Fraser Salmon & Watersheds Program

2011/12 FINAL REPORT

FSWP File Number*	FSWP1146XXEE

* Please use the FSWP File Number provided in previous FSWP project correspondence.

1. Project Information

1.1. Project Title

Alouette Watershed Adopt-A-Stream Pilot Program

1.2. Proponent's Legal Name

Alouette River Management Society

1.3. Project Location

Maple Ridge, BC

1.4. Contact for this report

Name: Amanda Crowston	Phone: 604-467-6401	Email: arms@alouetteriver.org

1.5 Funding Amount

Original Approved Grant Amount:	Total FSWP Expenditures:	Final Invoice Amount:	Final Non-FSWP leveraging, including cash and in-kind:
$12,050.00	$12,050.00	$3,615.00	$24,052.44

2. Project Summary

Please provide a single paragraph describing your project, its objectives, and the results. As this summary may be used in program communications, clearly state the issue(s) that were addressed and avoid overly technical descriptions. Maximum 300 words.

The Alouette Watershed Adopt-A-Stream Pilot Program brought together three groups to care for their neighbourhood streams. The Alouette River Management Society facilitated each group to take an active role in the protection, information gathering, and restoration of their local waterways. The three tributaries adopted were Morse Creek, Tributary 2, and Golden Pond. The Adopt-A-Stream pilot program brought together neighbourhood and student stewards for the watershed, researched and monitored the health of the streams, taught the volunteers how to care for the stream and why it is important, and started a relationship with municipal and federal agencies regarding community stewardship.

OPTIONAL: **Please give a short statement (up to 100 words) of the most compelling activity or outcome from your project.**

The juvenile fish trapping done by each of the groups was a highlight. By finding out what types of fish were in the streams , how far up the fish could go, and why finding these fish were important, the volunteers connected with the stream in a way that is much harder to do with water quality testing or garbage removal.

3. Final Project Results and Effectiveness

3.1 Please copy THE EXPECTED DELIVERABLES from your detailed proposal and insert into this table. Add additional rows as needed. Then describe the FINAL DELIVERABLES (the tangible end products resulting from this work) associated with each expected Deliverable.

If FINAL DELIVERABLES differ from the original EXPECTED DELIVERABLES, please describe why, and the implications for the project.

EXPECTED DELIVERABLES	FINAL DELIVERABLES
Objective #1 – Engage, encourage, and educate community members, students, and teachers to become active stewards and resource managers Deliverables: - New individuals or groups of stewards working on each of the tributaries - New classes and teachers connected with their waterways -Design and delivery of information packages and information sessions for riparian landowners and other interested parties	Three groups adopted three tributaries of the Alouette River: Morse Creek, Tributary 2 and Golden Pond. The groups on Morse Creek and Tributary 2 consisted of neighbourhood residents, local community members, and ARMS volunteers. ARMS held three events on Morse Creek: water quality sampling, setting fish traps, and collecting fish traps. Two volunteers on Morse Creek have given written confirmation of their commitment to continue work on Morse Creek. Four volunteers on Morse Creek have given written confirmation of their commitment to volunteer with ARMS in any Adopt-A-Stream project. Six events were held on Tributary 2: a landowner information session, garbage clean up, invasive plant pull and trail clearing, water quality testing, juvenile fish trapping, and stream habitat mapping. Three volunteers on Tributary 2 have given verbal confirmation of their continued interest. The group on Golden Pond was the Environmental School, a new outdoor school made up of 60 Kindergarten-Grade 7 students, with three teachers, university researchers, special education assistants and parent volunteers. With ARMS, the Environmental School participated in four event days, which included water quality testing, juvenile fish trapping, trail making, salmon spawner survey count, outhouse construction, and invertebrate sampling. This group has given verbal confirmation of their continued interest to adopt Golden Pond into the next school year. It was originally anticipated that there would be a school group attached to each adopted stream. Although a great idea in theory, it proved to be difficult to interest teachers

