

2022 in Review

Saturday

Dec 31, 2022

Issue # 2



What's new today

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



Above: Broodstock Release in Cedar Creek – from left: Zach Chan, Steve Shotton

ANGLERS MAGICAL “175”

Our Anglers’ ROCK, milestone reached! 2022 witnessed a full quota of Coho broodstock released to Cedar Creek, in year 3 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.



Congratulations to our member anglers, your dedication and fish handling expertise is appreciated!



Top: Dave Belgrove

Centre & Right: Dan Boutin, Isaac Nelson (DFO) Keith Miller

Left: Rick Locke, Nick Chow, Drew Robinson, Richard Chabot, Sandy Lambertson



Below: Richard Chabot, Zach Chan, Vance Reach



The Latest EGG News

INCUBATION

Coho

65,000+ eggs in Incubation

We are in great shape for brood year 2022!

Grist Goeson Memorial Hatchery				
	Total Harvested GrEggs →		82,309	
	Total TSFR Offsite GrEggs →		16,396	
As of Date	AVG per Female	30g Count	GrEgg/Gram	Fecundity
2022-12-15	136	4.6	2,838	
	Total Incubated Grams & GrEggs →		14,362	65,913
Earliest Shock Date	Date	Stack & Trayed	Total Grams	GrEggs True GRN
2022-12-30	24-Nov-22	S4T2	1125.0	4482
2022-12-30	24-Nov-22	S4T3	1065.0	5199
2022-12-30	24-Nov-22	S4T4	1105.0	4054
2022-12-30	24-Nov-22	S4T5	1190.0	4942
2023-01-08	01-Dec-22	S4T6	1410.0	6782
2023-01-08	01-Dec-22	S4T7	1292.0	6545
2023-01-16	08-Dec-22	S4T8	1380.0	7272
2023-01-16	08-Dec-22	S3T2	1364.0	6828
2023-01-23	15-Dec-22	S3T3	1239.0	6292
2023-01-23	15-Dec-22	S3T4	1743.0	7818
2023-01-23	15-Dec-22	S3T5	1449.0	5699
		S3T6	0.0	0
		S3T7	0.0	0
		S3T8	0.0	0

GGMH Average % Loss				
Data Yrs	% Eyed/TGrn	% Poned/TGrn		
3	10.3%	14.4%		
GGMH GrEgg Harvest				
Brood Year	2022	COHO		
	SEP Target	Actual	O&A Target	% +/-
	Total Production	77,920	82,309	4,389 5.6%
	GGMH Incubation	62,920	65,913	2,993 4.8%
	Offsite Transfers Target	15,000	16,396	1,396 9.3%
Note:	Total Production GrEggs factored up by 14.4%, average 3 Year egg loss to Poning stage			



Excitement & Wonder ... Look at them Fly

Above: member Drew Robinson release Chinook Smolts to Coquitlam River. Watching “expressively” are Drews two daughters, right to left: Ashley, Emily and Glenda Kukulowicz.

RELEASE HISTORY

Hatchery release targets are reviewed annually through DFO - SEP's (Salmon Enhancement Program) Production Planning Division for each fish Species. Production objectives, Wild Salmon Policy, and biological assessments like adult returns, juvenile outmigration, available spawning and rearing habitat, and water flows are all considered.

Each hatchery signs an agreement with DFO outlining approved species to rear and species release quantities. Release quantities overall are based on a waterway's ecosystem to naturally rear a “number of fish per kilometer”.

GGMH 6-year historical release quantities into the Coquitlam Watershed:

Grand Total - Years 2017 thru 2022

Coho: 332,785 Chinook: 213,726



News on

CLIPPING FED FRY

20 member and volunteer clippers demonstrated their finite motor skills clipping 52,000+ 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 for the Coquitlam River recreational fishery.



Thanks to Community Clipping Volunteers: Richard Kapitsa, Jeff Rudd, Helen Conners, Karen Ramage, Madeline, Oli & Theresa Ward, Lance Charles, Jason Collins, Allen Murray, Ahmed Hassan.

Left: Isaac Nelson (DFO), Mark Conners

Good news...

What's being released in our watershed?

