

HMCS Quadra Forcemain Replacement Project

Project Overview – November 2017

The Comox Valley Regional District (CVRD) has completed the installation of a new wastewater forcemain to service HMCS Quadra, at the end of Goose Spit. The project includes installation of a new forcemain from HMCS Quadra to the Hawkins/Croteau/Torrence intersection, as well as a pump station retrofit for the HMCS Quadra facility. This allows for an aging forcemain running through the estuary to be decommissioned.

Project Background

Project planning started in 2014 when the CVRD and Department of National Defence (DND) identified the need to replace the sanitary forcemain connecting HMCS Quadra to the Jane Place pump station.

The forcemain crossed the estuary, posing a risk to the marine environment. The new pipe was proposed to be re-routed inland to mitigate this risk going forward. It would also protect the area’s sensitive eelgrass and Sand Verbena moth habitats by using already paved surfaces for the new route.

The reasons for undertaking the replacement project include:

- The existing asbestos concrete forcemain pipe was constructed in the 1960s and had reached the end of its operational life.
- The upgrade was part of a larger plan to transfer operations and maintenance from DND to the CVRD.
- Funds from DND’s capital assistance program were available to entirely fund construction costs.

Construction

Construction occurred along Goose Spit and Hawkins roads (through Goose Spit Regional Park).

Construction began mid-April and was completed in two phases. The first phase saw the forcemain successfully installed on HMCS Quadra and from the Hawkins/ Croteau/Torrence intersection to Yates Road. The drilling rig experienced difficulties with ground conditions through Goose Spit Park, so a decision was made to halt further construction until September to avoid disruption to the public and HMCS Quadra over the busy summer months.

Construction resumed mid-September and installation of the remaining forcemain was completed on schedule.

The new HMCS Quadra forcemain follows Hawkins Road to the Croteau intersection, where it connects directly to the Town of Comox forcemain.



Forcemain Route

Intermittent road closures were necessary through the construction phase, but no further disruptions are required.

Funding/Budget

To fund the infrastructure service, DND's capital assistance program provided \$1.6 million for the planning and construction of the project. Upon project completion, the CVRD will own and operate the forcemain and pump station.

Environmental Protection

Goose Spit is a unique and valuable natural habitat. An environmental management plan was developed to assess the area and provide guidance during the construction period.

Examples of mitigation work included:

- An environmental monitor oversaw construction activities for compliance with regulations and to assist in identifying protection measures during work.
- Fencing was erected around work areas to protect 'no-go' zones.
- All equipment had to stay within paved roadways, gravelled areas and maintained lawns.
- Erosion and sediment control measures were in place.
- Water quality monitoring took place throughout construction.

Directional Drilling

To protect the sensitive habitat around Goose Spit, a specialized approach for installing the new forcemain pipe was selected: horizontal directional drilling (HDD).

- Rather than digging a trench, this drilling technique requires only small sections of road to be opened, with a drill then moving down and under the roadway, creating a tunnel below the still-intact road.
- Once a portion of tunnel is created, it is reinforced, and the pipe is hooked from one end and pulled through.
- The method is quick compared to open trench excavation.
- It also reduces disturbance on the surface. Given the highly-constrained work area for the Goose Spit, this was critical for successful completion.



Information/Questions

www.comoxvalleyrd.ca/hmcsquadra
engineeringservices@comoxvalleyrd.ca
250-334-6000