	during the job action that occurred this year. A landowner brochure was designed, printed and given to landowners participating in this pilot program. This brochure will be available online at our website One information session was held at the Maple Ridge Library for residents on Tributary 2. There were only two people who showed up, although letters were distributed to 150 residents along the stream. ARMS created the letters and two residents delivered them to their neighbours. ARMS believed the two volunteers were talking to each neighbour, but we only found out after the letters were delivered that they were dropped off in mailboxes, which if we had known, we would have designed the letters to be more eye-catching flyers or have gone out with the volunteers to help them talk to the neighbours.
Objective #2 – Research, assess, monitor, and improve watershed health around the Alouette River Deliverables: - Information pertaining to the newly monitored areas of the Alouette Watershed - Cleaner stream and riparian areas -Engaged citizens are more likely to notice, protect, and put in effort to rehabilitate local waterways - Activities such as invasive removals and streamside clean-up	Overall, each of the adopted tributaries appears to be in good health. All three water quality tests ranked in the top "good" category and there were juvenile fish found in each waterway. There are over 20 tributaries in the Alouette Watershed that flow into the South and the North Alouette Rivers. In the past, ARMS has rarely focused on the state of individual tributaries, except when there restoration projects. After this year, ARMS has more information regarding three of the tributaries of the Alouette. With the activities completed by each group, the streams and riparian areas are cleaner after conducting stream clean-ups and invasive plant removals. There are also more people in the community that know about these streams and are looking out for the stream's welfare.
Objective #3 – Streamline communication and reporting processes between the community members, community groups, district officials, and other officials Deliverables: - Outlined routs and personnel to contact under different scenarios - Stronger relationships and communication between all parties	Before this pilot project, ARMS already had good communication with the District of Maple Ridge and the DFO. The Adopt-A-Stream has increased communication with these agencies. Throughout the pilot project, the District of Maple Ridge has become increasingly interested in the work we were doing with the streams and volunteers. ARMS has had two meetings and one phone meeting with District staff to see how ARMS and the District can integrate Adopt-A-Stream with the District, with a possible goal of funding the program in the future. To attempt to streamline data, ARMS has inquired with

	the DFO about integrating the stream data collected with their online mapping and database. It has come to light that the database is out of date and there is currently a discussion going on about how to the DFO and community groups can improve communication and incorporate community mapping with the DFO's mapping system. To recruit volunteers for Adopt-A-Stream, the most effective way found has been word of mouth. We had the most interest after an article was written about the project in the local newspaper (attached). The other way we have recruited new volunteers is through the weekly meetings at the Centre for Education on Environment and Development (CEED Centre). Many new volunteers to ARMS came from attending a couple of these meetings. To better connect with the Adopt-A-Stream volunteers, ARMS will be making a new section to our website, which will include a section for each group, the landowner brochure, and information about how to adopt more streams.
Objective #4 – Follow through by fully establishing an adopt-a-stream program throughout the watershed Deliverables: - Research funding opportunities - Establish relationships with neighbourhood associations - Secure funding	With the wrap up of the Alouette Watershed Adopt-A-Stream Pilot Program, ARMS wants to continue the work started during the last year. ARMS has applied for funding to continue the Adopt-A-Stream project into Phase II. Phase II includes continuing to work with the three groups established in the pilot project and find more volunteers for them, to adopt new Alouette Tributaries, and to build on the relationship with the District of Maple Ridge to move towards a fully funded Adopt-A-Stream program (which would be Phase III). At this point, Phase II funding has not been secured, though there is great interest from the ARMS Board of Directors to continue the program and we will be continuing to apply for funding. There has been interest from a large church group in adopting a new stream and there is interest in a neighbourhood association in adopting a tributary of the North Alouette River where there is currently a lot of construction taking place.
3.2 Please evaluate the EFFECTIVENESS of your project in achieving Project Objectives, using the specific measures of success identified in your proposal. Please include any notable successes or challenges.	

The Alouette Watershed Adopt-A-Stream Pilot Project met many of the specific measures of success identified in the proposal. For the first objective (Engage, encourage, and educate community members, students, and teachers to become active stewards and resource managers), the measures of success and results were:

Measure of Success	Results
Number of groups/individuals engaged (100 new landowners contacted about the program)	In total, 110 people volunteered for the Adopt-A-Stream Pilot project. Morse Creek and Tributary 2 flow mostly through private land and obtaining access to the stream through the cooperation of landowners was important. On Morse Creek, we connected with three landowners that allowed us on to their property for fish trapping and water quality mapping. One of these owners mentioned another landowner with a pond who apparently had a great site for fish, but when approached, this landowner did not want anyone on his property. On Tributary 2, 150 landowners had letters dropped off in their mailbox (letter attached). This did not turn out to have worked and ARMS staff made sure to communicate clearly with Adopt-A-Stream volunteers about the objectives of landowner contact. For the mapping event, three landowners were directly contacted and gave consent for accessing their property for that day. The largest difficulty for working with this group in regards to landowner contact was coordinating a time and explaining the importance of face-to-face contact, rather than a letter (as was unsuccessfully done in the fall). The rest of the events took place on municipal land, for which the District of Maple Ridge gave us permission. Golden Pond is on public land so landowner contact was not an issue, but it is located along a BC Hydro access road. BC Hydro was approached and they were enthusiastic about the project and provided the school with access to the area. ARMS also met with Fraser Regional Health, Ridge Meadows Hospital, and the District of Maple Ridge to start a dialogue about an Adopt-A-Stream project on the hospital grounds. There was interest but no actions taken by Fraser Health beyond the initial meeting. ARMS also expected to start a monitoring project on a compensation project on the Katzie Slough. The

