

Asset Management Overview

BPU Study Session

February 4, 2021

Andrew Allen & Jason Roberts



OUR FUTURE IN EVERY DROP



Outline

- What is an Asset?
- Water Department Assets
- What is Asset Management?
- Why perform Asset Management?
- How do we develop the CIP?
- Questions

What is an Asset?

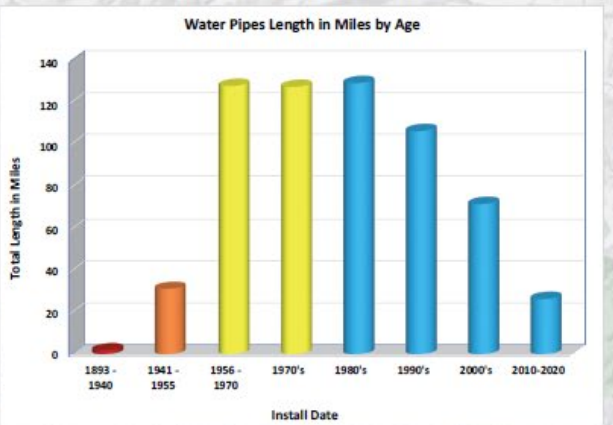
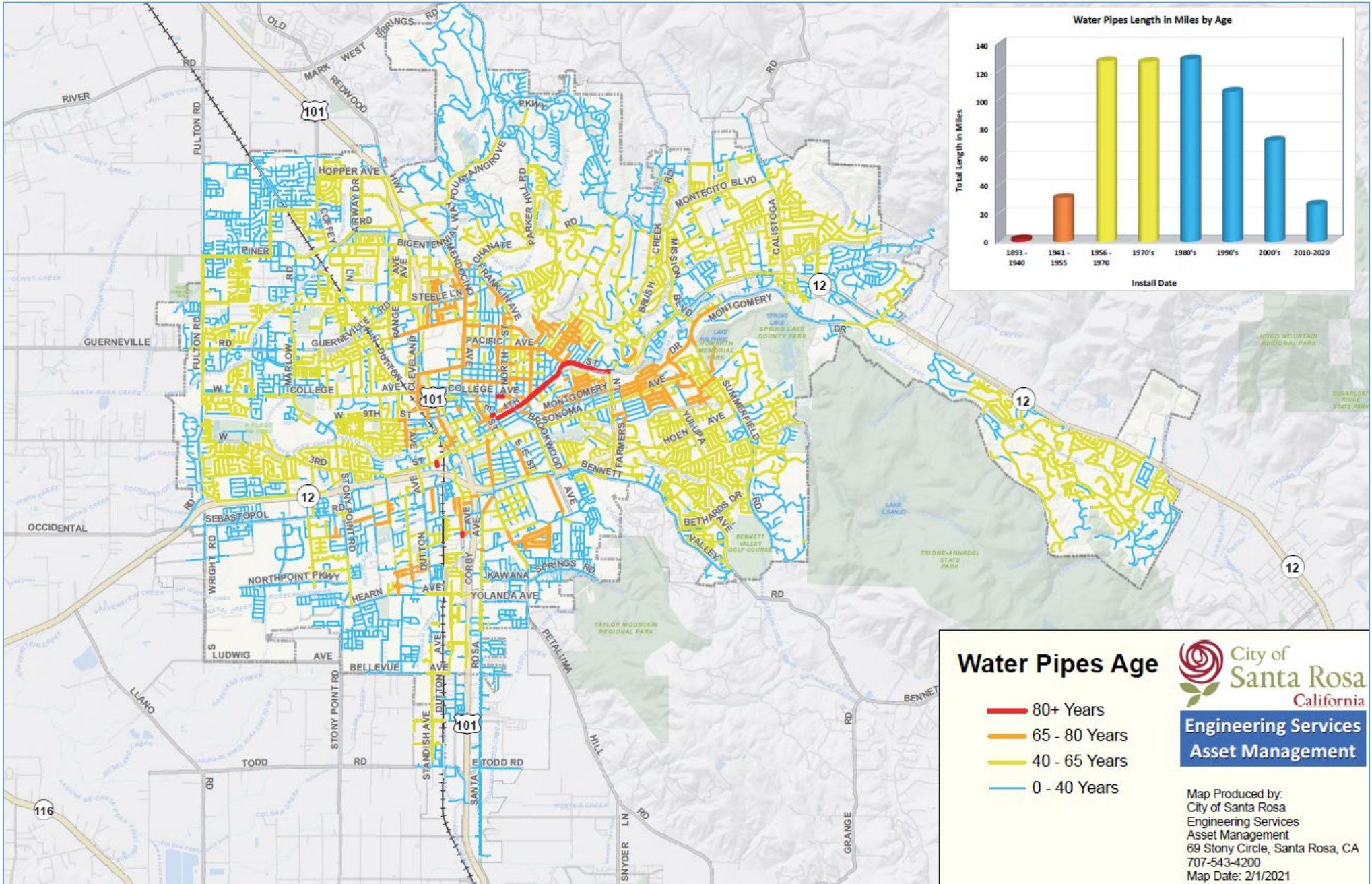
- An asset is a useful or valuable thing, person, or quality
- An asset is an item, thing, or entity that has potential or actual value to an organization

