



Alouette River Management Society

2021 Annual Report on Activities

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Alouette River Management Society

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Maple Ridge, BC. V4R 1R8

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-Final-

Land Acknowledgment

We acknowledge that the work of the Alouette River Management Society takes place within the traditional and unceded territory of the Katzie First Nation.

Financial Support

Thank you to the Province of British Columbia for its financial contribution to support the work we do in the Alouette Watershed. BC Community Gaming Grant funds are used to directly deliver our programs.



The Alouette River Management Society reserves the right to all photographs with exception of those as noted throughout this report. For any communications enquiries, please contact Alexandra Holmes, communications@alouetteriver.org

INTRODUCTION

Like so many other non-profit organizations in B.C. and across the country, the impact of COVID-19 has changed the way in which we work and serve our communities.

Throughout 2021, ARMS continued to follow the Province's Public Health Orders and Guidance so that we were able to offer safe and enjoyable youth and family activities. We worked with several organizations including the Lower Mainland Green Teams of Canada, BC Wildlife Federation, and the Maple Ridge Environmental School to bring ecological awareness to the community through a range of classroom programs, kids eco-camps, family fun days such as our Pollinator Awareness Day in July, Ridge Meadows Rivers Day in September and many days of community outreach with our summer staff in local parks along the Alouette River. We were engaged on the Alouette River picking up litter, dismantling rock dams, sampling sockeye salmon for their DNA, counting spawning salmon and much more.

2021's challenges were also complicated by the extreme rain events in November and December with catastrophic flooding in areas such as Sumas Plain, Merritt and elsewhere in south-west BC. Although we did not experience flooding here at the ARMS Rivers Heritage Centre, we know that many of our river residents did see very high water levels encroach on their properties, while areas such as Maple Ridge Park saw the South Alouette running through sections of it.

On behalf of the Alouette River Management Society Board of Directors, I am extremely grateful to all our volunteers, members, financial supporters, and the Maple Ridge-Pitt Meadows community for their amazing contributions during what has been another extremely challenging year for everyone.

We hope you enjoy our Annual Report on Activities for 2021 and look forward to seeing you in 2022 for more amazing youth programming, community engagement and Alouette Watershed advocacy!



Greta Borick-Cunningham
Executive Director



Chum salmon adults at ALLCO fish fence

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Education and Community Engagement

This year with COVID we were unsure what to expect for our programming as we wanted to be certain everything was handled with the utmost safety and care. We had our first ever virtual classes while we also resumed some in-person workshops with the appropriate safety measures. We delivered a total of **34 workshops in spring** for School District 42 for both Maple Ridge and Pitt Meadows. Classes were delivered to Meadowridge private school, the Odyssey program at Fairview for homeschool students, and Whonnock Elementary among others. Our most popular programs booked were focused on pollinators, however we also had interest in frogs and nocturnal animal workshops.

Although it was a slower spring than previous years due to COVID-19 restrictions, we made great strides with ZOOM teaching. It did take some planning and adapting with the classes, but overall we had a very positive response from teachers where virtual programming was the only option. Teachers mentioned students were very excited to have ARMS come in, as well as how engaging and interactive our workshops were. This year our goal was to provide both in-class and virtual workshops that were both informative and interactive to help combat the online fatigue experienced by most. **From March to June, we reached 700 students with our spring classes.**



Above left: In-person workshop with ARMS staff Jasmine; Above right: Virtual workshop with Jasmine for SD42 class

In March, ARMS hosted two weeks of spring break camps themed “Survivor” & “Hanging in Hogwarts”. Both camps were sold out with 24 children registered. Due to COVID-19 restrictions we reduced our typical camp registrations from 30 children to 12 per camp. Camps were also 100% outdoors hosted in ALLCO Park. Seven high school students volunteered over the two weeks of spring break as camp leaders to assist with games, arts, and crafts. This provided a great learning experience for older youth working with children. **Each volunteer earned 30 hours towards their graduation.**



Above left and right: ARMS camp volunteers and kids having fun in ALLCO Park, spring break 2021

Moving into July and August, we had another successful season of youth summer camps. We **offered six (6) weeks of camps** from July 12—August 20, 2021. All camps were held in ALLCO Park again due to the ongoing COVID-19 restrictions limiting public access on BC Corrections property where the Rivers Heritage Centre is located. Themes offered for summer camps included Survivor, Minecraft, Nature Detectives, and Nature Ninjas. We had an superb team of camp counsellors who provided fun and creative activities along with much energy. We were able to offer more camp spaces during summer due to high demand while still maintaining safety for all participants. Staff and volunteers worked with several different challenges including the intense heat, some forest fire smoke and high park use at the end of some camp days, however the park provided a safe place for everyone to enjoy themselves. We received a lot of positive feedback from the parents and kids. Thank you to the City of Maple Ridge Parks, Leisure & Recreation staff for their fantastic behind-the-scenes support!

Parent testimonials

“Honestly, the kids loved it. It was the best mental health boost they've had all year. Thank you for everything. They have asked to do it every year. ARMS has the best programs.”

“My son had a fabulous time in a beautiful location and spent each day having fun in nature with new friends. We are so thankful to ARMS for providing this incredible nature experience for him and all the kids. Wonderful! “

“My girls were thrilled with the survivor camp. 10+-. They are looking forward to your summer camps, see you again soon :)”



Above left and right: ARMS summer staff Aisha with camper; kids in ALLCO Park with ARMS summer camp staff Charlie



Above: More summer fun with kids and ARMS summer camp leader Antonie

In addition to our fantastic Camp Supervisor, Dan Mikolay, we had six amazing summer students to lead youth camps and community engagement in municipal parks. We were approved for \$28,712 from the Canada Summer Jobs Program to support these hires. Two of the summer staff participated in community outreach activities. They set up the ARMS tent in Maple Ridge and ALLCO Parks weekly to interact with the public sharing information about ARMS and our work in the Alouette Watershed while answering questions from the public and about river-related issues. They also led and attended different community events including Adopt-A-Block days, invasive species removals and storm drain painting.



ARMS summer camp staff from left to right: Tayah, Charlie, Antonie, Aisha, and Dan

PROFILE - Education and Outreach Summer Staff Experiences

Dave Zheng ARMS Summer Staff (June-August 2021)

“Being hired as a summer student worker at ARMS was nothing short of an amazing experience. My colleague Elise and I performed various tasks throughout the summer including researching salmon entrainment, fundraising, educating about salmon conservation, community engagement, and fieldwork. It was a role that had a lot of diversity and kept us on our toes, as every week was different. I remember one especially memorable fieldwork excursion that became an unexpected adventure.

Part of our responsibility for the summer was to monitor two channels near ALLCO Park, known as the Innergex Channels. When we set off to start our water testing, the first channel was a breeze. At the end of the channel, we were greeted by a family of deer. There was a mother with two fawns sheltered under the crevice of a huge tree trunk. I especially enjoyed the field work, because it got me into the field where I could see first-hand the type of habitats we monitor for water quality and wildlife. It was encouraging to see habitats that have had human intervention become areas that salmon and other wildlife could thrive and enjoy.”



