

Pavement Maintenance & Rehabilitation Funding Discussion



Edwards Street before 2012 overlay



Edwards Street after 2012 overlay

Classification of Pavement Condition



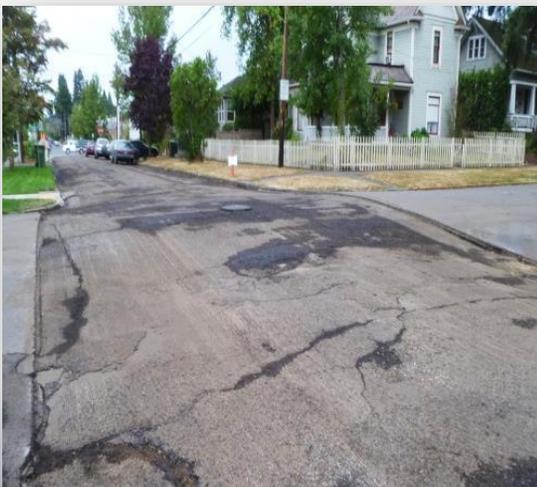
VERY GOOD (PCI=95)



GOOD (PCI=70)



FAIR (PCI=60)



POOR (PCI=45)



VERY POOR (PCI=20)



GRAVEL (PCI=0)

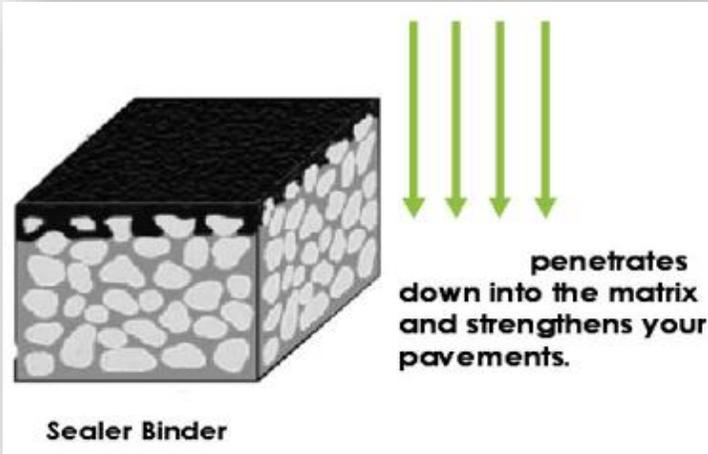
The City of Newberg has 65.5 miles of paved streets and 4.0 miles of gravel roadways with an replacement value of approximately \$150 million dollars.

Types of Pavement Maintenance



1. Crack Sealing:

- The least expensive treatment.
- Crack sealing prevents the majority of moisture from entering the underlying aggregate base rock.



2. Fog Seal:

- Rejuvenates the oils in the top layer of asphalt
- Fills small gaps between the aggregate in pavement
- Reduces deterioration of surface.

3. Slurry seal:

- Mixture of asphalt emulsion, fine aggregate and water.
- Mixture is spread over entire surface @3/8" thick
- Protects pavement from water damage Provides a new surface.



Types of Pavement Rehabilitation



1. Pavement overlay:

- Thin lift overlays, thickness of 1-inch
- Std. overlays are usually 2-inches

The City completed a thin lift overlay on a portion of Pinehurst Street in 2012.



2. Pavement grinding and inlay:

- Used on severely distressed pavement
- Very expensive when compared to thin lift overlays

The City completed a grind and inlay project on a portion of Blaine Street in 2012.

