Concept Paper - Homalco DDR-CA application

Feb 14, 2023

Community Emergency Preparedness Fund, Disaster Risk Reduction – Climate Adaptation

The Homalco emergency management program, through a climate change and resilience lens, endeavours to foresee, assess, and mitigate a full range of risks to our community. Changing patterns of rain, snow accumulation, and snow melt result in unpredictable water flows, quality, and yield patterns in our watersheds. The result is an increased risk associated with overland flooding which can impact our community in many ways. Our safety and security, our homes and businesses, our cultural places, and our cultural and ecological values are all vulnerable.

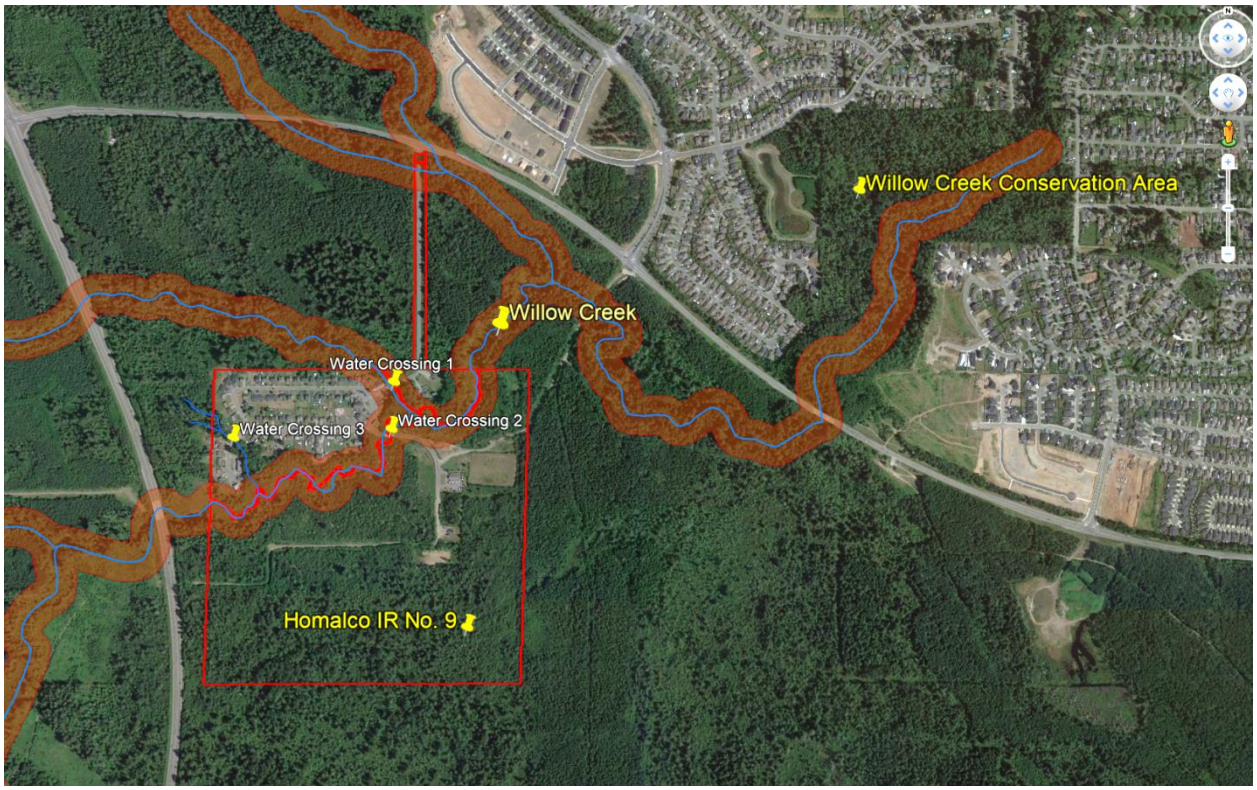
With this application we are looking to the Disaster Risk Reduction – Climate Adaptation (DRR-CA) funding stream of the Community Emergency Preparedness Fund to support us in understanding and mitigating the risk of overland flooding right within our residential community. This application is for Category 1 funding to identify, assess, and plan for mitigation of increased and unpredictable flows of water in Willow Creek and its tributaries within the bounds of Homalco IR No. 9.

