

Clean Water State Revolving Fund Green Project Reserve

- Preliminary -



Country Haven Estates Wastewater Facility Project

SRF Loan #WW 1704 (pop. 126)

\$1,400,000

Preliminary Green Project Reserve Justification

Categorical & Business Case GPR Documentation

- TREATED EFFLUENT LAND DISPOSAL SYSTEM (Innovative). Business Case GPR per Section 4.4-1: *State programs are allowed flexibility in determining what projects qualify as innovative in their state based on unique geographical or climatological conditions; and Section 4.4-1b: Technology or approach that is not widely used in the State, but does perform as well or better than conventional technology/approaches at lower cost.* (\$850,000).

1. TOTAL EVAPORATION LAGOONS (PRELIMINARY)

Summary

- Country Haven Estates is planning to upgrade existing wastewater treatment and disposal lagoons and construct new wastewater facilities which include a new effluent evaporation system. The system will be designed for total evaporation of treated effluent, resulting in a zero discharge system.
- Loan amount = \$1,400,000¹
- GPR Costs = New lagoons = \$850,000 (Preliminary Conceptual Cost Estimate)
- Green portion of loan = 62%

Background

- While specific impacts are undetermined, seepage from the Association's wastewater lagoons has the potential to negatively impact water quality in the Eastern Snake River Plain sole source aquifer.

LAS GPR Justification – Business Case²

- The project implements the Capital Improvement Plan, and is the most cost-effective solution.
- The chosen alternative, to line the existing treatment lagoons with an impermeable membrane and to construct additional lagoon cells, results in the total evaporation of effluent.
- The other wastewater treatment and disposal options evaluated included decentralized wastewater solutions, including large septic tanks and a community soil absorption system. After the chosen alternative, this was the next most viable and economical alternative considered. However, a community soil absorption system would have been located over a protected sole source aquifer and would most likely have necessitated nutrient removal.

LAS Benefits

- The proposed project will reduce lagoon seepage to below acceptable levels and will reduce the potential negative impact to groundwater quality.
- The chosen alternative is a zero-discharge solution. The total evaporation of treated effluent as a final disposal alternative will perform better than both conventional technologies, as well as non-conventional decentralized alternatives.
- The chosen alternative is the most sustainable in that it will maintain the low-maintenance characteristics of the current system.
- Staying with an all-evaporation system also means the current classification of the system as a “VERY SMALL WASTEWATER SYSTEM” will not be elevated.
- An effluent discharge permit will not be required.

Conclusion

- The total evaporation system was chosen over more conventional alternatives because it is the most cost-effective and results in the greatest positive benefit to groundwater and to surface water quality.
- **GPR Costs Identified:** Effluent Evaporation System = \$850,000 (Preliminary Cost Estimate)
- **GPR Justification:** Business Case (Innovative) per Section 4.4-1: *State programs are allowed flexibility in determining what projects qualify as innovative in their state based on unique geographical or climatological conditions;* and 4.4-1b: *Technology or approach that is not widely used in the State, but does perform as well or better than conventional technology/approaches at lower cost.*

¹ FY17 SRF WW Loan Agreement #1704

² Country Haven Wastewater Facilities Planning Study, Keller Engineers Revised February 2017