

San Lucas County Water District *Community Meeting*



SAFER Program – August 28, 2024

Welcome

Johannus Reijnders, Water Boards

Randy Marx, P.E., CSU Sacramento

Brian McCauley, P.E., MKN & Associates.

Douglas Leal & Erin Vincent, RCAC



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Meeting Agenda

- **Welcome & Introductions**
- **Project Background**
- **Engineering Report**
- **Next Steps**
- **Q & A**



Q&A Team

- *State Water Board Financial:*
 - David Chan
 - Aparjeet Rangi
- *State Water Board Engineering:*
 - David Zensius
- *Central Coast Water Board:*
 - Thea Tryon
- *Technical Assistance Providers*
 - Randy Marx, P.E.
 - Brian McCauley, P.E.

To Participate

- Please hold off on questions or comments until we reach the Q&A section.
- You may fill out a comment sheet during the presentation or raise your hand later.
- Everyone will have the chance to speak during public comment.
- There will also be an opportunity to provide written feedback for 14 days. Instructions will be provided at the end of this meeting.

Rural Community Assistance Corp (RCAC)

- **Background:**

- Specializing in community outreach and technical assistance

- Mission Statement:

“RCAC partners with underserved rural and Indigenous communities to achieve their vision and wellbeing through technical assistance, training, financial resources and advocacy”



Rural Community Assistance Corp (RCAC) (Continued)

- **Community Outreach Team:**

- Douglas Leal
- Erin Vincent
- Jerry Tinoco
- Victor Coronado
- Edgar Ortusiastigue

- **Next Steps**

- Work with San Lucas residents in running their own water system
- Monthly on-site visits to the community

Project Background

*Randy Marx, P.E.
Office of Water Programs at
Sacramento State*



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Background: Nitrates

Source:

- Agriculture.
- Fertilizers, storm water run-off, septic systems.

Infant Health Risk? **YES:**

- High levels affect ability of infant's blood to carry oxygen.

General Health Risk? **YES:**

- “Acute” contaminants can cause health effects in some adults within just hours or days of exposure.

Background: Iron & Manganese

Source:

- Leaching from natural deposits.
- Lack of sufficient water treatment plant.

Health Concerns?

- Potential health impacts from manganese.

Aesthetic Concerns? **YES:**

- Color, odor, and taste of water is affected.
- Can stain or clog sprinklers, faucets, appliances, etc.