General Pavement Maintenance Guidelines:

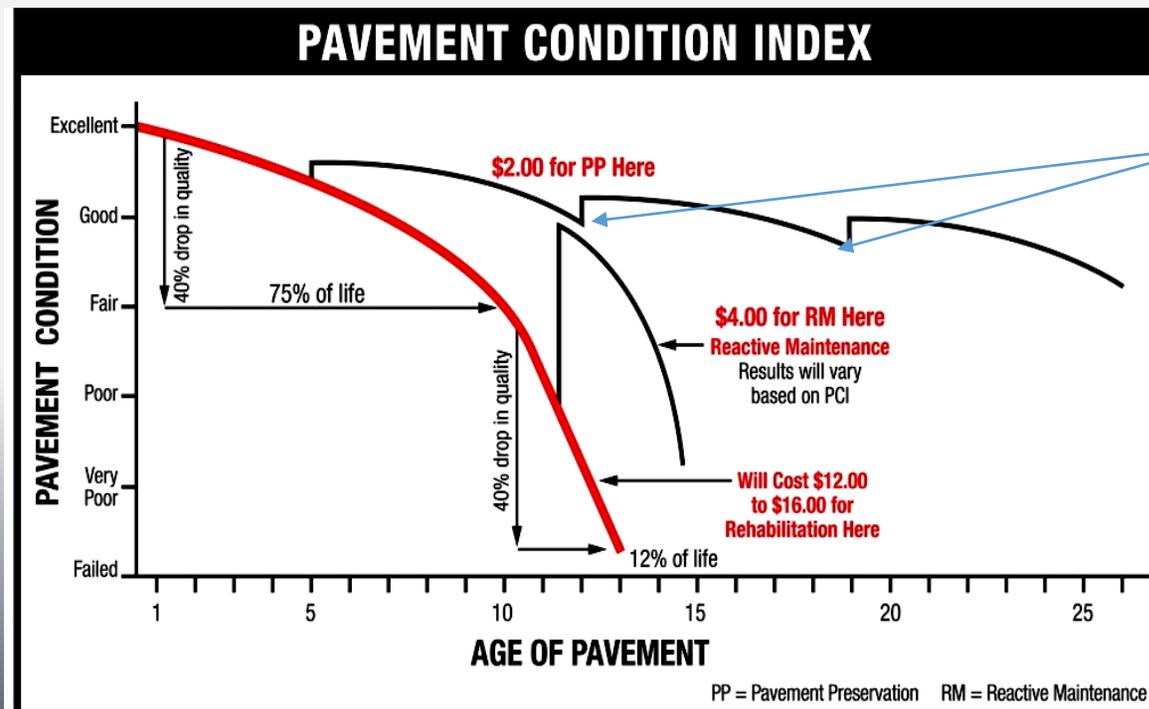
- All pavement eventually needs an overlay or complete reconstruction.
 - Full removal of pavement and base-rock is needed when:
 - the surface is highly fractured and the underlying base-rock section is inadequate
 - or at the end of its service life
- Full removal of pavement section has the longest service life but is the most expensive.
- Crack sealing every 3 to 5 years
 - Fog and slurry seal coat every 5 to 7 years
 - After several seal coats an overlay is usually required to address surface issues.
 - The interval schedules between overlays and reconstruction depends upon the road classification, traffic volumes and the service life of the original pavement structure.
 - Roads with higher traffic volume, speeds, and loads require higher level of service and maintenance intervals.

Pavement Condition Index (PCI):

PCI Rating Scale:

