

# 2021 improvements at the Snk'mip Marsh Sanctuary

## New trails for visitor accessibility, expanded marsh-overlook viewpoint, outdoor classroom space, more wetland ponds, additional amphibian & reptile habitat... and more rewilding

submitted

The creation of a pathway to an expanded viewpoint providing improved access for people with disabilities, the addition of several large ponds, the installation of several reptile/amphibian hibernacula, and intensive wetland restoration work including the decommissioning of more than two kilometres of interlaced road surfaces — all added up to a very intense summer work period at the Snk'mip Marsh Sanctuary (located in Sinixt territory at the north end of Slocan Lake) for the Valhalla Foundation for Ecology.

Overall, the project is a boon for ecological restoration and provides improvements for

human visitors seeking a nature experience.

The Valhalla Foundation for Ecology's (VFE) project work this year focussed on the creation of a gently-sloped wheelchair-accessible (with assist) pathway to a viewpoint, a specialized trail for people who use adaptive mountain e-bikes (or other assistive equipment), the expansion of a spectacular overlook of the marsh, six more wetland ponds created, three snake/amphibian hibernacula built, and the decommissioning and restoration of a massive network of interlaced, compacted road surfaces on the property.

"Our first objective at Snk'mip has always been

"rewilding:" restoring the land to higher ecological functioning and restoring damaged areas," said VFE director and Snk'mip project lead Lorna Visser. "Our second objective this year was to increase inclusivity: to provide barrier-reduced access to the sanctuary so that a wider range of people can experience nature there and, we hope, better understand and appreciate the importance of wetlands and ecological restoration."

"In particular, we're stoked about the new wheelchair-inclusive access trail we've constructed on a plateau which circles a new pond. We feel it's important that *everyone* have the opportunity to enjoy the marsh,

to get 'up close and personal' with a wetland pond, and to better understand how vital wetlands are for our ecosystem."

This summer's work marked the VFE's fourth year of restoration at the property. In previous years, the Foundation removed derelict structures and industrial debris, decommissioned and restored a roadway that had been built in the wetland water-body itself, filled in and restored a large gravel pit on the property, created several scenic viewpoints for users of the Rosebery-to-Summit-Lake rail-trail (located directly adjacent to the sanctuary), and replaced fill and topsoil into the base of a massive, ancient larch tree

to save the "spirit tree" of the sanctuary. Numerous ponds and small pools were added (which filled naturally with groundwater even in this summer's drought and heat), creating much-needed habitat for amphibians, reptiles, birds, insects, mammals and rare plants — many of them threatened and some of them endangered species.

The main financial supporter of the work has been the Columbia Basin Trust, with many other foundations, private funds, and local individual donors also contributing. "CBT has been wonderful, and we're particularly pleased this year to have received a grant from the Slocan Valley Legacy Fund. Considering the benefit this sanctuary provides for the health of the local environment, as an educational site, and for nature enjoyment for Slocan Valley residents, this is very fitting."

### New trails for people with disabilities

A separate grant was received from the Columbia Basin Trust's Trail Enhancement Grants program specifically toward the cost of building trails for people requiring mobility assistance.

"Sculpting these pathways to spec was challenging, given the considerably steep slope of the sanctuary property overall," said Robin Annschild, the wetland restoration expert and biologist who supervised the project design and restoration/construction at Snk'mip.

"At Snk'mip we're dealing with a 20-to-25-degree slope on the property overall, yet a wheelchair-accessible path requires a slope of between 3 to 8 degrees depending on various factors. To achieve a pathway that's pretty close to spec required a considerable amount of careful construction but we're so pleased with the result: a pathway that allows people with mobility challenges the same access to the beautiful marsh viewpoint and the same nature experience as everyone else."

Athlete and accessibility expert Kimberly Joines worked with Annschild and expert machine operators Stuart Nelson and Mike Nelson of Silverton Transport on the trail design and construction. Using both her wheelchair and her adaptive mountain bike she repeatedly tested the pathways while the contractors field-fitted and finessed the construction. It was a great day when she whizzed down and back up the trail effortlessly on her specialized e-bike.

Kimberly notes that the

upper portion of the access-trail (extending from the rail-trail into the sanctuary property) contains some grades considered steep for independent climbing, a challenge of adaptive biking at the best of times. She suggests it be designated as "adaptive inclusive, with assist" and recommends an electric-assistive device/e-bike, or a second set of hands to provide assist in steeper areas.