Background: Community Feedback



Engineering Report

*Brian McCauley, P.E.
MKN & Associates, Inc.*



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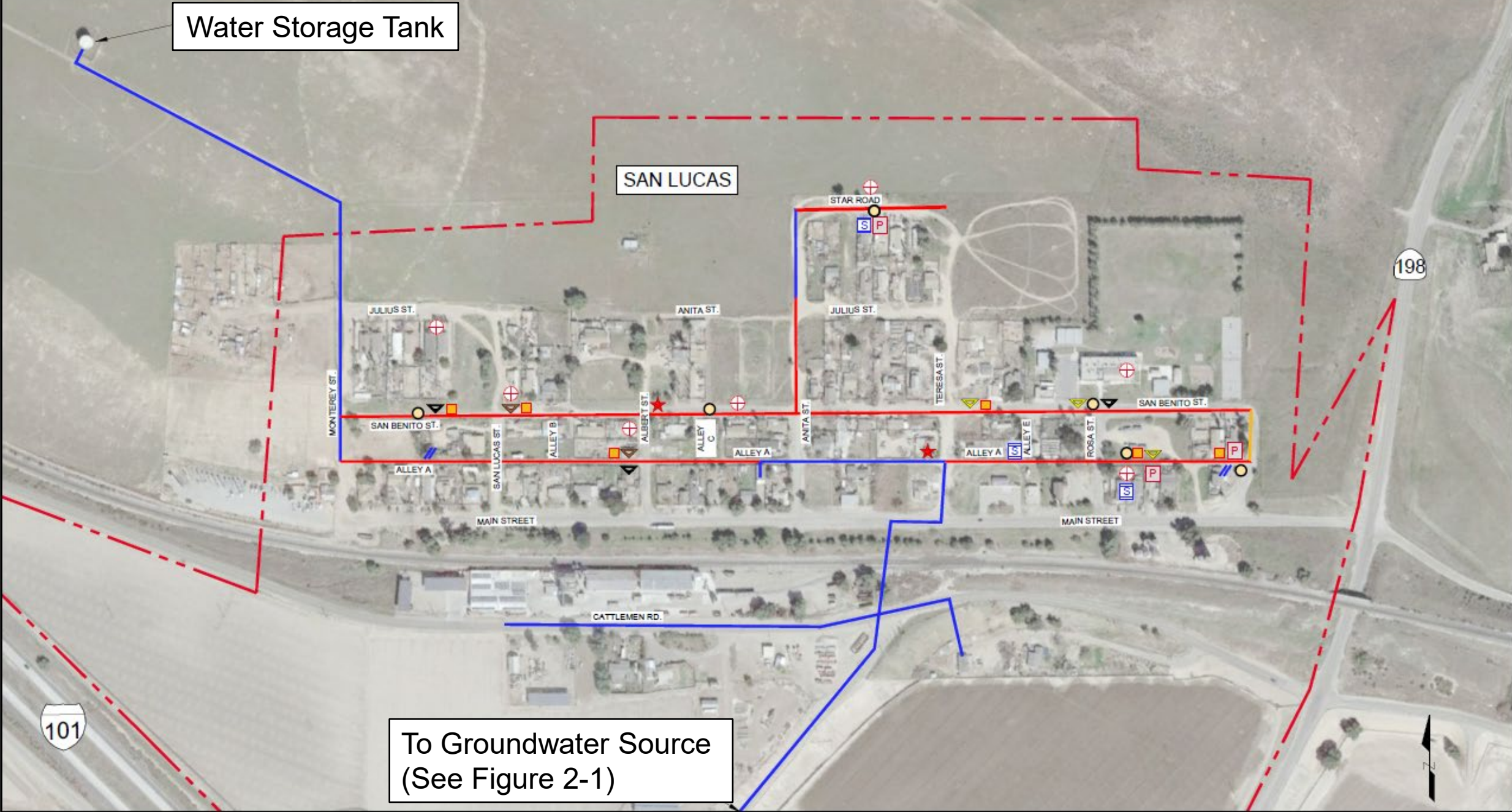
Water System Issues

Water Quality

- Nitrate
- Salinity
- Iron
- Manganese
- Uranium

Community Feedback

- Aesthetics (Color & Odor)
- Skin Irritation
- Appliance Failures
- Pipe Breaks
- Low or Variable Pressure
- Sediment Deposits



Possible Solutions

- **Alternative 1**

- Intertie with King City

- **Alternative 2**

- Wellhead Treatment (Ion Exchange)

- **Alternative 3**

- Wellhead Treatment (Reverse Osmosis)

- **Distribution System Rehab**

- Included in all Alternatives

1 – Intertie with King City

Construction

- Install 8-mile Pipeline to King City
- Install Booster Pump Station and Chlorination Facility