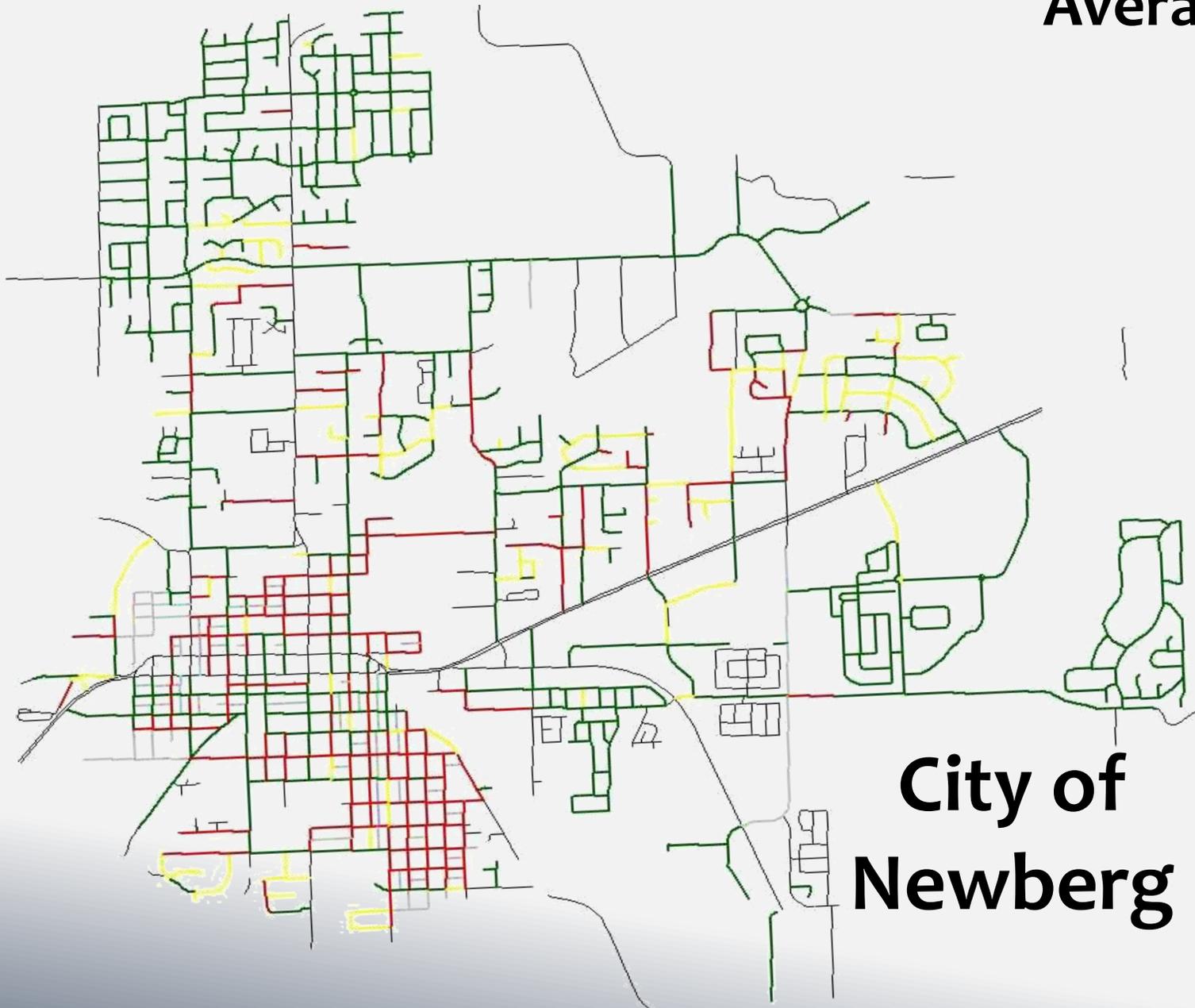
0-55: failed-poor 55-70: fair 70-100: good-excellent

- A city-wide pavement study was completed in 2014. The overall PCI rating was “73-good” with a maintenance & rehabilitation projects backlog estimated at \$14.3 million
- The pavement maintenance and rehabilitation budget is approximately \$150,000 per year. At this level of funding the PCI is expected to plummet to “61-fair” in 8 years with the maintenance & rehabilitation projects backlog increasing to \$25.8 million.



If major pavement maintenance/preservation work is completed about every 10 years, long term costs are greatly reduced.

