



March 2017 Water Outage

Information Session

October 2016

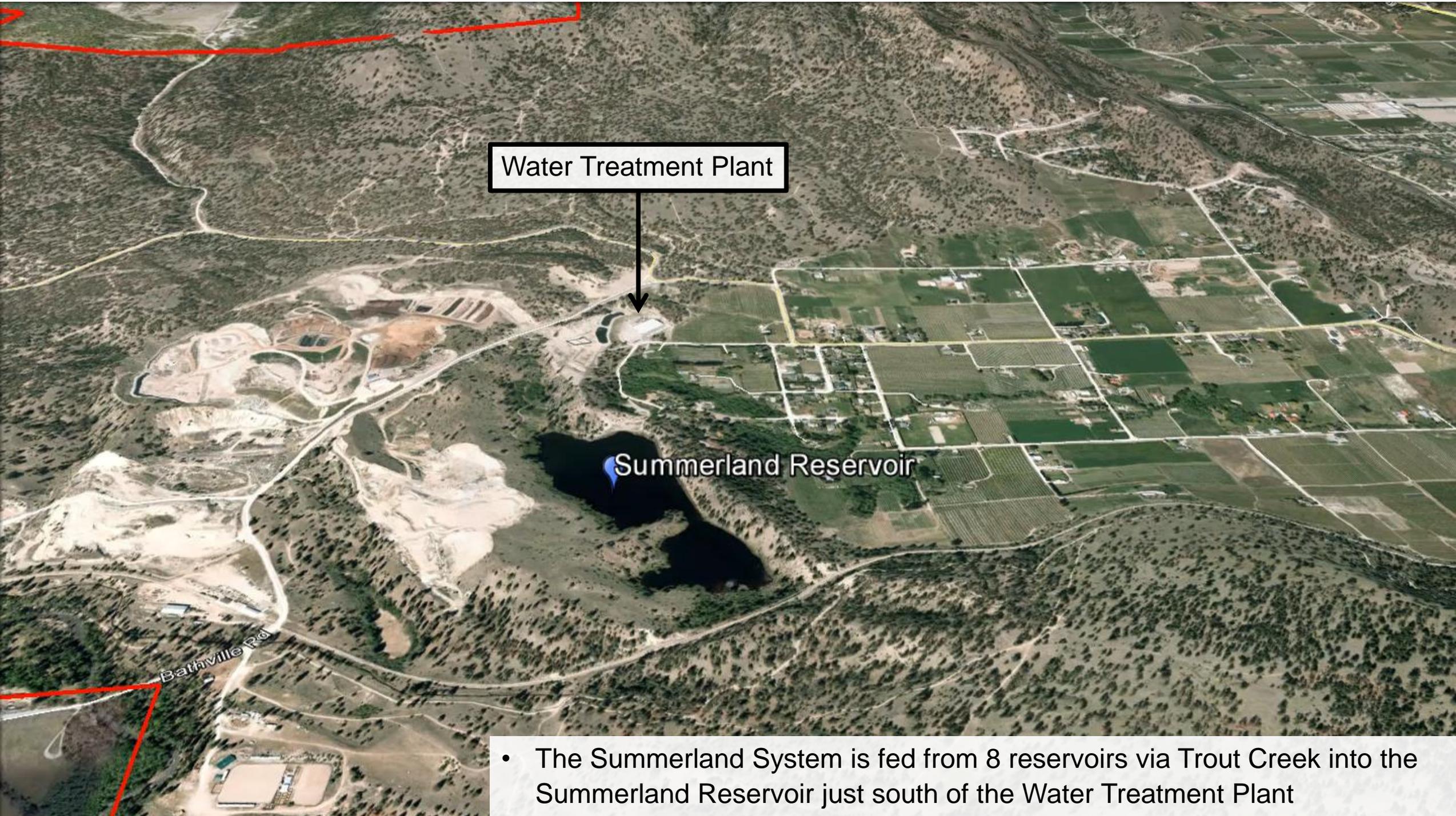
- Summerland has two separate water systems
 - Summerland System
 - Garnet Valley System