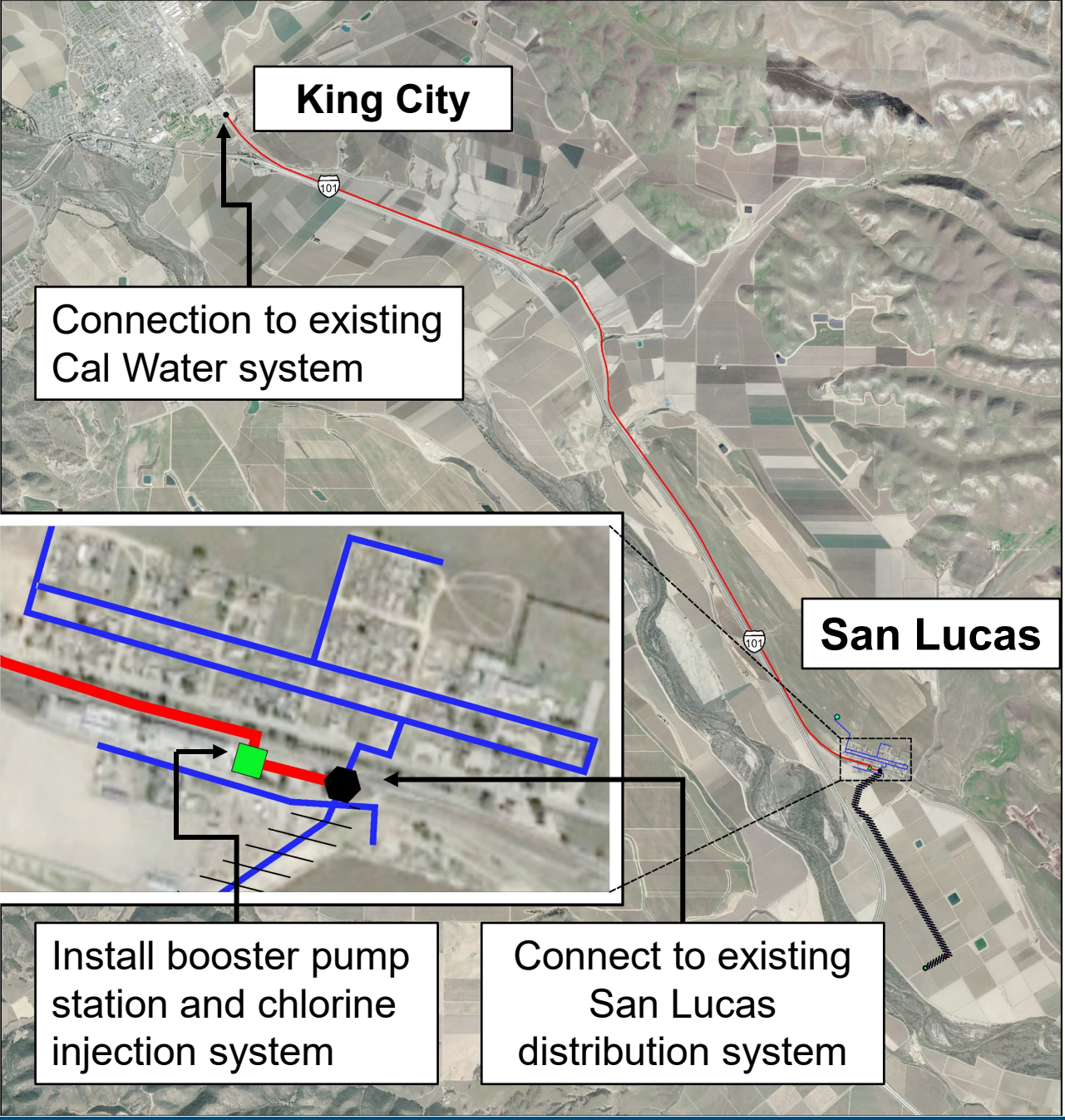
1 – Intertie with King City

Advantages

- Supply Redundancy – Multiple Wells
- Low Operation & Maintenance (O&M)






Disadvantages

- High Construction Cost
- Permitting Challenges
- Large Construction Impact and Duration
- Water Quality/Age Concerns
- Single Point of Connection to Water Supply



1 – Intertie with King City

Legend:

-  (N) 8"Ø C900 PVC
-  (E) Water Distribution System
-  (E) Water Storage Tank
-  (N) Point Of Connection
-  (N) Booster Pump Station And Chlorine Injection



2 – Wellhead Treatment (Ion Exchange)



Construction

- Install Ion Exchange Treatment System
- Replace Iron/Manganese Treatment System
- Install Waste Disposal Infrastructure

