

Fiscal Sustainability Study Session

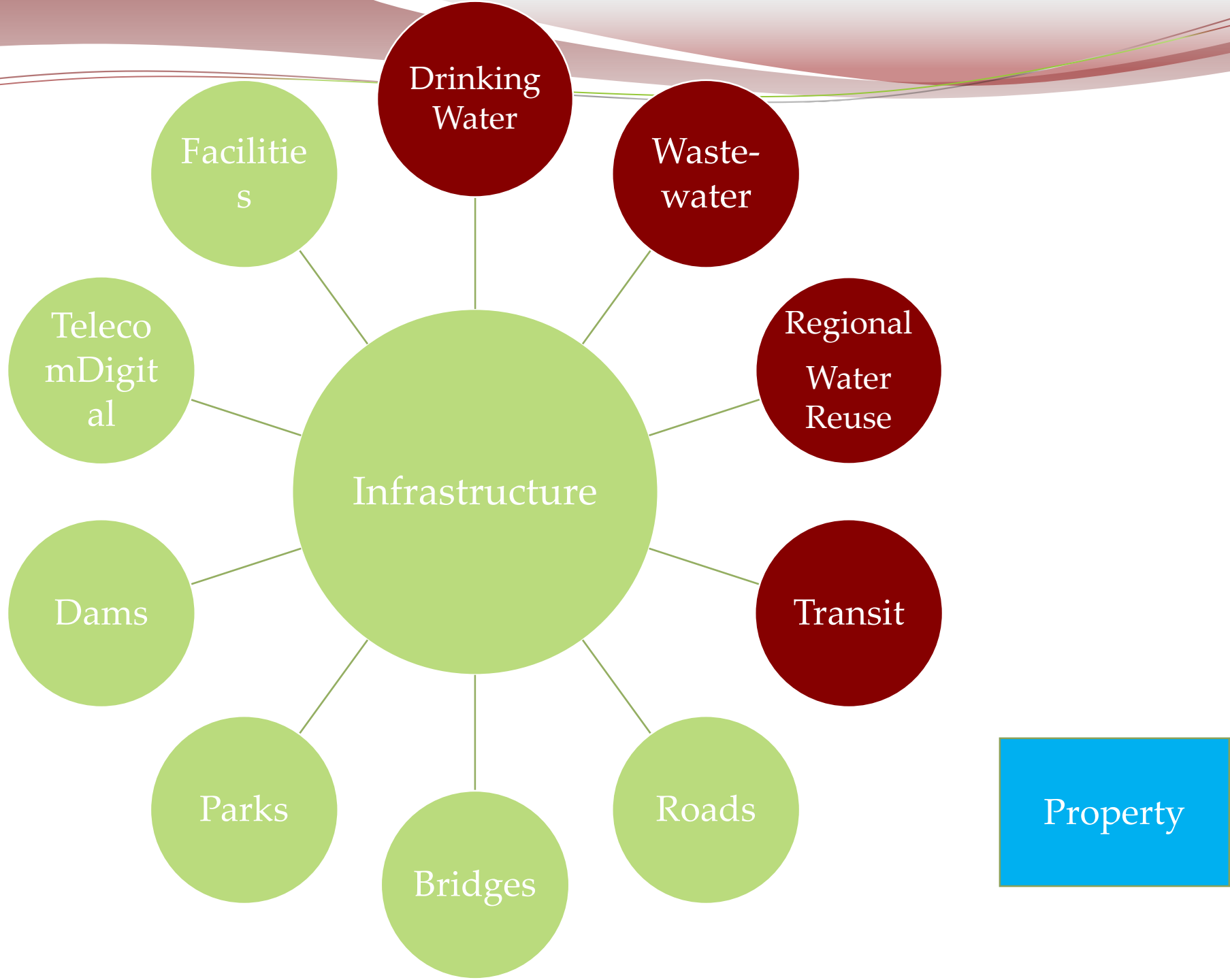
Infrastructure Report

City Council Meeting
May 21 & 22, 2019



Jason Nutt
Director, Transportation and Public Works

Citywide Assets Total Value \$5 Billion



Infrastructure Evaluations

Detailed operational and integrity assessment

- Staff evaluated
- Consultant evaluated
- Computer derivated

Measurements

- Report card
- Industry standards
- Industry indices

ASCE Report Card

A = Exceptional, Fit for the Future

B = Good, Adequate for Now

C = Mediocre, Requires Attention

D = Poor, At Risk

F = Failing/Critical, Unfit for Purpose

Report Card

Category	2017 ASCE Report Card (National)	2018 ASCE Report Card (California)	2017 City Report Card (Santa Rosa)
Drinking Water	D	-	B-
Wastewater	D+	-	B-
Regional Water Reuse	-	-	C-
Transit	D-	C-	C+
Roadways	D	D	C
Bridges	C+	C-	C+
Parks & Recreation	D+	-	C-
Dams	D	-	Unk
Telecom/Digital	-	-	Unk
Building Facilities	-	-	C

