Asset Management Principles

BPU Study Session

February 16, 2017

Santa Rosa WATER

OUR FUTURE IN EVERY DROP

Outline

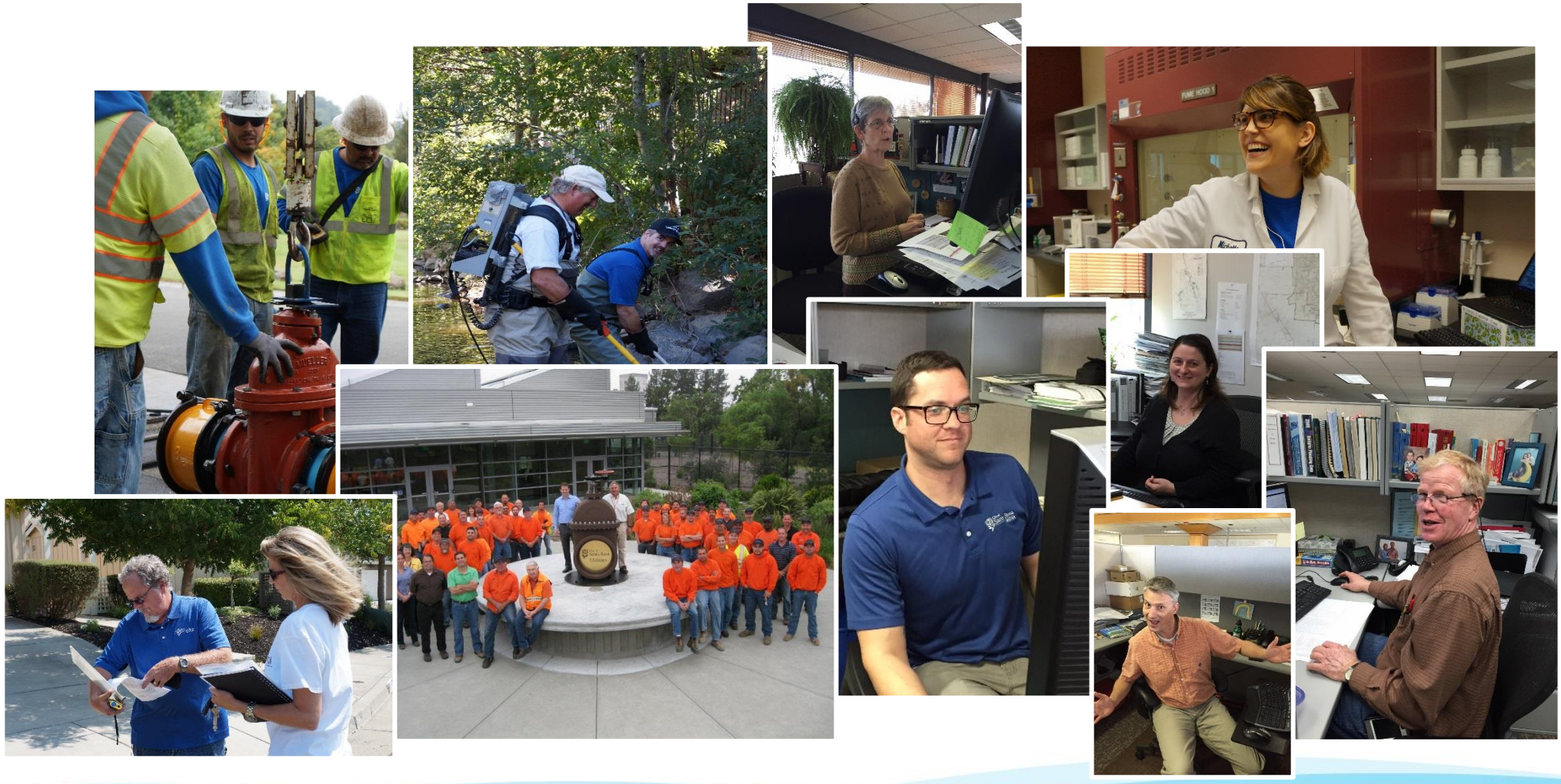
- What is an Asset?
- Water Department Assets
- Why Asset Management?
- What is Asset Management?
- How do we get from Asset Management to Project Development?
- Questions?