<u>Willow Creek</u>

Willow Creek flows through Homalco lands. Before reaching the Salish Sea at Willows Point, it passes through a patchwork of ownership including crown land, municipal land, and private land including a large parcel of National Trust land (Willow Creek Conservation Area).

The figure below indicates Willow Creek, a 50m buffer on the creek (brown), Homalco lands (red), and three water crossings within the bounds of Homalco lands. The Homalco land use plan identifies the riparian buffer area within IR No. 9 as environmental protection zone.

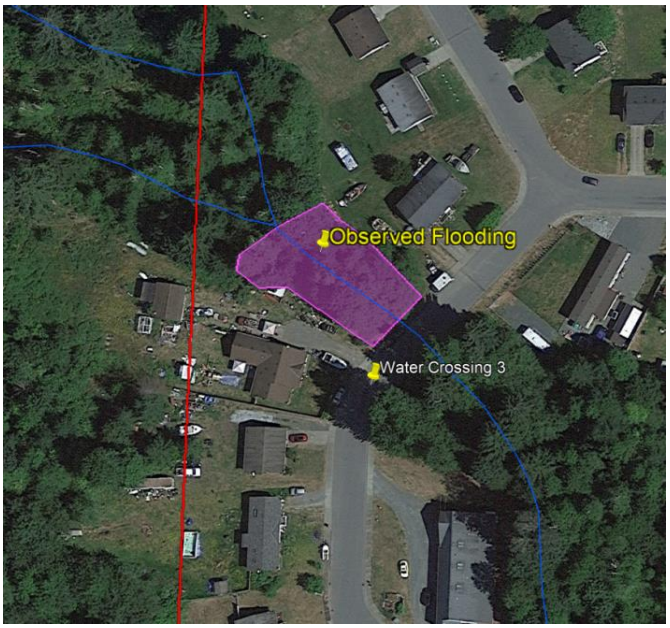
Willow Creek is a salmon bearing stream.



Land Forest People.

Community Concern

Community members report concern with regard to localized flooding behind the culvert on Aupe Crescent (water crossing 3) during rain events. The figure to the right is a map detail displaying the area of observed flooding behind the culvert at water crossing 3. Water levels reach the same level as the homes on both sides of the creek.



In addition to the risk of flooding of the nearby homes, the tributary creek downstream and Willow Creek are vulnerable to failure of the culvert at crossing 3 resulting in debris flows, bank erosion, and habitat loss.

Failure at crossing 1 isolates the entire community which has only one vehicle exit. Failure at crossing 2 isolates our health services facility. Failure at crossing 3 isolates 13 households.

Proposed Project

We propose a new project to investigate the risk of stream bank overflow and failed water crossing infrastructure for the full Homalco reserve, including three existing stream crossings.

We are proposing foundational activities including mapping and assessment of risk. On a preliminary basis, we anticipate flood risk mapping, evaluation of water flows and infrastructure requirements including assurance of fish passage, fish habitat status and potential.

Risk assessment will be built into the existing hazard, risk and vulnerability framework in our all-hazards emergency management plan.

Anticipated project outcomes are new knowledge to support decision making, the identification of disaster risk reduction and climate adaptation goals, objectives, and strategies; and the development of options and cost benefit analyses; and recommendations.

Anticipated long-term outcomes are adequate drainage and water crossing infrastructure anticipating climate change, development and use of land optimizing community benefits and minimizing risks, and thriving waterways of high natural and cultural value.

Potential Partners

Strathcona Regional District

City of Campbell River

Nature Trust British Columbia

Ministry of Land, Water and Resource Stewardship

Greenways Land Trust