Drinking Water

US	CA	SR
D	-	B

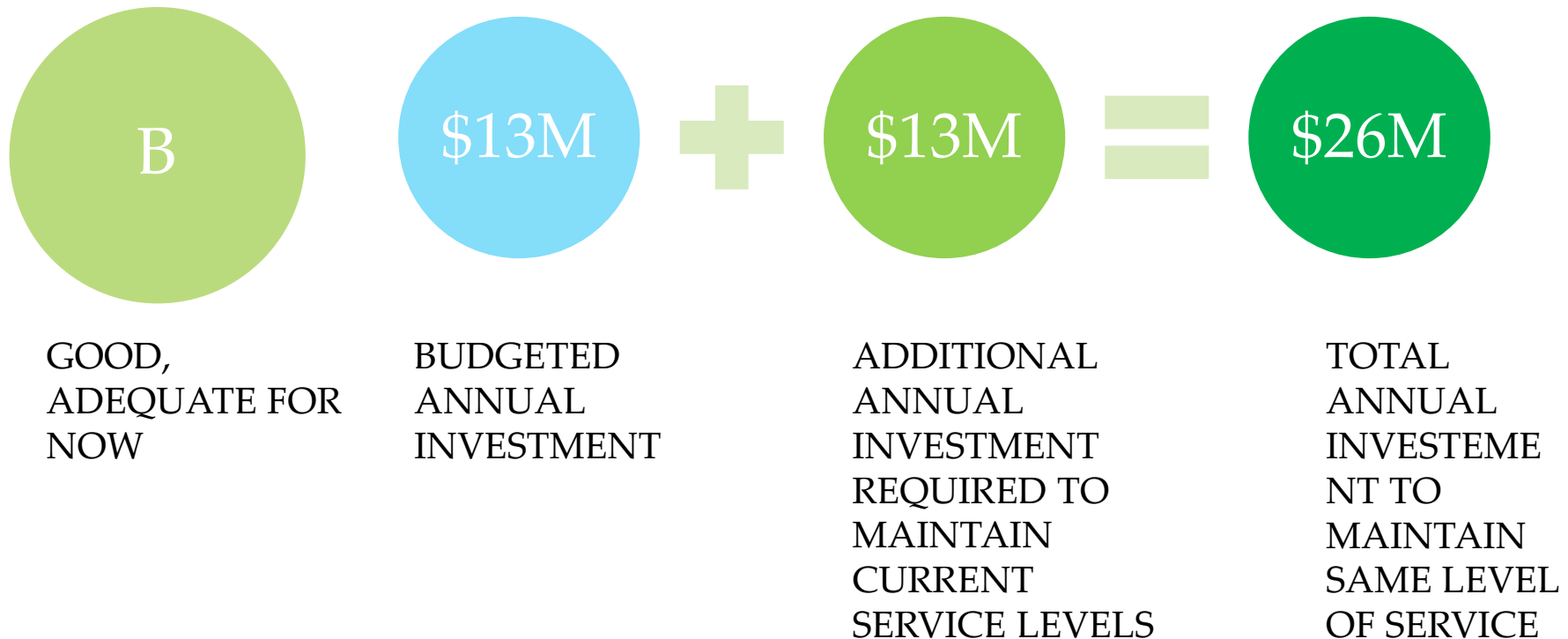
- 53,000 services
- 619 miles of pipe
- 19 pump stations
- 6,300 fire hydrants
- 29,000 valves
- 53,000 meters
- 22 reservoirs