What is an Asset?

as·set –noun

1. *a useful or valuable thing, person, or quality*

Water Department's Biggest Asset



Local Water Assets

- 619 Miles of Transmission and Distribution Mains
- 28,824 Water Valves
- 6,299 Hydrants
- 23 Reservoirs
- 20 Booster Stations

Local Sewer Assets

- 591 Miles of Trunks and Collection Mains
- 17 Sewage Lift Stations
- 12,216 Sewer Manholes

Increasing Challenges

- Regulatory compliance
- Aging assets
- Customer demands
- Security
- Financial constraints
- Loss of institutional knowledge
- Climate change
- Emergency response
- Resiliency / Redundancy

Why Asset Management?

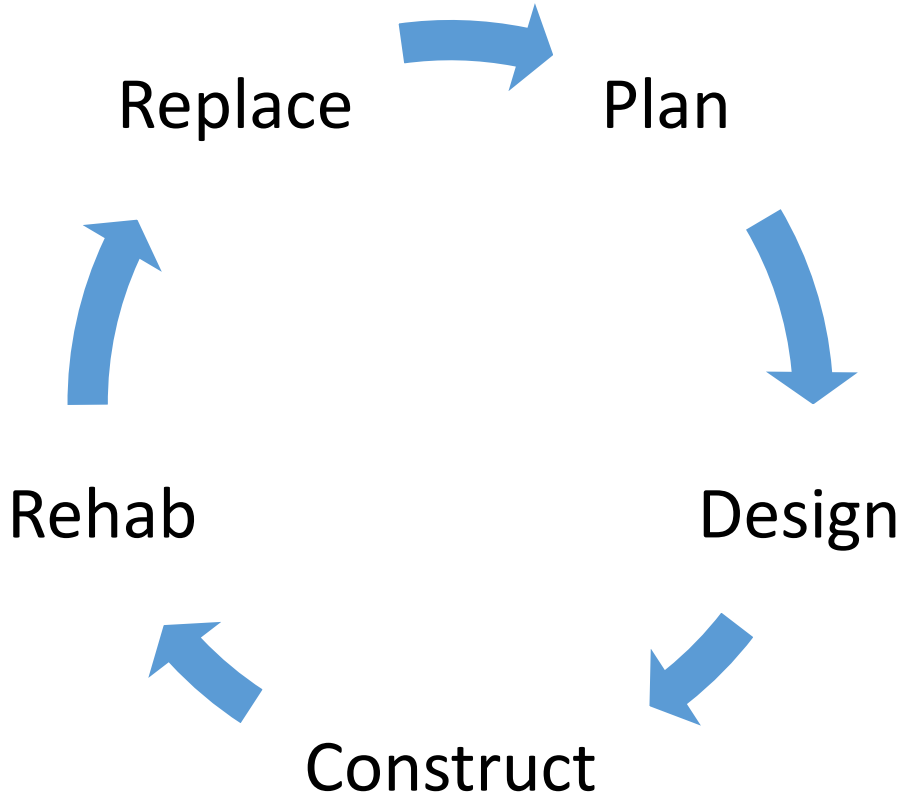
- Programmatic Approach
- No Surprises
- Right Decisions
- Right Time

Why Asset Management?