Kimberly also had high praise for the project. "The VFE folks really extended themselves to accommodate the requirements of people with disabilities, given that this is first and foremost intended as a nature sanctuary," she said. "Once all the work is complete, people with disabilities will have the same access to ponds and viewpoints as ambulatory people, that's an important universal-access principle."

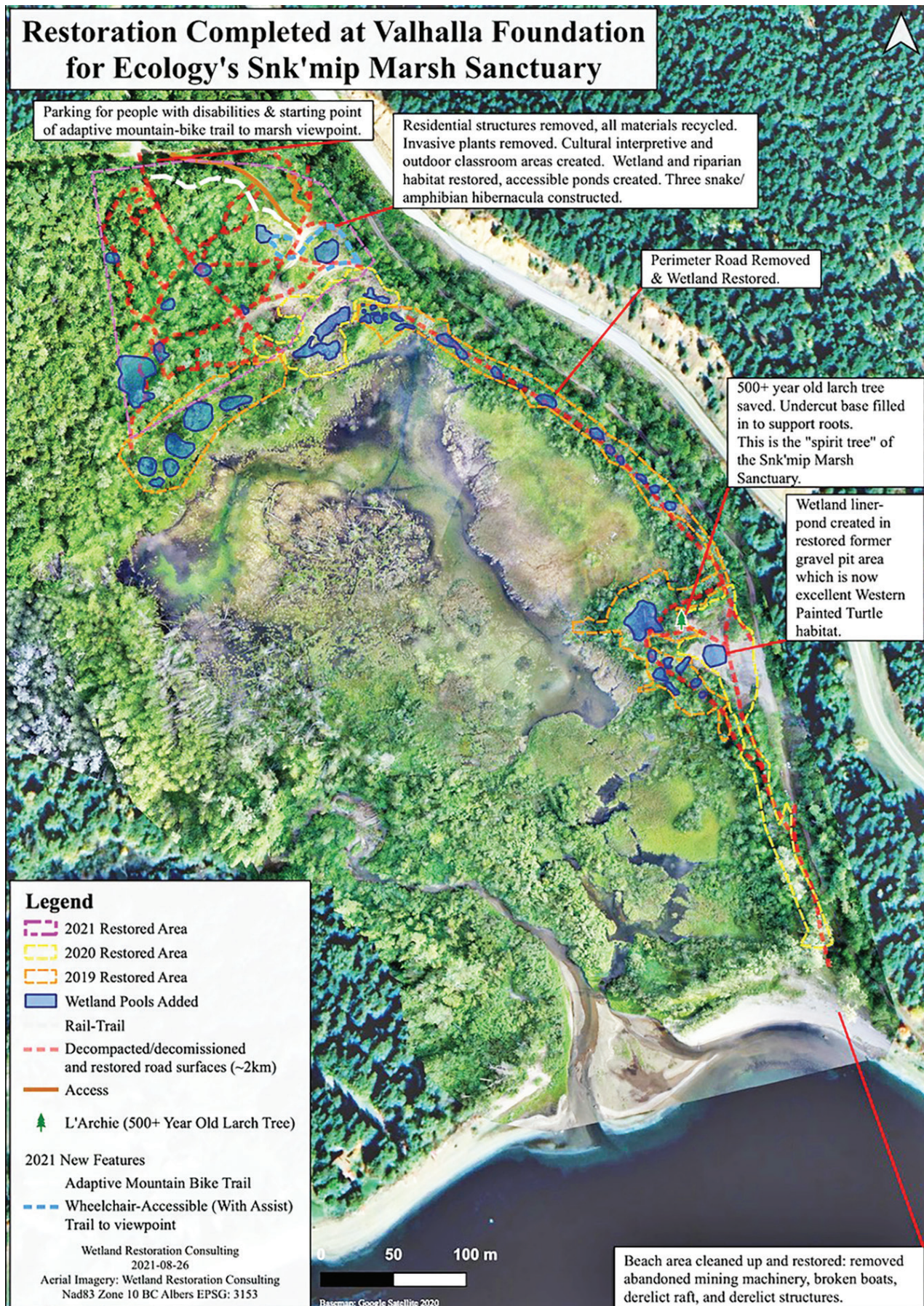
Joines is also on the board of the Kootenay Adaptive Sport Association and says she looks forward to bringing groups of touring Adaptive Mountain Bike Riders to Snk'mip. "The sanctuary is accessible from the rail-trail so that makes it a great spot for us, for a lunch break or a rest stop in a beautiful setting," she said.

