

2023 in Review

Sunday

Dec 31, 2023

Issue # 3



What's new today

Broodstock | Incubation | Rearing & Release | Community Value | Fun Facts
| kʷikʷələm Sockeye Hatchery



Above: Broodstock Release in Cedar Creek – from left: Drew Robinson, Nick Chow, Zach Chan

ANGLERS MAGICAL “175”

Back to Back milestones reached! 2022 and 2023 witnessed a full quota of Coho broodstock released to Cedar Creek, in year 4 of a 5-year program. Members **angled the full Coho broodstock quota of 175**, 100 for release into Cedar Creek and 75 for our own use... 😊.

On eggtake completion live adults were released to spawn naturally.



River Springs was the recipient of 18,000+ eggs. Congratulations to our member anglers, your dedication and fish handling expertise is appreciated!



Top: Dave Belgrove

Centre Right: Dan Boutin

Left: Ric Locke, Nick Chow, Drew Robinson; Cedar Creek

Right: Elias Osmanzai

Below: Richard Chabot, Zach Chan



The Latest EGG News

INCUBATION

Coho

58,000+ eggs in Incubation

We are in good shape for brood year 2023!

Grist Goeson Memorial Hatchery				
Total Harvested GrEggs →				85,042
Total TSFR Offsite GrEggs →				18,295
As of Date	30g Count	GrEgg/Gram	Fecundity	
	AVG per Female →	156	5.2	2,259
2024-01-11	Total Incubated Grams & GrEggs →	11,262	58,739	
Earliest Shock Date	Date Trayed	Stack & Tray	Total Grams	Est GrEggs True GRN
2024-01-02	30-Nov-23	S4T2	968.0	4253
2024-01-02	30-Nov-23	S4T3	1056.0	5355
2024-01-02	30-Nov-23	S4T4	1046.0	5311
2024-01-04	07-Dec-23	S4T5	1006.0	4710
2024-01-04	07-Dec-23	S4T6	756.0	3862
2024-01-18	14-Dec-23	S4T7	1470.0	7668
		S4T8	0.0	0
2024-01-18	14-Dec-23	S3T2	1210.0	7232
2024-01-26	21-Dec-23	S3T3	1244.0	7277
2024-01-26	21-Dec-23	S3T4	1306.0	6835
2024-01-26	21-Dec-23	S3T5	1200.0	6236
		S3T6	0.0	0
		S3T7	0.0	0
		S3T8	0.0	0

GGMH Average % Loss				
Data Yrs	% Eyed/TGrn	% Poned/TGrn	% Released/TGrn	
3	9.3%	13.0%	5.7%	
GGMH GrEgg Harvest				
Brood Year	2023	COHO		
	SEP Target	Actual	O&A Target	% +/-
Total Production	87,920	85,042	- 2,878	-3.3%
GGMH Incubation	62,920	58,739	- 4,181	-6.6%
Offsite Transfers Target	25,000	18,295	- 6,705	-26.8%
Note:	Total Production GrEggs factored up by 14.4%, average 3 Year egg loss to Poning stage			



Excitement & Wonder ... Look at them Fly

Above Left: Kwikwetlem First Nations helped to release Coho fry to Cedar Creek as part of their Youth Guardian Program – Left to Right: Ayden, Leo, & Kat Delaney(Guardian)
Above Right: Member Richard Chabot releases Coho Smolts to Coquitlam River.

RELEASE HISTORY

Hatchery release targets are reviewed annually through DFO - SEP's (Salmon Enhancement Program) Production Planning Division for each fish Species. Each hatchery signs an agreement with DFO outlining approved species and release quantities to rear.

Tide Gate Study(GGMH Coho Fry: 3,000/Year)

Fish Health - UBC is in year 3 of a 5 year Study to identify how Coho Fry move in and out of smaller waterways during different levels of flow seeking "safe" cover. The tagged fry are monitored for movement in areas where tide gates affect water flows, within the Coq River system.

GGMH 7-year historical release quantities into the Coquitlam Watershed:

Grand Total - Years 2017 thru 2023

Coho: 389,300 Chinook: 242,848



News on

CLIPPING FED FRY

20 member and volunteer clippers demonstrated their finite motor skills clipping 47,000+ Coho Fry adipose fins, the small one you can hardly see ☺, while enjoying each other's company, creating laughter, and enjoying "treats" in a relaxed environment on a warm summer's day!