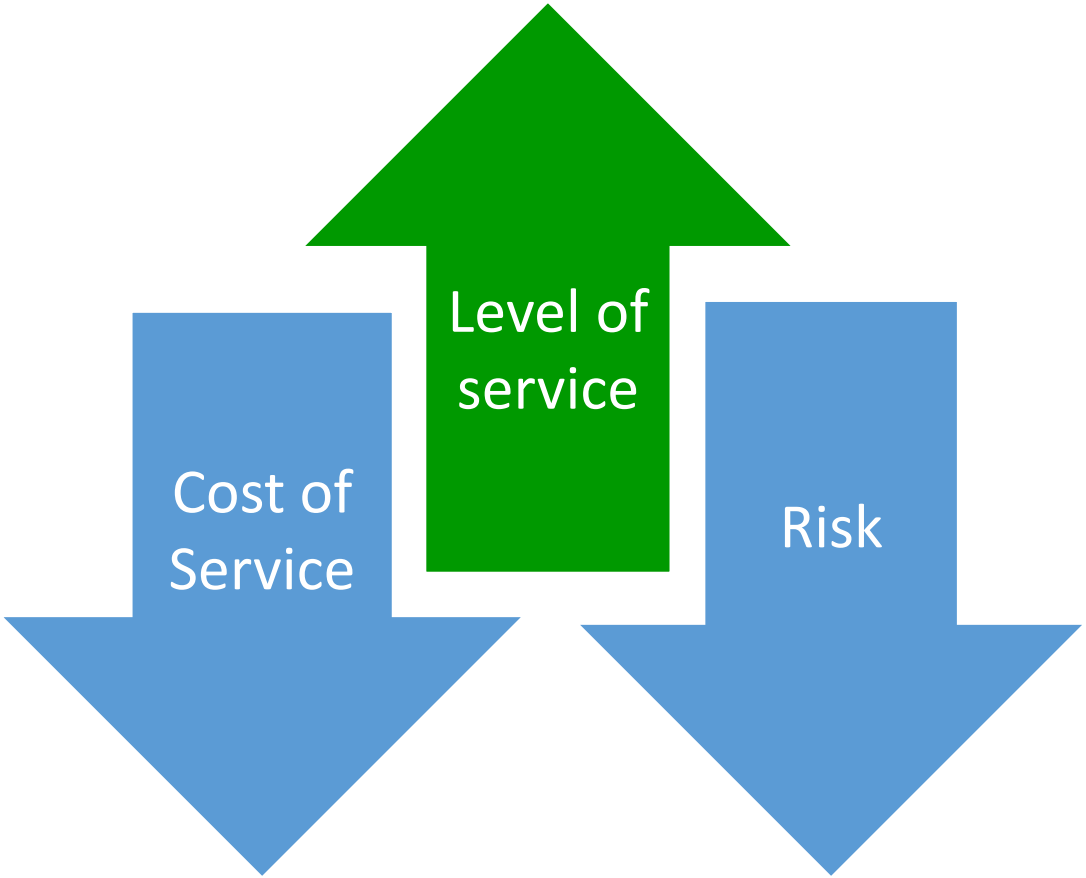
- Which **capital projects** to undertake, when, and why?
- What asset information should our **operations and maintenance** crews be tracking and why?
- When to **repair**, when to **refurbish**, and when to **replace**?
- To give our **customers** the **best value**

What is Asset Management?

- Not software
- Management Commitment
- Long Term Financial plan
- Project Development
- Based on life cycle of assets
- Software used to analyze and track assets



Comprehensive Asset Management



How do we get from AM to Project Development?

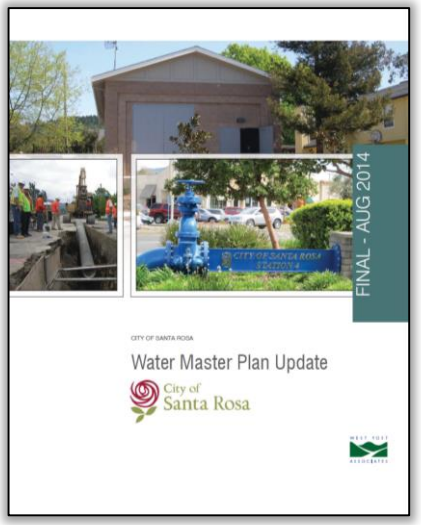
- Comprehensive Asset Management
  - Data
    - Asset Inventory
    - Maintenance Management System
  - Standardized Criteria
- Leads To Data Driven Decisions
  - Project Development
  - 5 Year CIP Program
  - O&M Budgets

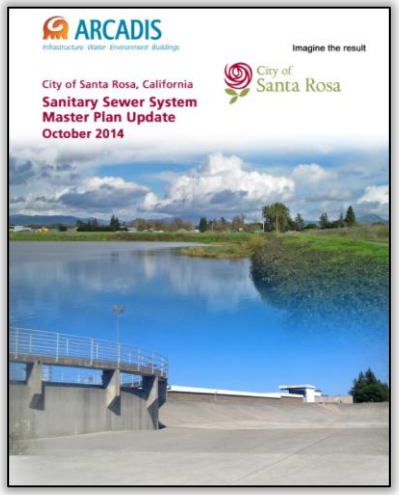
Project Development Process

1. Review Master Plans
2. Update asset scores
3. Assess risks
4. Establish new scores
5. Rank priorities
6. Reality check
7. Develop CIP based on funding

