

## THE NATURE TRUST OF BC MAGAZINE



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## Together, we are making a difference

Wheaton Precious Metals is pleased to support The Nature Trust of British Columbia and their important work of protecting the natural riches of our province.

Together, we are making a difference in preserving the environment for future generations.







Building a Conservation Legacy



Why Can I Visit Some Properties But Not Others?



See the Forest for the Trees



## Current Projects

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COVER PHOTO
Pileated Woodpecker, by Glenn Bartley

## Message from the CEO

id you know that British Columbia is the most biologically diverse province in Canada? More than 70 per cent of all of Canada's plants, birds and animals live right here in BC. But, of the species assessed almost half (43 per cent) are on watch lists because of low or dwindling populations.

It happens a little at a time—chipping away at the land and habitats available until, little by little, there's real loss.

We know that one of the best ways to protect species is to protect their habitat.

As CEO of The Nature Trust of BC, I'm proud to work with a highly skilled staff and a dedicated volunteer board of directors who are passionate about protecting our natural world through land conservation.

As a father of three energetic little boys, it never ceases to amaze me how thrilled they are to see what is hidden under a rock on the beach or under a log in the forest.

Working to keep nature in their future—and in all our futures—can seem daunting especially as we face the twin crises of biodiversity loss and climate change.

But I'm hopeful. There are solutions and there are tangible ways to make a difference.

One of them is to invest in conserving habitats that not only protect species at risk but also help mitigate climate change by safeguarding carbon sinks such as wetlands, forests, grasslands.

We know these efforts make a difference because The Nature Trust of BC has a 51-year track record of successfully conserving vulnerable habitats and species. The way we do that is by buying and protecting ecologically significant private land. Today with the help of our partners, we have conserved more than 500 properties covering more than 180,000 acres (73,000 hectares) across the province.

But there is more to do. And the need is urgent. We're



Dr. Jasper Lament, CEO

in a race, not just against time but against encroaching development and the rising costs of land.

In the following pages we will share with you how we are working to protect forests on Saturna Island, peat bogs and forests near Prince George and wetlands around Columbia Lake. We will also share stories about recent significant land acquisitions, a major wetland reconstruction effort and highlights of our fundraising Gala.

None of this work would be possible without you. We are grateful for the conservation-minded land owners who are willing to sell or donate their property, for the donors who make an annual gift, for our monthly donors who spread out their investment in conservation and for those special people who leave a legacy gift. To every supporter, thank you. We need you.

If you agree that habitats are worth saving, that species at risk are worth protecting, and that the work of The Nature Trust is valuable, please consider supporting our work by making a contribution to The Nature Trust of BC. Every dollar counts. Every dollar stays right here in BC.



### NATURE TRUST OF BC MAGAZINE

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## Working with Nature

We think British Columbia is beautiful. It says so right on our vehicle license plates.

And one of the reasons that British Columbia is considered so beautiful is that we have the most biodiversity of any Canadian province or territory.

Yet we are facing two intertwined natural crises: biodiversity loss and climate change. While the scope of these twin crises can seem overwhelming, there are tangible solutions that can make a difference. And one of those solutions is working with nature.

Nature-based climate solutions like land conservation are suddenly in the spotlight. Healthy ecosystems like wetlands, estuaries, forests and grasslands are powerful ways to capture carbon. At the same time, these carbon rich ecosystems also sustain the biodiversity of plants and wildlife, including species at risk.

The Nature Trust of BC has been a leader in land conservation for more than 50 years – long before the term "nature-based solutions" was coined. We have protected more than 500 properties and more than 180,000 acres (73,000 hectares) but we know we have to move even faster to keep pace with rapid biodiversity loss at a time when land is becoming more expensive and fragmented. That is why five years ago we made the bold decision to accelerate our land acquisition program—a commitment that includes taking on the responsibility and cost of maintaining, restoring or enhancing every property we purchase. It is clear that in this new era, climate change will be a constant theme in everything we do in land conservation.

## It is clear that in this new era, climate change will be a constant theme in everything we do in land conservation.

When the endangered ecosystems of forests and grasslands are preserved through strategic land conservation, land management and restoration efforts, they become more

resilient. They are better able to withstand the impacts of climate change such as the extreme weather events we are experiencing in BC.

One of the most productive ecosystems in the world are wetlands, which are a priority for The Nature Trust. By protecting wetlands we provide habitat for many species including migratory birds, an effort that has become increasingly important because North America's bird population has declined by 30 per cent since 1970. But wetlands do much more, they are also powerful carbon sinks and act as sponges to mitigate flooding.

## Wetlands are powerful carbon sinks and act as sponges to mitigate flooding.

To protect biodiversity and address climate change, The Nature Trust uses science-based conservation assessment tools that help identify a property's biodiversity values and how to protect them. They also incorporate projections of climate change into future biodiversity values. One example is our Enhancing Estuary Resilience Program, a multi-year project to sustain fish and fish habitat in a changing climate. This program utilizes comparative assessments of 15 different estuaries to prioritize efforts.

We don't do this work alone. We are grateful for the support of many conservation-minded organizations and for our partnerships with First Nations who bring valuable traditional conservation knowledge to our work. The Federal government has also acknowledged the important role of land conservation in mitigating climate change with a commitment to nature-based solutions to build resilience and help Canada meet its 2030 and 2050 climate change objectives.

Working with nature provides more than hope. It offers tangible actions such as conserving, protecting and caring for critical habitats that help mitigate climate change, and help keep British Columbia beautiful.