Above: Dave identifying salmon fry at 232nd Street Channel, Maple Ridge

Elise Carelse, ARMS Summer Staff (June-August 2021)

“This summer ARMS had the opportunity to hire two Education Outreach Program Coordinators for two months. One of these hires was me (Elise), and the other was Dave. During our work term, Dave and I participated in many different ARMS projects, but the main part of our job this summer was to connect with the public in a time when there were not as many events to attend. To engage the public we helped to organize volunteer events and set up outreach tables at local Maple Ridge parks. For the public outreach section of our job, Dave and I set up tables at ALLCO and Maple Ridge Park throughout June and July. During this time, we had the opportunity to engage with the community in various ways. The public was always interested in what we were doing and supportive in our efforts. Kids especially had many questions about anything and everything in the river. Dave and I had many positive interactions with people concerned about the health of the South Alouette River and our local salmon species.

Throughout our summer contract Dave and I were also able to attend and set up a couple of outdoor events. It was nice to be able to interact with volunteers and see people making an effort to help their local communities even during these crazy times. At these events, many kids showed up and were eager to help the environment. It just goes to show how important ARMS is in teaching and getting kids excited in environmental stewardship at a young age. Overall, this summer has been an amazing experience for me. I got to participate in many different activities this summer and learn so much about what ARMS does for the local community. I am so thankful to have been a part of this incredible organization and to have connected with so many different people. A big thank you to everyone who came up to our tent at the park and to all the volunteers that showed up to our events! “



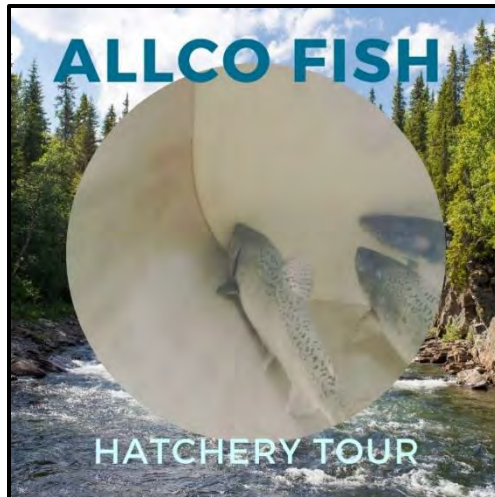
Above and right: Elise and Dave during ARMS community events

Highlights from ARMS Education and Community Engagement 2021

- ➔ **Delivered: 24 in-class Spring workshops (700 students)** to SD42 including Fairview Elementary, Whonnock Elementary, Meadowridge School, Yennadon Elementary, Hammond Elementary, Harry Hooe Elementary, Kanaka Creek Elementary.
- ➔ **Delivered: 10 virtual Spring workshops** to SD42 classes including: Yennadon Elementary, Alouette Elementary and Alouette Brownies. **(180 students)**
- ➔ **Delivered: 3 x Fall outdoor education classes** (Maple Ridge Park and ALLCO Park) for Home School and Yennadon Elementary School. **58 students participated and 6 school staff.**
- ➔ **Delivered: 8 x week-long day camps** for children aged 5 – 12 years. **Total attendance: 123 youth. Total camp days delivered: 38.** Themes included Minecraft in the Forest, Nature Ninjas, Nature Detectives, and Survivor. Guest speakers are engaged to talk about a range of themes including salmon, local wildlife, fossils, and bear-aware safety.
- ➔ **Delivered: 12 days of community outreach** at various municipal parks including Maple Ridge Park, Cross's Cabin and ALLCO Park.
- ➔ **Hosted: 2 storm drain marking sessions** with the 7 volunteers each in July with ARMS summer staff. Locations in Silver Valley and Yennadon neighbourhoods, Maple Ridge.
- ➔ **Hosted: 4 hatchery tours** (2 public, 1 for independent press (The Ridge), and 1 private for ARMS donor). Note: For safety reasons, planned public hatchery tours had to be cancelled from November 15 onwards to the end of the 2021 due to the extreme rainfall events which resulted in extremely high river flows and flooding at the ALLCO hatchery around the fish trap, fish fence, coho overwintering channel typically where ARMS would lead tours through.

93 - Total of all hatchery tours, workshops, outreach activities, and camps days

1104 - Total youth reached through all activities



Alouette River Issues and Alouette Reservoir

2021 started off with a lot of activity in our BC Hydro file. ARMS directors and staff were actively engaged on multiple issues relating to the Alouette Reservoir including liaising with BC Hydro on the future Alouette tunnel seismic upgrades and attending many public and stakeholder presentations hosted by BC Hydro on the proposed tunnel works. The Alouette-Stave-Ruskin Water Use Plan Order Review continues after some downtime in 2020 when the process was put on hold temporarily due to COVID-19. ARMS staff and directors are actively participating in committee work of the Alouette River Salmonid Restoration Program (formerly the Alouette River Sockeye Reanadromization Project).

To learn more about the Alouette River Salmonid Restoration Program (ARSRP): [Alouette Fish Passage Project - ARMS](#)

ARMS urges its members and the public to learn more about the issues affecting the Alouette Reservoir, Alouette River and overall watershed health by going to: [Alouette System - BC Hydro Projects](#)

We were also actively engaged on many other issues related to the Alouette River including calls and emails from the public including:

- ➔ Built structures within the stream set back e.g. decks, stairs, rock dams
- ➔ Beaver dams
- ➔ Yard waste dumping
- ➔ Rock pool graffiti
- ➔ Knotweed sightings
- ➔ Riparian vegetation vandalism

- ➔ Multiple stormwater sediment flushes into the North Alouette River and Coho Creek
- ➔ Tubing and littering
- ➔ High river temperatures (monitoring activities)
- ➔ Fry stranding
- ➔ Fishing regulations in the Alouette River

Other Alouette River activities in 2021 included:

In January, we had some challenges along our coho salmon overwintering channel that we use for education purposes. A large tree fell directly onto one of the bridge decks, smashing it completely. Repairs were delayed due to the November and December extremely high river levels.



Above: What remains of the bridge over the Alouette-Innergex Education coho channel

In February, ARMS submitted an “Access to Information and Privacy” (ATIP) for the DFO-HADD authorization for the Alouette diversion tunnel in early February. This information was provided to ARMS on June 17 by the Director of the ATIP. We requested this information to better prepare our input to the Alouette-Stave-Ruskin Water Use Plan Order Review and other regulatory activities on the system.

In early spring, ARMS staff were unable to complete any habitat monitoring at the Alouette-Innergex Channels due to the fish fence being down for repairs and the presence of a very large danger tree leaning out over the coho overwintering channel and South Alouette River about 30 metres upstream of the fence. ARMS staff reached out to City of Maple Ridge Environment, City of Maple Ridge Parks Services, Innergex Renewable Energy Corp., BC Hydro, and DFO for guidance and help with this problem. The removal of the tree was complicated by it being very tall, the angle it was leaning on, very difficult access and the tree being within the riparian zone. After much research and gathering quotes, Corrections hatchery staff were finally able to engage a tree falling company, Whieldon and Sons, to cut down this 25 metre tall danger tree with a diameter of 70-80 centimetres. Potential impacts we avoided if the tree had come down by itself were damage to the fish fence, the coho overwintering channel directly below and damage to the riverbank on both sides of the South Alouette, potential debris jams, and flooding overland in high fall/winter flows.