	construction of this project was supposed to be completed by the spring of 2011, with monitoring to start shortly thereafter. With construction finishing in the late fall of 2011, ARMS will be starting the monitoring in the spring of 2012. One of the partners for this project will be the Katzie First Nation.
Number of students and teachers involved (90 new students and three new teachers)	It was originally anticipated that there would be three separate classes with three teachers. Instead, there were 60 students and 3 teachers involved with the Environmental School, as well as seven support staff, parent volunteers, and researchers. ARMS also connected with the CEED Centre and the Connex Alternative School for a project on the North Alouette River (letter attached). The Adopt-A-Stream project was complementary to the Aldridge Acres farm project run by the CEED Centre, but the Connex School, although interested, did not follow through with action.
Number of times the groups undertake a stewardship activity (at least 12 sessions per tributary/group)	The Morse Creek group started in February and we were able to work with them on three days. With the continuation of Adopt-A-Stream, we will be holding many more events. The Tributary 2 group started in October and six stewardship activities were held. The Environmental School group started in October at Golden Pond. ARMS worked with the group over four days on stewardship activities, but the group was worked on other projects on Golden Pond. ARMS requested a report of their activities, but unfortunately it was not given in time for this report.
Willingness or interest of groups to continue after the first year (newly signed Adopt-A-Stream contracts for the following year)	There were 18 volunteers that had previously volunteered with ARMS, with 14 verbal and one written confirmations of interest in volunteering for any ARMS streamkeeping activity. There were 92 new volunteers, with 83 verbal and five written confirmations of interest in continuing to volunteer for Adopt-A-Stream projects. Also, 83 people were specific to volunteering on the creek they were working on and five volunteers would volunteer for any streamkeeping activity.
Any advocacy resulting from engaged stewards	As a part of the Morse Creek juvenile fish trapping, an opinion article was written and printed in the Maple Ridge News (attached). After this article was printed, ARMS received more interest from the general community regarding the Adopt-A-Stream project and we are hoping to continue on this momentum.

	The three main volunteers for Tributary 2 are interested in stopping a development in the headwaters of the stream. This group calls themselves the Hillside Creek Preservation Coalition. ARMS is not involved in their actions for trying to stop the development, but ARMS worked with this group over the summer of 2011, before the stewardship activities commenced in the fall of 2011, to ensure all proper environmental concerns were addressed in regards to the development proposal.

For the second objective (Research, assess, monitor, and improve watershed health around the Alouette River), the measures of success and results were:

Measure of Success	Results
Report from the three classes engaged	Golden Pond was opened up to the Alouette River to create new overwintering coho habitat and spawning grounds. Golden Pond flows into a stream beside a gravel road. The stream pools around a beaver box through which the water flows through a culvert under the gravel road and into another pond. Unofficially, the stream is referred to Golden Creek and the second pond is referred to as Silver Pond. Water quality testing in the fall revealed a "good" measure of the Alouette River near the output of the pond. Water quality testing of Golden Pond, Golden Creek and Silver Pond in the winter found and "acceptable" measure. This was found during a period of rain and it is known that Golden Pond is fed by a stream that goes through clay and silt, so this is not surprising. Gee trapping in Golden Pond found seven coho fry, three cutthroat trout, and a salamander. Gee trapping on Golden Creek found 20 coho fry. Gee trapping in Silver Pond found 11 misidentified fry (group identified the fry as chum but at the time of year, chum would not be that large. It is suspected they were either trout or coho) and 9 coho fry.
Data from other Adopt-A-Stream groups	In Morse Creek, 6 gee traps were set for approximately 24 hours. 12 coho fry, one steelhead trout, and one sculpin were trapped in four of the traps. The two traps set in the headwaters returned no fish, but there was at least one fish barrier, as well as a long culvert under two streets and a row of houses. Eight gee traps were set for Tributary 2, with six of them returning a total of 12 coho fry, two cutthroat trout, and nine stickleback. The habitat mapping took place from the last trap that caught fish and moved upstream. The habitat mapping discovered that there was a lock block in-stream barrier with a plunge pool suspected to be too shallow for fish to get above the blocks. Also of concern

	was erosion on the right bank close to a house, a weir with the stream eroding the banks, a number of drainage pipes, a poor excavation job that has introduced iron oxide soil into the stream, rip rap falling into the stream, invasive plants, lock blocks pushing clay into the stream, and a tributary that was put into a pipe before draining into the creek.
Amount of garbage collected	On Morse Creek there was one bag of garbage collected by a volunteer while other stewardship activities were On Tributary 2, there were three large garbage bags and three large items removed from the creek and surrounding areas. The garbage consisted of plastics, a pillow, glass, a barbeque, an office chair, a tire, buckets and a fan. 12 large garbage bags of English ivy were cleared and disposed.

For the third objective (Streamline communication and reporting processes between the community members, community groups, district officials, and other officials), the measures of success and results were:

Measure of Success	Results
Ease of contact between community and community groups	ARMS has had good communication with volunteers. We inform by phone or email all volunteers interested in a certain activity or creek of when the activity is taking place. We have had more success with following through with volunteers than we have in a number of years.
Smoother communication between community groups and higher levels of governance	ARMS is currently working with the DFO to improve the way data collected by stewardship groups is imputed and available online. The DFO have expressed to ARMS that there can be a better way of sharing data and ARMS will continue to work with DFO staff, which will improve communication between DFO and all community groups.