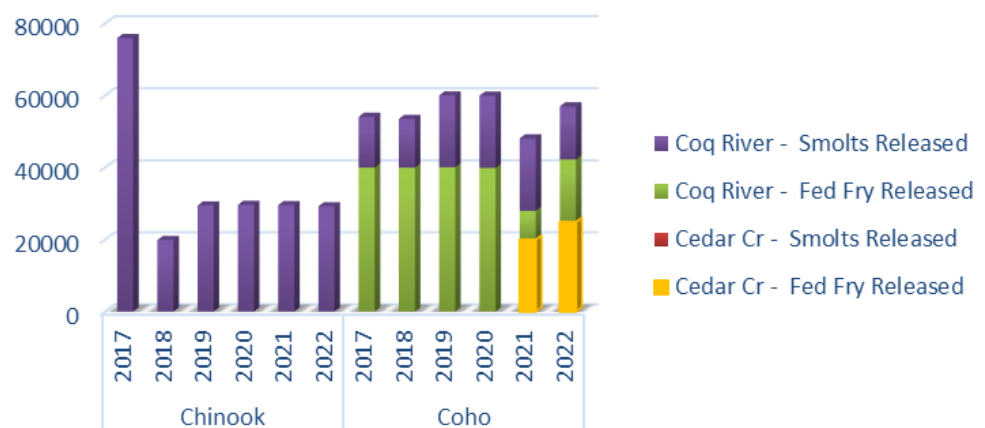
COHO and CHINOOK

RELEASES

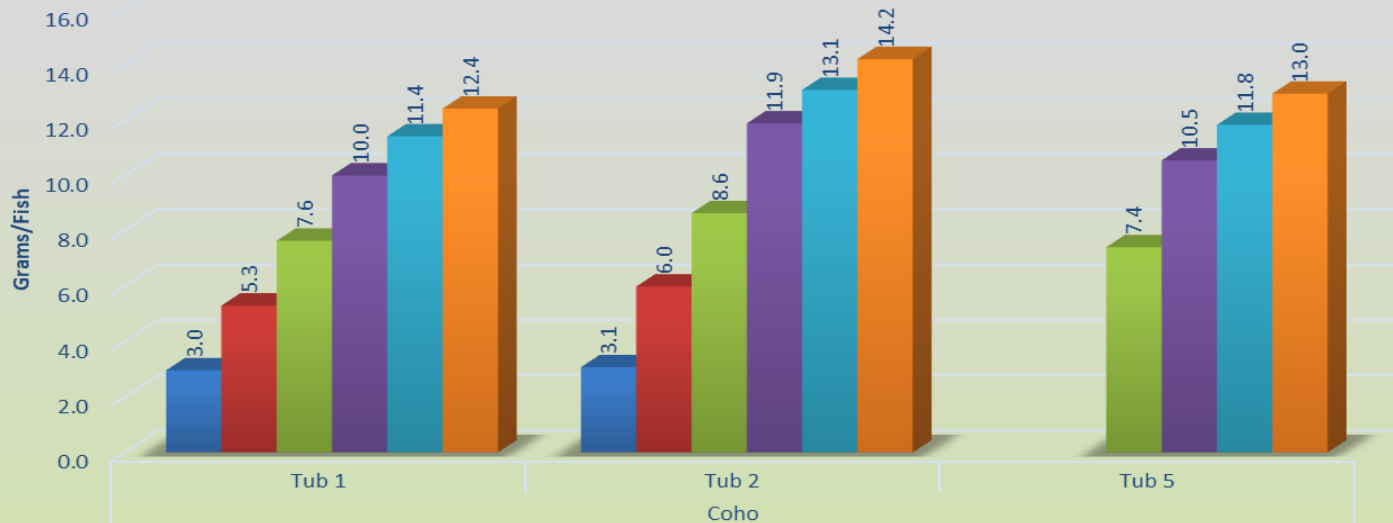
Cedar Cr Release: Right: KFN's NyShawna Scott, Left: DFO's Brendan Zoehner, Eric Kukulowicz.



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



**GGMH COHO Fry Growth Progression
Brood Year 2021**



GGMH Fish Feed to Weight Conversion Ratio		RATIO
A		=B/A
Fish Biomass KG's	Released	
On Hand	281.1	
ALL Sizes	413.8	
Feed Kg's	308.4	0.75

**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 2021’s Feed to Weight conversion ratio estimate is .75 kg feed per kg of biomass, very good.