Before and after photos – big cedar with large lateral crack leaning out over the channel and what remains after being felled

Save Our Salmon (S.O.S) Campaign

Over the last two years, much work was done by ARMS directors, staff, and our supportive community to push our concerns regarding the proposed residential development at the north end of 240th Street alongside the South Alouette River. Our directors stepped into this cause with both feet and volunteered hundreds and hundreds of hours for fundraising, research, sourcing, reading all relevant documents,

maps, city bylaws and Official Community Plan, provincial floodplain regulations, writing, editing, and submitting position papers, presenting to the Maple Ridge Mayor and Council at two public meetings, liaising with government agencies, Katzie First Nation, and others to push our concerns regarding the proposal.

The development proposal passed through council in four readings, with the last reading passed in June 2021, which moved it on to the Provincial government for approval. In September, the Province turned it down, causing the developers to appeal their decision. On December 2 they withdrew their appeal.

Our official S.O.S. campaign launched back in 2019, when the development proposal for 26 single family residences was presented before City of Maple Ridge Mayor and Council. Our campaign focused on defending the Alouette River and Latimer Channel from the development on 240th Street. Thank you to all our supporters who helped ARMS bring pressure to all those who would listen at the City of Maple Ridge, government agencies such as the Ministry of Environment, Department of Fisheries of Oceans and the public who rallied around this key issue to protect the Alouette River from irresponsible floodplain development.

Alouette River Sockeye Returns

A low number of sockeye salmon returned to the ALLCO fish fence in 2021 with only eight (8) adults counted. Five (5) adults arrived at the fish fence in August and three (3) arrived in October. We speculated that the run was likely very low due to zero outmigration of sockeye smolts in 2019. This zero outmigration was due to the Alouette reservoir elevation not being at a sufficiently high enough level at the spillgate to facilitate the smolts leaving. Subsequently any smolts wanting to leave the reservoir missed the first 3 weeks of their historical window while the lake filled to reach the level of the spillgate (at or above 121.85 metres). A good sockeye smolt outmigration in 2019 potentially would have been the prime year for our returning adults in 2021 as the largest number of Alouette sockeye that have returned since counting began 14 years ago have been 4.2 years old.

We had very unseasonable river temperatures for the summer of 2021, reaching between 21-23 Celcius (and likely higher) in some sections of the Alouette River. ARMS staff researched the use of “tidbits” and the installation of this equipment so as to monitor the river temperatures continually and without having to go out everyday to measure. “Tidbits” are underwater temperature monitors and require a download of data once a week. We hope to install some along streams and in key points along the Alouette River in 2022 (if funding exists).

In other river activities, two volunteers (Inge and Kelli) took water temperatures at high tide at the mouth of the Alouette River. We were attempting to determine where the river mouth was getting warmer and if we have a thermal curtain happening at the confluence of the Alouette and the Pitt Rivers. The presence of a thermal curtain may be inhibiting sockeye salmon venturing up the Alouette River during July and August. We also monitored this in September 2021 (results pending). We will continue to monitor this in 2022 if we have the volunteers.

Total returns for all salmon species counted at ALLCO Hatchery fence for 2021

| Salmon Species | 2021 Estimated Return Total* |
|-----------------------|-------------------------------------|
| Sockeye | 8** |
| Pink | 114 |
| Chum | 6,253 |
| Chinook | 76 |
| Coho | 799 |

*This is an estimated total of adult salmon species trapped at the ALLCO fish fence. These fish were part of the egg take program or released back into the Alouette River from the fish trap.

**Full total of adult Sockeye Salmon returned. All Sockeye Salmon are part of the Enumeration program, have samples taken and released, when possible, into the Alouette Reservoir.



ARMS staff, Alex Holmes with a pink salmon, September 2021

Salmon Spawner Surveys

In other Alouette River activities, ARMS volunteers surveyed Coho Creek, Millionaire Creek, Latimer Channel, and a portion of the North Alouette River. Our surveyors went out once a week from early October to mid-November (cut short due to the extreme rain events) to count live and dead salmon found along the tributaries. These surveys provide an estimate of the returning spawning salmon population to the Alouette system. This data is then submitted by ARMS staff and volunteers to Pacific Streamkeepers as well as Fisheries and Oceans Canada Stock Assessment, to track the changes of the population year to year. We had strong support for the program this year, with so many volunteers wanting to help, just not enough known spawning tributaries to be surveyed in the community.



Long-time spawner survey volunteer Doug Stanger in Millionaire Creek, fall 2021

Atmospheric River Events and Flooding

In mid-November and early-December the southwest corner of BC was impacted greatly by intense rain and catastrophic flooding in place like Abbotsford, Sumas Plain, Merritt and other parts in south-west BC. In Maple Ridge, there were impacts from flooding in typical low-lying areas such as 132nd Street, 224th Street and in Maple Ridge Park. These extreme rain events caused the Alouette Reservoir levels to rise up and over the free crest weir at the Alouette Dam. BC Hydro reported that the Alouette diversion tunnel had been open for approximately a week leading up to the extreme rain event, however the spillgate at the Alouette dam was not opened until November 15 due to mechanical issues. The spillgate is the second

way in which water can be released in a controlled manner from the Alouette Reservoir down the South Alouette River.

At the ALLCO fish hatchery, ARMS staff were unable to continue with any public hatchery tours from mid-November due to the rising and fast-running waters. Staff saw numerous adult salmon swimming right over the trap and as far up as the retaining wall (see below photos).



Above left and right: Flooding at ALLCO trap and fish fence (all underwater)

During this time, ARMS staff and directors were kept busy with information checking the Alouette Reservoir levels on BC Hydro's website, WSC station recorded flows and other hydrometeorological data available. We also attended atmospheric river response meetings with BC Hydro, City of Maple Ridge and other stakeholders to get up to date flow and planning information. We communicated out to the public as much information we had available to raise awareness of high flows and where residents could find more information to help them navigate what were very tense times.

When the water level became too high to manage through the spillgate, the gate was closed and the water free flowed over the free crest weir. Alouette River levels over 2 metres were recorded at the Haney Water Survey of Canada (WSC) station located at 232nd Street bridge and water flows as high as 130 m³/second. The gate was opened and closed according to the reservoir level. Water level and flows returned to average near the end of December. At the ALLCO Fish Hatchery we saw the impacts of these events-scouring of salmon redds and the riverbed, large debris floating down the river and sedimentation of side channels and overwintering habitat, and hatchery river pump screens filled with sand.

As the river subsided further, there was noticeable damage to bridges around the Alouette-Innergex coho channel, increased sand and sediment in the channel and a lot of scour downriver in ALLCO Park. On the plus side, staff saw increased gravel and cobble recruitment in the South Alouette around the hatchery and downstream across from ALLCO Park.



Above left and right: Alouette-Innergex coho overwintering channel after the November 2021 out-of-bank event

Below: Coho salmon adult



Alouette River Salmonid Restoration Program



The multi-partner committee for the Alouette River Salmonid Restoration Program continued its work on annual monitoring of the Alouette sockeye smolt outmigration, adult sockeye returns enumeration in addition to new work initiated to study the potential and amount of fish entrained through the north diversion tunnel from the Alouette Reservoir into the Stave Reservoir. This new study has been an key issue that ARMS has for many years asked BC Hydro to implement. The entrainment study objective was to understand the impacts of Alouette operations (i.e., dam and tunnel) on the ability to facilitate outmigration of sockeye in the Alouette watershed. This portion of work for 2021 was led by LGL Environmental with support from KDLP field staff from March to December. The adult sockeye enumeration portion ran from mid-June when the ALLCO fish fence went up to block and manuvre any returning sockeye adults into the fish trap. ARMS staff sampled and measured all adult sockeye returns, with BC Corrections hatchery staff transporting and releasing the adult sockeye into the Alouette Reservoir, which is approximately a six-kilometre drive from ARMS office and the hatchery. All seven (7) adult sockeye were released in good condition to the reservoir.