Garnett Reservoir

97

Summerland Reservoir



Water Treatment Plant



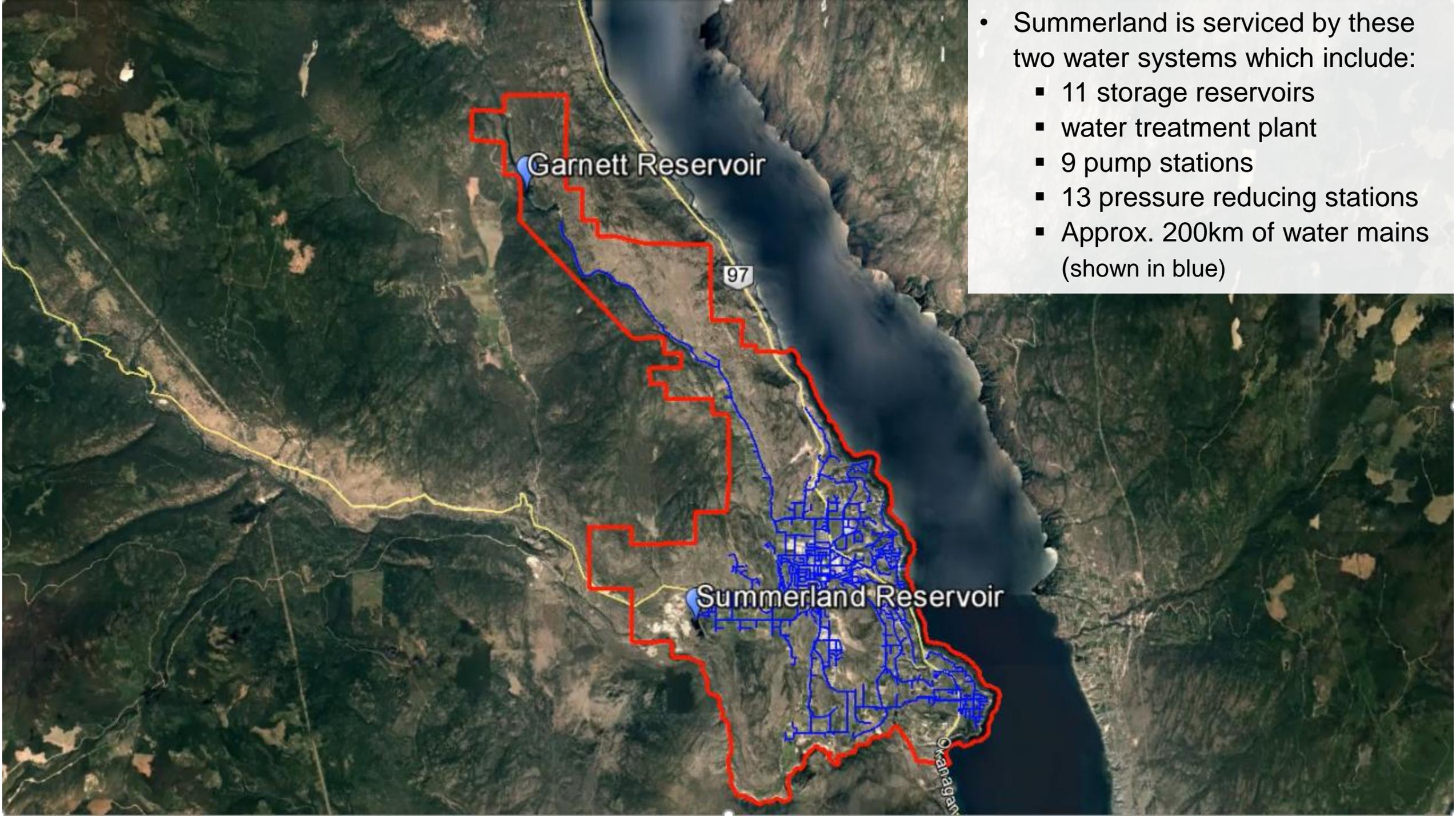
Summerland Reservoir

Bathville Rd

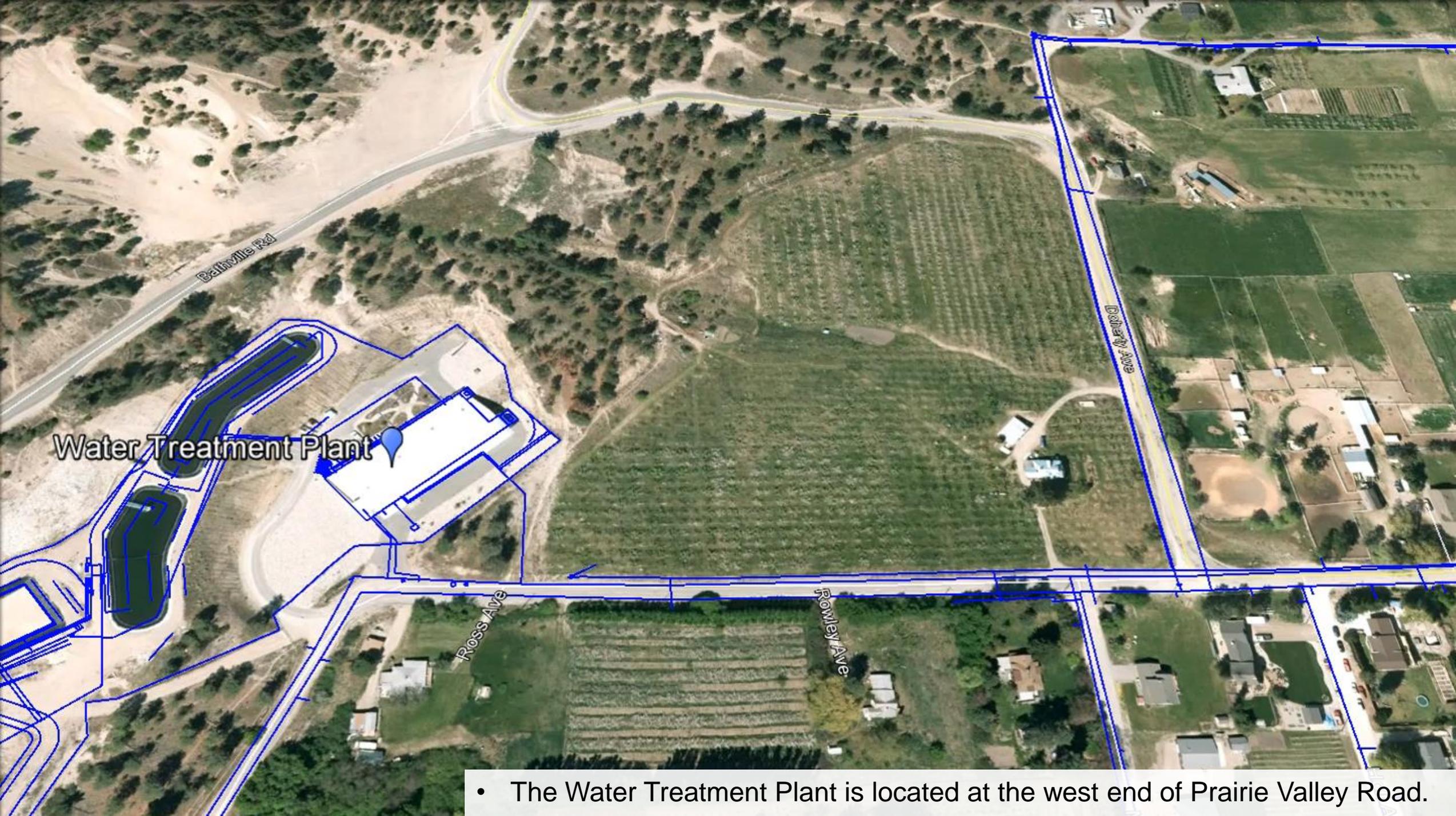
- The Summerland System is fed from 8 reservoirs via Trout Creek into the Summerland Reservoir just south of the Water Treatment Plant

- The Garnet System is fed by 3 reservoirs via Eneas Creek and primarily services the Garnet Valley area.





- Summerland is serviced by these two water systems which include:
 - 11 storage reservoirs