Standardized Criteria

- Regulatory Requirements
- Legal Mandates
- Condition Assessment
- Operations Maintenance History
- General Plan and Master Plans
- Public Input
- Street Rehabilitation and Maintenance
- Proximity to Other Assets





Asset Scoring Process

CONDITION

- Remaining Service Life
- CCTV-Pipe Condition
- Number of repair work orders
- Number of schedule maint

PERFORMANCE

- Hydraulic Capacity
- Flush Score
- Slope

RISK

- Seismic Activity
- Fire Flow Deficiencies
- Creeks
- Hwy Right of Way
- RR XINGS

Asset Scoring Process

CONDITION

+

PERFORMANCE

+

RISK

=

TOTAL SCORE

Condition Assessment

- CCTV
  - assess condition of sewer pipes
  - identifies deteriorated sewer pipes that need replacement

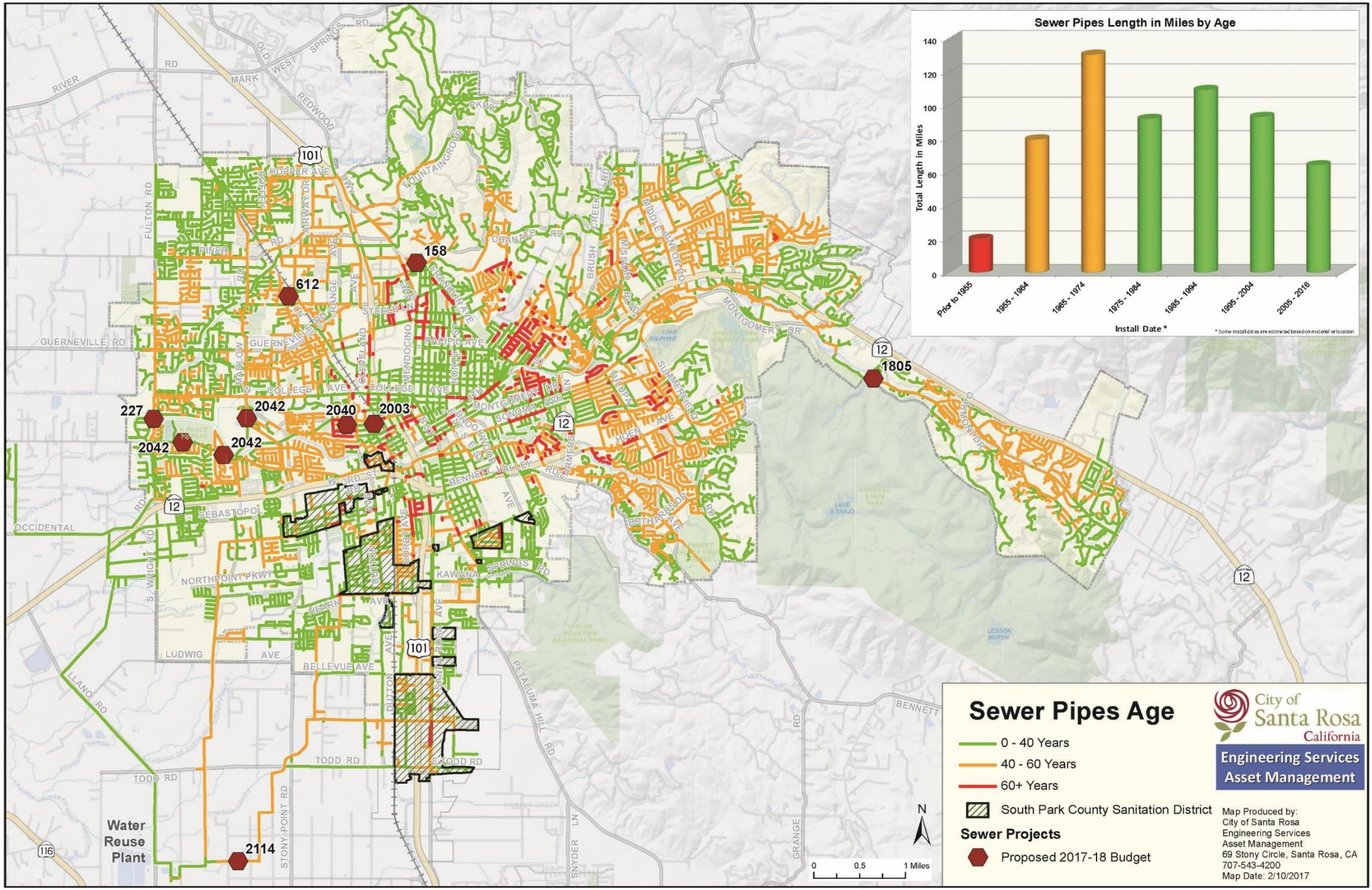
Residual Life

Remaining Service Life

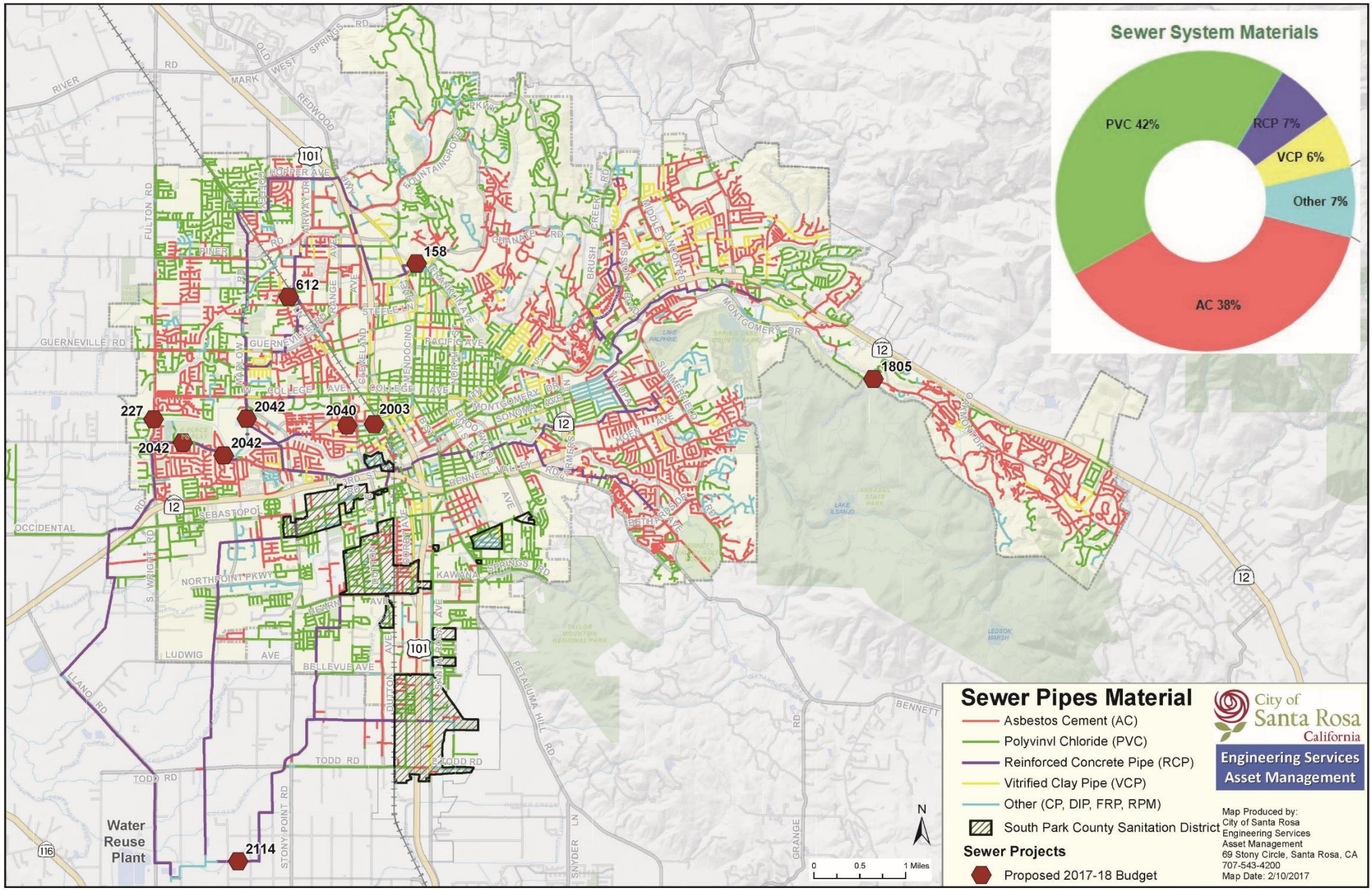
Sanitary Sewers

Material Type	Description	Estimated Service Life
PVC	POLYVINYL CHLORIDE	100
PE	POLYETHYLENE	100
DIP	DUCTILE IRON PIPE	80
AC	ASBESTOS CEMENT	65
CAS	CAST IRON	75