For the fourth objective (Follow through by fully establishing an adopt-a-stream program throughout the watershed), the measures of success and results were:

Measure of Success	Results
Funding	Applications have been made to RBC Blue Water Project ($5000), Mountain Equipment Coop ($5000), The North Face Explore Fund ($2500), and Service Canada ($3700) to move into Phase II of the Adopt-A-Stream project.
Engagement from other groups	There is interest from a large church group to adopt McKenney Creek and from the Alouette Valley Association, a neighbourhood group, to adopt Cattell Brook.
Engagement from District officials	ARMS has had three meetings with District of Maple

	Ridge staff in regards to the partnership ARMS and the District can form through Adopt-A-Stream. ARMS also has a council liaison from the District of Maple Ridge and the City of Pitt Meadows. The Maple Ridge councillor has shown interest in the Adopt-A-Stream project and has suggested ways that the municipality can help promote it through their website.

3.4 If applicable, please describe project outcomes that relate to one or more of the following strategic approaches (Section 2.1 of RFP; section 8 of detailed proposal template), and include specific examples.	
Engagement of First Nations. Please specify who, and in what capacity.	The Katzie First Nation will be involved in the monitoring of the Katzie Slough Compensation Project, which will be rolled under the umbrella of Adopt-A-Stream. The Katzie Slough project will start in the spring of 2012, instead of 2011 due to a delay in construction.
Active partnerships with one or more organizations.	ARMS partnered with the Maple Ridge Adopt-A-Block Society, who provided garbage grabbers for the events, the District of Maple Ridge, who worked with the Tributary 2 group in regards to information regarding the development application, the CEED Centre, where many of the Morse Creek volunteers were found at their weekly meetings, the Environmental School, who adopted Golden Pond.
Engagement and participation of diverse and under-represented groups.	Local residents were able to adopt the creek in their own backyard, instead of helping out in general activities watershed wide. The Connex Alternative School consists of youth who have dropped out of school but have come back to finish at their own pace. ARMS connected with this program and there was interest, but a project did not occur this year.
Relationship building, as a foundation for sustainable, enduring activities.	The Adopt-A-Stream project enabled ARMS to “get the word out” about ARMS projects and goals. There has been more interest from the general public about ARMS and how people can get involved.
Capacity building, including mentorship models, leadership training and skills development.	ARMS worked with all groups and trained them to sample for water quality (pH, temperature, turbidity, and dissolved oxygen), trap for juvenile fish, and map habitat. ARMS staff made available any information requested and As a part of Phase II, ARMS has applied for funding to continue the education of ARMS staff and keen volunteers for training in stewardship activities.

Recognition and support of champions and their initiatives.	Recognition will be given to each group at the Rivers Day ARMS hosts at the Allco Fish Hatchery and each group will be invited to set up a booth about the work they have done. The Adopt-A-Stream project with ARMS has been in the local newspaper three times and after each article has been more interest from the community. ARMS has promoted the Adopt-A-Stream project in our biannual newsletter. There will be an article about each stream in our 2012 spring edition (to come out in April).
Opportunities to influence policy and decision making,	ARMS is working with the DFO and the District of Maple Ridge to ensure that the data collected is used to find potential restoration sites and priority areas. ARMS is reporting all salmon enumeration data (juvenile for this project, but we are hoping to add these streams to our spawner surveys in the fall) to the DFO to ensure proper policy comes from the data collected.

3.5 Please describe how the benefits of this project will be sustained and/or be built upon into the future. What are the planned next steps, or recommendations for further work, if applicable?

There has been interest in the Adopt-A-Stream from the District of Maple Ridge and the ARMS Board of Directors, who are currently working on ARMS' vision, feel that the Adopt-A-Stream model fits well with the direction ARMS will be heading with our (soon-to-be-defined) new vision.

The next step for the Adopt-A-Stream project is to implement Phase II of the project. Phase II will include connecting more people to the established Adopt-A-Stream groups, encouraging the adoption of more streams, and continuing a dialogue with the District of Maple Ridge about Adopt-A-Stream. ARMS hopes to increase the number of adopted streams, especially in west Maple Ridge and Pitt Meadows, where stream are highly suburbanized. The Adopt-A-Stream Phase II project is focused on connecting people to the streams in their backyards. Many people know about the larger river systems but are not aware of how storm drains and small tributaries contribute to the overall health of an entire watershed. Adopt-A-Stream brings people together to educate them about the importance of watersheds by holding streamkeeper events to monitor the health of the stream. Phase II also involves establishing a working partnership with the District of Maple Ridge, which is essential for the continuation of Adopt-A-Stream in the future. ARMS will go about establishing this relationship by working with ARMS' Council Liaison, meeting with District staff, and presenting to the District of Maple Ridge council.

3.6. What are the top three lessons learned from this project that could be useful to communicate to others doing similar work in the Basin?