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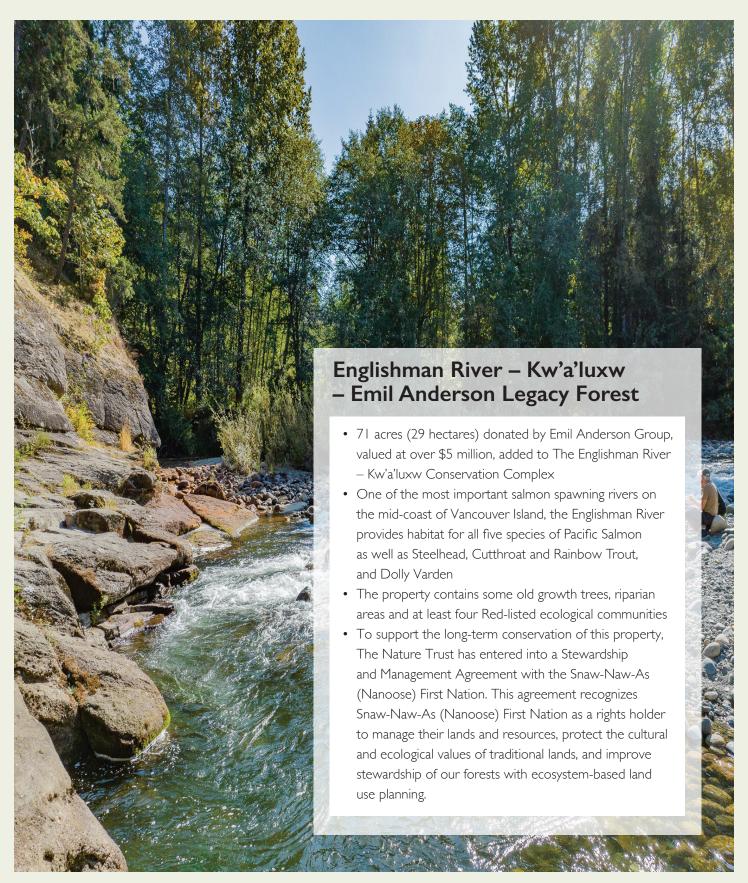
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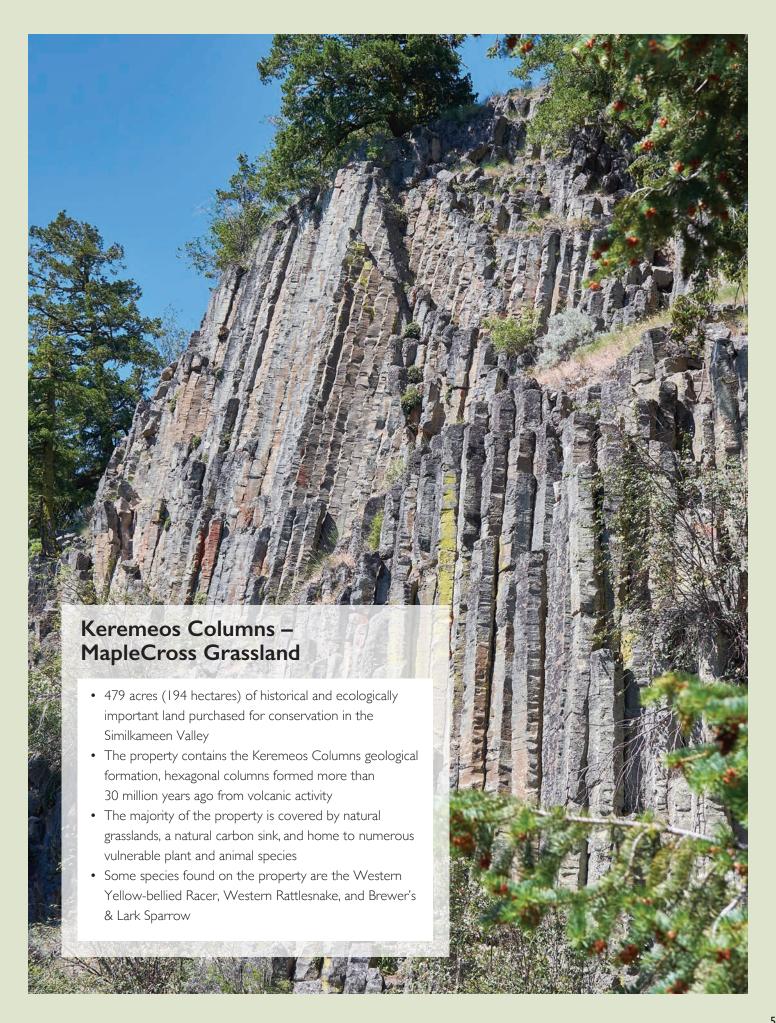
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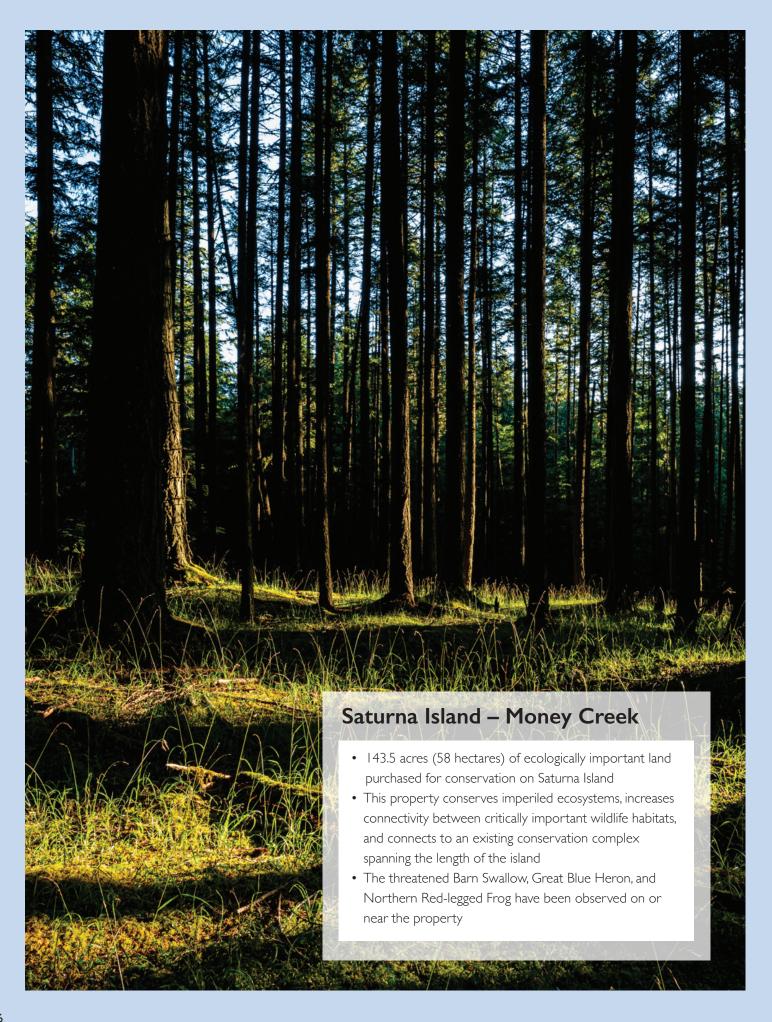
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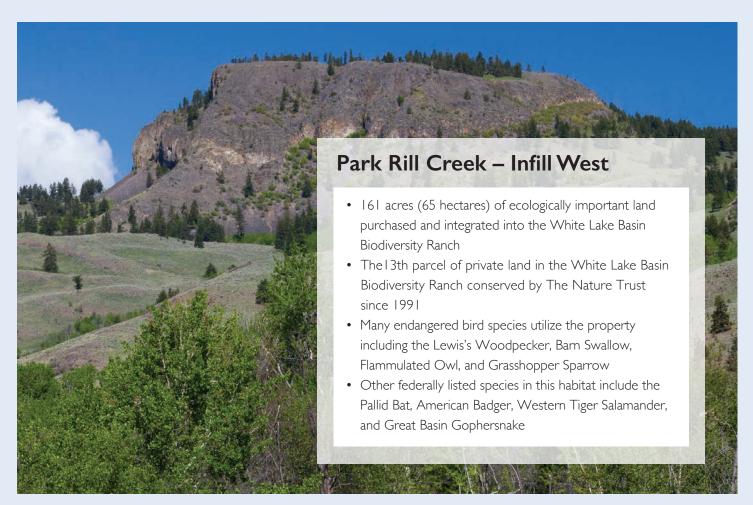
## Building a Conservation Legacy

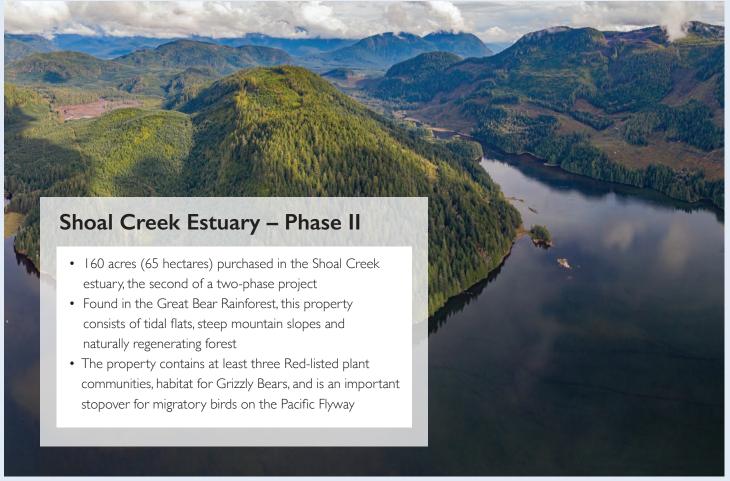
Since spring 2022, The Nature Trust acquired five new conservation areas totalling 1016 acres (411 hectares) of ecologically sensitive land.











