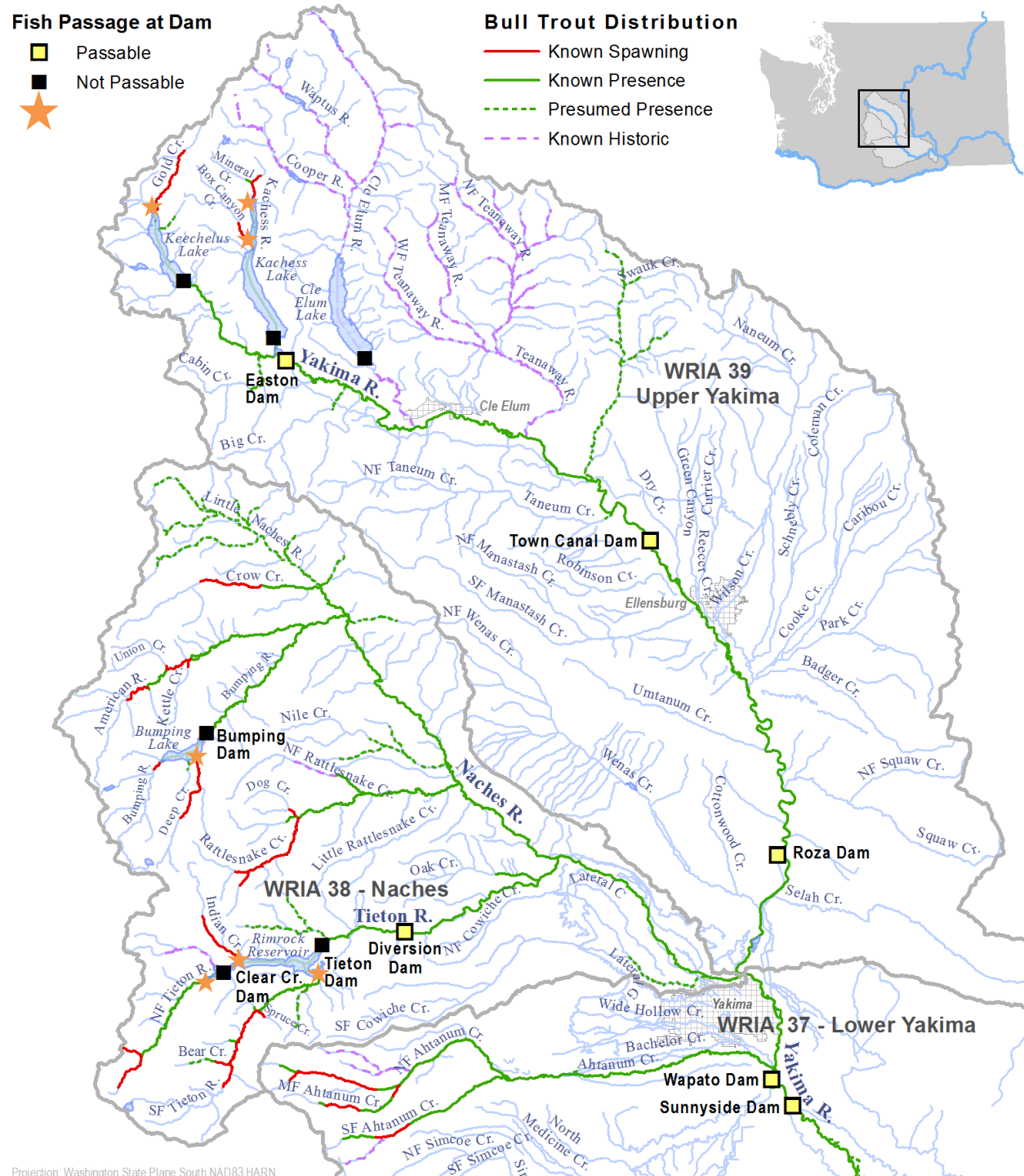


Providing Bull Trout Passage Through Central Cascade Reservoirs

Josh Rogala
WDFW Fish Screening and Passage





Yakima Basin Bull Trout Distribution and Fish Passage Monitoring Locations

Stream Monitoring includes:

