

Sun Valley Water System Public Meeting

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Agenda

- Purpose of the Meeting
- Existing system
- Current and resolved challenges with the water system
- Recent improvements to the water system and grants
- Proposed improvements and water management strategies. Costs and benefits
- Next steps
- Questions

Purpose

The purpose of this meeting is to inform residents of recent changes to their water system, review current system challenges and obtain feedback on proposed upgrades.

We have applied for an infrastructure grant where residents will have to pay for 1/3 of the costs for the proposed improvements. We would like to know if you support the grant application.

Existing System

- The existing system consists of a well, a balancing reservoir and 1300 m of pipe.



Current Challenges

- The well water has Iron/Manganese that precipitates (the creation of solids from solution) as it oxidizes.
- The concentrations of Iron/Manganese meet the requirements of the Canadian Drinking Water Quality Guidelines and Provincial Regulation.
- The precipitate is creating a medium in which bacteria is able to grow causing us to exceed Provincial total coliform requirements. A Boil Water Notice is then required.

Current Challenges



Current Challenges



Current & Resolved Challenges

- The reservoir is not at elevation.
 - When power goes out or if the pumps fail the water distribution system empties quickly and causes negative pressure which in turn causes a risk of infiltration and backflow. A 'Boil Water Notice' is then required.
- The pumps were old, too small and were the sudden stop and start type. This puts the pumps and pipe system at risk of failure due to pressure waves. These pressure waves also cause water quality issues. ***(Recently addressed)***
- There was no alarm system to notify operators of a failure. ***(Recently addressed)***
- The current system of billing is based on dole valve size, and may not reflect the amount of water actually used.
- **The dole valves and actual services have outlived their lifespan and need to be replaced.**

Recent Improvements

- Old pumps have been replaced with a soft start/stop type. This reduces risks of failure and will improve the ability to flush the system.
- A SCADA telemetry system has been installed that informs operators of a system failure and the type of failure.
 - *SCADA means a Supervisory Control And Data Acquisition system*
- The RDOS received \$175,000 in Gas Tax for Pump and controls replacement and a Grant From the Community Waste Water Fund (CWWF) program for \$44,000 for SCADA.

Recent Improvements

Before



Recent Improvements

After



Recent Improvements

Before



Recent Improvements

After



Future Management Strategies

- Staff will undertake a more frequent flushing program in order to remove precipitate, reduce pipe growth and reduce the risk of obtaining a positive total coliform sample.
- Should the flushing program fail, we will investigate fixing the iron/manganese by putting additives in the water. Bench testing and further public consultation will be required.

Back up Generator

- Provides immediate power in the event of a power outage.
- Stops the system from going 'negative' in the event of a power outage.
 - Reduce risks of infiltration and siphoning (back flow).
- Removes the need for a Boil Water Notice following a power outage.
- Allows for continuing use of the system and increased fire protection.

Back up Generator

- Costs based on A 200KW generator
- Total Capital Costs = \$ 212,745
- 73.4% Funding from ICIP grant = \$156,027
- 26.6% Funding borrowed and amortized over 20 Years = \$56,718
- Annual increase in operations and replacement costs = \$2200 (operating costs offset by less BWNs)
- Average increase in user fees = \$282 per annum based on property with a 6 gpm domestic dole valve and a 24 gpm irrigation dole valve.

Water Metering

- Allows for leak detection in the system and on private property.
- More fair billing system based on water usage.
- Typically, a 20% reduction in water consumption is observed after meters are installed.
- May improve chances for future grants.



Metering

- Costs based on service renewals during meter installation
- Total capital costs = \$378,249
- 73.4% funding from ICIP grant = \$277,408
- 26.6% funding borrowed and amortized over 20 years = \$100,841
- Annual increase in operations and replacement costs = \$960
- Average increase in user fees = \$339 per annum based on a property with a 6 gpm domestic dole valve and a 24 gpm irrigation dole valve

Project Cost Summary

**** costs are based on 24gpm dole valve. 2/3rds of capital costs are covered through a grant**

Option 1

Back up Generator

- Capital Cost: \$212,745
- Amount Borrowed: \$56,718
- Avg. Rate Increase: \$282

Option 2

Metering

- Capital Cost: \$378,249
- Amount Borrowed: \$101,841
- Avg. Rate Increase: \$339

Option 3

Generator + Metering

- Capital Cost: \$590,994
- Amount Borrowed: \$157,559
- Avg. Rate Increase: \$621

Next Steps

- Determine if there is public support for improvements through a community survey.
- If there is no support RDOS will withdraw the grant application.
- If we receive a grant, RDOS will undertake an Alternative Approval Process (AAP).
 - 10% of the electorate will have to submit their non-support of the project.
- Notification and instructions regarding the AAP will be mailed to you.
- The RDOS will not proceed with the metering or back up generator without a grant.

Questions

Rate Comparison

Approximate 10 acre Parcel with One Home

Water System	Residential/yr	10 acre/yr	Total/yr
Naramata	\$1,035	\$2,840	\$3,875
Kaleden Irr. District	\$462	\$1,898	\$2,360
BMID	\$456	\$2,255	\$2,711
Summerland	\$360	\$2,211	\$2,571
Ok. Falls ID	\$186	\$1,899	\$2,085