## Everyone wins when we take care of the environment.



Green Today. Green For Life.



The Nature Trust of BC's 50th anniversary with an endowment of \$50,000.

This gift will support priority projects over three years through the Odlum Brown Land Acquisition Fund.

Odlum Brown and The Nature Trust of BC have a long, rich history, beginning with one of Odlum Brown's founders, Colonel William 'Tom' Brown, who was one of the founding directors of the thennamed Second Century Fund. This connection has endured ever since due to our organizations' shared values of supporting the communities where we live and work.

Odlum Brown has been helping British Columbians achieve their financial goals for nearly 100 years, and we look forward to continuing to do important work alongside The Nature Trust of BC for many more decades to come.



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## Kids need Nature. lature needs Kids.

NatureKids BC helps children get outdoors to play, explore, learn about and take action for nature.

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s a land trust, we often get asked why some of our properties allow for recreation while others do not. Because each of our properties has its own unique variety of habitats and species, they all require different levels of management and care. Some properties can sustain certain kinds of recreation with minimal impact to the land and ecosystems, while other properties are far more sensitive to the presence of people. Protecting species and ecosystems is the key priority for our conservation efforts.

It is important to remember that conservation areas are not parks. They have been selected for conservation for their ecological value – many contain rare and endangered ecosystems, plants and animals. These areas are managed to give these species a chance to flourish with as little disturbance as possible.

But we also understand the importance of giving people the opportunity to get outdoors and enjoy the natural beauty of our amazing province. There are many people who don't have sufficient access to the outdoors, negatively impacting their physical and mental health. Research has shown that park visitation, fishing, camping, and outdoor play have substantially declined among children over recent decades. Meanwhile, significant amounts of research have demonstrated the benefits of nature on our mental and physical health, including reduced stress, better sleep, reduced depression and anxiety, lower blood pressure, improved child development, and reduced obesity and diabetes, among others.

The Nature Trust has to balance the need for outdoor recreation with its conservation goals. Unfortunately, outdoor recreation can have negative effects on the environment. Everything from our direct physical contact with the soil to side effects from our presence can become serious issues.

Trampling and soil disturbance are major issues in conservation areas. As humans move through nature, they can damage the mainly organic top soil layer, called the "organic horizon". As the organic horizon is pressed, the soil loses its ability to absorb water and retain moisture and increases runoff and nutrient loss. The impact of trampling is more apparent

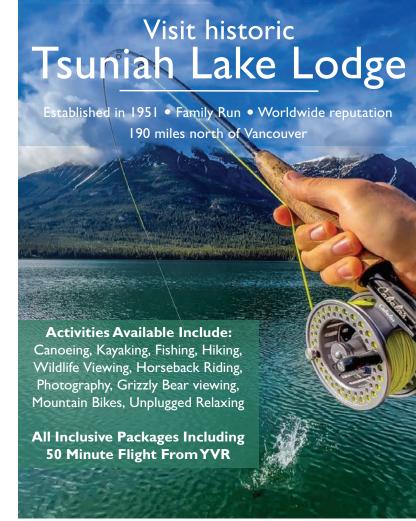
## **Becoming Nature Positive**

At Teck, we've set a goal to become a naturepositive mining company by 2030 by conserving or rehabilitating at least three hectares for every hectare affected by our mining activities.

Working towards being nature positive builds on our commitment to biodiversity and our passion for protecting the land where we live and work.

Learn more at teck.com/nature-positive









on vegetation, which can get broken and destroyed as people leave the designated trails. Disturbance of soils leaves space for invasive plants to take root and displace native plants, reducing habitat integrity for wildlife.

There are further impacts of recreation on wildlife. Habitat destruction reduces an animal's ability to meet its basic survival needs. For example, the construction of a trail can fragment the habitats of small animals, reducing the space in which their populations can thrive and leading to decline. Pollutants, litter, or food left by visitors can have devastating consequences, such as dangerous animals getting acclimated to human food. As bears get used to the presence of humans and to eating human food, they lose their fear of people, increasing the likelihood of unwanted or dangerous interactions – often resulting in the animal ending up having to be removed. Direct animal-human encounters can also affect their migration patterns.

This is why The Nature Trust of BC has some properties where recreation is allowed and others where the land is left to wildlife. Land conservation is a balancing act between the interests of people and the interests of nature itself. It is so important for people to have the chance to get outside and appreciate the natural world, but this need must be balanced against the possibility of damage to natural environments. This is why The Nature Trust is committed to sound land management.

With good knowledge and intent, land conservation can help us protect nature and allow for outdoor recreation where appropriate. This is why, on properties that are open to public recreation, we require people to stick to the marked trails, to travel on foot only, to keep their dogs on leash, and not to litter. All of these practices can help ensure that we are respecting the land and disturbing it as little as possible with our presence.

## Nature Trust properties to visit in your community

**Buttertubs Marsh** is a 23-acre reclaimed freshwater marsh habitat within the City of Nanaimo, with a 2km loop trail around the marsh, observation decks and a tower perfect for bird watching.

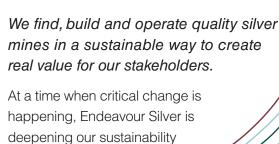
**Boundary Bay** is a 79-acre Conservation Area in Delta and a vital link in the Pacific Flyway that provides a great opportunity for walking, photography, and cycling.

The **Hoodoos** Conservation Area covers nearly 9,700 acres in the East Kootenay and boasts incredible scenery, including hoodoo rock formations, unique wildlife, and stunning recreational trails.

**Vaseux Lake** Conservation Area protects 484 acres of critical Bighorn Sheep habitat in the Okanagan. Trails throughout the property lead through grasslands, forests, rocky outcrops, and the panoramic views.



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t's no secret that there is a growing list of wildlife species that are vulnerable, threatened, or critically endangered in BC. Some species, including the greater Sage-Grouse, Hadley Lake Stickleback, and Dawsoni Caribou, have even gone extinct over the past few decades. But while it's true that we're losing biodiversity among wildlife, amphibians, and insects faster than we can categorize them, a parallel story is unfolding among plants and trees. Unfortunately, the latter story is often overlooked.

