
Recycled Water Feasibility Study

Sacramento County Water Agency

WaterReuse

July 20th, 2017

Sacramento County Water Agency

Recycled Water Feasibility Study Presentation

Overview:

- Feasibility Study Overview
 - Purpose
 - Methodology
- Overview of Zone 40
 - Conjunctive use
- Option Description
- Preliminary Recommendations
- Recycled Water Benefits
- Next Steps
- Contact Information

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Recycled Water Feasibility Study Purpose:

To evaluate recycled water opportunities to augment water supplies for SCWA and present a recommended project.

- Wastewater from the Sacramento metropolitan area is collected and treated by Regional San.
- Regional San is in the process of upgrading from secondary to tertiary treatment and SCWA is planning to obtain more recycled water from Regional San to increase its existing use of recycled water.

The report describes the study area with water management needs, identifies opportunities, evaluates opportunities, and proposes a project with implementation steps.

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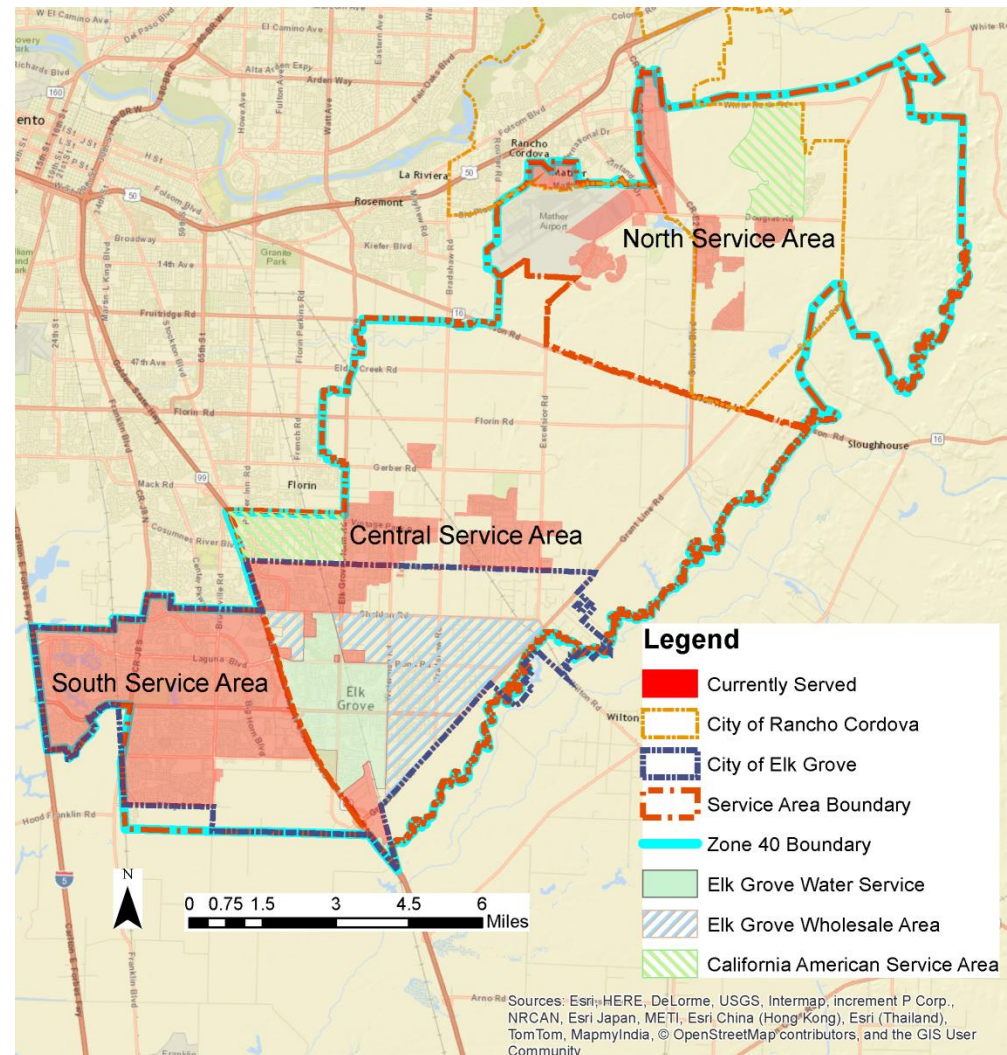
Recycled Water Feasibility Study Methodology:

- Overview of the Zone 40 setting and water supply portfolio
- Describe recycled water supply
- Options for recycled water use in Zone 40
 - Status Quo
 - Phase 1 and Phase 2
 - Expansion of existing program
 - “Purple Pipe” Option
 - In the river swap
 - Use existing FRWA intake to access recycled water
 - Indirect potable reuse
 - Aquifer storage and recovery
 - Direct potable reuse
 - Highly treated effluent directed to surface water treatment plant
- Evaluate alternatives and propose project

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Zone 40 Overview:

- Serves approximately 150,000 people
- 35,000 acre feet of water annually
- Conjunctive use program:
 - Surface Water
 - Recycled Water
 - Groundwater
 - Remediated Groundwater



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Zone 40 Overview Cont.:

Conjunctive Use Program

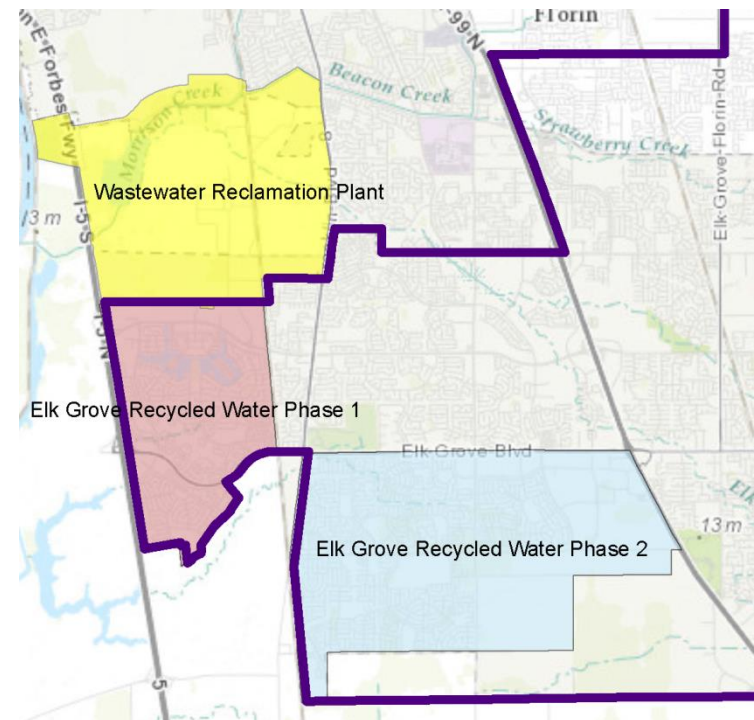
- Surface Water:
 - FRWA Intake
 - CVP Supplies
 - Fazio Contract
 - SMUD Assignment
 - Appropriative Surface Water Right
 - Expansion to NSA
- Groundwater:
 - An important resource to rely upon in dry years
 - Includes remediated groundwater from contaminated areas
- Recycled Water:
 - On next slide

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Zone 40 Overview Cont.:

- Recycled Water:
 - Currently delivered to the Phase 1 area
 - The Phase 2 area is in progress
 - Some facilities in ground and some being planned
 - Regional San's Wastewater Treatment Plant is in close proximity to Zone 40