The best lessons ARMS learned from the project were:

1. There are many different faces to what a group looks like. A group of people that came together for different purpose (for example the Tributary 2 group over a development project), with the right direction, can also come together for the benefit of the stream through a project like Adopt-A-Stream.
2. Communication is key. Lay out expectations in every activity done. For example, we were not clear with the Tributary 2 group about the importance of face-to-face contact when reaching out to landowners and we did not get any response from those landowners, but when we clearly explained why and how to do a stewardship activity, the volunteers were able to take ownership of the project and excel.

3. Finding people and groups to volunteer takes time and effort. ARMS was communicating with the Tributary 2 group for five months before any stewardship activities took place. ARMS worked with the organizers of the Environmental School for two years before the school opened and this project occurred.

3.7 REQUIRED: Attach all DOCUMENTATION of Final Deliverables, and LIST attachments in Section 8. These may include technical reports, maps, photos, evidence of communications, lists of meeting participants, etc.

4. Outreach and Communications

Please describe how you have communicated project activities and results within local and basin-wide communities, across organizations and/or to decision makers.

Please list and attach copies of (or links to) any communications materials from these efforts that you have not previously submitted.

To communicate project activities and results, ARMS has written about it in our fall 2011 newsletter, *What's Up at ARMS?*, talked to the local press and participated in a photo shoot, met with another streamkeeper group, the Langley Environmental Partnership Society, to learn about their stream stewardship activities and see how ARMS could use their ideas to enhance our program, met with the District of Maple Ridge to start a dialogue about how ARMS and the District can support each other in regards to stream activities, and have started a discussion with the DFO to enhance the way data from stewardship activities can be better accessed, managed and used. ARMS also send all data collected to the DFO Streamkeeper Database.

Three Maple Ridge News articles
What's Up at ARMS? Fall 2011

ARMS has also used our website calendar (www.alouetteriver.org/events.html) and our facebook page (www.facebook.com/AlouetteRiverManagementSociety) to get the word out about this project.

8. APPENDICES

LIST all REQUIRED DOCUMENTATION here, and attach at the end of this report. These include:

1. **Documentation of FINAL RESULTS. These may include technical reports, maps, photos, lists of meeting participants, etc. (Section 3).**
2. **Communications and Outreach materials, if applicable (Section 4)**
3. **Letters of Confirmation for non-FSWP contributions (Section 5.2)**

1. Maple Ridge News – Adopt a stream – neighbours, get involved
2. Maple Ridge News – Along the Fraser – Morse Creek and the friends it now has
3. Maple Ridge News – Along the Fraser – BC is open for work along streams
4. What's Up at ARMS? – Fall 2011
5. Letter to Tributary 2 Landowners
6. Letter to Connex School
7. Landowner Brochure
8. Landowner Survey
9. Sign in and photo release for each event
10. Data collected at each event
11. Map of Tributary 2 and Morse Creek provided by District of Maple Ridge

Pictures

1. Garbage picked up at Tributary 2, October 2011
2. Clearing a trail to Tributary 2, November 2011
3. Removing English ivy along Tributary 2, November 2011
4. Volunteers with the ivy and garbage removed, Tributary 2, November 2011
5. Volunteers test the pH of Tributary 2, December 2011
6. A volunteer tests the dissolved oxygen of Tributary 2, December 2011
7. Coho caught in Tributary 2, January 2012
8. Volunteers identify a fry, Tributary 2, January 2012
9. Fish barrier on Tributary 2, January 2012
10. Volunteers measure Tributary 2, March 2012
11. Volunteers on Tributary 2, March 2012
12. Fish passage barrier at Morse Creek, February 2012
13. Volunteers prepare the gee trap, Morse Creek, February 2012
14. A volunteer identifies a fry, Morse Creek, February 2012
15. Volunteers test dissolved oxygen of Morse Creek, March 2012
16. Environmental School student in Alouette River, October 2011
17. Teaching the Environmental School about the ecology of the Alouette Watershed, October 2011

MAPLERIDGENEWS.com

Adopt a stream – neighbours, get involved

A coho salmon fry showed up in T2 creek along 222nd Street, the focus of a pilot adopt-a-stream program. River management society volunteer Peter Dittaro and employee Nicole Driedger confirm that it's a coho.

Contributed

By Phil Melnychuk - Maple Ridge News
Published: **January 18, 2012 9:00 AM**

After being poked and prodded and tested for acidity levels, clarity, oxygen and temperature, the result was a clean bill of health – and it doesn't even have a name.

Officially, it's called T2, but the locals know it as Hillside Creek.

It runs through an older neighbourhood in Maple Ridge, along 222nd Street, starting somewhere north of Dewdney Trunk Road, through backyards and beneath roads and it's a sparkling example of what an urban stream should be, says the Alouette River Management Society.

Thanks to the adopt-a-stream pilot program, T2 now will have some tender loving care to ensure its survival.

The program matched the society's expertise with the volunteer efforts of concerned residents, in order to safeguard the watercourse.