 - water treatment plant
 - 9 pump stations
 - 13 pressure reducing stations
 - Approx. 200km of water mains (shown in blue)



Water Treatment Plant

- The Water Treatment Plant is located at the west end of Prairie Valley Road.



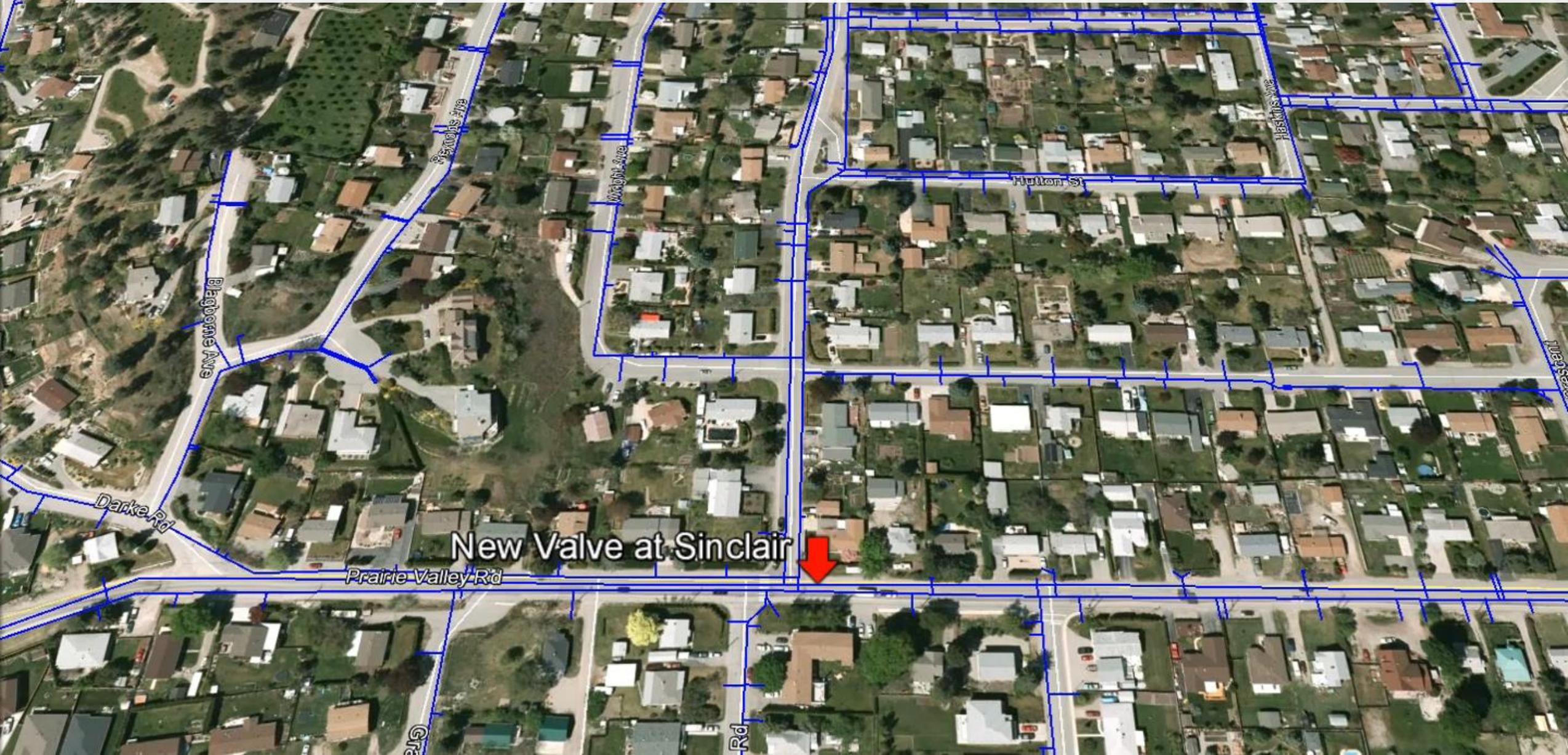
- The existing valve located in an underground vault on Prairie Valley Road east of Morrow Avenue is no longer functioning.
- Replacement of this valve and additional equipment inside this vault will be completed during the water outage.

