

Idaho Falls Power Relicensing



UPDATED STUDY REPORT (USR) MEETING

IDAHO FALLS (P-2842-045) AND GEM STATE (P-2952-073)

WEDNESDAY, JUNE 24, 2026, 10:00 A.M. – 2:00 P.M. (MST)



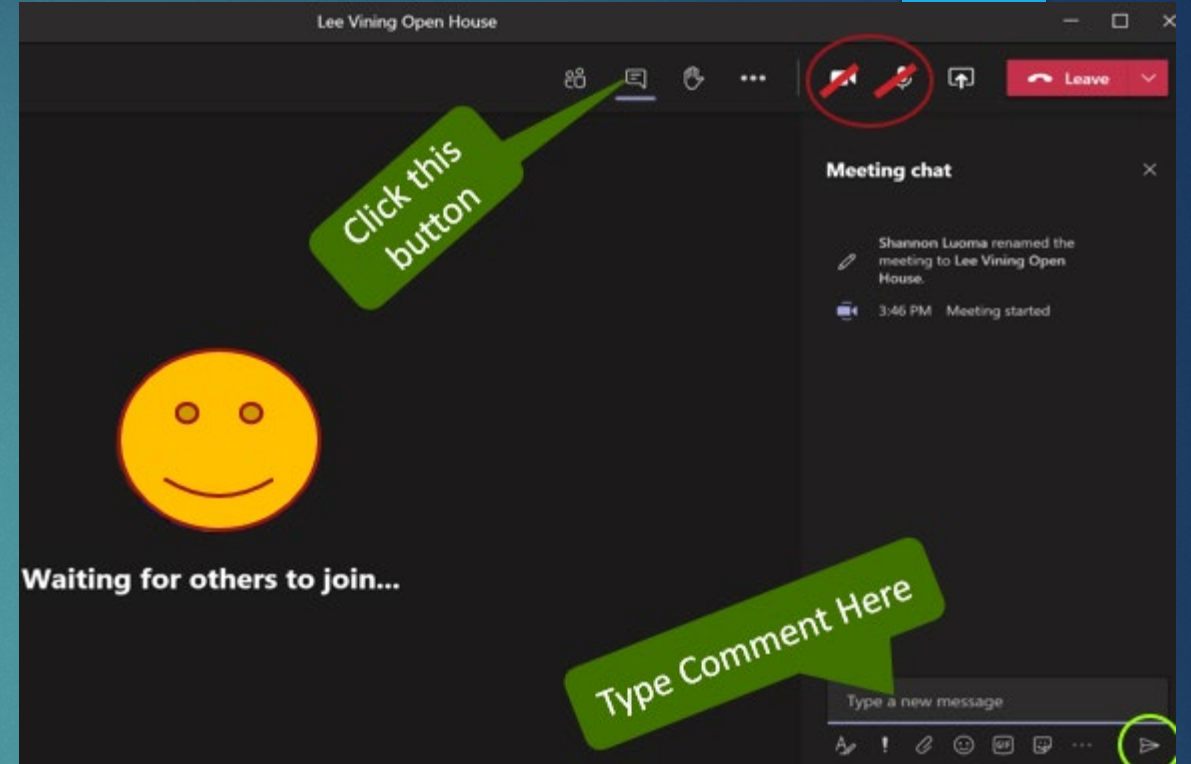


USR Meeting Agenda

- ▶ Welcome and Introductions
- ▶ Overview of FERC Relicensing and Process
- ▶ Review Updated Study Report (USR) highlights
- ▶ Review Relicensing Schedule
- ▶ Questions
- ▶ Action Items and Adjourn

Meeting Tips and Guidelines

- ▶ *Note that this meeting is being recorded*
- ▶ Please wait to be called on and then unmute your line
 - ▶ Introduce yourself (name and affiliation) prior to speaking
- ▶ Listen and respect each other
- ▶ Stay on topic
- ▶ Ask a question by typing it into the chat box during the presentation or by using the raise your hand feature



Welcome and Introductions: Idaho Falls Relicensing Team

Idaho Falls Power Team

Richard Malloy – Project Manager

Chris Fredericksen – General Manager

Consulting Team

Finlay Anderson – Project Manager

Olivia Smith – Assistant Project Manager

FERC Team

Amy Chang, FERC Project Coordinator, Terrestrial Resources

Lauren Townson, Recreation & Cultural Resources

John Matkowski, Aquatic Resources

Golbahar Mirhosseini, Engineering

Resource Leads

Kai Steimle – Water Quality (WQ-1)

Emma Royce – Fish Assemblage (AQ-1)

Steve Rogers – Desktop Fish Entrainment (AQ-2)

Steve Rogers – Aquatic Habitat & Sediment Characterization (AQ-3)

Indya Messier – Botanical Resources (TERR-1)

Steve Fuller – Wildlife & RTE (TERR-2)

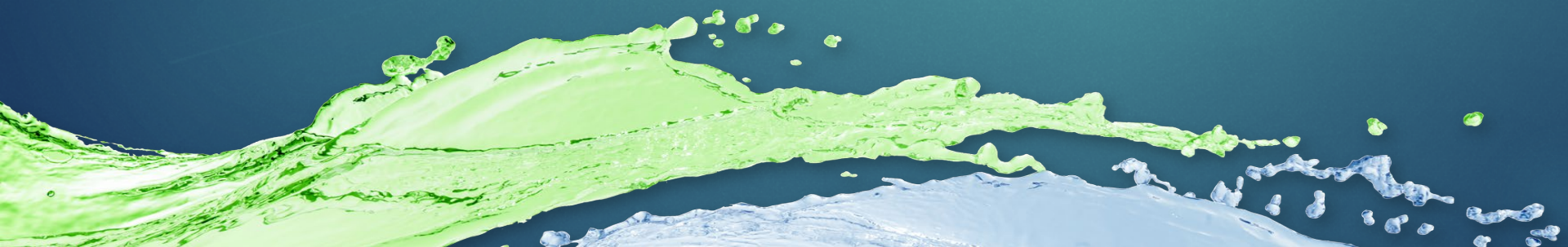
Olivia Smith – Project Lands & Roads (LAND-1)

Matt Harper – Recreation (REC-1)

Kelly Beck – Cultural Resources (CR-1)

Kelly Beck – Tribal Resources (TRI-1)

Emily Waters – Environmental Justice (EJ-1)

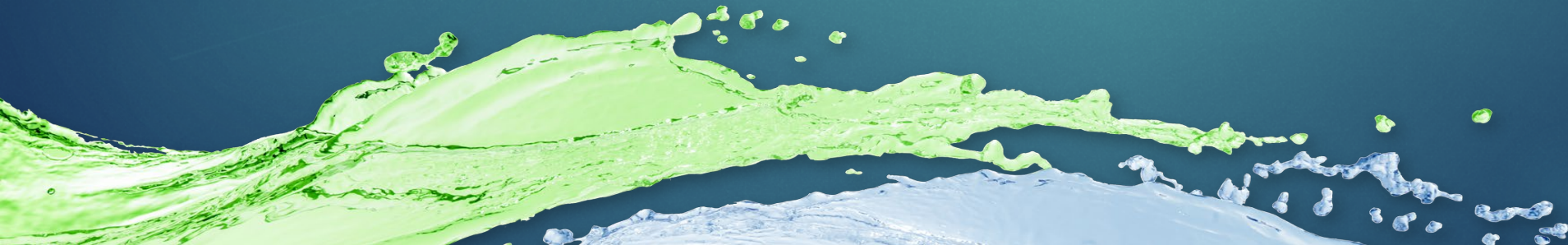




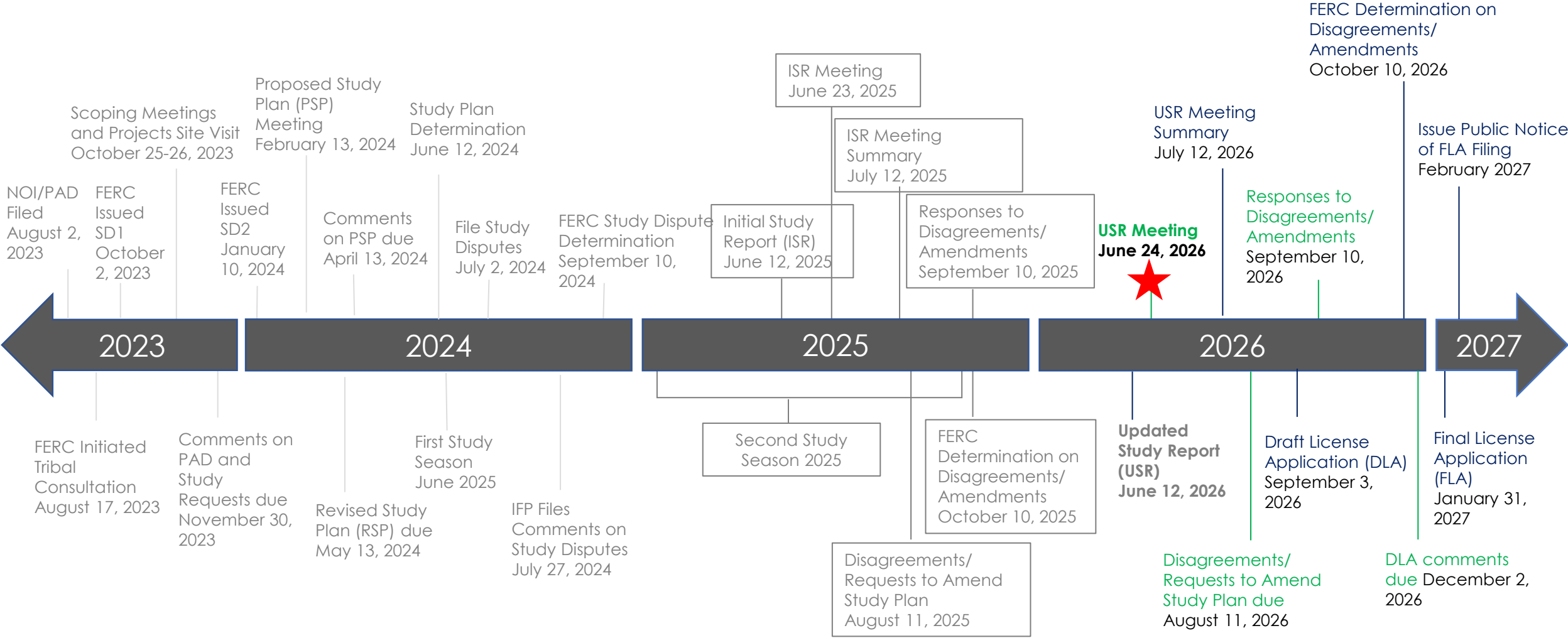
Overview of FERC Relicensing Process, Timeline, & Updated Study Report (USR)

Regulatory Process and Look Back

- ▶ Idaho Falls Power (IFP) is utilizing the Integrated Licensing Process (ILP)
 - ▶ The Federal Energy Regulatory Commission (FERC) and licensing participants engaged throughout process
 - ▶ More structured “formal” milestone schedule around studies
- ▶ Preliminary Application Document (PAD) and Notice of Intent (NOI) filed August 2023
- ▶ Site Visit and FERC Scoping Meeting – October 2023
- ▶ Study Plan Development – February to April 2024
- ▶ Studies began in 2024, continued in 2025, wrapped up in 2026
- ▶ ISR distributed June 12, 2025, **USR distributed June 12, 2026**
- ▶ Draft License Application (DLA) due September 3, 2026



Project Relicensing Timeline



Legend

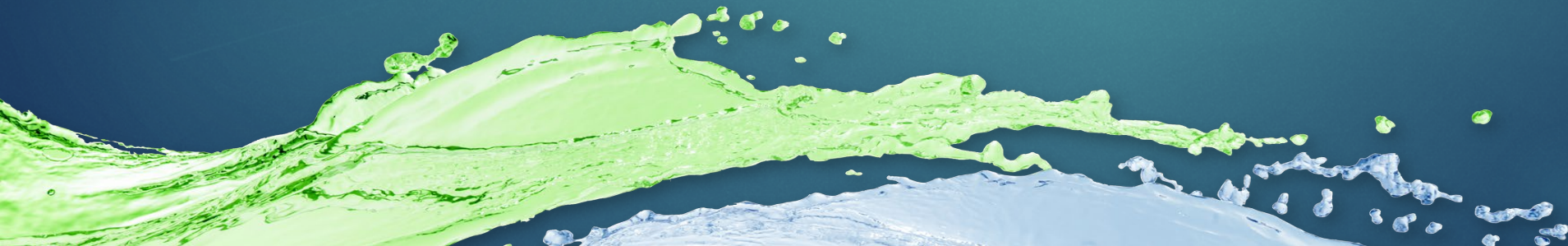
- Past Licensing Milestones
- FERC ILP Milestones
- Stakeholder Opportunities

The Idaho Falls Relicensing Schedule is for planning purposes only; dates subject to change to account for weekends and holidays.*

Continued Operation & Combined License Proposal

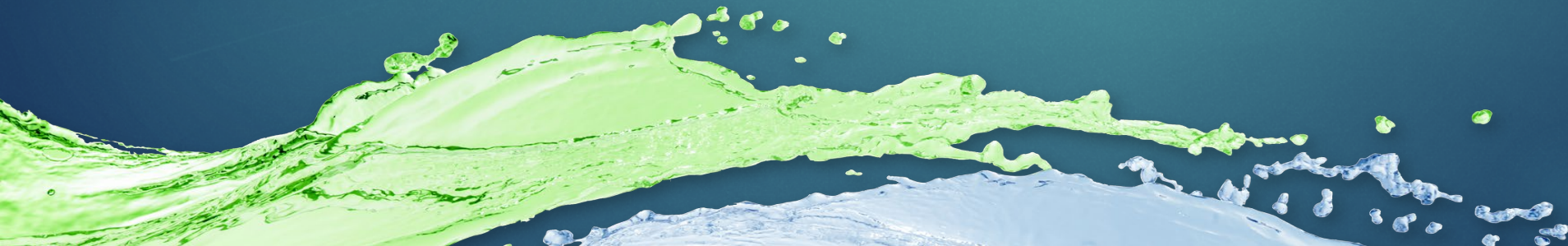
IFP is proposing to continue Project operations at both the Idaho Falls and Gem State facilities as outlined in the existing licenses and is **proposing to combine the projects under one license (Idaho Falls docket number) in the Draft License Application (DLA) for the next license term.**

At this time, no changes to Project facilities or operations are being proposed.



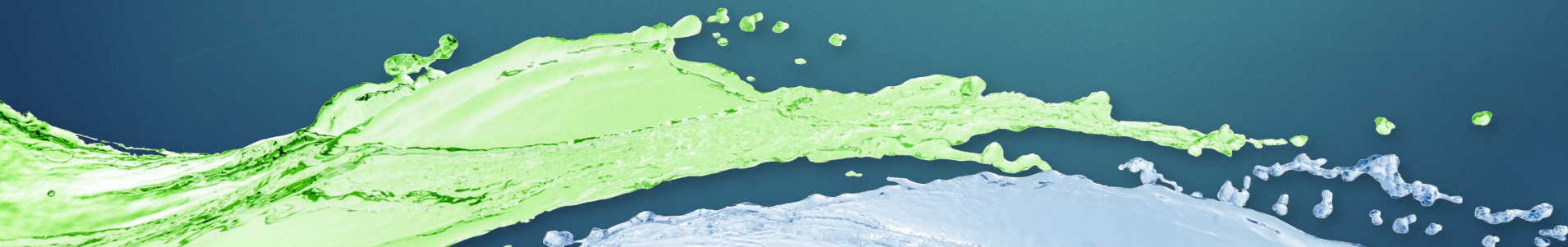
Updated Study Report Meeting Objectives

- ▶ Update relicensing participants on the process and receive any feedback
- ▶ Provide an opportunity for relicensing participant questions about the study results described in the USR
- ▶ Confirm process between USR and DLA



Updated Study Reports

- ▶ Water Quality (WQ-1)
- ▶ Fish Assemblage (AQ-1)
- ▶ Desktop Fish Entrainment (AQ-2)
- ▶ Aquatic Habitat & Sediment
Characterization (AQ-3)
- ▶ Botanical Resources* (TERR-1)
- ▶ Wildlife & Rare, Threatened,
& Endangered (RTE) Species (TERR-2)
- ▶ Project Lands & Roads (LAND-1)
- ▶ Recreation (REC-1)
- ▶ Environmental Justice (EJ-1)
- ▶ Cultural Resources (CR-1)
- ▶ Tribal Resources (TR-1)





Water Quality (WQ-1)



Water Quality Study (WQ-1) Goals and Objectives

▶ Goal:

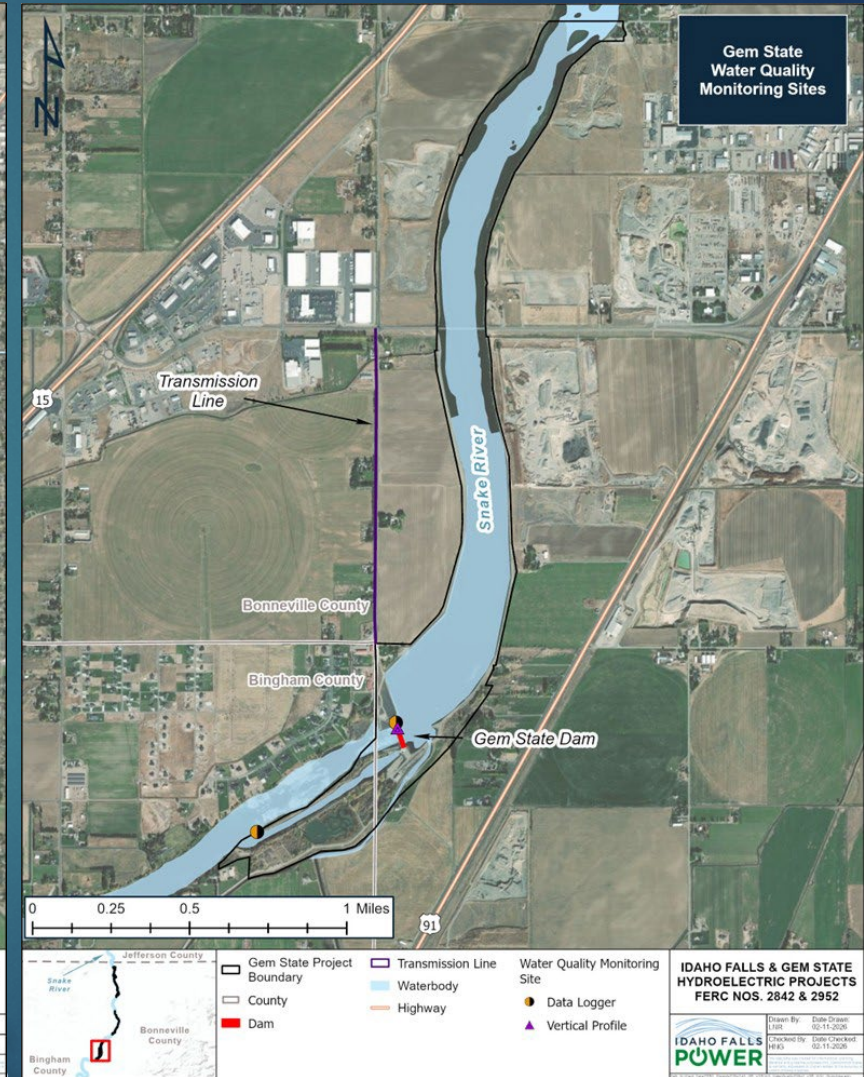
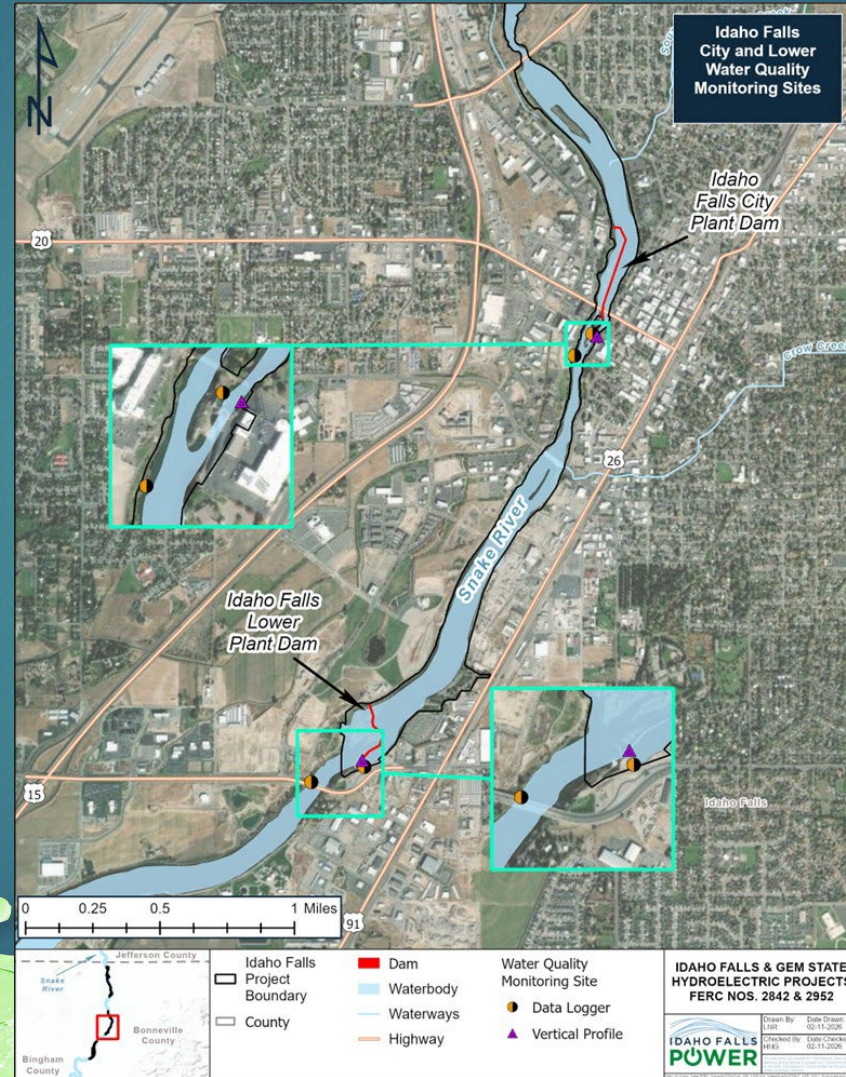
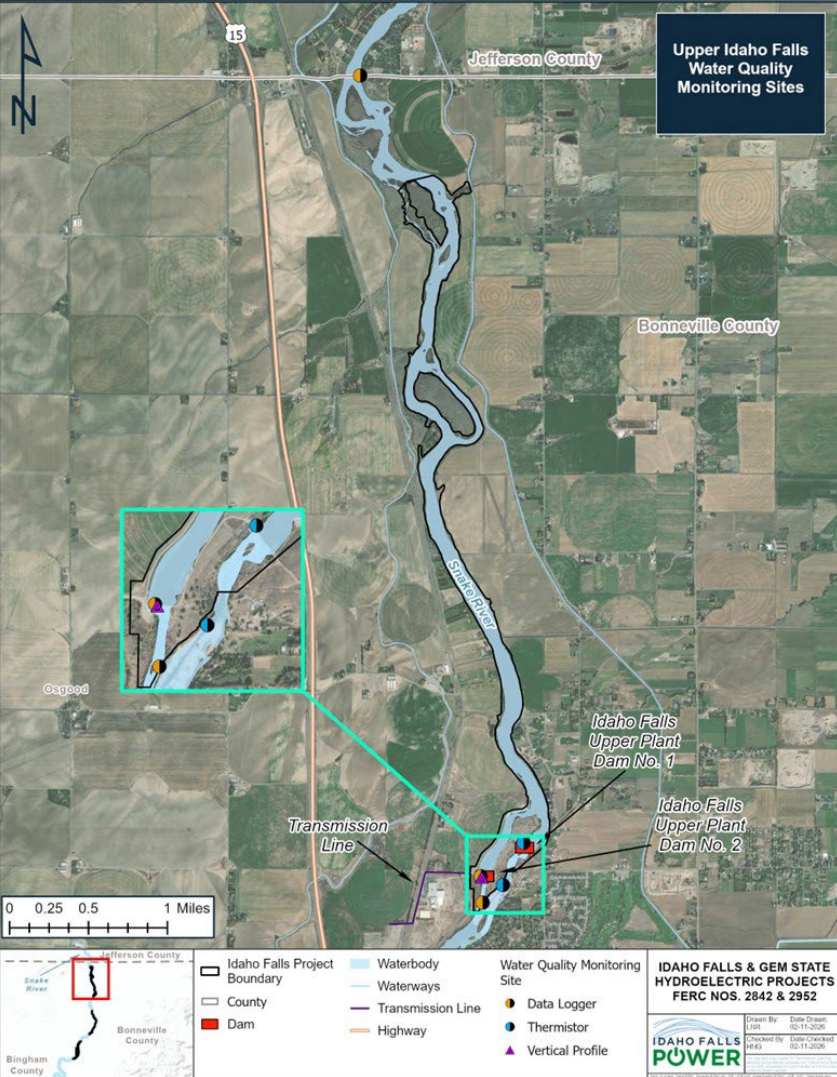
- ▶ Characterize water quality in the Snake River in the Idaho Falls Project area and the Gem State Project area.

▶ Objectives:

1. Characterize water temperature and dissolved oxygen (DO) upstream and downstream of each diversion in the Projects, specifically the Upper Plant, City Plant, Lower Plant, and Gem State dams.
2. Collect vertical profiles of water temperature and DO in each impoundment.
3. Analyze fish tissue samples from downstream of the Gem State Project for mercury.
4. Assess the ability of the Projects to comply with water quality standards based on continued operation.



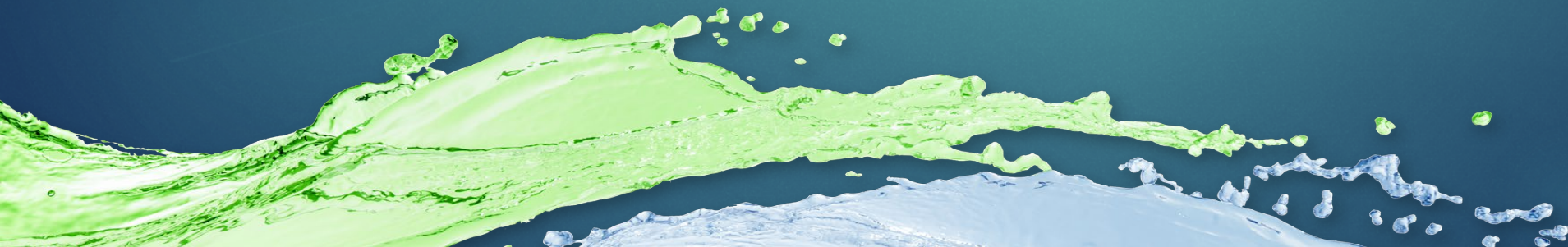
Water Quality (WQ-1) Study Area



Water Quality Study (WQ-1)

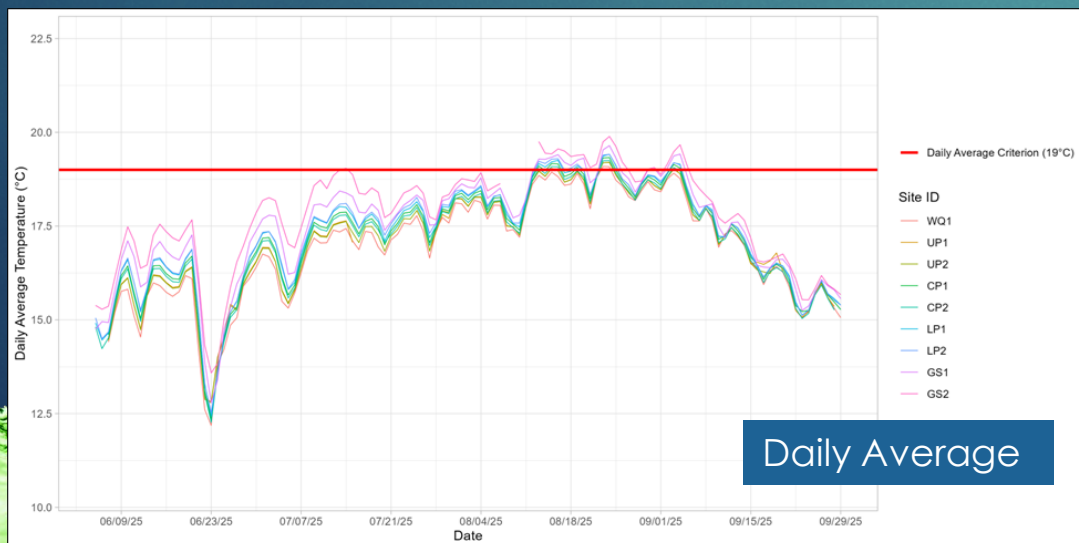
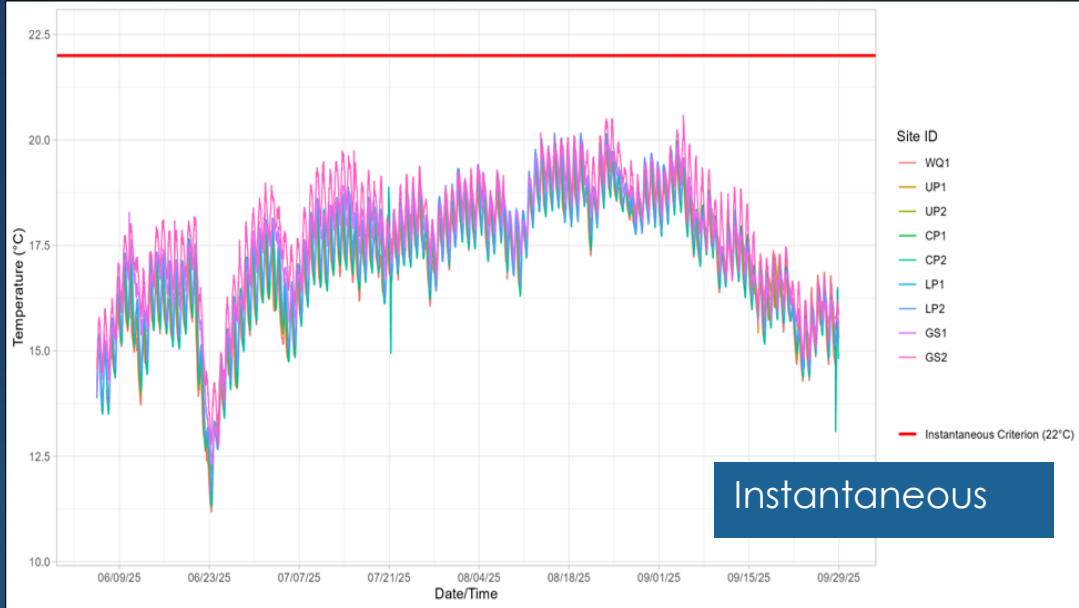
Status – Study Complete

Status	Variances	Modifications
August 2024 - Site selection - complete	None	Accessibility challenges and potential tampering and biofouling: Continuous monitoring for one week per month.
June-September 2025 – Continuous Monitoring - complete	None	Lack of access to well-mixed location downstream of Upper Plant: DO/temp loggers deployed at Upper Plant forebay and tailrace; temperature-only loggers deployed at spillway forebay and tailrace.



