

Professional Services Agreement Approval Professional Engineering Services for the **2019 Water System Reliability Study**

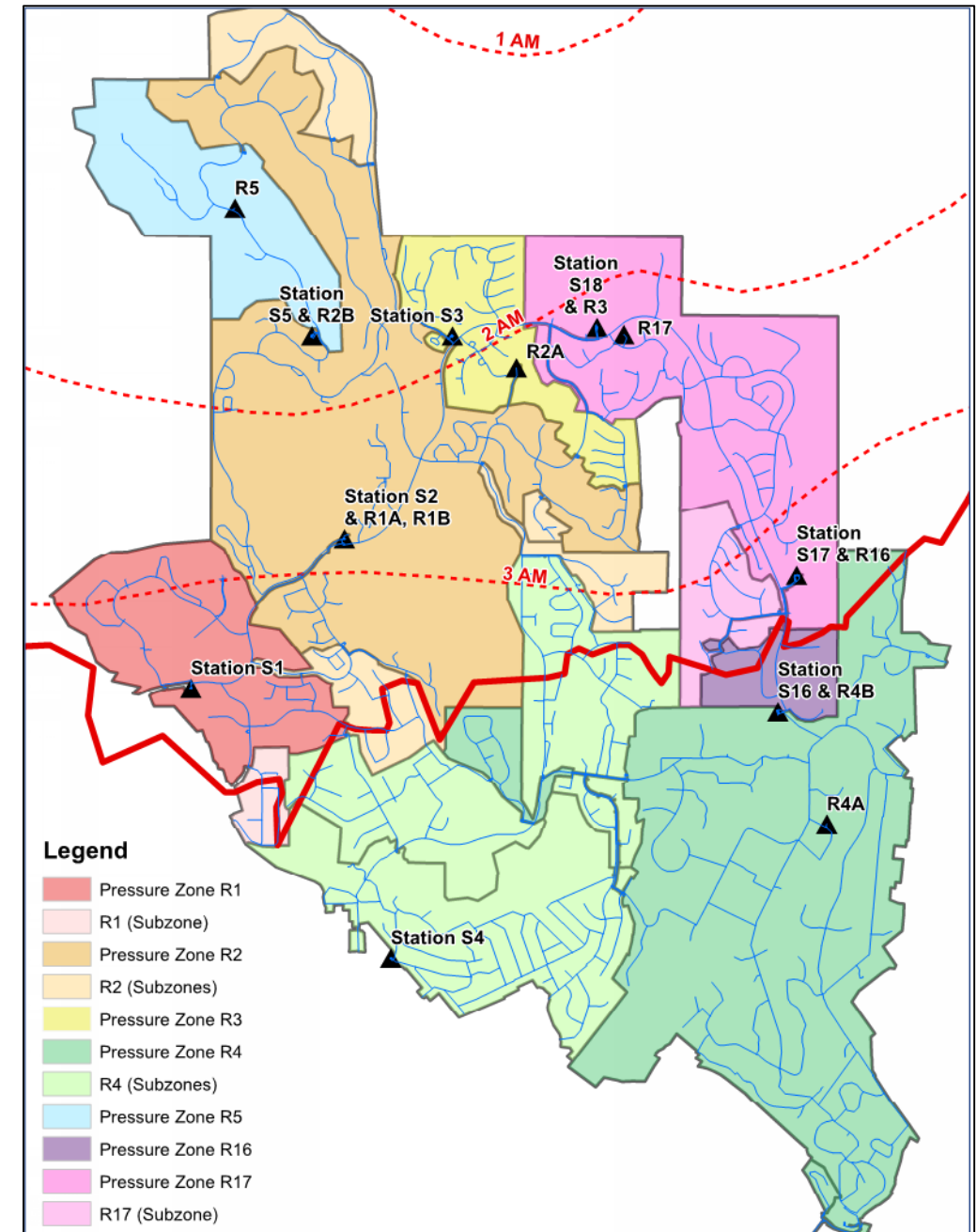


March 21, 2019

Emma Walton, Deputy Director of Engineering Resources
Joe Schiavone, Deputy Director of Local Operations

