



LOWER SNAKE RIVER COMPENSATION PLAN



FISH FOR THE FUTURE

MATT HOW GRAPHIC - USFWS



KRIS MILLGATE

CRUCIFIED

WHAT'S BEEN HAPPENING IN LSRCP

JUNE 2021

The blood is red paint. It's dripping from rusty nails staked in a ... crying on camera is a personal reveal deserving respect. When it's sincere, it's sacred. I don't zoom in for a tighter shot on a tear.

Lower Snake River Compensation Plan

FISH FOR THE FUTURE

COORDINATOR'S CORNER

The cover image of Crucified by Kris Millgate in Backcountry Journal certainly caught my attention this month. "Salmon sacrificed for power", is a sobering headline, but one that reflects the sentiment of our stakeholders over the past few years. If you get a chance, check out the Ocean to Idaho trailer coming in 2021 at: <https://www.tightlinemedia.com/oceantoidaho/>

In any case, we are in challenging times and I'm counting on all of you to think outside our boxes to move the needle further than we ever had. I strongly believe the time is now to make big, bold moves forward. Yes, there are always risks of failure, but when we are nosing on rock bottom, the fall isn't very far.

I had a great visit to Rapid River Hatchery this month to catch up with Ralph Steiner. Certainly in the realm of spring Chinook, Ralph and the Rapid River Hatchery have been a cornerstone. Ralph drug out a quote from the old annual reports that bears repeating:

"Rapid River is a dismal failure and we should never build another facility with this design again" - Rapid River Superintendent 1975.

I'm sure glad the Rapid River staff stuck with it and built the program we have today. It reminded me of a quote Steve Rodgers, Dworshak Complex Manager, told me almost a decade ago:

"Give me an old run down facility and a great staff, and we'll blacken the rivers with the backs of salmon....Build me a brand new hatchery and a downtrodden crew and we'll fail every time."

Keep your chins up, we're going to find a way to blacken the river!

-Nate



We cannot solve our problems with the same thinking we used when we created them

- Einstein



FIRST LOSTINE CHINOOK OF THE YEAR - NEZ PERCE TRIBE

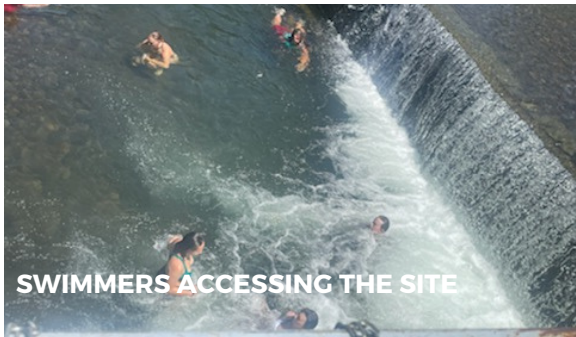
DAYTON DAM EMERGENCY



DAYTON DAM ON THE TOUCHET RIVER

The hot weather across the region has increased demand on local swimming spots and pushed people into some dangerous situations. Staff with Washington Department of Fish and Wildlife contacted LSRCP about local residents accessing the face of Dayton Dam and entering voids (scour holes) under the dam structure. The local Sheriff's Office was recently called to the site to investigate the possible drowning of a young adult. Thankfully, it was a false alarm of sorts, as the youth was under the dam and using an available air pocket. Apparently, this is a new form of entertainment for the local youth.

Dayton Dam is in an active (albeit prolonged) state of failure and we judged the attractive nuisance of the voids underneath needed to be addressed immediately. With help of on the ground staff and a contractor, emergency permitting was completed, equipment mobilized and the project completed by July 2nd just ahead of the July 4th holiday. Not bad for an issue that came into the office on Monday, June 28th. An unfortunate swimming hole loss, but much safer for those enjoying the Touchet river.