Water Quality Study (WQ-1)

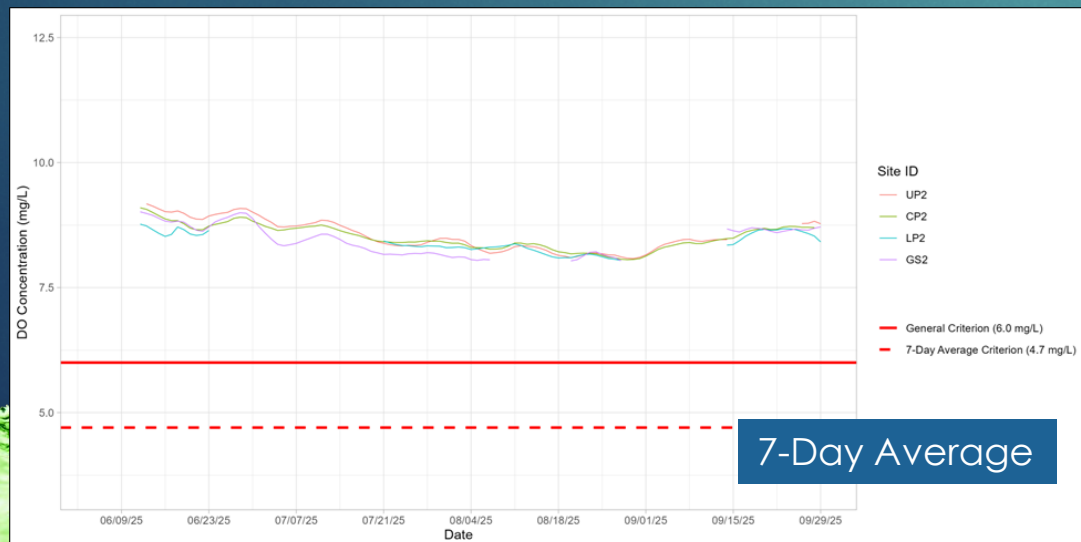
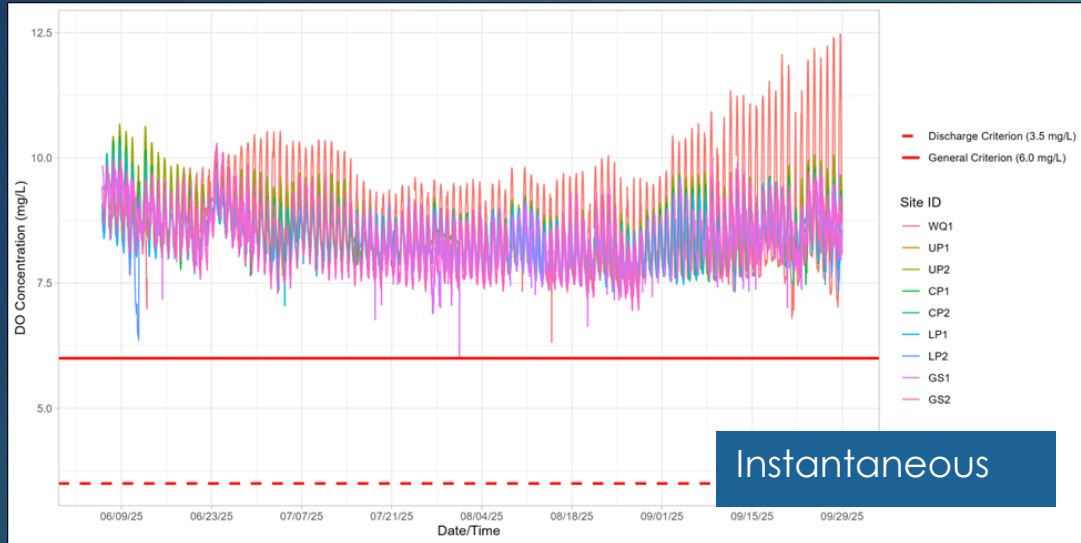
Objective 1a: Characterize temperature



- ▶ Temperatures from 11.2°C to 20.6°C, daily Averages from 12.2°C to 19.9°C
- ▶ Coolest at upstream monitoring site
- ▶ Maximum daily average ranged from 19.1°C to 19.9°C across sites
- ▶ Differences between forebay and tailrace at each plant less than 0.1 °C , except Gem State
- ▶ Gem State difference in monthly maximum between forebay and tailrace ranged between 0.3 °C in June and 0.8 °C in September

Water Quality Study (WQ-1)

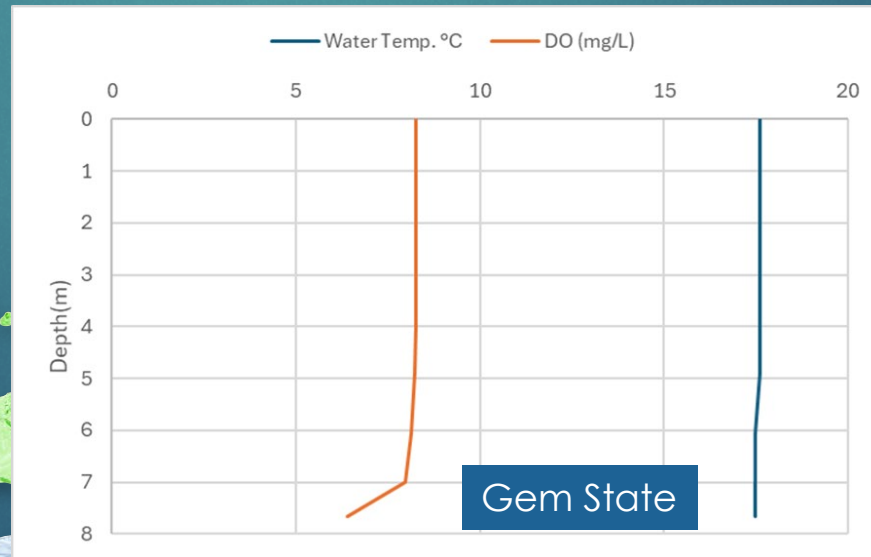
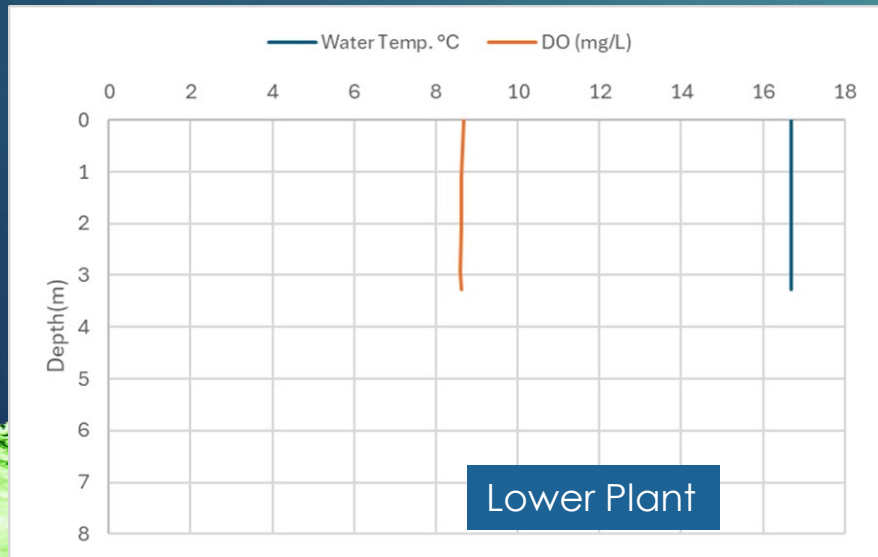
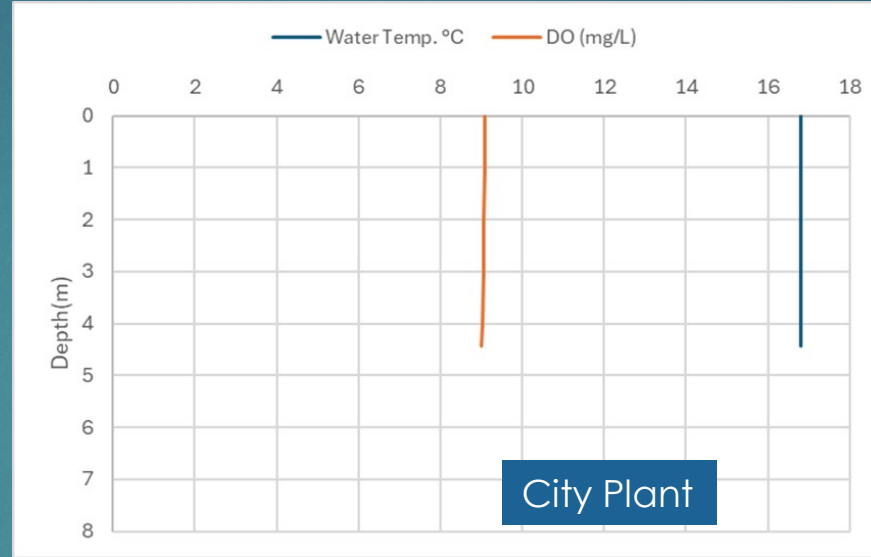
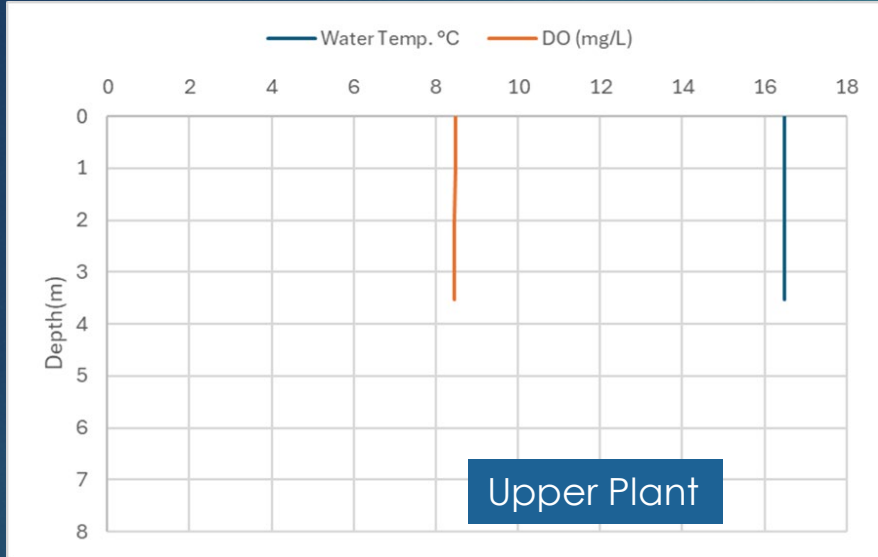
Objective 1b: Characterize DO



- ▶ DO ranged from 6.0 mg/L to 12.7 mg/L, 7-day averages ranged from 8.0 mg/L to 9.2 mg/L
- ▶ Lower DO concentrations before dawn, highest in late afternoon
- ▶ Scale of daily variation similar to or larger than seasonal variation
- ▶ Lower water temperatures in June and late September were associated with higher DO

Water Quality Study (WQ-1)

Objective 2: Vertical Profiles

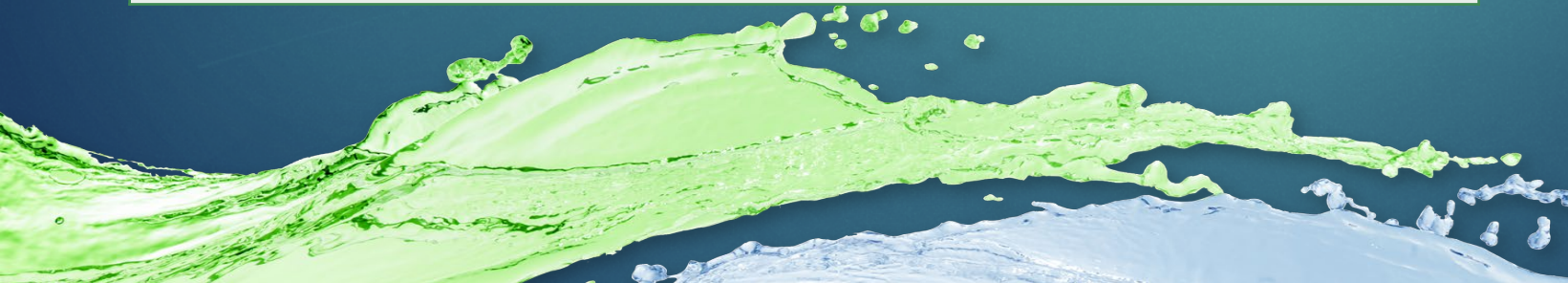
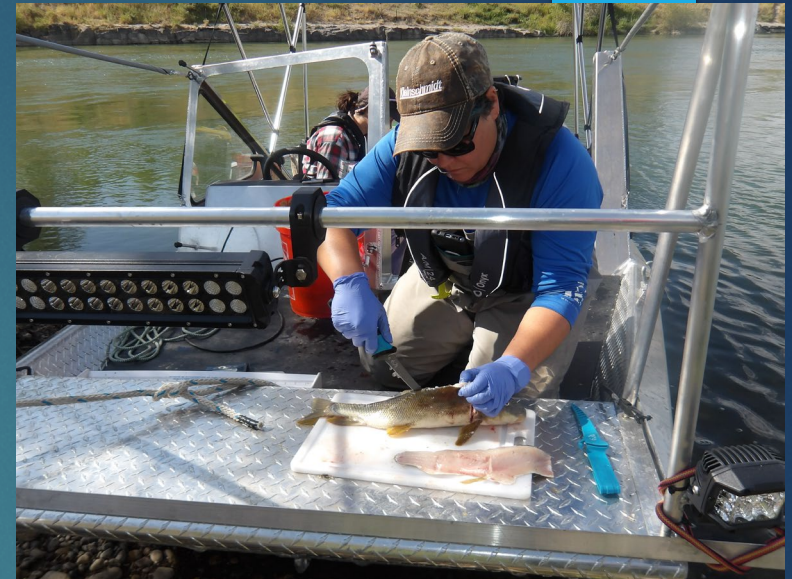


Vertical profiles collected on August 14, 2024 revealed impoundments with well-mixed conditions and no evidence of vertical stratification.

Water Quality Study (WQ-1)

Objective 3: Fish Tissue Mercury Analysis in Gem State Tailrace

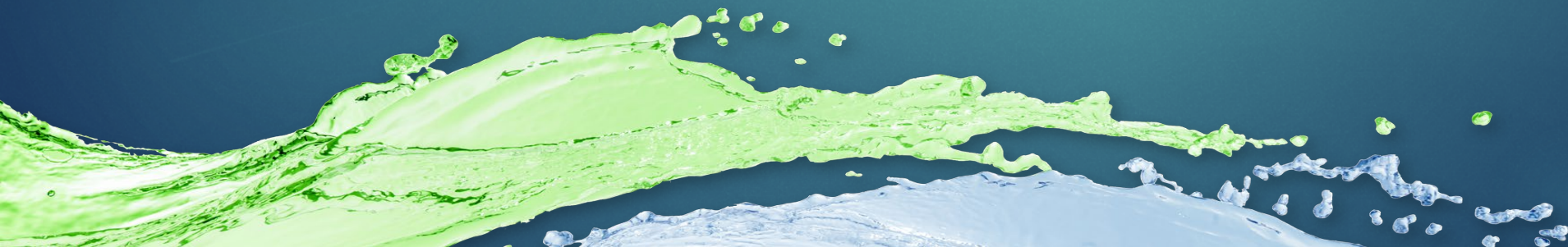
SAMPLE DATE	FISH SPECIES	SAMPLE SIZE	LENGTH RANGE (CM)	TOTAL MERCURY (MG/KG)
7/21/2025	Smallmouth Bass	8	34.0-41.0	0.368
7/22/2025	Utah Sucker	9	42.7-53.0	0.323
9/30/2025	Brown Trout	1	51.0	0.430



Water Quality Study (WQ-1)

Objective 4: WQ Standard Attainment

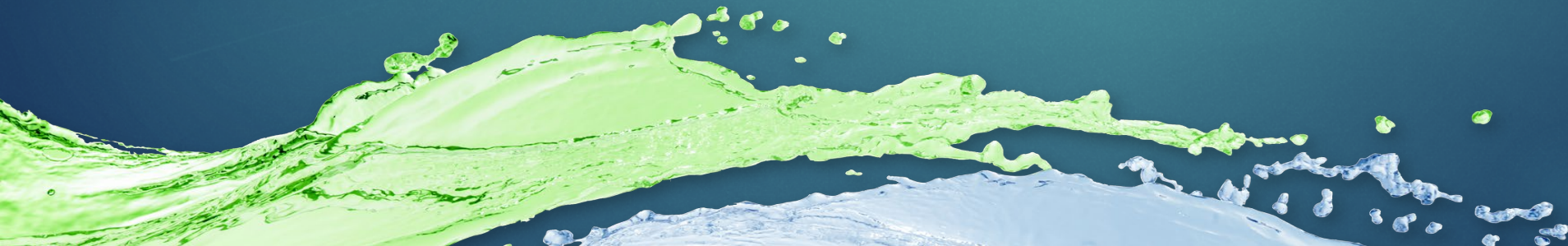
- ▶ Water Temperature
 - ▶ All sites below the 22°C criterion for cold water aquatic life
 - ▶ All sites seasonally exceeded the 19°C daily average criterion for cold water aquatic life
 - ▶ Frequency of exceedance increased from upstream to downstream
 - ▶ Increase occurred between dams, not between forebay and tailrace (except Gem State)
 - ▶ Consistent with lack of vertical stratification
 - ▶ Consistent with previous studies (1989-1990, 2014-2015)
 - ▶ All sites exceeded the 13°C criterion for salmonid spawning over most of the study
 - ▶ The 9°C daily average water temperature criterion for salmonid spawning was never met during the monitoring period at any of the monitoring sites



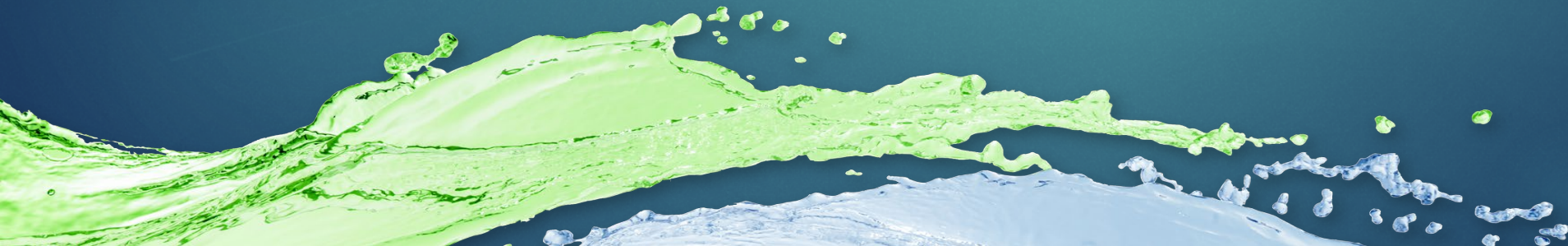
Water Quality Study (WQ-1)

Objective 4: WQ Standard Attainment

- ▶ Dissolved Oxygen (DO)
 - ▶ All sites above the instantaneous 6 mg/L criterion for cold water aquatic life and salmonid spawning
 - ▶ All sites above the weekly-average 6 mg/L criterion for salmonid spawning
 - ▶ All tailrace sites above the weekly-average 4.7 mg/L criterion for discharges from hydroelectric facilities
- ▶ Mercury
 - ▶ Total mercury concentrations measured in fish tissue for Smallmouth Bass, Utah Sucker, and Brown Trout collected in the Gem State tailrace all exceeded the 0.3 mg/kg criterion to protect human health



Questions?





Fish Assemblage (AQ-1)

Fish Assemblage Study (AQ-1)

Goal:

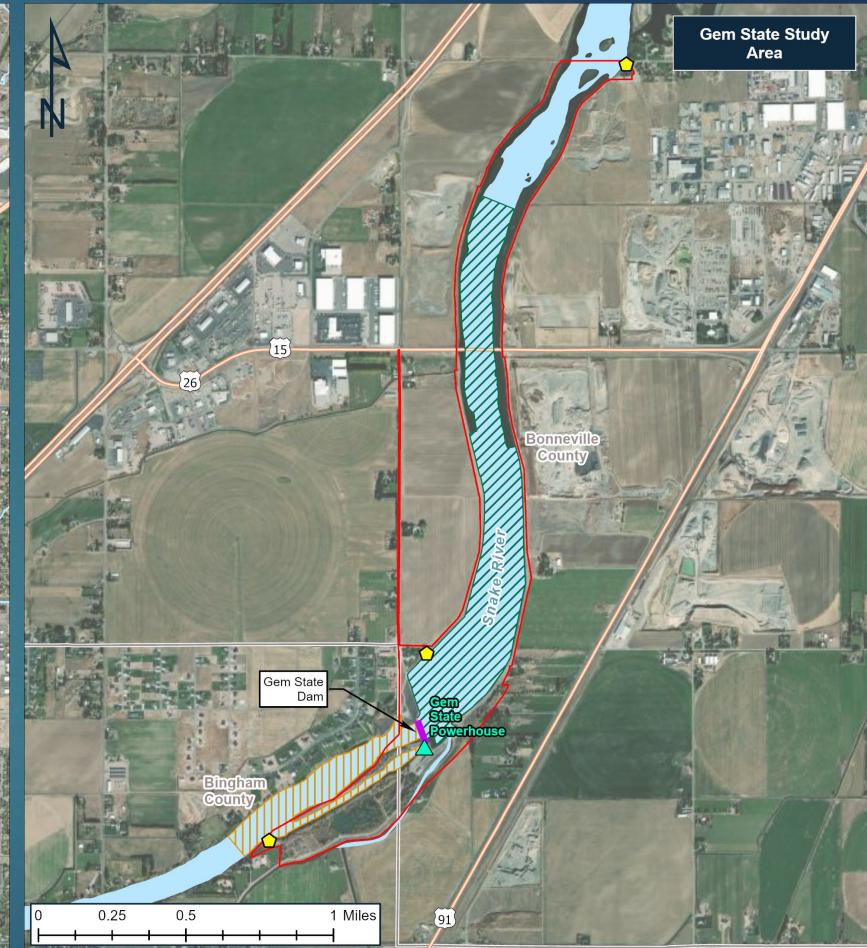
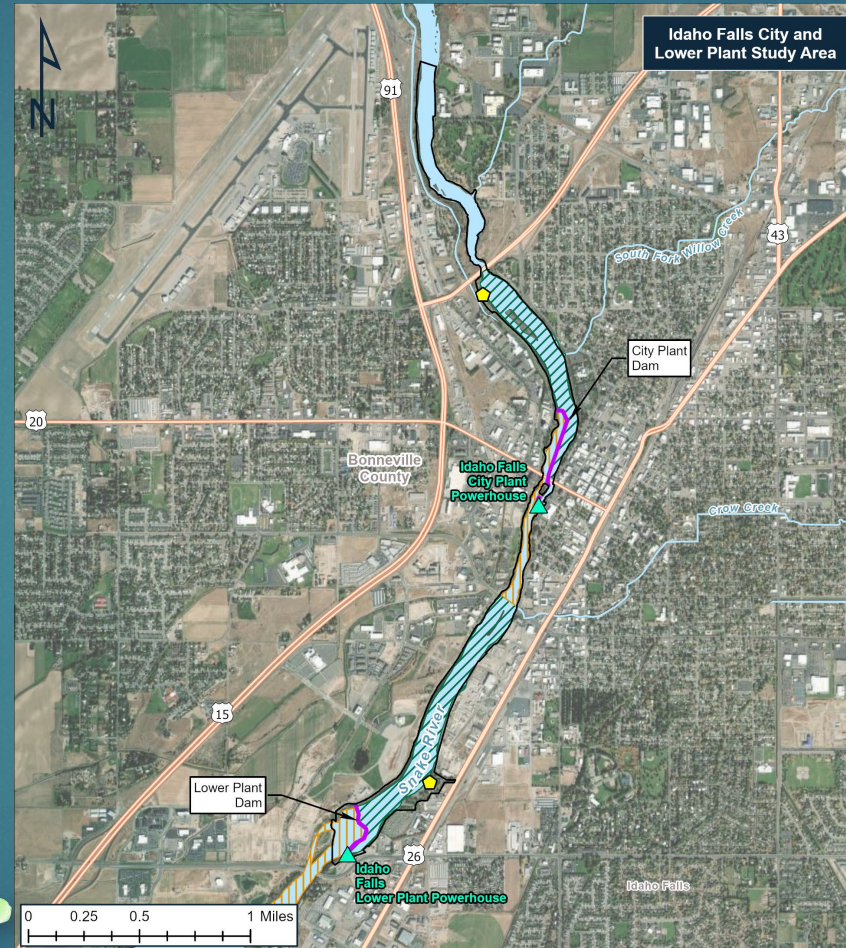
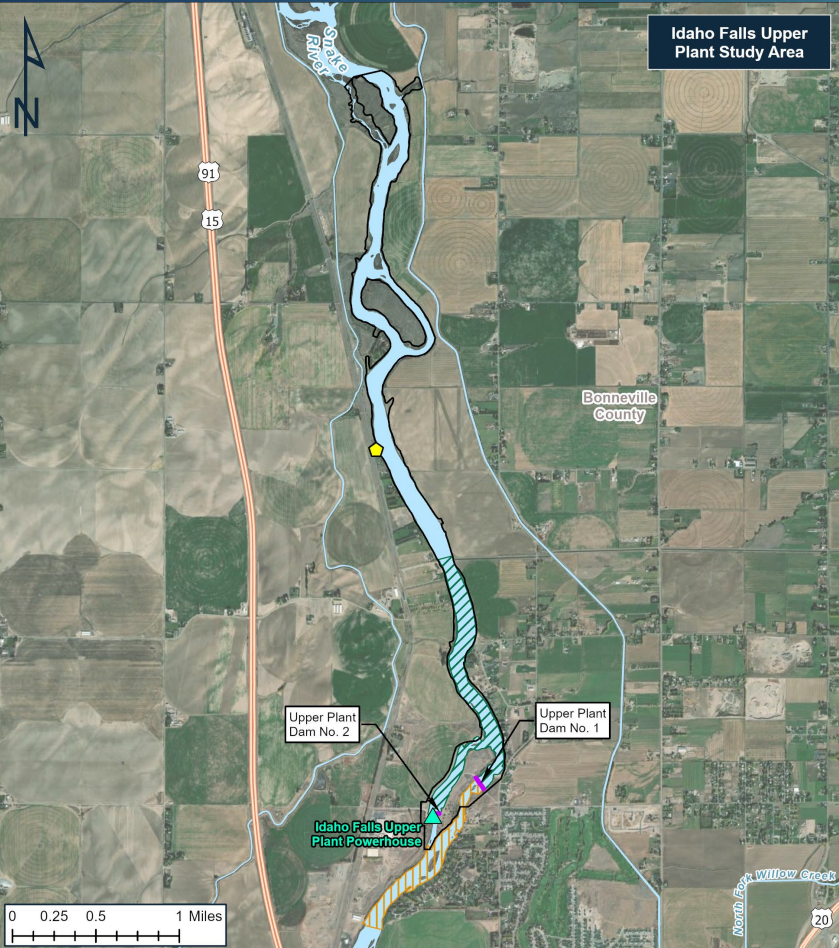
Assess fish assemblage within Project-affected reaches.

Objectives:

- ▶ Determine seasonal changes in the distribution and abundance within reservoirs and tailrace reaches.
- ▶ Characterize habitat use of target fish species.
- ▶ Collect fish tissue samples for target species.