A total of eight (8) adult sockeye salmon arrived at the ALLCO fish fence. Five (5) arrived in the first run, quite late, from August to September and another three (3) returned in mid-October. As part of our enumeration program, we took samples including scales for aging and adipose fin clips for DNA testing. Photos were taken to assist with sexing the adults. We will be excited to learn what year these fish out-migrated as smolt. We would have expected most of these fish to have left the reservoir in 2019, however no sockeye smolts out-migrated from the reservoir that year due to very low water levels below the spillgate, thus hampering the first three weeks of their migration window.



Sampling Photo 1: First Sockeye of the season. Sampled August 8th 2021 by A. Holmes and L. DiSalvo.

This adult enumeration study led by ARMS with field assistance by BC Corrections hatchery staff is part of a larger multi-year project called the Alouette River Salmonid Restoration Program (ARSRP). This project is now in its 14th year of work (formerly the Alouette River Sockeye Reanadromization Project) to build a business case to BC Hydro for the restoration of all salmonid species in the Alouette with particular focus on the sockeye salmon and fish passage over the Alouette. The ARSRP committee is a working collaboration between ARMS, BC Hydro, Fisheries and Oceans Canada, Ministry of Environment, Leq'a:mel First Nation, and LGL Environmental Ltd. This partnership has been ongoing since 2008 working to achieve fish passage on the Alouette Dam.

Alouette River Salmonid Restoration Project – Committee meetings in 2021

- ➔ January 7 – 2021-2022 Work Plan subcommittee meeting
- ➔ January 12 – Full committee meeting
- ➔ January 28 – 2021-2022 Work Plan subcommittee meeting
- ➔ May 13 – Hatchery, fish fence operations meeting
- ➔ June 9 – 2021-2022 season budget meeting
- ➔ June 11 - 2021-2022 season budget meeting
- ➔ June 29 – Full committee meeting
- ➔ July 19 – Technical Feasibility workshop subcommittee meeting
- ➔ August 12 – Technical Feasibility workshop subcommittee meeting
- ➔ September 29 – Full committee meeting
- ➔ December 7 – Full committee meeting - interim presentation of LGL Environmental's entrainment study



Alouette dam and spillway – Photo credit: Geoff Clayton

Alouette Watershed Advocacy - Meetings and Presentations

2021 was another busy year of advocacy for ARMS and the Alouette River despite the ongoing COVID-19 pandemic. ARMS staff and directors met with all levels of government on various issues pertaining to the Alouette River, Alouette Reservoir, and the Alouette watershed in general. Below are some of the activities that ARMS was involved in:

- February 5 - MLAs meeting – ARMS President, directors and staff met virtually with Bob D’Eith and Minister Lisa Beare on the BC Hydro issues. We sent them a letter addressed to BC Hydro clarifying our concerns and our requested actions with regards to the Alouette Reservoir Headworks Tower and Surge Tower Seismic Upgrade Project.
- February 16 - ARMS directors and staff met with BC Hydro regarding the Alouette Reservoir Tunnel Upgrades. The meeting included Karen Popoff, Manager for Environment, Bob Schubak, Director of Dam Safety and Jeff Greenbank, Greenbank Environmental (and others).
- March 2 – ARMS staff presented our 2020 Annual Report to the City of Maple Ridge Mayor and Council.
- March 16 - ARMS directors and staff met with BC Hydro staff with regards to the Alouette Reservoir Headworks and Surge Tower Seismic upgrades.
- March 18 - ARMS staff co-presented our Environmental Stewardship Activities Proposal with Green Teams of Canada to the City of Maple Ridge Corporate Team including Christine Carter, Kathryn Baird, Al Horsman, and others. We asked the City of Maple Ridge to directly fund a 2-year program of environmental, youth-focused activities for 2022 and 2023. Pending approval.
- March 18 – Staff attended the Streamkeepers Annual Roundtable hosted by the Stoney Creek Environmental Society. Staff presented on the Alouette River issues and work done in 2020.
- March 26 – ARMS Adopt-a-Program 2020 presentation to City of Pitt Meadows Green Teams.
- April 27 – ARMS staff and Vice President met with Todd Hunter of Conservation Office Service, RCMP and Freshwater Fisheries Society (Go Fish BC) regarding strategies to be ahead of the upcoming recreation season along the Alouette River and issues of littering and safe river use.
- April 30 – ARMS staff met with Alouette Valley Association (AVA) members to discuss synergies for our two organizations to support AVA’s work for the City of Maple Ridge’s Transportation Strategic Plan (specifically around 132nd Street traffic-calming initiatives AVA has proposed over the years). 132nd Street is a busy arterial corridor for traffic which also runs in proximity to the North Alouette River.
- May 3 - ARMS was invited to participate in a research project led by Dr. Chris Woods (Ph.D., FRSC, Adjunct Professor, Dept. of Zoology, University of British Columbia) - NSERC Alliance application (Natural Sciences and Engineering Research Council of Canada) "The Impact of Road Salt on Pacific Salmon Success". ARMS director, Daniel King assisted ARMS staff in the initial documentation needed to participate as a partner organization. Potential activities include fish and benthic invertebrate monitoring, advisory and planning role in 2022.
- May 4 – ARMS directors and staff met to prepare input for the City of Maple Ridge draft Integrated Stormwater Management Plan for the South Alouette and Kanaka Creek Watersheds.
- May 7 – ARMS staff and directors met to provide input to the draft South Alouette River and Kanaka Creek Watershed Integrated Stormwater Management. **Special mention for ARMS member, Josh Baker**, and professional chemist, who donated many hours reading the draft ISMP and providing written input regarding the 800-page document. Our group met with City of Maple Ridge, Joe Dingwall, Engineer, Rod Stott, Environmental Planner, and the representative for Urban Systems (consultant) for a presentation and to ask questions, provide concerns about the limitations and good points of the document. ARMS staff worked with directors to finalize

written comments that went back to the city engineer for inclusion in the final South Alouette River and Kanaka Creek Watershed Integrated Stormwater Management Plan.

- May 18 – ARMS staff co-presented with Green Teams of Canada a funding proposal to City of Maple Ridge Community Engagement Manager, Tony Cotroneo.
- May 25 – ARMS staff and directors attend virtual meeting of fourth reading of the 240th development application.
- June 8 – ARMS staff co-presented with Green Teams of Canada a funding proposal to Community Network.