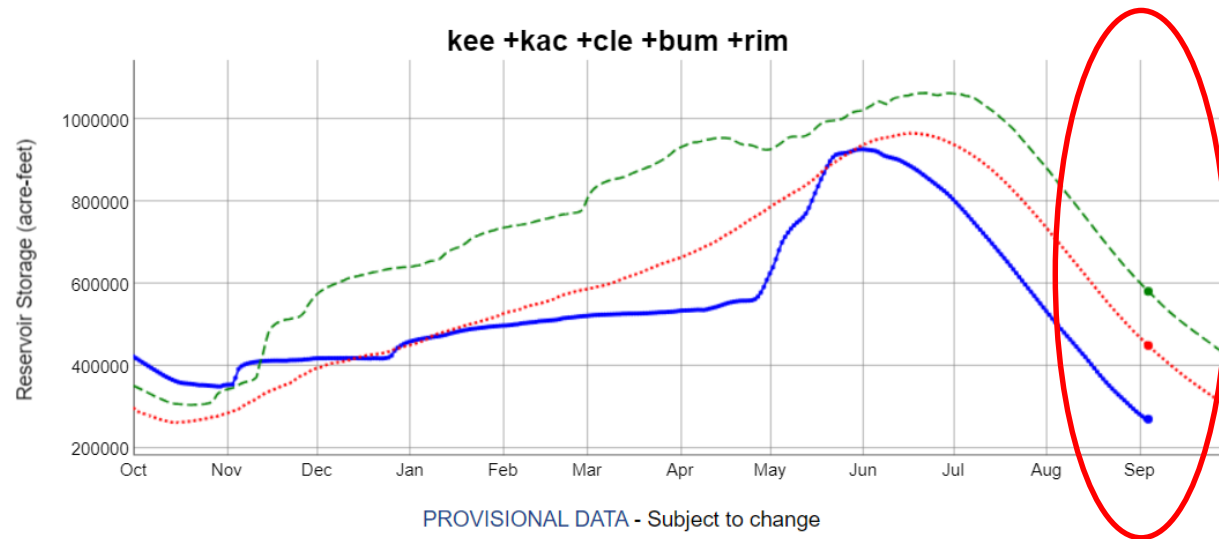
- Channel Connectivity & Dewatering
- Water Depth
- Temperature
- General Fish Passage Conditions
- Fish Presence/Condition
- Reservoir Elevations/Storage
- Fish Rescue



Why do we monitor fish passage conditions?