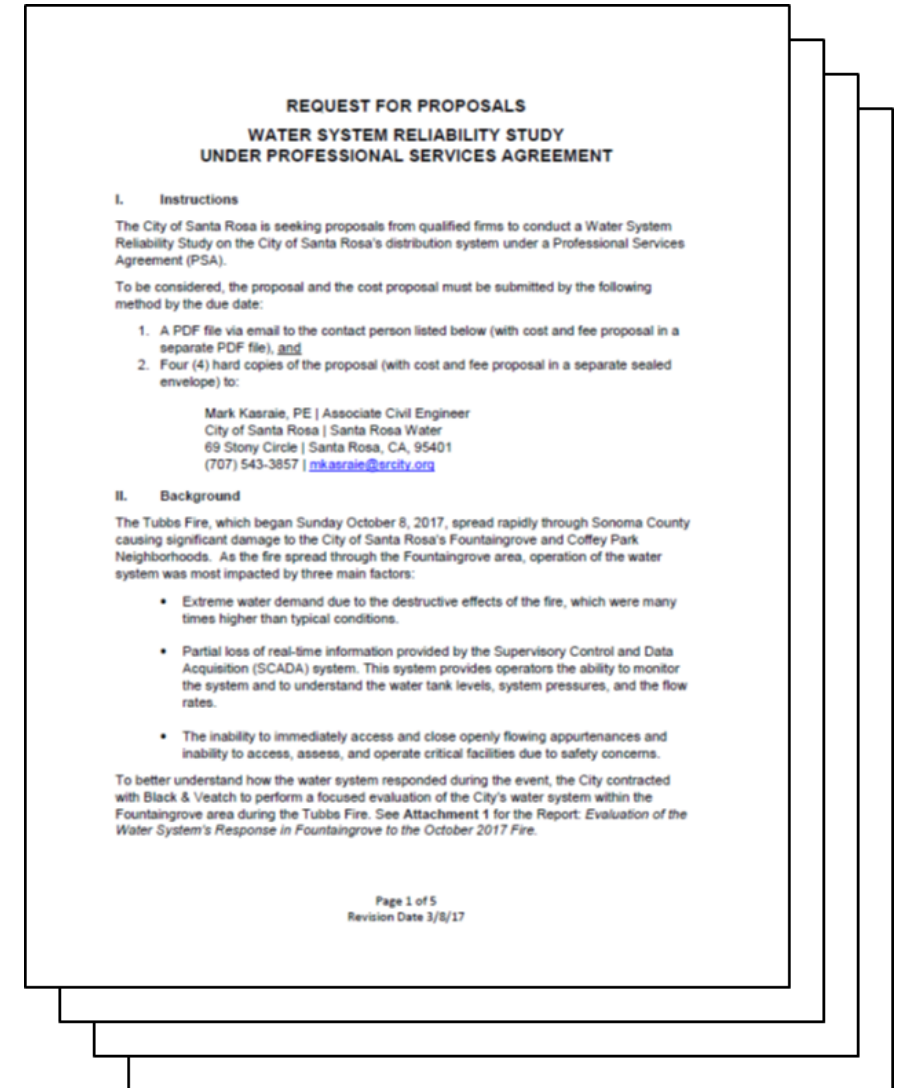
Background

- October 2017 Tubbs Fire
- Jan-Aug 2018 B&V Evaluation of **Fountaingrove** Water System
- October 2018 RFP Released for **City-wide** Evaluation