Local Water Assets

- 647 Miles of Transmission and Distribution Mains
- 29,473 Water Valves
- 7,488 Hydrants
- 24 Reservoirs
- 20 Booster Stations
- “Total system replacement” cost of \$2.3B in 2019 dollars
- \$518M CIP need over the next 20 years



Water System by Age

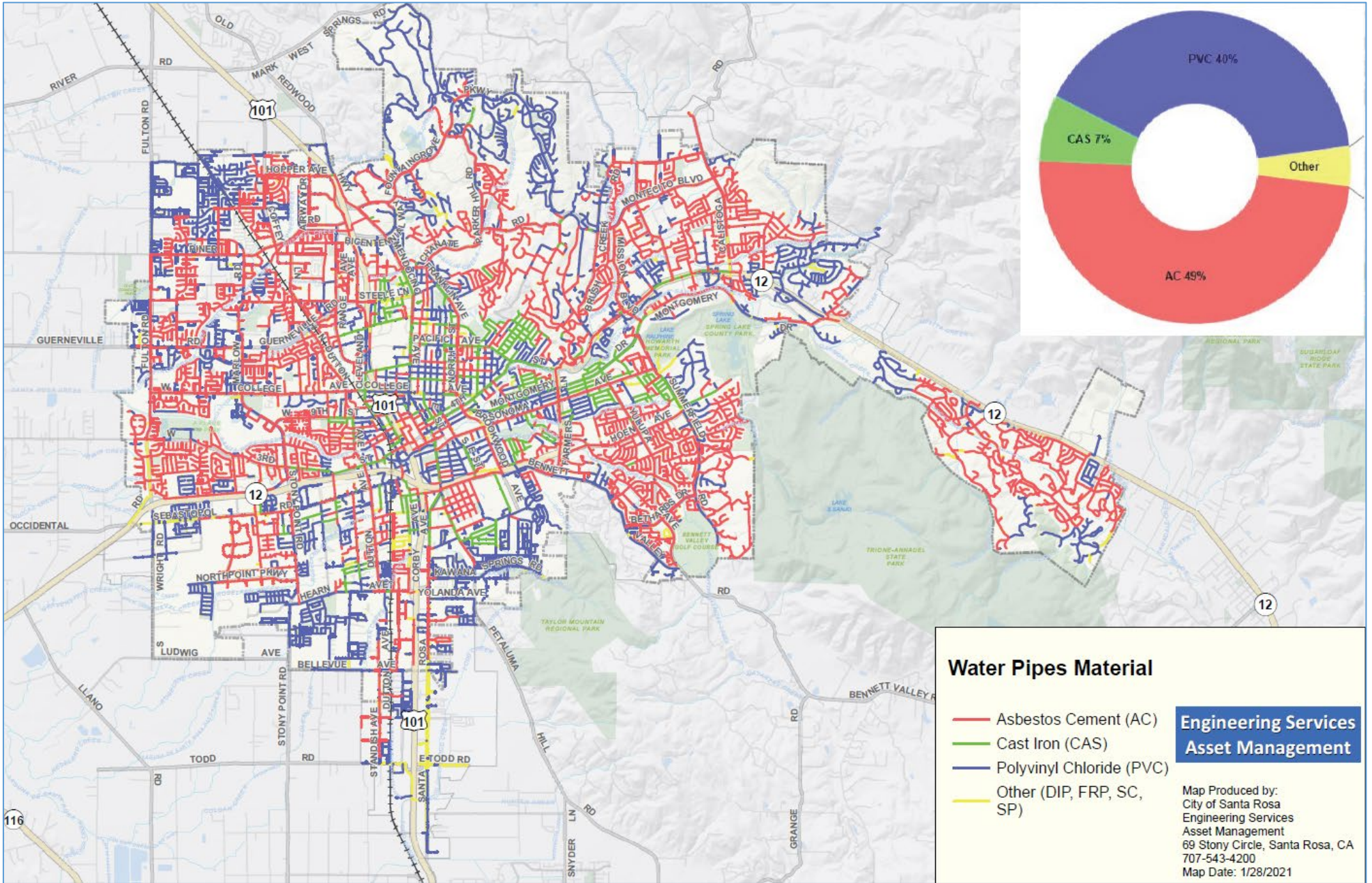


Water Pipes Age

City of Santa Rosa California
Engineering Services
Asset Management

Map Produced by:
 City of Santa Rosa
 Engineering Services
 Asset Management
 69 Stony Circle, Santa Rosa, CA
 707-543-4200
 Map Date: 2/1/2021