Annschild mentions that the work is not yet totally complete, with the installation of benches, landscaping, replanting, and interpretive signage still to come. "Give it a year to regenerate and green up, and for all the finishing touches to be installed. It's going to be amazing," she said.

### Nature-forward vision takes priority

VFE project director Lorna Visser explained that the sanctuary property now has several zones:

- The main marsh water-body which is designated off-limit to human use (including canoes and kayaks please),
- The surrounding riparian area (including decommissioned roads) that have been restored to wetland ponds and pools,
- Several upland pools and additional riparian wetland habitat that has been created,
- The forested northwestern section of the sanctuary in which a confusing tangle of roads has been removed and deeply de-compacted so the land can regenerate,
- A human-visitation area that includes an outdoor classroom space, several beautiful new large ponds where students can get "up close and personal" with wetland species such as frogs and toads, and a clearing for student activities or interpretive/artistic activities,





## 2021 improvements at the Snk'mip Marsh Sanctuary (continued from page 16)

- A beautiful new wheelchair-accessible viewpoint, and
- The wheelchair and assisted-mountain-bike trails.

"Being a charitable land trust whose mandate is preserving wild places for wild things, our vision for Snk'mip has always been rewilding: restoring and enhancing the property for *nature*," said Visser.

"Sometimes that gets challenging — you're balancing best environmental functioning with the preferences of people. Take, for example, the human perception that the compacted road surfaces we've decommissioned were, in the past, nice walking trails that meandered around within the sanctuary. Well, that's true. But all those compacted roads were ecologically unproductive. Our restoration work has been done with a view to 'maximum ecological uplift' i.e. what's the best outcome for natural functioning on each and every square meter of the property? So that means some walking paths have been removed but that was necessary for the ecology."

Visser cites as another example of restoration success a small pond that was created last summer in what had formerly been a gravel pit on the property. "For decades that gravel pit was an ecological disaster, basically a dead zone, it was a pit of dust and knapweed. Last summer we placed some 3,000 metric tons of natural material into that pit — this is fill that had been pushed into the wetland by the previous owner, which we dug out in order to restore the wetland to its original size — then we used that material to refill the gravel pit. We then re-contoured the area, topped it with coarse woody debris (logs and stumps), topsoil, replanted with native grass and shrub species, and added a small pond.

"Our reward came this year. In the

late spring there was a Western Painted Turtle basking on a log placed across that new pond. I was gobsmacked! We thought turtles were extirpated down at the marsh, but there it was, basking with its little head lifted to the spring sunshine. Seeing that turtle there was one of the best days of my life."

"To go from ecological dead-zone to habitat for a threatened species in less than a year: that's what we call progress."

### Smoke, heat and Covid added challenges

The ecological gains made this summer came with considerable challenges during the construction period, particularly from the intense heat and smoke from nearby forest fires.

"We were guided by the BC Wildfire Service which provided us a very strict set of requirements. We had trained firefighters on site at all times we were working, water tanks, pumps and hoses at the ready, and a fire-spotter patrol the site for two hours after each work day. We started at 5 a.m. to get a jump on the heat of the day, and we frequently watered the access routes to keep down the dust and bring up the humidity."

Throw in highway closures due to forest fires delaying the delivery of materials, and another summer of restrictions to prevent the spread of the COVID virus and all the precautions that entailed, and it's fair to say that Snk'mip 2021 had its challenges.

"We want to thank Stuart and Mike Nelson who worked long hard days in that heat and smoke to get this job done, and Robin Annschild and her assistant Miranda Cross who were on the ground directing the work for long days in the smoke," said Visser. "Wearing an N95 mask all day in that heat isn't the easiest thing to do but it was necessary."

"But it was all worth it, we all put

our hearts into the work. Our skilled contractors added so many truly artistic touches, working in concert with the landscape and with the goal of maximum ecological lift. What has been accomplished is beyond the wildest dreams we had when we started this restoration project four years ago."

### Non-motorized rail-trail eagerly anticipated

Visser notes that with this fall's implementation of the official designation of the Rosebery to Summit Lake rail-trail as non-motorized, the ecological improvements the VFE has created at Snk'mip marsh will be better protected.

"There's not much point in spending close to a million dollars acquiring and restoring a wetland nature sanctuary and then allowing off-road vehicles such as ATVs, dirt bikes and side-by-sides to roar through that same ecosystem," she said. "All the dust, pollution, noise disturbance to sensitive species and spread of invasive plant species that motorized use brings — and that's before you consider direct vehicular mortality to amphibians and reptiles using or crossing the trail — that has a substantial cumulative impact."