There are an estimated 60,000 tree species that we know of around the world. According to the

IUCN Red List, approximately 8,000 species, over

10% of the Earth's total, are globally threatened

with extinction. At least 77 tree species have

become extinct in the past 100 years, with many

more no longer found in the wild.

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# See the Forest for the Trees

British Columbia and Ontario have the most significant numbers of rare plants and trees in Canada. Many of these species are more common in the US and reach their northern limit along the Canada-US border. However, this is also where most Canadians reside, leading to a high concentration of agriculture and industrial activity in this area. Because of this, the natural habitat of many trees has been damaged or destroyed.

Why should we care about endangered trees?

Aside from their cultural significance and natural beauty—which can't be overlooked—trees benefit surrounding areas and act as meaningful anchors in an ecological niche. Without them, entire ecosystems could collapse. Trees serve as homes, nutrient sources, carbon sequesters, oxygen producers, pollution absorbers, cooling agents,

water filtration systems, and so on.

Trees are often less vulnerable to natural ecosystem disturbances. Hence, their continued health and life also allow many other life forms to regenerate and thrive—including the plants we humans greatly benefit from. But with rampant deforestation and exploitation, even these pillars of biodiversity are in trouble.

While we can't bring back trees from extinction, we know that land conservation is critical in maintaining healthy forests, trees, and biodiverse ecosystems. This is why The Nature Trust of BC needs your help to continue protecting precious land. When we allow nature to thrive, it benefits both people and the planet.

These are the endangered trees you can find here in BC.

## Whitebark Pine (Pinus albicaulis)

Blue-listed taxon in BC (special concern)

The Whitebark Pine is a subalpine tree species identified by its broad spreading crown and beautiful twisted branches. Facing the combined threats of habitat loss, climate change, the Mountain Pine Beetle and Blister Rust, the Whitebark Pine's BC population has been in decline for several years.

Because this species is not of commercial value, getting the tree recognized as endangered was challenging when researchers first tried to call attention to the issue. In 2012, it was added to the federal endangered species register under the Species at Risk Act.

This evergreen, coniferous tree can be found in southern BC, east of the Coast-Cascade Mountains. Considered a keystone species, it is an important food source for many birds and small mammals, particularly for Clark's Nutcracker, which plays an essential role in seed dispersal.

## Seaside Juniper (Juniperus maritima)

Yellow listed - but considered G3 = vulnerable to extirpation or extinction under the Global Conservation Status

A recently discovered tree species endemic to the Salish Sea region. They are a unique juniper species as they have evolved physiological genes to facilitate growth in mild, wet environments, unlike many other similar species.

It is frequently found on windswept points and small islets. A famous location at Squitty Bay features some old-growth Seaside Junipers over 400 years old. Considered threatened to vulnerable in BC as it occurs in a very restricted area over only 5000 km² on southeast Vancouver Island. It is now known as the rarest North American juniper species.

A small population combined with the increasing threat of climate change risks causing further declines in this species over time. Higher summer temperatures are causing more extended drought periods, increased wildfire occurrence, and more significant numbers of threatening pests and diseases.

## Peach-leaf Willow (Salix amygdaloides)

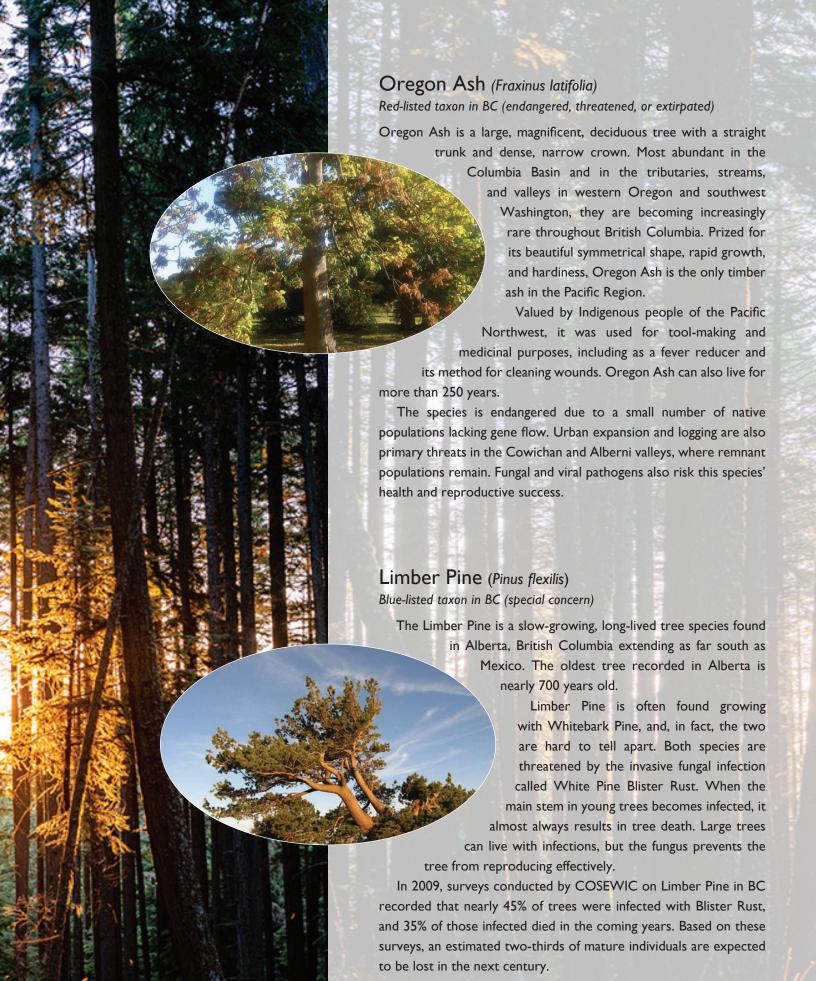
Blue-listed taxon in BC (special concern)

The Peach-leaf Willow is a fast-growing deciduous tree with beautiful weeping branches and fragrant white flowers that bloom in late spring. It occurs throughout North America, from southern Canada to Pennsylvania and west to Texas. In BC, it is only found in the Okanagan Valley at Osoyoos Lake and from Kelowna to Vernon.

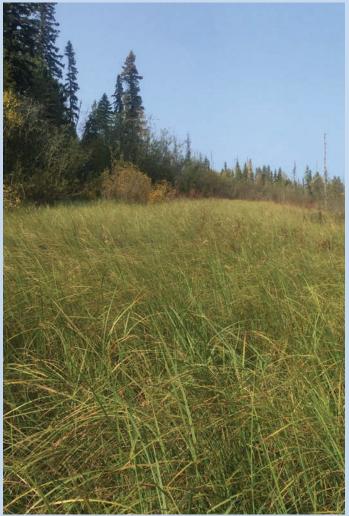
This tree provides excellent habitat, nesting, food, and shelter for many birds, including raptors, waterfowl, and songbirds. Across their range, willow tree communities are known to provide habitat for Elk, Mule Deer, White-tailed Deer, and Moose.

Peach-leaf Willow is often found in wetlands and along the shoreline of rivers and streams – all habitats that have been disappearing over the last century.