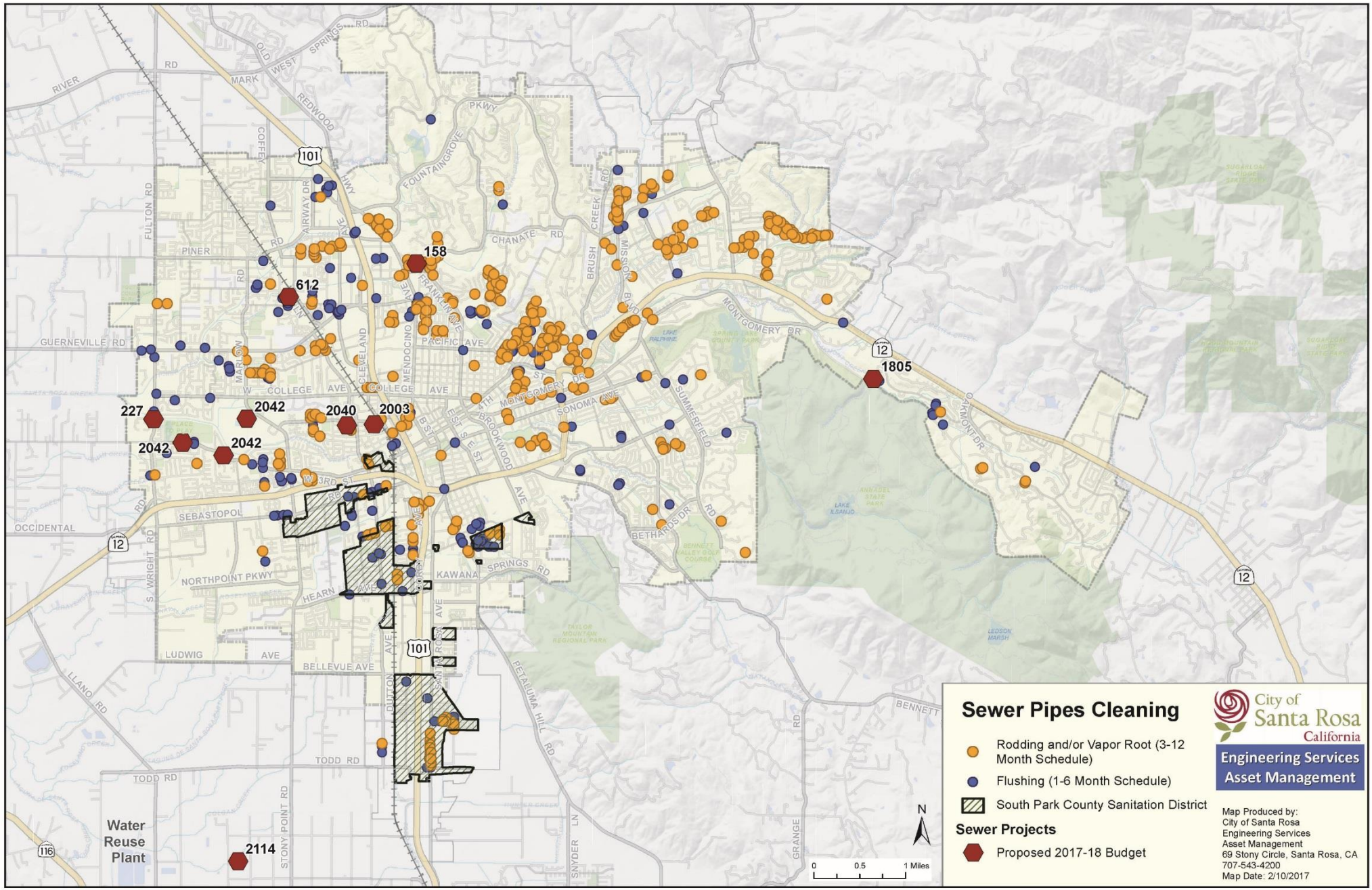
Sewer Collection System by Age



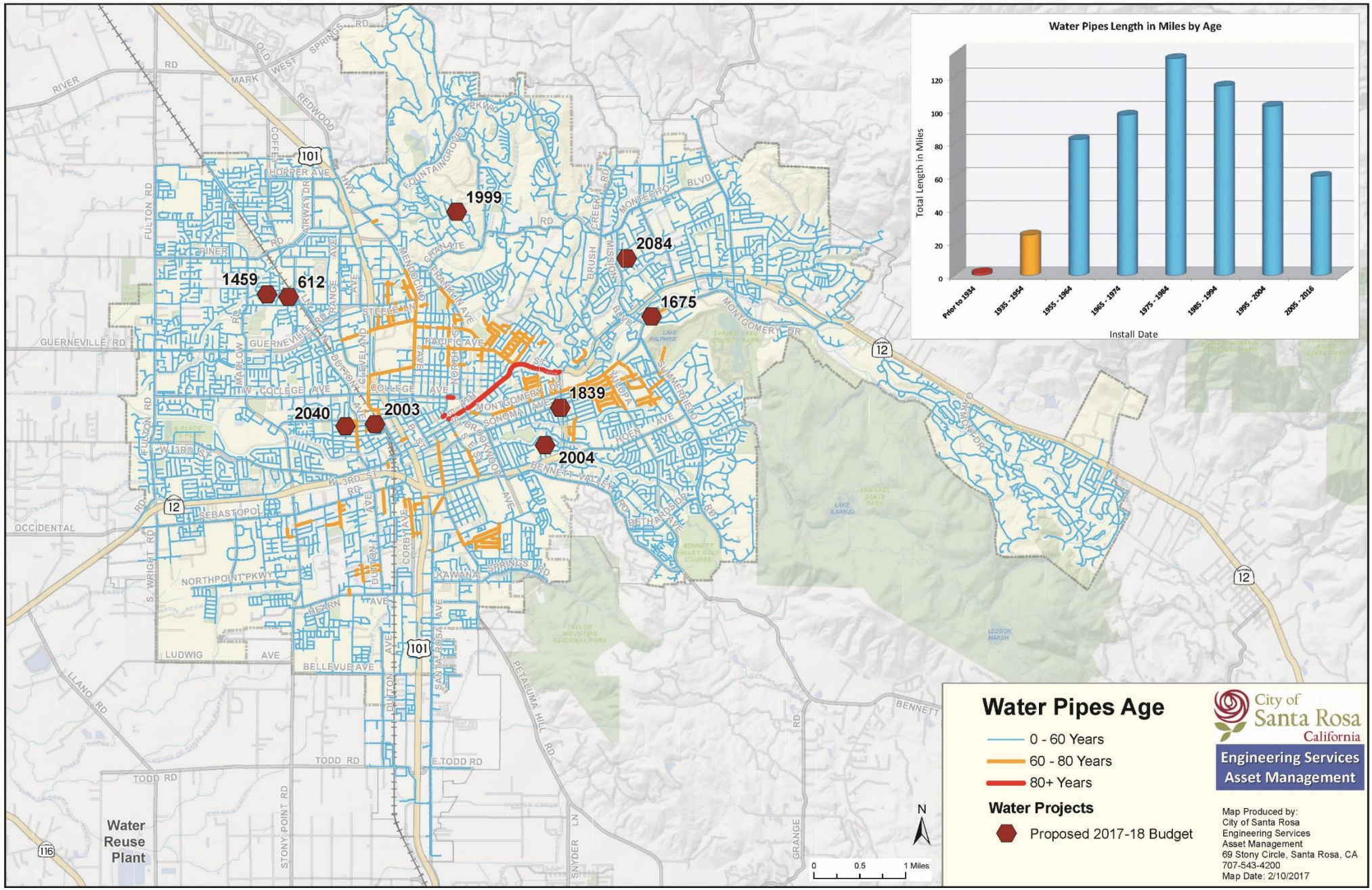
Sewer System by Material



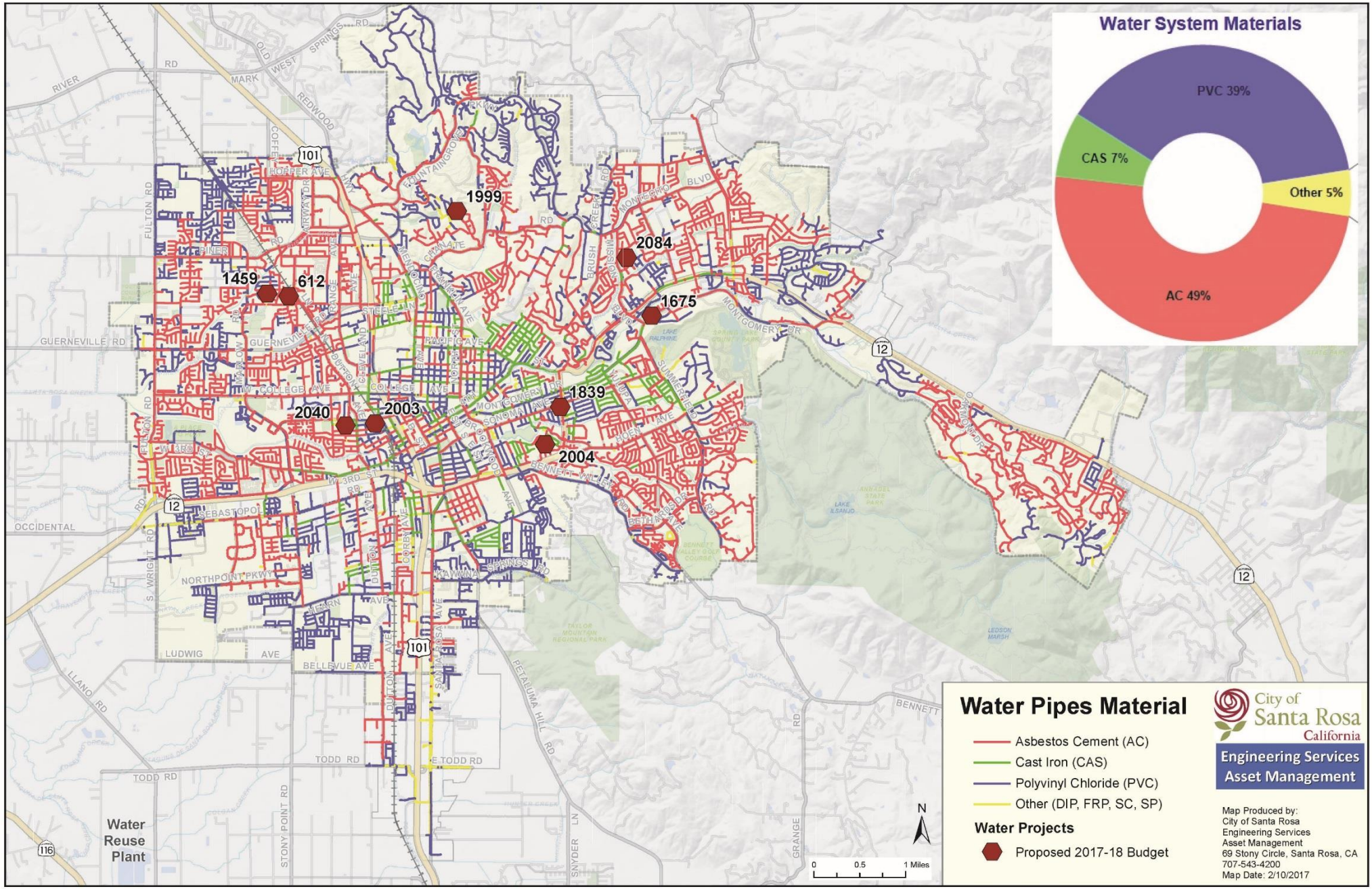
Sewer System Scheduled Maintenance



Water System by Age



Water Systems by Material



Regional Water Reuse System

- Treatment Plant
- Laboratory
- Reclamation
- Geysers
- Biosolids

Regional Water Reuse System

Master Plan (under development)

- Condition Assessments
- Agreements, Contracts, Permits
- Regulatory Requirements
- Project Prioritization
- CIP Project Identification
- 10 Year + Horizon
- Risks
- Opportunities
- Strategies

Questions?