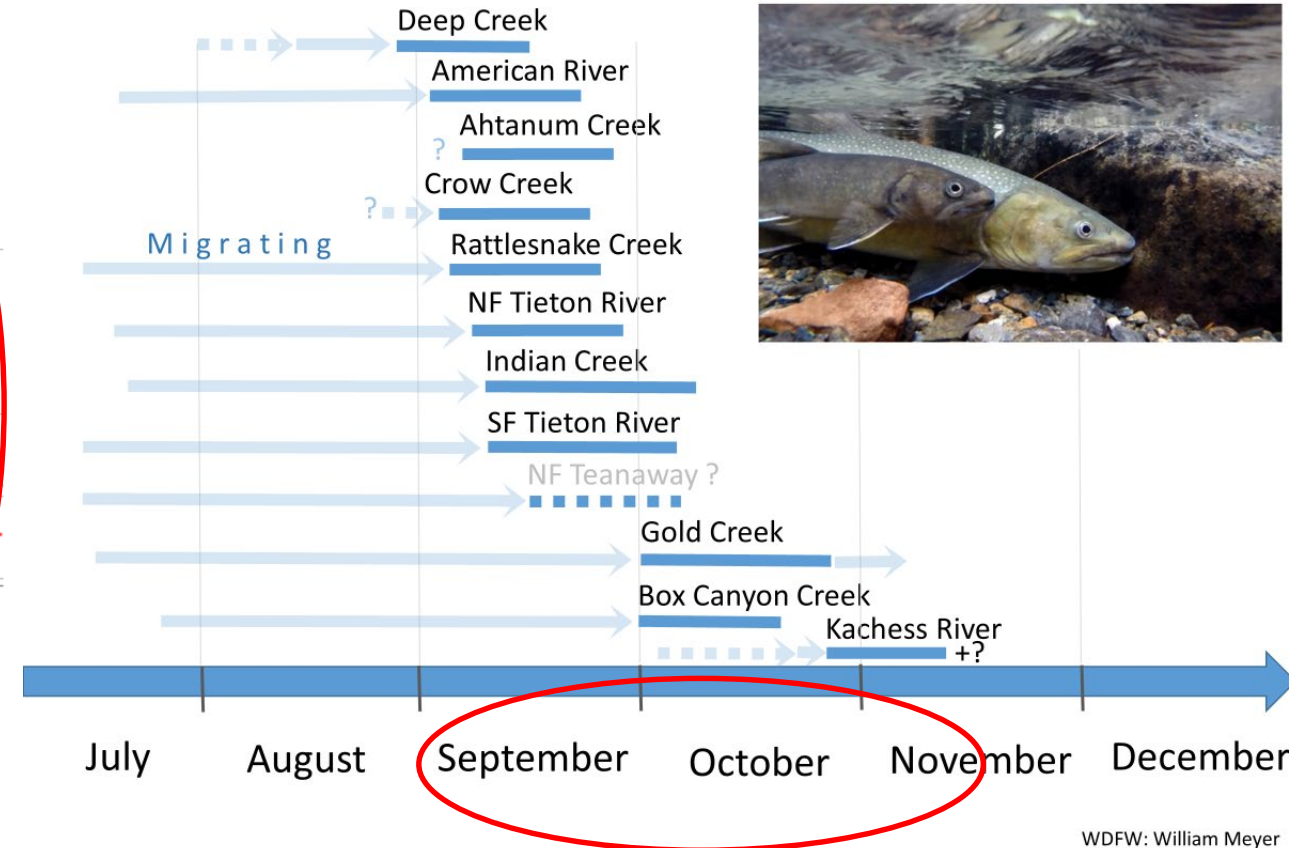
Water Year Graph

Sep:
Current Year: 269578.75
Previous Year: 581515
Average: 449280.32



09/08/2023 Hydromet Water Year Graph

Yakima Basin Bull Trout Migration & Spawn Timing



WDFW: William Meyer

Bull trout begin their spawning migration as fish passage conditions are most negatively impacted by reservoir operations and weather.



Water Year Graph

736,048.15 acre-feet as of 6/11/2024.

Jun:

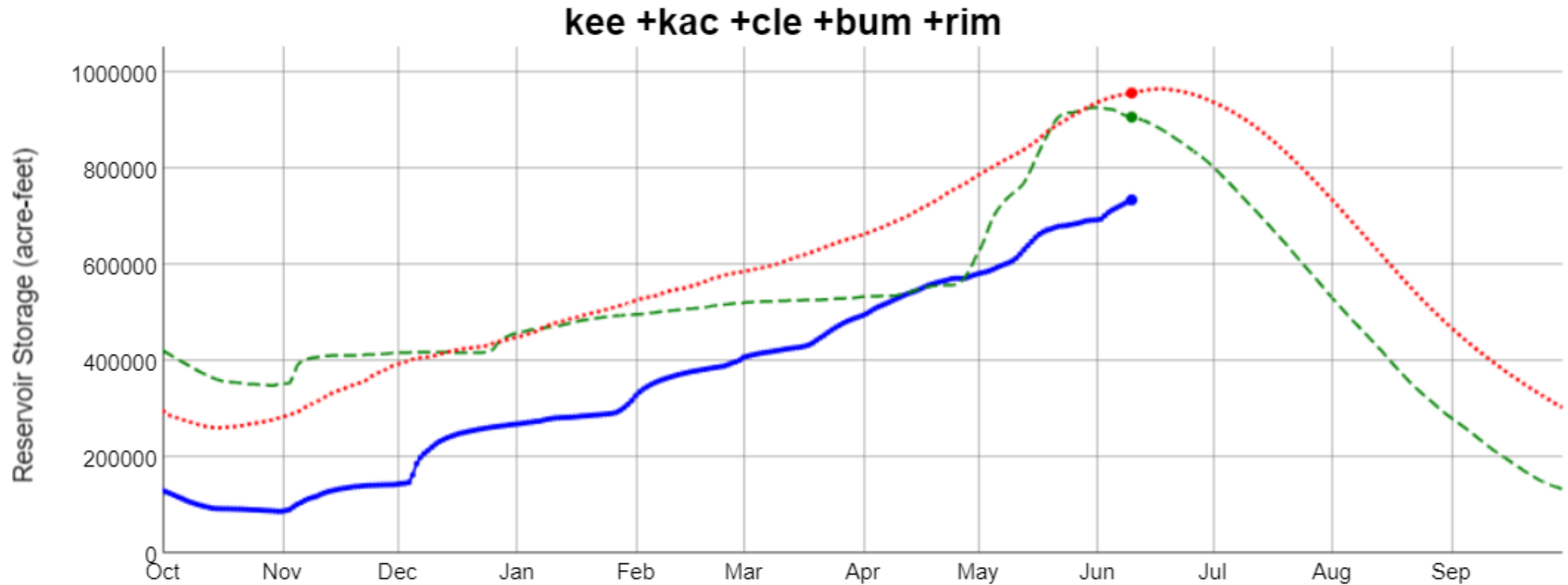
Current Year: 736048.14

Previous Year: 908364.31

Average: 958473.39

172,316.17 less acre-feet than 2023.

222,425.25 less acre-feet than average.



PROVISIONAL DATA - Subject to change



Poor Fish Passage Conditions



Predation



Recreation





Fish Passage Remediation



Fish Rescue



Fish rescue from an isolated pool.



YOY Bull trout after release upstream.



Indian Creek

Full Pool



Low Pool



SYSTEM STATUS AT 06:00, Sunday, 01-Jul-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Rimrock	2925.02	195530.	198000.	99.	530.	694.

SYSTEM STATUS AT 06:00, Thursday, 20-Sep-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Rimrock	2874.10	90590.	198000.	46.	249.	1540.



Deep Creek



SYSTEM STATUS AT 06:00, Tuesday, 21-Aug-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Bumping	3415.05	20715.	33970.	61.	53.	209.



SYSTEM STATUS AT 06:00, Sunday, 23-Sep-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Bumping	3404.72	10946.	33970.	32.	52.	174.



09/24/18 South Fork Tieton River 10/17/18



SYSTEM STATUS AT 06:00, Tuesday, 25-Sep-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Rimrock	2866.30	78040.	198000.	39.	126.	1260.



SYSTEM STATUS AT 06:00, Wednesday, 17-Oct-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Rimrock	2841.30	43900.	198000.	22.	152.	470.



South Fork Tieton River

09/24/18

10/17/18





Gold Creek

Full Pool



SYSTEM STATUS AT 06:00, Monday, 10-Jul-2017

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
	FB	AF	AF	%	CFS	CFS
Keechelus	2508.51	136694.	157800.	87.	207.	1067.