Volunteers remove invasive blackberry from Maple Ridge Park, April 2021

- June 15 – Public hearing for 240th Street development application.
- September 14 – Alouette-Stave-Ruskin Water Use Plan Order Review public meeting
- September 22 – Alouette-Stave-Ruskin Water Use Plan Order Review stakeholders meeting
- September 27 – ARMS closed to observe first National Day of Truth and Reconciliation
- November 4 – ARMS President attended Alouette Dam Emergency Planning Guide Review
- November 15 – ARMS staff and President attended meeting for Atmospheric River coordination.
- November 30, December 1 and December 2 - ARMS staff and President attended meeting for Atmospheric River coordination.
- December 16 – BC Hydro High Inflow Event Debrief for the Alouette Dam – attended by ARMS staff and President

25 meetings and presentations with municipal and provincial government, BC Hydro and other organizations on Alouette River and Alouette Reservoir related issues in 2021



Environmental Stewardship and Community Partnerships

Mason Bee Habitat Building

To kick off 2021 Environmental Stewardship activities, ARMS donated 26 mason bee kits to the Maple Ridge Environmental School students to build and then take home to place in their backyards. This donation of kits was part of our Pollinator Program.



Maple Ridge Environment School students – building mason bee homes. Photo courtesy of Ola Cholewa.

Invasive Plants Get Removed and Native Plants Go In!

In 2021, ARMS teamed up with the Lower Mainland Green Teams of Canada, BC Wildlife Federation, and School District 42 to remove invasive plants in Reg Franklin Park and Maple Ridge Park as well as plant native trees and shrubs along the South Alouette River.

On March 5, students from the Environmental School removed invasive plants with the Green Teams of Canada. Students grades 3 to 9, used clippers and pure muscle to cut and pull Himalayan blackberry. Our partnership with the Lower Mainland chapter of Green Teams of Canada has been fostered over the past three years and is turning out to be one of mutual benefit. The mandate of Green Teams of Canada is to build community and promote health, well being and environmental stewardship through hands on activities in nature. This is a mission that ARMS feels we can support in concert with our own mission, vision, and values. The following week with a BC Wildlife Federation donation, students came back to the park to plant 60 native trees and shrubs to build up the riparian area of Morse Creek, a nutrient bearing stream running through the park. Once the planting was completed students covered the ground with mulch to retain moisture throughout the dryer summer months. The Maple Ridge Environmental School students provided approximately 70 hours of labour. Thank you to the Stewart Family Foundation for financial support and making these activities possible.



Left: BC Wildlife Federation leads the activity, March 12.

Right: Maple Ridge Environmental School students after completing the planting day at Reg Franklin Park, March 12.





Maple Ridge Environmental School at Reg Franklin Park. Photo courtesy of Green Teams of Canada



Above and right: Maple Ridge Environmental School students digging out invasive blackberry at Reg Franklin Park

ARMS also hosted other events with Green Teams of Canada on April 9 at Maple Ridge Park for another invasive plant removal and on October 30 at Reg Franklin Park to remove English ivy and Himalayan blackberry.

Both events were successful! See the summary table below courtesy of the Green Teams of Canada (Lower Mainland GTC chapter).



LOWER MAINLAND GREEN TEAM ACTIVITY REPORT

Alouette River Management Society

2021 Activities

| | Date | Location | Activity Type | # Engaged | Hours | m ³ Removed | # Introduced to Park | # Introduced to Removing Invasive Plants |
|---|---------------------|----------------------|---------------------------------------|-----------|-------|---------------------------|-------------------------|--|
| 1 | March 5, 2021 | Reg Franklin Park | Invasive plant species* removal | 35 | 105 | 6 | 2 | 10 |
| 2 | April 9, 2021 | Maple Ridge Park | | 28 | 47 | 5 | 3 | 25 |
| 3 | October 30, 2021 | Reg Franklin Park | | 18 | 59 | 10.5 | 17 | 14 |
| | | | TOTALS | 81 | 211 | 21.5 | 22 | 49 |

*Himalayan blackberry and English ivy



Wings Homeschool Program help remove blackberry from Maple Ridge Park wetland area.

Photo courtesy of Green Teams of Canada



Thomas Haney Secondary School students in Maple Ridge Park with ARMS and Green Teams of Canada

Photo courtesy of Green Teams of Canada

Two planting sessions with ARMS volunteers at Maple Ridge Park on April 28 contributed 130 new native shrubs in a small wetland.

Streamkeepers Training with the Pacific Streamkeepers Federation

ARMS offered a streamkeepers training workshop on June 26th and 27th, free to volunteers and members. This was made possible by the Maple Ridge Community Foundation (MRCF). ARMS received funding from MRCF for the Alouette Watershed Connections Project which engages youth and community through wetland stewardship. Streamkeepers training provides citizen science in stream habitat surveys, water quality monitoring, juvenile fish trapping and identification and stream invertebrate studies. Due to COVID-19 guidelines from the Provincial public health guidance, we ran the workshop with only six participants to keep everyone physically distanced and feeling safe.



Zo Ann Morten (PSkF) leading the workshop participants through safety orientation

BCWF Restoration Workshop and Planting Event



On the 2nd and 3rd October 2021, BC Wildlife Federation (BCWF) hosted their Fish Habitat and Riparian Restoration Workshop in Maple Ridge. ARMS was involved in planning sessions to make this event possible by providing advice on potential sites in the Alouette watershed to hold the event, site visits, and logistics support. ARMS also participated in the second day of the workshop held along the riverbank of the South Alouette. We presented to participants about the Alouette Watershed and the Pacific salmon found within the river. We discussed the role ARMS plays in the community through our environmental advocacy, education, and stewardship projects. ARMS staff also assisted BCWF hosts to lead some activities on the day: a morning and afternoon planting along the riverbank as well as water quality testing methods. The plants selected for the event were native trees and shrubs that succeed in riverbank conditions for example, salmonberry and Nootka rose.

The event occurred during the Chum salmon run, so we were able to see the salmon swimming back to their spawning grounds. ARMS hosted a tour at the end of the day at ALLCO Fish Hatchery. We had

approximately seven keen individuals from the workshop come out to view the hatchery operations.

At the end of the event we still had some plants remaining so in partnership with BC Wildlife Federation again, ARMS hosted a second event at the same location along the South Alouette River. On November 2nd, 21 amazing volunteers planted the remaining shrubs and trees. With the help of a tractor for some large 20-gallon trees, we were able to plant over 100 plants in an hour and a half. The group watched returning salmon in the South Alouette River, took a riverside tour and discussed the importance of riparian restoration for the health of salmon and their habitat.

Thank you again to all the amazing volunteers who joined us at these events helping to restore the Alouette River and thank you to Coniagas Farm for providing a site along the river for planting on both days.



Above: Tobias Roehr (BCWF) leading a talk along the South Alouette River

Right: Keen volunteers getting diggy with it in that rocky river soil



Latimer Channel River Intake and Valve Upgrade

In early 2021, ARMS staff liaised with Fisheries and Oceans staff to implement some long-awaited upgrades for Latimer Channel. The ALLCO fish hatchery staff kindly gave permission for the grounds to be used as a staging area for the enormous pipe sections and intake valve until the work was to be undertaken.

The work was scheduled in for the fisheries window and in late July, staff with Fisheries and Oceans Ecosystem Management Branch, Restoration Unit, replaced the worn-out pipe intake from Latimer Channel to the South Alouette River. The work was completed over three days. The original pipe was installed in the late 1990's to provide vital fish flows into the channel. The original pipe was corroded and broken from tree roots, which reduced flows for coho and chum salmon using the channel to return to their spawning grounds. A new pipe was installed next to the old one and a new intake valve at the head of the channel. Latimer Channel runs for approximately 600 metres parallel to South Alouette River and is important spawning habitat for chum salmon and other species.