Recycled Water in Zone 40

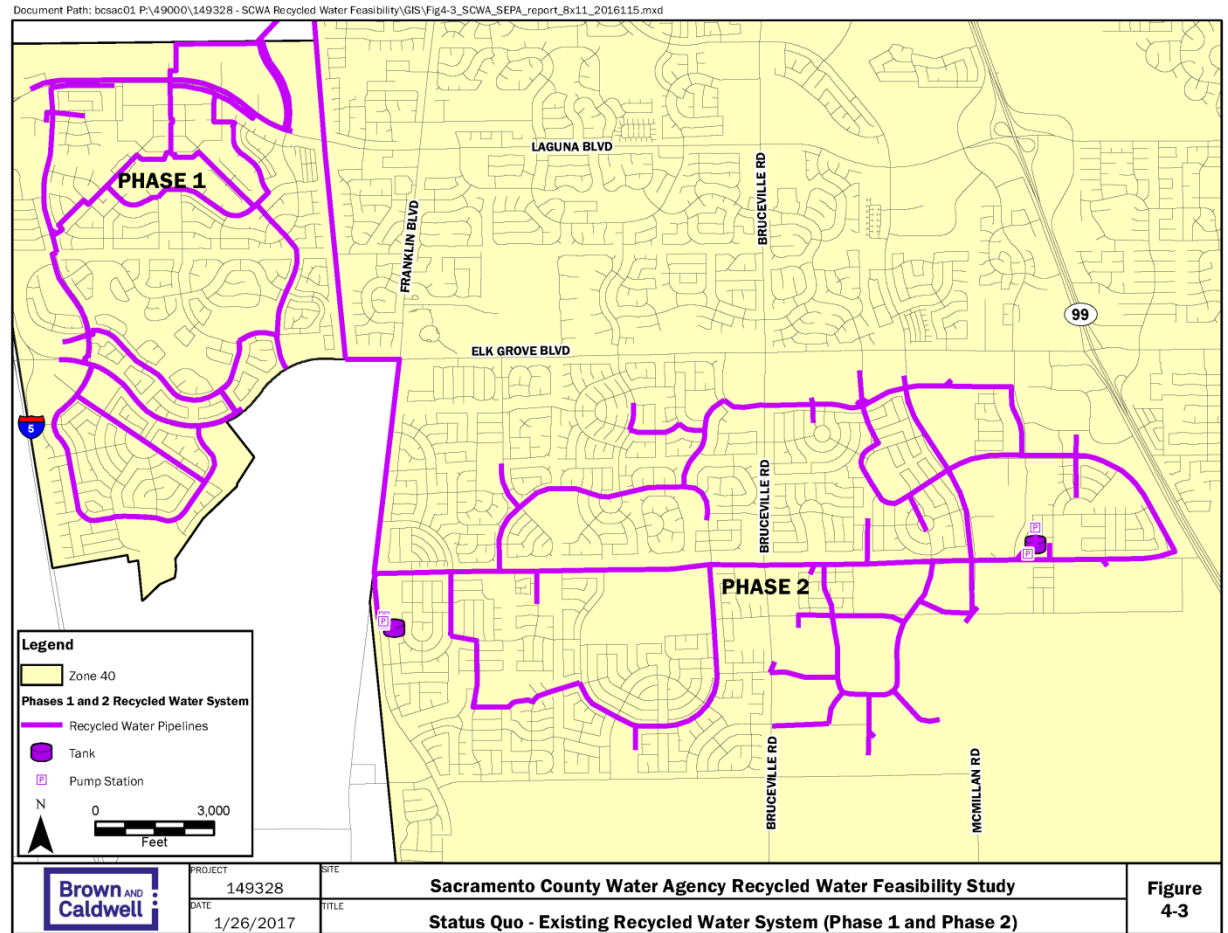


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Option Description:

Status Quo

- Continue with Phase 1 and Phase 2 projects

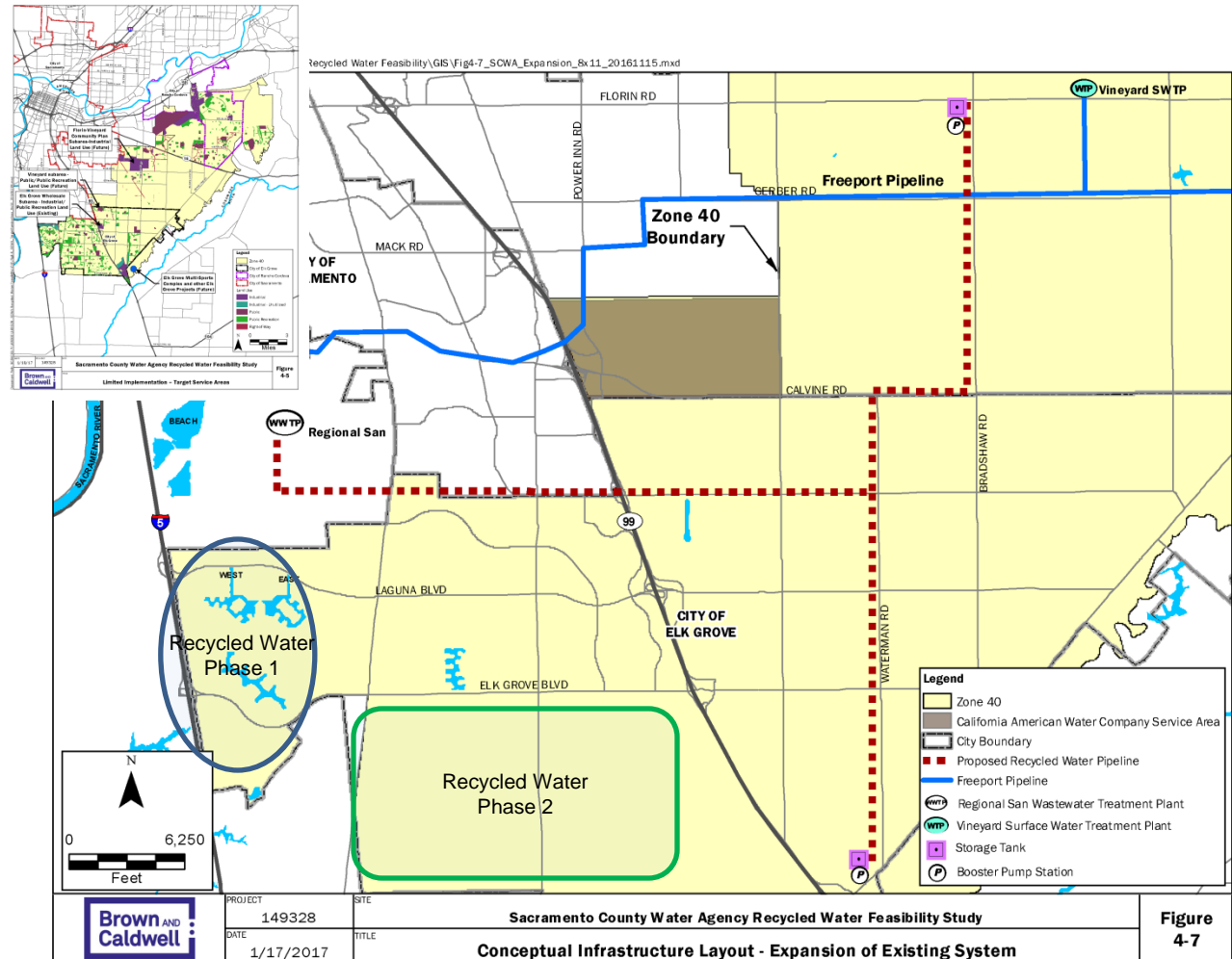


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Option Description:

Expansion of Existing System

- “Purple Pipe” Option
- Transmission mains to deliver recycled water for approved uses
- Parcel map shows possible use locations