Morrow Ave

Prairie Valley Rd

Replace Morrow Avenue Valve

- A new inline valve is also being installed on Prairie Valley Road east of Sinclair Road during the water outage.
- This will allow isolation of the water system closer to Pressure Reducing Valve Station #10 (PRV 10) to reduce the length of water outage required for any future repairs.



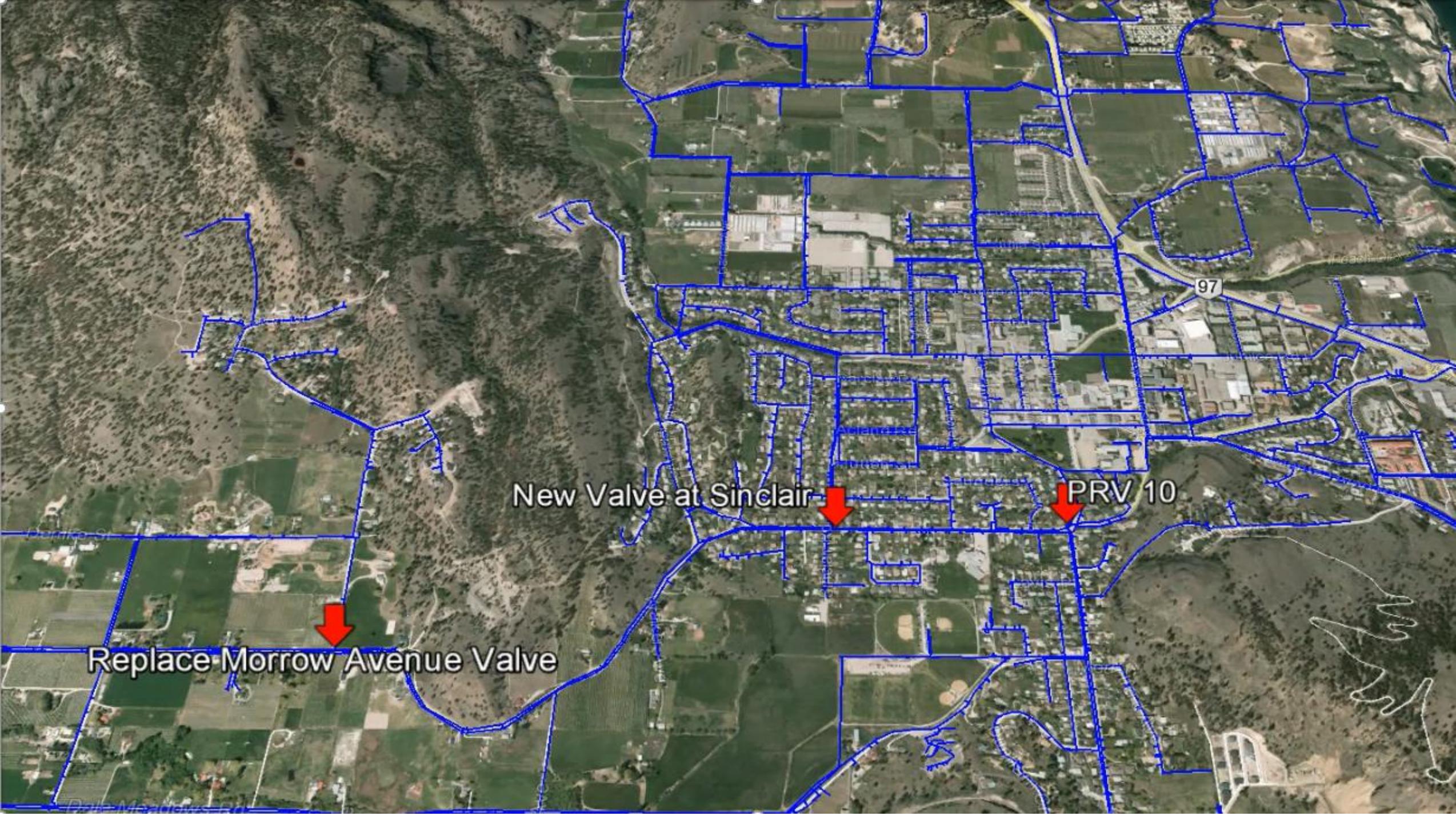


Saunders Crest

PRV 10

Prairie Valley Rd

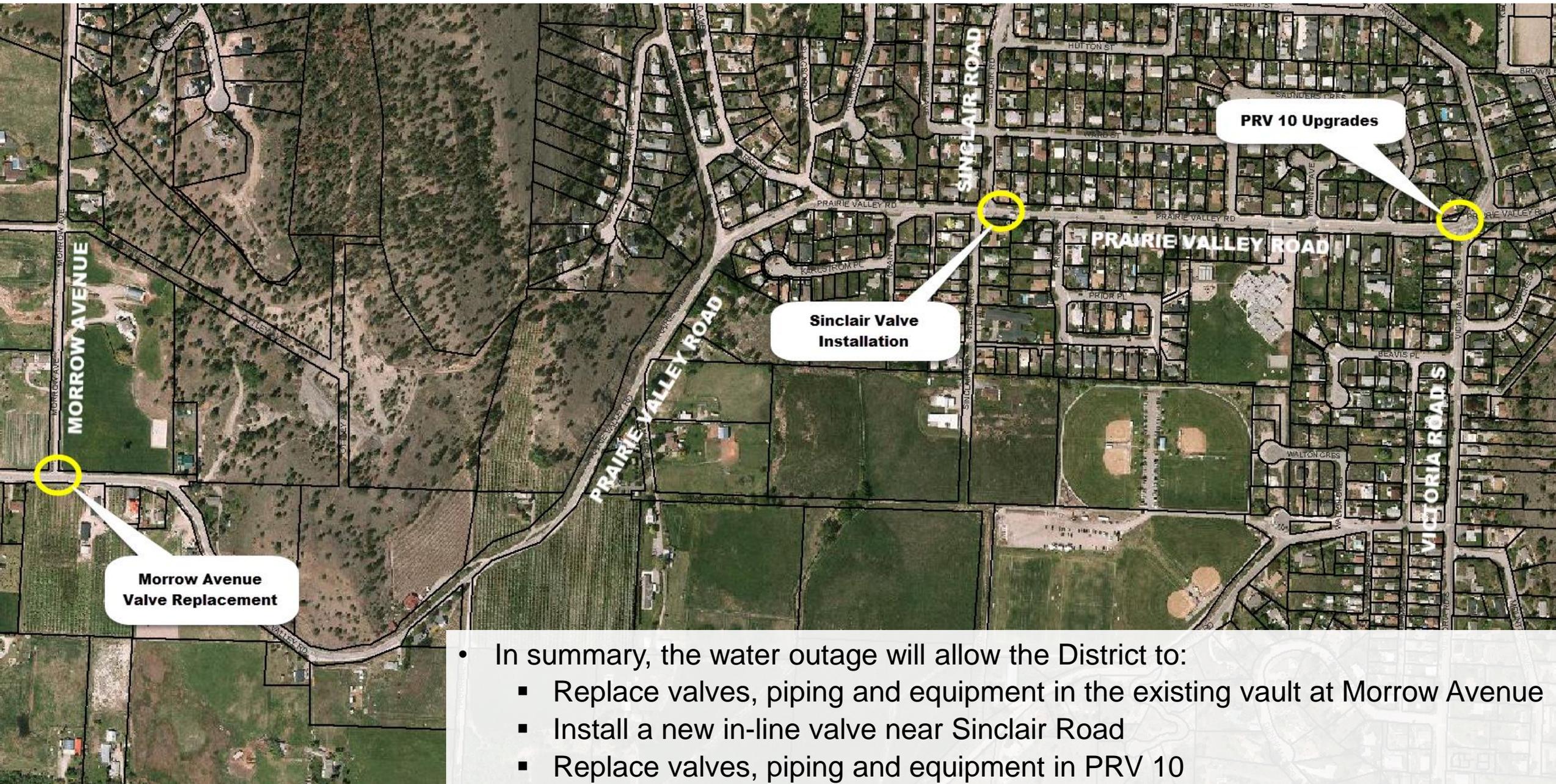
- PRV 10 is located on the northwest side of the oval-about, at the intersection of Victoria Road and Prairie Valley Road.
- Replacement of existing valves and other equipment with PRV 10 is the primary reason for the water outage.