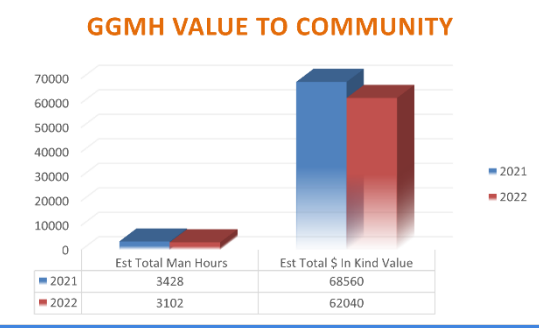
Right Bottom: newly ponded 1G Coho Fry, Top: 20G Smolts, and a friendly Coquiltam River Coho...Yin Hui

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 32 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 PCDFHC.

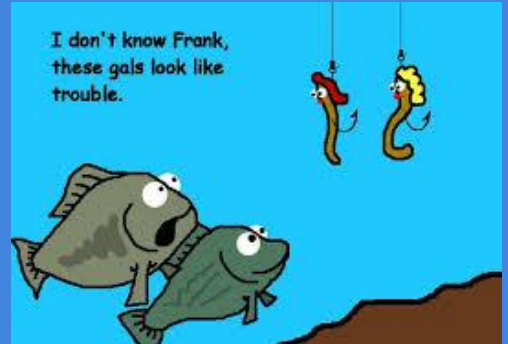
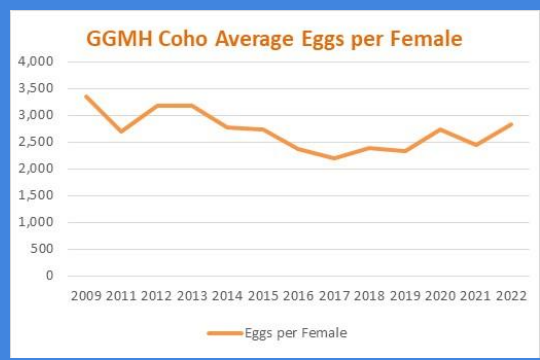


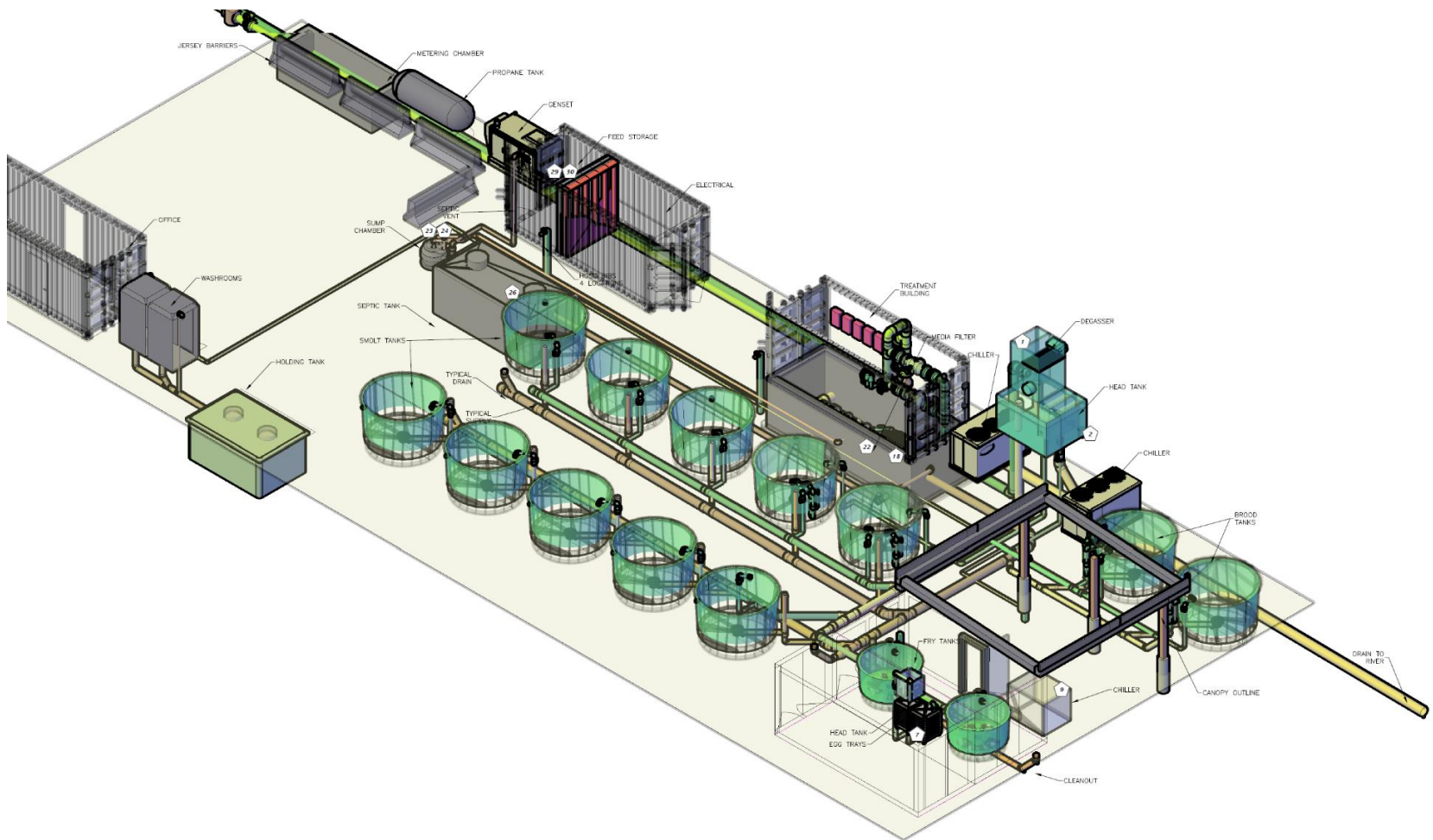
To the 14 Bi-Weekly Feeders, for your relentless daily dedication to rearing container maintenance and feeding the Fry.