Fish Assemblage (AQ-1) Study Area



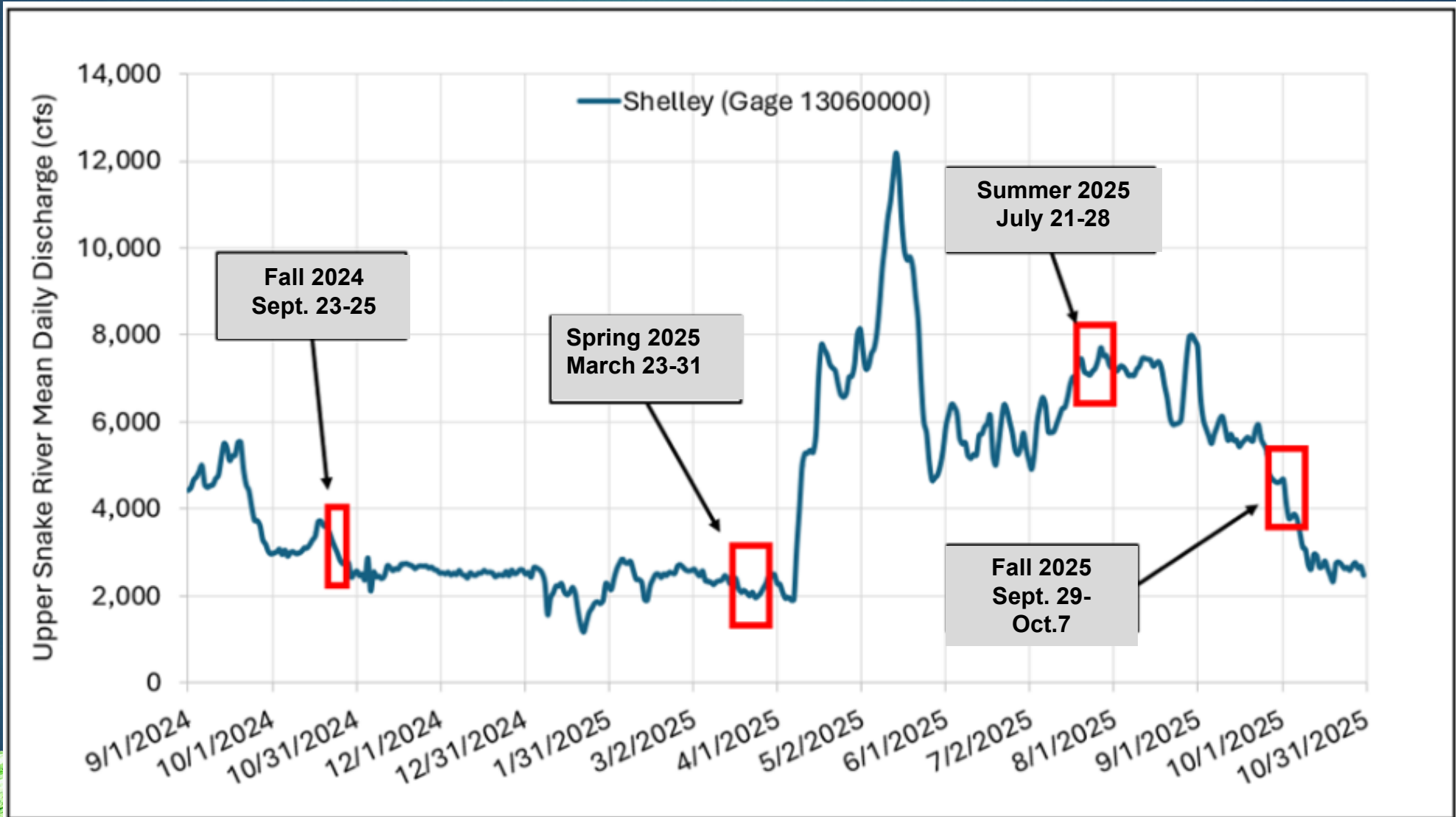
		IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS FERC NOS. 2842 & 2952 <small>Drawn By: Date Drawn: 4/10/2025 Checked By: Date Checked: 05-11-2025</small>

		IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS FERC NOS. 2842 & 2952 <small>Drawn By: Date Drawn: 4/10/2025 Checked By: Date Checked: 05-11-2025</small>

		IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS FERC NOS. 2842 & 2952 <small>Drawn By: Date Drawn: 4/10/2025 Checked By: Date Checked: 05-11-2025</small>

Fish Assemblage Study (AQ-1)

Sampling Events



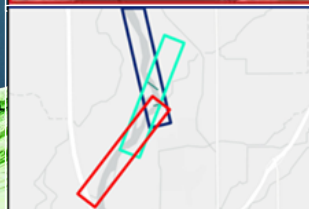
Fish Assemblage Study (AQ-1)

Status – Study Complete

Status	Variances	Modifications
Spring and Fall 2025	Survey area altered in response to low water levels, impeded boat access to Upper Plant tailrace area, electrofishing/setlines downstream of delineated tailrace.	
Spring 2025		To reduce fish injury/mortality, gillnet deployment shifted to daytime sampling (rather than nighttime) with soak times reduced to <8 hrs per set.
Summer and Fall 2025		Limited nighttime gillnet sampling was utilized in reservoir habitat to supplement nighttime boat-mount electrofishing during the summer and fall 2025 Daytime gillnet deployments continued in the reservoirs for sets <8 hrs.

Fish Assemblage Study (AQ-1)

Study Variance – Upper Plant Tailrace Sampling Area



- Sampling Section
- Gillnet (Day)
- Boat Mount Electrofishing (Day)
- Boat Mount Electrofishing (Night)
- Setline
- Fyke/Hoop Net
- Backpack Electrofishing

IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS
FERC NOS. 2842 & 2952

IDAHO FALLS POWER

Drawn By: ENM Date Drawn: 01-06-2026
Checked By: KPN Date Checked: 01-06-2026

Fish Assemblage Study (AQ-1)

Sample Methods – Reservoir & Tailrace

Methods:

▶ Reservoir

- Boat Electrofishing (Day & Night)
- Gill Net Sampling (Day & Night)
- Setlines

▶ Tailrace

- Electrofishing
 - Boat & Backpack
 - Fyke Net Sampling
 - Setlines



Fish Assemblage Study (AQ-1)

Data Summary – Level of Effort

Method	Pilot		Spring		Summer		Fall		Total	
	No. Samples	Effort (hrs)	No. Samples	Effort (hrs)	No. Samples	Effort (hrs)	No. Samples	Effort (hrs)	No. Samples	Effort (hrs)
Backpack e-fishing	1	0.2	3	0.6	4	1.1	5	0.6	13	2.6
Boat e-fishing	4	0.7	23	5.2	25	6.6	31	6.6	83	19.1
Night boat e-fishing			9	1.4	9	1.7	10	2.2	28	5.4
Fyke net	2	36	3	65	1	21	5	73	11	200
Gillnet			9	24	12	32	13	21	34	78
Night gillnet	2	35			2	32	2	38	6	100
Setline	4	70	20	360	21	360	20	340	65	1,100

Fish Assemblage Study (AQ-1)

Native and Introduced Species

- ▶ Redside Shiner (N)
- ▶ Utah Sucker (N)
- ▶ Sculpin Spp. (N)
- ▶ Utah Chub (N)
- ▶ Smallmouth Bass (I)
- ▶ Brown Trout (I)
- ▶ Dace Spp. (N)
- ▶ Rainbow Trout (I)
- ▶ Mountain Whitefish (N)
- ▶ Mountain Sucker (N)

- ▶ Common Carp (I)
- ▶ White Sturgeon (I)
- ▶ Largemouth Bass (I)
- ▶ Cutthroat Trout (N)
- ▶ Sunfish Spp. (I)
- ▶ Yellow Perch (I)



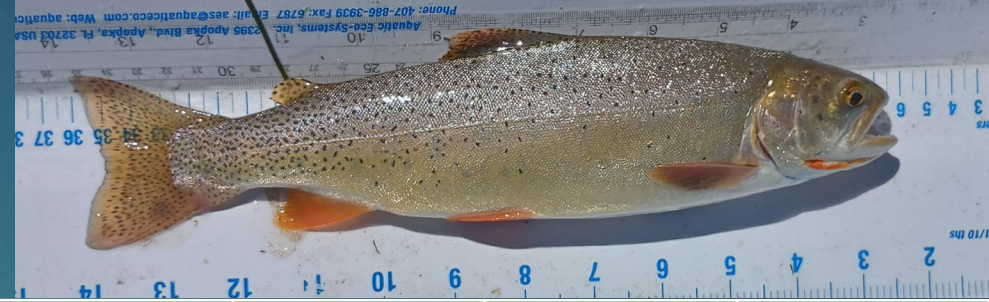
Fish Assemblage Study (AQ-1) Data Summary – Sport fish

- ▶ Sport fish species present:
 - ▶ Brown, Rainbow, and Cutthroat Trout
 - ▶ Largemouth and Smallmouth Bass
 - ▶ White Sturgeon



Fish Assemblage Study (AQ-1)

Bass and Trout



Sport Fish	Gem State Tailrace				Gem State Reservoir				Lower Plant Tailrace			Lower Plant Reservoir			City Plant Tailrace			City Plant Reservoir			Upper Plant Tailrace			Upper Plant Reservoir			
	Pilot	Spring	Summer	Fall	Pilot	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Largemouth Bass	x		x																								
Smallmouth Bass	x	x	x	x	x	x	x	x		x	x														x		
Brown Trout	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rainbow Trout		x		x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x		x	x		x	x
Cutthroat Trout		x													x		x			x	x	x	x	x		x	



Fish Assemblage Study (AQ-1)

Data Summary – White Sturgeon

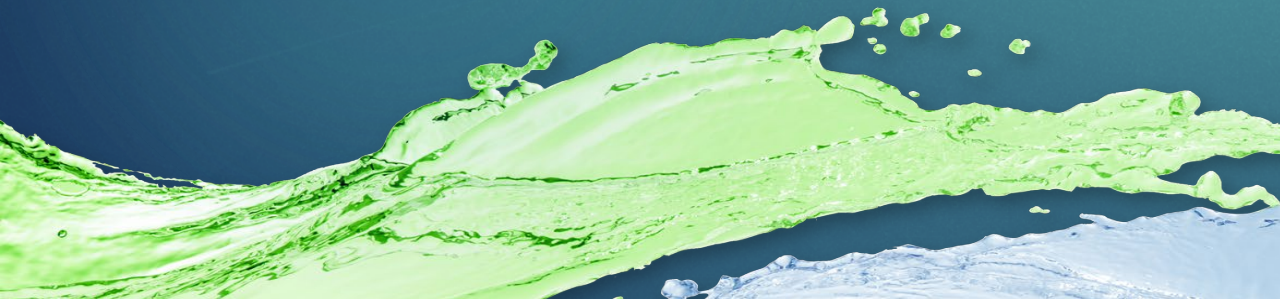
Project	Spring		Summer		Fall	
	n	Total Length Range (mm)	n	Total Length Range (mm)	n	Total Length Range (mm)
Gem State Tailrace	4	1,000 - 1,550	7	800 - 1,470	4	850 - 1,450
Gem State Reservoir					4	1,050 - 1,150
Lower Plant Reservoir	2	950 - 1,010				
City Plant Tailrace			1	910		
City Plant Reservoir	3	760 - 850	6	800 - 1,220		
Upper Plant Tailrace	7	890 - 1,450				



Fish Assemblage Study (AQ-1)

General Observations

- ▶ Fish assemblage is dominated by native species
- ▶ Summer sampling produced the highest species diversity and catch rates (CPUE)
- ▶ Species richness was highest in the Gem State and Lower Plant reaches
- ▶ Game fish species captured in all Projects and seasons
- ▶ Water quality and habitat conditions followed expected seasonal patterns





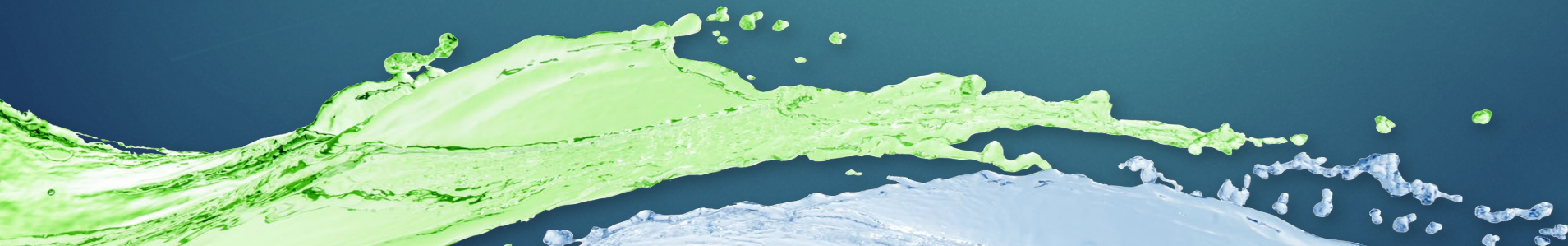
Questions?



Desktop Fish Entrapment (AQ-2)

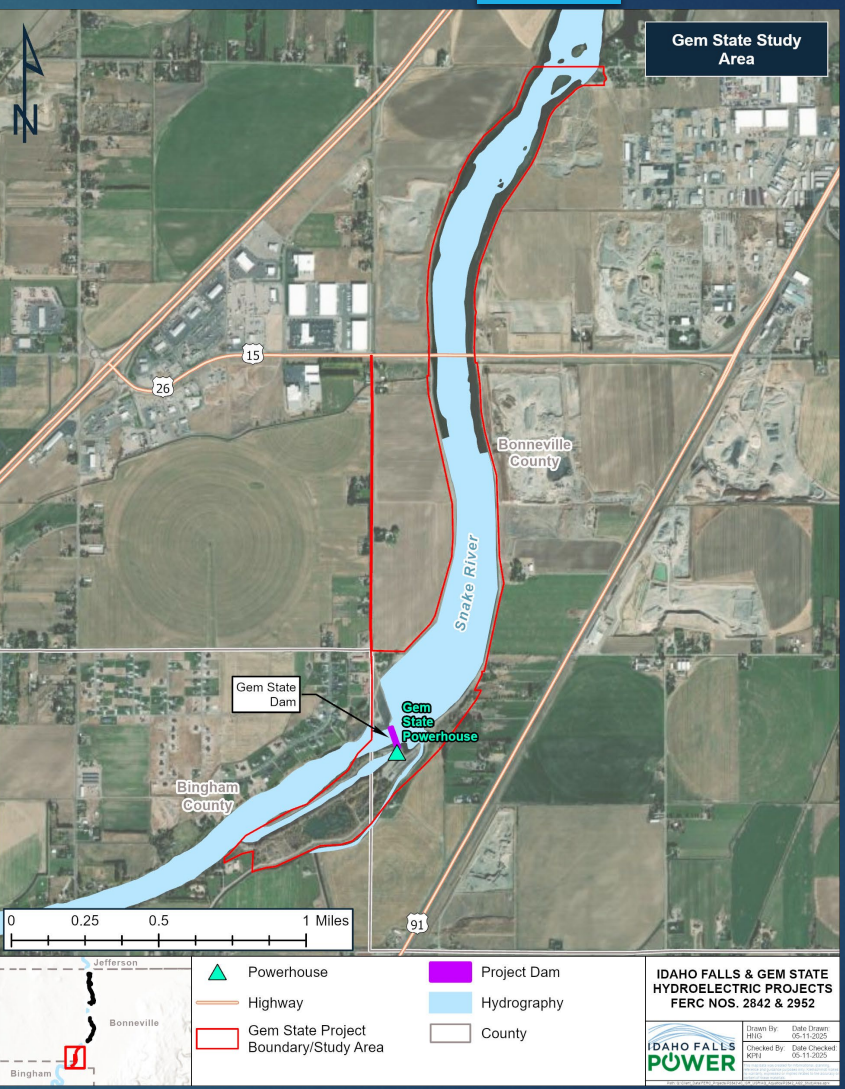
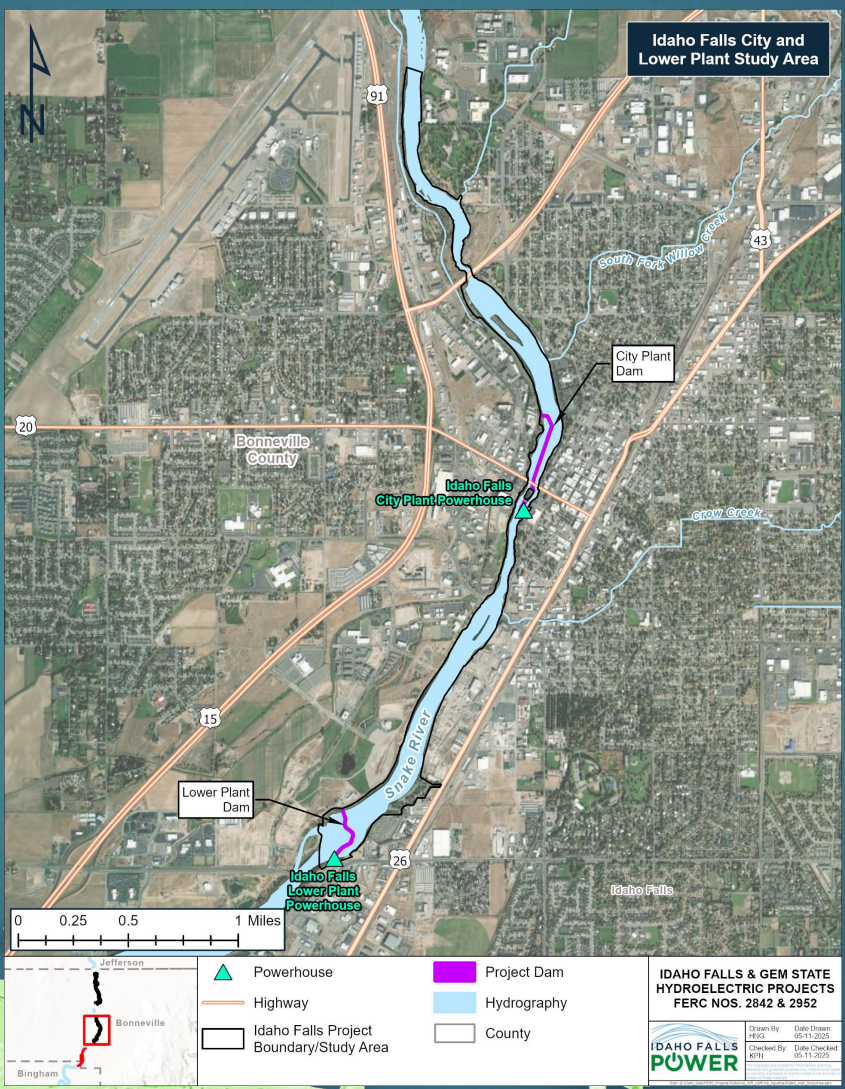
Desktop Fish Entrainment Study (AQ-2)

- ▶ **Goal:**
 - ▶ Assess how the operation of the Projects may affect the ability to achieve management objectives of resource agencies, with regard to fish species actively managed in Project reservoirs (i.e., stocked salmonids and stocked adult White Sturgeon).
- ▶ **Objectives:**
 - ▶ Identify and describe the features and characteristics of each turbine at each of the Idaho Falls and Gem State developments that may influence entrainment and turbine passage survival of stocked adult White Sturgeon, Rainbow Trout, Brown Trout, Yellowstone Cutthroat Trout, Mountain Whitefish and Smallmouth Bass.
 - ▶ Review and describe aquatic habitat near intake areas at the Projects.
 - ▶ Review and describe the biological and behavioral characteristics of study species.
 - ▶ Characterize the potential risk of entrainment for adult White Sturgeon, Rainbow Trout, Brown Trout, Yellowstone Cutthroat Trout, Mountain Whitefish and Smallmouth Bass.



Desktop Fish Entrainment Study (AQ-2)

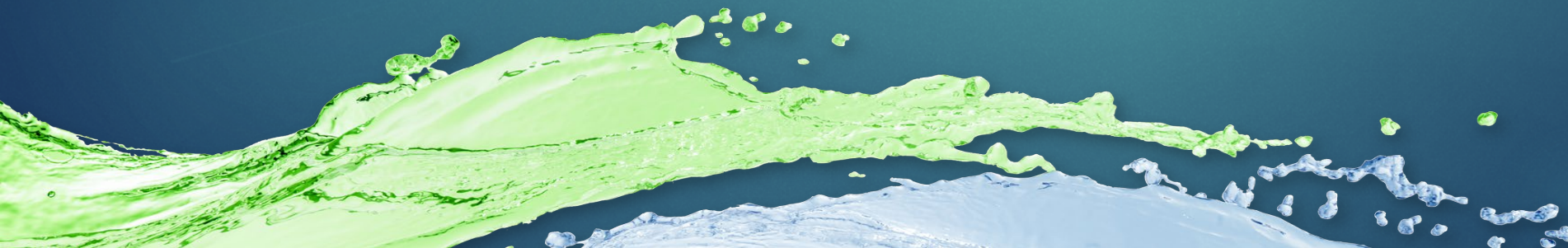
Study Area



Desktop Fish Entrainment Study (AQ-2)

Status – Study Complete

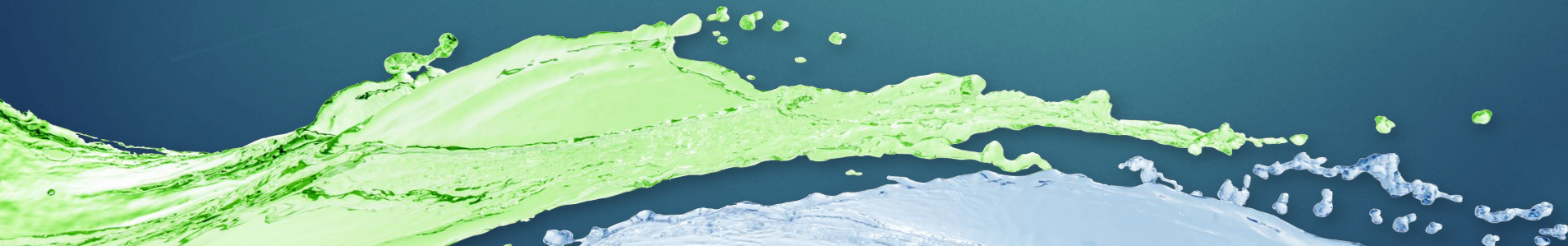
Status	Variances	Modifications
Spring 2025		If quantitative data are insufficient to execute Stryke program, qualitative information will be used to assess risk. Brown Trout, Mountain Whitefish, and Smallmouth Bass added to species list.



Desktop Fish Entrainment Study (AQ-2)

Data collected

- ▶ Physical characteristics of Turbine and Intake Areas
- ▶ Study Species habitat, behavioral and biological data summary
- ▶ Analysis of Entrainment Risk and Turbine Passage Survival
- ▶ Conclusions



Desktop Entrainment Study (AQ-2)

Physical Characteristics of Turbines and Intake

Project	Turbine Type	Number of Turbines	Unit Effic. (%)	Bar Spacing (Trash Rack)	Rated Capacity (MW)	Rated Head (ft)	Rated Runner Speed (rpm)	Max. Net Head (ft)	Min. Net Head (ft)	Runner Diameter (ft)	Max Intake Flow (cfs) * Calculated value	NUMBER OF BLADES
IFP- Upper Plant	Axial-flow, horizontal bulb, Kaplan runner and adjustable wicket gates	1	93	6 in	8.3	18	94.7	20.1	13.3	15.91	6,000	4
IFP- City Plant	Axial-flow, horizontal bulb, Kaplan runner and adjustable wicket gates	1	93	6 in	8.3	18	94.7	20.1	13.3	15.91	6,000	4
IFP - Lower	Axial-flow, horizontal bulb, Kaplan runner and adjustable wicket gates	1	93	6 in	8.3	18	94.7	20.1	13.3	15.91	6,000	4
IFP - Lower Historic	Standby Morgan Smith turbines with axial-flow	2	93	6 in	1.5	18	138.5	20.1	13.3	10	1,200*	4
Gem State	Single Kaplan Vertical with adjustable-blade runner with wicket gates.	1	95	6 in	22.3	42	100	46.9	32.5	18.37	7,000	5

Desktop Entrainment Study (AQ-2)

Study Species Data

SPECIES	HABITAT	SPAWNING NATURE	BURST SWIM SPEED (FT/S)	MEAN LENGTH (FT)	MIGRATORY
Brown Trout	Structurally complex, deeper pools, low velocity zones	Fall/winter spawners, limited spawning habitat availability, 1000+ eggs	5.62	0.94	No
Rainbow Trout	Higher velocity riverine	Spring spawners, limited spawning habitat availability, 700+ eggs	5.46	0.91	No
Yellowstone Cutthroat Trout	Headwaters, tributaries and predominantly riverine	Late spring/summer, favor tributaries to spawn, 800+ eggs, potential to repeat spawn	5.82	0.97	No
Mountain Whitefish	Lentic environments and higher velocity zones	Late winter/spring, broadcast spawners, moderate fecundity	2.73	0.45	No
Smallmouth Bass	Reservoirs, structure oriented	Nesting spawners, moderate fecundity	2.54	0.42	No
White Sturgeon	Riverine/lentic habitats	Broadcast, variable intervals between spawning events, highly fecund	20.44	3.41	No

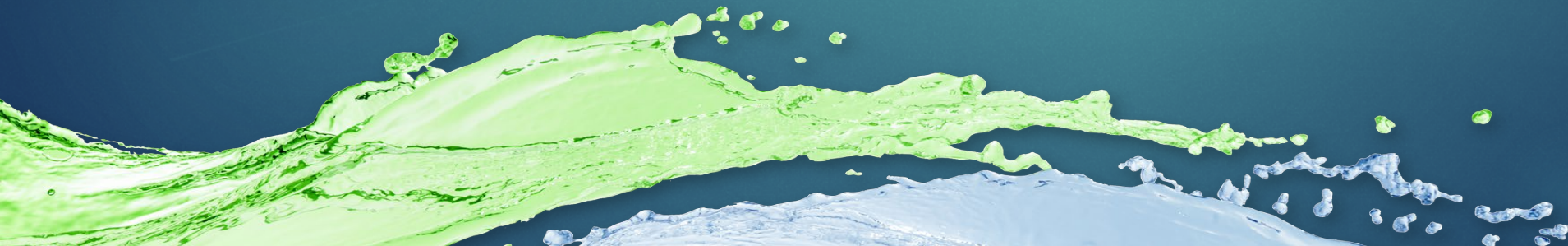
Desktop Entrainment Study (AQ-2)

Risk criteria

High Risk- Approach velocity $>$ burst swim speed, Body width narrower than trash rack bar spacing, species is migratory or occupies habitat near intakes.

Moderate Risk- Approach velocity is equal or close to burst swim speed, fish may not be physically excluded from trash racks, species is migratory or likely to use habitat near intake.

Low Risk- Burst swim speed $>$ than approach velocity, or trash rack spacing prevents fish entrainment, non-migratory and limited habitat near intake.



Desktop Entrainment Study (AQ-2)

Estimated Risk by Species

SPECIES	RISK LEVEL					Survival*		
	UPPER PLANT	CITY PLANT	LOWER PLANT	HISTORIC LOWER	Gem State	LOW FLOW (%)	MEDIUM FLOW (%)	HIGH FLOW (%)
Brown Trout	Moderate	Moderate	Moderate	Low	Low	93.0	94.9	94.9
Rainbow Trout	Moderate	Moderate	Moderate	Low	Low	93.1	95.0	95.0
Yellowstone Cutthroat Trout	Moderate	Moderate	Moderate	Low	Low	92.7	92.7	94.9
Mountain Whitefish	Moderate	Moderate	Moderate	Low	Low	96.4	98.0	98.0
Smallmouth Bass*	Moderate	Moderate	Moderate	Low	Moderate	96.6	97.8	97.8
White Sturgeon	Low	Low	Low	Low	Low	N/A	N/A	N/A

Desktop Entrainment Study (AQ-2)

Conclusions

Current operations are unlikely to result in meaningful entrainment or turbine passage impacts.

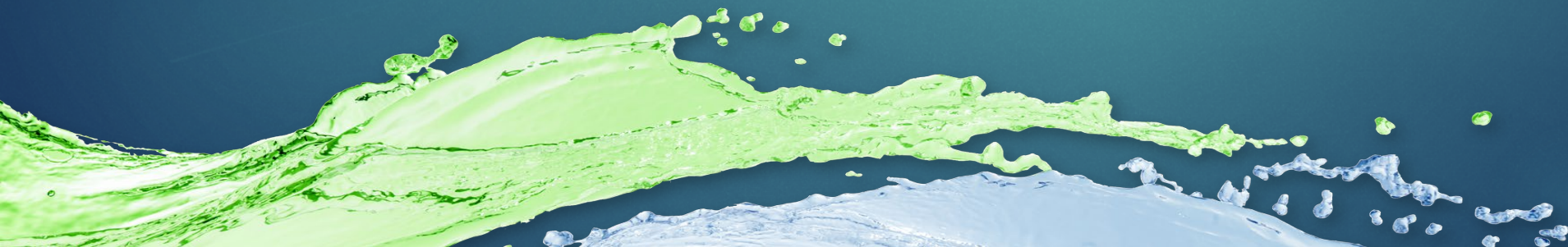
Risk was evaluated to be moderate to low across all facilities for all species.

Survival > 92% for all species and flow scenarios.

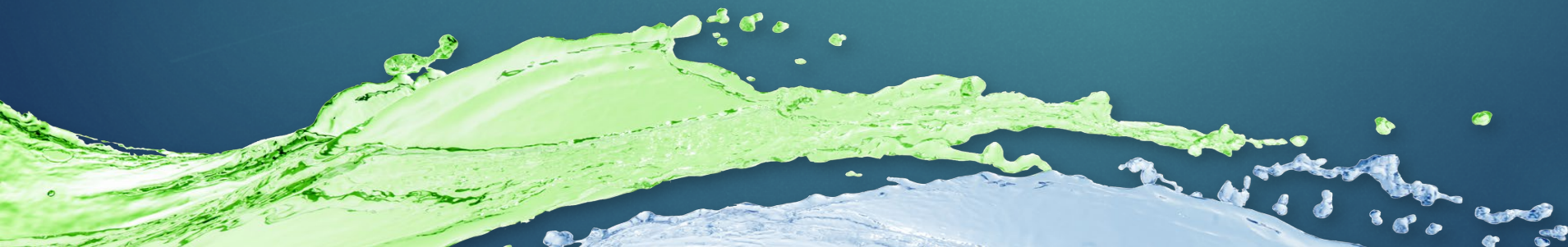
Moderate and low risks primarily due to most species occupying riverine and tailrace sections as opposed to reservoir lentic habitats found near the intakes.

The sizes observed and body shapes of most study species promote a higher passage survival.

Current operation is compatible with maintenance of recreational fisheries and does not pose a substantial constrain on population sustainability.



Questions?