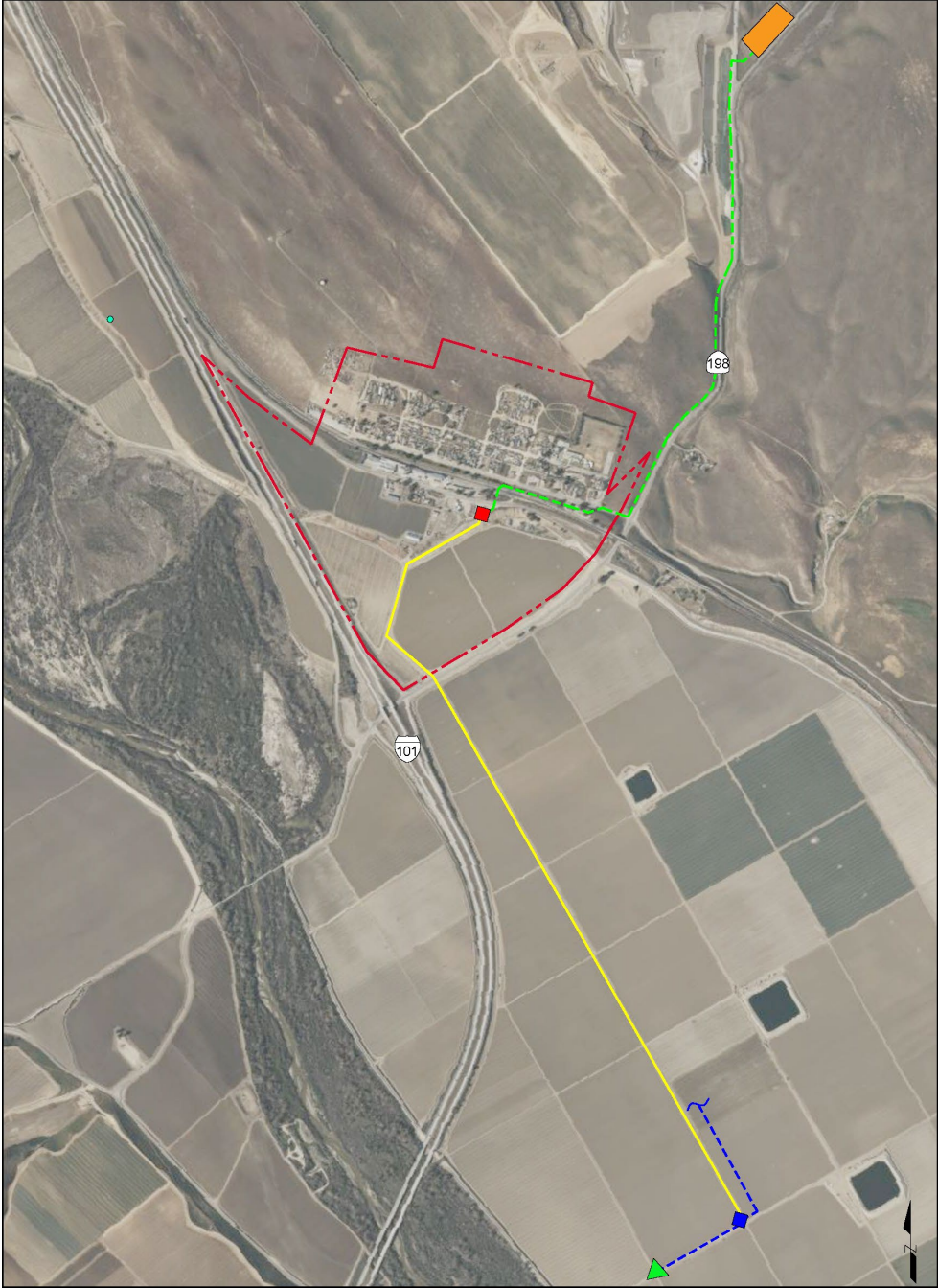
2 – Wellhead Treatment (Ion Exchange)

Advantages

- Water Quality Improvement
- Simple Operation




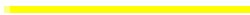




Disadvantages

- Less Efficient and Effective than Alternative 3
- Difficult Handling of Liquid Waste Byproduct



2 – Wellhead Treatment (Ion Exchange)

Legend:

-  Service Boundary
-  (E) 4"Ø Sewer Force Main
-  (E) 8"Ø Pvc Water Main
-  (N) Proposed 4"Ø Force Main For Liquid Byproduct Disposal
-  (E) Lift Station
-  (E) Wastewater Treatment Plant
-  (E) Water Treatment Facility
-  (E) Well

3 – Wellhead Treatment (Reverse Osmosis)



Construction

- Install Reverse Osmosis Treatment System
- Replace Iron/Manganese Treatment System
- Install Waste Disposal Infrastructure