SWIMMERS ACCESSING THE SITE



FILLING VOIDS WITH 36" MINUS



COMPLETED REPAIR



UPDATED SIGNAGE

RAPID RIVER



RAPID RIVER REARING PONDS

Rapid River Quick Facts:

- 3M Smolts (20 fpp target)
- FCR - 0.93
- DI Max = 0.2
- FI Max = 2.0 (elevation = 2180)
- DO = 8.0 ppm
- CaCO₃ = 60 ppm
- Total Water Supply = 35 cfs (37-55 F)
- Rearing Ponds = 27,000 ft³ (3 ft deep)
- Early Raceways = Max DI = 0.8 in 90 x 6 x 3.5 feet (1700 ft²)
- swept 3x weekly
- Average Arrival at Granite = May 1

I had a chance to visit with Ralph Steiner, Beau Gunter, Derek Gloyn, and Chris Starr at Rapid River Fish Hatchery in June. What makes Rapid River one of the most consistent Spring Chinook programs in Snake Basin? That could be the 58,700 adult question i.e. the LSRCP spring/summer Chinook goal over Lower Granite. Besides large rearing ponds, this small team noted Rapid River broodstock and marking schedule is prioritized in the Snake Basin; i.e. the Hatchery needs are driving the system rather than the system driving the Hatchery. In addition, leadership longevity has emphasized solid fish culture practices; meaning that old infrastructure still produces quality smolts and strong adult returns. In any case, Rapid River has come a long ways since 1975 when the Hatchery Manager of the time was ready to close its doors for good. We're sure glad they didn't!



RALPH STEINER AT THE OLD ADULT PONDS FOR EMERGENCY SOUTH FORK TRANSFER



RAPID RIVER ADULTS



FINGERLINGS MARKED AND IN FINAL REARING PONDS



DWORSHAK SPRING CHINOOK RELEASES

CLEARWATER SPLIT RELEASES

Table 1. Estimated 10%, 50%, and 90% passage dates at Lower Granite Dam and travel times (Release-LGR) for early and late releases of spring Chinook reared at Dworshak NFH and released into the north fork of the Clearwater River in 2021.

Release Group	Cumulative Passage Dates			Travel Times (days)			
	10%	50%	90%	Min	Med	Max	95% Conf. Int.
Early (Mar. 31)	19-Apr	29-Apr	11-May	5.6	28.8	61.9	28.6-28.9
Late (Apr. 14)	26-Apr	3-May	15-May	3.4	19.0	48.0	18.7-19.4

Table 3. Estimated 10%, 50%, and 90% passage dates at Lower Granite Dam and travel times (Release-LGR) for early and late releases of spring Chinook reared at Clearwater Hatchery and released into the north fork of the Clearwater River in 2021.

Release Group	Cumulative Passage Dates			Travel Times (days)			
	10%	50%	90%	Min	Med	Max	95% Conf. Int.
Early (Mar. 31)	16-Apr	26-Apr	1-May	3.0	26.1	46.8	26.0-26.2
Late (Apr. 14)	25-Apr	29-Apr	9-May	2.7	15.4	42.9	15.2-15.9

Clearwater, Dworshak, and Nez Perce Tribal Fish Hatcheries participated in a split release study this Spring. Basically, Spring Chinook smolts were released at "normal" timing (March 31) or delayed two-weeks (April 14th).

The downstream survival and transit times are mostly collected now and the results follow what the evaluation group expected. Fish released later had significantly faster downstream travel time (10 days faster), and essentially arrived in the same 8-day window as smolts released earlier.

The evaluation group plans to meet with the Fish Passage Center to explore if faster travel times from release to Lower Granite Dam have had positive effects on Adult Survival rates.

Additional evaluation is planned for the 2022 release year.



CLEARWATER DISTRIBUTION UNITS

Table 2. Estimated survival (Release-Lower Granite Dam) and transportation proportions for early and late releases of spring Chinook from Dworshak NFH in 2021.

Release Group	Survival to LGR (90% CI)	Transport Proportion (90% CI)
Early (Mar. 31)	0.77 (0.74-0.79)	0.026 (0.023-0.031)
Late (Apr. 14)	0.81 (0.78-0.85)	0.027 (0.024-0.031)

Table 4. Estimated survival (Release-Lower Granite Dam) and transportation proportions for early and late releases of spring Chinook from Clearwater Hatchery in 2021.