Water System by Material

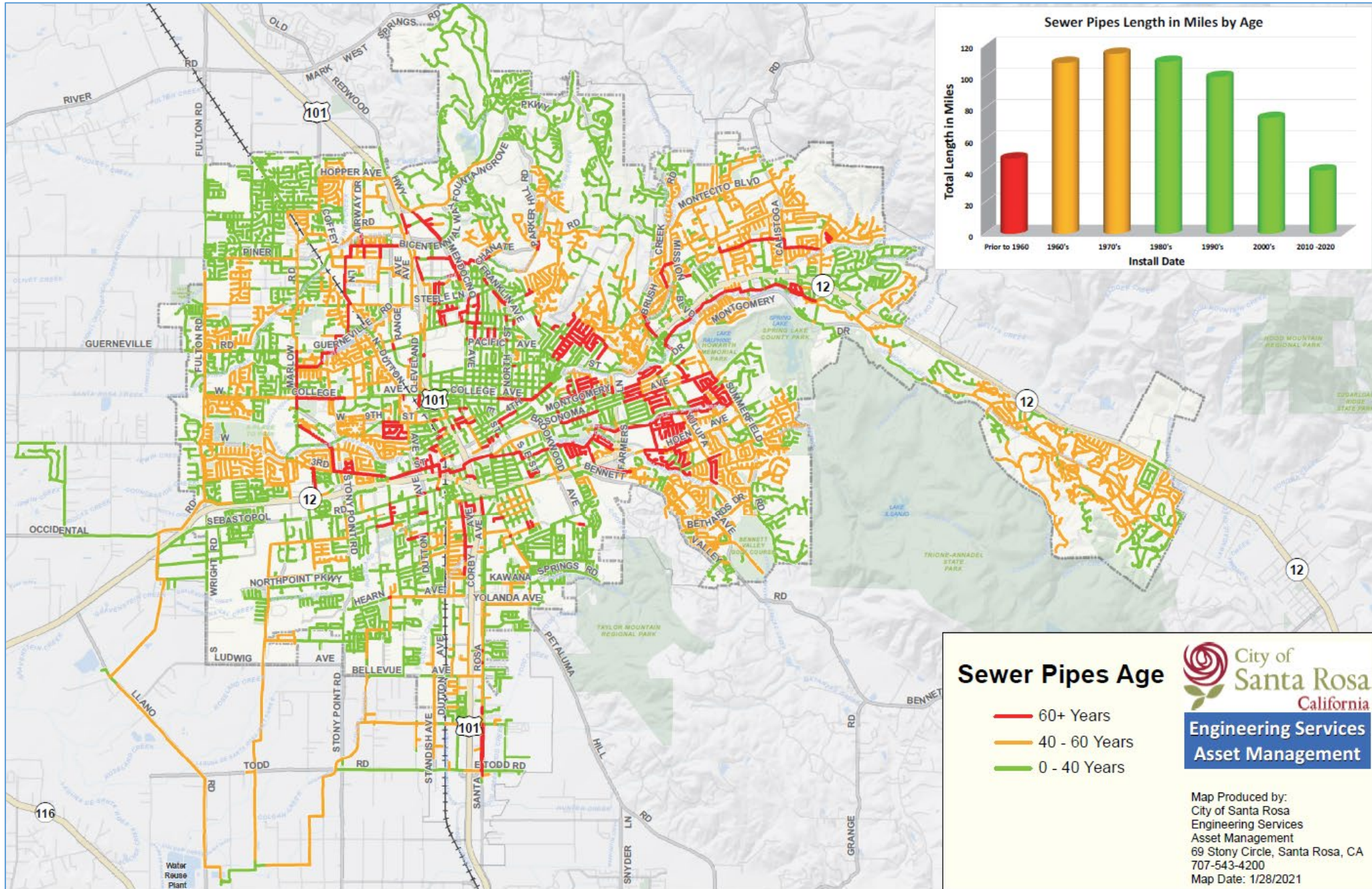


Local Sewer Assets

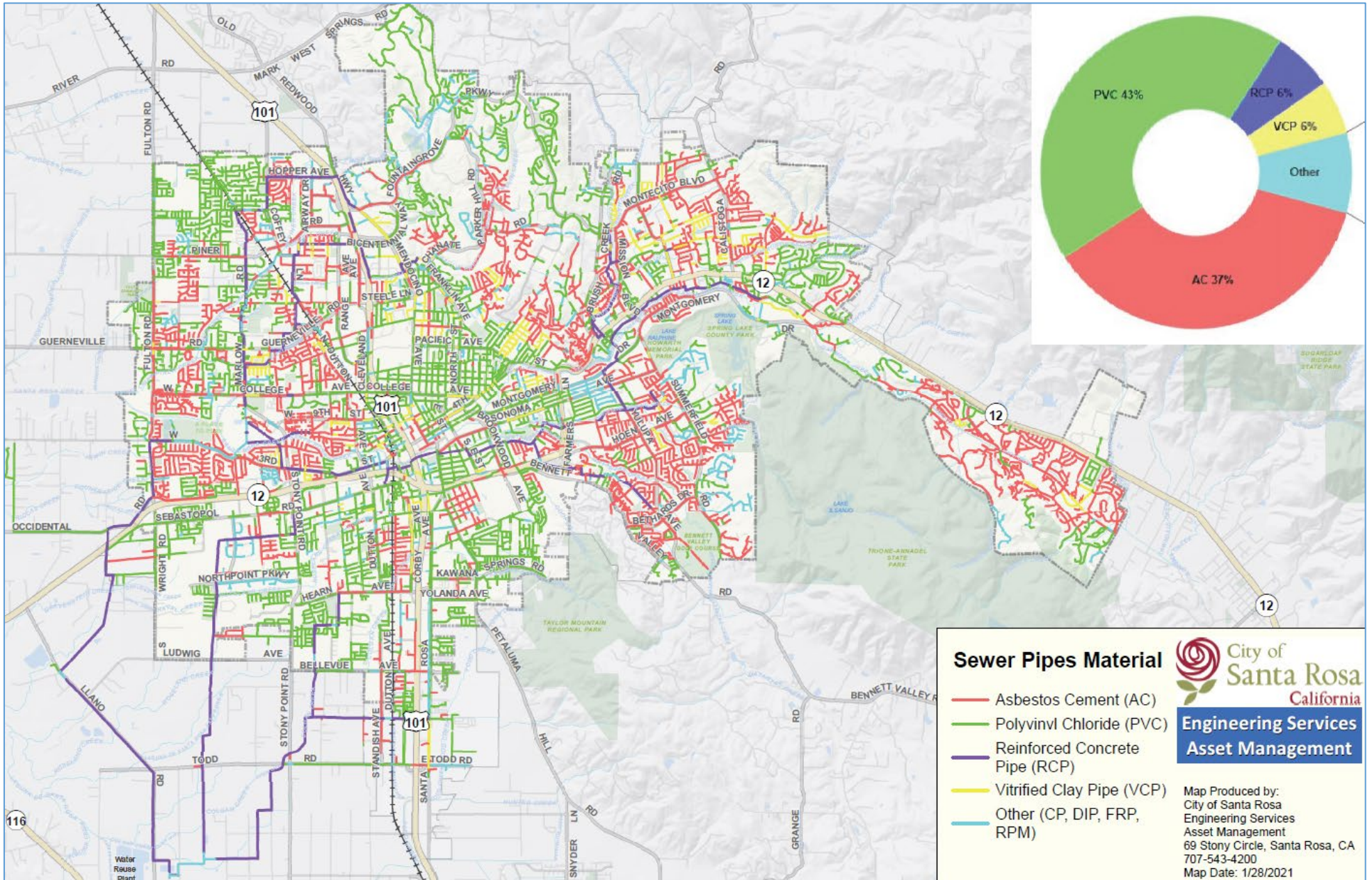
- 608 Miles of Trunks and Collection Mains
- 17 Sewage Lift Stations
- 13,163 Sewer Manholes
- “Total system replacement” cost of \$1.9B in 2019 dollars
- \$629M in CIP need over next 20 years