Pavement Condition Index Map: City wide Weighted Average PCI=73

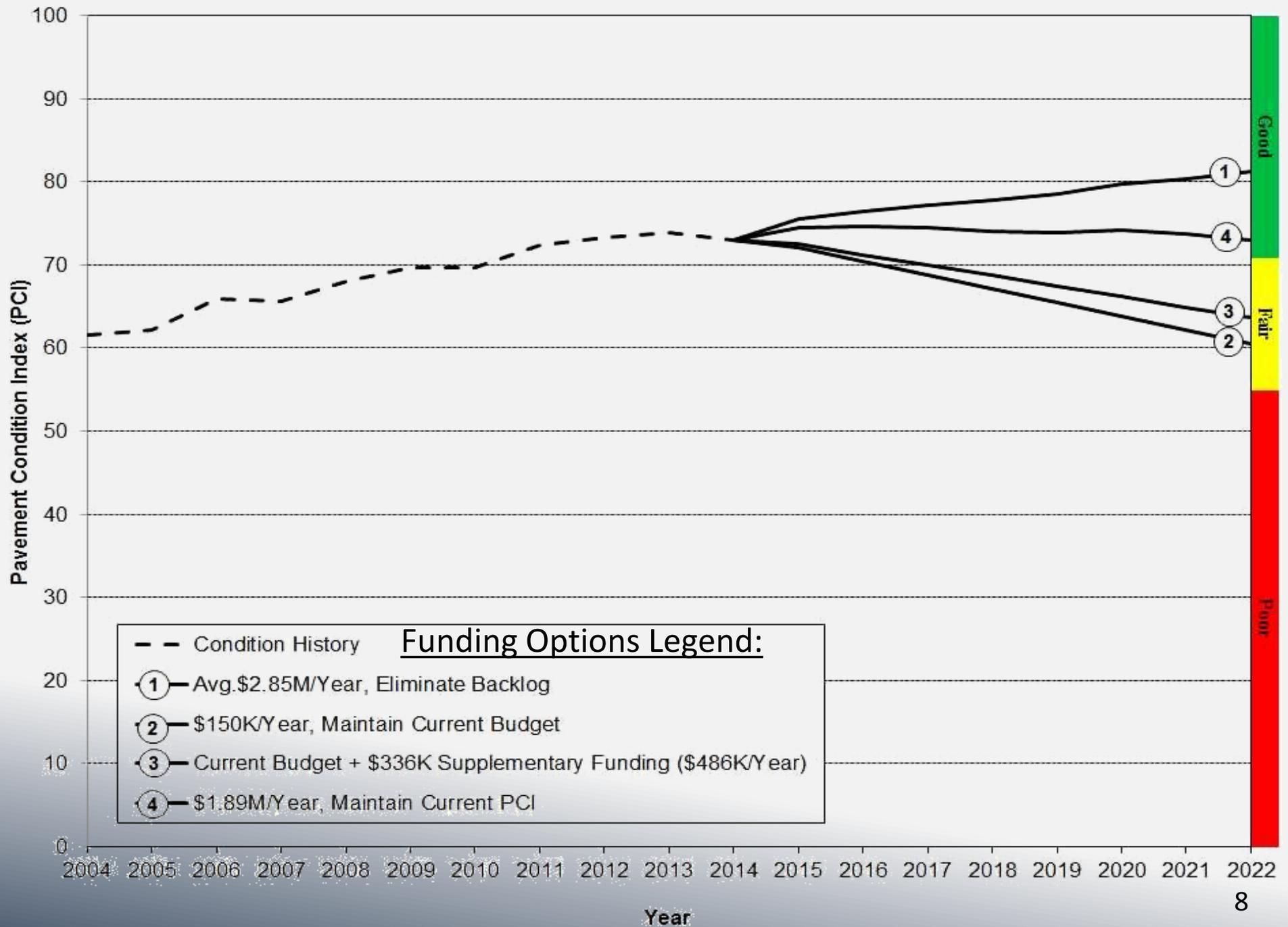


PCI Rating Scale	
	Good (70 – 100)
	Fair (55 – 70)
	Poor (0 – 55)
	Not Managed by City or Gravel