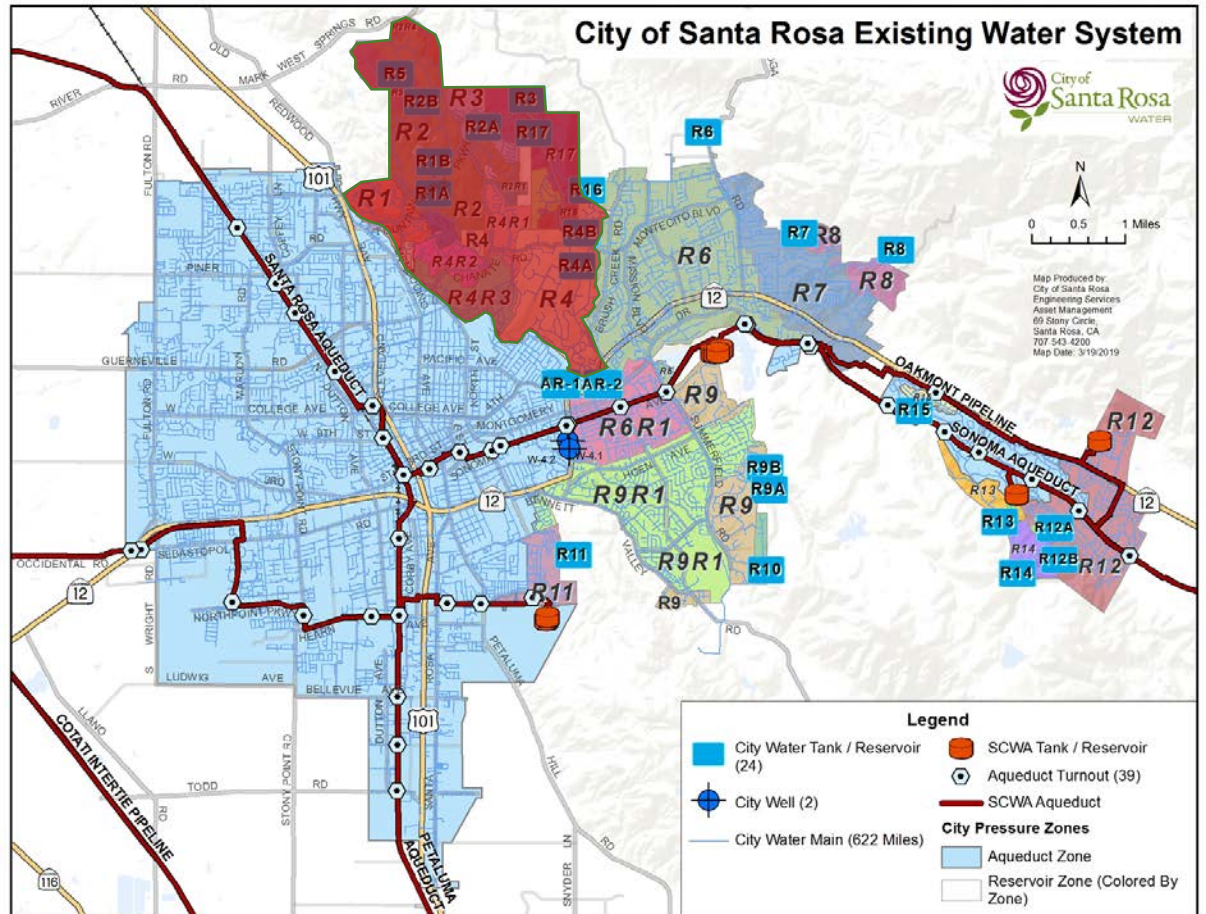
The RFP Process

- Advertised on October 30, 2018
- Professional Services Agreement
- Proposals submitted November 20, 2018
 - Two Proposals Received
- B&V Selected on December 17, 2018
- B&V Fee
 - Base \$277,760
 - Optional \$126,130
 - Total \$403,890



Base Services

- SCADA System Reliability & Redundancy
- Flow Control Opportunities
- Back-Up Power Generation
- System-Wide Fire Flow Evaluation & Recommendations
- System Reliability Opportunities
- Off-Line Storage
- Prioritized Recommendations and Costs
- Proctor Heights Evaluation (Proctor Tanks)

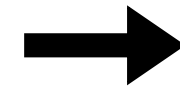


Optional Services

- Fire Department Coordination
- Redundant Communication Studies
- Coffey Park Investigation
- Fire Damage Probability
- Water Quality/Water Age Impact Evaluations
- Presentation to Governing Boards

Proctor Tanks History

- 1989 and 1994 Master Plans Identified need for Aqueduct Storage
- January 2004 Board Adopted MND and Authorized Project
- April 2006 Board Awarded Contract (Base Bid \$6,320,110)
- February 2008 Tanks brought Online (Final Cost \$6,750,113)