## Meteor Lake Wetland - Bog

The Nature Trust of BC is fundraising to purchase the Meteor Lake Wetland – Bog this fall. This 581-acre (235-hectare) wetland property is located about 70 km northeast of Prince George and connects to one of the largest wetlands in the Upper Fraser River Valley. It is located on the traditional territory of the Lheidli T'enneh First Nation. This land is notable in that it contains a plethora of rare wetland environments, including peatland ecosystems among its bogs and fens. Peatlands serve an important role in climate resilience, absorbing greenhouse gases and housing rare species and ecosystems.

Peatlands often provide unique food, cover, shelter and breeding spaces for numerous animal species as well, including amphibians, birds and mammals. The property provides habitat for Grizzly Bear and Moose as well as many species of special concern. Northern Goshawk (SARA Schedule I – Threatened) have been observed within the Meteor Lake Wetland conservation complex and White Sturgeon (SARA Schedule I - Endangered) have historically been identified in the area.

We need to raise the remaining \$75,000 to protect this rare peat bog to help combat climate change.



### Columbia Lake North - Wetlands

The Nature Trust of British Columbia has the opportunity to purchase 165 acres (67 hectares) of conservation land in the Columbia River Valley. This property, referred to as Columbia Lake North – Wetlands, is located at the north end of Columbia Lake, within the traditional territory of the Ktunaxa Nation and the Secwepemc (Shuswap Band). The majority of the property is a riparian wetland complex that includes open water, marsh and swamp wetlands mixed with willow-dominated riparian communities and pockets of dry forest. It is located in the very dry cool Interior Douglas-fir (IDFxk) biogeoclimatic zone – a zone of conservation concern.

The land is home to a variety of species of concern, including the Blue-listed Great Blue Heron and Red-listed American Badger (SARA Schedule I Endangered). The Barn Swallow, Bank Swallow, and Common Nighthawk (all SARA Threatened) have been observed near this property, as has the Western Painted Turtle (SARA Special Concern). The area is excellent habitat for a variety of animals, including bears, wolverines, deer, elk, and waterfowl.

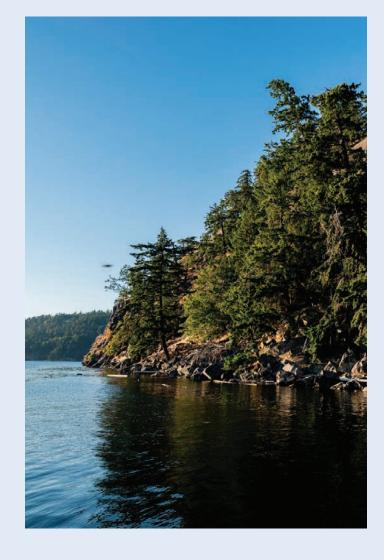
We need to raise the remaining \$70,000 to protect this vital wetland forever.

### Saturna Island - Mount Fisher Bluffs

The Nature Trust of British Columbia is working to acquire 79 acres (32 hectares) of land on Saturna Island, to be known as the Saturna Island – Mount Fisher Bluffs. This property will be the latest land to be conserved in the Southern Gulf Islands, adjacent to the Southern Gulf Islands National Park Reserve of Canada. This property consists primarily of herbaceous bluffs, mixed coniferous forest, including priority Garry Oak ecosystems, and grassland ecosystems. The property contains six sensitive ecosystems in a relatively natural state. This land is located near The Nature Trust's newly purchased Saturna Island – Money Creek conservation area, and is located on the traditional territory of the Quw'utsun First Nation.

The Mount Fisher Bluffs contain various at-risk plants, animals, and ecological communities. The Red-listed White Meconella and Lindley's Microseris (both SARA Schedule I Endangered), as well as the Slender Popcornflower (SARA Schedule I Threatened) occur on the property. As do the Blue-listed Barn Swallow (SARA Schedule I Threatened), Great Blue Heron *fannini subspecies*, and Peregrine Falcon anatum subspecies (both SARA Schedule I Special Concern).

We need to raise the remaining \$150,000 to protect this amazing property for future generations.





Wetlands represent critical breeding, rearing, feeding and staging habitats for many species of fish, wildlife and other wildlife. Relative to surrounding areas, wetland habitats often support high levels of biodiversity and a disproportionate number of listed species.



## Wildlife, Wildsight, and Wetland Resilience at Big Ranch

A combination of science and sweat helped create a new wetland in the Elk Valley, bolstering efforts to protect and conserve this ecologically rich region.

Just off Highway 43, between Elkford and Sparwood, in ?amak?is Ktunaxa territory, the Big Ranch Conservation Area is nestled in the valley bottom, high Rocky Mountains hedging in its borders. Scattered broadleaf deciduous Black Cottonwood and evergreen Spruce trees spread patchy shade across the gently sweeping grasslands and rolling hills. In summer, wildflowers dot the landscape with bright splashes of colour.

Management objectives for this conservation area focus on maintaining and enhancing habitat values for Rocky Mountain Elk, and specifically the herds that utilize this area as critical winter range. Aside from elk, many wildlife species use this land, and most could benefit from more reliable water sources across the landscape.

This 1195-acre (484-hectare) conservation area was purchased between 1990 and 2003 by The Nature Trust of British Columbia (NTBC). An expansive, multi-year restoration project known as the Big Ranch Ecosystem Enhancement Project (BREEP) is being funded primarily by Columbia Basin Trust and led by the Sparwood and District Fish and Wildlife Association (SDFWA). The project includes restoration and enhancement activities on the important forest, grassland and wetland ecosystems within the conservation area.

"There aren't a lot of wetlands on the local landscape," explains Michelle Daniel, Nature Trust field technician.

The Elk River runs along the east of the property, and culverts allow water to flow from nearby roadsides, but much of the land here doesn't retain enough water to create the eco-rich habitat found in a thriving wetland. When in the field, staff look for opportunities to create ecological lift. At this project site, staff observed some existing basins, likely dug by a past rancher, which weren't retaining water long. Below the basins were failed dams and ongoing erosion.

To encourage water stability on the site, reduce flooding, and increase biodiversity, the project team hired Tom Biebighauser, a renowned wetland restoration consultant specializing in restoring wetlands that benefit plants and animals and are built to last without ongoing maintenance,

to design new wetland builds here. Miranda Cross, a wetland restoration specialist with Rewilding Water and Earth Inc., implemented the designs this year.

After an excavator dug out four basins (each with dimensions ranging from 40 to 50 feet), participants worked with hand tools on the finer detailing to make basins wetland-ready. They pulled rocks and raked the surface smooth before lining the basin with heavy-duty fabric, above and below an aquatic-safe pond liner and a layer of soil. It was tough work: a  $50 \times 50$ ft liner weighs over 800 pounds! Once liners were tacked in and trimmed to shape, and soil back on top, native seed was sown to help establish a vegetative layer. Woody debris was placed throughout to add structure and habitat.

Excess soil, removed to add depth to basins, was piled in rough and loose formation. This will promote habitat for the badger, a species at risk observed on the Big Ranch.

Working with hand tools, crews filled in divots, previously forming narrow, incised channels of water, to help achieve the slow-flow, wet meadow effect, reusing sod pulled from the basins.

"We've targeted (to build) more of a wet meadow leading between basins now, to allow water to slowly pass between the basins and beyond, instead of a channelized, quick-moving flow. This will allow for better treatment of storm water and agricultural runoff," says Michelle.