Aquatic Habitat & Sediment Characterization (AQ-3)

Aquatic Habitat & Sediment Characterization Study (AQ-3)

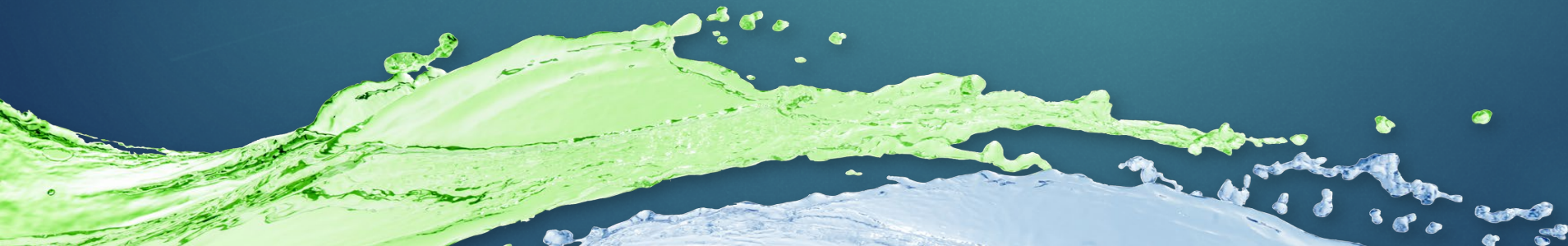
Goals and Objectives

▶ Goal:

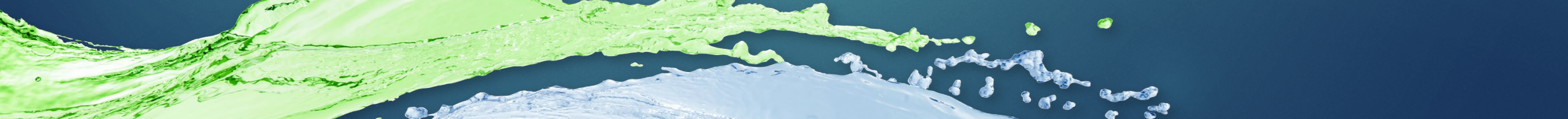
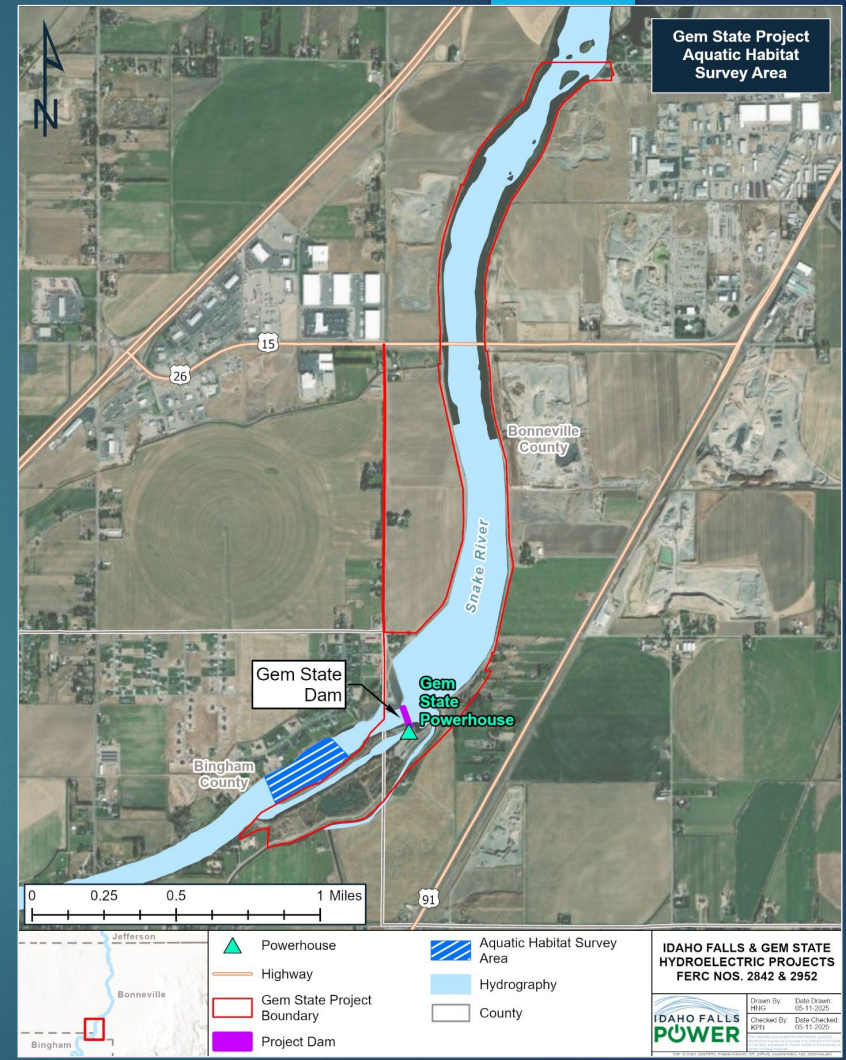
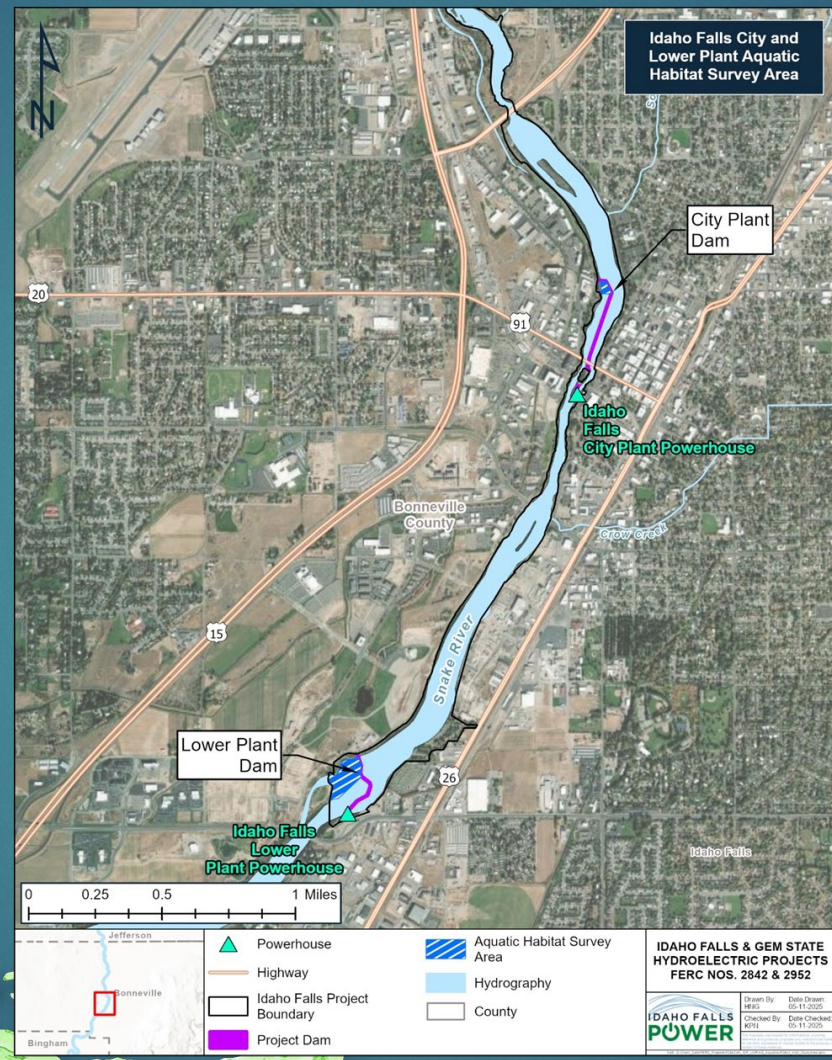
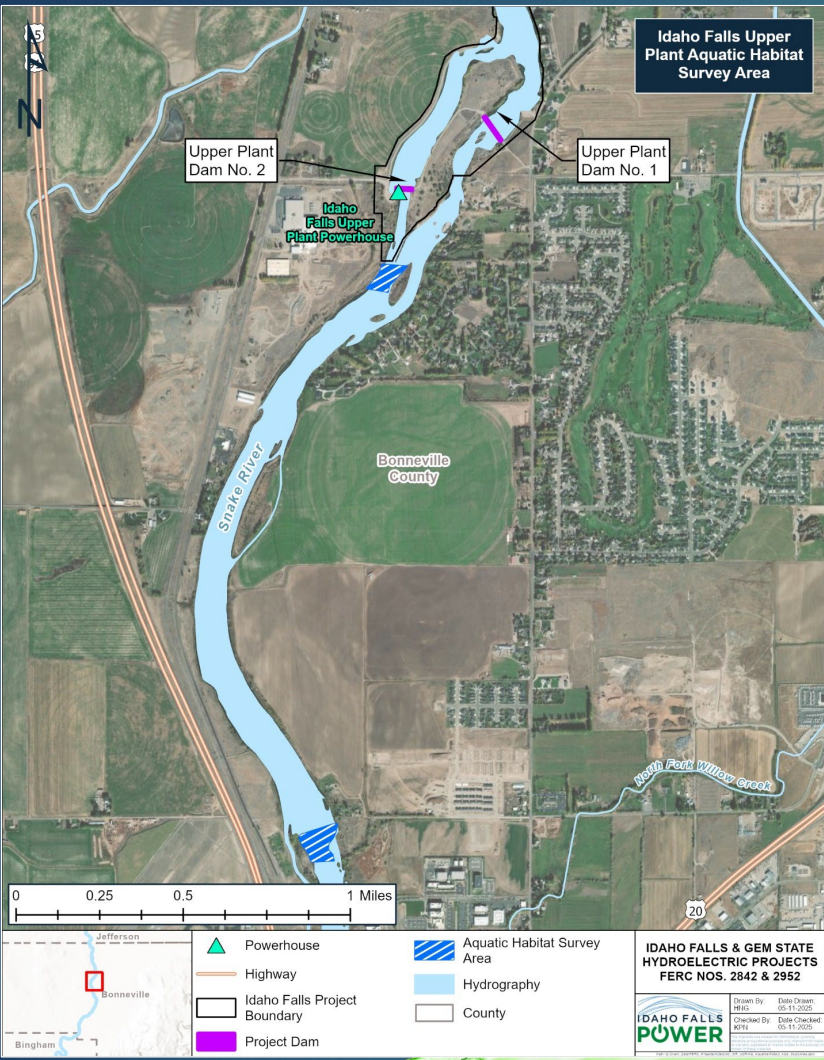
- ▶ Inventory free-flowing aquatic habitats within the Project areas and determine how operations at each Project interact with existing aquatic habitats.

▶ Objectives:

- ▶ Characterize and map aquatic habitat within the free-flowing sections of the Snake River located in the Project areas.
- ▶ Identify potential spawning habitat for salmonids, characterize substrates, and definitive features (e.g., water velocity, substrates) within those areas.



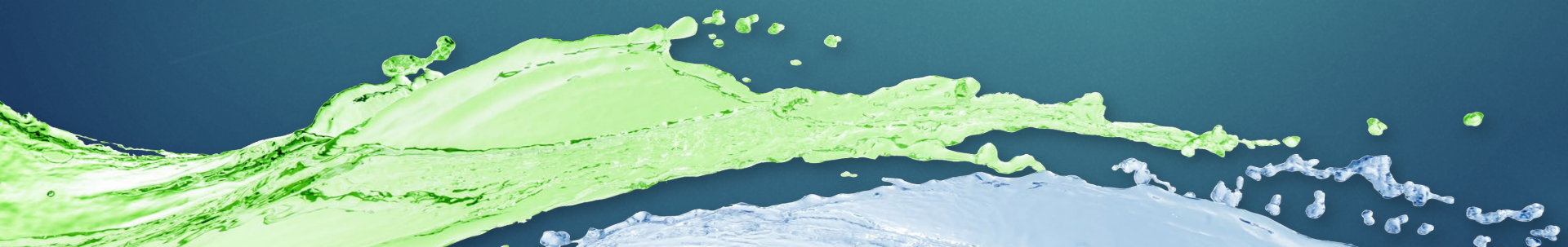
Aquatic Habitat & Sediment Characterization Study (AQ-3)



Aquatic Habitat & Sediment Characterization Study (AQ-3)

Status – Study Complete

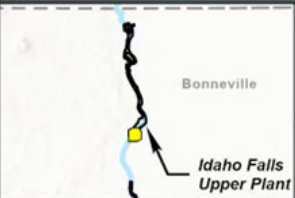
Status	Variances	Modifications
Summer 2025	Summer 2025 sampling shifted to fall 2025 to occur alongside AQ-1, with July site selection trip.	Survey areas modified following July site selection trip.
Fall 2025		Water velocity and depth measurements will be taken opportunistically with emphasis on suitable spawning habitats. Water temperature and dissolved oxygen measurements will not be taken because these data are being collected in AQ-1 and WQ-1.



Aquatic Habitat & Sediment Characterization Study (AQ-3) Upper Plant Results

Upper survey area

- ▶ Steep slope, high velocity, bedrock-controlled channel
- ▶ Depth and velocity varied with shallow riffles and deep bedrock trenches.
- ▶ No cobble or gravel located within survey area thus no potential spawning habitat



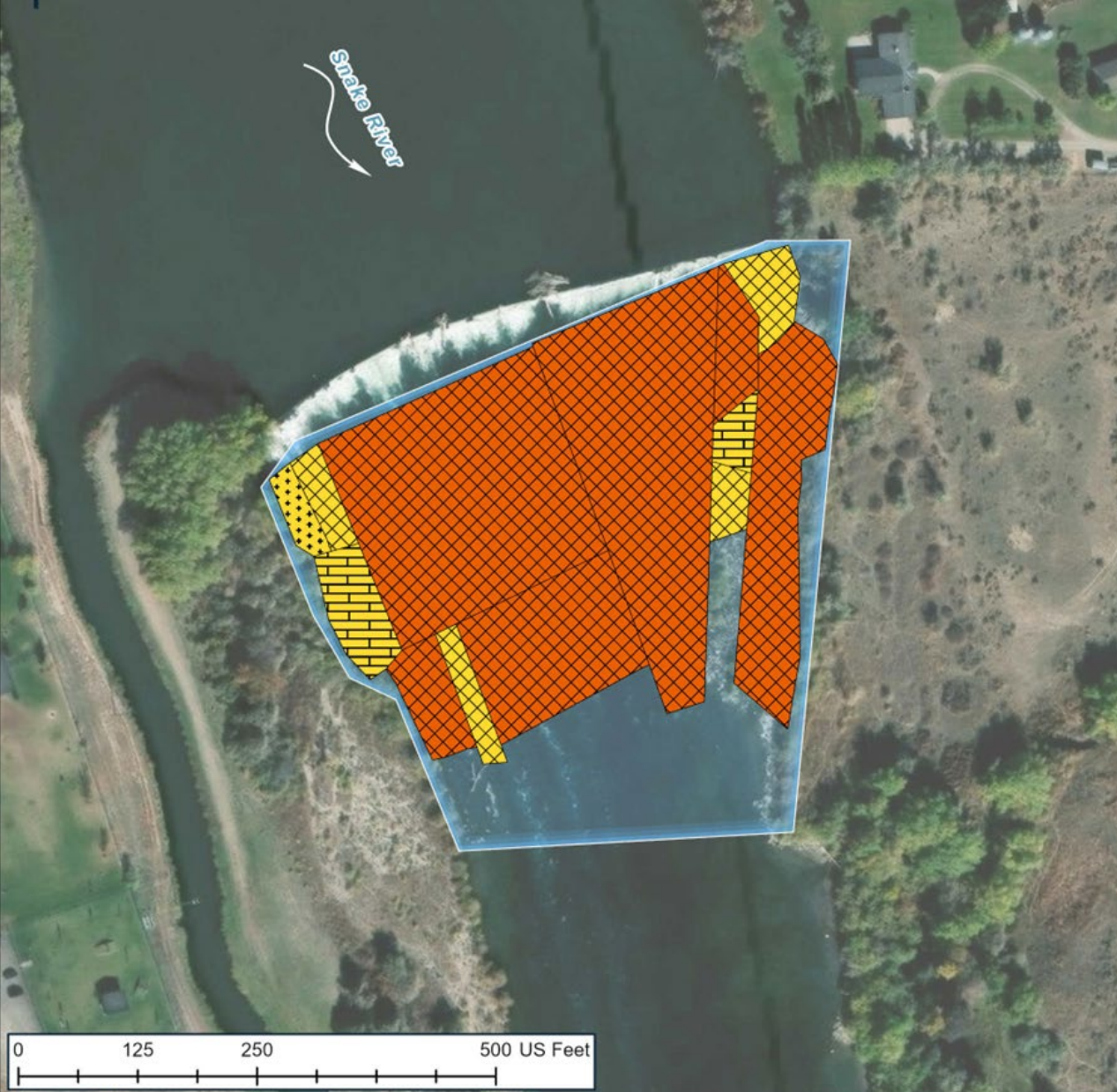
Idaho Falls Project Boundary	Riffle	Boulder
Aquatic Habitat Survey Area	Run	Cobble
Mesohabitat Type	Dominant Substrate	Large Gravel
Pool	Bedrock	Mud / Fines

IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS
FERC NOS. 2842 & 2952

IDAHO FALLS POWER

Drawn By: HRG	Date Drawn: 12-01-2025
Checked By: KPH	Date Checked: 12-01-2025





Aquatic Habitat & Sediment Characterization Study (AQ-3) Upper Plant Results

Lower survey area

- ▶ Higher velocity, bedrock riffles comprised most of central survey area
- ▶ Shorter riffle and runs dominated by boulders were found along edges of survey area.
- ▶ Large woody debris in upper right corner of map.
- ▶ Highly variable velocities and depths between central riffles and edges
- ▶ Small patches of gravel with insufficient depths to support spawning



Aquatic Habitat Survey Area	Riffle	Boulder
Mesohabitat Type	Run	Cobble
Pool	Dominant Substrate	Large Gravel
	Bedrock	Mud / Fines

IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS
FERC NOS. 2842 & 2952

IDAHO FALLS POWER

Drawn By: HRG	Date Drawn: 12-22-2025
Checked By: KPH	Date Checked: 12-22-2025





Aquatic Habitat & Sediment Characterization Study (AQ-3) City Plant Results

- ▶ 41.6% run, 27.1 % pool, and 14.5% riffle habitats
- ▶ Run habitat had dominant substrates of bedrock and boulder, pool was bedrock dominant, and riffles dominated by cobble.
- ▶ Transitional hydraulics within the survey area provided variable depths.
- ▶ Lack of continuous gravel and cobble prevent suitable spawning habitat for trout.
- ▶ Pool habitat at bottom of reach may suggest potential spawning for Mountain Whitefish.

<p>Idaho Falls City Plant</p>	<p>Idaho Falls Project Boundary</p> <p>Aquatic Habitat Survey Area</p> <p>Mesohabitat Type</p> <p>Pool</p>	<p>Riffle</p> <p>Run</p> <p>Dominant Substrate</p> <p>Bedrock</p>	<p>Boulder</p> <p>Cobble</p> <p>Large Gravel</p> <p>Mud / Fines</p>	<p>IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS FERC NOS. 2842 & 2952</p> <p>IDAHO FALLS POWER</p> <p>Drawn By: HRC Date Drawn: 12-22-2025 Checked By: KPH Date Checked: 12-22-2025</p>
-------------------------------	--	---	---	---



Idaho Falls Lower Plant
Aquatic Habitat Survey
Mesohabitat

Aquatic Habitat & Sediment Characterization Study (AQ-3) Lower Plant Results

- ▶ Plunge pools below spillway provided depth and refuge during no spill conditions.
- ▶ Shallow riffles dominated by bedrock transitioning to high gradient cascades on the right channel.
- ▶ Large (22.5-32 mm) and small gravel (~8mm) was found in what would be riffle at bottom of right channel.
- ▶ No spill at time of survey, during spill likely support spawning with suitable substrate, depths and velocities for trout.
- ▶ Pool habitat at bottom of reach likely supports Mountain Whitefish spawning.

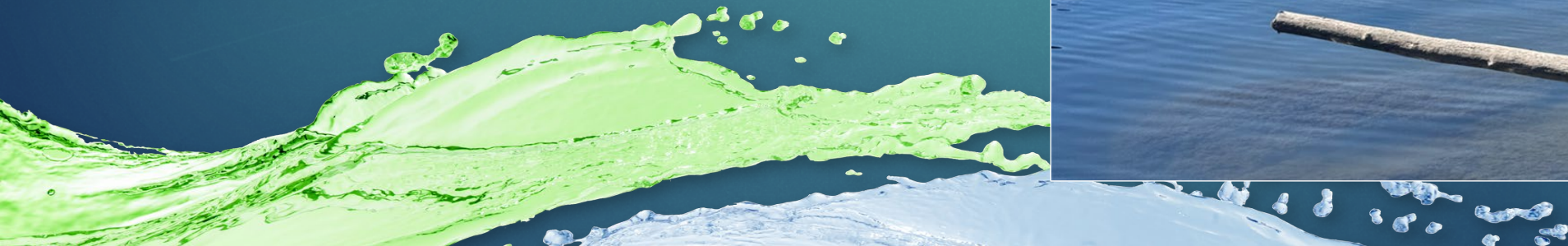
<p>Bonneville</p> <p>Idaho Falls Lower Plant</p>	<p>Idaho Falls Project Boundary</p> <p>Aquatic Habitat Survey Area</p> <p>Mesohabitat Type</p> <p>Pool</p>	<p>Riffle</p> <p>Run</p> <p>Dominant Substrate</p> <p>Bedrock</p>	<p>Boulder</p> <p>Cobble</p> <p>Large Gravel</p> <p>Mud / Fines</p>	<p>IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS FERC NOS. 2842 & 2952</p> <p>IDAHO FALLS POWER</p> <p>Drawn By: Date Drawn: 12-22-2025 Checked By: Date Checked: 12-22-2025</p>
--	--	---	---	---





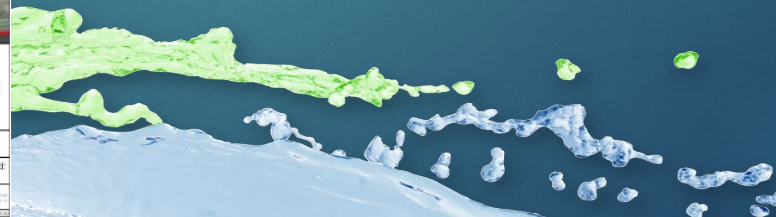
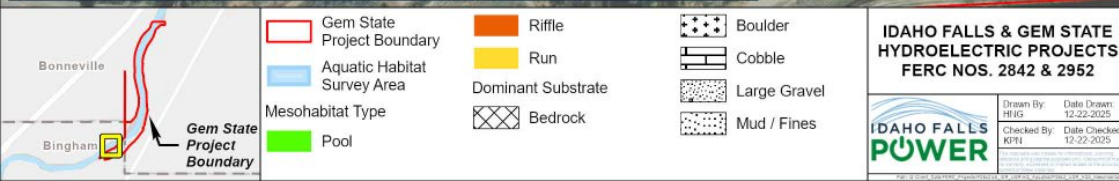
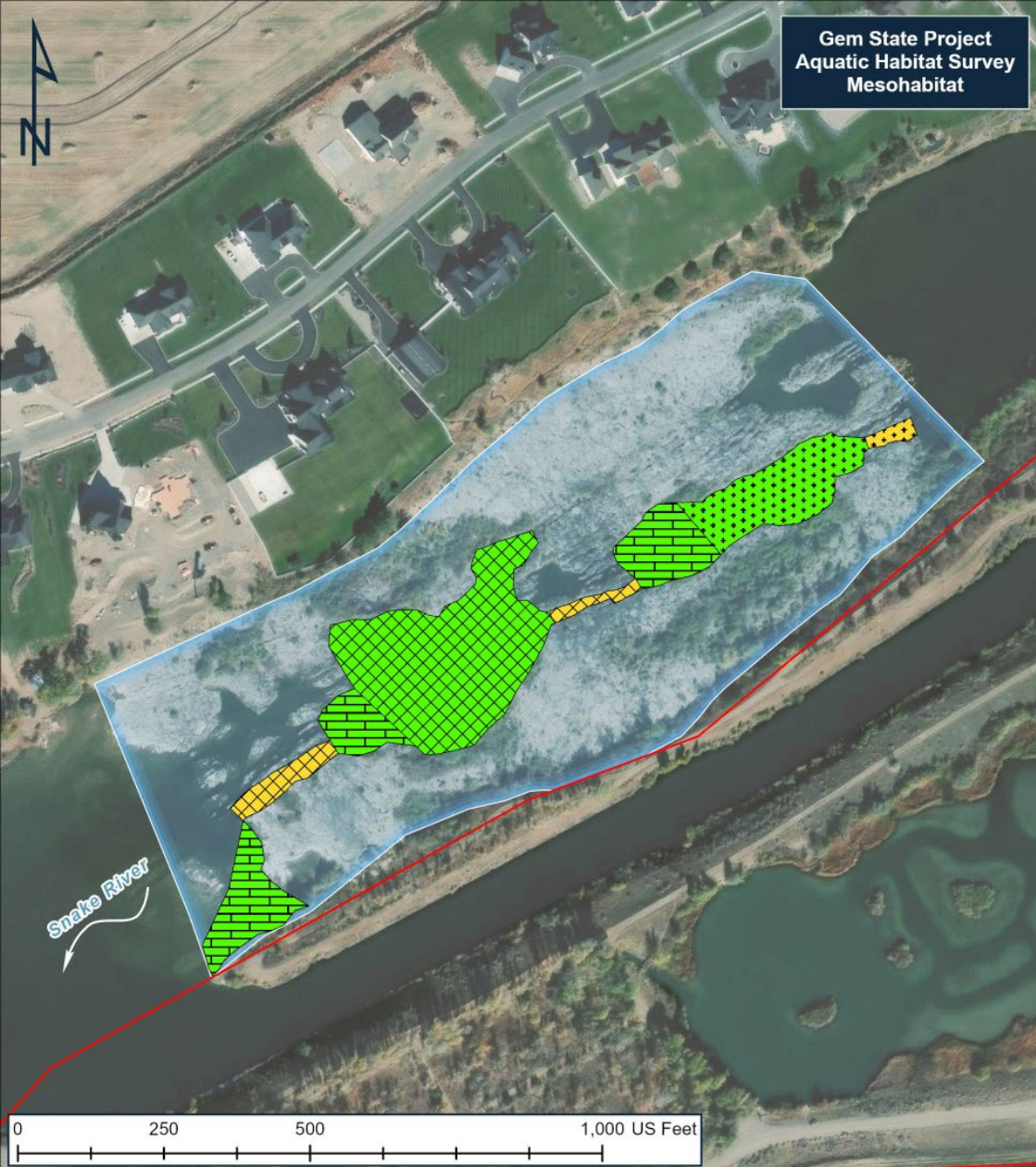
← Dewatered gravel section below cascade on right channel.

↓ Left channel plunge pool below spillway



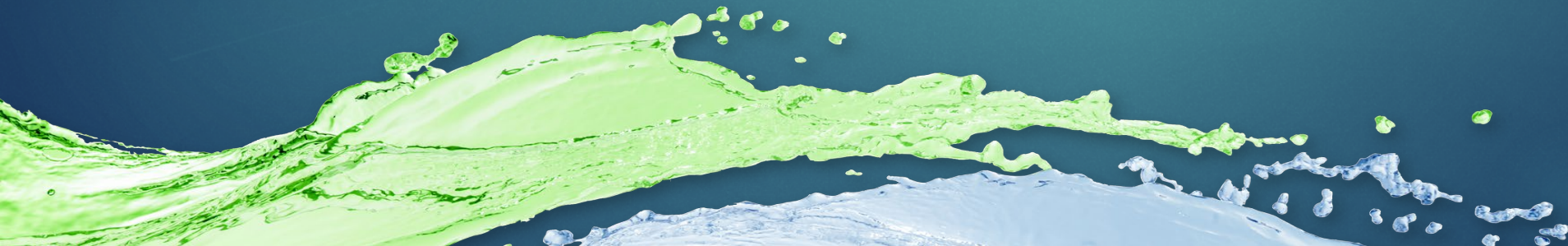
Aquatic Habitat & Sediment Characterization Study (AQ-3) Gem State Results

- ▶ 92% pool habitat, 8% run habitat
- ▶ Survey area alternated between large deep pool with channelized bedrock runs between
- ▶ Substrate transitioned from upstream end of pool to downstream end. Dominated by boulder with cobbles and sand accumulated in the downstream ends.
- ▶ Pool habitats had low velocities (< 0.1 m/s)
- ▶ Runs had velocities above 0.24 m/s with variable depths.

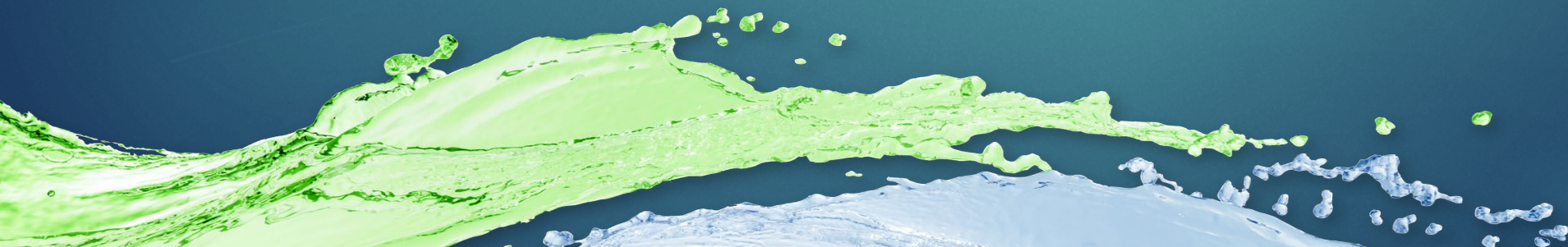


Aquatic Habitat & Sediment Characterization Study (AQ-3) Conclusions

- ▶ Bedrock dominated survey areas with boulder as a common subdominant substrate class
- ▶ Across survey areas, pool and runs most common habitat classification
- ▶ Depths and velocities at the time of survey were not supportive of trout spawning with some areas having potential under ideal flow conditions.
- ▶ Mountain whitefish spawning habitat may occur in pool tail outs and low velocity margins where cobble and gravel substrates were present but overall limited in extent.



Questions?