Rating Distribution	
66%	Good
12%	Fair
22%	Poor

**City of
Newberg**

2014 Pavement Analysis Funding Level Options:

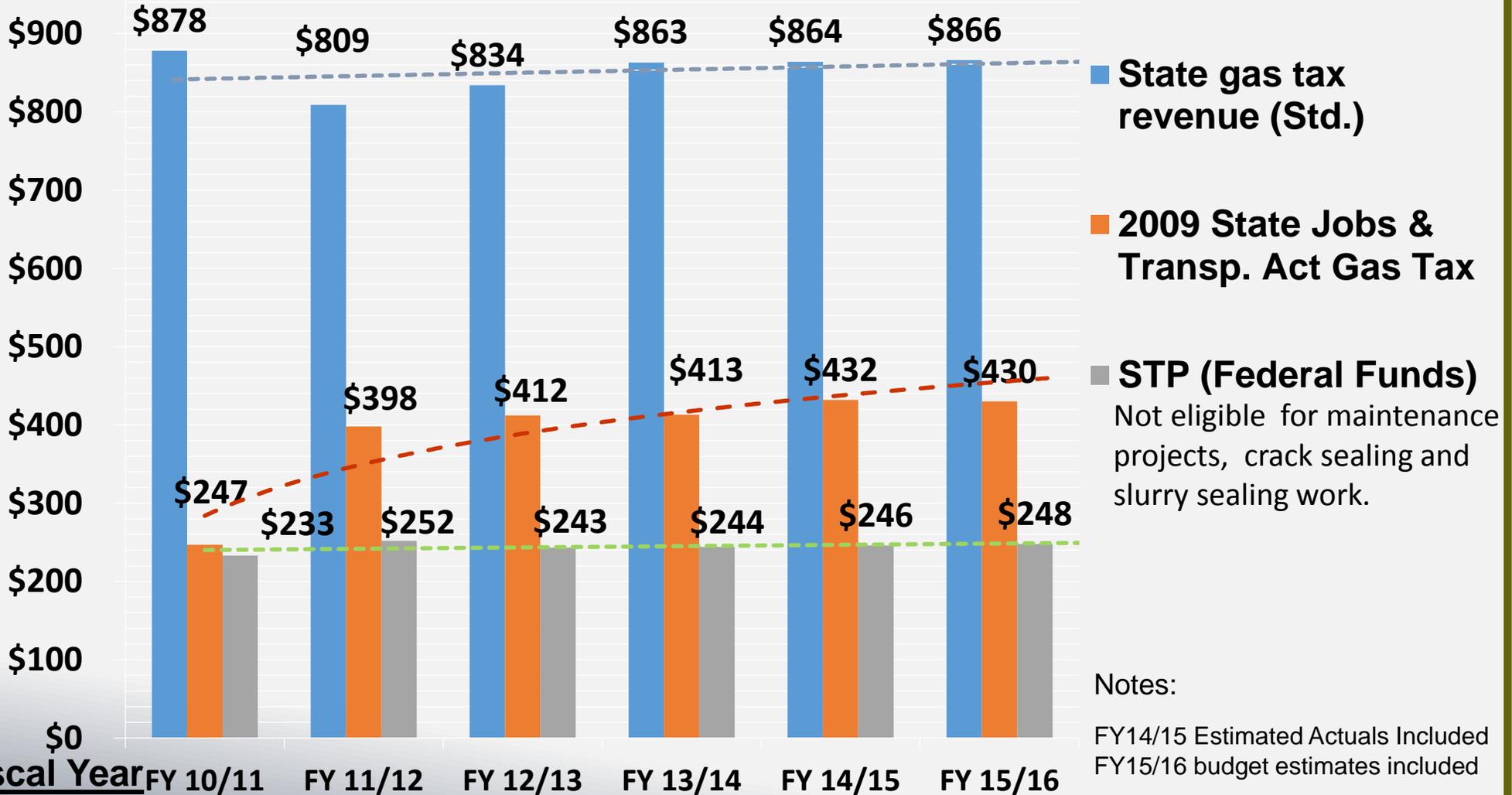


Existing Revenue Sources:

Fund 2 - Streets

Dollars (thousand)

\$1,000



Fiscal Year

FY 10/11

FY 11/12

FY 12/13

FY 13/14

FY 14/15

FY 15/16

Summary Statements:

- **Gas tax revenues are not increasing- fuel efficiencies, electric cars and reduction in miles driven each year**
- **The City of Newberg's situation is not unique, most Oregon cities have similar funding issues.**
- **A dedicated stable funding source is necessary for the maintenance and rehabilitation of the pavement infrastructure asset.**
- **The available funds for City pavement maintenance projects will reduce to \$150,000 in 2017 for the repayment to ODOT for the Newberg-Dundee Bypass.**
- **41% of the pavement in the City is classified as fair to poor condition. Maintenance to these surfaces soon can defer higher costs later, such as dig-out and replacement repairs.**
- **Proper preventative maintenance of all surfaces will reduce the number of higher cost overlays and full reconstruction.**
- **Proactive maintenance reduces the reactive costs for maintenance materials and personnel such as pothole repairs.**
- **Improved and well maintained streets increase livability, property value and business activity for the community.**

Potential Supplemental Funding Options

Street Utility Fee:

Can be enacted by Council or the voters. The fee is included with the monthly water bill for street improvements. Neighboring Cities have adopted similar programs. The fee is usually based on trip generation rates.

General Obligation Bond:

Council directs a ballot measure for voter approval to authorize a general obligation bond to fund the needed street system repairs. The repayment of the debt is based is typically repaid over a 10 to 15 year period.

Local Option Levy:

Council directs a ballot measure for voter approval to authorize a levy to fund the needed street system repairs. The term of a local option levy for capital projects is up to 10-years.

Local Gas Tax:

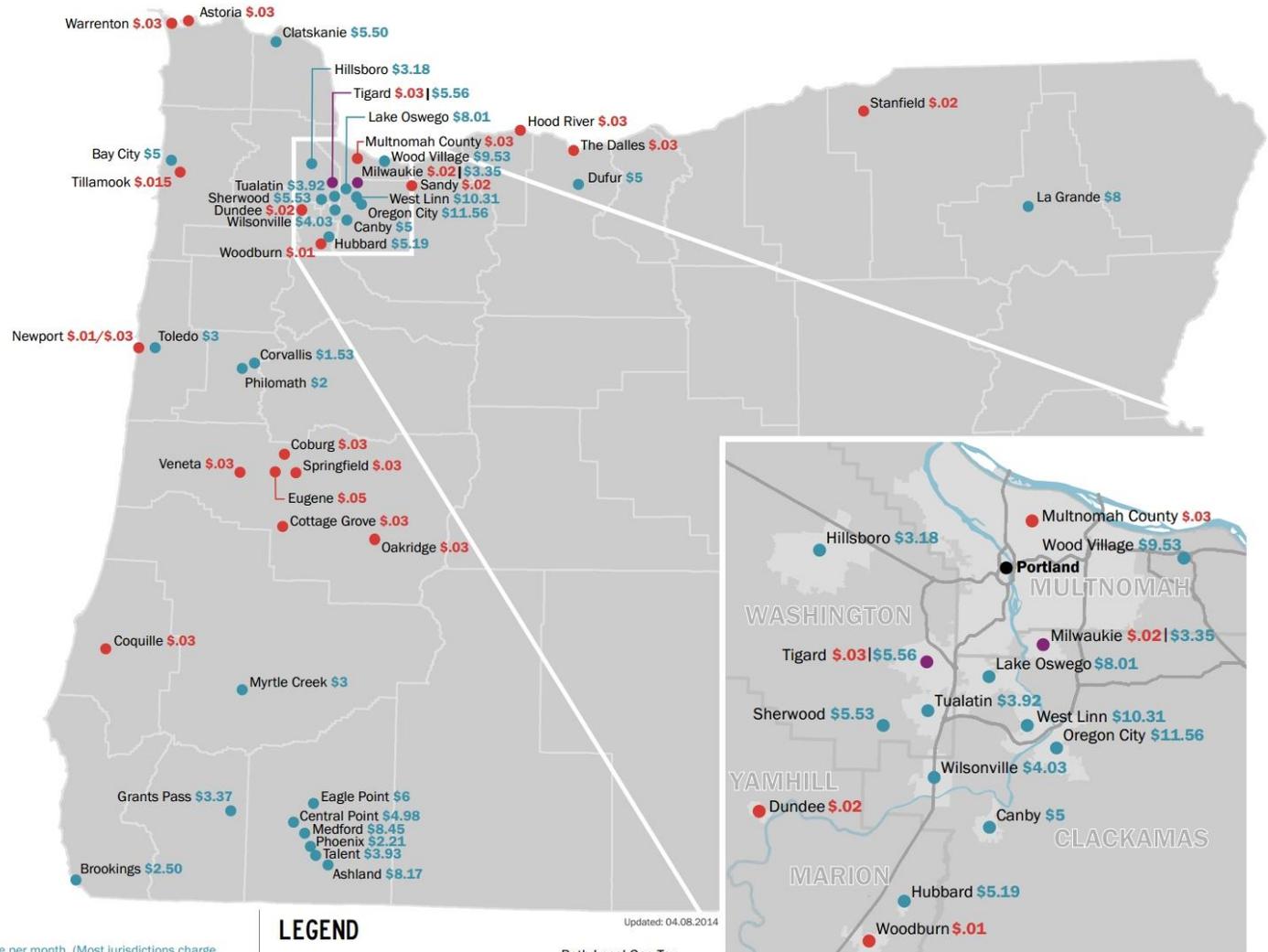
Council directs a ballot measure for voter approval. The gas tax is based on the number of gallons of fuel sold in the City.