A similar project was completed further south on the conservation area in 2015, where erosion was addressed and wetland basins were constructed along Nordstrum Creek. While helping with the wetland restoration project, members of the Youth Climate Corps (YCC) toured the previously restored site.

"It was interesting to see a wetland that was built a while ago, to see how the landscape there has changed compared to the holes we're digging," shares YCC member lvy Desboilles.

This was a great partnership for the Nature Trust Kootenay Conservation field crew to work alongside other groups who contributed on-the-ground support to the project, including The Sparwood and District Fish and Wildlife Association, the BC Ministry of Land, Water and Resource Stewardship, Wildsight YCC, Columbia Power Corporation, and the Rocky Mountain Trench Natural Resource Society.

The project was made possible through financial support from the Columbia Basin Trust, Teck Resources, the Sparwood and District Fish and Wildlife Association, The Nature Trust of BC, The Habitat Conservation Trust Foundation, North Coal Limited and The Elkford Rod and Gun Club.

## wesgroup

we see potential.

Wesgroup strives to make a positive impact in the communities where we work and live. We support organizations that produce tangible benefits in many different ways as well as integrating sustainable practices into our business and communities.

As we head into a future very different from our past, we are committed to being the change we want to see in the world.



### To date, we have

Revitalized 189 acres of previously contaminated brownfield sites



Collected 265 lbs of garbage since 2015 from Vancouver's Shorelines



Planted 70,000 trees on BC's Sunshine Coast



Provided 400,000 bees a home at River District



Sadly, the Oregon Forestsnail's elusiveness is a result of its declining population.





## Restoration at a Snail's Pace

This past fall, the Lower Mainland Field Crew spent hours gazing with rapt eyes on leaf-littered forest floors with the hope of catching a glimpse of a particularly elusive species of snail, the Oregon Forestsnail (Allogona townsendiana). As an endangered species on the federal Species at Risk Act and the provincial Red list, this large native land snail proved rather elusive; the Crew even resorted to getting on their hands and knees and searching under Stinging Nettles and Large Leaf Maples (markers of their preferred habitat). While it once used to roam the O horizon (the upper organic layer of soil) from Tsawwassen through the Lower Mainland, habitat fragmentation and increasing development have shrunk their critical habitat to a fraction of its former size.

With this in mind, The Nature Trust of BC has been working with BCIT students to begin the long process of species rehabilitation. BCIT students spent last summer assessing ten Nature Trust properties to find suitable habitats for Oregon Forestsnail translocations. The habitat characteristics that they searched for included malleable soils, leaf litter, maple species, Stinging Nettles, a combination of dense forests and edge habitat, and rather counter-intuitively, no current presence of Oregon Forestsnails (a silver lining to the crew not sighting any of these terrestrial gastropods). Of the ten properties surveyed, only one was deemed a suitable habitat for future Forestsnail translocations, highlighting the difficulty of these types of restoration projects.

The Oregon Forestsnail is endemic to western North America and as an adult, it is identified by a thick white apertural lip (the lip surrounding the opening of a snail shell) and a deep central pit (the central hole on the underside of the shell). The shell is pale brown or straw-yellow and ranges from 28 to 35 mm. Since large native land snails are rare in the coastal forests of BC, the Oregon Forestsnail is a valuable component of the biodiversity of these environments. They sequester calcium and other minerals from their environment as well as perform important ecological functions as decomposers and consumers of plant matter. The Oregon Forestsnail may also function as a dispersal agent of native seeds, lichens, and fungi, adding to the biodiversity of their environment — albeit at a snail's pace. Participating in the Oregon Forestsnail surveys showed the crew that even the smallest of species can play a key role in their ecosystems.

Thank you to BCIT Fish, Wildlife and Recreation students.







## Planting the Seed

onservation means we must always look toward the future – making sure that we can care for the land and ecosystems in perpetuity. One of the very best ways to ensure this is to teach the next generation to also care for the land. That is why our Okanagan Conservation Field Crew joined forces with schools from the Okanagan Similkameen School District to spend some time in one of the most endangered ecosystems in the province.

Students from local schools visited our Antelope-brush Conservation Area throughout the spring to learn about conservation and to help take care of the land. These young

people learned about local wildlife, endangered species, animal tracking, and Indigenous perspectives on place. They also helped out the crew by doing restoration work such as planting seedlings and setting up wildlife cameras.

Antelope-brush ecosystems also represent a uniquely British Columbian conservation story.

This initiative was in collaboration with a number of local conservation organizations, including The Nature Trust of BC, Osoyoos Desert Society, Okanagan and Similkameen Invasive Species Society and the South Okanagan Conservation Fund, among others.

"Our goals were to help students learn more about this critically endangered [Antelope Brush] ecosystem, and also to provide them with a meaningful, hands-on way for them to be part of the solution," said project organizer Allison Dietrich in a video on the program. Dietrich said that this approach to education provided a more holistic, rounded experience learning about Antelope-brush ecosystems, and

students were inclined to agree.

"I liked planting the Antelope-brush because I knew that I was helping the ecosystem and it was something good for the environment," said one participant.

This kind of initiative is especially important in the context of Antelope-brush ecosystems because this type of ecosystem is critically endangered in Canada and one of the most threatened types in the province. It is characterized by grassland steppe terrain covered in gnarled Antelope-brush plants. These grasslands contain over 40 federally-listed atrisk species, including the Behr's Hairsteak Butterfly, the Pallid

Bat and the Desert Nightsnake, all of which are provincially Red-listed.

The Antelope-brush species thrives in soil derived from windblown sand deposited by Ice Age glacial meltwater, which is scattered across Western Canada and the United

States. According to the Okanagan Similkameen Conservation Alliance, 68% of South Okanagan Antelope-brush habitat has been destroyed since 1938, making its restoration critical.

The organizers of this program hope that by engaging productively with an Antelope-brush ecosystem as children, these students will gain a new appreciation for critically imperiled biodiversity and the work that goes into restoring it. The statements of the participants themselves seem to indicate that this project is having the desired effect.

This initiative was a pilot project by the Okanagan Similkameen School District. Our team at The Nature Trust greatly enjoyed spending time with these young conservationists.



## Nanaimo River Estuary Restoration

The Nanaimo River Estuary is the largest estuary on Vancouver Island and is rich in natural resources. It's utilized by five of the Pacific Salmon species and various other wildlife, including Black-tailed Deer and American Black Bear. Birds are also abundant in the estuary, with over 200 species having been observed in the estuary.

The Nanaimo River and the associated estuary are both located on the traditional territory of the Snuneymuxw First Nation (SFN), who have sustainably harvested fish, shellfish, plants, and other foods and resources from the estuary for thousands of years. However, European settlement in the region introduced industrial activity and agricultural practices that disrupted the natural processes of the estuary and river, including tidal connectivity of the upper saltmarsh, deposition of gravel into the river, and changes to freshwater flow and distribution.

Over the last few years, The Nature Trust of BC and our partners at SFN and Fisheries and Oceans Canada, have invested significant effort and resources into removing and restoring some of the historic anthropogenic features and industrial land uses that have degraded the estuarine ecosystem, with approximately three kilometres of agriculture

berms removed, reconnection of tidal channels, and planting thousands of native plants to improve fish and wildlife habitat.