"It's really about connecting people to their streams and show them how important their stream is to wildlife and fish," said Amanda Crowston, with the river society.

“It’s really to showcase the importance of these urban streams.”

A $12,050 grant from the Fraser Salmon and Watershed Program allowed the water quality to be tested. The results from last fall came back good for all of the above categories.

ARMS staff and local neighbours also installed fish traps in four spots last week and found fish in three of them – cutthroat trout, coho salmon and stickleback, some almost 10 centimetres long. It’s possible that a concrete barrier blocked fish access to the fourth.

“We were really excited. It goes through so many properties,” Crowston said.

Removal of invasive plants was also part of the project.

Crowston doesn’t know the exact origin point of T2, saying that it’s formed basically by runoff from roads, backyards and ditches. When the Alouette River is under storm conditions or facing heavy runoff, such channels offer a refuge for smaller fish.

If more money becomes available, the program could be offered to other neighbourhoods. Crowston says adopt-a-stream forms a connection between residents and the stream and its surrounding environment, which people may not have had before.

Her group wants to show residents how, with small changes to their properties, there can be a healthier stream for fish and wildlife.

“Many people love bird watching, for example, and with a healthy fish population in an urban stream, and plants that support bird habitat, there will be more birds in our backyards.

“If they want to start caring for their streams in their back yards, we want to support them.”

Not tested for, however, was pesticides. Maple Ridge doesn’t allow use of pesticides or herbicides on residential properties.

“The stream is going through a residential area. We hope with the municipal bylaw, that’s something we don’t have to test for.”

Stacy Wakfer, who lives on 222nd Street, is one of the handful of residents who helped ARMS.

“It’s my belief we own the streams and that waterway is ours,” Wakfer said.

The stream will be here long after she’s gone, she added.

However, she wonders why the District of Maple Ridge OK’d last June a new 109-unit condo development at 12256 – 222nd St., that’s located on nearby untouched green space.

The project already has a permit, but Wakfer wants the setback for the stream corridor that runs through the property increased from 15 metres to 30 metres.

Crowston, though, says the project has “sufficient setbacks from the stream and there is a proper plan in place to ensure the setback is restored with native plants.”

MAPLERIDGENEWS.com

Morse Creek and friends it now has

Along the Fraser

Jack Emberly

Jack Emberly.

Published: **February 10, 2012 8:00 AM**

Rex Rutherford is a long-time friend to Morse Creek.

It runs through his back yard at Abernethy and 224th Street to the South Alouette River.

To the unsuspecting, Morse looks like a ditch – storm drains empty into it - but Rex has seen chum salmon spawn here in the fall, and herons stalk fry.

Rex recalls crayfish, frogs, lots of fry, and plenty of salmon in Morse.

But recently, during spring run-off, he's found ivy, garbage bags, even TVs, radios.

Rex, and neighbours, like John and Laurie Dwulit next door, clean up messes like that.

Rex wonders how many other folks would become stewards of Morse given the invitation.

He also wonders if there enough fish to make this once abundant little brook worth nurturing.

Last week, Rex got answers to his questions. The Alouette River Management Society's newly funded Adopt-a-creek Program already had one proud member, T2 – or Hillside Creek, – a stream that runs along 222nd Street.

Amanda Crowston, ARMS office manager, thought Morse might be another one. She'd assess its potential: what lives in Morse today; what the water quality is; whether there'd be volunteers to help

find the answers.

Step 1 was to set water traps on Feb. 2nd, and check them Feb. 3rd. I shared the dates with visitors at the CEED Centre, adding that volunteers were welcome. Nearly every hand went up.

Morse had friends it didn't know about.

Probably, most of our streams do.

Thursday, noon, Feb. 2nd:

Fry traps are two-section, wire-mesh cylinders joined by hinges. There's a wide cone-shaped opening at each end that narrows to the centre. Once inside, fish can't find their way out.

Lori, an ARMS volunteer, demonstrated baiting traps for Blake, Ron, Elaine, and Laurie, and me. We placed soft fish-flavoured cat food into a small nylon sack that's dangled from the middle of the trap before snapping it shut. The knack takes practice, but Lori was patient. Twine secures the cage to a branch on the stream bank.

Cliff, a retiree, is another ARMS volunteer.

"I was a banker until Friday afternoon," he says, "and then I was in the bush."

It's Cliff's job to lay six traps at various locations along Morse.

Traps 1 and 2 go into Morse near the Alouette.

Cliff avoids stepping in gravel that might be a nest for eggs. He finds a pool against a tree trunk, parallel to the current for Trap 1.

"Okay, that's really fine," he announces. "Ya, a very good set."

We've walked through bamboo-like plants, but Nicole Driedger, ARMS education coordinator, says it's knotweed, "a real problem because it spreads so quickly."

Volunteers often replace knotweed, English ivy and blackberries with indigenous plants like salmon berries, or huckleberries, natural food for fish.

Rex has found ivy clippings in Morse. They'll regenerate on stream banks.

Cliff kneels on the bank to set Trap 2.