Sewer System by Age



Sewer System by Material

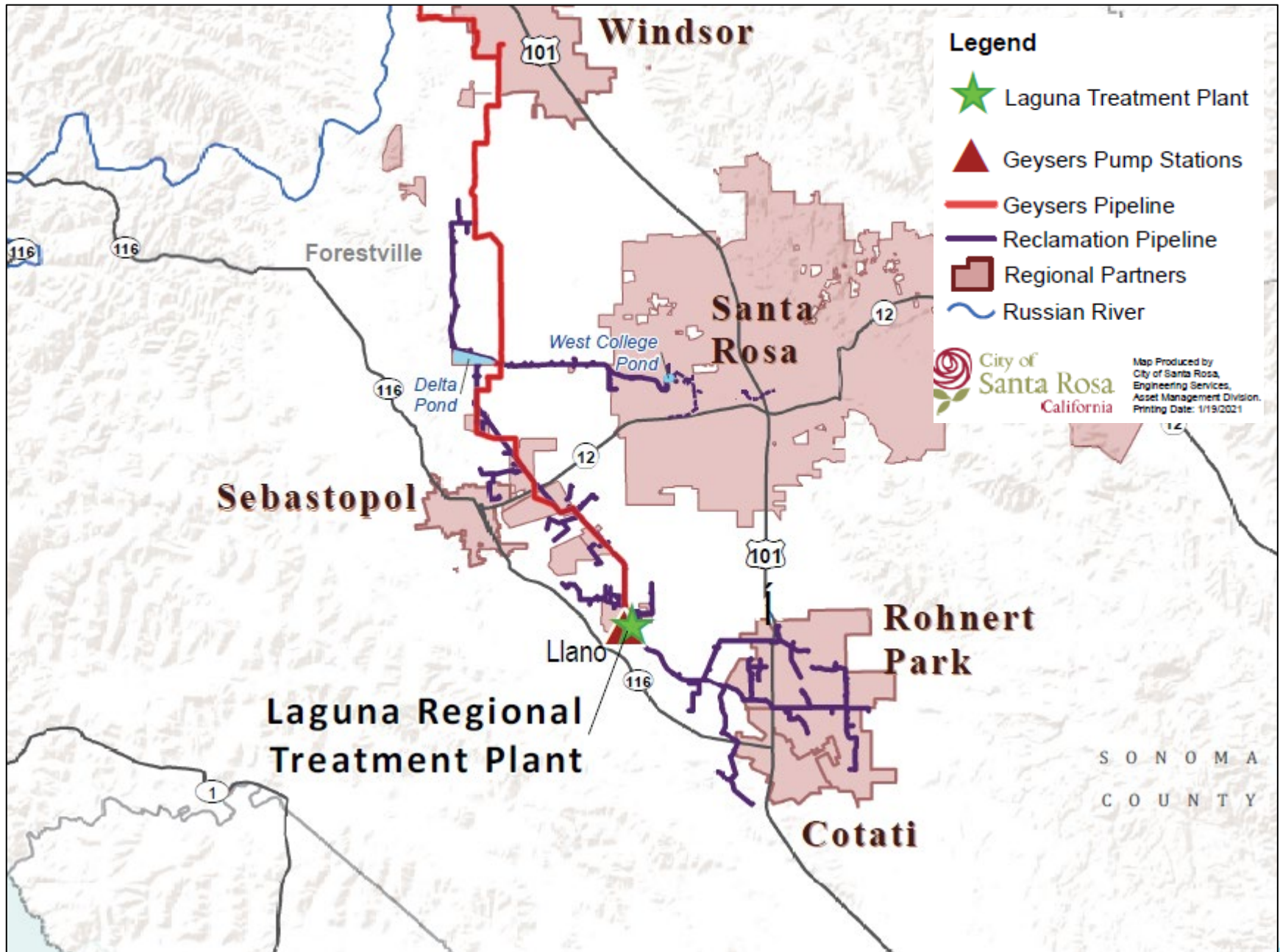


Regional Water Reuse System

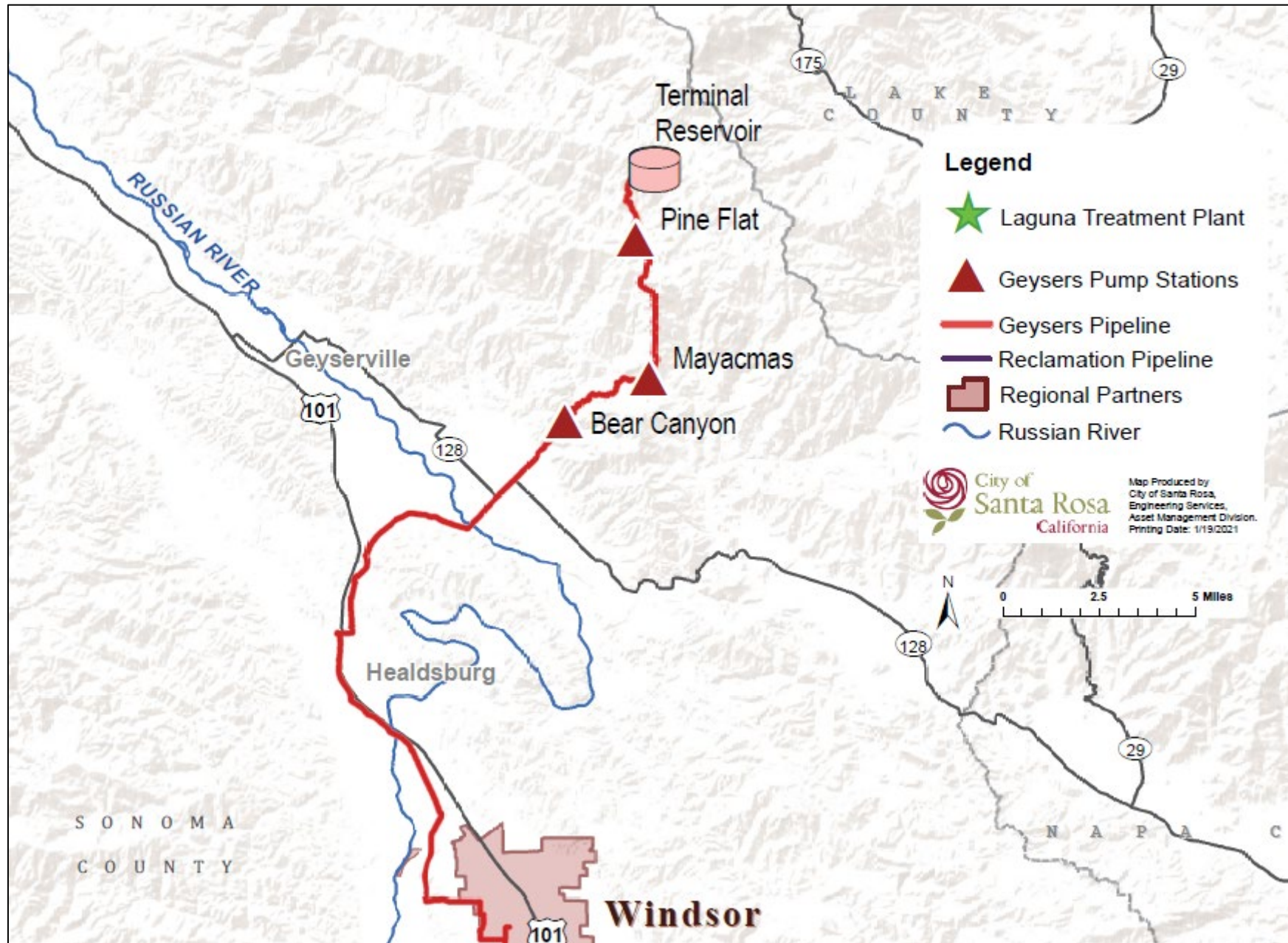
- Laguna Treatment Plant
 - Laboratory
 - Reclamation
 - Geysers
 - Biosolids
-
- 7,228 assets total
 - \$275M in CIP needs over next 20 years just at LTP (2,764 assets)
2019 Master Plan, GHD



Regional System Overview



Regional System: Geysers Pipeline cont.



