

San Lucas Nitrate Feasibility Study Peer Review

Background

The draft **San Lucas Nitrate Feasibility Study Peer Review** evaluates solutions proposed by Mission Ranches Company, LLC and the Naraghi Family (Responsible Parties) who are required to remedy the **nitrate** water quality concerns affecting the San Lucas community serviced by the San Lucas County Water District (Water District).

The State Water Resources Control Board is funding a team of technical assistance providers to develop and evaluate options to improve drinking water quality in the community, including the development of this San Lucas Nitrate Feasibility Study Peer Review document and a San Lucas Water System Improvements Engineering Report (summarized in separate Fact Sheet).

Potential Water System Improvements

In the peer review, the technical assistance provider comments on the “Alternatives” (solutions) proposed by the Responsible Parties and also provides a list of “Recommendations” for next steps that should all be taken.

Responsible Parties’ Proposed Alternatives:

Alternative 1 – Transmission Line: Modified “dilution tank” system that blends contaminated water with clean water when nitrate level spikes are detected.

KEY TAKEAWAY: NOT FEASIBLE. DO NOT INVESTIGATE FURTHER.

Alternative 2 – Ion Exchange: Modified “wellhead treatment” system that removes contaminants from groundwater when nitrate level spikes are detected.

KEY TAKEAWAY: LIKELY INEFFECTIVE AS PROPOSED. INVESTIGATE FURTHER.

Technical Assistance Provider Recommendations for Next Steps:

Recommendation I – Evaluate Feasibility of Biological Denitrification Treatment: Solution is highly efficient, low waste, and low maintenance; but may not be feasible for the Water District to manage due to its complexity in operating such a system.

Recommendation II – Evaluate Feasibility of Reverse Osmosis Treatment: Solution is low waste and may improve both nitrate and non-nitrate water quality; likely the most feasible solution.

Recommendation III – Monitor Total Dissolved Solids:

Installing devices that track water quality may be critical to identify solution(s) that will survive long-term and stay cost-effective.

Recommendation IV – Optimize Existing Iron and Manganese Treatment:

The Water District's current iron and manganese treatment system is aging and in dire need of optimization – if not a full replacement.

Community Engagement Opportunity

A community meeting on **August 28, 2024** will update the San Lucas residents on this ongoing process and the proposed solutions to improve drinking water quality in the San Lucas community. This community meeting will give residents the opportunity to provide feedback on the proposed solutions they want the Water District to pursue and to ask questions about the information presented and in the draft reports, including the ability to submit written feedback after the meeting.

Additional Resources

For more information and to view the full peer review document, please visit our website at: <https://bit.ly/SanLucasWaterBoards>

For technical questions about the San Lucas Drinking Water Project please contact:

SAFER Rural Solutions Unit

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