Release Group	Survival to LGR (90% CI)	Transport Proportion (90% CI)
Early (Mar. 31)	0.88 (0.85-0.91)	0.016 (0.013-0.019)
Late (Apr. 14)	0.87 (0.80-0.96)	0.026 (0.019-0.035)

EMPLOYEE SPOTLIGHT RICK KING



RICK KING ELK HUNTING DWORSHAK RESERVOIR

Rick King has been ensuring Fish for the Future for 30 years at Dworshak National Fish Hatchery. Rick served in the U.S. Army for 3 years as a Military Police Officer and he worked as a Miner for 17 years in the Silver Valley. Rick graduated with an Associate's Degree in Electronics from Miller Institute, Spokane, Washington in 1986. Rick started at Dworshak in the Fishery Resources Office in September of 1991 and served as a certified Dive Tender and took care of maintenance needs for the fleet of jet boats. With Rick's unique skills in maintenance, electronics, and Diver Certification's, Rick was sought out for this position with the Fishery Resources Office. As a Dive Tender, Rick worked with the field crew marking Fall Chinook salmon redds. Rick brought the first screw trap into the Clearwater Valley from Corvallis, Oregon. He worked with both the Fishery Resources Office and the Dworshak NFH Maintenance Staff until he was selected for a position on the Dworshak NFH Maintenance Crew in the late 1990's. Rick has 33 years of federal service and a full 30 years at Dworshak!

Rick simply tries to do his best. He's proud of the many projects he has been involved in over the years including the construction of the Mixed Cell Rearing Units which are a modification to the outdated Burroughs Ponds. Rick is the water treatment expert on the facility. He has been a key participant in many changes allowing Dworshak NFH to continue to produce fish while meeting National Pollutant Discharge Elimination System (NPDES) permit requirements through many challenging times. Rick manages the facility's effluent treatment systems (clarifiers and digesters) and continues to be the "Go To Guy" for the vacuum degassing systems to abate Total Dissolved Gas issues associated with the operation of the Dworshak Dam. At the end of the day, Rick would say, "We put them in the river and we bring them back home". It all about the fish and he still loves to watch them come up the ladder as they return to Dworshak.

Rick is most proud to be part of the Dworshak Team for all of these years!



RICK KING AT THE TUNNEL POND
VETERAN FISHING DAY

**"BE WHO YOU ARE AND SAY HOW YOU FEEL, FOR
THOSE THAT MATTER DON'T MIND AND THOSE
THAT MIND, DON'T MATTER." DR. SEUSS**

EMPLOYEE SPOTLIGHT JEREMY PIKE



BILL YOUNG, NATE WIESE, AND JEREMY PIKE WITH A DOWNRIVER LOAD OF SMOLTS

Jeremy Pike - Nez Perce Tribe Fish Biologist, Dworshak NFH 2016 - current

Jeremy is originally from a small town in Upstate NY (LaGrangeville, NY). He attended the University at Buffalo for a BS in Biological Sciences and a MS in Environmental Science and Biology from The State University of New York College at Brockport.

Jeremy's biggest accomplishment within LSRCP is the updating and reworking of the facility's wastewater and environmental compliance requirements with the EPA's National Pollutant Discharge Elimination System (NPDES) program at Dworshak. The infrastructure of our facility is dated - the facility was built in the 1960s and the Clean Water Act did not exist until 1972. Under a new EPA NPDES permit in 2019, Jeremy spearheaded a new Notice of Intent, improved Best Management Plan, QA/QC Plan, and restructured sampling protocol and locations. In updating previously difficult to navigate compliance issues, Dworshak is now fully covered under the new NPDES permit. The hatchery has greatly reduced instances of violations and non-compliance, and has provided transparency through open communication with state, federal, and tribal partners.

Jeremy's favorite part about Fish for the Future is the knowing the role the hatchery has not only in the Clearwater Basin, but the Snake River and Columbia Basins as a whole to achieve this objective. Dworshak regularly holds broodstock for other hatcheries and provides surplus eggs to facilities both in and out of basin, and in the past, they reared juveniles from other facilities. To have a great team to work with, and appreciate the impact our program has on the anglers, tribal members, youth, and their families is an awesome feeling. "Fish for the Future is the end goal, and the passion I have is shared across the region." - Jeremy Pike



JEREMY PIKE TAKING GENETIC SAMPLE

"TELL ME AND I FORGET. TEACH ME AND I REMEMBER. INVOLVE ME AND I LEARN." – BENJAMIN FRANKLIN