Drinking Water

US	CA	SR
D	-	B

\$260 million in drinking water infrastructure needs over the next 10 years



Wastewater Infrastructure

US	CA	SR
D+	-	B-

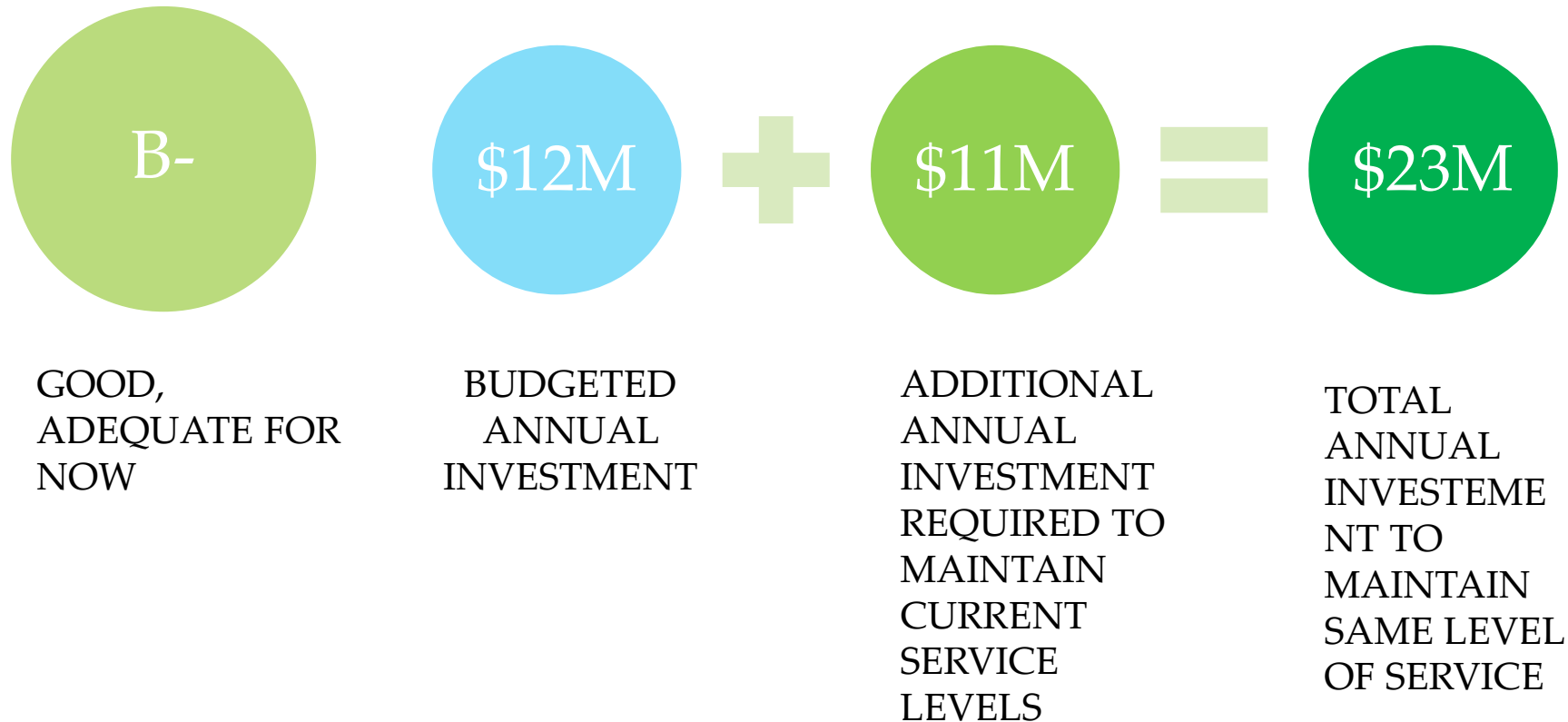
49,000 services
590 miles of main
12,000 manholes
17 pump stations



Wastewater Infrastructure

US	CA	SR
D+	-	B-

\$230 million in sewer collection infrastructure needs over the next 10 years



Wastewater Infrastructure

Regional Water Reuse

Treatment facilities

Recycled water distribution system:

- Geysers pipeline
- Irrigation
- Seasonal storage ponds

Biosolids/compost facilities

US	CA	SR
-	-	C-



Wastewater Infrastructure

Regional Water Reuse

\$224 million in wastewater treatment and water reuse infrastructure needs over the next 10 years.

US	CA	SR
-	-	C-



MEDIOCRE:
REQUIRES
ATTENTION

BUDGETED
ANNUAL
AVERAGE
INVESTMENT

ADDITIONAL
ANNUAL
INVESTMENT
REQUIRED TO
MAINTAIN
CURRENT
SERVICE LEVELS

TOTAL
ANNUAL
INVESTMENT
REQUIRED TO
MAINTAIN
SAME LEVEL
OF SERVICE

Transit

US	CA	SR
D-	C-	C+

Transit infrastructure and related investments evaluated through federally-required Transit Asset Management Plan (2018)

Facilities:

- Transit Operations Building (constructed in 2005)
- 2 major transit hub facilities
- 3 on-street transit hub facilities

Fleet:

- 29 fixed-route vehicles (5 past useful life)
- 13 paratransit vehicles (6 past useful life)

Transit

US	CA	SR
D-	C-	C+

Major upcoming unfunded infrastructure needs

- Transit Mall Improvements
 - Roadbed repairs and rebuild
 - Kiosk expansion and orientation
 - Bus position expansion
- Electrical infrastructure upgrades for charging electric buses
- Transit Hub Improvements
 - Westside, Coddington, Montgomery Village
- System Improvements
 - Increase frequencies
 - Evening service