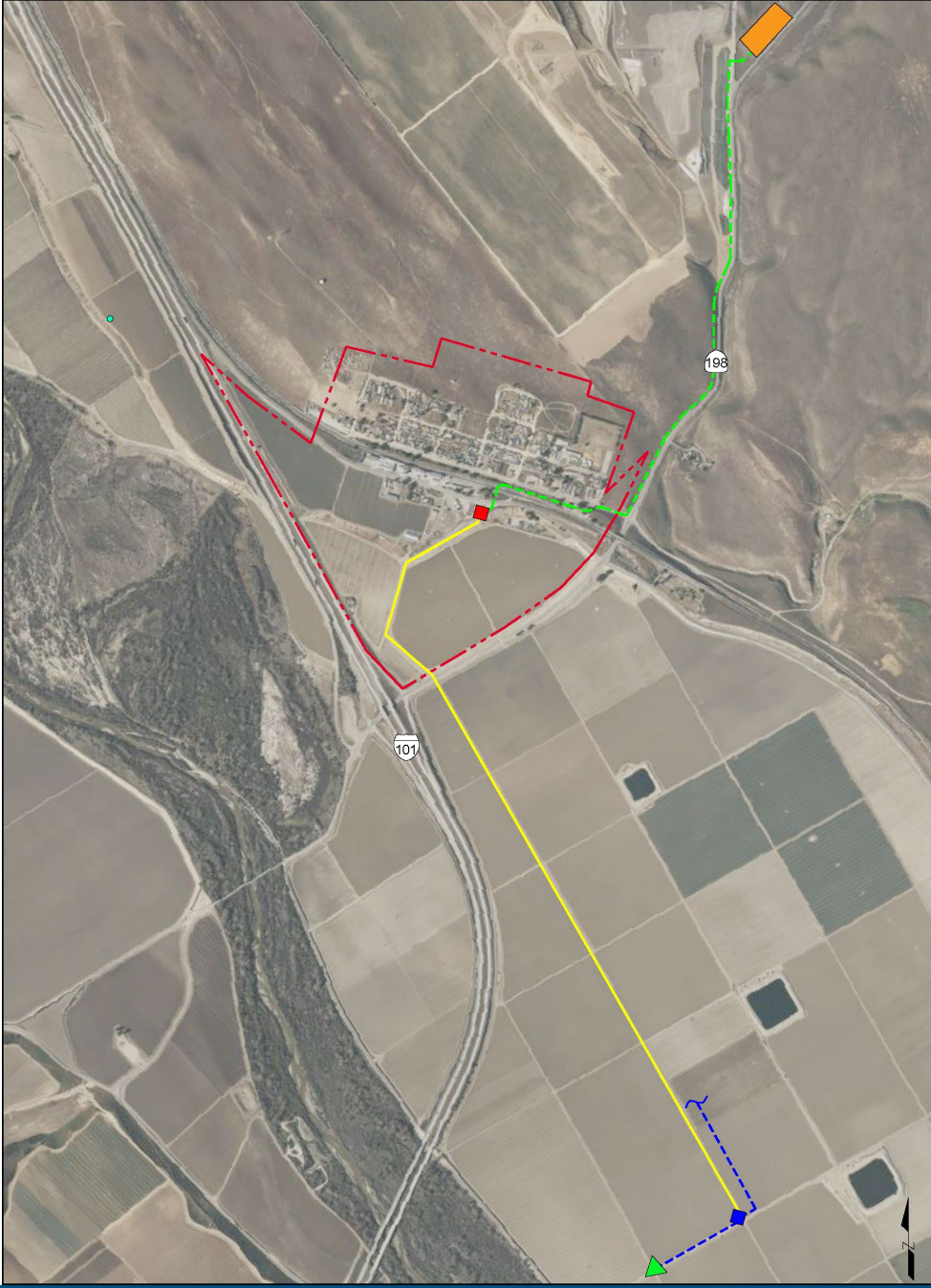
3 – Wellhead Treatment (Reverse Osmosis)