Water Department's Greatest Assets



What is Asset Management?

- Asset Management is the practice of managing infrastructure assets to minimize the total cost of owning and operating those assets while delivering the desired service levels.
- Asset Management is the coordinated activity of an organization to realize value from assets.

What is Asset Management?

A comprehensive asset management program includes:

- detailed asset inventories
- operation and maintenance
- condition and risk assessment
- capital improvement program
- long-range financial planning

Why Perform Asset Management?

- Develop a Programmatic Approach
- No Surprises
- Right Decision
- Right Time



To Answer Common Questions

- Which assets need the most maintenance?
- When should we replace these “troubled assets”?
- Will we need more CIP budget in the near future?



To Answer the Big Questions

- What “level of service” must we provide, sustainably?
- Which assets are critical to sustained performance?
- What are our long-term costs? Are we investing enough in CIP?

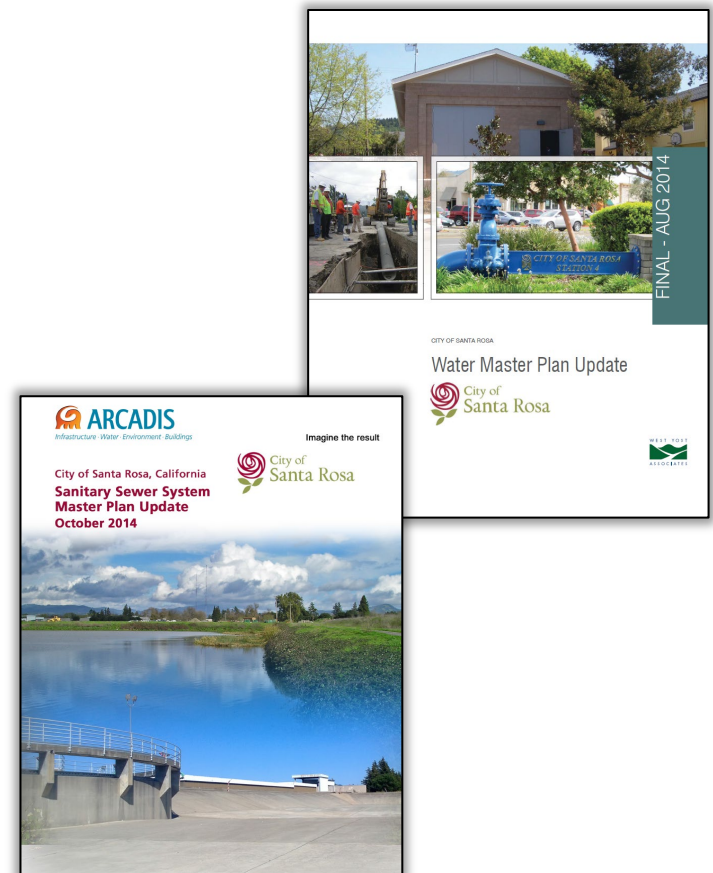


How do we develop the CIP?

- City's General Plan, Master Plans & Engineering Studies
- Regulatory Requirements
- Evaluate Level of Service
- Condition Assessment
- Risk Assessment
- Stakeholder and Public Input
- Board of Public Utilities and City Council direction

General Plan, Master Plans and Engineering Studies

- Evaluate System to Support General Plan Changes
- Level of Service Scoring
- Condition Assessment
- Risk Assessment
- CIP Project Development