Project Lands & Roads (LAND-1)



Project Lands & Roads Study Plan (LAND-1)

▶ **Goal:**

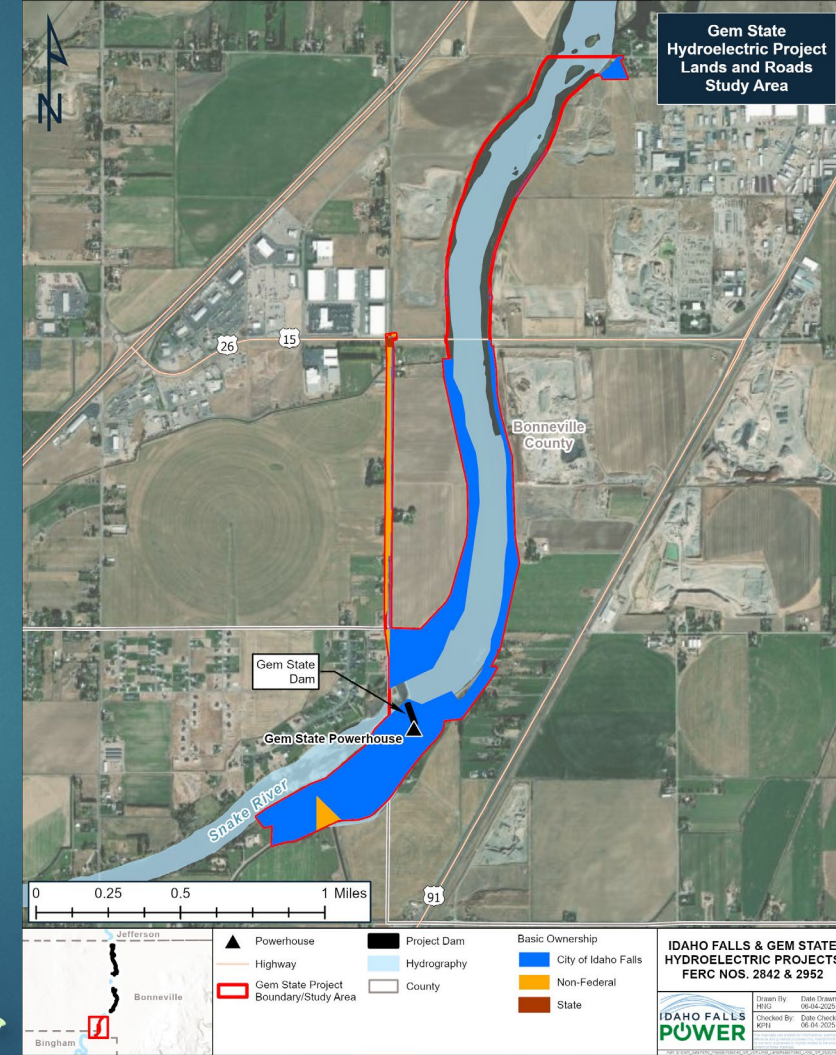
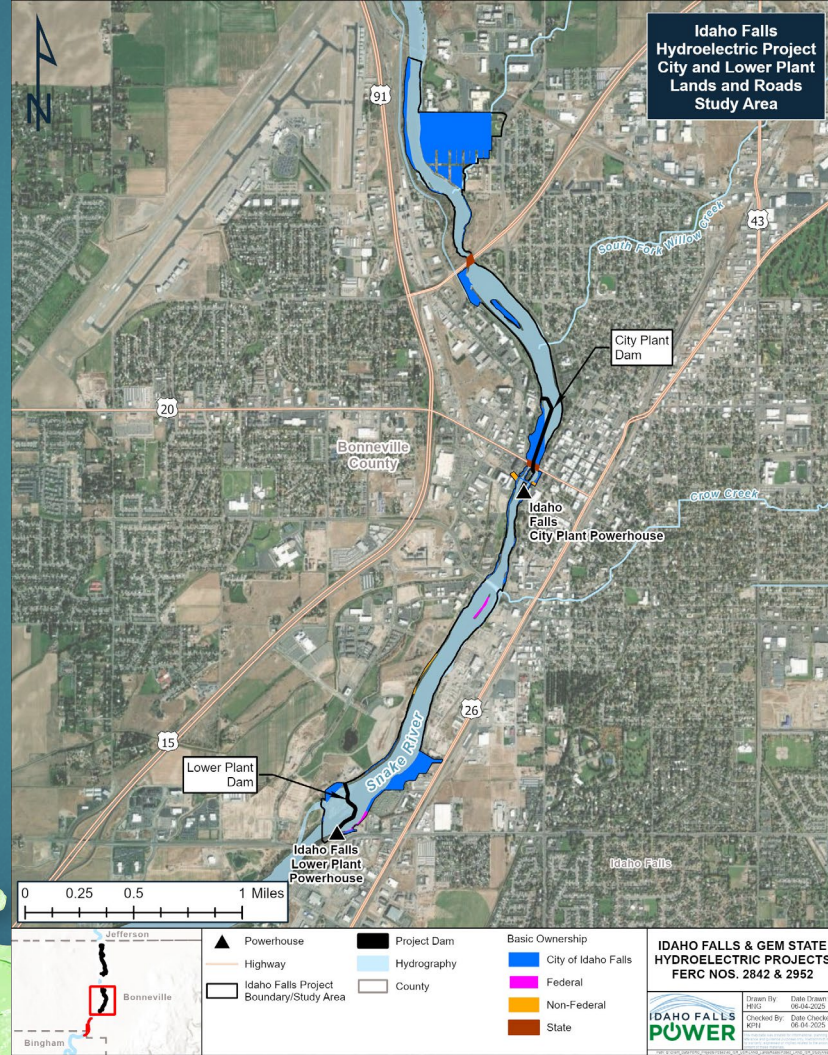
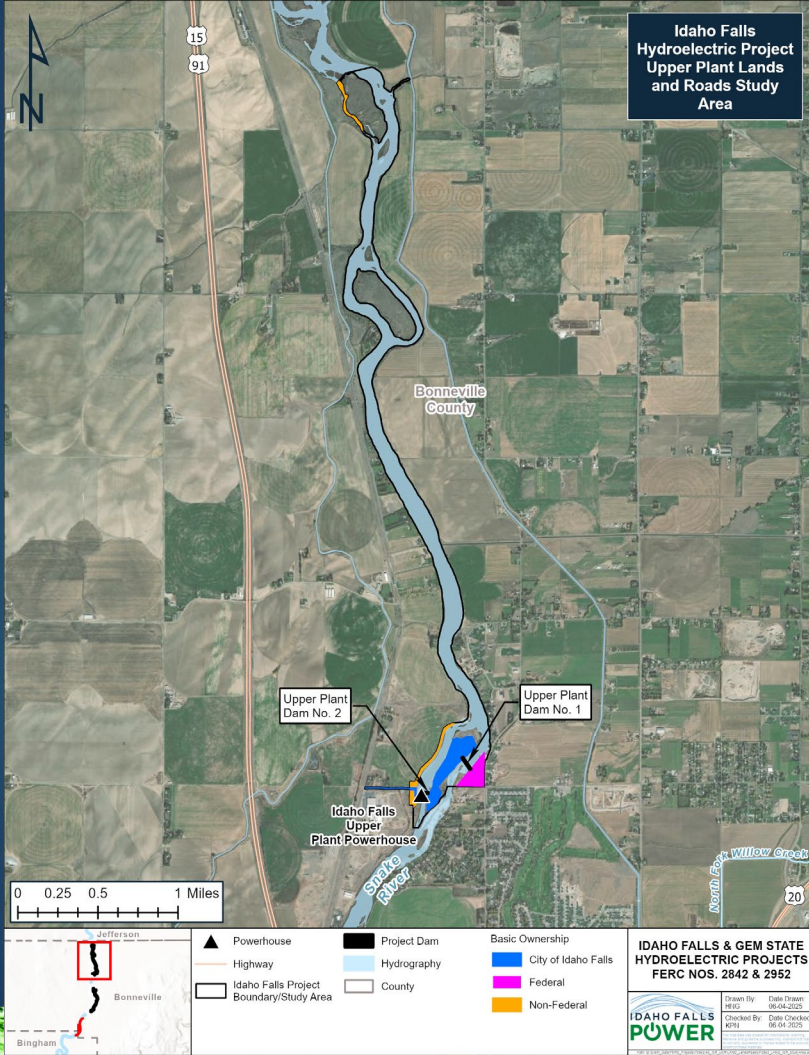
- ▶ Gather current information on existing lands and roads within the current Project Boundaries and assess their current usage and functionality.

▶ **Objectives:**

- ▶ Assess the current Project Boundaries for accuracy, incorporating changes as warranted by new mapping techniques and technology.
- ▶ Confirm base ownership of Project lands in terms of title, easements, and other jurisdictional overlays.
- ▶ Assess parcel(s) of BLM land that may be encumbered by the Projects and for which a withdrawal for power purposes was never completed to determine the appropriate next steps to account for Project use.
- ▶ Assess the Idaho Falls Project and Gem State Project areas for roads used predominantly for project purposes.
- ▶ Assess the Idaho Falls Project and Gem State Project areas for ancillary and unintended uses arising from authorized Project activities.
- ▶ Determine if certain Project facilities (including roads) will be removed or abandoned under the term of the next license and how they will be treated.
- ▶ Identify areas outside the current Idaho Falls Project and Gem State Project Boundaries that may need to be included as Project lands in the new license terms.
- ▶ Coordinate with the REC-1 Study to update recreation areas and the Recreation Management Plan if necessary.

Project Lands & Roads Study Plan (LAND-1)

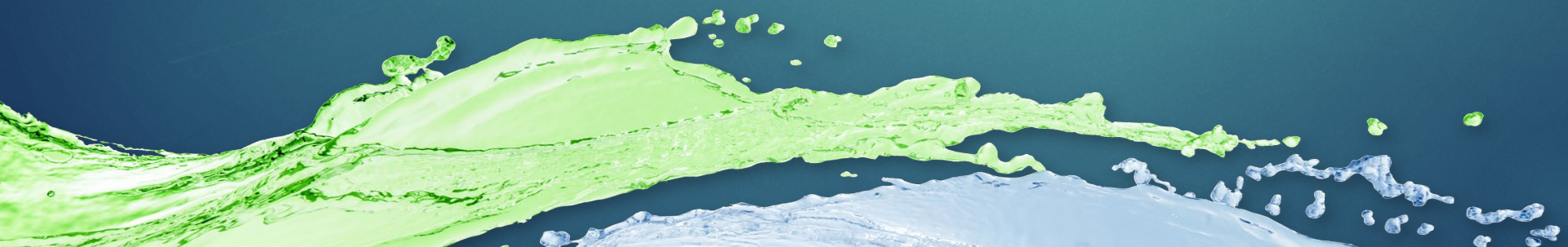
Study Area



Project Lands & Roads Study Plan (LAND-1)

Status – Study Complete*

Status	Variances	Modifications
Spring 2024 to 2025	Study schedule delayed from spring 2024 to spring 2025 due to administrative and internal discussions around recreation sites and impact on Project Boundaries.	
Combining licenses		Since the Study Plan Determination (SPD), IFP has decided to combine the two licenses into one license and one Project Boundary.



Project Lands & Roads Study Plan (LAND-1)

Data

Added

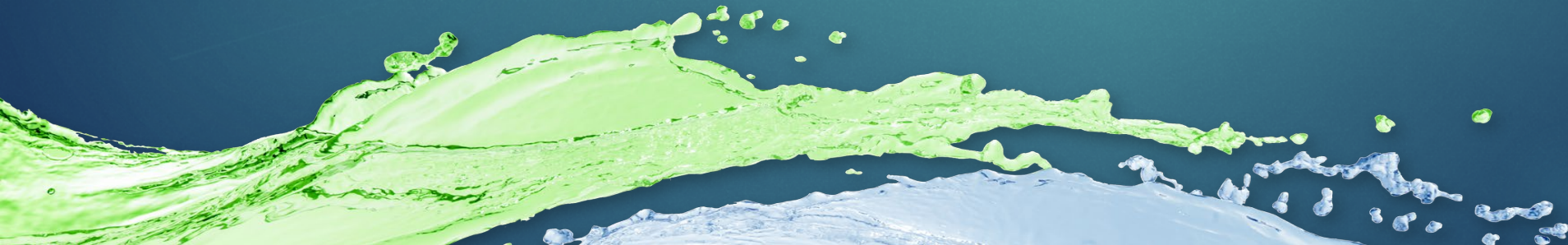
- Upper Plant- Gated road across 9-acre BLM parcel
- Upper Plant- Road on west side
- Small parking lot ¼ mile south of E. River Road Access boat launch
- City Plant- Transmission Line
- Lower Plant- Transmission Line
- Gem State- Transmission Line
- Gem State- Bike Park at Upper Marina

Removed

- Upper Plant - Existing Project Boundary was drawn to consider ice jams which no longer occur.
- City Plant- Keefer's Island
- City Plant- Pedersen Park & Trail to Island
- City Plant- Russell Freeman Park
- City Plant- South Capital Park

Administrative Change

- 1.8 acre BLM parcel at Lower Plant



Project Lands & Roads Study Plan (LAND-1)

Changes since the ISR



Adding the bike park at Upper Marina to FERC Project Boundary

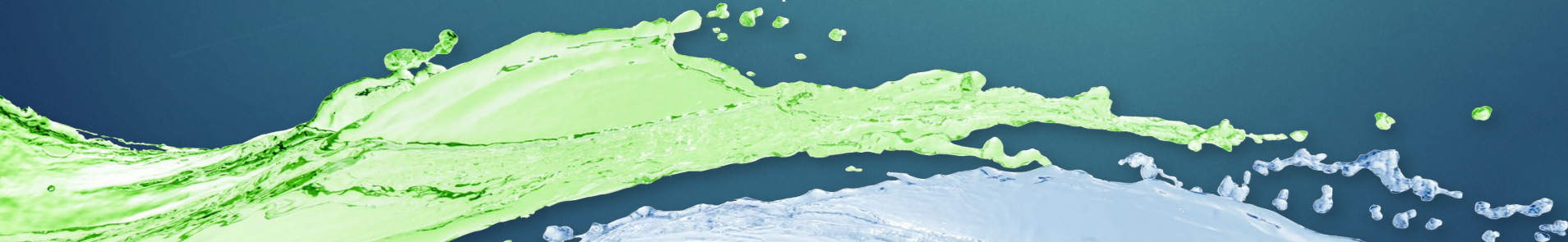
Calling the area "Friendship Garden at Pedersen Park" instead of "Eagle Rock Crossing"



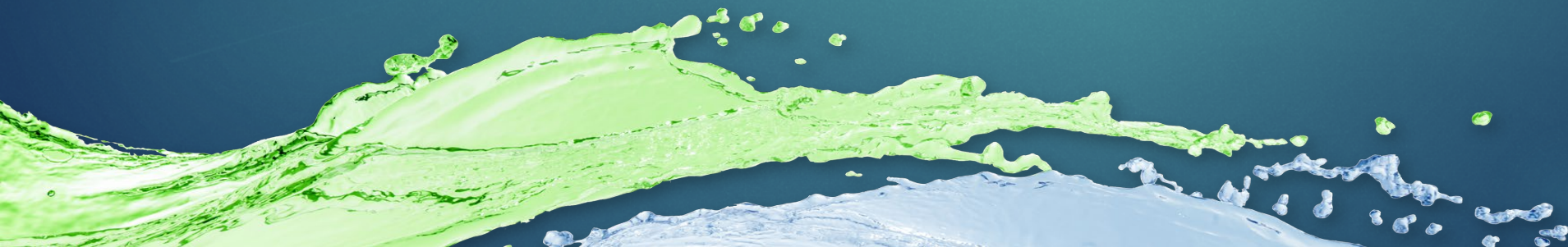
Project Lands & Roads Study Plan (LAND-1)

Results & Conclusion

- ▶ Project Boundaries tightened to follow shoreline
- ▶ Licensee has purchased properties that were potentially impacted by potential ice jams and converted them to boat launch and conveyed to the County
- ▶ Proposed changes relate to ensuring Project operations and facilities, trails, and roads are accurately included in the proposed Boundary (in close coordination with the REC-1 Study)
- ▶ Mapping corrections included improved centerlines and buffers for roads, flowlines, creeks, or transmission lines
- ▶ The effort also identifies where historic recreation exhibits and management plans need to be reconciled with the Project Boundaries
- ▶ The Project Lands and Roads (LAND-1) USR includes a comprehensive list and images of additions and removals (most recently the Bike Park near Gem State).
- ▶ Ultimately, changes will result in an updated Exhibit G with the new license, which was filed as an attachment to the LAND-1 report



Questions?





Recreation Use & Facilities Inventory (REC-1)



Recreation Use & Facilities Inventory (REC-1)

Goals & Objectives

▶ **Goal:**

- ▶ Gather current information on recreation facilities, recreational use, and Projects' potential effects to determine existing and future recreation use and capacity at the Idaho Falls and the Gem State Projects.

▶ **Objectives:**

- ▶ Inventory and identify the condition of the recreation facilities and associated amenities at FERC-approved recreation sites.
- ▶ Identify who owns, operates, and maintains each recreation site and facility.
- ▶ Describe each recreation site and facility in relation to their associated Project Boundaries.
- ▶ Evaluate recreation use at study area recreation sites, including both an assessment of the amount of use at each site (including percentage of capacity) and the recreation activities that occur at the site.
- ▶ Collect visitor feedback regarding perception and experience at recreation facilities.
- ▶ Determine the adequacy of study area recreation sites and if modifications to the sites would be needed to meet the current or future recreation needs.

Recreation Use & Facilities Inventory (REC-1)

Status – Study Complete

Status	Variances (Additional Info in REC-1 Report)
Non FERC-Approved recreation sites added to the study area	Goals and objectives listed in the SPD discuss implementation at FERC-approved recreation sites for the Projects. Since that time, the study was expanded to include certain infrastructure that are not FERC-approved or required; therefore, the language throughout this report discusses the study area, as described in Section 3.0, rather than discussing FERC-approved recreation sites. Specific additions include Gem State Bike Park, Heritage Park, and the Greenbelt Loop.
Status	Modifications (Additional Info in REC-1 Report)
Updated REC-1 survey forms	Minor changes to wording and content were made to the Recreation Facility Inventory Form (Appendix A to the RSP), Recreation Use Spot Count Form (Appendix B to the RSP), and Recreation Use Survey Form (Appendix C to the RSP).
Updated study sites and methods	Minor changes to the list of recreation sites and naming conventions and implementation methods occurred for the following recreation sites: Upper Plant Fishing Access, Upper Plant Marina, Friendship Garden at Pedersen Park, Keefer's Island, South Capital Park, Fishing Pond, and Cedar Point Recreation Area.
Minor change to traffic counter calibration and data backup methods	Traffic counters were neither calibrated, checked, nor downloaded according to the methods stated in the RSP. Calibration of counters was conducted prior to their initial installation in May 2025 and reinstallation of each in July 2025. Given that buried, electromagnetic vehicle counters were employed for this study, and constraints on schedule given the number of sites being studied, data were collected once during the study season, in July 2025, at which point, counters were recalibrated and reinstalled. Visible counters (e.g., pedestrian counters) were assessed periodically by IFP maintenance staff during the study season to ensure that no vandalism had occurred.
Changed traffic counter from vehicle to pedestrian	For one recreation site in the study area (Pedersen Park), pedestrian counters were deemed most appropriate, given that this city center location has multiple vehicle parking locations for a wide variety of additional activities and establishments in the area, and vehicle counts would not be representative of use solely at Pedersen Park. Accordingly, two trail counter locations were chosen to collect pedestrian access across each of the two bridges leading to the island park.
Addition of general accessibility assessment	Although not included in the RSP, accessibility was assessed generally to understand basic inventory and function of existing accessibility improvements across the study area. However, it should be noted that the assessment was neither conducted by a licensed landscape architect nor analyzed at a detailed level according to any regulatory standards, such as those required by the ADA.
Removal of vehicle count from spot counts	In the RSP, Section 5.2.1 notes that spot counts would include the number of vehicles at each site. Given that the number of vehicles was collected by traffic counters or was infeasible given surrounding parking infrastructure (e.g., Pedersen Park, Friendship Garden at Pedersen Park, and Keefer's Island), spot counts did not include this information.
Spot counts deemed only reasonable form of data collection	For two recreation sites in the study area (Keefer's Island and Friendship Garden at Pedersen Park), spot counts were deemed the only reasonable form of data collection, Friendship Garden at Pedersen Park due to the open location in the city center with public parking available at multiple locations and no true funnel point for entrance and exit and Keefer's Island due its sole access via boat.
Traffic counter vandalism (Pedersen Park)	Pedestrian counters were installed on each of the two pedestrian bridges to quantify total number of recreators accessing the island park. On July 7, 2025, field staff observed that the trail counter located on the eastern pedestrian bridge was missing entirely. Staff later found the trail counter downstream at a Project site where apparently it had been thrown into the river. As a result, calculations for Pedersen Park traffic counts were partially interpolated.
Traffic counter data corruption (Russell Freeman Park)	Upon final retrieval of all traffic and trail counter equipment on September 3, 2025, it was discovered that the waterproof case for the Russell Presto counter (1 of 3) had failed and allowed groundwater to enter and saturate the unit's circuit board. Although staff attempted to apply absorbents to dry the circuit board, it was not possible to recover additional data. As a result, calculations for Russell Freeman Park traffic counts were partially interpolated.



IDAHO FALLS PROJECT

FERC No. P-2842

GEM STATE PROJECT

FERC No. P-2952

Recreation Use & Facilities Inventory (REC-1) Study Area



Recreation Use & Facilities Inventory (REC-1) Data Collection

▶ Recreation Inventory

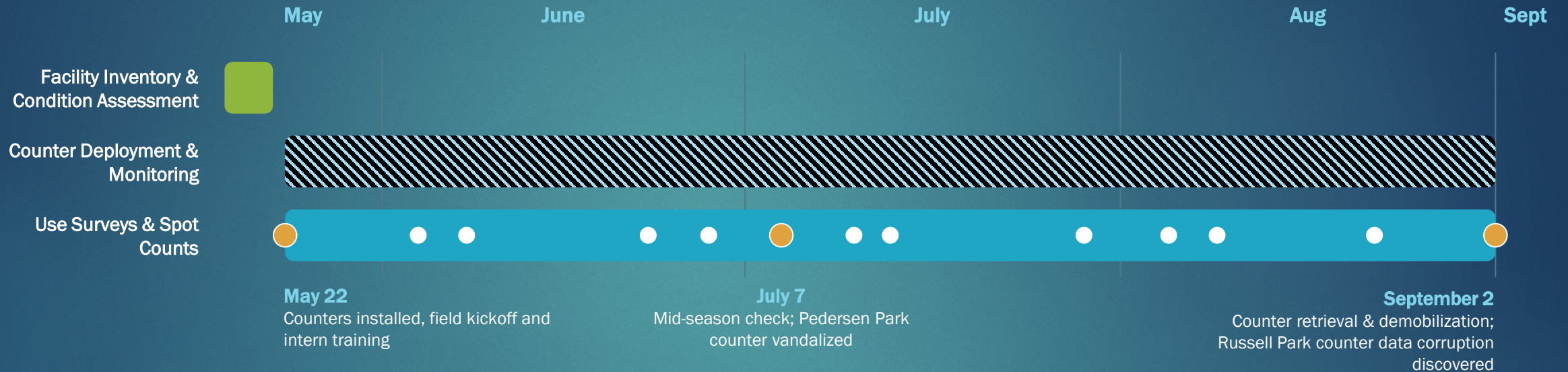
- ▶ Field data collection using GIS software to capture snapshot of current recreation infrastructure, including facility type, condition, site security and safety, distribution patterns, and parking capacity.
- ▶ Accessibility was also assessed and noted in the inventory at a general level. No formal, ADA-compliant assessment was conducted.

▶ Recreation Use Assessment

- ▶ Traffic Counters (Vehicle and Pedestrian)
 - ▶ 14 vehicle counters implemented
 - ▶ 2 pedestrian trail counters implemented (Pedersen Park)
 - ▶ Spot counts were deemed the only reasonable form of data collection at Keefer's Island and Friendship Garden at Pedersen Park
- ▶ Intercept Surveys
 - ▶ Idaho Falls Power interns were trained on the use of Survey 123 software and provided a randomized schedule to be on site interviewing recreators.

Recreation Use & Facilities Inventory (REC-1)

Implementation Timeline (2025 Field Season)



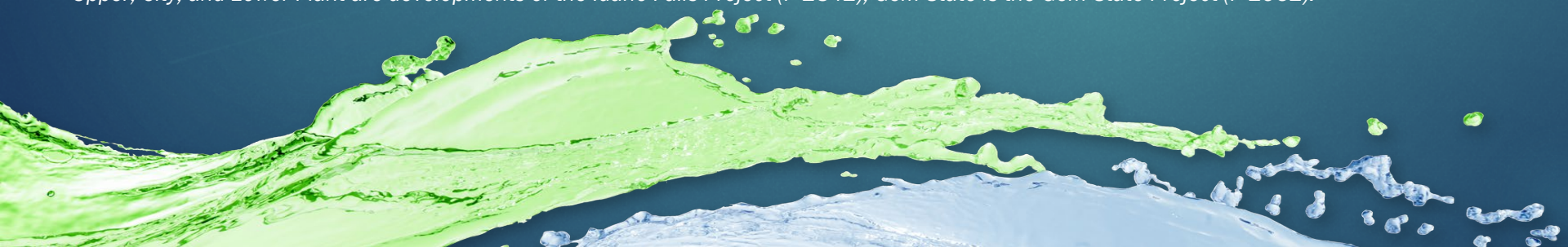
Recreation Use & Facilities Inventory (REC-1)

Results at a Glance

742	89.1%	484,785	191
Facilities Inventoried	% Facilities Rated "Good" Condition	Total Visits (102-day season)	User Surveys Completed

Development	Recreation Sites	Facilities	% Good Facilities	Total Recreation Visits (102-day season)	Avg Daily Recreation Visits (102-day season)	% of Use	Peak Parking
Upper Plant	2	65	89.2%	43,124	423	8.9%	≤ 50%
City Plant	5	331	91.8%	342,120	3,354	70.6%	≤ 78%
Lower Plant	2	181	93.4%	41,792	410	8.6%	≤ 39%
Gem State	5	165	78.8%	57,749	566	11.9%	≤ 25%
Study Area Total	14	742	89.1%	484,785	4,753	100%	< 60%

Upper, City, and Lower Plant are developments of the Idaho Falls Project (P-2842); Gem State is the Gem State Project (P-2952).



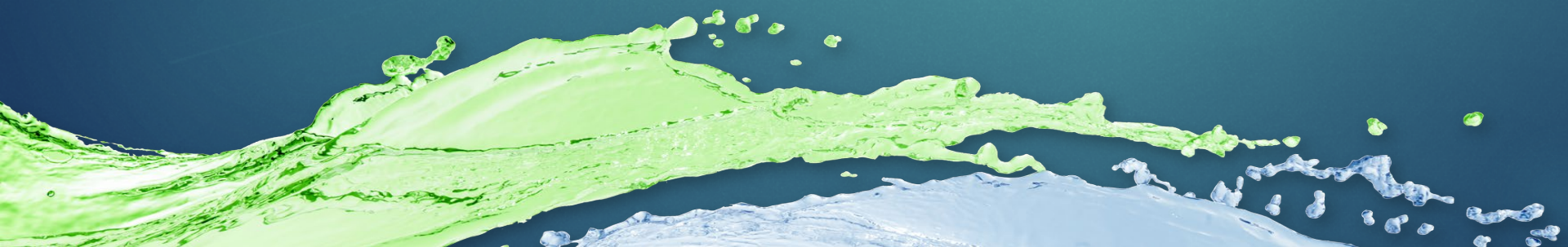
Recreation Use & Facilities Inventory (REC-1)

Recreation Use

484,785	≈ 4,753	6,680	88% vs. 12%
Total Visits (102-day Season)	Avg Daily Visits (102-day Season)	Peak Daily Visits (Memorial Day)	Idaho Falls vs. Gem State

Recreation Site (Top 5 Ranked by Total Visits)	Visits	Avg / Day	% of Total	Use Tier
Pedersen Park	155,179	1,521	32.0%	High
Russell Freeman Park	136,303	1,336	28.1%	High
John's Hole Forebay Park	50,524	495	10.4%	High
Upper Plant Marina	38,352	376	7.9%	Moderate
South Capital Park	24,349	239	5.0%	Moderate
<i>7 lower-volume sites (combined)</i>	80,078	785	16.5%	Moderate / Low

Counts are 102-day season totals (May 24–Sept 2, 2025); "Avg/Day" is the season daily mean. Peak in July; Gem State ~34% higher on weekends.



Recreation Use & Facilities Inventory (REC-1)

Visitor Intercept Surveys

191 of 314	~61%	~55%	Not crowded
Completed Surveys (60.9% Response Rate)	Visit 6+ times a year	Visit Alone	Majority Across All Sites

Most-Reported Activity	% of Respondents
Walking	63.4%
Jogging	38.0%
Hiking	34.5%
Fishing	31.7%
Relaxing / resting	29.6%
Wildlife / bird viewing	27.5%

Facilities seen as adequate

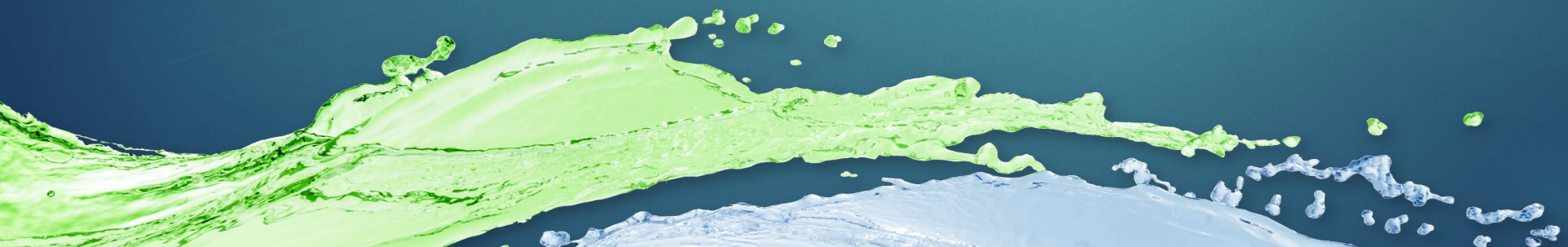
Suggestions were minor — seating, restrooms, trash, signage, and routine upkeep, not new facilities.

Local & repeat

Small parties, frequent annual visits, day use; respondents could select multiple activities.

Part of a network

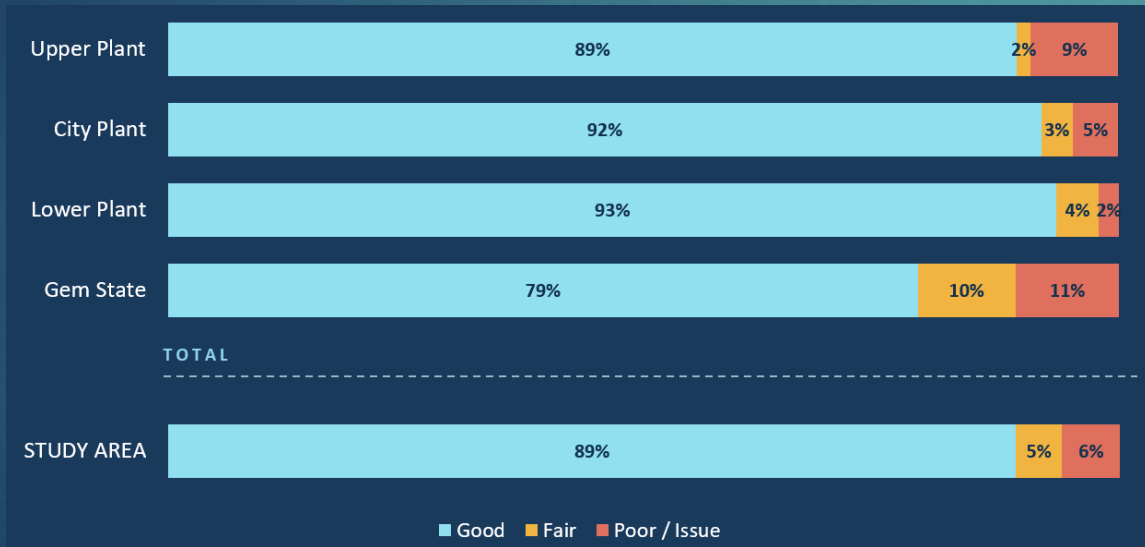
46.5% reported using the Greenbelt trail and 18.2% Heritage Park — sites act as access points to a connected corridor.