Thank you so much to the technicians and engineers from the Unit for their work on this vital salmon habitat project.



Fisheries and Oceans
Canada

Pêches et Océans
Canada



Latimer Channel river pipe and intake replacement, Fisheries and Oceans technicians hard at work, July 2021

Photos courtesy of Jonathan Bulcock

Highlights from Environmental Stewardship and Community Partnerships

Hosted: 5 native planting sessions in various locations along the South Alouette River – **73 volunteers contributed 110 hours of labour**, including delivering tools, planting, and cleaning up equipment. **Planted 440 native shrubs.**

Hosted: 1 weekend (26 and 27 June) of Streamkeepers training with Pacific Streamkeepers Federation – **6 attendees participated** both days (to run a safe event keeping COVID-19 in mind, we reduced the available spots by 50%).

Implemented: 4 field days at various locations including Alouette-Innertex coho overwintering channels for water quality survey, 232nd Street Channel for water quality survey and fry trapping, Maple Ridge Park wetland (vegetation assessment, blackberry maintenance removal), Reg Franklin Park (vegetation assessment, blackberry maintenance removal).

Hosted: 4 sessions of community outreach in Maple Ridge Park and Cross's Cabin along the South Alouette River. Focused promotion of salmon species, river etiquette when recreating, litter clean-ups. Provided free salmon storybooks and bird house kits to build onsite.

Partnered: Assisted Alouette River Scuba Clean up on June 5 with the BC Conservation Service (Maple Ridge COS) – **group retrieved 200lbs of garbage** from the South Alouette River.

Hosted: 12 sessions of Community outreach with ARMS staff in Maple Ridge Park and ALLCO Park. Engaged the public in discussions about the Alouette River, salmon species, river recreation etiquette, fishing, fish passage, and tubing.

Assisted: 10 volunteers helped to dismantle rock pools in the South Alouette River, originating from reports by resident to ARMS staff.

Hosted: Salmon spawner survey training for 6 new volunteers with Zo Ann Morten (Pacific Streamkeepers Federation) on September 22.

Coordinated: Salmon spawner surveys for 4 creeks with 8 volunteers. **Approximate number of hours surveyed: 72** *Note: The survey season was cut short due to the extremely high rainfall event on the weekend of 14-15 November and in early December, the North Alouette River and particularly the South Alouette River, experienced out of bank flooding and prolonged extreme high flows due to BC Hydro controlled spill and cresting of the weir.*

Co-hosted: 1 x BC Wildlife Federation "Alouette River Fish Habitat Stewardship Workshop" –

Participants: 15. ARMS participated in this weekend workshop and played a large role in assisting in the planning and development of the workshop with BC Wildlife Federation staff. ARMS presented to the audience on salmon species, Alouette watershed issues including fish passage and other salmon restoration goals. We then participated in a native planting along the South Alouette River with the workshop attendees.

Co-hosted: 3 x invasive plant removals at Reg Franklin Park and Maple Ridge Park. Partnered with Lower Mainland Green Team. **81 youth** participated. **211 hours** volunteered. **21.5 cubic metres** of invasive Himalayan blackberry and English ivy removed.

Special Events Hosted by ARMS

July 11 – Bees, Birds, Bears, Bugs and Butterflies Event – Summer Family Event

ARMS hosted a fun family-friendly event in ALLCO Park with the help of our full time and summer staff. We had some amazing exhibitors from WildSafe BC (Daniel M), “The Bee Lady” (Loretta Jackson), and David Suzuki Foundation’s Butterfly Ranger program. The event was set up with different stations in ALLCO Park to provide for a fun and leisurely experience for the attendees to learn about the wildlife in the Alouette Watershed including our amazing pollinators – birds, butterflies, bees and more! One of the focal points was the observation beehive, which was brought in by “The Bee Lady”, Loretta Jackson. She talked with families about the importance of bees and the importance of other pollinators. During the event she extracted honey, giving kids a chance to spin frames of honey.



BBBBB event attendees painting wooden butterflies

Although in BC we were in Stage 3 of the provincial Restart Plan at that point, ARMS decided to continue to offer a safe event implementing many of the COVID-19 health and safety protocols we had been using for 2020. **24 people attended this free event made possible with generous funding from various supporters.**



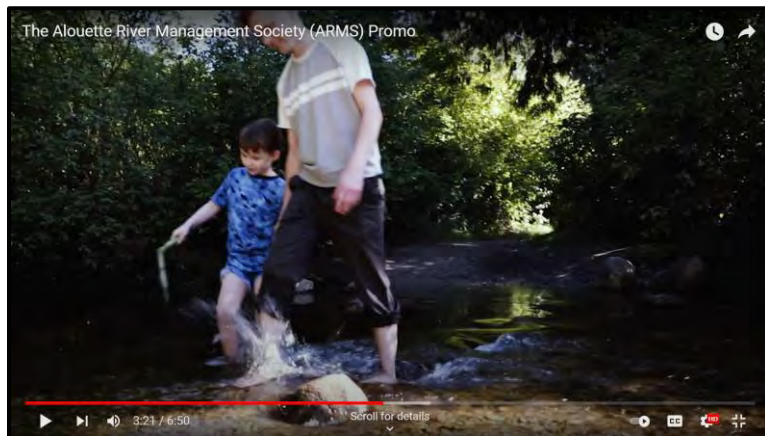
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ARMS Launches Alouette Watershed Video with Asalah Youssef

In 2021, ARMS was extremely fortunate to partner with two amazing artists, mother and daughter, to create a new and inspiring video about the Alouette Watershed. We were fortunate to have local film makers, Allison and Asalah Youssef, put this beautiful video together with many hours of research, interviewing video participants, and scoping out locations. It was over a year in the making and we were thrilled by the result. In September we released the promotional video to the public showcasing the Alouette and the work of the Alouette River Management Society. There was also interest from the City of Pitt Meadows to present the video to Mayor and Council. Allison presented the video to Mayor and Council on November 23.

Asalah Youssef is a young photographer and entrepreneur passionate about the environment. She worked closely with her mother Allison on this project. To check out more of Asalah's work please visit: [Asalah Youssef](#)

[Alouette Watershed and ARMS promotional video](#)



Screen shots from the new video





Date: Sunday September 26

The 28th Annual Ridge Meadows Day was a hit despite the downpour! The celebration took place in ALLCO Park alongside the South Alouette River, a proclaimed B.C Heritage River. For 2021, due to continuing COVID-19 public access restrictions at the ALLCO Fish Hatchery, we were unable to hold our event at the usual location.

With COVID-19 restrictions still ongoing, ARMS goal was to host a community celebration in a manner that was safe for the public, volunteers, and staff. As we did not know in advance where we would be come September 2021, we planned to hold a small, RSVP event instead, capping public participation at 75 people with a reduced number of exhibitors and entertainers. We incorporated all we learned over the previous year and a half to incorporate safe measures including COVID-19 event waivers, recommending people self-assess their health leading up to the event and on the day of, provided disposable masks, hand sanitizer at each exhibitor station, and physical distancing signage around the event site.