In each of years 2020-2024, up to 45,000 adipose fins require clipping to meet SEP



release targets of 25,000 Fry to Cedar Creek while

20,000+ are retained, reared, and released as smolts



in the following year to the Coquitlam River recreational fishery.



At 13, Colm was our youngest clipper and "clipped" the AdFins like a pro...with Dad gently reminding him to stay on task ...



Thanks to Community Clipping Volunteers: Joe Cornies, Stephanie Davidson, Rodney Lee, Homan, Richard Kapitsa, Jeff Rudd, Helen Conners, Brent Simonson, Colm Hornibrook, Glen Hornibrook, Josie Wall.

Left: Isaac Nelson (DFO), Mark Conners

Good news... What's being released in our watershed?

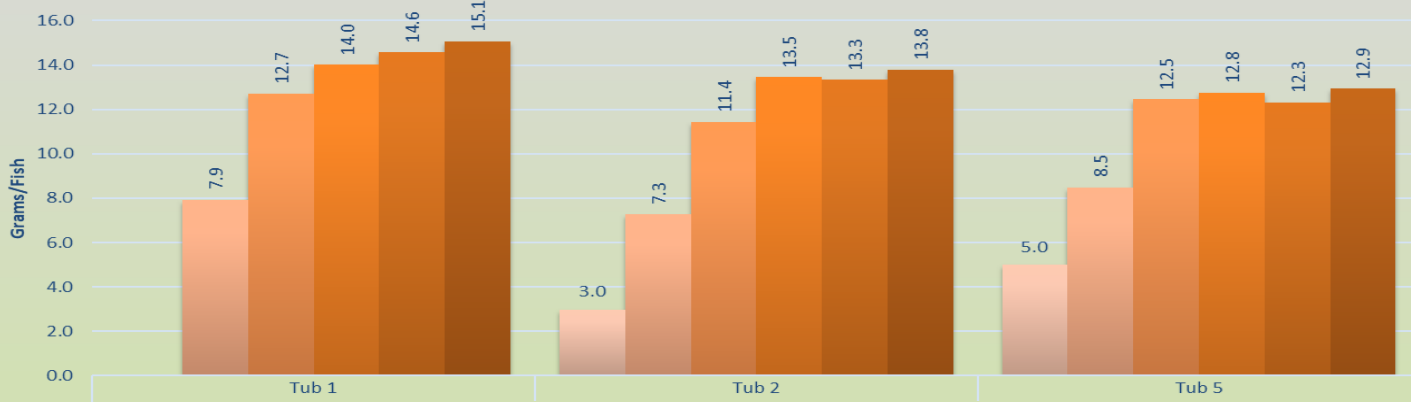
COHO and CHINOOK RELEASES

Top: Clipped and ready for release..Coho Fry
Bottom 2nd from Left: Vance Reach...What fin?
Who says we can't have FUN ☺

GGMH Calendar Year Fed Fry & Smolt Releases Coq River & Cedar Creek

Year	Chinook - Smolts Released	Chinook - Fed Fry Released	Coho - Smolts Released	Coho - Fed Fry Released
2017	78000	0	0	0
2018	20000	0	0	0
2019	30000	0	0	0
2020	30000	0	0	0
2021	30000	0	0	0
2022	30000	0	0	0
2023	30000	0	0	0
2016	0	0	55000	0
2017	0	40000	0	0
2018	0	40000	0	0
2019	0	40000	0	0
2020	0	40000	0	0
2021	0	40000	0	0
2022	0	40000	0	0
2023	0	40000	0	0

**GGMH COHO Fry Growth Progression
Brood Year 2022**



GGMH Fish Feed to Weight Conversion Ratio				
As of Date	Brood Yr	Species	RATIO =B/A	
			A	B
			Fish Biomass KG's	Feed KG's / Kg's Feed per
17-Dec-23	2022	Coho	385.6	1.08
15-Jun-23	2022	Chinook	95.6	0.87
			Released	On Hand
			124.5	261.1
			95.6	0.0
			385.6	416.4
			95.6	83.1

**The Growth Cycle
from Fry to Smolts to...**

REARING

An important part of the Rearing Process includes monthly weighing of Fry.