Replace Morrow Avenue Valve

New Valve at Sinclair

PRV 10



- In summary, the water outage will allow the District to:
 - Replace valves, piping and equipment in the existing vault at Morrow Avenue
 - Install a new in-line valve near Sinclair Road
 - Replace valves, piping and equipment in PRV 10



New 30" Valve



Existing valve and piping inside the existing vault at Morrow Avenue

Approximate location of excavation to install a new 42" valve on Prairie Valley Road east of the Sinclair Road intersection



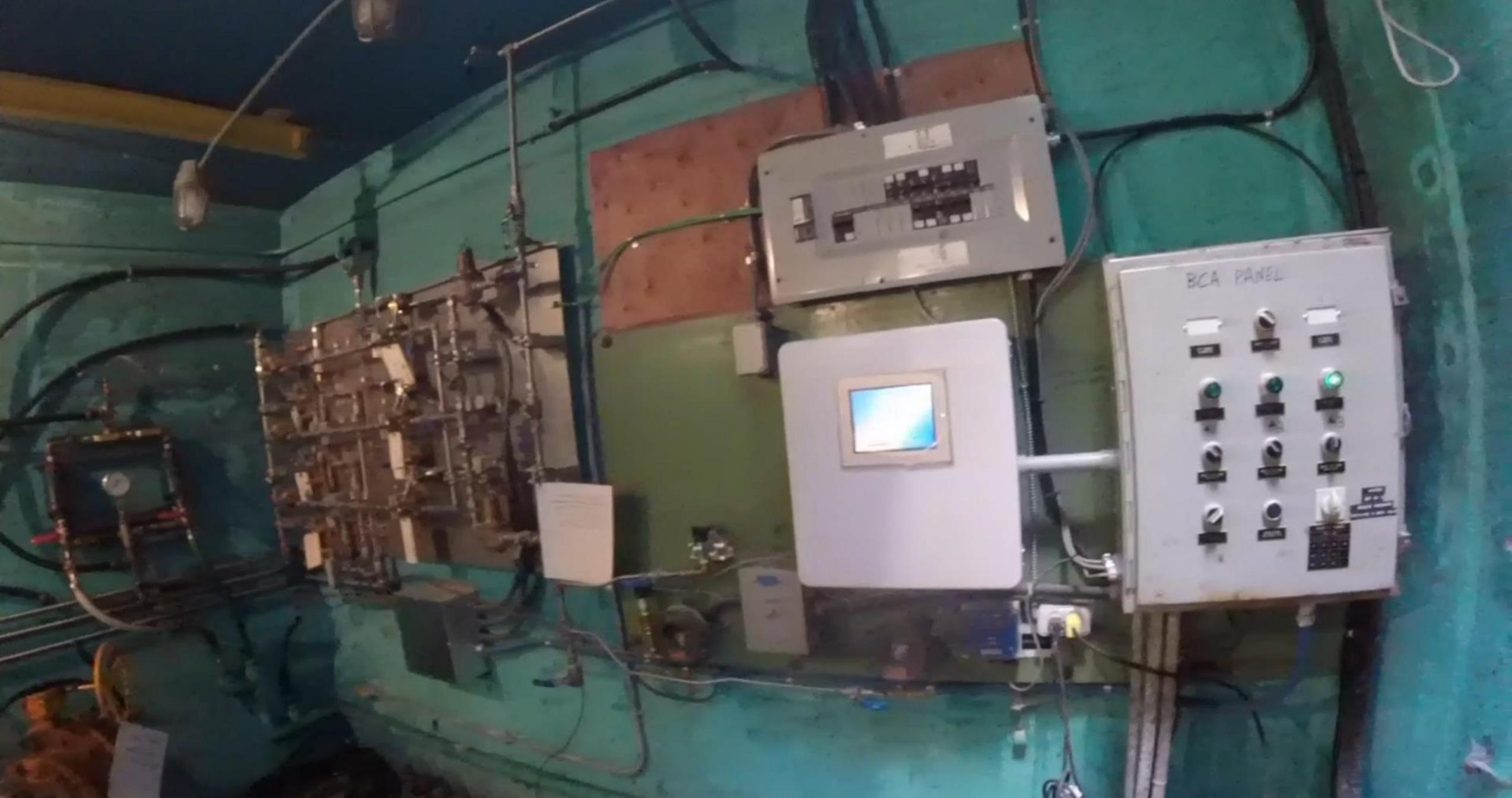
42" Couplings



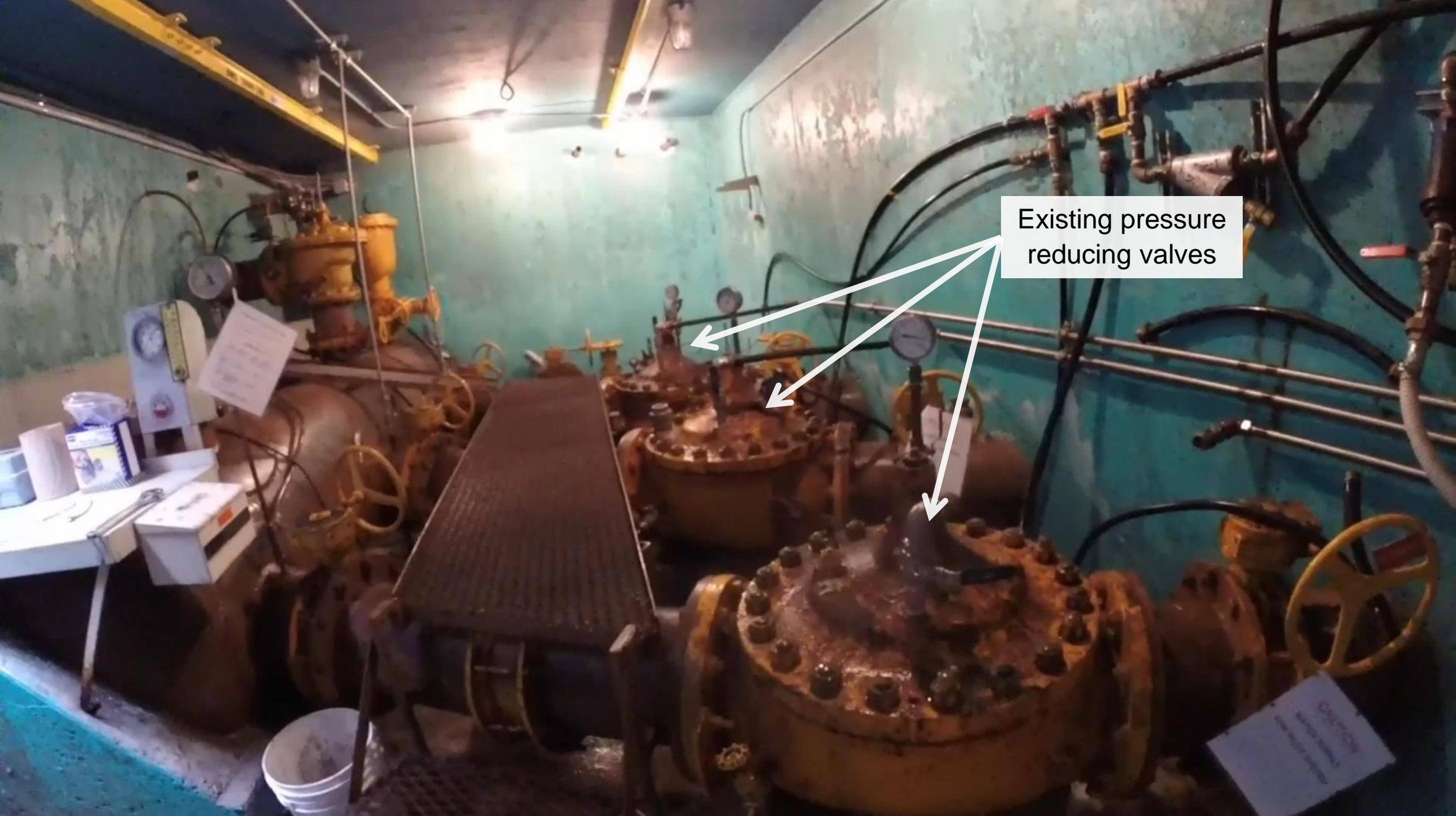
New 42" Valve



- Oval-about at Prairie Valley Road and Victoria Road intersection near the access hatch for PRV 10.



- Inside PRV 10 – electronic board and pilot system which controls the operation of the valves inside the PRV station



Existing pressure
reducing valves

- In order to complete the work in PRV 10, 3.4km of existing watermain between the Water Treatment Plant and PRV 10 is required to be drained which equates to a total volume of approx. 4,000 m³.
- To drain this watermain quickly, a temporary storage pond will be excavated on District owned land near Kelly Avenue and Brown Street with a storage volume of approx. 2,500 m³.



Why is the water outage needed?

- The water system infrastructure in Summerland is aging and critical components in the system are failing.
- One of the three pressure reducing valves (PRVs) within PRV 10 is no longer functional and can't be repaired due to the failed isolation valves upstream.
- Two upstream isolation valves and a drain between them are required by WorkSafe BC in order for anyone to work on the valves in PRV 10 as this is a confined space.
- To eliminate a similar multi-day shutoff in the future, the existing valve on Prairie Valley Road east of Morrow Avenue, which has failed, needs to be replaced and a new valve is required to be installed on Prairie Valley Road east of Sinclair Road.
- To complete this work, the water needs to be shutoff at the Water Treatment Plant and the 3.4km of pipe between the Water Treatment Plant and PRV 10 needs to be drained.

What happens if the work isn't completed?

- The risk of catastrophic failure increases the longer this work is delayed. Such a failure would create an emergency situation.
- In the case of a failure, the shutoff time would be longer, would occur without notice and could present a greater risk for staff and contractors working on the shutoff.
- In addition, the circumstances would likely cause watermain breaks and other issues due to the high system pressures that would be caused by the PRV failure.