VIPs who attended included Mayor Mike Morden (City of Maple Ridge), Councillors Robson, Yousef, and Dueck (City of Maple Ridge), Councillors Hayes and O'Connell (City of Pitt Meadows), and the Honorable Minister for Citizens' Services Lisa Beare. The Alouette River Management Society President and other directors were in attendance helping to MC the event and to provide public outreach at the ARMS and Adopt-a-Block tents. A bursary cheque of \$750 was presented to ARMS summer student, Elise Carelse, for her dedication to environmental volunteerism in the Alouette Watershed.

The event had a variety free activities for families including birdhouse building, honeybee hive observation, aquatic invertebrate surveys, enviroscape demonstrations, face-painting, clown, acoustic music, storytelling and poetry.

Highlights!

City of Maple Ridge Festival in-kind support – We had extra help with event equipment this year pop-up tents, weights, tables, and chairs! It was very helpful to be able to access this support.

City of Pitt Meadows in-kind support – At the last minute, City of Pitt Meadows provided us with 2 additional pop-up tents and weights to use on Rivers Day. With the forecast for heavy rain, we estimated we were going to need more shelters for our exhibitors and activities.

New exhibitors – We had some new artists and groups join us this year including Maple Ridge Bears, Jen Healy Face Painting and Taryn Hubbard, Haney Artist-in-Residence.

CTV News - We were pleasantly surprised to see that CTV News covered our event on the day! It hit the 6 p.m. and 11 p.m. news broadcast on September 26. [CTV News - 28th Ridge Meadows Rivers Day](#)



Left: Artist Taryn Hubbard and her river poetry booth

Below: Examples of youth poetry and artwork



Photos courtesy of Donna Millburn



28th Annual Rivers Day: top photo: Adopt-a-Block and volunteers

Photos courtesy of Donna Millburn

28th Annual Ridge Meadows Rivers Day Stats!

30 volunteers contributed 126.5 hours

14 exhibitors attended

70 participants attended*

*RSVP event for size limit

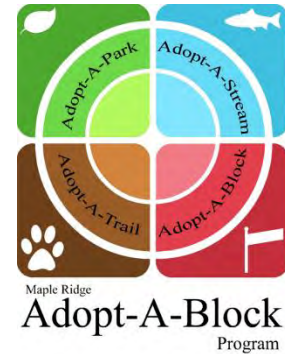


Left: Jack Emberly, local writer and storyteller; Right: Face painting fun with youth

Photos courtesy of Donna Millburn

In other special events for 2021, ARMS co-hosted a public information session with the Invasive Species Council of Metro Vancouver called “Invasive Species: Along the Alouette River” on June 21. The virtual information session was led by ISCMV Executive Director, Tasha Murray, who was a wealth of information for the participants. Focus was paid to the Alouette River including Himalayan knotweed, scotchbroom, and aquatic invasive species. This was a free event put on by the Alouette River Management Society.

Adopt-a-Block Maple Ridge and Adopt-a-Program Pitt Meadows



Maple Ridge Adopt-a-Block

The Adopt-A-Block Program organized and/or participated in 16 different activities in 2021. The number of events we typically schedule was down somewhat in 2021 due to the continuing challenge of the COVID-19 pandemic.

- ➔ Family Day activity
- ➔ Reg Franklin Park invasive plant pull event
- ➔ Reg Franklin Park native planting event
- ➔ Maple Ridge Earth Day challenge
- ➔ Maple Ridge Park Wetland invasive pull
- ➔ Maple Ridge Park Wetland planting
- ➔ Alouette River scuba garbage retrieval
- ➔ Bees, Butterflies, Bugs, Bears Pollinator Event at ALLCO Park
- ➔ Storm Drain painting events in Maple Ridge neighbourhoods
- ➔ Summer clean up in Harry Hooe Park
- ➔ July 30th Summer Students River Float Clean Up
- ➔ 28th Annual Ridge Meadows Rivers Day
- ➔ Alouette River Scuba garbage sweep with BC Conservation Service
- ➔ Green Teams Canada Reg Franklin Park invasive species removal
- ➔ Abernathy Way Clean Up
- ➔ Holiday Clean in Maple Ridge Park

At the end of 2021 there were 140 number of active adopters in Maple Ridge.

Examples of events and promotion in Maple Ridge

Get outside! **FAMILY DAY CLEAN UP**

Adopt-a-Block challenges you to choose an area in Maple Ridge or Pitt Meadows to pick up litter.

Submit your photos to
adoptablock@alouetteriver.org



Photo courtesy of Kiwanis Club



Alouette River scuba group haul with BC Conservation Service, June 5



Above left: Volunteer from Tantalus Lab picks up along the road. Photo courtesy of Tantalus Labs. Above right: Garbage haul from a litter pick up event



Pitt Meadows Adopt-a-Program

- There were 9 active adoptions at the end of 2021, primarily by schools and community groups.
 - Pitt Meadow Secondary School – Parkside Trail
 - Five active classes of 25 students (total 125 members participating)
 - Edith McDermott Elementary – Somerset Park
 - One active class of 25 students
 - Highland Park Elementary – Hoffman Park
 - Two active classes of 50 students
 - Pitt Meadows Scouts – various locations
 - Mitchell Road Park – Wild and Wonderful Family Daycare
 - 8 members
 - Pitt Meadows Elementary - Harris Roadblock

- One active class of 25 students
- Trans Canada Trail – Bud Livesey
 - Individual membership
- Harris Road Park – Ridge Meadows Association of Community Living
 - Charity Membership
- Bonson Road & Airport Way – Irene Lee
 - Family membership, trail and stream included

Events hosted or attended in Pitt Meadows

- Bonson Park and Neighbourhood clean-up – July 22
- For the Love of Trees – September 22 (City of Pitt Meadows event)
- 28th Annual Ridge Meadows Rivers Day – September 26
- Highland Park Elementary – Program Orientation – October 20

Note: Some planned events in November and December were cancelled due to the extreme rain events and flooding around Pitt Meadows parks and trails.



Young Adopt-a-Block volunteer helps out



The Maple Ridge clean-up saw few people, but Alexandra Holmes with ARMS said that "small but effective that's how we like to do it." (Alexandra Holmes/Special to The News)

ARMS undertakes Maple Ridge-Pitt Meadows community clean-ups

Promotes their adopt-a-block program

PRIYANKA KETKAR / Jul. 23, 2021 12:00 p.m. / COMMUNITY

The Alouette River Management Society (ARMS) undertook two community clean-ups, one in Maple Ridge and one in Pitt Meadows this week.



Adopt-a-Program Pitt Meadows coordinator Alex Holmes and young volunteers in Bonson Park. Pitt Meadows

Donation Campaign Highlights

April Campaign - Adopt-a-Butterfly

Families enthusiastically donated to our campaign and through this initiative they received a Painted Lady larvae to raise and release. This was a fun activity for families to watch and learn the lifecycle of a native butterfly. The public embraced our fundraising campaign and adopted 150 butterfly larvae! This initiative raised \$5,000 for ARMS' education, stewardship, and Rivers Heritage Centre programming.

