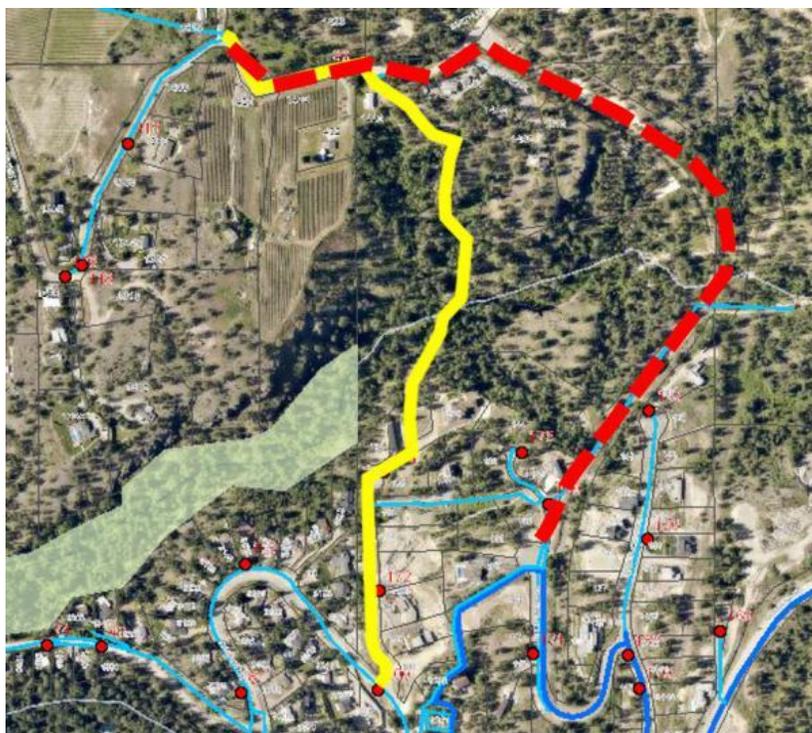


Naramata Water System – Future Water Main Rehabilitation and Realignment Design

The Regional District contracted Urban Systems to construct a water system model and complete an assessment to determine which sections of water main in the Naramata water system are in need of replacement based on; the age of the pipe, its condition, and the need to upsize or downsize pipe diameters based on system hydraulics. Urban Systems identified three lengths of pipe with the highest priority for replacement, Smethurst, Upper Debeck, and Gawne. A design to replace the Salting Road water main will also be completed, due to a recent water main break making its replacement a higher priority.

Smethurst Road:

Smethurst Road was identified due to its age, condition, and its potential for realignment to a more accessible and less environmentally sensitive area. Currently this section of water main acts as an upland connection between the north and south portions of the water system and is critical for proper hydrology and maintaining water quality. The current alignment traverses rugged terrain, Naramata Creek, and environmentally sensitive areas included habitat for endangered animals.



Map Legend:

Current Alignment 

New Alignment 

Fire Hydrant 

When planning the replacement of the water main it was determined that simply replacing the water main in the same location would not be feasible due to:

1) Environmental Concerns:

- Approximately 0.5 to 1.0 hectares of trees and shrubs would need to be grubbed and cleared to create enough room to replace the water main in its current location.
- Replacing the section of water main that crosses the creek would require an extensive environmental plan, approvals from various Ministries, which are very difficult to obtain, and additional works such as temporarily diverting Naramata creek that can be extremely costly.

2) Access:

- A water main break in this area would be very difficult to access and repair, and given its location it is likely that a break would result in thousands of liters of chlorinated water entering Naramata Creek and the surrounding ecologically sensitive areas, which would be devastating to the local habitat and fish-bearing stream.

For these reasons it was determined that realigning the water main to run along the KVR trail, which will make use of a previously established and maintained right of way, which provides easier access in the event of a break and reduces construction costs.

Upper Debeck Road:

Upper Debeck was selected for replacement based on age and condition. A design to renew some sections of the water main had already been completed as part of other design projects however, the replacement of the sections never occurred due to budget constraints. The new design will incorporate as much of the existing design work where possible. The new water main will be a replacement in the same location, however we will explore opportunities for looping where possible:



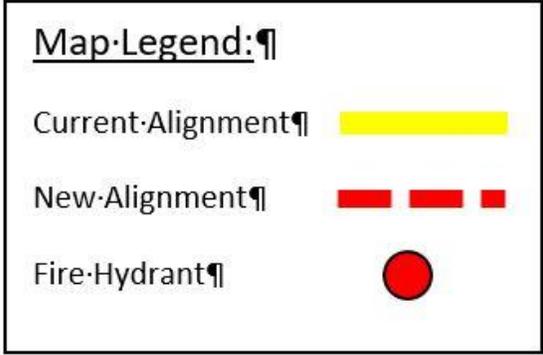
Map Legend:

| | |
|-------------------|---|
| Current Alignment |  |
| New Alignment |  |
| Fire Hydrant |  |

This Project will take place when a grant or other appropriate sources of funding become available.

Gawne/Gammon Road:

The Gawne/Gammon Road area was also chosen based on age and condition. As part of the replacement, the RDOS will look to realign the water main to the road right of way to avoid the need for private right of ways, and to improve access to water main appurtenances such as valves.



This project is not yet scheduled. Construction will take place once funding becomes available.