SEHAB update Kevin Ryan Nov 2022
North Shore, Port Moody and Maple Ridge
DFO CA Brian Smith

North Shore

Kevin met with Keegan Casidy (North Shore Stream Keepers) he gave me an excellent tour of all key locations and streams on North Shore. Very impressive work that was led by him completed last year in Mosquito creek. He is looking to do more work on west side of MacKay creek to improve spawning. Lots of big projects under consideration by north shore stream keepers. Big money involved in many of these. They have been very successful securing financial assistance from a number of heavy industry in Burrard Inlet such as Seaspan, Port of Vancouver etc. Volunteers needed to organize several of these projects.
We looked at Lynn Creek and possibility of establishing side channels in lower reaches.
We chatted about how the recent Highway 1 project negatively impacted several waterways in the area. Lynn Creek main channel (lower reaches) has been straightened so much all spawning gravel has been completely washed out. I understand this is fairly typical of the larger rivers on the north shore due to redesign over the years where the dstrict has straighten them out and hardened shorelines.

Port Moody

Noons Creek
Lots of coho spawning literally 100's
Discussing work with Brian (CA) to dredge out their side channel needing DFO habitat restoration support. Atmospheric river events have washed down all the gravel into the lower estuary needs work.

We were all very excited to see the rain return so fish could make it up the creek, first it was the sleek Coho that manoeuvred through all the rocks, one after the other, then as it kept raining the numbers increased to several hundred. The numbers have surprised us all and it is the best Coho return in years. It was easy to take 11 females and 11 males into the tubs inside. We only need 8 pairs for our incubation room, approximately 20.000 eggs. At present we have spawned 1 pair, last Thursday for 2830 eggs. We have 11,800 coho fry in our pond, however with the drought and very low oxygen (75%) we expect that there are less coho that we have on paper.

As the creek had better flow the Chum returned too in greater numbers than last year and they are still returning. We have not spawned any Chum from our creek, but 6 volunteers participated in harvesting 57.000 Chum eggs from Alouette River on Oct.31/22 for our incubation room.

A few Chinook Salmon washed up in our creek last week, which is unusual.

Work projects for next year is: Improving electrical capacity to our incubation room for the Winter months. (Brian's request from DFO.)

Restoring our side channel, needs to be dug out, drained and restored with spawning gravel as it is too shallow and upper part is full of sand.

Mossom Creek hatchery

Excellent returns of chum averaging 60-70 chum in one hour count. Counted every day since rains started. Heaviest returns in last 8 years! Nov 1st Mossom creek egg take secured 20,000 chum eggs. Balance of our eggs 80,000 were secured from Alouette Hatchery. We have a number of new interested volunteers. Our open house salmon Sundays (11am-1:30pm) are always packed.
Brian Smith will be working with a few volunteers this week to locate coho near hatchery to use for Mossom spawners. If unsuccessful we will get coho eggs from Noons Hatchery who have an abundance 11 pair holding in their tanks.. We are hearing that DFO may be considering increasing our allowable coho limits currently only allowed 4000.

UBC Mossom coho tagging project
We have received preliminary results from this project. We tagged 90 coho smolts released over 3 different days in May. We installed 10 receivers in Burrard inlet. 2 east of release point, 2 just past Reid Point 2 Indian Arm 2 second narrows and 2 at Lions gate bridge. UBC masters student will be analyzing the raw data and will be preparing a thesis paper on this project.
Initial Results were somewhat surprising many of the coho hung around eastern part of the inlet with over 150,000 hits involving almost all 90 tagged coho over a month. They appeare to hang around the area from Port Moody to Reid Point Marina for almost a month.. About 20-30 we're recorded around Indian Arm and around 15% past second narrows. Just under 10% we're recorded at Lions Gate.
A good deal more analysis needed and we feel a second or third study will be warranted to validate before any firm conclusions are made.
This project cost was $40,000 just to purchase radio tags. UBC in kind was another $30,000 from UBC. So extremely expensive study.

Maple Rudge

Alouette Hatchery
Unable to connect with Ross for most recent spawner and egg take numbers. I heard they have Secured over 8 million chum eggs. I believe they keep aprox 4 million for their hatachery and share the rest with other hatcheries like Seymour, Noons, Mossom etc.

Kanaka Bell Irving Hatchery
Very strong chum and coho return as well,
Numbers at ALLCO fish fence as of Nov 5th:
Chum - 9349
Coho - 118
Chinook - 90

Common complaint from community hatcheries is funding or lack there of from DFO
Lower Mainland Road Salt project

Lower mainland stream keepers led by (Stony Creek) have secured a very impressive sizeable 5 year NSERC grant ($500,000), to look at the impact of road salt on salmon and other aquatic life including invertebrates in a number of creeks and streams in MetroVancouver. Several universities are now also involved UBC,SFU and BCIT project is co-ordinated by DFO. First workshop last weekend led by Nikki Kroetsch from DFO. Nikki will be coordinating activities of the various stream keepers groups along with the involved universities.

BIMES/Mossom creek hatchery has agreed to participate in this study. Initially we have one data logger installed just below IOCO Road. We may add a second logger around the hatchery to compare conductivity level differences in Mossom Creek. There are only two roads that would have any impact on aquatic life on Mossom creek that being IOCO road and East Road. Mossom creek water is one of the healthiest waterways in Metro Vancouver. This is largely due to relatively minimal impact from development and road infrastructure . Mossom creek will therefor be used as a baseline and will be compared against other creeks in the lower mainland. The road salt team is aware of several creeks already struggling with extreme levels of road salt.

Aproximately 30 data loggers will be installed in various creeks in the lower mainland. Date will be uploaded 2-3 times per year and the results will form a real time picture of how much salt is entering our creeks based on conductivity levels. This data will then be replicated in several labs. There are a number of PHD and masters students who will be studying the impact of road salt on aquatic life. These results will be published and shared with all interested parties.

The study organizers recognize the need for application of road salt for safety reasons. The road salt team will be looking for solutions that allow for the safe movement of vehicle traffic and hopefully find ways to reduce the volume of salt on our roads. This study is not limited to the use of salt on roads. The team also understands the additional impact of household salt application on driveways and sidewalks as well as in multi family dwellings. These add to the overall impact on creeks and streams. Educational efforts will form part of this study to communicate to the public the impact this material has on aquatic wildlife.

The road salt team wants to work collaboratively with all municipalities to find ways to lessen the impact of road salt. Several municipalities have even offered to pay for data loggers to widen the scope of this important project.

Kevin Ryan
Nov 5th 2022