Roadways

US	CA	SR
D	D	C

509 miles (1,126 lane miles) of public roads

PCI = 61 (2019); Target PCI = 75

Estimated value = \$1.2 billion

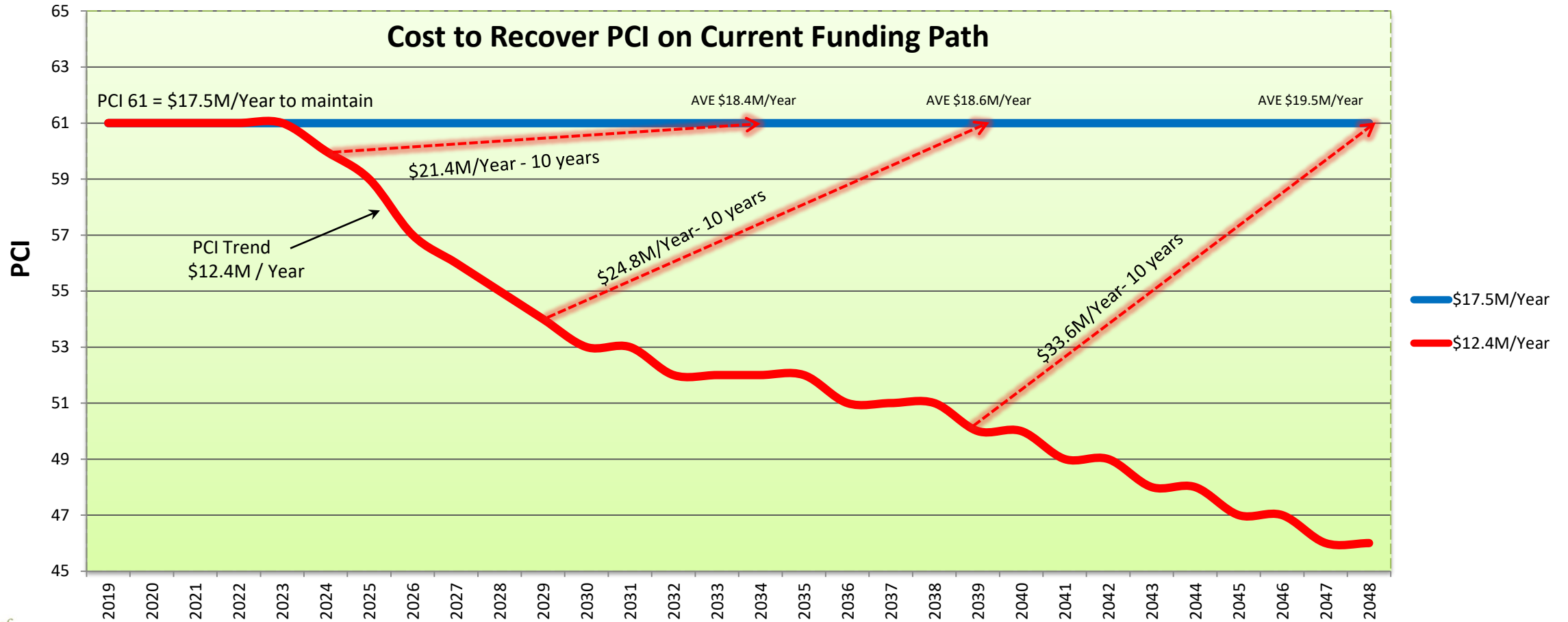
Pavement Management Plan

- \$17.5 million to maintain existing PCI
- Gas Tax = \$1.3 million
- Measure M = \$1.0 million
- SB1 = \$3.5 million
- Utility Impact Fee (UIF) = \$5.2 million
- Roseland pavement = \$662k (through 2027)
- **Shortfall to maintain = \$5.8 million**

Classification	Lane Miles	%	PCI
Arterial	307	27%	65
Collector	166	15%	62
Residential	653	58%	58

Roadways

US	CA	SR
D	D	C



Roadways

US	CA	SR
D	D	C

Relevant Budget Scenarios:

Fix all streets with a PCI <25 over 7 years = \$171,000,000

Increase PCI to 65 over 5 years = \$118,299,524 (\$23,660,000/year).

- Maintain PCI of 65 = \$21,743,000/year

Increase average PCI to 75 over 10 years = \$336,058,577 (\$33,605,857/year).

- Maintain PCI of 75 = \$20,479,441/year

Roadways (cont)

US	CA	SR
D	D	C

2018 Trip Report

The Hidden Cost of Deficient Roads (San Francisco – Oakland Area)

TRIP has calculated the cost to the average motorist in the state's largest urban areas in the form of additional vehicle operating costs (VOC) as a result of driving on rough roads, the cost of lost time and wasted fuel due to congestion, and the financial cost of traffic crashes.

- Vehicle Operating Costs (VOCs) = \$1,049/yr
- Safety = \$206/yr
- Congestion = \$1,737/yr
- Total = \$2,992/yr

Average cost to drivers statewide = \$843

Bridges

US	CA	SR
C+	C-	C+

63 Public vehicle bridges

- Spans of 20 feet and longer per FHWA
- Average Age = 54 years
- 7 bridges are functionally obsolete
- 4 bridges are structurally deficient

Target sufficiency rating = 80

Annual maintenance budget = \$85,000

- Current five-year investment (2014-19) = \$480,000

Estimated deferred capital maintenance = \$4.4 million

127 minor public crossings

- Culverts and spans less than 20 feet

	# of Bridges	Avg Sufficiency Rating
On-system	41	83.8
Off-system	22	89.0

Recreation & Parks

US	CA	SR
D+	-	C-

Recreation Facilities

- Finley Complex
- Finley Aquatic Center
- Steele Lane Center
- Ridgway Aquatic Center
- Doyle and Franklin Clubhouses

Park Inventory

- Developed = 637 acres
- Pending = 114 acres
- Open Space = 277 acres

Managed Park Assets

- Turf = 285.60 acres
- Landscape = 47.19 acres
- Pathways = 46.30 acres
- Parking Lots = 28.67 acres
- Play Apparatus = 5.64 acres
- Tennis Courts = 3.65 acres
- Dog Parks = 3.99 acres
- Picnic Areas = 5.38 acres

Recreation & Parks

US	CA	SR
D+	-	C-

Sample Park Asset Types

- Play Apparatus = 118
- Ball Diamonds = 12
- Soccer/Rugby Fields = 20
- Shade Pavilions/Gazebos = 12
- Restrooms = 16
- Basketball Courts – Full = 9
- Basketball Courts – Half = 14
- Skate Parks = 2
- Dog Parks = 9

Sample Park Asset Types (cont.)