Weighing of fry allows for a quick “sight” assessment of overall fry health and ensure growth development follows “Wild Salmon” patterns. This triggers two key evaluation steps; 1) Feed Quantity and Frequency – “is it diet time”; and 2) Container Rearing Capacity – is the overall fish biomass within tolerable limits of each container’s capacity to maintain proper fish health. As fish grow and reach container maximum biomass limits, the fish are split into additional rearing containers. This “balancing” continues through to final fry or smolt release. To date, Brood Year 2022’s Feed to Weight conversion ratio estimate is Coho 1.08 and Chinook .87 kg feed per kg of biomass, “okay” and “very good”. The Coho are still on a diet after the summer gain ☺!



Right Bottom: newly ponded 1G Coho Fry, Top: 20G Smolts, and a friendly Coquiltam River Coho... Yin Hui

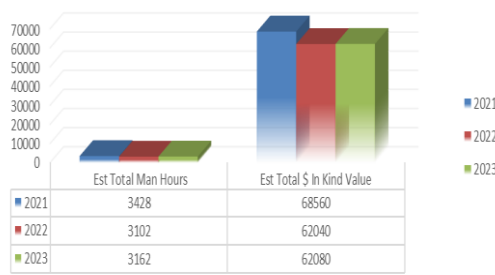
**Creating
Community & Value**

GGMH Value to Community

When you consider the value of the member volunteer group, and the service to the community, it is considerable annually. On a conservative basis, “in-kind” value is estimated annually as part of the SEP reporting process. GGMH averages 34 continuous member volunteers, a small group yet mighty in deliverables.

To the Originating Members, thank you for having the vision, perseverance, and desire to create something spectacular and beautiful, a true legacy for each of you and for PCDHFC.

GGMH VALUE TO COMMUNITY

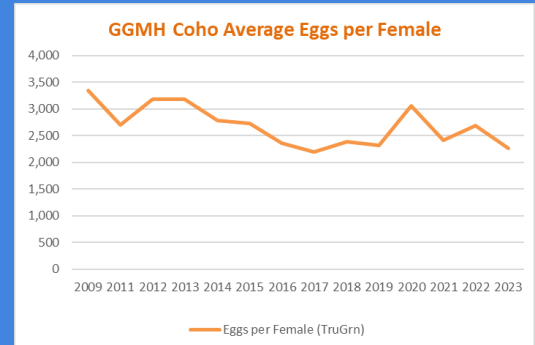


To the 14 Bi-Weekly Feeders, for your relentless daily dedication to rearing container maintenance and feeding the Fry.