Recreation Use & Facilities Inventory (REC-1)

Condition, Accessibility, & Parking

89.1%	6.1%	28.6%	6% to 78%
Facilities Rated "Good"	Facilities Rated "Poor / Issue"	Facilities noted as generally "accessible" and having minor issues	Peak Parking Utilization



Condition

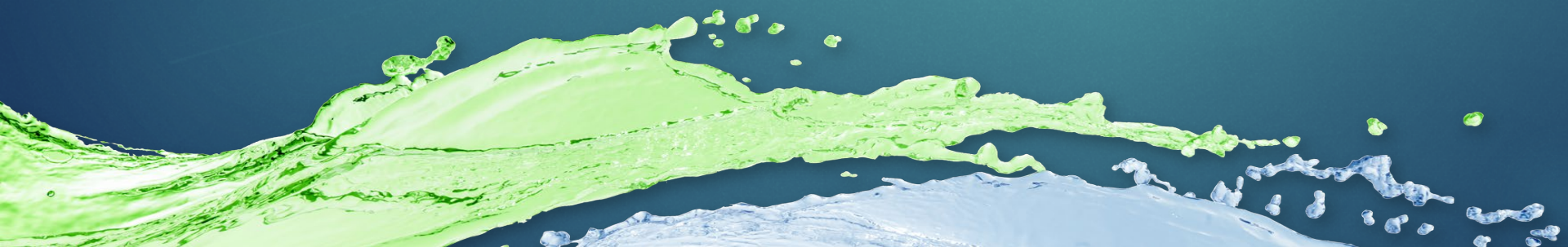
Issues are localized – weathered signage, shoreline erosion, surface wear – routine maintenance, not structural deficiency.

Accessibility (General, not ADA)

28.6% "accessible with issues," mostly restroom approach surfaces.

Parking

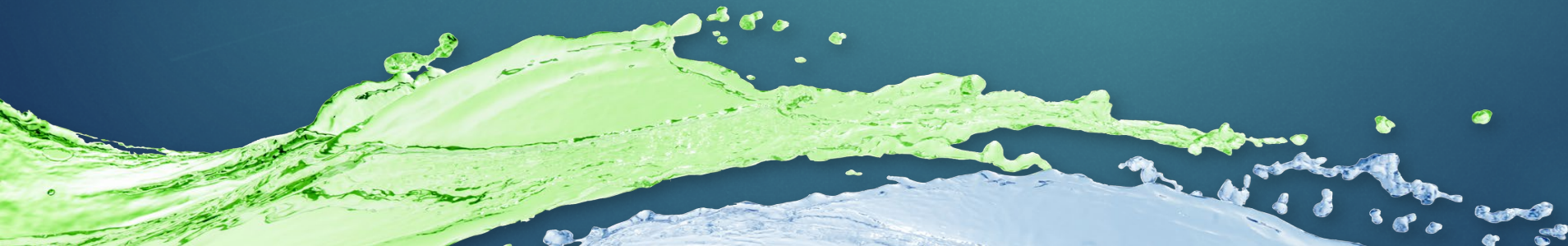
Peak utilization below capacity at every measurable site; surveys did not flag parking.



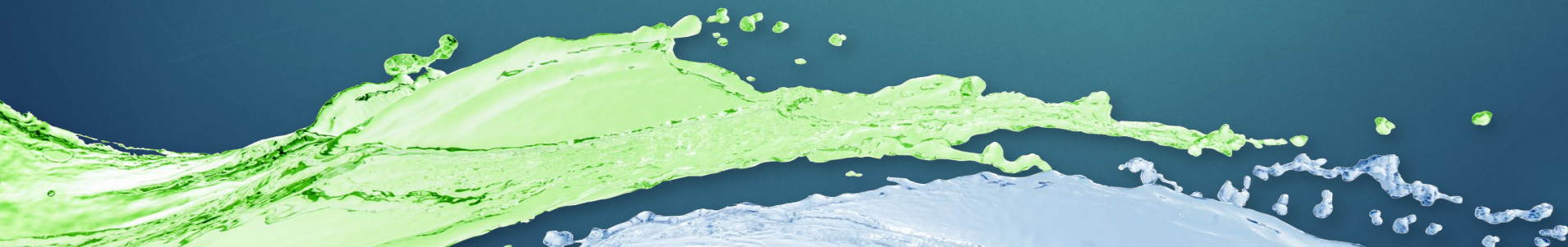
Recreation Use & Facilities Inventory (REC-1)

Conclusions

- ▶ **Recreational use concentrates** at urban City Plant sites but is frequent, local, day-use — spread across the week.
- ▶ **Facility condition is good**; identified needs are localized maintenance, not capital improvement.
- ▶ **Parking is sufficient** at every measurable site; no expansion indicated.
- ▶ **No unmet demand** for new or expanded facilities was identified in either use data nor visitor feedback.
- ▶ Existing facilities are **adequate for current use** and **well positioned for moderate future growth**.
- ▶ Existing facilities are **one part of a larger, well-functioning City of Idaho Falls system** connected by the Greenbelt Loop.

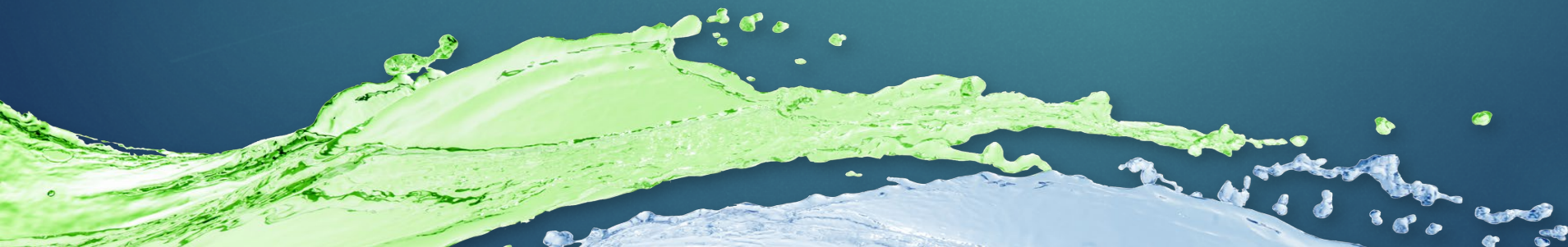


Questions?



Draft License Application Mechanics of Combining Licenses

- ▶ Single Notice of Intent with both Project Numbers (2842 and 2952)
- ▶ Exhibits
 - ▶ Both FERC Project Numbers in Header (2842 and 2952)
 - ▶ Only “Idaho Falls Project P-2842” on Title Page
 - ▶ Treatment of Gem State Development, within Idaho Falls Project
- ▶ Exhibit E
 - ▶ Affected Environment (both Projects described separately/existing conditions)
 - ▶ Environmental Effects (single Project / Proposed Action)
- ▶ Drawings (Exhibit F and Exhibit G)
 - ▶ Both Project Numbers in legend
 - ▶ Revise and refile upon License Issuance with “Idaho Falls Project P-2842”



A photograph of a dam with water cascading over it. The water is white and foamy as it falls. In the background, there are trees and a building under a cloudy sky. A large black rectangular overlay is positioned on the right side of the image, containing white text.

Break

▶ Please return at 12:30 p.m. (MST)



Wildlife and Rare, Threatened, and Endangered (RTE) Species (TERR-2)

Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2)

Goal, Objectives, & Methods

▶ Goal:

- ▶ Document existing wildlife and RTE species and identify the potential effects of the Project on these resources.

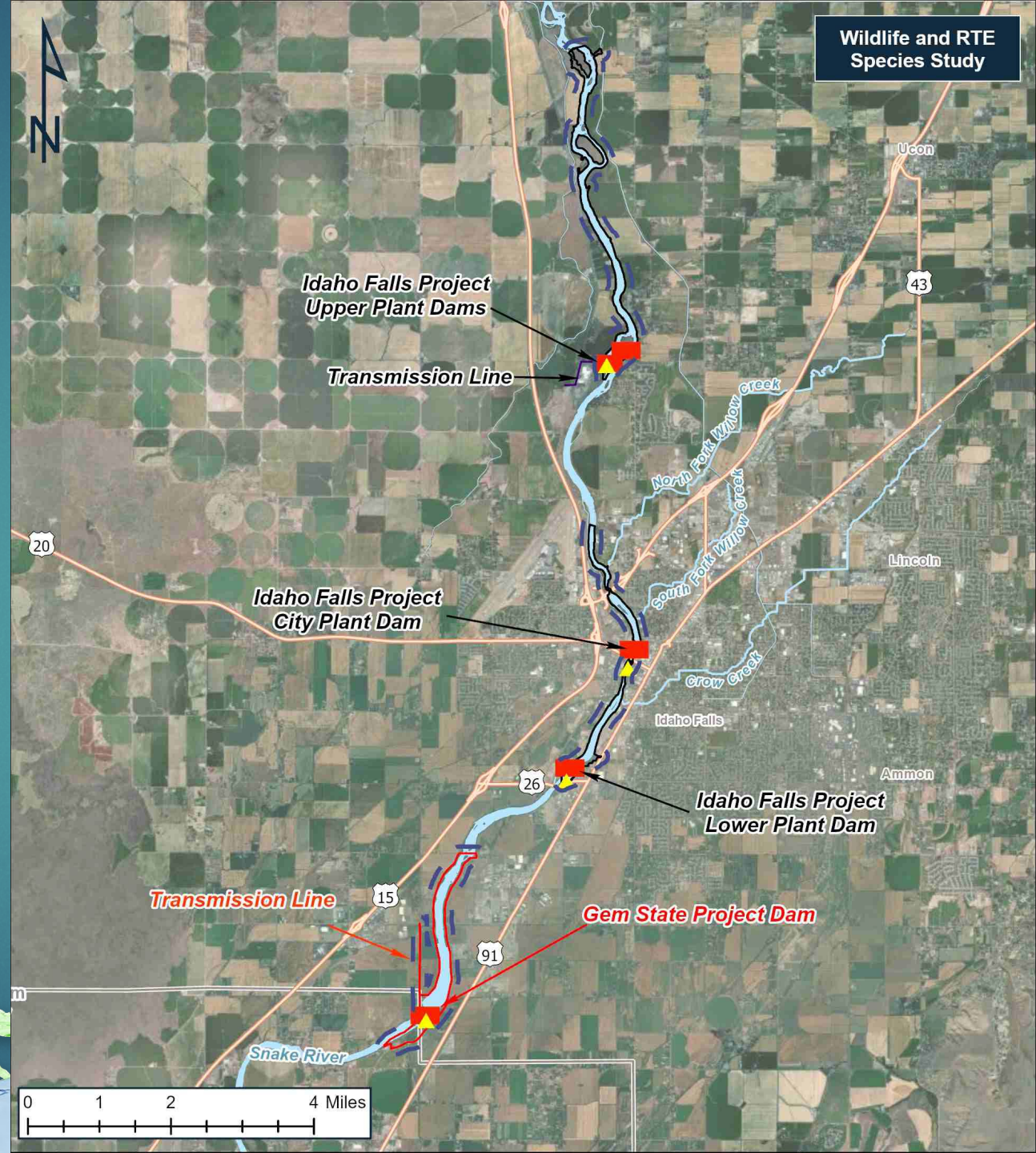
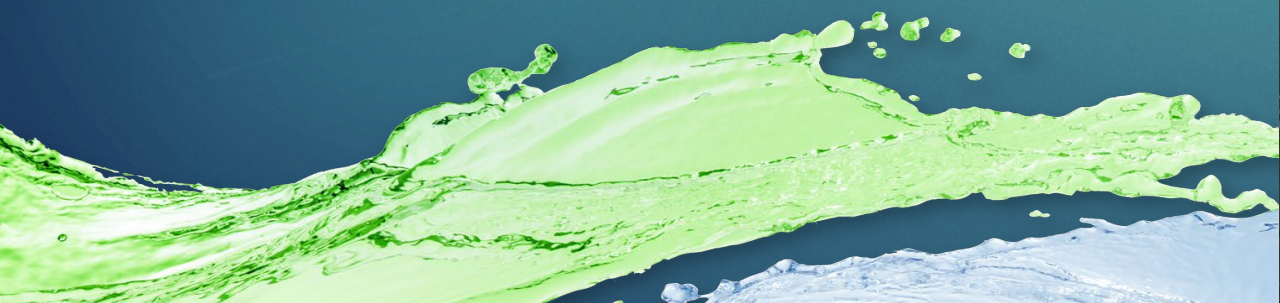
▶ Objectives:

- ▶ Assess the abundance and general distribution of wildlife species in the study area.
- ▶ Determine the potential presence of special-status wildlife during the breeding season, including yellow-billed cuckoo.
- ▶ For those special-status species with high presence potential or those that have been determined to be present, assess the potential impact of the Projects.
- ▶ Identify the potential effects of Projects' continued operations on habitats and associated wildlife within the study area.
- ▶ Evaluate bird mortality from Project-specific power line strikes in the study area, with emphasis on the trumpeter swan.

▶ Methods:

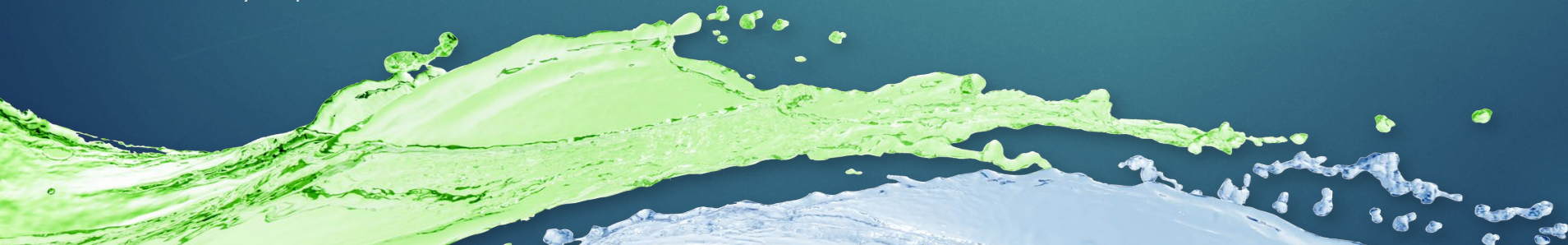
- ▶ Literature Review
- ▶ Field Surveys
- ▶ General Wildlife
- ▶ RTE Species
- ▶ Avian Carcasses

Wildlife and Rare, Threatened, and Endangered (RTE) Species (TERR-2) Study Area



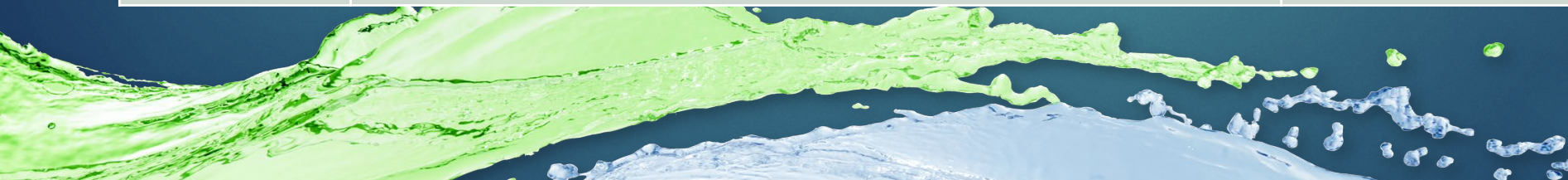
Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2) Data

- Based on the desktop assessment of potential yellow-billed cuckoo (YBCU) (*Coccyzus americanus*) suitable habitat within the Project Boundaries and prior field surveys (TERR-1 Year 1), no suitable habitat for YBCU is expected. SWCA consulted with U.S. Fish and Wildlife Service (USFWS) regarding this assessment and, on April 16, 2025, USFWS concurred. Thus, although suitable habitat is unlikely to be found within the Project Boundaries, TERR-2 field surveys have verified this assumption.
- Desktop analysis identified the following species with potential to occur in the study area:
 - 2 federally listed endangered species – Snake River physa (*Physella natricina*) and white sturgeon (*Acipenser transmontanus*)
 - 1 proposed threatened species – monarch butterfly (*Danaus plexippus*)
 - 1 proposed endangered species – Suckley's cuckoo bumble bee (*Bombus suckleyi*)
- Additionally, the desktop analysis identified 4 species under review, including little brown bat (*Myotis lucifugus*), pinyon jay (*Gymnorhinus cyanocephalus*), western bumble bee (*Bombus occidentalis*), and western ridged mussel (*Gonidea angulata*)
- The Suckley's cuckoo bumble bee, Snake River physa, and all four species under review are new RTE species not previously noted in the TERR-2 study plan
 - Tables of RTE species with potential to occur in the study area (and ESA status information) and state-listed species and species with other conservation status that may occur in the study area are included in the Wildlife & RTE Species (TERR-2) study report



Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2) Status – Study Complete

Status	Variances	Modifications
Fall 2024	Avian carcass surveys delayed from fall 2024 to fall 2025 following refinement of transmission lines and easement coordination.	-
Summer 2025	Biologists surveyed the northern Project areas by boat and using binoculars due to high water levels. Approximately 953 acres of study area were observed with scopes and binoculars.	-
Fall and Winter 2025/2026	Avian carcass surveys were performed following refined transmission line right of ways.	-



Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2) Results

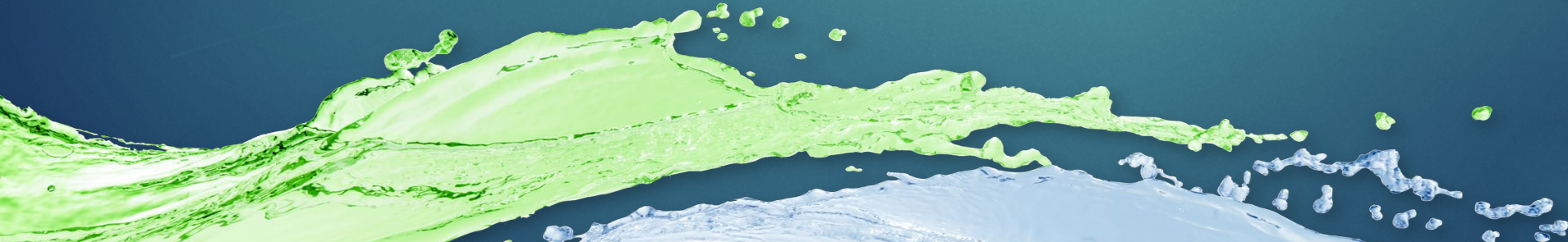
▶ Idaho Falls Project

▶ Upper Plant

- ▶ Bald eagle foraging activity
- ▶ Four osprey nests, three of which are occupied
- ▶ 68 acres of suitable raptor nesting substrate
- ▶ 7.6 acres of monarch butterfly habitat
- ▶ Three Canada goose carcasses; one may have been victim of entanglement

▶ City and Lower Plants

- ▶ Three osprey nests, two of which are occupied
- ▶ 48 acres of suitable raptor nesting substrate
- ▶ 4.2 acres of monarch butterfly habitat
- ▶ 1.8 acres of suitable bee habitat (no bee individuals observed)



Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2) Results

- ▶ Idaho Falls Project
 - ▶ Upper Plant



- ▶ City and Lower Plants



Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2) Results

- ▶ Gem State Project
 - ▶ Bald eagle and golden eagle activity noted
 - ▶ Two occupied osprey nests; one occupied bald eagle nest; three unoccupied nests
 - ▶ 116 acres of suitable raptor nesting substrate
 - ▶ 46 acres of monarch butterfly habitat
 - ▶ 47 acres of bee habitat

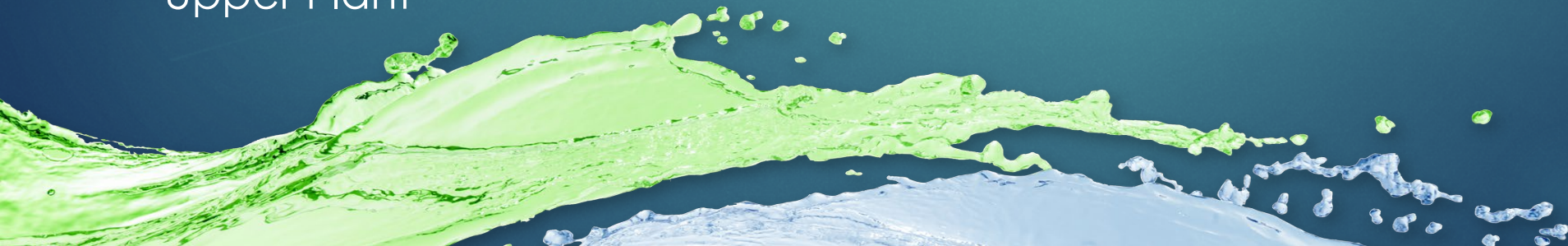


Wildlife & Rare, Threatened, & Endangered (RTE) Species (TERR-2)

Conclusion

▶ Overall Data

- ▶ 7 active Osprey nests and 1 active bald eagle nest
- ▶ 232 acres of suitable raptor nesting substrate
- ▶ 57.8 acres of monarch butterfly habitat
- ▶ 48.8 acres of suitable bumblebee habitat
- ▶ 3 Canada goose carcasses noted at the Upper Plant
- ▶ No plans for additional facilities or components; no changes in operations or future plans for development or rehabilitation





Trumpeter swan and
Western yellow-billed
cuckoo, USFWS



Questions?



Botanical Resources (TERR-1)



Botanical Resources (TERR-1)

Goals, Objective, & Methods

▶ Goals:

1. Identify if there is suitable habitat for special-status, ESA-listed, and invasive plant species;
2. Assess the extent of cottonwood and willow wetland habitat; and
3. If suitable habitat for special-status, ESA-listed, and invasive species is found, evaluate the extent of species distribution and associated habitat.

▶ Objective:

Gather sufficient data necessary to fill gaps in existing information.

▶ Methods:

- ▶ Desktop Assessment
- ▶ Field Surveys
 - Initial Habitat Assessment
 - Follow-up Survey



Idaho Falls Upper Development Botanical Resources Study Area

Botanical Resources Study Area

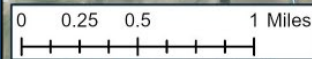
Idaho Falls Hydroelectric Project Upper Power Plant

Upper Plant Dam No. 2

Upper Plant Dam No. 1

Idaho Falls Upper Plant Powerhouse

Bonneville County

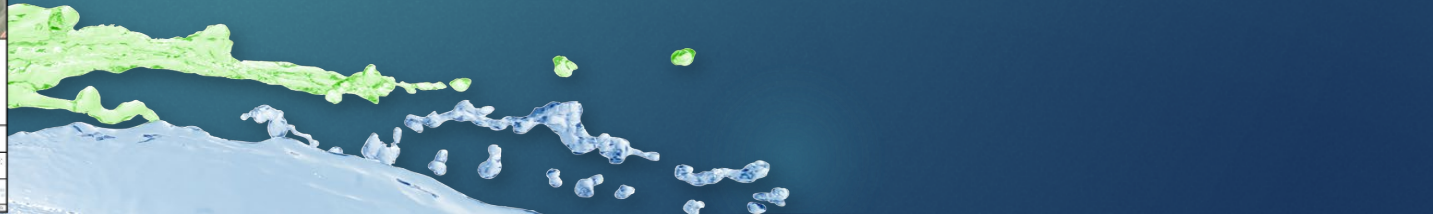


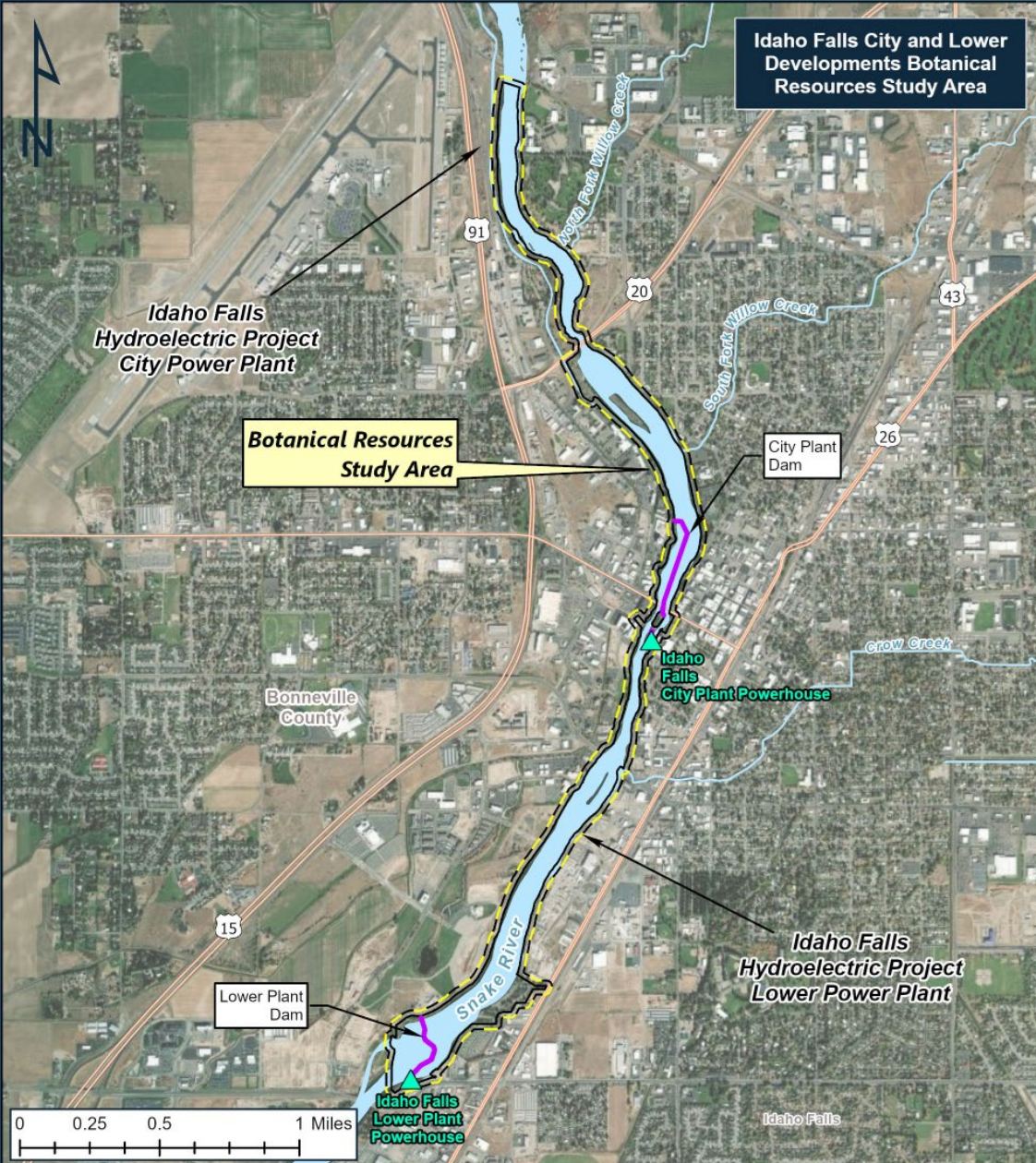
	Powerhouse		Project Dam
	Highway		Hydrography
	Idaho Falls Project Boundary		County
	Botanical Resources Study Area (100-ft Buffer of Project Boundary)		

IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS FERC NOS. 2842 & 2952

Drawn By: Date Drawn: HEIG 04-28-2025
 Checked By: Date Checked: KPI 04-28-2025

Botanical Resources (TERR-1) Study Area (1)





Idaho Falls City and Lower Developments Botanical Resources Study Area

Idaho Falls Hydroelectric Project City Power Plant

Botanical Resources Study Area

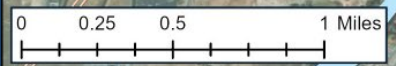
City Plant Dam

Idaho Falls City Plant Powerhouse

Idaho Falls Hydroelectric Project Lower Power Plant

Lower Plant Dam

Idaho Falls Lower Plant Powerhouse



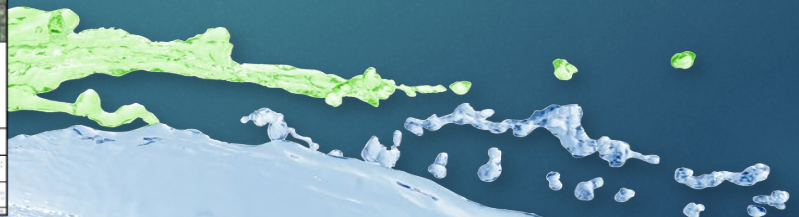
Powerhouse	Project Dam
Highway	Hydrography
Idaho Falls Project Boundary	County
Botanical Resources Study Area (100-ft Buffer of Project Boundary)	