Advantages

- Water Quality Improvement
- More Efficient and Effective than Alternative 2
- Easier Disposal of Liquid Waste Byproduct
- Lower Construction Cost than Alternative 1









Disadvantages

- Somewhat Complex Operation
- Handling of Liquid Waste Byproduct



3 – Wellhead Treatment (Reverse Osmosis)

Legend:

-  Service Boundary
-  (E) 4"Ø Sewer Force Main
-  (E) 8"Ø Pvc Water Main
-  (N) Proposed 4"Ø Force Main For Liquid Byproduct Disposal
-  (E) Lift Station
-  (E) Wastewater Treatment Plant
-  (E) Water Treatment Facility
-  (E) Well

Additional Alternatives & Considerations

- **Alternative 4**

- Wellhead Treatment with New Well Drilling

- **Water System Governance**

- **A:** San Lucas County Water District (SLCWD) Ownership
 - **B:** Consolidation with Cal Water, King City

Additional Alternatives & Considerations (Continued)



Alternative 4

- Only used if agreement for land and well use cannot be reached
- Drill new well
- Install treatment per Alternative 2 or 3

Governance Considerations

Sub-Alternative A

SLCWD continues to own and operate water system

- Local and familiar management group
- Slightly lower water rates
- Contract operator

Sub-Alternative B

Cal Water owns and operates

- Large entity with significant resources
- Experienced internal operators
- Longer schedule and cost to drill another well (2 wells total)
- Water and Wastewater service provided by two different water system groups

Evaluation Criteria

- Improved Water Quality
- Capital Improvement Costs
- Operations and Maintenance Costs
- Operational Complexity
- Construction Impact
- Timing

Table 5-1: Evaluation Matrix

Criteria	Weight (%)	Scores		
		Alternative No. 1 - Intertie with King City	Alternative No. 2 – Wellhead Treatment - Manganese Dioxide Filtration and Ion Exchange	Alternative No. 3 – Wellhead Treatment - Manganese Dioxide Filtration and Reverse Osmosis
Improved Water Quality	35%	5	4	5
Capital Improvement Cost	25%	1	5	4
O&M Cost	10%	4	2	3
Operational Complexity	10%	4	2	3
Construction Impact	10%	1	3	3
Timing	10%	1	3	3
Weighted Totals	100%	3.0	3.7	4.0

Estimated Costs of Alternatives

Alternative	Monthly Consumption Charges per Service ¹	Monthly O&M Costs per Service	Total Capital Costs ²
Alt. 1 - Intertie with King City	\$100 - \$182	\$20 - \$42	\$23,548,000 - \$27,807,000
Alt. 2 - Wellhead Treatment (Ion Exchange)	\$100 - \$182	\$120 - \$143	\$7,753,000 - \$12,036,000
Alt. 3 - Wellhead Treatment (Reverse Osmosis)	\$100 - \$182	\$112 - \$135	\$8,654,000 - \$12,937,000

(1) Consumption charges are estimated water use charges based on typical water use and billing rates.

(2) Total Capital Costs shown do not reflect potential reduction of capital costs due to financial assistance through grant funding and/or contributions from Mission Ranches and the Naraghi Family to address nitrate pollution. Grant funding from the State Water Board may be eligible for up to \$80,000 per connection (currently 97 connections estimated). Unfunded costs will need to be paid for through other sources including a potential loan repaid through increased water rates over time.