- Picnic Tables = 528
- Benches = 698
- Trash Cans = 523
- BBQ Grills = 97
- Bike Racks = 72
- Drinking Fountains = 87
- Dog Drinking Fountains = 26
- Tennis Courts = 19 (4 youth)
- Pickleball Courts = 7

Recreation & Parks

US	CA	SR
D+	-	C-

National Recreation and Park Association (NRPA) Effectiveness Ratios (per Population Density >2,500/Square Mile)

- Operating Expenditures
 - \$101.89 per capita (NRPA Avg = \$102.57)
 - \$5,768 per parkland acre (NRPA Avg = \$5,197)
 - \$235,456 per FTE (NRPA Avg = \$93,230)
- Revenue per capita = \$22.43 (NRPA Avg = \$25.63)
- Revenue as % of Operating Expenditures = 22% (NRPA Avg = 26.9%)
- Park Acres per 1,000 residents = 6.0 (NRPA Avg = 8.0)
- FTEs per 10,000 population = 4.3 (NRPA Avg = 10.5)

Recreation & Parks

US	CA	SR
D+	-	C-

Sample Deferred Maintenance

- Picnic Areas = \$4,000,000
- Playgrounds = \$19,600,000
- Basketball Courts = \$1,500,000
- Soccer Fields & Ball Diamonds = \$22,000,000
- Golf Course = \$3,000,000

Total Deferred Maintenance = \$50,100,000

- 10-Year Average = \$5,000,000

Dams

US	CA	SR
-	-	-

Recreation and Parks:

- 1 at Howarth Park (Lake Ralphine)
- 2 at Nagasawa Park (Fountaingrove Lake)

Santa Rosa Water owned & maintained

Have not conducted a comprehensive evaluation or threat assessment

Telecom/Digital

Residential and Business Needs

Fixed Broadband: generally “OK” in City limits

Broadband Mobile wireless connectivity

- Cloud services (Google, Apple, Microsoft, etc)
- Mapping, video and audio streaming
- Internet of Things (IoT) and Sensors
- Point of Sale

Newer applications are requiring higher data rates and lower latency supplied by 4G and 5G.

Santa Rosa has extremely poor 4G/LTE. Are poorly prepared for the next 5 years of digital services.

US	CA	SR
-	-	-

Telecom/Digital

City Operational Needs

US	CA	SR
-	-	-

Fixed Broadband: generally “OK” in City limits

Broadband Mobile wireless connectivity needs are same as Resident and Business, plus:

- Public Safety in-vehicle and on-foot mobile data
- Support for fixed Public Safety communications
- On-street IoT sensors (PW, Parking, Transit, Water, etc)
- Broadband machine:people connectivity
- Lower bandwidth, low-latency machine:machine connectivity

Significant deficiencies and needs for 4G/5G wireless within City limits (downtown and residential areas)

Telecom/Digital

Digital Transformation Trends (Forbes 2019)

US	CA	SR
-	-	-

5G Fixed to 5G Mobile

Connected Clouds (Public, Private, Hybrid)

Data > Analytics > Machine Learning > AI

Sensors

Chat Bots

Internet of Things (IoT)

Geospatial Technology

Robotics

Virtual and Augmented Reality (VR & AR)

Building Facilities

US	CA	SR
-	-	C

General Fund Structures = 122

- General Civic = 29
 - Leased = (3) libraries; (1) museum; (1) daycare; (1) visitors center
 - Scheduled for Demolition = 3
 - Evaluating Divestment = 12
- Public Safety = 16
- Recreation & Parks = 77
 - License Agreement = (1) Bayer Farm Barn
 - Scheduled for Demolition = 14
 - Restrooms = 19
 - Activity Sites = 26

Building Facilities - Enterprise

US	CA	SR
-	-	-

Water Enterprise Structures = 47

- Office/Admin = 6
- Pump/Lift Stations = 30
- Operations = 11 (treatment plant, chemical building, etc.)