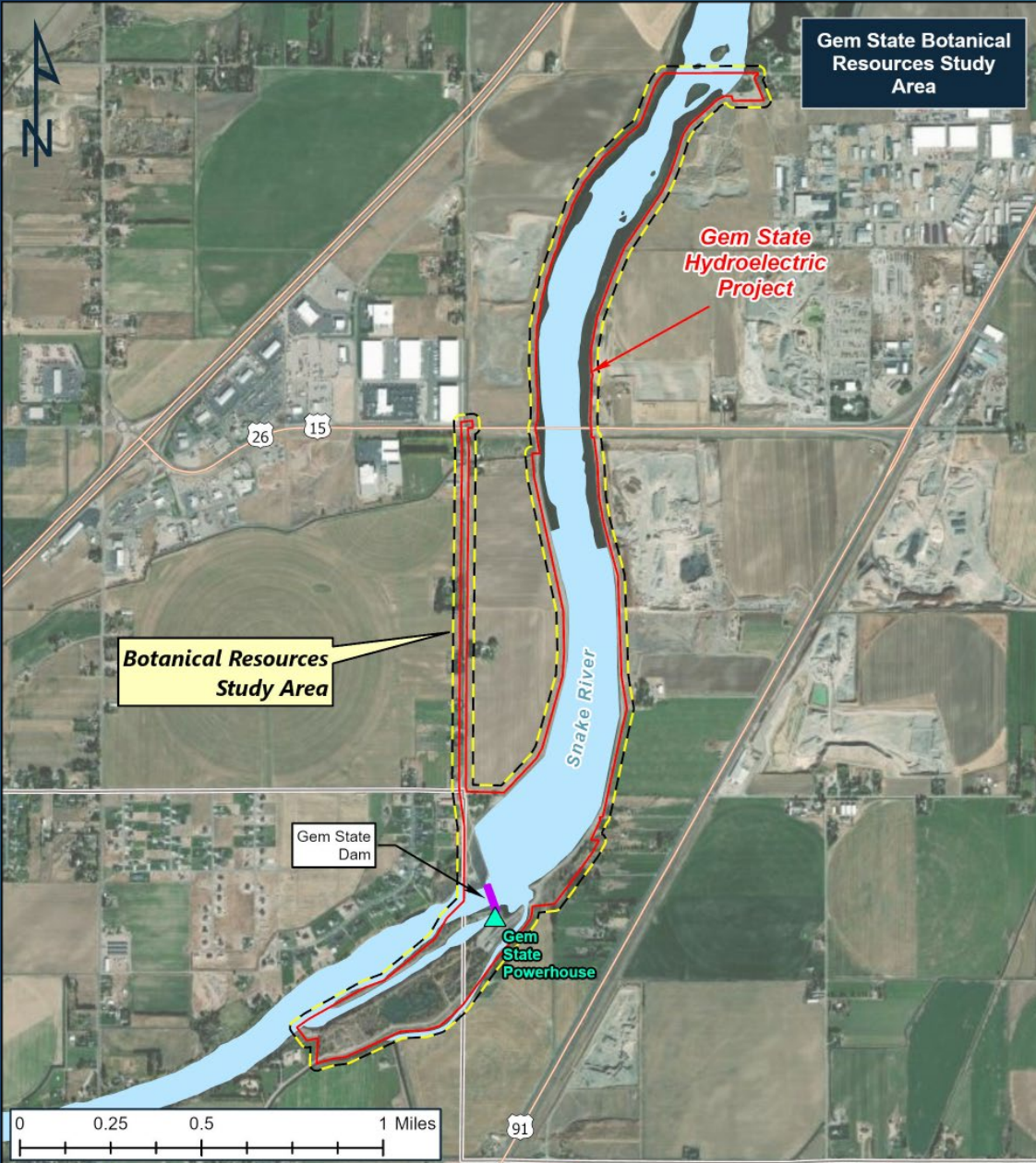
IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS
FERC NOS. 2842 & 2952

IDAHO FALLS POWER

Drawn By: HEIG	Date Drawn: 04-28-2025
Checked By: KPI	Date Checked: 04-28-2025

Botanical Resources (TERR-1) Study Area (2)





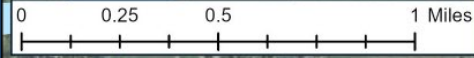
Gem State Botanical Resources Study Area

Gem State Hydroelectric Project

Botanical Resources Study Area

Gem State Dam

Gem State Powerhouse



Powerhouse	Project Dam
Highway	Hydrography
Gem State Project Boundary	County
Botanical Resources Study Area (100-ft Buffer of Project Boundary)	

IDAHO FALLS & GEM STATE HYDROELECTRIC PROJECTS
FERC NOS. 2842 & 2952

IDAHO FALLS POWER

Drawn By: HEIG	Date Drawn: 04-28-2025
Checked By: KPH	Date Checked: 04-28-2025

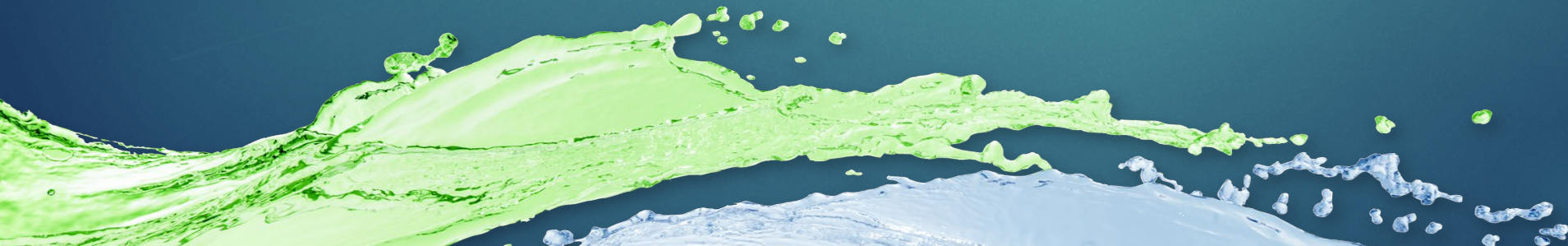
Botanical Resources (TERR-1) Study Area (3)



Botanical Resources (TERR-1)

Initial Habitat Assessment (2024)

- ▶ 0.76 acres of ULT suitable habitat mapped
- ▶ **No ULT occurrences found**
- ▶ 34.35 acres of cottonwood and willow habitat mapped
- ▶ 57.97 acres of noxious or invasive plant species mapped
- ▶ **No incidental observations of saltcedar**



Botanical Resources (TERR-1)

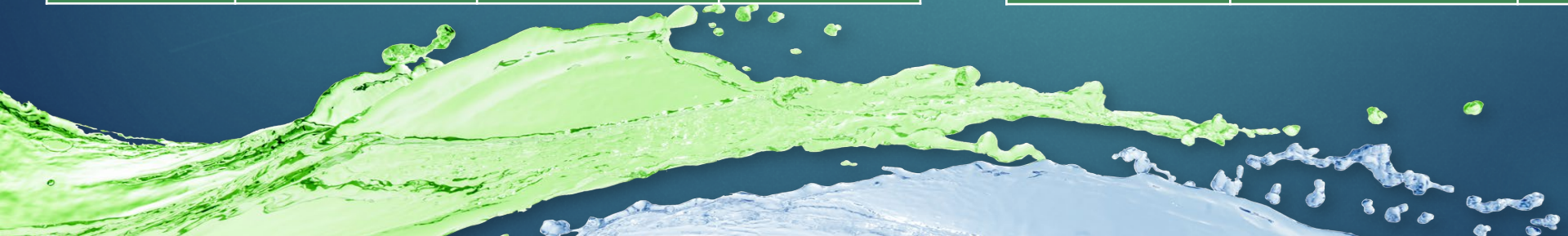
Initial Habitat Assessment (2024)

Initial Habitat Assessment – Native Plant Species Identified in the Study Area

USDA PLANT CODE	SCIENTIFIC NAME	COMMON NAME	STATUS
ACNE2	<i>Acer negundo</i>	Boxelder	SNR, G5
ACSA2	<i>Acer saccharinum</i>	Silver maple	G5
ASSP	<i>Asclepias speciosa</i>	Showy milkweed	SNR, G5
EPCA3	<i>Epilobium canum</i>	Hummingbird trumpet	SNR, G5
EQHY	<i>Equisetum hyemale</i>	Scouringrush horsetail or rough horsetail	SNR, G5
FRVE2	<i>Fraxinus velutina</i>	Velvet ash	-
POAN3	<i>Populus angustifolia</i>	Narrowleaf cottonwood	SNR, G5
SAEX	<i>Salix exigua</i>	Narrowleaf willow	SNR, G5
SCAC	<i>Schoenoplectus acutus</i>	Hardstem bulrush	SNR, G5
TYLA	<i>Typha latifolia</i>	Broadleaf cattail	SNR, G5
ULMUS	<i>Ulmus spp.</i>	Elm	-

Initial Habitat Assessment – Invasive and Noxious Weeds Identified in the Study Area

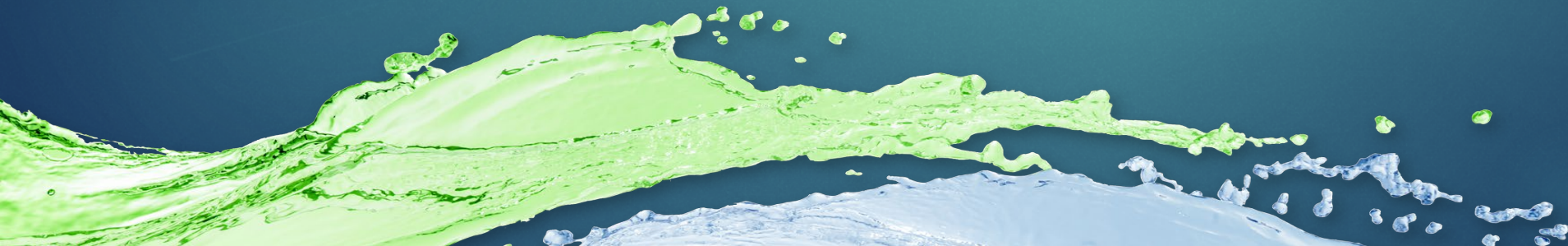
USDA PLANT CODE	SCIENTIFIC NAME	COMMON NAME	STATUS
ACRE3	<i>Acroptilon repens</i>	Russian knapweed	GNR, Statewide Containment List ¹
BRTE	<i>Bromus tectorum</i>	Cheatgrass	SNA, GNR
CANU4	<i>Carduus nutans</i>	Musk thistle	SNA, GNR, Statewide Containment List ¹
CEST8	<i>Centaurea stoebe</i>	spotted knapweed	GNR, Statewide Containment List ¹
COAR4	<i>Convolvulus arvensis</i>	Field bindweed	SNA, GNR, Statewide Containment List ¹
ELAN	<i>Elaeagnus angustifolia</i>	Russian olive	SNA, GNR, Statewide Containment List ¹



Botanical Resources (TERR-1)

Follow-up Survey (2025)

- ▶ Of the 0.76 acres of ULT suitable habitat mapped in 2024, 0.56 acres were field verified in 2025
- ▶ An additional 1.45 acres of high potential ULT suitable habitat not previously accessible in 2024 was identified in 2025
- ▶ **No ULT occurrences found**
- ▶ 34.35 acres of cottonwood and willow habitat verified
- ▶ 58.78 acres of noxious or invasive plant species verified/mapped
- ▶ **No incidental observations of saltcedar**



Botanical Resources (TERR-1)

Follow-up Survey (2025)

Follow-up Survey – Native Plant Species Identified in the Study Area

USDA PLANT CODE	SCIENTIFIC NAME	COMMON NAME	STATUS
ACSA2	<i>Acer saccharinum</i>	silver maple	G5
ASSP	<i>Asclepias speciosa</i>	showy milkweed	SNR, G5
CLLI2	<i>Clematis ligusticifolia</i>	Western white clematis	G5
COCAP3	<i>Conyza canadensis</i>	Canadian horseweed	G5
FRVE2	<i>Fraxinus velutina</i>	velvet ash	–
GLLE3	<i>Glycyrrhiza lepidota</i>	American licorice	G5
JUBA	<i>Juncus balticus</i>	Baltic rush	G5
MEAR4	<i>Mentha arvensis</i>	Field mint	–
POPE2	<i>Persicaria pensylvanica</i>	Pennsylvania smartweed	G5
PLMA2	<i>Plantago major</i>	Common plantain	G5
POAN3	<i>Populus angustifolia</i>	narrowleaf cottonwood	SNR, G5
SAEX	<i>Salix exigua</i>	narrowleaf willow	SNR, G5
SCAC	<i>Schoenoplectus acutus</i>	hardstem bulrush	SNR, G5
SYPU	<i>Symphotrichum puniceum</i>	Purple-stemmed aster	G5
TAVU	<i>Tanacetum vulgare</i>	common tansy	SNA, GNR
TYLA	<i>Typha latifolia</i>	broadleaf cattail	SNR, G5
–	<i>Veronica spp.</i>	speedwell	–

Follow-up Survey – Invasive and Noxious Weeds Identified in the Study Area

USDA PLANT CODE	SCIENTIFIC NAME	COMMON NAME	STATUS
CANU4	<i>Carduus nutans</i>	musk thistle	GNR, Statewide Containment List ¹
CEST8	<i>Centaurea stoebe</i>	spotted knapweed	GNR, Statewide Containment List ¹
ELAN	<i>Elaeagnus angustifolia</i>	Russian olive	SNA, GNR, Statewide Containment List ¹
LYSA2	<i>Lythrum salicaria</i>	purple loosestrife	SNA, G5, Statewide Containment List ¹
MEOF	<i>Melilotus officinalis</i>	Yellow sweetclover	SNA, G5
PHAR3	<i>Phalaris arundinacea</i>	reed canarygrass	SNA, G5

Botanical Resources (TERR-1)

Data Summary (2024-2025)

ULT Habitat/Species Occurrences

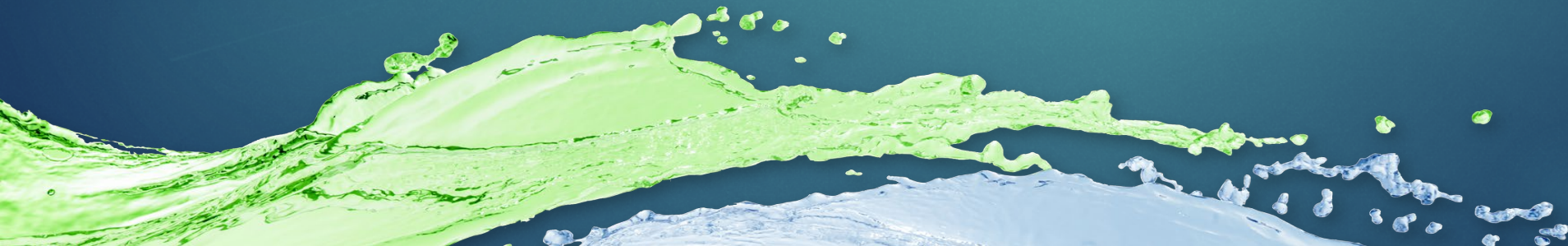
- ▶ **378 acres** of **high potential suitable habitat** for Ute ladies'-tresses (ULT) noted during the **desktop assessment**
- ▶ During the **2024** initial habitat assessment, **0.76 acres** of **suitable habitat** was **field verified**
- ▶ During the **2025** follow-up survey, suitable habitat was re-checked, and **0.56 acres** were **verified**
- ▶ The **follow-up survey** also **mapped** an **additional 1.45 acres** of high potential suitable habitat not accessible/surveyed during the initial habitat assessment (a survey is planned for 2026 to re-check those areas)
- ▶ **Total ULT high potential suitable habitat = 2.01 acres**
- ▶ To-date, **no occurrences of ULT** have been **found** within the study area

Cottonwood/Willow Habitat

- ▶ **34.35 acres** of **cottonwood and willow habitat** was documented during the initial habitat assessment and field verified during the follow-up survey

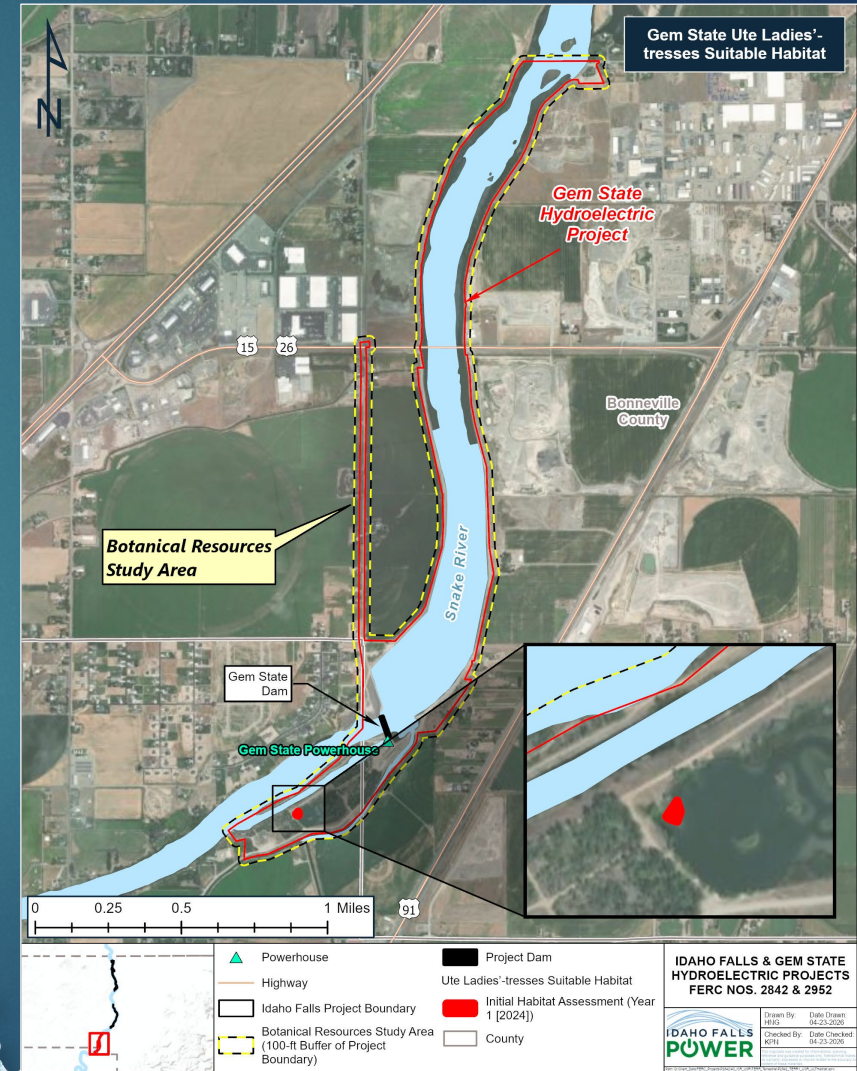
Noxious/Invasive Plants

- ▶ 57.97 acres of noxious or invasive plant species was documented during the initial habitat assessment, increasing to **58.78 acres** after the follow-up survey
- ▶ To-date, **no occurrences of saltcedar found** within the study area



Botanical Resources (TERR-1)

Data Summary (2024-2025) – Potential ULT Suitable Habitat in the Study Area



Botanical Resources (TERR-1)

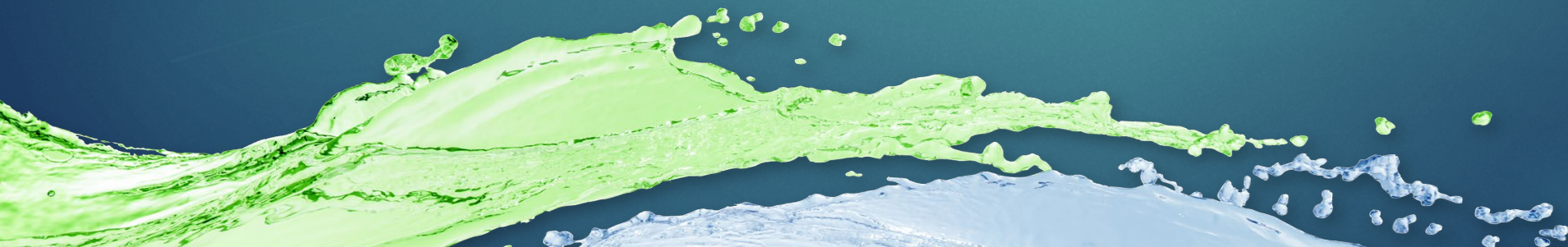
Status – Study Complete

Status	Variances	Modifications
Summer 2024/2025	<p>The study area surveyed during the 2024 initial habitat assessment was modified in response to field conditions. The northernmost portion of the Upper Plant development was determined to be inaccessible by foot. The field crew accessed the northernmost extent via boat, where they then conducted visual surveys of the riverbanks. Additional obstructions, such as a dense vegetative understory adjacent to the riverbank and low water levels, prohibited access to various islands in the northernmost extent of the Upper Plant development.</p> <p>During the 2025 follow-up survey, the field crew was able to survey previously inaccessible areas, either through pedestrian or visual surveys (binoculars). New suitable ULT habitat was found.</p> <p>Several areas of suitable ULT habitat previously surveyed in 2024 were submerged in 2025. These areas will be revisited during the August 2026 survey, if they are accessible, in addition to the areas previously inaccessible and identified as suitable habitat in 2025.</p>	-

Botanical Resources (TERR-1)

Discussion and Conclusions

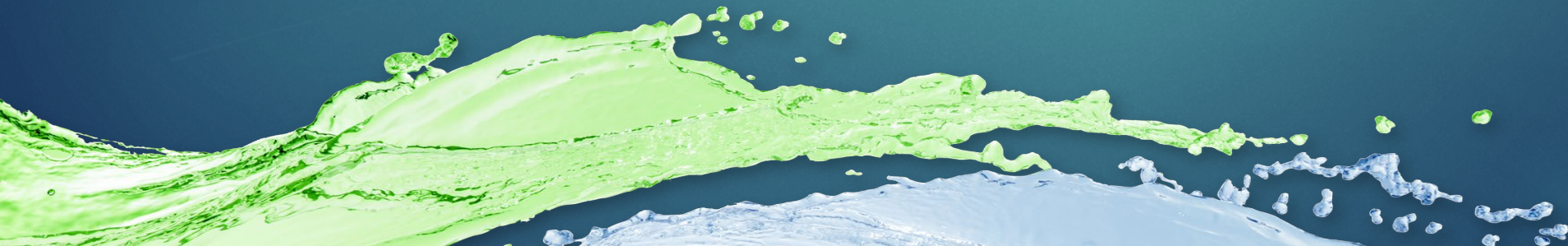
- ▶ Although no ULT occurrences were observed, suitable ULT habitat was identified and distribution assessed
- ▶ Both cottonwood and willow habitat and noxious/invasive plant species occurrences were noted throughout the study area and distribution was assessed
- ▶ Detailed discussion and analysis of potential effects will be provided in the DLA, including any the need for additional protection, mitigation, and enhancement measures.



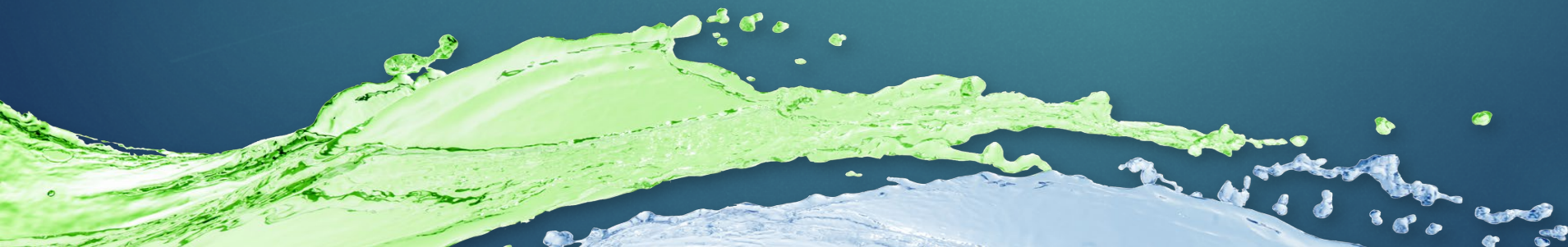
Botanical Resources (TERR-1)

Next Steps

- ▶ Field survey planned for 2026 to re-check previously inaccessible high potential ULT suitable habitat
- ▶ Following the field survey, a revised and final TERR-1 study report will be distributed as part of the DLA (September 2026)
- ▶ Study findings will be incorporated into the FLA (January 2027)



Questions?





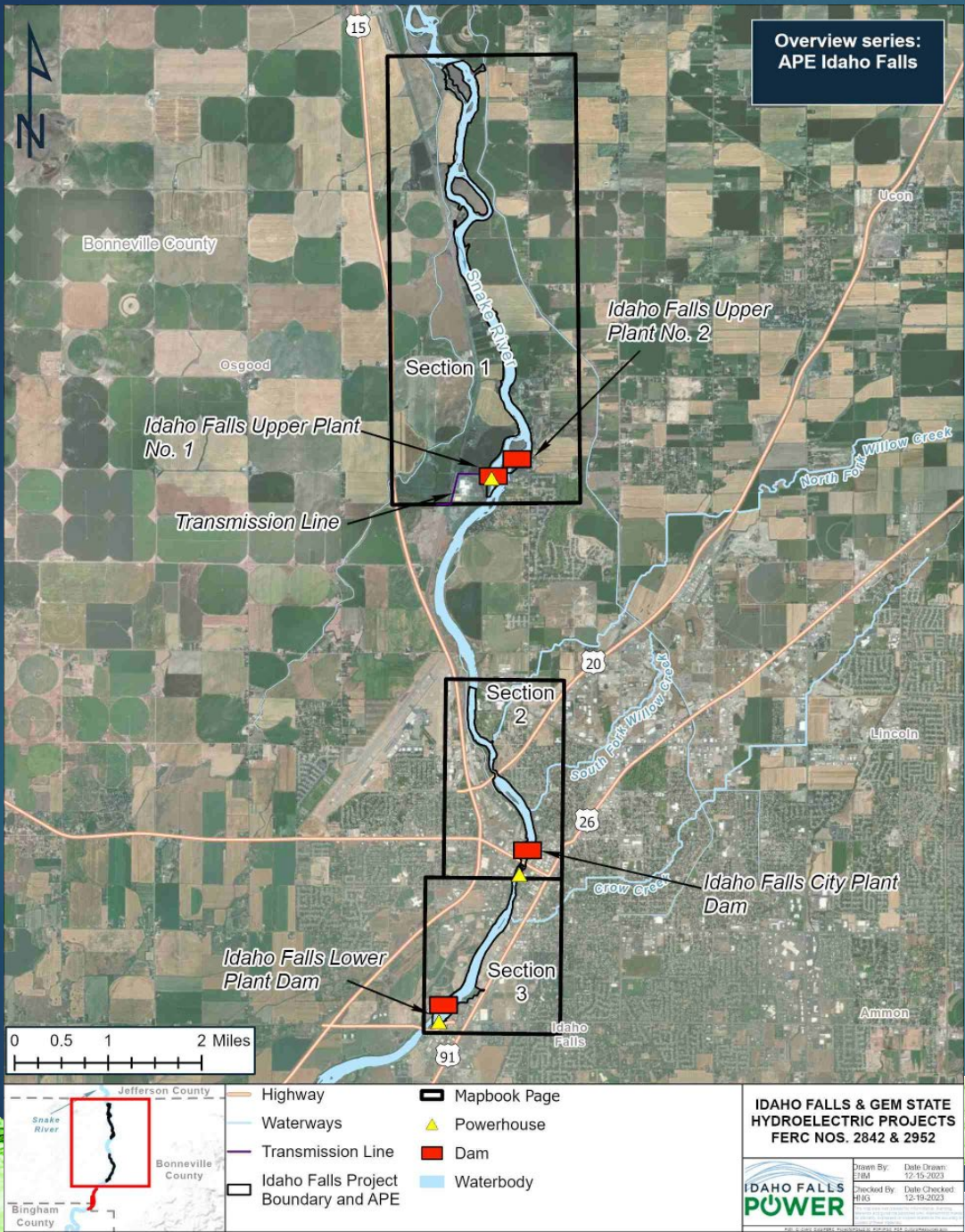
Cultural Resources (CR-1)

Cultural Resources (CR-1)

Goals & Objectives

- ▶ **Goals:**
 - ▶ Assess potential impacts to historic properties associated with O&M activities at both Projects.
 - ▶ Ensure future Project facilities and operations are consistent with the cultural resources management goals of land-holding agencies, interested historic parties, and Tribal cultural entities.
- ▶ **Objectives:**
 - ▶ Identify and document archaeological and historic-era properties within the Area of Potential Effects (APE).
 - ▶ Evaluate National Register of Historic Places (NRHP) eligibility for properties identified within the Project APE.
 - ▶ Determine potential Project effects on NRHP-eligible or listed archaeological and historic-era properties within the APE.

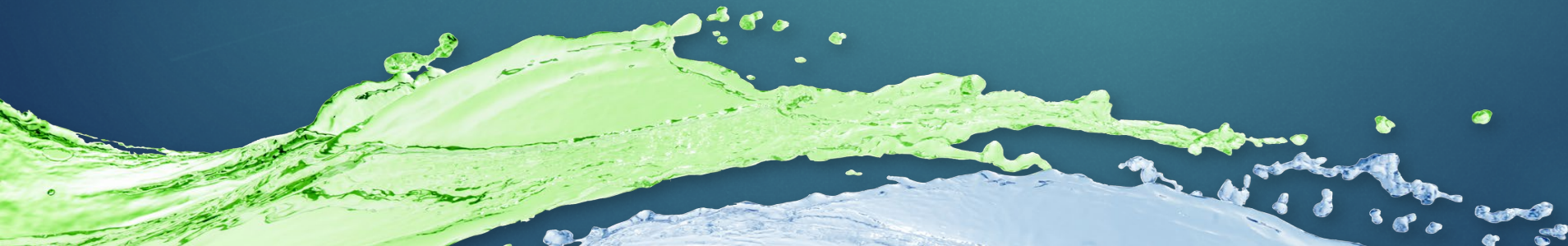




Cultural Resources (CR-1) Study Area

Cultural Resources (CR-1) Data

- ▶ Field surveys for archaeology and historic architecture were completed in June 2025.
- ▶ Architectural surveys documented 43 locations including the Upper Plant, City Plant, Lower Plant, and Gem State Dam.
- ▶ Archaeological surveys documented five locations.
- ▶ A large, precontact archaeological site plotted within the cultural resources study area that was originally recorded in 1977 and then subject to archaeological excavation was not relocated and no cultural materials were observed at its plotted location.
- ▶ The Eagle Rock Ferry site (now known as Pederson Park) was nominated for the National Register of Historic Places in 1972 and is plotted within the cultural resources study area. No physical evidence for the site was observed during archaeological field surveys.



Cultural Resources (CR-1)

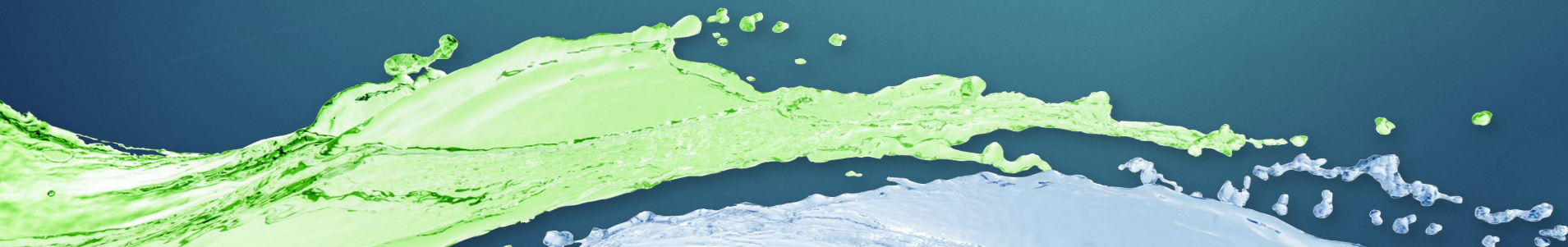
Status – Study Ongoing

Status	Variations	Modifications
Fall 2024	Field crews were unable to access portions of the survey area due to dense vegetation and were not subject to archaeological investigation. Water levels prohibited safe access by boat to small island at north end of Gem State; revisited and observed erosion precluding presence of archaeological resources.	
Spring 2026		NAGPRA Plan of Action developed in consultation with Shoshone-Bannock Tribes for portions of the Study Area managed by BLM.