After our first three years of monitoring through our Enhancing Estuary Resiliency project, the Nanaimo River Estuary was identified as a top candidate for further restoration activities, with a long-sought after restoration project identified by both SFN elders and our restoration biologists; removing upwards of 8,000 m³ of gravel that created a bar along the main stem of the Nanaimo River (remnant from historic industrial activity) and creating a new channel for freshwater to flow. The gravel bar has rerouted the majority of freshwater into the western section of the estuary, significantly reducing freshwater to the vast majority of the estuary, limiting salmon migration routes, and decreasing juvenile salmon rearing grounds.

The fish window for this massive undertaking was relatively short, limiting us to just one month for in-stream work beginning in mid-July. However, our staff and project partners would be on-site daily for upwards of seven weeks, preparing the site and working out all the logistics of machine access, surveying in the proposed channel, installing a temporary bridge onto the gravel bar, collecting baseline water quality data, conducting bird nest surveys, removing invasive species, and a host of other tasks.

Additionally, with the high traffic along the only access road during the summer, it was decided that the rock pulled out of the gravel bar would be stockpiled in the upper estuary until the fall to minimize traffic to the local community. The gravel removal process produced over 800 truckloads of gravel to be stored, but thankfully, our friends at LaFarge Canada were happy to contribute to our project and will be moving the gravel in phases this fall to ensure minimal disruption to the local community.

Work days started early, kicking off with daily safety briefings before everyone started out on their assigned tasks. Fish salvages were conducted daily once the channel was beginning to take shape, as the overnight high tides would flood the new channel, leaving juvenile Salmon, Rainbow Trout, Stickleback, Sculpin and other fish species needing to be removed before work could begin.

Once the nets were clear of fish for two sets, silt fences were installed to keep sediment from entering the river as the excavator worked, and a turbidity logger was installed downriver to monitor any changes to the water column.

## The fish window for this massive undertaking was relatively short, limiting us to just one month for in-stream work beginning in mid-July.

As the weeks passed and the end of the fish window neared, the channel began to take shape, stretching approximately 330 m in length, 1.5 m deep and 14 m wide. Two riffles were built at either end of the channel to act as a grade control, with the upper riffle set to match an adjacent existing riffle and the downstream one to maintain water levels throughout the channel.

Nearing completion of the channel, bulk bags were filled and transferred onto the site to create a coffer dam, separating the main river from the newly excavated channel. The bags were placed around the channel and reinforced with silt fencing, thus allowing the excavator to work in the channel to remove the final stretch of gravel and connect to the river.

With the channel now complete, we will be continuing with our monitoring work in the estuary, including monthly water quality surveys, fish and wildlife surveys, and annually assessing flow through the new channel. We will also be moving toward the next phase of the project, which includes removing the stockpiled gravel, planting native species, and restoring the stockpile site.



Before



After





## NATURE TRUST BRITISH COLUMBIA

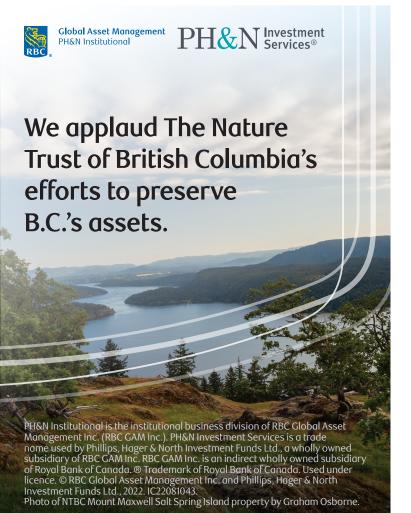
## Fall Gala 2022

Our first in person Fall Gala since 2019 was a stunning success!

We are so grateful for everyone who bought tickets, sponsored tables, bid on auction items and supported our work. Because of all of you, this was our biggest gala ever.

Funds raised will protect forest on Saturna Island and peat lands at Meteor Lake and wetlands at Columbia Lake. Each one of these conservation projects will protect biodiversity and help mitigate the impacts of climate change.

Thank you all for a wonderful night!

















## Music for the Birds and Bears

usic is what makes Chris Wood tick. The 52-year-old bassist is co-founder of The Wood Brothers, a roots band based in Nashville, Tennessee. Together with Chris's brother Oliver on guitar and Jano Rix on drums and keyboards, the trio records and performs a unique blend of roots American music inspired by blues, gospel, soul, R&B, jazz, folk and rock & roll. The Wood Brothers have gained a following across North America, performing year-round from coast to coast. They first recorded on Blue Note Records before a stint on country singer Zac Brown's label, leading to some collaborations with The Zac Brown Band. In 2018, The Wood Brothers received a Grammy nomination for their record One Drop of Truth, released on their own Honey Jar Records label.

However, life changing events and a pandemic brought Chris from Nashville to British Columbia. He married Laura Matthias, a wildlife biologist from BC. The couple recently moved from Salt Spring Island to Pender Island, where they run a small farm growing vegetables and hops. Through her work studying endangered species, restoring wetlands and collaborating with various organizations to conserve wildlife habitat, Laura has learned that the best way to help remaining wildlife is to conserve and preserve. She has collaborated with The Nature Trust of BC and liked their focus on land acquisitions and land management.

"I'm very influenced by her, always interested in and passionate about the environment and what we can do, but I think for probably most of my life I was a bit overwhelmed and not sure what kind of action to take. I was wanting to live what I believed, and so that's kind of what led us here."

Chris wanted to find a way to help, so this year The Wood Brothers will be donating one dollar from each ticket sold to The Nature Trust of BC.

So far, The Wood Brothers have raised significant donations

for The Nature Trust. The individual contributions are small but they add up over the course of the year. The Wood Brothers are what is referred to as a "third party partner", a group that collaborates with The Nature Trust to relay individual small donations to conservation as one large contribution. Often (but not always), a portion of sales is donated, like when you add on an extra few cents for charity to a purchase at the grocery store. The Nature Trust has collaborated with a number of third party partners, including Healthy Hooch Kombucha, local artist Elizabeth Gad and fundraisers Megan and Cody Kelso.

The Wood Brothers will be donating a dollar from every ticket sold at their concerts to American Friends of Canadian Conservation to support The Nature Trust's efforts. Every dollar will be matched with two from the U.S. Fish and Wildlife Service, so more endangered wetlands in BC can be saved.

At the end of the day, Chris is glad that his beloved music can make a difference for the environment.

"I think it took a long time to understand and appreciate that I could do anything useful with my platform...I think it's very important that we have to work across borders to preserve some kind of connectivity in terms of habitats and [bird] migration routes for all sorts of reasons."

"We have to do things for wildlife for its own sake, and conservation is so important for that and land acquisitions are so important for that, and The Nature Trust seems to be doing a great job of that...If we can work across the borders, eventually I think it makes a bigger impact."

The Nature Trust would like to thank The Wood Brothers and all other third party partners for their valuable contributions to making our mission possible. Visit our website to learn more about how you can donate to wetland conservation as a partner.

