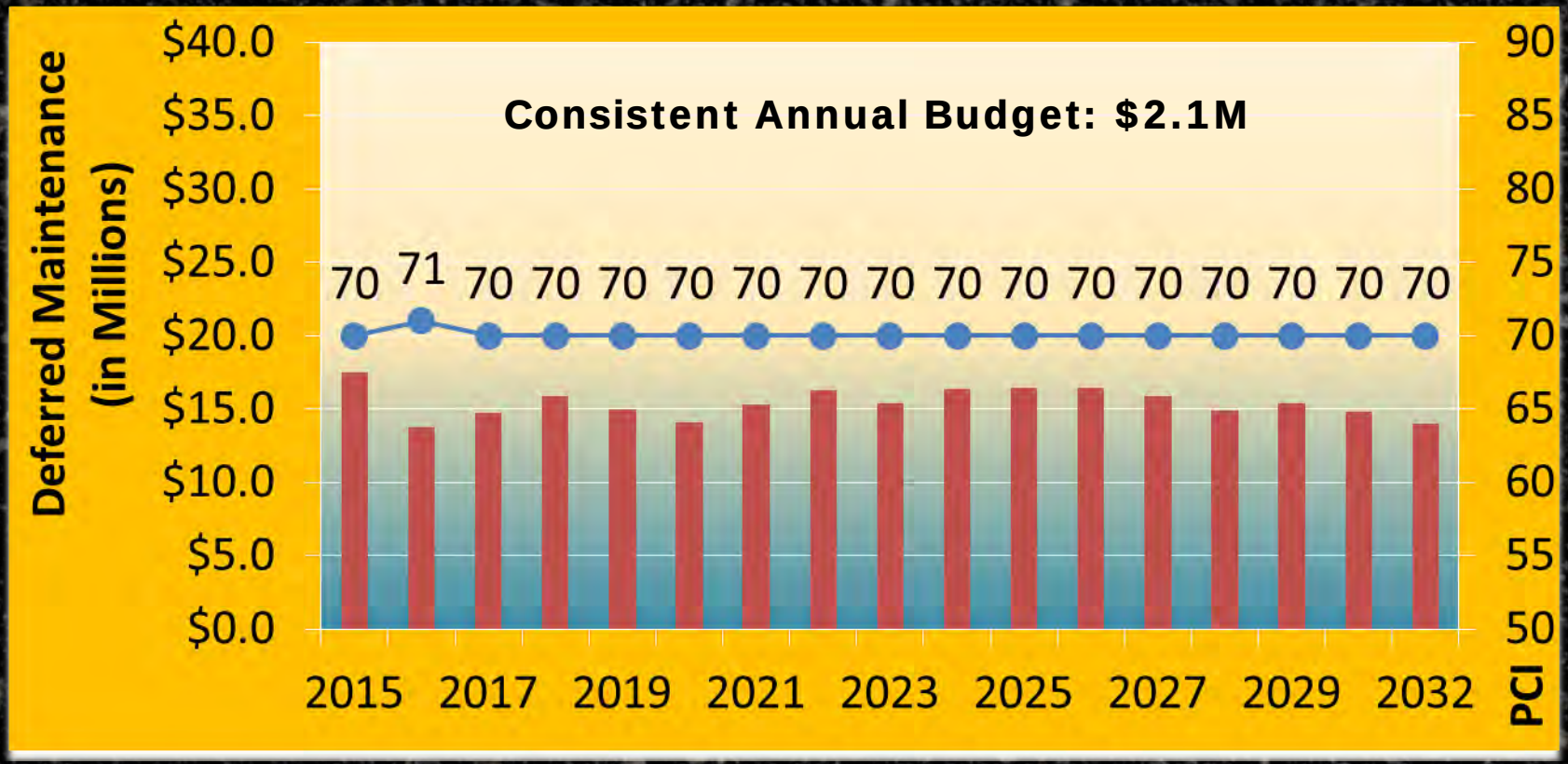


Next 17 Year Plan

Budget Scenarios

Scenario 3: Maintain Current PCI of 70

$33.8M yields a 70 PCI with $13.7M Deferred Maintenance

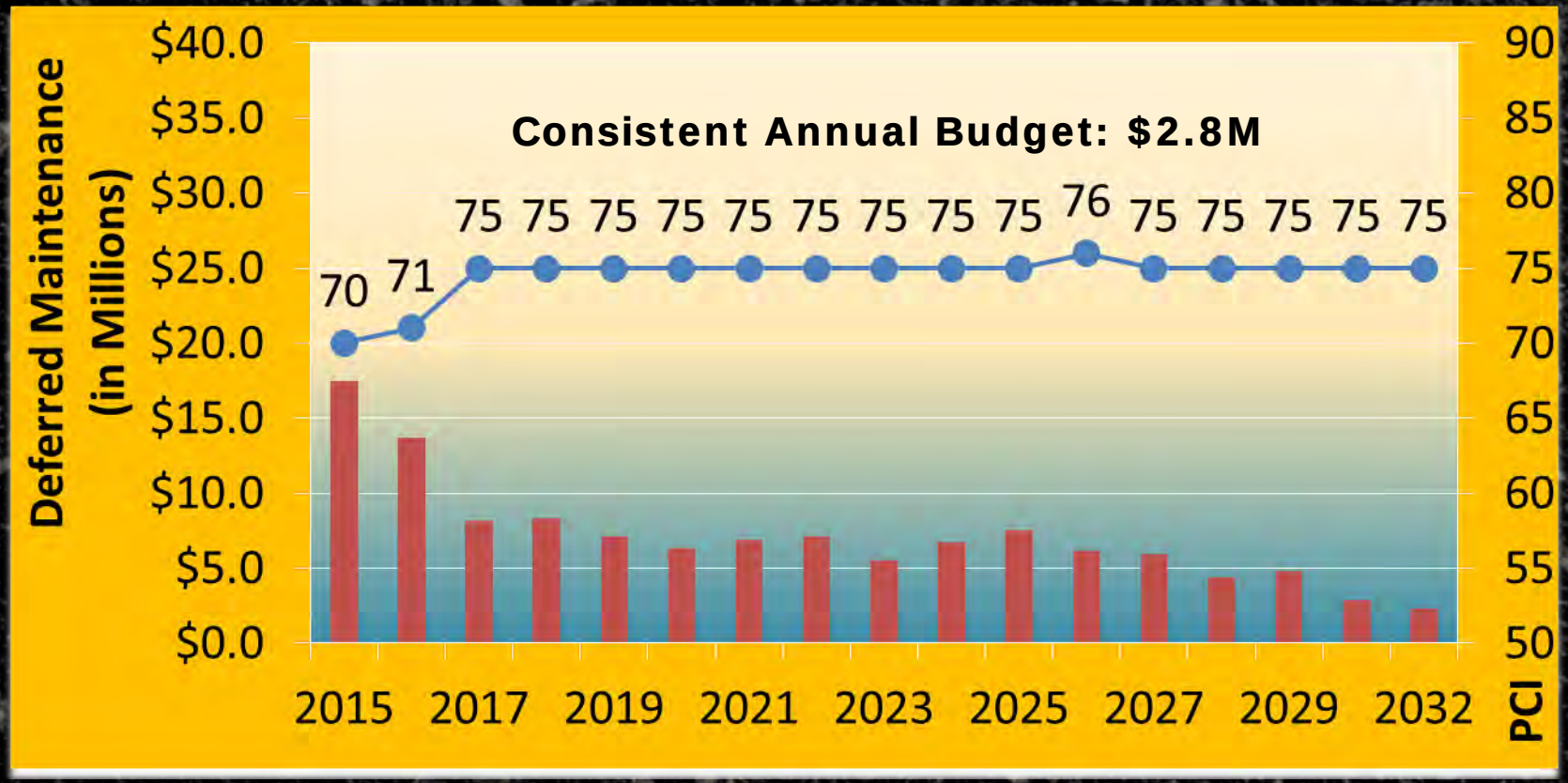


Next 17 Year Plan

Budget Scenarios

Scenario 4: Increase PCI by 5 Points to 75

$44.2M yields a 75 PCI with $2.2M Deferred Maintenance



Next 17 Year Plan

Budget Scenarios

Budget Scenario Summary

Scenario Name	17 Year Budget	2032 PCI (change)	2032 Deferred Maintenance	2032 % Good	2032 % Very Poor
1 – Optimum	$47.7 million	76 (+6)	$0	81.6%	0.0%
2 – Current Investment	$24.8 million	57 (-13)	$28.4 million	41.9%	18.2%
3 – Maintain Current PCI	$33.8 million	70 (0)	$13.7 million	72.4%	6.1%
4 – Increase PCI 5 points	$44.2 million	75 (+5)	$2.2 million	77.9%	0.4%

Next 17 Year Plan

Recommendations

- <u>Focus on One Type of Treatment per Year</u>
  - Continue focusing on 1 type of treatment per year to maximize quantities and lower unit bid prices
  - 2016 Preventative Maintenance Treatment
  - 2017 Overlay Treatment
  - 2018 Reconstruction Treatment
- <u>Budget Appropriate Percentage of Funding for Each Treatment Type</u>
  - StreetSaver analysis determined appropriate percentage of funding to be programmed for each treatment type to maximize the overall PCI conditions
  - Spend 50% on Preventative Maintenance, 17% on Overlay, 33% on Reconstruction treatments

Next 17 Year Plan

Recommendations

- <u>Budget non-Measure K Funds at or Greater than Pre-Measure K Levels</u>
  - Pre-Measure K funding averaged $507K annually
  - Non-Measure K funding from 2012 to 2016 averaged $985K annually
  - Future Measure K projections is promising and estimated at $1.55M
  - Potential future funding from CCTA's 2016 sales tax measure (similar to Measure J) for an additional 1-cent
  - Potential future funding from Senate Bill 16 which will provide $335K to $430K annually for 5 years

Next 17 Year Plan

Recommendations

- <u>Partner with Other Agencies to Reduce Costs</u>
  - Reduce duplicate administration costs and/or increase quantities to reduce bid prices
  - A reoccurring goal at the past couple of Tri-City Council meetings and was part of the 2014 Town Mayor's Goal
  - Currently, the Town is exploring a joint surface seal project with the City of Lafayette to further increase quantities and further reduce costs
  - Also being explored is a joint project with the City of Orinda to address Ivy Drive since the street's centerline serves as the Town limit

Conclusions & Questions?

Edric's House Analogy