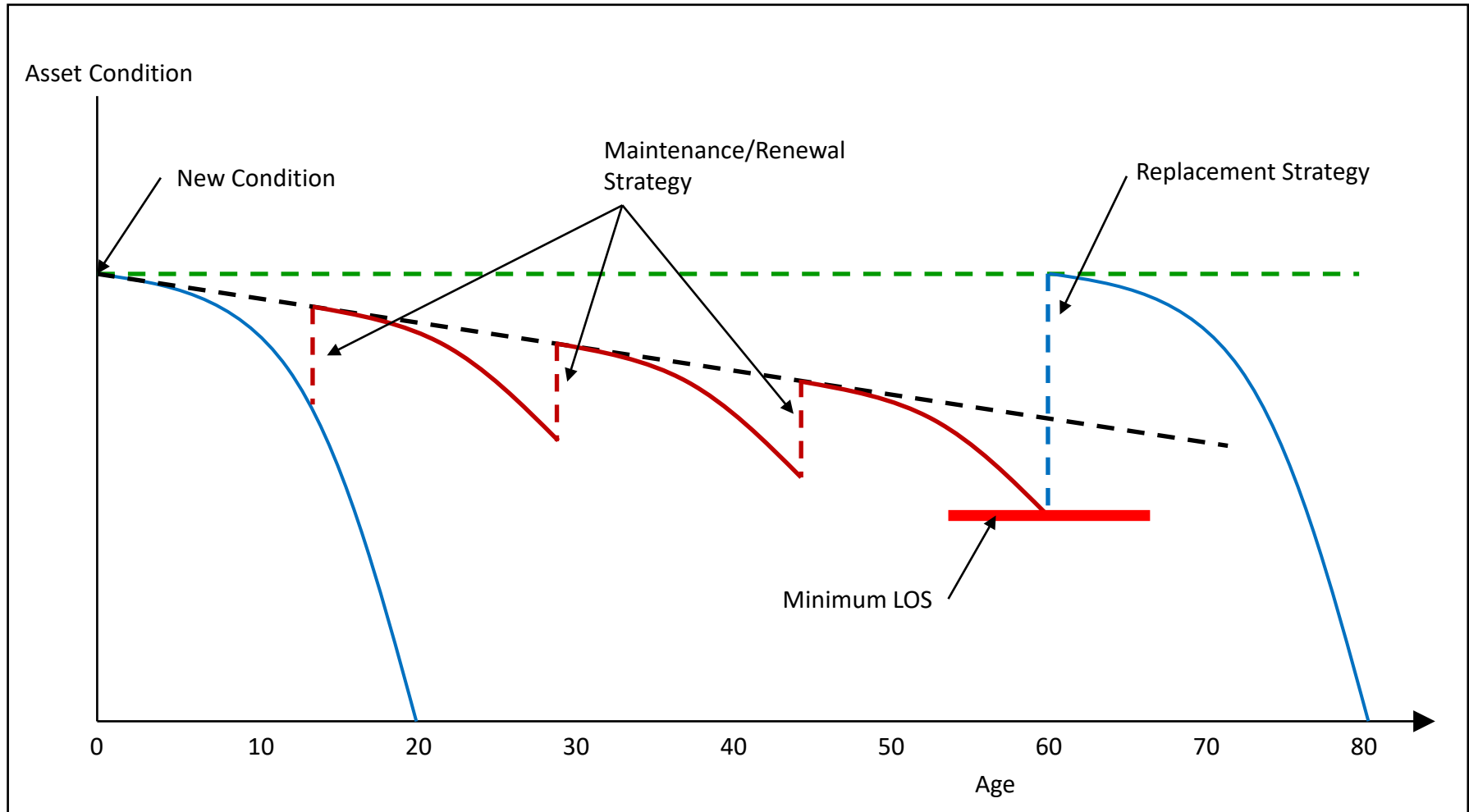
Regulatory Requirements

- Building Code and Fire Code Upgrades
- Department of Drinking Water
- NPDES Waste Discharge Permit
- NPDES Stormwater Permit

Evaluate Level of Service

- Each asset provides value to the City
- Evaluating individual assets can provide numeric or qualitative “Level of Service” scores:
 - % downtime, incidents per year
 - hydraulic capacity
 - regulatory compliance
 - cost to maintain
- Relies on goals and priorities from “the top”

Condition Assessment



Risk Assessment

- Likelihood of Failure
 - Maintenance history
 - Condition observations & assessment
 - Asset attributes (age, material)
- Consequence of Failure
 - Financial
 - Social
 - Environmental

	Consequence				
Likelihood	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	Extreme	Extreme
Possible	Medium	Medium	High	High	Extreme
Unlikely	Low	Medium	Medium	High	High
Rare	Low	Low	Medium	High	High

Stakeholder and Public Input

- Local Water Operations
- Local Sewer Operations
- Regional Water Reuse
- Water Administration
- Customer Calls
- Public Meeting Comments

Board of Public Utilities and City Council Direction

- BPU and CC Comments & Suggestions
- BPU Budget Subcommittee
- BPU Full Board
- City Council

Summary

1. Data review – identify assets that need CIP work
2. Prioritization – which assets need work now?
3. Refine scope, confirm funding
4. Consult stakeholders
5. Queue CIP project for design





Questions?