PHOTO: Chris Wood by Gus Philippas





## Conversations on Conservation

Mike Jacobs, Chair of Emil Anderson Group of Companies says, "If something makes sense to do, you have to do it."

So it's not surprising that Mike never gave up on a plan to donate a portion of his company's Englishman River property to The Nature Trust of BC to conserve in perpetuity. It was a deal that took 10 years to complete.

Mike is not easily daunted. He has overseen the expansion of the six-lane Highway 97 through Kelowna, the WR Bennett Bridge-Campbell Road interchange, the construction of the bobsleigh, luge sliding centre and ski jumps at the 2010 Olympics (including trucking snow to Cypress Mountain for the ski-cross event), many phases of the Kicking Horse Canyon Trans-Canada Highway, and helped build Emil Anderson Construction into a multi-faceted operation.

He is a great-grandson of Emil Anderson who started Emil Anderson Construction in 1938 as a road building business. Today, Emil Anderson Group of Companies encompasses nine divisions acclaimed not only for road construction expertise, but also for major civil infrastructure projects, highway road maintenance and residential/commercial development.

Mike spoke recently with The Nature Trust to share the fascinating story of his 10-year effort to make 71.4 acres (29 hectares) of Englishman River Lot D part of The Nature Trust's treasury of ecologically significant land across BC and how the legacy of Emil Anderson has continued through four generations.

In 2012, Emil Anderson Construction owned property along the Englishman River including a dormant gravel pit and the riparian forest you wanted to protect and conserve by donating it to The Nature Trust of BC. What's the history of this property and how did it launch your 10-year endeavour?

In 1960, my father, Gil Jacobs (company president from 1976 to 1996) bought for EAC, 80 acres known as District Lot 57 for \$6,000. We extracted gravel to build and repave the old Vancouver Island Highway, a number of highway projects in the 1970s and for major highway projects on the Inland Vancouver Island Highway including the bypass around Parksville in the 1990's

The property also included valuable secondary cedar growth which was actually zoned for resource extraction and logging. Even though we had the right to clear cut, or select log the property, we started to look at other options.

The Englishman River property in the flood plain is a fabulous piece of land to preserve. We were determined to find a way to protect it while still being able to build a residential development on the remaining portion of the land.

In 2012, you approached The Nature Trust of British Columbia with the idea of donating the riparian forest part of your Englishman River property for conservation. Did you have a connection with The Nature Trust?

I had known about The Nature Trust of BC for years. I knew about their property conservation in the Penticton area and their conservation of grasslands in the South Okanagan. I

knew they were doing great things and it was a good cause. One of the causes we supported was The Nature Trust's Earth Wind Fire fundraising event in Kelowna.

We have a company and family history of quietly supporting good causes, from Ducks Unlimited to providing Hope, BC with a Search and Rescue vehicle, decades of support to the Hope Golf Course and doing much work in kind for community amenities like the Mission Creek Greenway in Kelowna and Vedder River trails in Chilliwack. The company also believes in giving back through its employee-led Community Give-Back program.

## In 2022, this generous property donation finally became part of The Nature Trust's treasury of conserved land. Why did this deal take so long to complete? And did you ever think of giving up?

It was a complex land deal involving a land swap, a subdivision development and numerous stakeholders.

We just kept pushing, knocking off each hurdle one at a time.

## It seems your family has a history of sticking with things worth doing. What are some of the accomplishments you're most proud of?

We were part of the main effort to open the Coquihalla Highway to traffic flow after the flood damage in November, 2021. It was an all-out, 24/7 effort for 41 days and an exciting time in a contractor and engineer's life because you're asked to do what's almost impossible and then you go and do it. EAC is pleased to have responded to many natural disasters over the decades to open highways and railroads to keep goods and people moving.

There are many proud moments going back to 1942 when my great-grandfather Emil and his son Carl Anderson helped build the Alaska Highway in one season working alongside military engineers and every contractor available. Carl said it was the best time of his life.

## Based on a career that spans some 34 years in the construction and development in British Columbia, how do you view the next ten years and beyond, especially in terms of the environment?

This province is one of the best places in the world but we could do more to enhance climate resilience by creating more spaces in nature for people to enjoy, by managing our forests more productively, planting more trees, conserving more vulnerable land along with growing our economy and providing minerals and cleaner energy as the world transitions away from GHG emissions.

And in terms of business, if you want to get into construction engineering, get a job with a shovel first. I worked three summers as a surveyor's assistant and labourer on highway projects in BC and I tell the students I mentor at UBC, learn how to build

stuff and it will take you further in your engineering career than anything you learn in school.

The Emil Anderson Group is very proud of the company legacy in construction excellence, award winning development carried on through four generations. We have built infrastructure projects that opened up BC, with many still in use 6-7 decades later, worked on many environmental enhancements and restored infrastructure and property damaged by natural disasters. In our housing communities, preserving open space around our neighbourhoods is a key element of the livability of our neighbourhoods. The Englishman River land donation to The Nature Trust enhances the legacy started by Emil Anderson almost 85 years ago."

The Nature Trust of BC has acquired and managed land along the Englishman River since 1978, helping to protect and conserve species who call it home from the headwaters on the Eastern slopes of the Beaufort Range to the estuary near Parksville on Vancouver Island.

The Englishman River is in the Coastal Douglas-fir biogeoclimatic zone – BC's most endangered zone and one of The Nature Trust of BC's conservation priorities.

This interview has been edited for clarity and space.



We are proud to be sponsoring Nature Trust of British Columbia in their mission to preserve and protect wild natural areas that conserve iconic and important species at risk.

## **Upcoming Events**



## Calling Young Leaders: Vancouver

Each year we bring together young professionals interested in conservation for a fun-filled night out. This year's event will be in late February in downtown Vancouver. Shoot us an email if you would like to be involved in this great networking event: info@naturetrust.bc.ca



## Brant Wildlife Festival: Parksville-Qualicum Beach

From March 3 I—April 9 join us in Parksville-Qualicum
Beach for the annual Brant Wildlife Festival. Celebrating
the changing seasons and the epic migration of the Brant
Geese, events will be held each day. Visit BrantFestival.bc.ca
for more information.



## Fall Gala: Vancouver

The 2023 Fall Gala will be held at the Fairmont Hotel Vancouver in October 2023. Sponsor a table or buy a ticket to our premier fundraising evening. The night includes dinner, entertainment, auction, and a little conservation magic. More information will be available on our website.



## Conservation Land Management Workshops and Events: All Regions

Events are held throughout the year, across the province. Stay tuned to our website and your local naturalist clubs for more information. If you are a member of a conservation group and are interested in partnering with The Nature Trust, please contact us at 1.866.288.7878, or info@naturetrust.bc.ca



The Nature Trust of BC's 2022 Fall Gala was our biggest and best yet, raising over \$1.5 million. Your donations will help us protect carbon rich ecosystems that support biodiversity and fight climate change.

From all of us at The Nature Trust, a heartfelt thank you to our sponsors and donors for your incredible generosity.

To learn more about us or make a donation, please visit naturetrust.bc.ca or call 1-866 288 7878.



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## At The Nature Trust, we trust nature.

We trust the wetlands, forests and grasslands nature has provided to deliver nature-based solutions as part of the effort to fight climate change.



Please donate today! naturetrust.bc.ca/giving

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