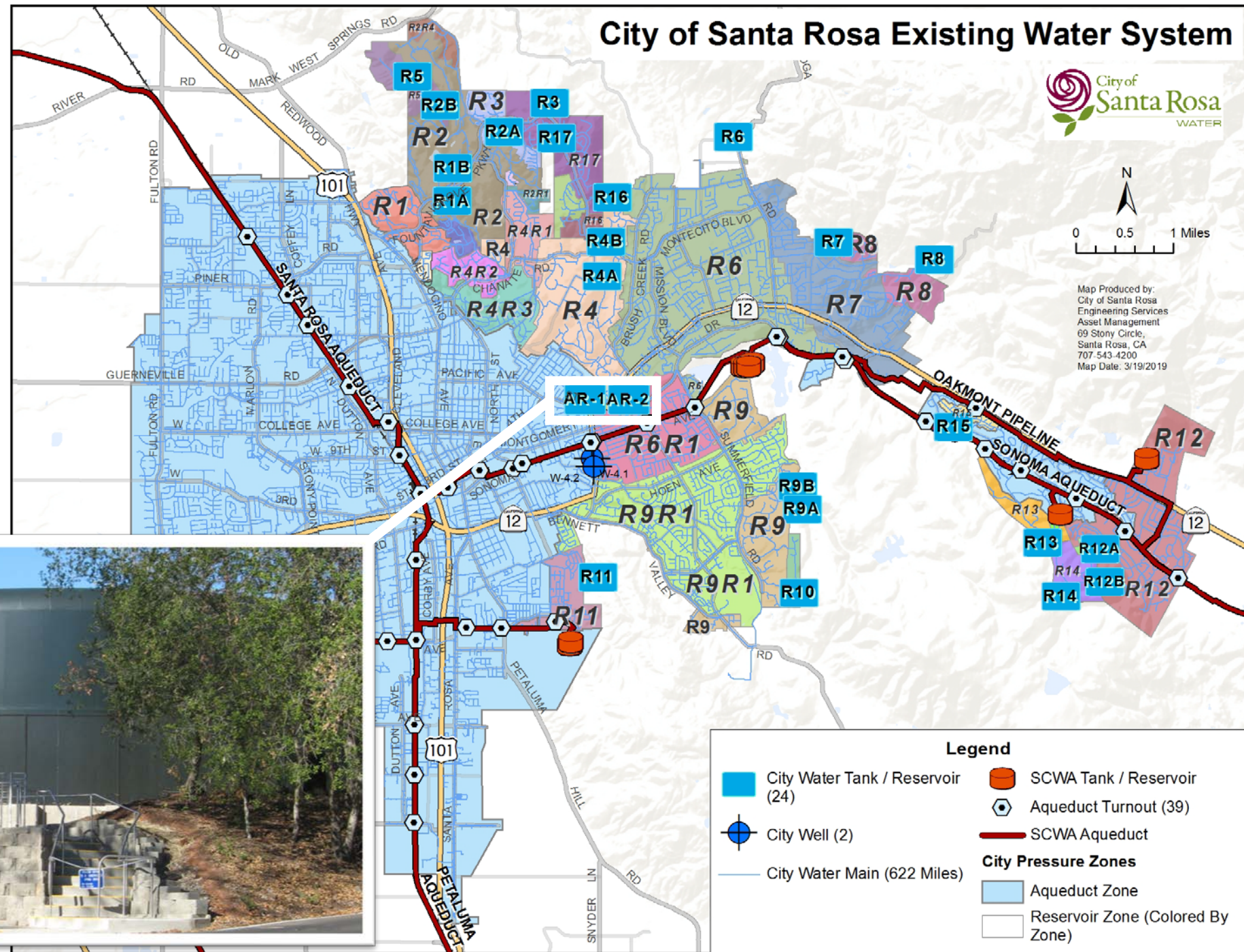


- October 2008 Tanks taken Offline due to Water Quality Concerns



Proctor Tanks

- 2.6 MG each
- Provide Drinking Water during Interruption of Aqueduct Supply

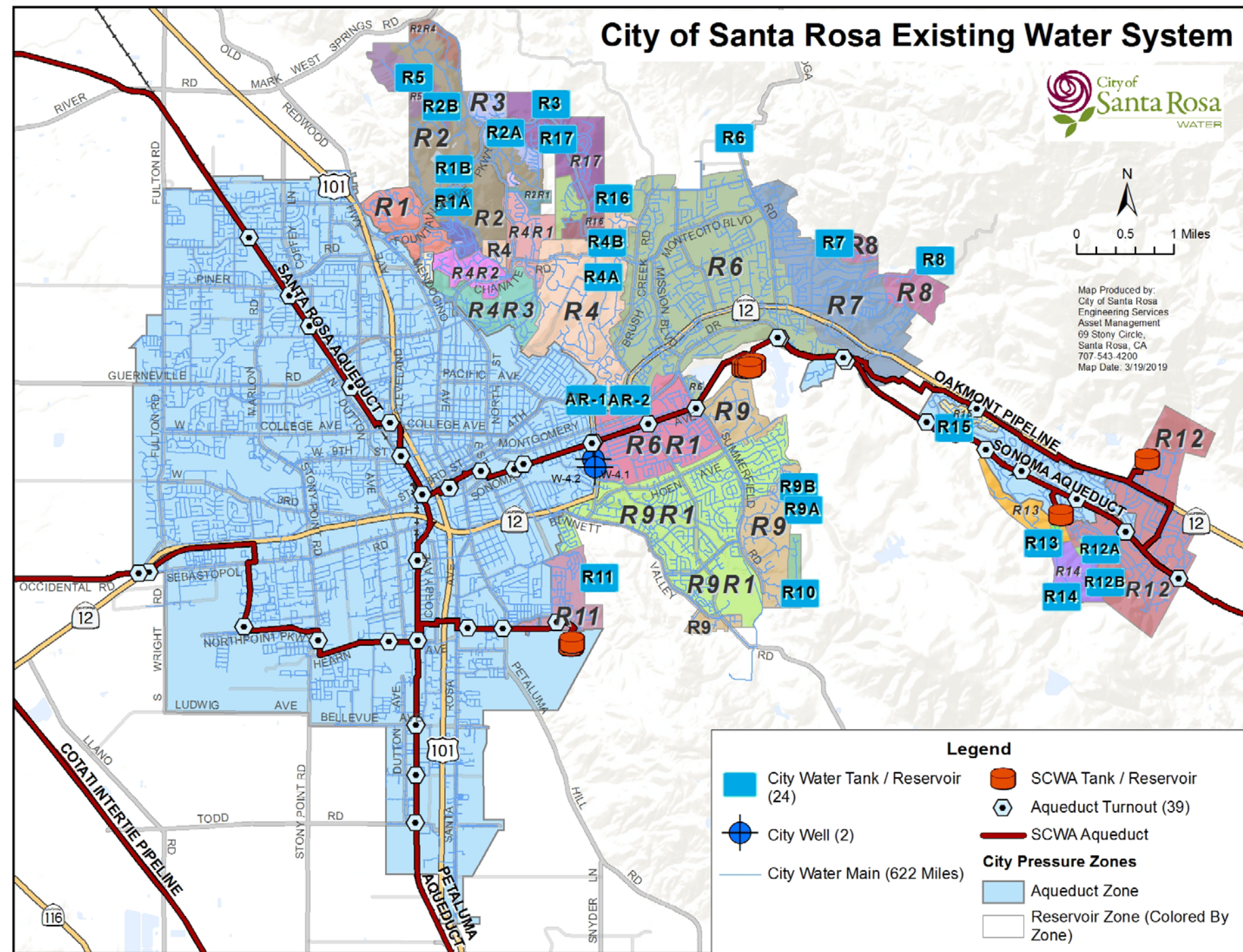