Parking Enterprise Structures = # parking structures

Transit Enterprise Structures = 3 (TOB, Westside TC, wash station)

Building Facilities

US	CA	SR
-	-	C

Facilities Maintenance Total Budget (FY18/19) = \$5,507,898

- Maintenance Division
 - 1 Crew Supervisor, 7 Maintenance Workers
- Construction Section
 - 1 Crew Supervisor, 8 Maintenance Workers

Total Floor Area = 645,748

- 113 surveyed structures
- Industry standard FTE/SF = 1/50,000
- Santa Rosa FTE/SF = 1/80,000

Historical Capital Expenditures = \$1,634,172/year

- Predominantly roof repairs, HVAC and ADA compliance

Building Facilities

US	CA	SR
-	-	C

Comprehensive Facilities Assessment FY16/17

- 111 General Fund & 2 Transit structures evaluated
- Facilities Condition Index (FCI) calculated for each structure
 - $\text{Deferred Maintenance Deficiencies (DMD)} \div \text{Current Replacement Value (CRV)}$

Facility Condition Index Ranking Scale Summary:

The FCI Scale is an industry standard scale used to communicate condition. It assigns the numeric value of the FCI Equation to five general condition rankings: Good, Fair, Poor, Critical, and Divest.



- Average Current FCI = 0.07
- Average 5-year FCI = 0.18

Building Facilities

US	CA	SR
-	-	C

- 25-year Horizon w/ Year 1 (2017)
- Prioritized funding needs by year and time
- Facility parking lots not included

Key Priority 1 issues

- Fire system code upgrades
- Roof repairs
- HVAC systems
- Electrical systems
- Direct Costs = \$7,509,735

PRIORITY 1 - Currently Critical Year 1 (0-12 months) Requires immediate attention	<ul style="list-style-type: none"> • General Life-safety non-compliance observations • Return a necessary building system assembly or service system to useful operation
PRIORITY 2 - Potentially Critical Year 2 (13-24 months) Will become critical	<ul style="list-style-type: none"> • Rapid deterioration of building system assembly or service system will potentially lead to loss of facility operation • General ADA non-accessible observations
PRIORITY 3 - Necessary, But Not Yet Critical Years 3 - 5 (25-60 months) Should be addressed	<ul style="list-style-type: none"> • Repairs that would provide a rapid return on investment, including energy-efficiency • Necessary building or site improvements • Repairs that preclude predictable deterioration, potential downtime, and/or higher short-term maintenance costs • Replacement of building assembly or service system components that have exceeded their useful lifespan
PRIORITY 4 - Recommended Years 6 - 10 (61-120 months) Should be considered	<ul style="list-style-type: none"> • Sensible improvements to existing conditions • Not required for the facility to generally function • Improvement of overall usability and / or reduce long-term maintenance costs
PRIORITY 5 - Consider Years 11 - 25 (121-300 months) Extended legacy planning	<ul style="list-style-type: none"> • Consideration for existing conditions anticipated as being necessary between years 11 - 25 • Appendix reporting capability for extended legacy planning and benchmarking metrics
PRIORITY 0 - No Action Years 26 - 99 (Beyond 301 months) Good condition	<ul style="list-style-type: none"> • No capital improvements to existing conditions anticipated as being necessary until after year 25 • Only minor deferred maintenance deficiency projected with a repair valuation at five percent or less of total system value

Building Facilities

US	CA	SR
-	-	C

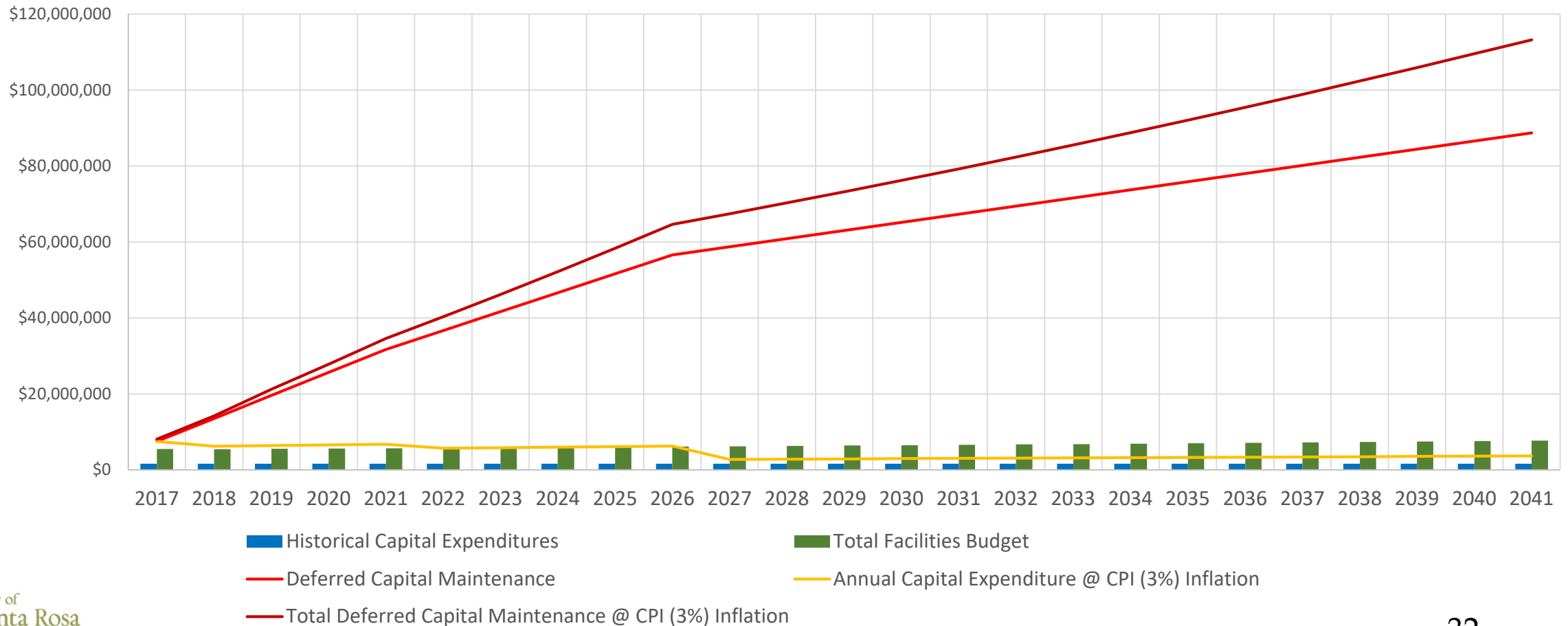
Funding Needs - By Priority, Year, and Term