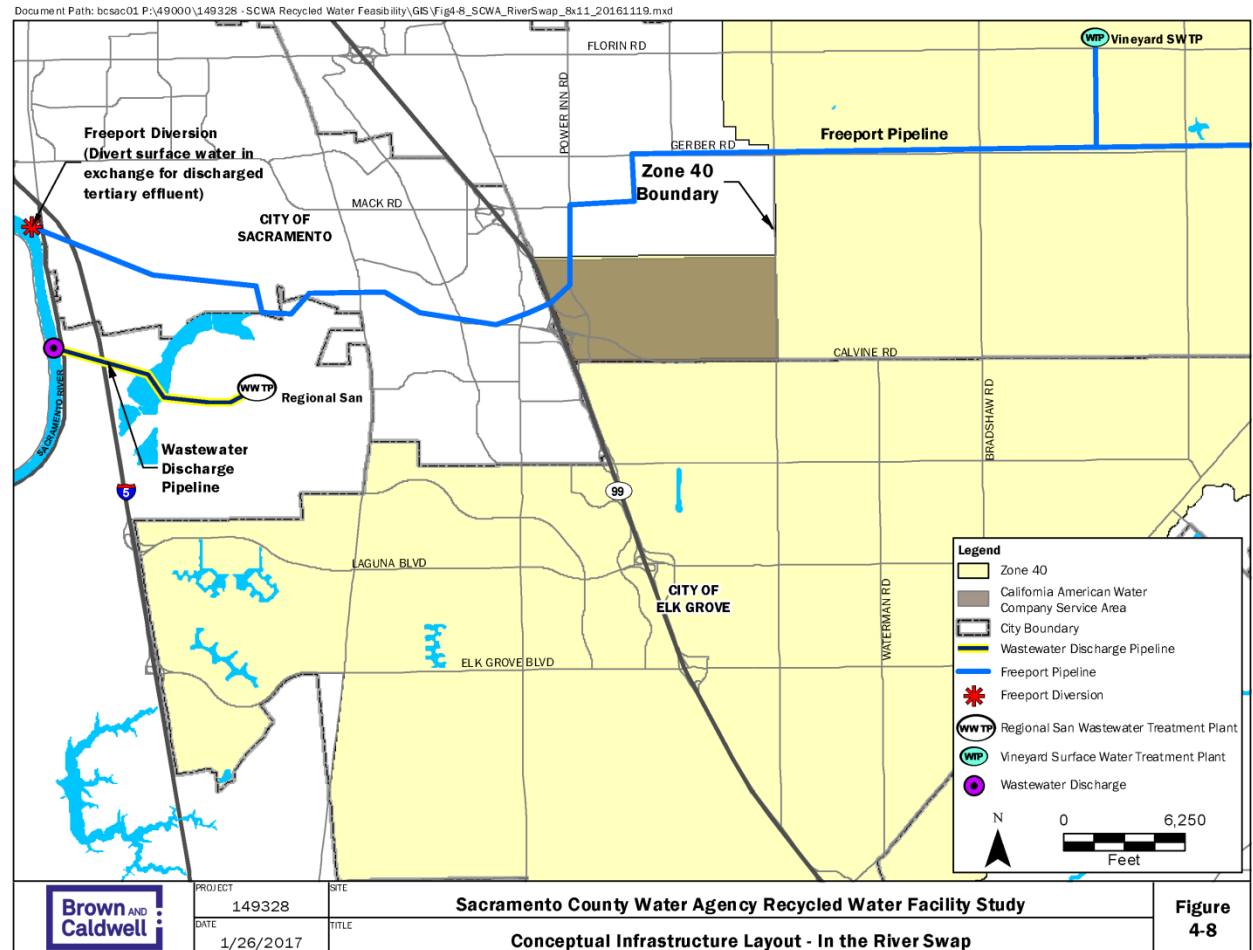


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Option Description:

In the river swap

- Not classic use of recycled water
- Drought resistant source of surface water
- No expansion of FRWA



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Option Description:

Indirect Potable Reuse:

- Aquifer injection

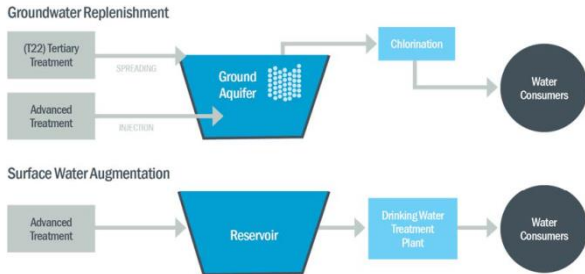


Figure 4-9. IPR alternatives include groundwater replenishment or surface water augmentation.