City Storage

- 24 Reservoirs
- 23.1 MG Hillside
- 5.2 MG Aqueduct

SCWA Storage

- 8 Reservoirs
- 61.5 MG =
24.6 MG for City's
Aqueduct Zone



Emergency Storage Needs – 2014 Master Plan

24.6 MG SCWA Storage
+ 8.8 MG City's Emergency Wells
= 33.4 MG Emergency Supply in Aqueduct Zone

32.0 MG Needed Currently (+1.4 MG Surplus)

36.5 MG Needed at Buildout (-3.1 MG Deficit)

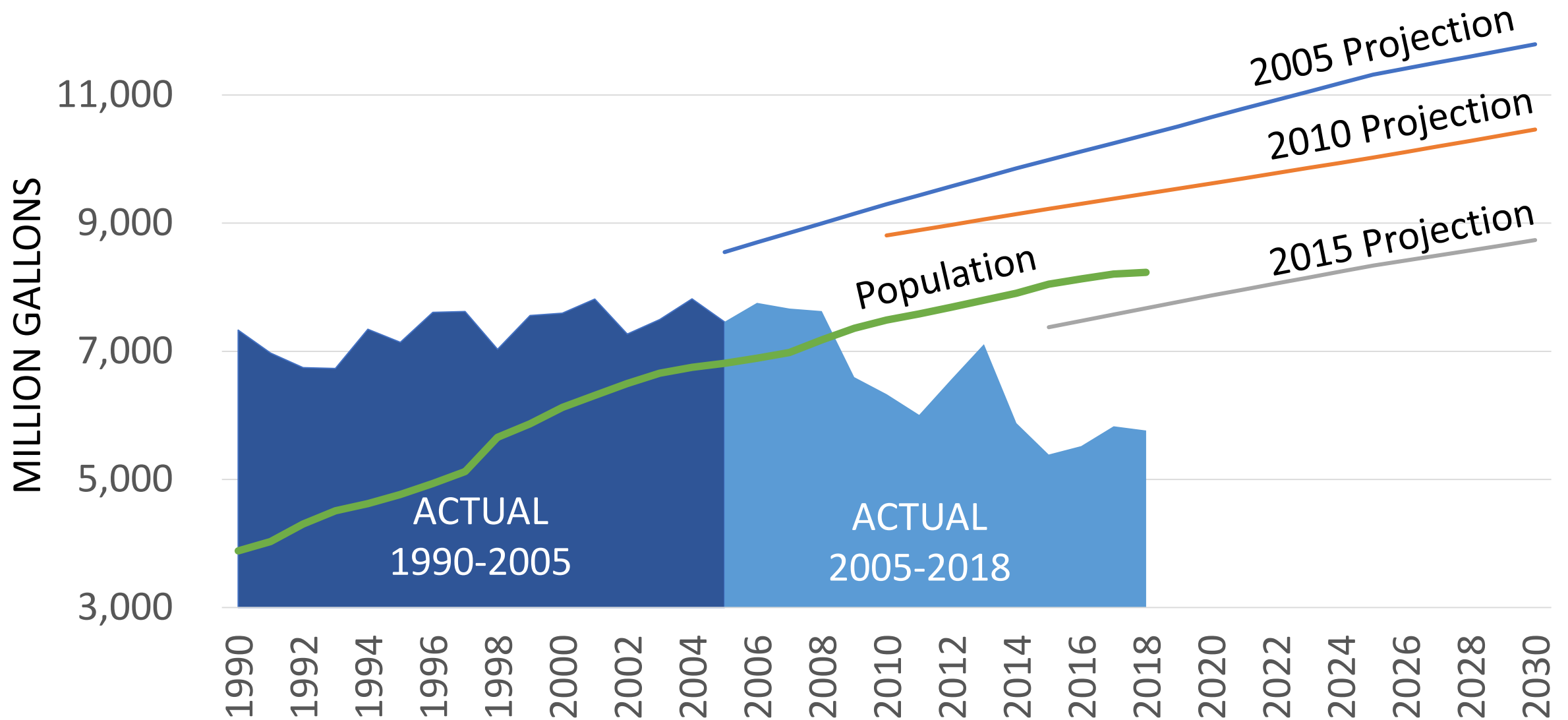
5.2 MG Proctor Tanks

Emergency Storage Needs – What Changed?