PRIORITY 1 Year 1	PRIORITY 2 Year 2	PRIORITY 3 Years 3 - 5	PRIORITY 4 Years 6 - 10	PRIORITY 5 Years 11 - 25	TOTAL (Years 1 - 25)
Direct Cost:					
\$7,509,735	\$6,050,762	\$18,174,234	\$24,839,966	\$32,158,715	\$88,733,411
50% (DMD) Project Value:					
\$11,264,603	\$9,076,143	\$27,261,351	\$37,259,948	\$48,238,072	\$133,100,116
Immediate	Short-Term		Long-Term		

Building Facilities

US	CA	SR
-	-	C

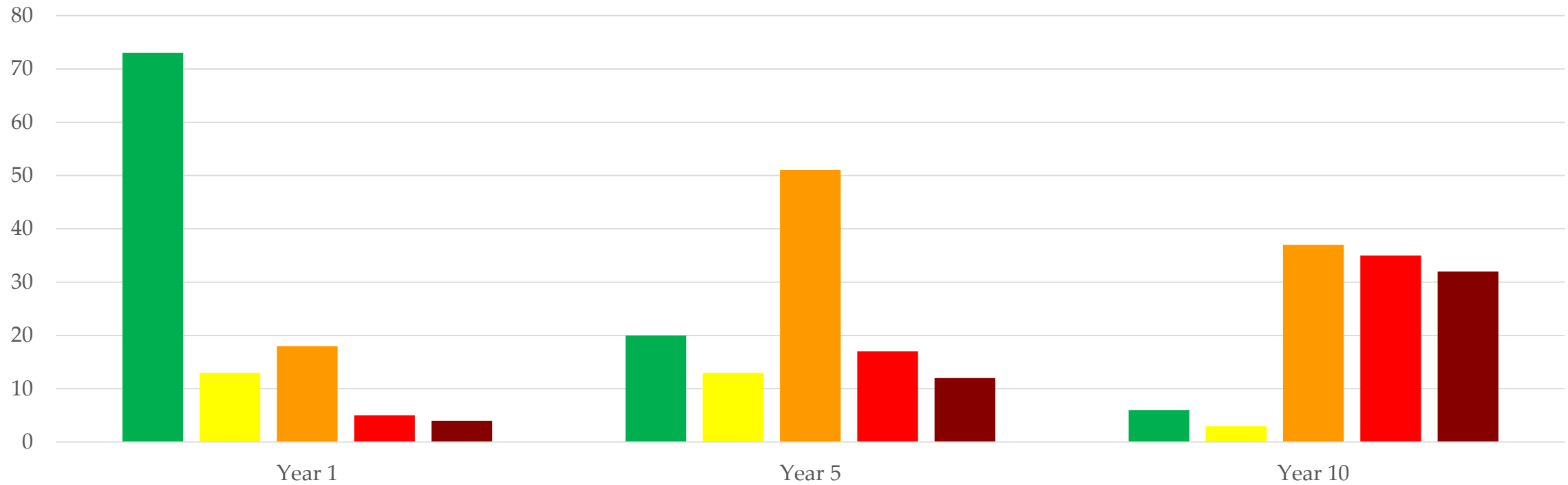
Deferred Capital Maintenance All Facilities