"If I fall in," he jokes, "I guess I'll be some kind of invasive species."

Gerry holds his belt from behind.

"I've got ya," he says.

We're learning today, and having a little fun too.

On our way up the bank, we meet angler Jim Andre with a six-pound hatchery steelhead – no adipose

fin.

“How’s the steelhead return this year?” Cliff asks.

“Medium,” replies Andre, “compared to the ’80s. Between 112th and 240th there’s no fish anymore.”

Andre blames cutbacks at hatcheries and “hotspot” bragging on the internet that funnels anglers directly to their quarry.

Traps 3 and 4 go into Morse at the Dwulit place.

“Here to set the traps?” John asks.

We set Traps 5 and 6 in Morse headwaters off Edge Street, near Eric Langdon elementary.

Nothing to do now, but wait, and hope.

Friday Feb., 3rd, 10 a.m.

We’re all anxious to see what the traps hold. Trap 1 has good news.

“We’ve got one,” someone shouts excitedly.

Trap 2 yields another fry, and a 90 mm long, flat-headed fish that looks like a bullhead. This shy bottom dweller with fan-like fins has no scales, and no spine. It’s a sculpin. Some are protected.

“This is fantastic,” says Amanda, “I’m very happy about this.”

There’s more reason to celebrate. Traps 3 and 4 produce 11 fry 40–90 mm long. Fins, and side marks show 10 are coho. But one, an unexpected bonus, is a wild steelhead (red lateral line).

Traps further up are empty as expected. Thick debris blocks fish movement.

That could be a clean-up later, but it’s okay for now.

“I’m very pleased with what we found,” concludes Amanda, “and with the fantastic interest that people have shown in Morse. It’s an excellent creek for adoption.”

The next step? Water quality testing later this month, Amanda tells us. I’m sure most of Morse’s new friends will be there. Adopting a stream is rewarding.

“My goal is to have every stream in the Alouette Watershed adopted,” Amanda says. “We’d encourage people who have one on their property to contact us to see how we can help them.”

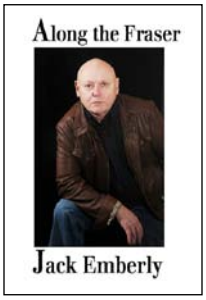
Little streams throughout B.C. that once teemed with fish life can be productive again, and our kids can enjoy them as we did, if more of us become their friends.

• Contact ARMS at 604-467-6401.

Jack Emberly is a retired teacher, local author and environmentalist.

MAPLERIDGENEWS.com

B.C. is open for work around streams



Jack Emberly. *The NEWS/files*

By Jack Emberly - Maple Ridge News

Published: **March 22, 2012 10:00 AM**
Updated: **March 22, 2012 10:52 AM**

Legislation to protect fish was headed for death by a thousand cuts, but the Harper government couldn't wait. It delivered the coup de grace last week with its secret plan to erase habitat protection from the Fisheries Act.

The scheme, contained in a government memo, was leaked to retired fisheries biologist Otta Langar, who issued a press release. Prosecution of offenders under Section 35 of the Fisheries Act will soon be history.

Here's the wording as it stands today: "No person shall carry on any work or undertaking that results in harmful alteration, disruption, or destruction of fish habitat."

Strong talk, fines to $1 million, law with teeth.

Key words in amended Section 35 (1) will make enforcement irrelevant, and let industry know B.C. is open for unimpeded work around streams.

It will read: "No person shall carry on work, undertaking, or activity, other than fishing that results in adverse effect on a fish of economic, cultural or ecological value."

Economic, the first value, will now decide the fate of fish and habitat.

We shouldn't be surprised. A few years ago, the DFO had these words inserted into the Species at Risk Act to escape a costly habitat remediation program for declining Cultus Lake sockeye. In DFO opinion, the endangered species no longer had economic value.

In June 2010, Canadian National Geographic noted "an obscure clause" (economic value again) in the Fisheries Act that let mining companies transform "schedule 2" lakes (new words and category) into tailing ponds. But, when it came to Fish Lake, near Williams Lake, the Dene, with values other than economic, shouted, 'no way.'

Protecting habitat is an aversion for a government that plans to slash the DFO budget by 33 per cent before 2013. Fisheries officers at the Cohen Inquiry (June 2011) said "catastrophic" cuts will make it impossible for DFO to fulfill its protection mandate.

Is that the plan?

“To date,” says Langan, “the Harper government has shown little regard for the protection of the environment, and over the past few years has supervised the almost total elimination of enforcement of the habitat protection and the pollution provisions of the Canada Fisheries Act. In 2008, there were only two convictions ... in all of Canada. They [fisheries officers] were told not to enforce the act. That came out in Cohen Inquiry.”

Ring a bell?

In Maple Ridge, we waited a year for DFO to investigate 2009 complaints about thousands of dead fry in the North Alouette, and machinery digging in the river. I struggled with DFO reluctance to interview witnesses, collect fish for testing, or accept the ones I’d frozen for them. When officers finally showed up on site, one insisted she was not “investigating,” but only “inspecting.” Words erased, others added to DFO dictionaries.