- 1989, 1994, 2006, 2014 Master Plan Assumptions
- Actual Water Demand and Projections Decreased

Water Usage

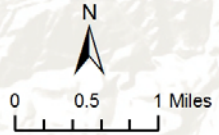
Projected Demand vs Actual Demand



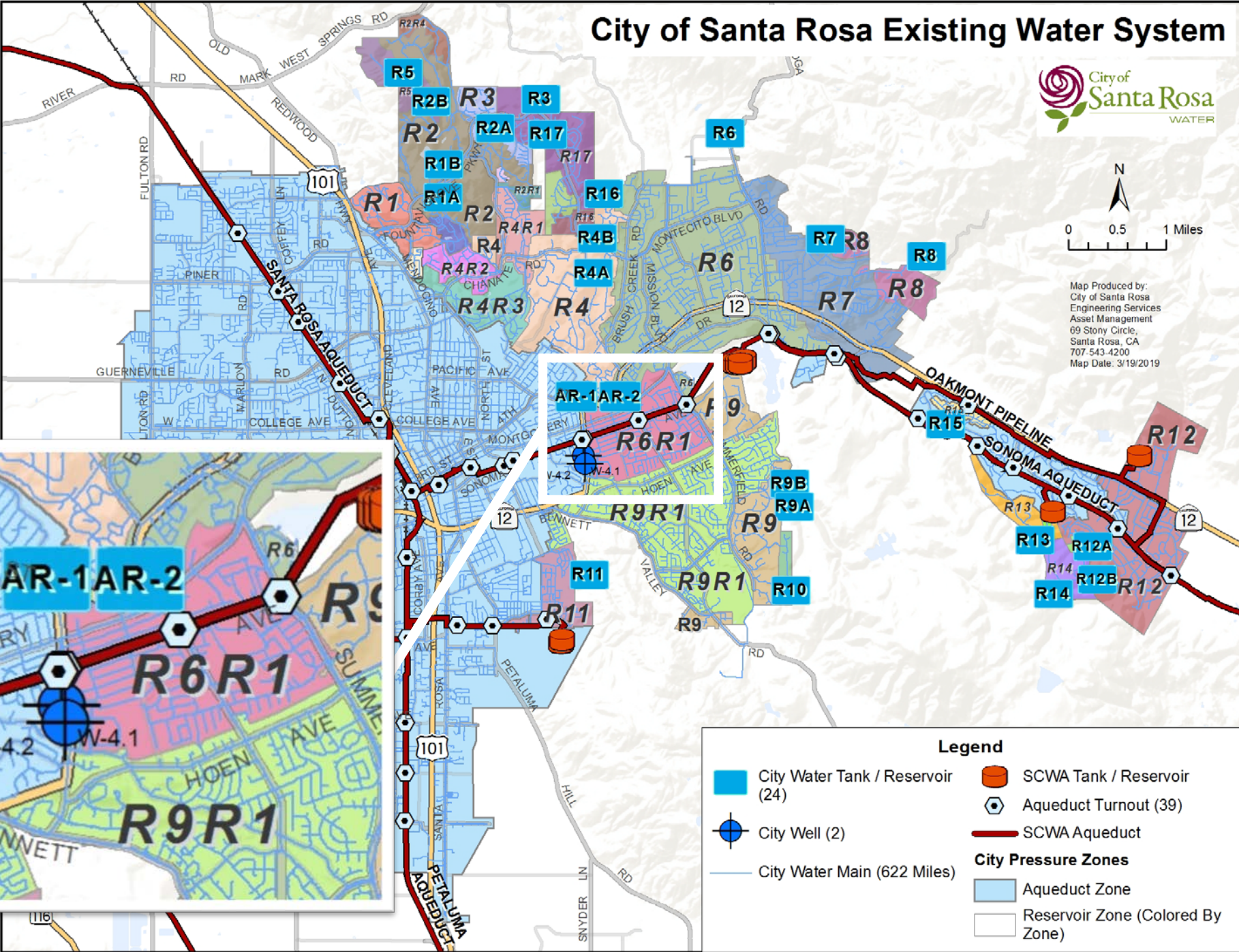
Emergency Storage Needs – What Changed?