Why will the outage last 60 hours?

- Beginning at 7:00pm on March 3, the existing large diameter watermain from the Water Treatment Plant to PRV 10 will be drained = **7 to 12 hours**.
- Once the watermain is drained, complete the work within PRV 10 = **24 to 36 hours**.
 - To reduce shutoff time, only the minimum amount of work will be done in PRV 10 during the shutoff to allow the supply of water to resume to the District.
 - The remaining works will continue over the next few days but will not affect water supply.
- The valve installations at Morrow Avenue and Sinclair Road will take place concurrently and are estimated to take less time than the work in PRV 10.
- Once the work is complete, water will be reloaded into the system = **8 to 12 hours**.
 - Water must be reloaded slowly as air from the empty watermains will be pushed out of existing air valves.
 - If done too fast, an air valve could fail. If this occurs, the air valve will need to be isolated and repaired.
 - When a water main is emptied, pipe joints may be affected causing the pipe to leak. If this happens, we will have to isolate the area of the leak, expose the pipe and repair it.
 - We have been in contact with neighbouring municipalities and they are willing to assist us with any repairs during the reloading phase, if needed.

Option to Provide Intermittent Water

- Options to back feed water into the water system from the Garnet Valley System and the Summerland Irrigation System during the shutdown are being investigated.
- This supply will be intermittent which means it will be limited in volume and pressure.
- Continuous water availability to all areas of the District cannot be guaranteed.
- Isolation valves in the system will be closed to isolate the work areas and allow intermittent water in the remainder of the system.
- Some isolation valves are more than 80 years old. If one of these valves doesn't fully close, the area that will be without water will increase.
- Initially, many properties may be out of water until the line is fully drained and crews are able to isolate areas and introduce water from these alternate sources.
- It is anticipated that many properties will have intermittent water as of Saturday morning.

Water Quality

- During the water outage, water from the Garnet Valley System and the Summerland Irrigation System will provide an intermittent source of water.
- These water sources will be chlorinated only so they do not meet current Canadian Drinking Water Standards; therefore, the District must impose a Boil Water Advisory before, during and after the shutdown.
- A notice will be sent to residents reminding them of the dates of the water outage and when the Boil Water Advisory is expected to be in effect.
- A notice will also be sent advising residents that a Boil Water Advisory is in effect and will be notified once the Boil Water Advisory is lifted.

Tips for Residents

- Now:
 - Use this time to monitor how much water you currently use
 - Calculate how much water may need to store for drinking and for other uses
 - Identify ways you can reduce your water use during the outage
- Before the shutdown:
 - Fill any storage containers with potable water for drinking purposes
 - Fill any bathtubs, pots and other storage containers with water for other purposes
- During the Water Outage:
 - Conserve water use
 - Pour water into toilet bowl or into the tank to allow flushing of toilets
 - Have disinfecting wipes or hand sanitizer available
 - Use stored potable water or bottled water available for drinking
 - Avoid using washing machine or dishwasher
- Following the Water Outage:
 - Turn your inside and outside taps on and let them run until the water is clear
 - Do not turn on the washing machine or dishwasher until you have done this

Insurance & Fire Protection

- Property insurance policies vary in their requirements and coverages for such events.
- Property owners may wish to contact their insurance providers to discuss the potential impact of this planned water shutoff on their coverage.
- The Fire Department will be staffed for the duration of the shutoff with additional members onsite at the fire hall to reduce response time in the event of a fire.
- Water is stored on all three fire engines and additional water will be stored and available on two District water trucks if required.
- All fire incidents during this event will be treated as a rural response.
 - A rural response dictates that additional resources (water trucks) are dispatched to the incident.
 - This is a standard response protocol utilized by the Fire Department for several areas of Summerland where hydrants are not available.
- The water supply tanks for Lower Town, Trout Creek and Deer Ridge areas will remain full so that water will be available in the event of a fire.
- The District is continuing work on maintain some water within the system which could be used as a supplemental source of water for fire protection.

Your emergency preparedness guide

72 HOURS

IS YOUR FAMILY PREPARED?

72 HOURS



PreparedBC

BASIC EMERGENCY SUPPLY KIT

gov.bc.ca/PreparedBC



First Aid kit and medications



Cell phone with chargers, inverter or solar charger



Garbage bags, moist towelettes and plastic ties for personal sanitation



Battery-powered or hand crank radio tuned to Environment Canada weather



Local maps (identify a family meeting place) and some cash in small bills



Water, four litres per person per day for at least three days, for drinking and sanitation



Battery-powered or hand crank flashlight with extra batteries



At least a three-day supply of non-perishable food. Manual can opener for cans



Dust mask to help filter contaminated air



Whistle to signal for help



Seasonal clothing and footwear

- Opportunity to raise awareness for possible future emergency – BE PREPARED!



How to stay informed?

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“District of Summerland”

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www.summerland.ca

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Sign up for an electronic version of the monthly newsletter