Now, even the word fish is redefined to suit the government’s purpose. When the Fisheries Act was born in 1868, a fish was any cold-blooded, aquatic vertebrate with a caudal fin (Darwin). No means test. But, the new Section 35 says fish are the small, elite group with “economic” value. Pink, chum, trout, and the humble, but colorful sculpin have little worth. We have a carefully named commission to focus investigation into the disappearance of sockeye, and nothing else, caudal fin or not.

Economic value frees the Harper team from any expectation to protect streams in B.C. that don’t have sockeye – there’s lots of them. Enbridge pipes would cross some.

As Geoff Clayton of ARMS suggests, the new industry-freeing Section 35 of the act is a green light for the Gateway pipeline.

Indeed, the minister now has power in the amended Section 35 (2) to ensure the light remains green for all developers who lobbied for one. Original wording declared no one – even the minister – can allow a harmful alteration, disruption or destruction for any reasons.

But, the adjusted law permits adverse effects if authorized by the minister after economic considerations.

Developers, municipalities bent on growth, agriculture, will be overjoyed.

Conservative MP Randy Kamp indicates that’s been the government’s aim for a long time, saying changes needed to be made in Section 35 because municipalities can’t clean out their ditches, and farmers can’t either, if fish have been found in them, and they’re considered habitat.

Our ditches were streams before we turned them into toilets. Many can be restored with efforts like the ARMS adopt-a-creek program.

“Ultimately,” says Mr. Kamp, “were committed to protecting fish and fish habitat in an efficient way.”

DFO's plan to privatize enforcement has also been exposed at the inquiry. Officials told Cohen letting industry police itself was a more efficient way than having DFO do it. Without funding, that's a certainty.

Kamp tells "river groups" concerned about changes to Section 35 to patient. "They need to see what actually comes ... discussions will follow."

But, the Harper team will do what it wants and explain later, if necessary. Discussions over the Enbridge pipeline followed the deal to send oil to China. The decision to promote fish farms occurred without talking to us, as did the new, exclusive definition of fish in law, and the dismemberment of DFO enforcement.

Our government doesn't listen, or value the environment. We should follow the Dene and say no way to changes in Section 35 of the Fisheries Act.
Jack Emberly is a retired teacher, local author and environmentalist.

Adopt-a-Stream

Landowner Survey

The Alouette River Management Society invites you to participate in an exciting project to adopt the stream in your neighbourhood. What are you interested in? How do you think you can help? We want to support you in caring for your neighbourhood stream.

Name

Address

Phone Number

Email

Stream Name:

Does the stream go through your property? YES NO
If yes, would you allow volunteers to access the creek through your property to participate in an adopt-a-stream program? YES NO
Please note, volunteers through this program would be covered by ARMS insurance.

What interests you in caring for streams?
Examples may include: salmon, plants, stream cleanup, education, etc.

Have you volunteered for an outdoor/environmental project before? YES NO
If yes, what did you do?

What days of the week/time of the day are you available to volunteer?

Additional questions or comments:

Adopt-A-Stream is brought to Maple Ridge by the Alouette River Management Society
with funding support from the Fraser Salmon & Watershed Program.

Legend

- Culverts
- Erosion Areas
- Existing Enhancements
- Fish Observed
- Natural Obstructions
- Outlets
- Ponds
- Problem Flags
- Stream Infrastructure
- Wetlands
- GPS Creek Centrelines
- Municipal Land and Leases

Streams & Rivers (Topographic)

Feature Type

- Indefinite Creek Centreline
- Ditch Centreline
- River Centreline

Rivers & Lakes (Topographic)

Feature Type

- Canal
- Flooded Land
- Lake/Reservoir
- Marsh
- River

Trib 2

Morse Creek

The Corporation of the District of Maple Ridge makes no guarantee regarding the accuracy or present status of the information shown on this map.

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SCALE 1:2,200

Morse Creek & Trib 2

City of Pitt Meadows · District of Mission · District of Langley · FRASER R.

Morse Creek & Trib 2

CORPORATION OF THE DISTRICT OF MAPLE RIDGE
PLANNING DEPARTMENT

DATE: Feb 14, 2012 FILE: MorseCreekTrib2.mxd BY: DT

Removing English ivy along Tributary 2, November 2011

Volunteers with the ivy and garbage removed, Tributary 2, November 2011

Volunteers test the pH of Tributary 2, December 2011

A volunteer tests the dissolved oxygen of Tributary 2, December 2011

Coho caught in Tributary 2, January 2012

Volunteers identify a fry, Tributary 2, January 2012

Fish barrier on Tributary 2, January 2012

Volunteers measure Tributary 2, March 2012

Volunteers prepare the gee trap, Morse Creek, February 2012

A volunteer identifies a fry, Morse Creek, February 2012

Teaching the Environmental School about the ecology of the Alouette Watershed, October 2011