- 1989, 1994, 2006, 2014 Master Plan Assumptions
- Actual Water Demand and Projections Decreased
- City Added a Pressure Zone (R6R1)

City of Santa Rosa Existing Water System



Map Produced by:
City of Santa Rosa
Engineering Services
Asset Management
69 Stony Circle,
Santa Rosa, CA
707-543-4200
Map Date: 3/19/2019



Legend

City Water Tank / Reservoir (24)

SCWA Tank / Reservoir

Aqueduct Turnout (39)

City Well (2)

SCWA Aqueduct

City Water Main (622 Miles)

City Pressure Zones

Aqueduct Zone

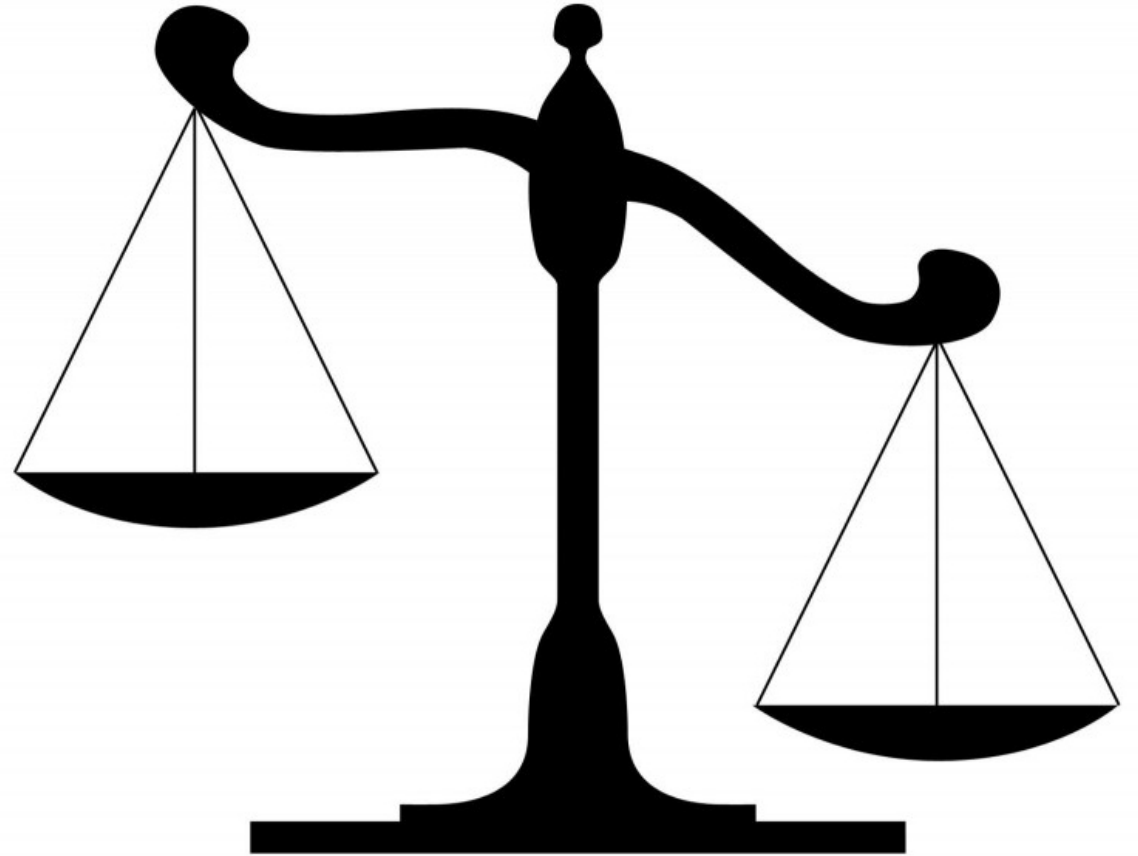
Reservoir Zone (Colored By Zone)

Emergency Storage Needs – What Changed?

- 1989, 1994, 2006, 2014 Master Plan Assumptions
- Actual Water Demand and Projections Decreased
- City Added a Pressure Zone
- City Developed additional Storage in Hillside Zones
- City Developed additional Groundwater Supply
- SCWA Developed additional Storage

A Balanced Approach

- Fire Flow
- Storage
- Water Quality
- Operational Efficiency
- Seismic Resiliency
- System Redundancy
- Groundwater Supply
- Regional Efforts



Recommendation

It is recommended by the Water Department that the Board of Public Utilities, by motion, approve a Professional Services Agreement with Black and Veatch to provide professional engineering services for the 2019 Water System Reliability Study in the amount not to exceed \$403,890.00.

