



Mission Creek Restoration Initiative

fact sheet

Spring 2024



Enriching historical, ecological, and recreational values.

MISSION CREEK is critical to the Central Okanagan – an invaluable natural asset that provides ecological, social, cultural, educational, recreational, and economic values.

The Mission Creek Restoration Initiative (MCRI) was formally launched in 2008 to conserve, restore, and enhance these values and assets following decades of damage caused by straightening the channel, and destruction of the natural stream bank vegetation system. MCRI focuses on the lower 12 km of Mission Creek, from East Kelowna Bridge to Okanagan Lake, as the portion of the creek most heavily impacted by channelization.

MCRI's objectives are to:

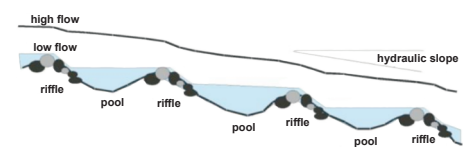
- Collaboratively conserve and restore fish and wildlife habitat
- Improve flood protection for adjacent urban and agricultural properties
- Respect Syilx/Okanagan peoples' historical, social, cultural, and spiritual values, traditions, and connections
- Expand biodiversity and protect species at risk
- Advance community climate resilience
- Support continued enjoyment of Mission Creek Greenway
- Foster public engagement to inform decision-making
- Inspire similar work in other communities.

Formal MCRI partners include BC Ministry of Water, Lands, and Resource Stewardship, Regional District of Central Okanagan, City of Kelowna, Westbank First Nation, Okanagan Nation Alliance, Central Okanagan Land Trust, and Friends of Mission Creek.

To date, MCRI successes have included:

- Land purchases to expand floodplain and creek channel habitat
- A large-scale dike setback and floodplain restoration project
- Construction of instream fish habitat
- Ongoing monitoring to determine restoration effectiveness
- Preparation of the *Lower Mission Creek Habitat Conservation & Restoration Plan* (the Plan) available at www.missioncreek.ca.

If we do not act to conserve and restore Mission Creek now, species reliant on aquatic and riparian habitat will continue to decline, along with the associated benefits they provide. Equally important, flood risks will increase, especially in light of climate-change modeling that projects changes in peak flow, timing, and increased intensity.



Chang 1988, in Newberry 2016

Upcoming projects include the installation of 'riffles' downstream of the Robert Hobson Environmental Education Centre for the Okanagan and near Hollywood Road. Riffles are natural rock and gravel clusters that occur in all creeks. Constructed riffles (shown in the profile above), mimic these natural features to support key ecological functions (i.e., oxygenation, dissipation of hydraulic energy, invertebrate production) and provide fish spawning, rearing, and resting areas.

LOOKING BACK

Channelization for flood control in the 1950s, along with subsequent land development, severely impacted fish and wildlife habitat and populations, and disrupted the creek's energy with respect to water and sediment transport.

MCRI is a multi-phase, multi-stakeholder effort designed to restore and protect ecological and other vital values and assets for the Okanagan.

MCRI's Phase-1 construction project (photo bottom right) kick-started on-the-ground restoration efforts in 2015 with a 500-metre dike set back and floodplain expansion on the south side of Mission Creek between Casorso Road and Gordon Drive. Spring runoff flows into the expanded floodplain, which stores flood waters and captures sediment. Water flows back into the creek when flooding subsides. Despite recent record-breaking floods in 2018, restoration works held up exceedingly well.

Subsequent in-stream placement of large boulder clusters is intended to improve spawning and rearing habitat for rainbow trout, kokanee, and other indigenous fish species.

LOOKING AHEAD

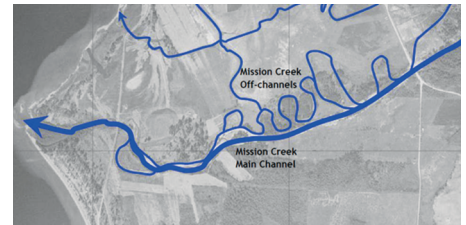
The Plan recommends key strategies based on detailed assessment of challenges and opportunities associated with recommended restoration and conservation activities. Based on detailed studies, widening the floodplain of Mission Creek is the best and most cost-effective option for improving flood protection and habitat for aquatic and riparian fish and wildlife species. This will require our community to move development back from the creek to allow the space needed for natural hydrological processes to occur.

Plan recommendations are to:

- Conserve existing high-quality aquatic and riparian habitats
- Set back dikes to expand creek channel and floodplain widths
- Restore natural creek-bed form to ensure creek-bed stability and rebalance the creek's energy
- Modify or add gravel bars and riffles

IN CLOSING...

MCRI's collaborative approach to ecological and flood-control issues is progressive and sets the stage for similar projects elsewhere. Project partners are pleased and proud to have achieved many successes to date, and look forward to undertaking more flood-control and habitat conservation and restoration projects moving forward.



Historically, Mission Creek meandered 130 m across the valley bottom and was about 30 km long. As shown in the top photo, the creek is now 30 m wide and 11 km long.



Photo courtesy of Jon Vozenilek, Copper Sky Productions

WIN-WIN FOR MCRI & LANDOWNERS

MCRI is looking for opportunities to partner with identified landowners to conserve and restore more areas considered vital for overall creek health. This united approach supports our community's values, while providing landowners with significant drainage, flood-protection, climate-adaptation, and agricultural benefits.

Options available to a landowner could include land donation, conservation covenant, stewardship agreement, or the sale of all or part of the property.

For more information about MCRI, visit www.missioncreek.ca