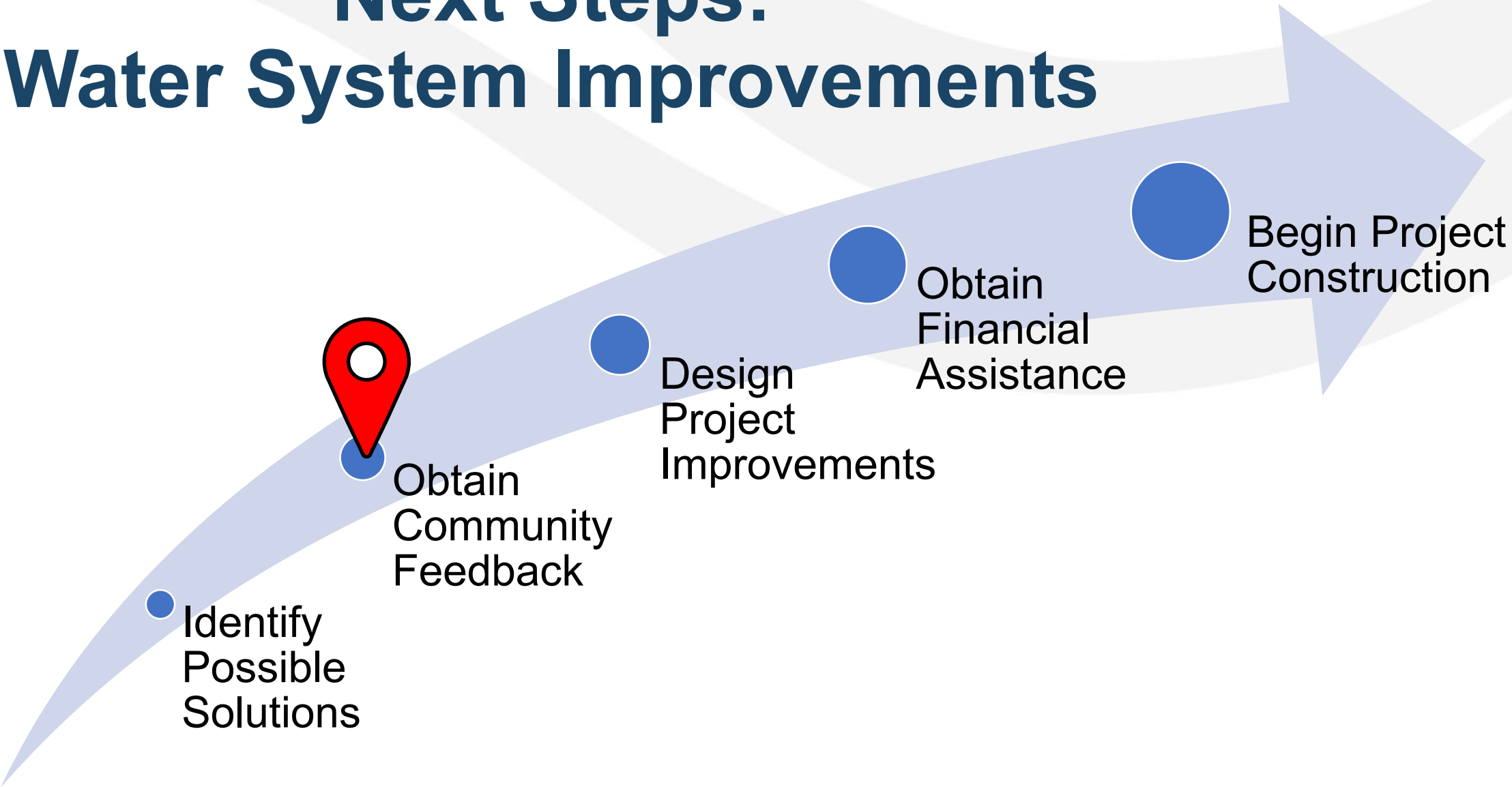
Next Steps

*Randy Marx, P.E.
Office of Water Programs at
Sacramento State*



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Next Steps: Water System Improvements



Q & A

*Johannus Reijnders
State Water Boards*



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Ways To Participate

- Speak your comment:
 - Raise your hand and we will come by with a microphone
- Fill out a comment sheet:
 - Raise your hand and one of us will read the comment for you
 - Or leave your comment sheet behind for us to collect
- Send a comment after this meeting for the next 14 days (until September 12)
 - Follow this link to submit a comment:
bit.ly/SanLucasWaterBoards

How to Submit Written Feedback

- Deadline: **September 12, 2024**
- Drop off a **comment card** at the San Lucas County Water District Office.
 - Take one home with you today.
 - Take one from San Lucas County Water District Office (ask for Antonio Ramirez)
- Email: [**OPP-SAFER@Waterboards.ca.gov**](mailto:OPP-SAFER@Waterboards.ca.gov)
- Online Form: [**bit.ly/SanLucasWaterBoards**](https://bit.ly/SanLucasWaterBoards)