In addition as a thank you back to our community, ARMS donated 20 caterpillars to Greystone Manor Retirement Residence, 24 to Maple Ridge Hospice, 24 to the CEED Centre, 18 to the Intergenerational Garden, 30 to Katzie Early Years, 24 to the Environmental School and 24 to Chartwell Willow Retirement Community. This was a way to provide a free and fun way for residents and children to participate in a butterfly release party of their own. Total value of the donation to the elder care and early education centres - \$550



CanadaGiving Donation Campaigns

- ➔ JuneGiving Campaign – Adopt-a-Salmon
- ➔ NovemberGiving Campaign – Adopt-an-Alevin

In 2021 we ran a new fundraising campaign leading up to the holidays. Our Pink Salmon started hatching into alevin late December and we started to adopt them out—to be raised at the hatchery. For just a toonie (\$2), adopters received an adoption certificate with updates as the alevin grow into fry and smolts until they are released into the Alouette River. The goal of the fundraiser was to raise funds to help restore salmon habitat damaged from flooding and help with the long term care of the pink salmon alevin.

The campaign was successful with many adoptions! ARMS raised an amazing sum of \$10,290. We are extremely thankful to all our donors who showed their support for this campaign to help with the recovery of salmon habitat.

ARMS also received over \$800 from our annual participation in the Rotary Duck Race. We give thanks to the organizers of this event for the opportunity as it was another challenging year with COVID-19 making it difficult for this to be an in-person fundraising event for Rotary.

In addition, the Stewart Family Foundation generously donated \$1,590 to ARMS for the purchase of native trees and shrubs for riparian area enhancement along the Alouette River and tributaries. These trees and shrubs provide food, shelter, bank stability, and shade for juvenile and adult salmon as they move through their lifecycle stages in the Alouette River and beyond.



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Thank you!

Total donations for 2021 - \$27,599



Grants Approved in 2021

Totalled: \$569,549

- ➔ BC Community Gaming Grant - \$54,450 for Education, Rivers Heritage, Stewardship, and Adopt-a-Block programs
- ➔ Fish and Wildlife Compensation Program and BC Hydro - \$408,887 – combined directed contribution agreement for the Alouette Watershed Sockeye – Fish Passage Feasibility Project Year 5
- ➔ Canada Summer Jobs Program - \$28,712 for summer staff wages
- ➔ City of Maple Ridge - \$20,000 for Education, Rivers Heritage and Stewardship programs
- ➔ Eco Canada Science Horizons Internship - \$25,000 for Wage subsidy
- ➔ Pacific Salmon Foundation - \$2,500 for River Pump Rebuild
- ➔ City of Pitt Meadows - \$5,000 for Pitt Meadows Adopt-a-Program
- ➔ City of Maple Ridge - \$25,000 for Maple Ridge Adopt-a-Program



Homeschool group in ALLCO Park for Salmon in the Forest workshop, November 2021

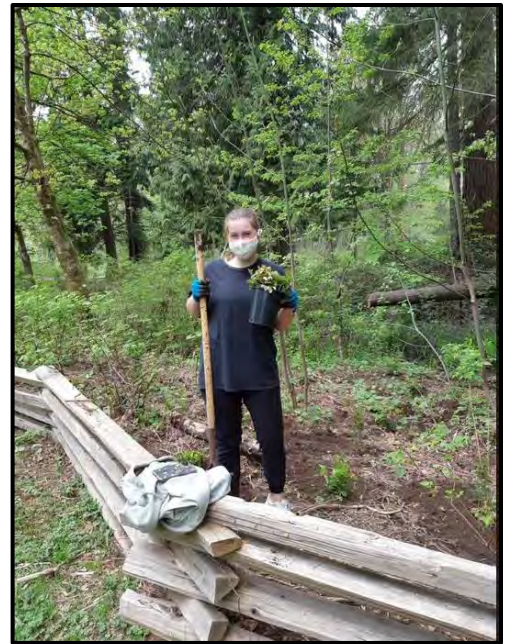


Volunteer Support through 2021

The work of the Alouette River Management Society would not happen without the ongoing work of many talented volunteers in a variety of different areas including education, environmental stewardship, advocacy, and event support.

Volunteer activities by type:

- ➔ Bookkeeping and data entry
- ➔ Tree planting
- ➔ Invasive plant removals
- ➔ Event planning
- ➔ Event support – set up, take down
- ➔ Youth camp leaders
- ➔ Storm drain painting
- ➔ Gardening at the Rivers Heritage Centre
- ➔ Rock pool dismantling in Alouette River
- ➔ Salmon spawner surveys
- ➔ Water quality testing
- ➔ Habitat monitoring on conservation property
- ➔ Research on water-related issues, river, and BC Hydro projects
- ➔ And more...



Total volunteer hours contributed: 2415

Total dollar value: \$36,225





End Notes - Staff Comings and Goings

ARMS full-time staff is a small tight-knit team with seasonal employees expanding at different times of the year to accommodate our programming. In January 2021, we greeted Sophie Sparrow's news of her pregnancy with delight but sadness knowing we would be soon saying goodbye to her for over a year. Sophie has been one of the driving forces here at ARMS for five years covering the Environmental Projects, Communications and Adopt-a-Block programs. Her contributions to ARMS are wide-ranging from starting at ARMS initially in our education program, taking on a steep learning curve in the early days with sockeye adult enumeration program, then evolving her role to handle many environmental projects, as well as our communications and Adopt-a-Block program. In other happy news at the start of the year, we were able to rehire Jasmine Sidhu, after COVID-19 decimated our education programming in 2020. Although ARMS was keen to extend Jasmine's contract, she moved on to a new career in the Federal government in August. Jasmine was well-loved by students in School District 42 and is missed greatly at ARMS.

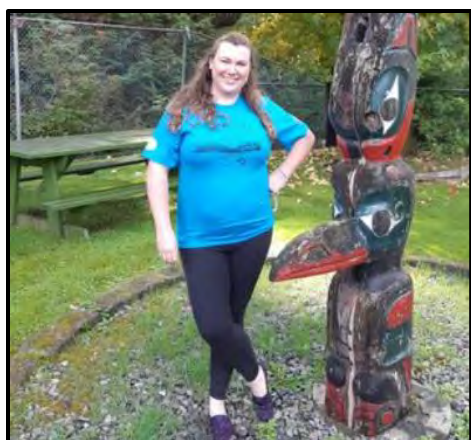


Left: Sophie Sparrow and salmon friend



Above: Jasmine Sidhu with butterfly and kids from School District 42

As we said these goodbyes we welcomed on board two fantastic young people, Alexandra Holmes in July to cover Sophie's maternity leave, and Marissa Waddell in November as our new Environmental Educator.



Left: Alex Holmes; Right: Marissa Waddell

ARMS would like to express our sincere appreciation for the dedication, enthusiasm, and professionalism that all our staff have given to ARMS over the years and look forward to a bright future expanding and growing with you and our community.

2021 SNAPSHOT OF ACHIEVEMENTS

4642 VOLUNTEER HOURS DONATED

128 VOLUNTEERS ENGAGED

440 TREES AND SHRUBS PLANTED

30 CUBIC METRES INVASIVE PLANTS REMOVED

1104 YOUTH REACHED THROUGH EDUCATION PROGRAM

28 NEW LITTER PICKUP ADOPTIONS

\$27, 599 CASH DONATIONS RECEIVED

\$569,549 PROJECT GRANTS MANAGED

45 MEDIA MENTIONS (PRINT AND ONLINE)

