Vancouver Island community puts beavers to work on climate risks

By Rochelle Baker | News, Climate Solutions Reporting, Island Insider | February 27th 2025

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Xwémalhkwu Guardian Kai Blaney surveying a culvert in the Willow Creek watershed as a part of project to prevent flooding while protecting wildlife and ecosystems. Photo courtesy of Holmalco First Nation.

Working with nature, and not against it, a Vancouver Island First Nation is creating a plan to climate-proof its growing community.

The Willow Creek watershed project will restore wetlands and watercourses in the Homalco First Nation's territory to reduce flooding and other climate disaster risks, but also boost cultural values and sustainable economic development, said Xwémalhkwu (Homalco) Chief Darren Blaney.

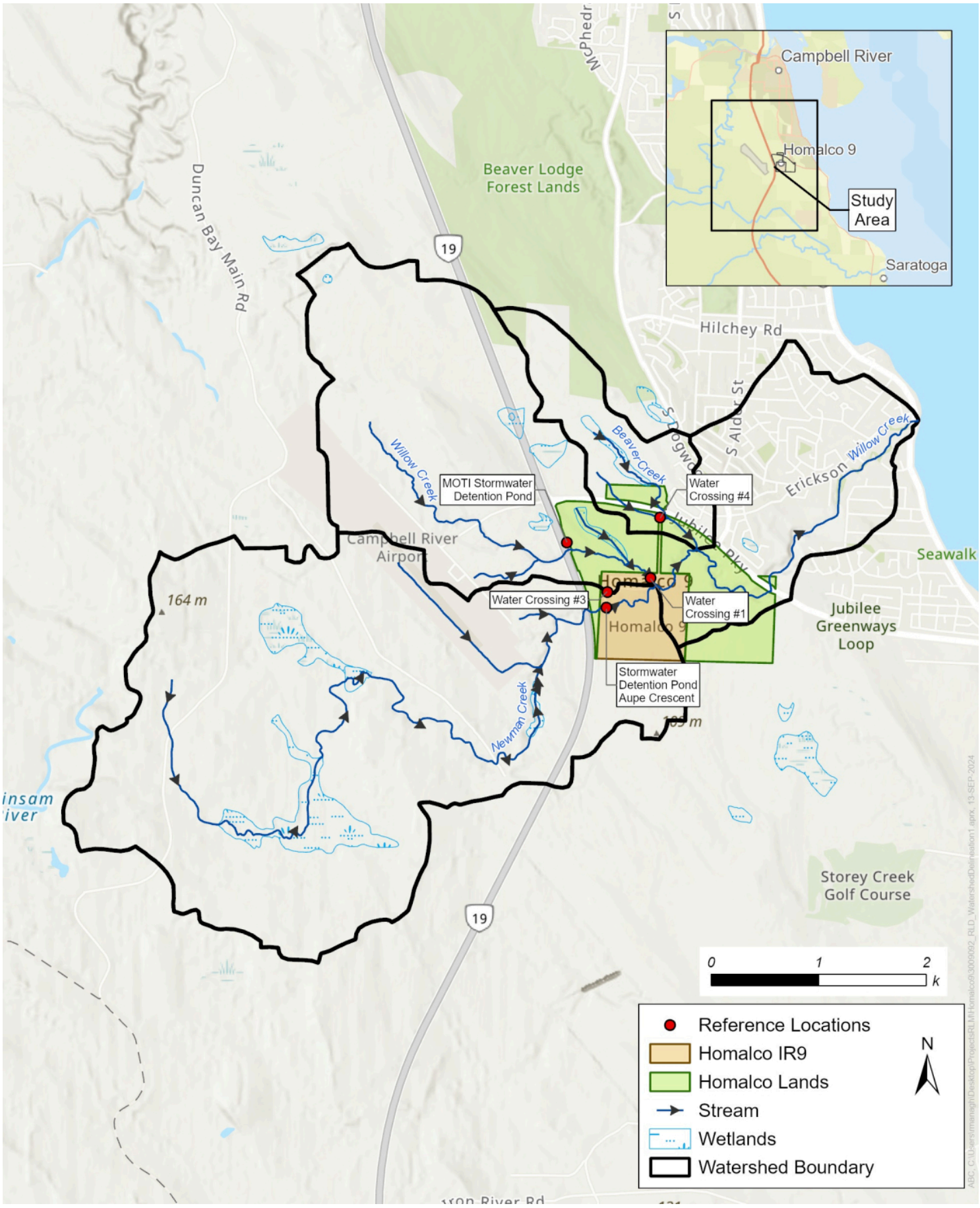
Wetlands and riparian areas are critical because they slow and store water moving across the landscape during heavy rains to prevent floods and reduce the wildfire risk created when forests dry out.

The Xwémalhkwu, whose territory is in the Campbell River area, recently secured $1.5 million in provincial funding for watershed mapping to identify flood risks and environmentally important areas, Blaney said. The project will focus on balancing the community's climate resiliency with ecological needs.

"Salmon is an important component," Blaney said, noting better stream habitat leads to more fish and helps bears — results which are consistent with Xwémalhkwu values.

"Keeping that ecosystem intact is kind of like rebuilding our own culture," he said.

Preserving natural areas in the watershed also protects water quality for people and wildlife because flood banks along streams or ponds filter contaminants from industrial or development activity in rainwater runoff, he added. Natural solutions, such as encouraging beaver activity and integrating rain gardens, will be paired with infrastructure improvements that balance ecological and community needs to protect the Xwémalhkwu from flooding.



The Willow Creek watershed includes a maze of streams that cross through forestry lands, public and private properties, Holmalco territory and neighbourhoods in southern Campbell River. Photo submitted.

The 2,328-hectare Willow Creek watershed south of Campbell River features a network of forested salmon creeks and streams, with Xwémalhkwu lands making up about 10 per cent of the area, said David Carson, Homalco's emergency planning and land use consultant.

However, nearly 30 per cent of the watershed's wetlands have been lost largely to residential development or forestry.

The nation is taking a watershed-wide approach to understand how wetlands and riparian areas affect water flow patterns and fish habitat.

Natural solutions to flooding, like rain gardens, are being considered inside the community itself. And other tactics, like encouraging beaver activity in the watershed, can lead to natural water reservoirs that can double as new fish habitat, Carson added.

"Beavers and salmon have co-existed forever," Carson said. "The past solution to beaver dams was dynamite and that's just not on anymore."

The construction of flood-prevention infrastructure, like new culverts to protect road access and residences for the Homalco community, will also consider natural water flows and avoid disruption to fish streams.

Collaborating with partners like Strathcona Regional District will create a holistic approach to flooding that will also protect downstream neighbours, like Campbell River's Willow Point community, Carson noted.

The initiative also leverages and builds the skills of the Xwémalhkwu Guardians, who are involved in field studies and mapping the watershed.

Understanding the Willow Creek ecosystem helps the Homalco to grow the community and economy in a way that cares for the environment,

Blaney said. The community is expanding and looking to climate-proof itself in the process; 16 new homes are being developed.

The design of stormwater ponds or the protection of existing beaver pools are a way to draw and support migratory birds, and bolster salmon populations for bears to keep them from searching for food in the village, Blaney said.

“It will also be kind of interesting to see what kind of ducks come [to the ponds],” he said.

“We’re figuring out how we're going to develop our subdivision, but also how to maintain the water within that ecosystem.”

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