Low Pool



SYSTEM STATUS AT 06:00, Thursday, 07-Sep-2023

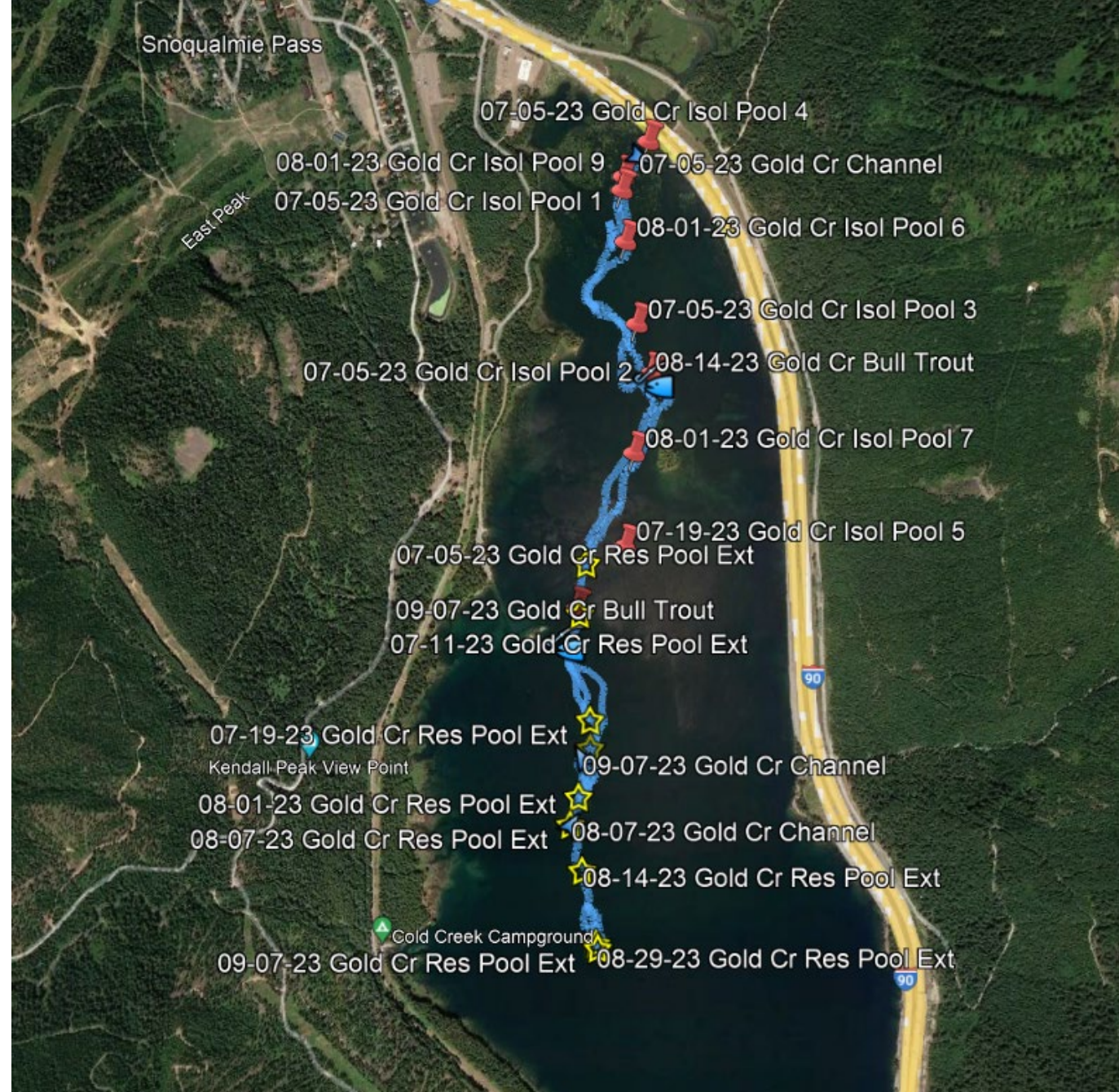
RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Keechelus	2437.87	16301.	157800.	10.	29.	82.



Gold Creek

Linear distance from full pool to low pool is up to 1.5 miles.

Up to 0.15 linear miles of reservoir bed can be exposed each week.



Gold Creek

Snoqualmie Pass

Gold Creek





Gold Creek



Kachess River

Full Pool



SYSTEM STATUS AT 06:00, Tuesday, 17-Jul-2018

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Kachess	2259.35	227051.	239000.	95.	77.	415.

Drought



SYSTEM STATUS AT 06:00, Wednesday, 06-Sep-2023

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Kachess	2222.68	84242.	239000.	35.	115.	847.