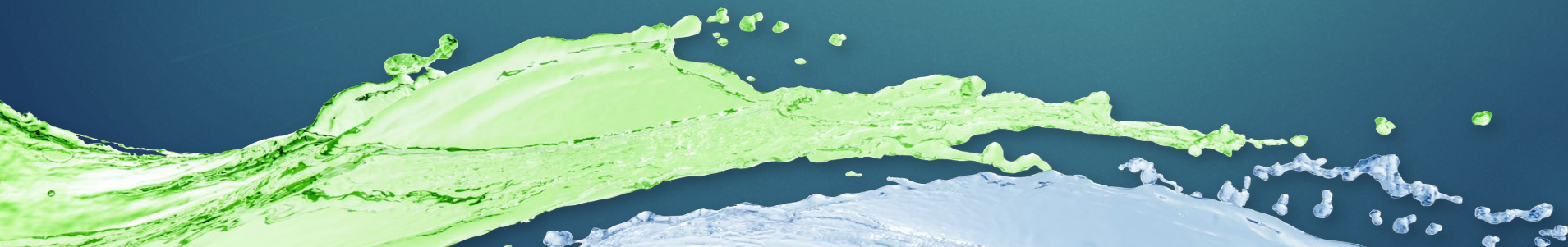
Cultural Resources (CR-1)

Results & Conclusion

- ▶ Architectural surveys documented 43 locations including the Upper Plant, City Plant, Lower Plant, and Gem State Dam.
- ▶ Archaeological surveys documented five locations.
- ▶ NAGPRA Plan of Action developed in May 2026 in consultation with the Shoshone-Bannock Tribes for portions of the Study Area managed by BLM.
- ▶ Revised technical reports for architectural and archaeological resources submitted to Idaho SHPO in May 2026.



Questions?





Tribal Resources (TR-1)



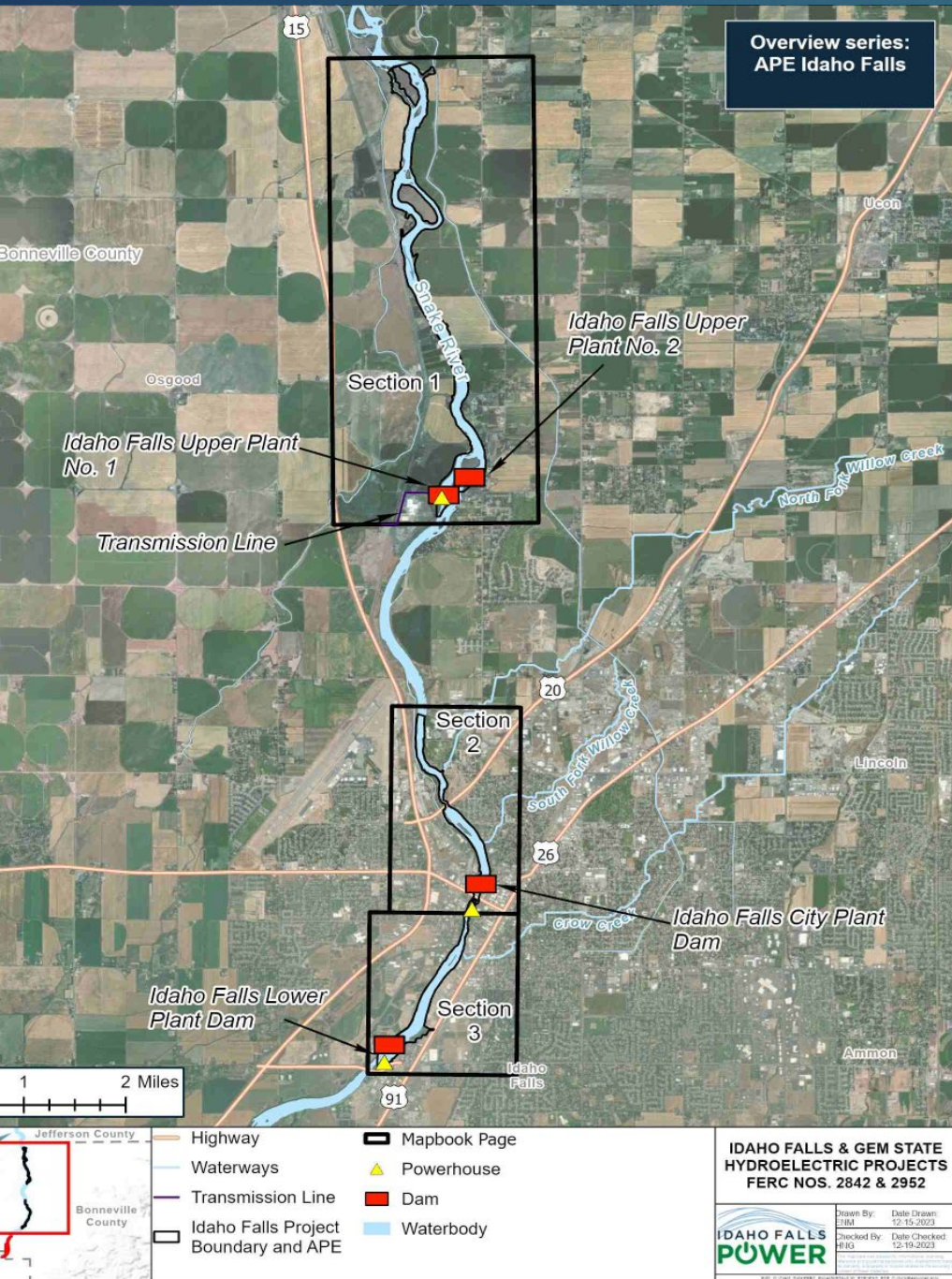
Tribal Resources (TR-1) Goals & Objectives

▶ Goals:

- ▶ Identify Tribal resources that may be affected by the undertaking through archival research, oral interviews, field inspections, and targeted site visits to ensure that O&M of the Projects does not impact such places.

▶ Objectives:

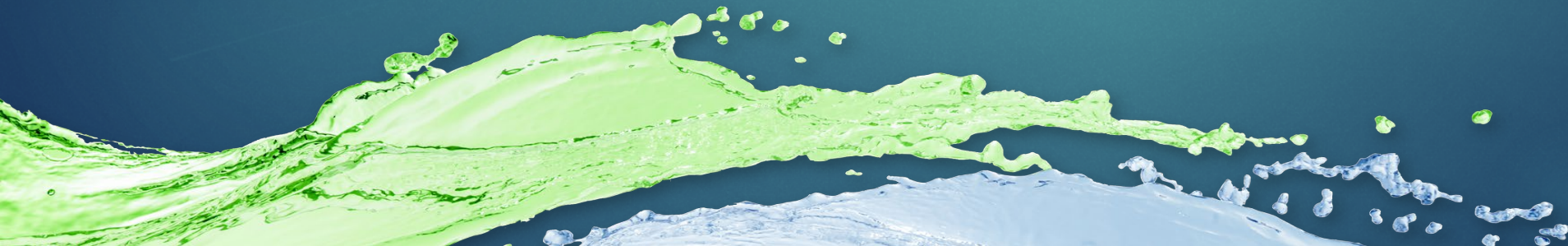
- ▶ Research, identify, and document known Indian Trust Assets (ITAs), Traditional Cultural Properties, Tribal economic ventures, relevant Tribal agreements, and other resources of traditional, cultural, or religious importance to the Native American community that may potentially be affected by the Projects within or immediately adjacent to the proposed Area of Potential Effects (APE).
- ▶ Conduct outreach and interviews with Tribal governments and their representatives.
- ▶ Evaluate each identified Tribal resource for eligibility and inclusion in the NRHP.
- ▶ Identify and describe potential impacts to Tribal resources from existing and proposed future O&M of the Projects .



Tribal Resources (TR-1) Study Area

Tribal Resources (TR-1) Data

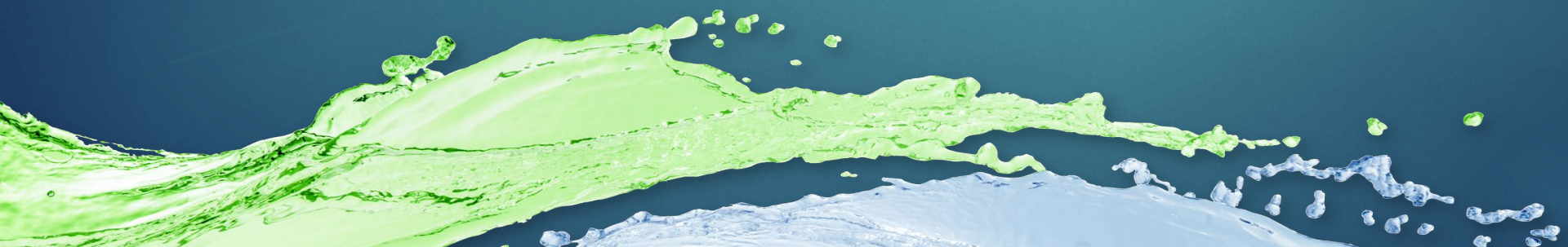
- ▶ October 2024 – Archival research began and is completed
- ▶ Archaeologists revisited mapped locations of three previously recorded sites; no cultural materials visible at any locations
- ▶ November 2024 – Following survey, oral interviews and site visit offered with interested Tribal representatives. The Tribal Resources (TR-1) technical memo to be filed as confidential on the FERC docket
- ▶ February 2026 – Oral interviews conducted with individuals from the Shoshoni-Paiute Tribes of the Duck Valley Indian Reservation
- ▶ April 2026 – Site visit with individuals from the Shoshone-Bannock Tribes to support development of a NAGPRA Plan of Action for portions of the Study Area managed by BLM



Tribal Resources (TR-1)

Status – Study Ongoing

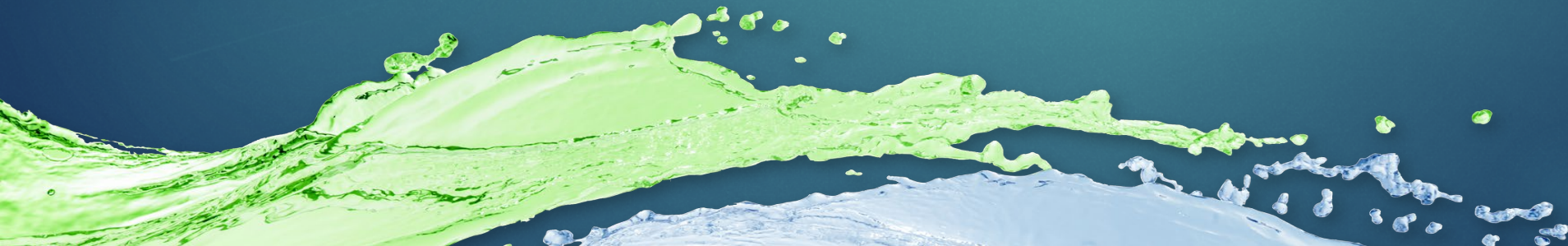
Status	Variances	Modifications
TR-1 delayed due to CR-1 delays	Due to CR-1 fieldwork delay (administrative/boat access), TR-1 research, oral interviews, and site visit did not begin until May/June 2025 after the Class III survey was completed. If any Tribal resources are identified, IFP will conduct an NRHP evaluation and include it in an interim report for SHPO review.	



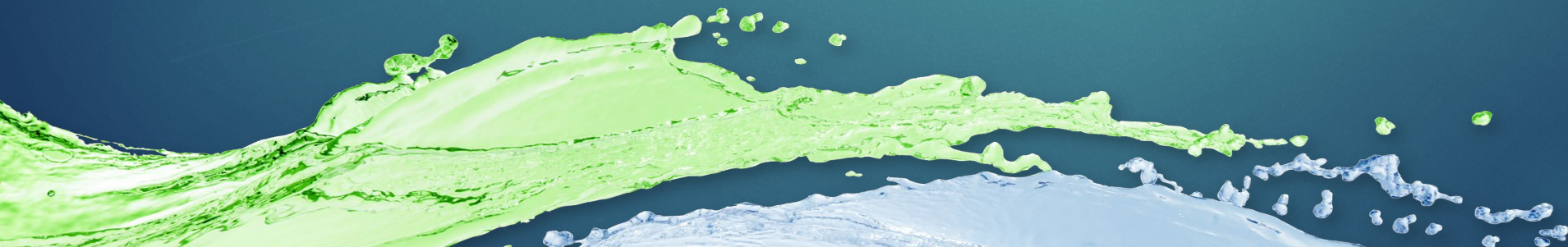
Tribal Resources (TR-1)

Results & Conclusion

- ▶ Water is Life: Cultural connection to the Snake River
- ▶ Sacred Sites, Traditional Places and Resources
- ▶ NAGPRA Plan of Action developed in May 2026 in consultation with the Shoshone-Bannock Tribes for portions of the Study Area managed by BLM
- ▶ Tribal Resources technical report submitted to Idaho SHPO in May 2026.



Questions?





Environmental Justice (EJ-1)

Environmental Justice (EJ-1)

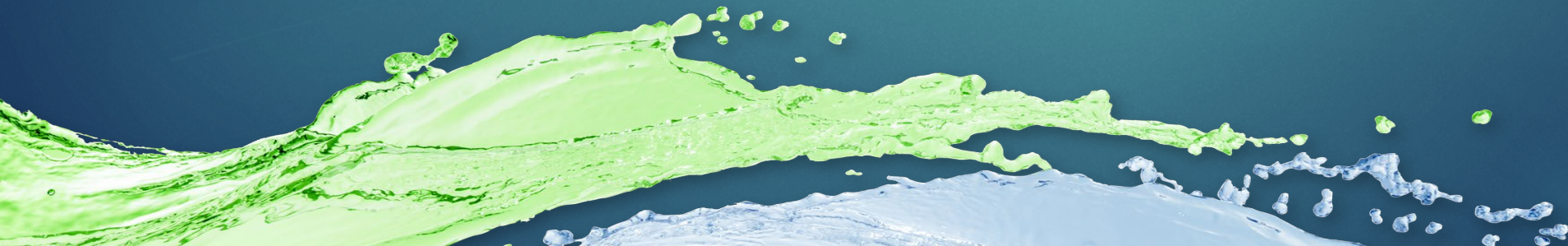
Goal and Objectives

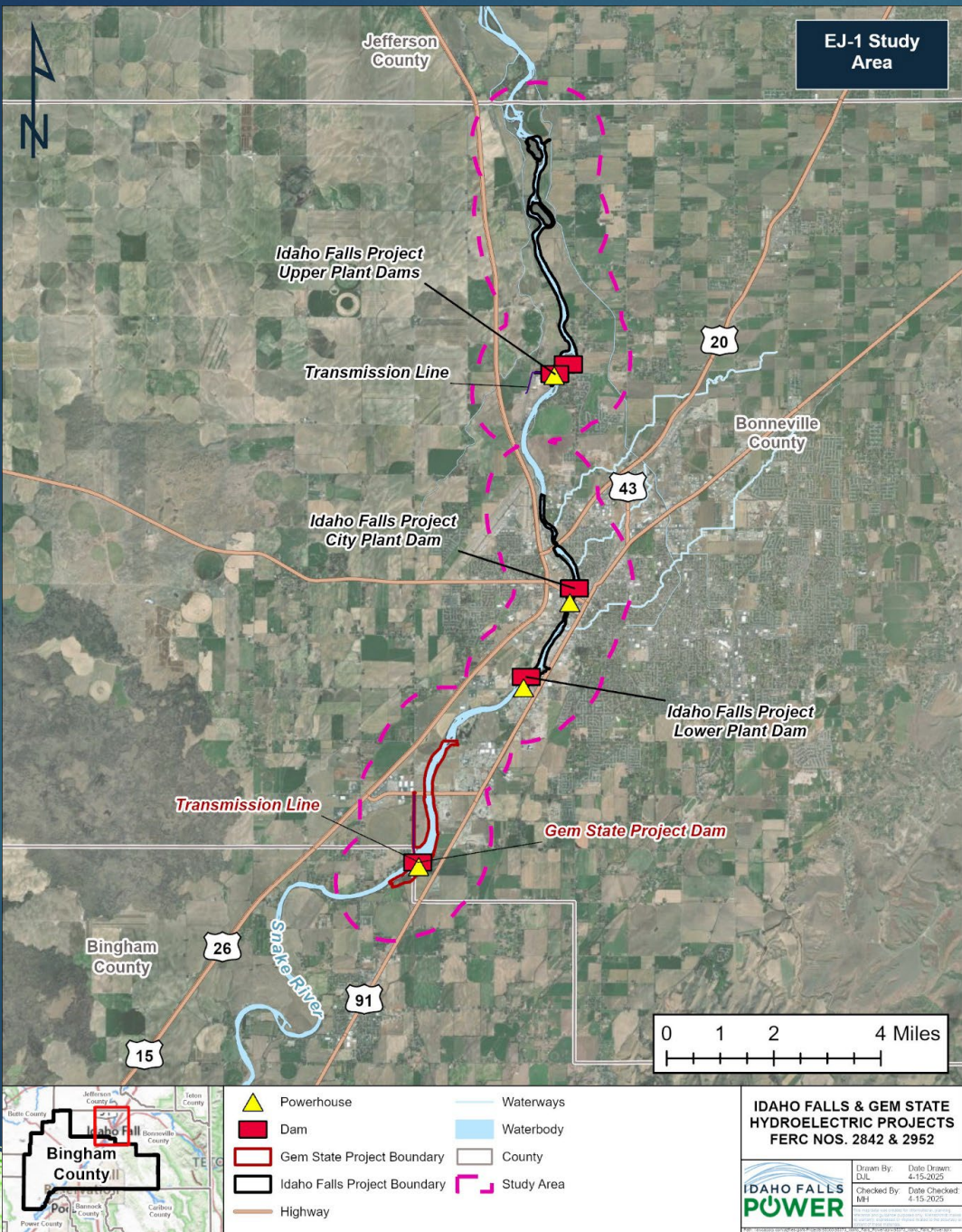
▶ **Goal:**

- ▶ Identify the potential effects of continued Project operations during the term of a new license on environmental justice communities in both Projects' study areas.

▶ **Objectives:**

- ▶ Identify the number and location of environmental justice communities within the study area.
- ▶ Identify the number and location of non-English-speaking populations within the study area.
- ▶ Conduct outreach to engage environmental justice communities and non-English-speaking populations in the relicensing process.
- ▶ Discuss (a) the potential effects of relicensing on the identified environmental justice communities, (b) effects that are disproportionately high and adverse, and (c) potential effects on non-English-speaking communities.



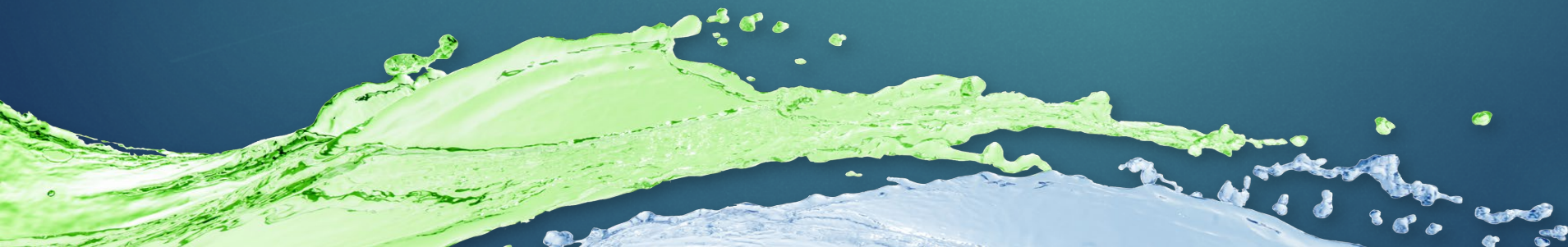


Environmental Justice (EJ-1) Study Area

Environmental Justice (EJ-1)

Data

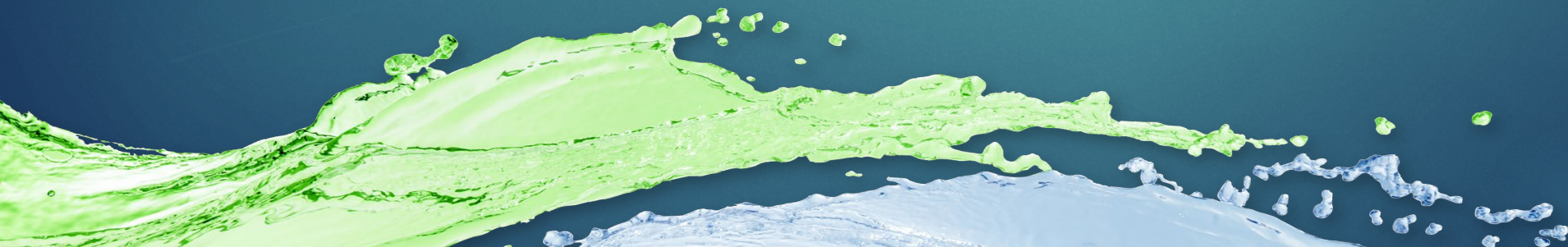
- ▶ 36 census block groups intersect the study area, of which 24 contained environmental justice communities (either minority, low-income, or non-English-speaking, or a combination of the three).
 - ▶ Because a block group can contain multiple environmental justice communities, a total of 27 environmental justice communities were identified; 26 of these were in the Idaho Falls study area, and 1 was in the Gem State study area.
 - ▶ 36 percent of these groups were identified as belonging to a minority population, and 55 percent were below 200 percent of the federal poverty level.
 - ▶ 13 of block groups identified as having significant non-English speaking population which informed development of outreach strategy and materials



Environmental Justice (EJ-1)

Outreach Update

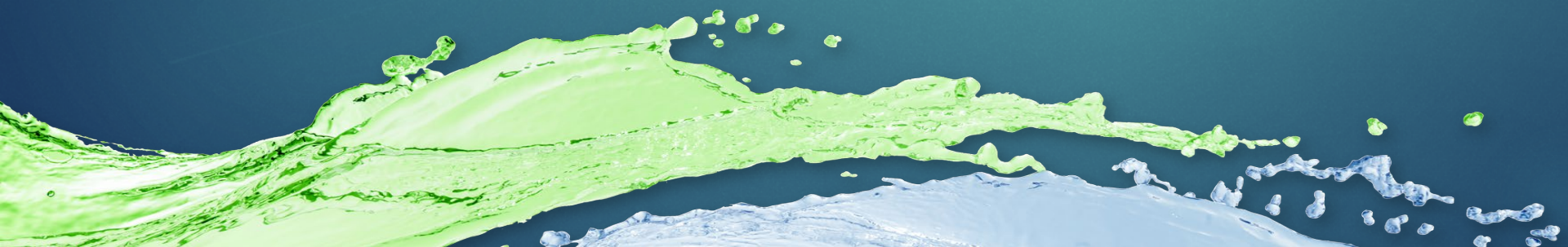
- ▶ To support the study objectives of identifying the number and location of environmental justice communities, including non-English-speaking communities, IFP developed a targeted outreach strategy to provide equitable access to information about the Projects within the framework of relicensing.
- ▶ IFP conducted phone calls to organizations, created a bilingual website content, and created a dedicated email account for receiving comments.
- ▶ IFP distributed 16 bilingual postcards and posted 50 bilingual flyers in high-traffic areas within identified environmental justice communities.
- ▶ IFP also developed and published bilingual engagement content on the relicensing website.



Environmental Justice (EJ-1)

Status – Study Complete

Status	Variances	Modifications
Fall 2024	Delayed initial outreach from fall 2024 to spring 2025 to include Project Boundary adjustments, completed summer 2025.	-
Altered methods due to EOs 12898, 14008, and 14096	-	Due to the rescinding of EOs 12898, 14008, and 14096, IFP modified study methods to use U.S. Census Bureau data and EPA's NEPAssist tool.
Altered method in desktop analysis for identifying low-income populations	-	Census Table C17002 (<i>Ratio of Income to Poverty</i>) was selected over Census Table B17017 to ensure a more accurate assessment of the population earning less than 200 percent of the federal poverty level.

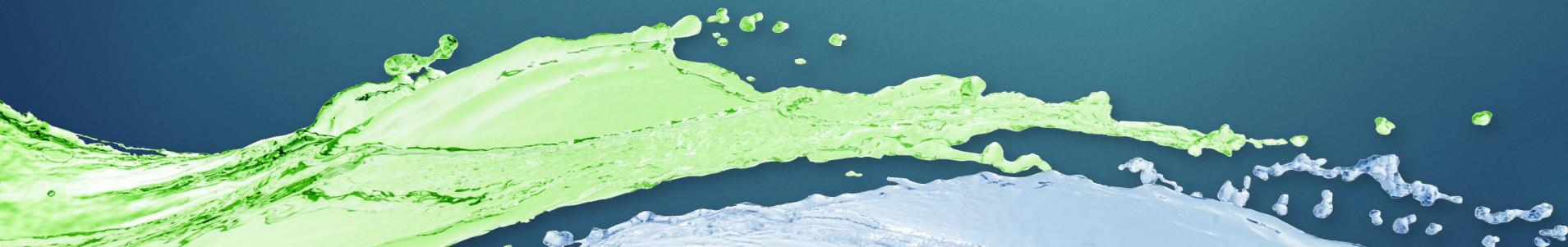


Environmental Justice (EJ-1)

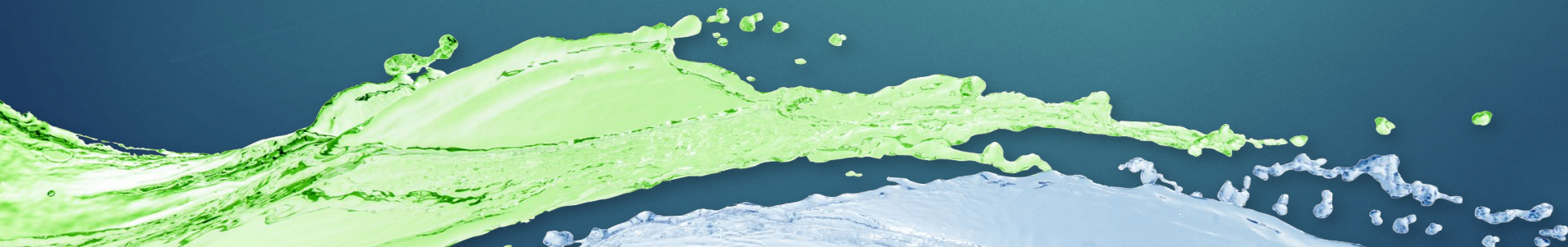
Results & Conclusion

► Conclusion

- 27 environmental justice communities were identified in Study Area; primarily low-income (55%).
- Bilingual postcards, fliers, and public website materials were distributed; no input or comments were received
- No EJ-related project impacts anticipated
- Study is complete

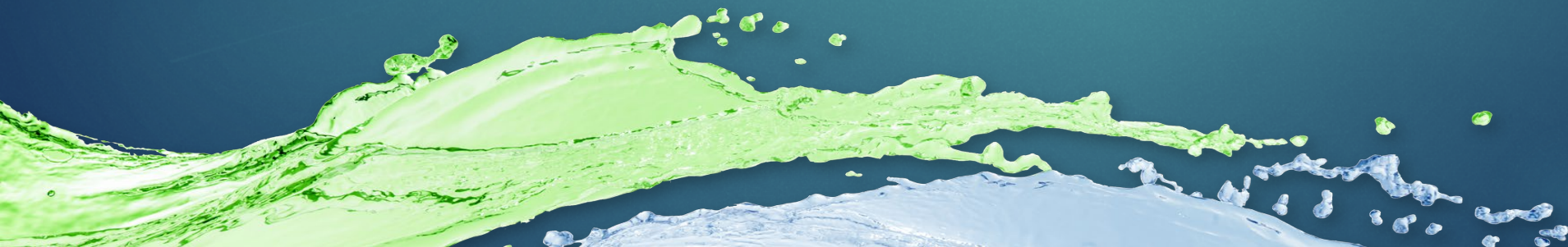


Questions?



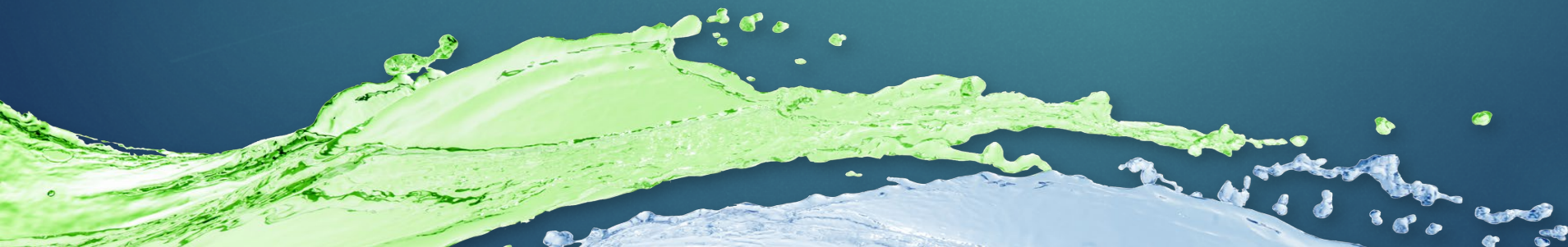
Next Steps

- ▶ IFP to post meeting presentation on website and distribute meeting summary by July 8, 2026
- ▶ Relicensing participants file Disagreements/Requests to amend Study Plan due to FERC by August 11, 2026
- ▶ Response to Disagreements/Amendment Requests by September 10, 2026
- ▶ FERC issue's Director's/Determination on Disagreements/Amendments by October 10, 2026
- ▶ IFP files Draft License Application with Final Technical Reports in September 2026



Stay Involved

- ▶ Check the Project website for updates/news at: <https://www.ifpower.org/about-us/relicensing>
- ▶ Sign up for FERC's e-subscription (docket numbers "P-2842-045" and "P-2952-073") at www.ferc.gov
- ▶ Email Olivia Smith with questions: olivia.smith@kleinschmidtgroup.com





Thank you!