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:





Picture: Drawing of the New Kwikwaka'wakw Sockeye Hatchery to be located in the Coquitlam Watershed

Local Ceremony and Launch New Beginning for the return of...

“RED FISH UP the RIVER”

Excerpts, pictures from Kwikwaka'wakw FN and press release...

COQUITLAM, BC., November 10, 2022 - Kwikwaka'wakw (Kwikwetlem) First Nation announced today at a special cultural blessing and ground-breaking ceremony that a new Sockeye Hatchery is being built nearby the Coquitlam Dam in the heart of the Nation's traditional, ancestral and unceded territory known as the skw'lam:ɬ ɣaca? (Coquitlam Lake) Watershed.



The Kwikwaka'wakw Sockeye Hatchery is a crucial next step in the Nation's long-term goal of restoring the run of Coquitlam Sockeye that once flourished in the

Nation's territory, and that sustained our people for thousands of years for food and culture before the Coquitlam Dam opened in 1913 and virtually eliminated this species. “The Nation, along with our Elders, past and present, as well as countless allies have worked tirelessly to restore this run of sockeye back to our ancestral lands and waters for decades.



The Fletcher Family attended the ceremony.



Top Left: Kathleen Ross (nee Fletcher), Jack Fletcher, Scott Ducharme

Left: Marion Fletcher



Front Row: Stogan family from Musqueam (x'məθk'əyəm), the spiritual workers who delivered the spiritual part of the ceremony.

Back Rows: Local dignitaries, BC Hydro, Metro Vancouver, DFO representatives and other local interested individuals.

The Kwikwaka'wakw Sockeye Hatchery is being led by Kwikwaka'wakw First Nation in partnership with BC Hydro, Metro Vancouver and Fisheries and Oceans Canada. Kwikwaka'wakw First Nation is responsible for operating the hatchery once completed, which is expected to be by early 2023. The Kwikwaka'wakw Sockeye Hatchery will also highlight the Nation's culture and history through cultural design elements as well as interpretive display areas around the hatchery.

Grist Goeson Memorial Hatchery is recognized as a supporting partner in salmon recovery within the Coquitlam watershed. Norm Fletcher, lifetime PCDHFC member, was one of Kwikwaka'wakw's strongest supporters for return of **Red Fish Up the River**.

Sockeye Hatchery Quick Facts

This small-scale, conservation hatchery will hold broodstock, incubate eggs and rear juvenile sockeye to the smolt stage before they are released to the lower Coquitlam River. By raising sockeye in the hatchery environment, the hope is to give the population a boost with higher survival rates.

- Juvenile sockeye require access to a lake for their initial growth in freshwater – this is critical to their life history.

- Initial target is the capture of 30,000 eggs for annual incubation, to raise 15,000 fish to release at the smolt stage after spending 18 months in the hatchery. Surplus fish will be released at the parr stage, to rear in Coquitlam Lake.
- There is a low expectancy of Coquitlam sockeye adults returning in the initial years. As a result, use of residualized sockeye from Coquitlam Lake (these are salmon that were trapped in the lake after the dam was built in 1913) as initial broodstock will help restart the population.