Kachess River

07/17/2018

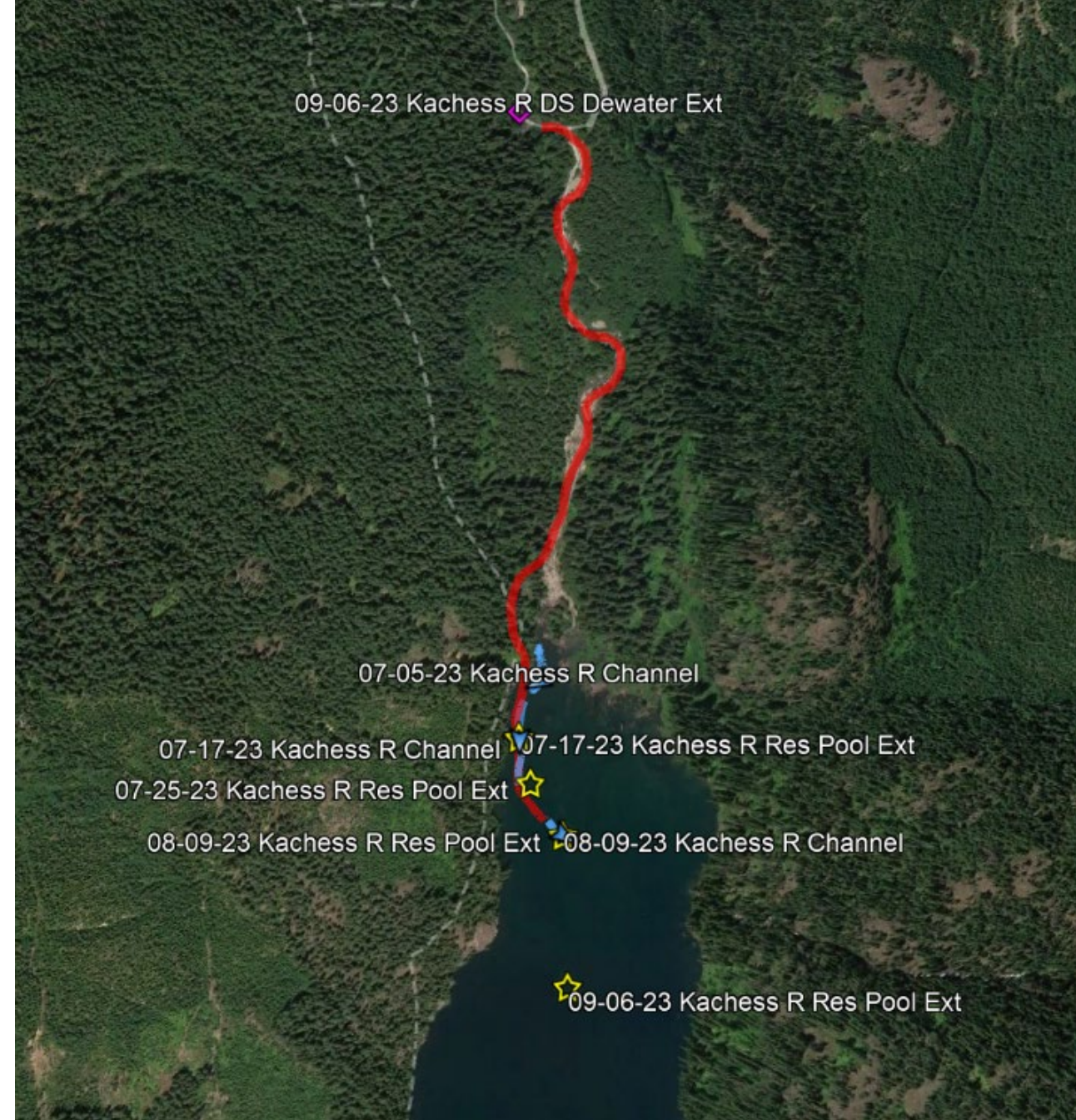


08/08/2018



Kachess River

Kachess River can disconnect for approximately 1.25 miles.



Box Canyon Creek

07/20/23



SYSTEM STATUS AT 06:00, Wednesday, 20-Jul-2022

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Kachess	2260.88	233921.	239000.	98.	82.	240.

09/11/23



SYSTEM STATUS AT 04:00, Monday, 11-Sep-2023

RESERVOIR	FOREBAY ELEVATION	CONTENT	TOTAL CAPACITY	PERCENT CAPACITY	RESERVOIR INFLOW	RESERVOIR RELEASES
Kachess	2219.62	75428.	239000.	32.	80.	1006.



Box Canyon Creek

Box Canyon Creek became disconnected from the reservoir between 8/22/23 – 8/29/23.



Date	Reservoir	Forebay Elevation FB	Content AF	Total Capacity AF	Percent Capacity %	Reservoir Inflow CFS	Reservoir Release CFS
8/22/2023	Kachess	2231.13	112,597	239,000	47	55	1318
8/29/2023	Kachess	2226.78	97,160	239,000	41	83	1111



09/07/23

Kachess Reservoir

Box Canyon Creek

Box Canyon Creek

Perched Above Channel Grade

Dry

Kachess Reservoir



09/07/23

Kachess Reservoir





Kachess Reservoir

dry

Box Canyon Creek

Drone footage from 09/07/23 of the disconnected section of Box Canyon Creek





Thank you to our partners!



Washington
Department of
**FISH &
WILDLIFE**



Questions?



Joshua Rogala – Joshua.Rogala@dfw.wa.gov – 509-406-2726