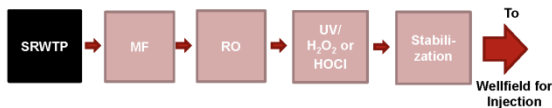
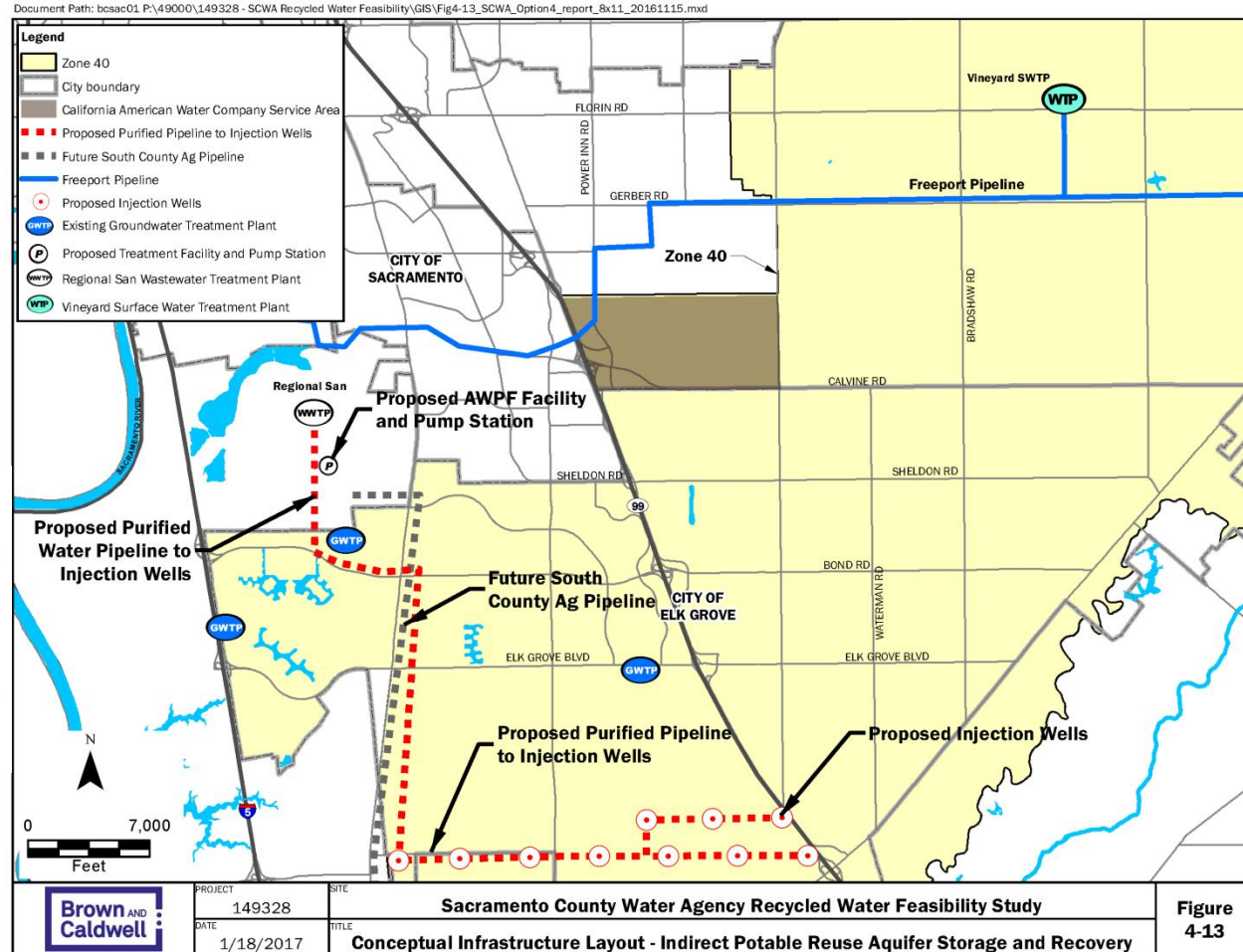


Figure 4-11. Process flow diagram for treatment train in IPR conceptual scenario



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Option Description:

Direct Potable Reuse:

- Through Vineyard Surface Water Treatment Plant
- Two alignments

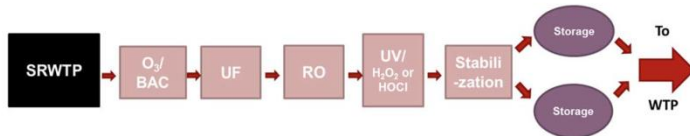
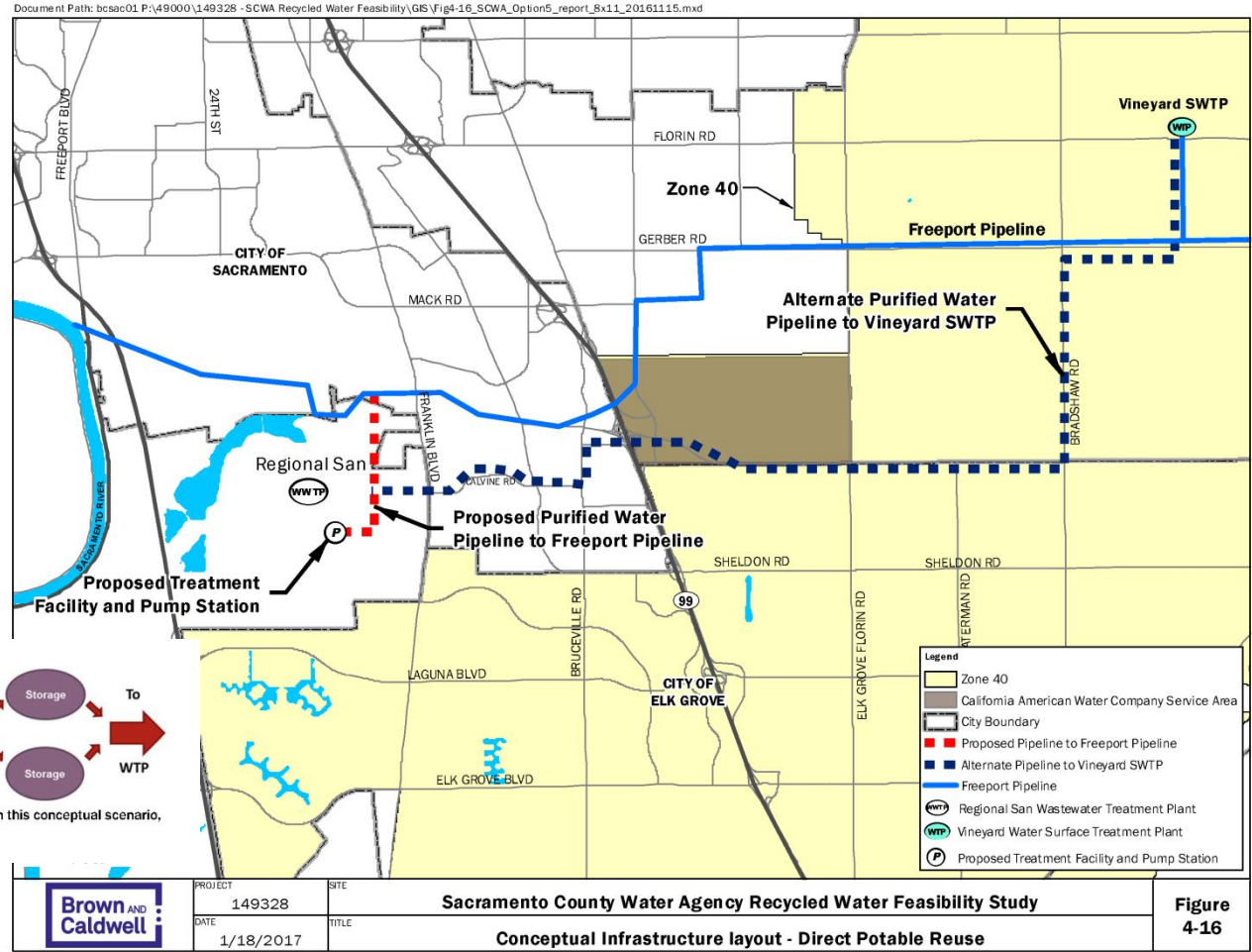


Figure 4-14. Process flow diagram for a possible future DPR treatment train used in this conceptual scenario, including an engineered storage buffer

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Preliminary (i.e. Draft) Recommendation:

– Status Quo

- Continue Operation and planning for Phase 1 and 2

– Expansion of Recycled Water System

- Limited expansion option

– In the River Swap

– Direct Potable Reuse

- In future once regulations are developed

– South County Ag

- Track and participate as appropriate

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Recycled Water Benefits:

- Expansion of current recycled water system
 - Allows irrigation with recycled water
 - No additional treatment
 - Lowers max day potable water requirement
- In River Swap/Direct Potable Reuse
 - Regional San produces recycled water independent of drought
 - Potential for SCWA to realize benefit of the Surface Water Treatment Plant in more dry years
 - Less risk of curtailment than current surface water rights
 - Less dependence on groundwater
- South County Ag Project
 - Track and participate as appropriate

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Next Steps

- Staff recommendation has been developed
- Review from funding agencies
 - State DWR
 - Water Recycling Funding Program
 - Bureau of Reclamation
 - Water Smart
 - Title XVI Water Reclamation and Reuse
- Any other outreach
- SCWA Board of Directors

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