"At one point this rail-trail was planned to become one of Recreation Sites and Trails BC's motorized roads for off-road vehicles. Imagine if our rail-trail had been promoted on official government websites and in BC government tourism materials as motorized — we would have seen the level of motorized vehicle use increase exponentially, which would have been very damaging to the ecology. Thankfully we averted that scenario."

"We look forward to the day the rail-trail can be enjoyed by pedestrians, hikers, birdwatchers and cyclists who seek healthy human-powered outdoor recreation, to quietly enjoy nature. For the many species such as Western toads, turtles, lizards and garter snakes that cross the trail as part of their seasonal movements, the non-motorized designation will mean the very welcome removal of a cause of disturbance and mortality." She notes that this summer a Bald Eagle pair attempted to nest above the rail-trail right-of-way by Snk'mip marsh. "They'll certainly be happy to no longer have the dust and disturbance of noisy vehicles roaring past beneath their nest."

### What's Next for Snk'mip?

What's next for the sanctuary? Visser replied that pending raising adequate funds, plans are in the works for a collaboration with the Autonomous Sinixt to add some interpretive historical/cultural/artistic components to the sanctuary (which is located in the area of a historical Sinixt village: Snk'mip). And, given the success of restoration work thus far, the Valhalla Foundation for Ecology will also be looking at further enhancements to turtle habitat and reptile and amphibian denning structures. Weed-pulling and invasive species control will also be work that is ongoing.

The Snk'mip Marsh Sanctuary wetland is the jewel in the crown in a chain of wetlands along what has been termed the Bonanza Biodiversity Corridor (the riparian corridor along Bonanza Creek between Summit Lake and Slocan Lake). Several other wetland areas in this corridor are being restored this fall by the Slocan Lake Stewardship Society. Overall, given the state of affairs on this beleaguered planet, the SLSS and the VFE are providing some welcome respite for nature.

## THANK YOU

*A huge thank you from the frogs, turtles & toads, the snakes, the bears & birds, and all the other threatened and sensitive species whose habitat is now restored and better protected thanks to you. The Valhalla Foundation for Ecology's 2021 restoration project at the Snk'mip Marsh Sanctuary was supported by:*

### 2021 Funders:

Columbia Basin Trust (Environment Grants Program) • Columbia Basin Trust (Trail Enhancement Grants Program) • Habitat Conservation Trust Foundation • McLean Foundation • Vancouver Foundation • Slocan Valley Legacy Fund • Fanwood Foundation • Regional District of Central Kootenay (Recreation Commission 6) • Fish & Wildlife Compensation Program • And many local individual donors... thank you!

### Contractors & Volunteers:

Robin Annschild, Wetland Restoration Consulting • Miranda Cross, Wetland Restoration Consulting • Stuart Nelson, Silverton Transport • Mike Nelson, Silverton Transport • Leh Smallshaw, Wetland Restoration Consulting • Kimberly Joines, Accessibility Consultant • Gary Davidson, Bird Expert • Tara Morris & Tyler Bradley • K.L. Kivi • Bryan Whelan • Amber Peters • Tara Lynn Betts • Mike Sarell • Lorna Visser, Project Co-ordinator • Wayne McCrory, Consulting R.P.Bio • Laurie Frankcom, CKISS • Kerry McArthur & Mark Wolfe, WestWord Communications • Rob Tupper, Monashee Surveying • Heather Dewey and everyone who helped with pond-creation

### Supporting agencies & conservation colleagues:

Autonomous Sinixt (matriarch Marilyn James) • Tim Davis, Habitat Biologist, Ministry of Forests, Lands, Natural Resource Operations and Rural Development • Area H Director Walter Popoff, Regional District of Central Kootenay • Nelson Wight, Planning Department, Regional District of Central Kootenay • Central Kootenay Invasive Species Society • Slocan Lake Stewardship Society • West Kootenay EcoSociety • Kootenay Conservation Program • Lucerne school, Nakusp school, Winlaw home-school group, Ready, Set, Learn group, Know Your Watershed group, and the many students and teachers who visit Snk'mip for environmental education programs • *The Valley Voice* newspaper



The VFE's accessibility consultant Kimberly Joines measures the slope on a section of the new wheelchair-accessible (with assist) trail created at the Snk'mip Marsh Sanctuary. This inclusive pathway leads to an expanded viewpoint that has been opened up to provide a beautiful overlook of the marsh.