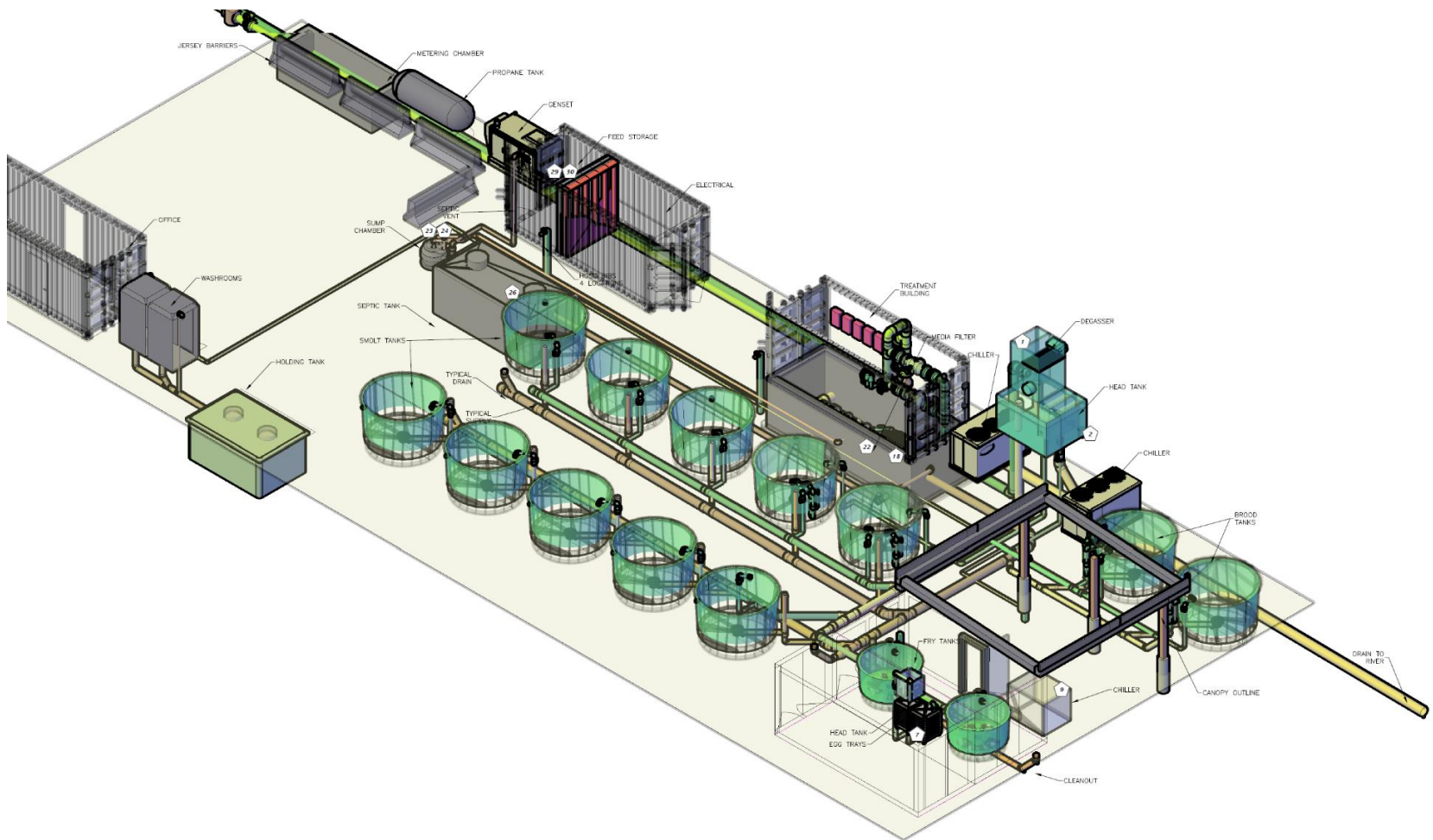
To the Egg Pickers, Early Feeders, Clippers, Turbine Test Team, Broodstock Anglers, Site Maintenance Crew, Photographers, Special Project volunteers, and DFO

a **HUGE...**
THANK YOU ALL!

Fun Facts:



“OK, this is it! All the sacrifice, the hard work, the planning... it’s now or never! Spawning ground, here we come!”



Picture: Drawing of the New kʷikʷəłəm Sockeye Hatchery to be located in the Coquitlam Watershed

Progress Update Excited for the return of...

“RED FISH UP the RIVER”

by Rodney Lee...Jan 5, 2024

With much anticipation, construction work on the kʷikʷəłəm Sockeye Hatchery site commenced in March 2023. However, by mid-April work had been put on hold pending further completion of hatchery designs and construction plans. Despite the delay in onsite works, equipment for the hatchery was received and work to outfit the sea-can hatchery buildings proceeded at an offsite construction yard. Onsite construction work resumed in November and continues to this day.

The present construction schedule indicates completion of phase #1 hatchery components (all buildings and equipment to run the hatchery including water supplied from the Metro Vancouver water main) in May 2024, followed by commissioning and testing activities as well as final outfitting. Further work to install a secondary water supply to the hatchery (phase #2 - river intake) is being planned for the July 2024 during the least impact fisheries window.



Top Right: Site Under Construction.
Bottom Right: Sea-Can Hatchery Buildings will be placed on footings at the hatchery.

Top Left: 8' rearing tubs will be used for adult holding as well as for smolt grow out.



Bottom Right: 2 x 8 heath tray stacks together with 6' tubs for ponding fry will be housed in an “incubation” trailer.



Parallel to the construction activities, the hatchery requires a number of licenses including the aquaculture license. We have an application under review with DFO Aquaculture Management Division. This is the same licensing process that all hatcheries (including community involvement hatcheries like GGMH) go through to obtain the “license to operate”

There’s still a lot of work ahead however we are hopeful that all work can be completed and we can be incubating Sockeye eggs in Fall 2024.