Other Cities:

LOCAL TRANSPORTATION FUNDING MECHANISMS



CITY	GAS TAX*	STREET FEE**
Ashland	--	\$8.17
Astoria	\$.03	--
Bay City	--	\$5.00
Brookings	--	\$2.50
Canby	--	\$5.00
Central Point	--	\$4.98
Clatskanie	--	\$5.50
Coburg	\$.03	--
Coquille	\$.03	--
Corvallis	--	\$1.53
Cottage Grove	\$.03	--
Dufur	--	\$5.00
Dundee	\$.02	--
Eagle Point	--	\$6.00
Eugene	\$.05	--
Grants Pass	--	\$3.37
Hillsboro	--	\$3.18
Hood River	\$.03	--
Hubbard	--	\$5.19
La Grande	--	\$8.00
Lake Oswego	--	\$8.01
Medford	--	\$8.45
Milwaukie	\$.02	\$3.35
Multnomah County	\$.03	--
Myrtle Creek	--	\$3
Newport	\$.01/\$.03***	--
Oakridge	\$.03	--
Oregon City	--	\$11.56
Philomath	--	\$2.00
Phoenix	--	\$2.21
Sandy	\$.02	--
Sherwood	--	\$5.53
Springfield	\$.03	--
Stanfield	\$.02	--
Talent	--	\$3.93
The Dalles	\$.03	--
Tigard	\$.03	\$5.56
Tillamook	\$.015	--
Toledo	--	\$3
Tualatin	--	\$3.92
Veneta	\$.03	--
Warrenton	\$.03	--
West Linn	--	\$10.31
Wilsonville	--	\$4.03
Woodburn	\$.01	--
Wood Village	--	\$9.53



LEGEND

- Local Gas Tax
- Local Street Fee
- Both Local Gas Tax & Street Fee

* Local gas tax in dollars per gallon.

** Local residential street maintenance fee in dollars per single family residence per month. (Most jurisdictions charge lower fees for multi-family residential units.) Fees are also charged for commercial and industrial properties at varying rates.

*** Varies by season.

Direction and Actions

1. **Is Council interested in development of additional funding source(s) for the sole use of pavement maintenance and rehabilitation projects?**
2. **If Yes, staff requests Council direction of which funding level (page 8) and funding source (page 11) shown below, to further research and to report back to Council in the future.**

Funding Levels:

1. **Eliminate backlog, \$2.85 million per year for 7-years**
2. **Maintain current budget, \$150,000 per year**
3. **Current budget plus, \$486,000 per year**
4. **Maintain current PCI, \$1.89 million per year**

Funding Source:

- **Street Utility Fee**
- **General Obligation Bond**
- **Local Option Levy**
- **Local Gas Tax**

For more information, please contact:

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