Building Facilities

US	CA	SR
-	-	C

Building Condition
Current Investment



■ Good
 ■ Fair
 ■ Poor
 ■ Critical
 ■ Divest



Building Facilities

US	CA	SR
-	-	C

Current capital budget = \$300,000/year ▼ = 25 Year FCI

- Departments use operating & capital funds for specific improvements

Estimated Needs

- FCI of 0.0 (Excellent) = \$5.0 million/year over 25 years

Proposed Budget

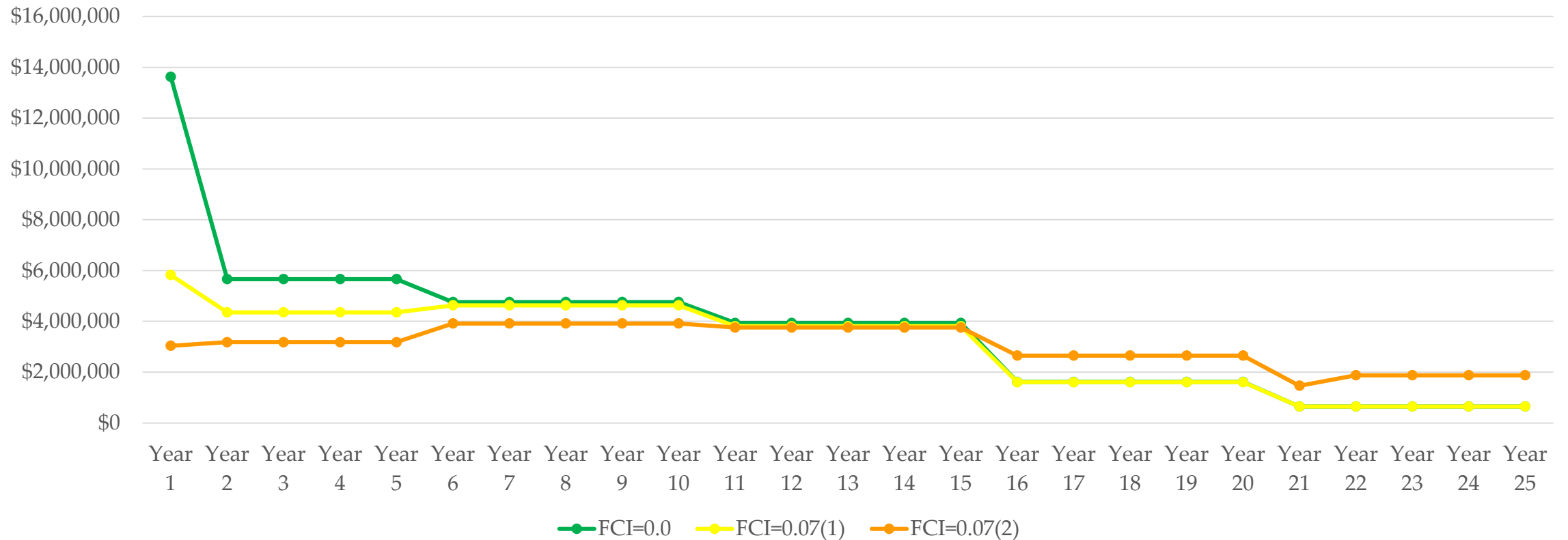
1. FCI of 0.07 (Fair) Annually = \$3.5 million/year
2. **FCI of 0.07 (Fair) by Year 25 = \$3.0 million/year** ▼ = 25 Year FCI
 - Adjusts to \$2.8 million/year following demolition and SJH roofing project
 - Adjusts to \$1.35 million/year adding the P3 project



Building Facilities

US	CA	SR
-	-	C

Facilities Funding Models



Building Facilities

US	CA	SR
-	-	C

Leased facilities

- No lease for 3 library sites (Main, Rincon Valley, Northwest)
 - 2008 draft lease suggested 50/50 capital investment split
 - 15-year investment = \$1,566,492
- Lease with the Museum of Sonoma County at Historic Post Office Building
 - City pay 100% of building maintenance costs
- Lease with 4-Cs at Northwest Community Park
 - Tenant pays 100% of routine maintenance
- License with LandPaths at Bayer Neighborhood Park & Garden
 - Tenant pays 100% of routine maintenance

Building Facilities

US	CA	SR
-	-	C

Divestment

- Council provided direction for P3 project
 - City Hall Bldgs 1-10; Annex; Former Chamber; Former West America Bank; Public Safety Building; Municipal Service Center South; various surface parking lots
- Other discussions
 - Bennett Valley Senior Center & Recreation Annex
 - Sam Jones Hall
 - Library buildings
 - Museum
 - Northwest Community Park day care building
 - Bennett Valley Golf Course
 - Municipal Service Center North (Admin/Lab bldg., shop bldg., warehouse)

Building Facilities – P3

Approved moving forward with P3 evaluation January XX, 2019

Needed Investments

- Priority 1 items = \$8.3 million
- ADA = ~\$10.0 million
- Seismic = ~\$10.0 million

Proposed investment strategy

- FCI = 0.07 @ Year 25 = \$1.6 million/year
 - Does not include ADA or seismic improvements = ~\$0.8 million/year

Summary

Category	2017 City Report Card (Santa Rosa)	Annual Deficiency (10 year term)
Drinking Water	B-	\$13,000,000
Wastewater	B-	\$11,000,000
Regional Water Reuse	C-	\$14,000,000
Transit	C+	Unk
Roadways	C	\$5,800,000
Bridges	C+	\$4,400,000
Parks & Recreation	C-	\$5,000,000
Dams	Unk	Unk
Telecom/Digital	Unk	Unk
Building Facilities	C	\$3,500,000

Questions?