



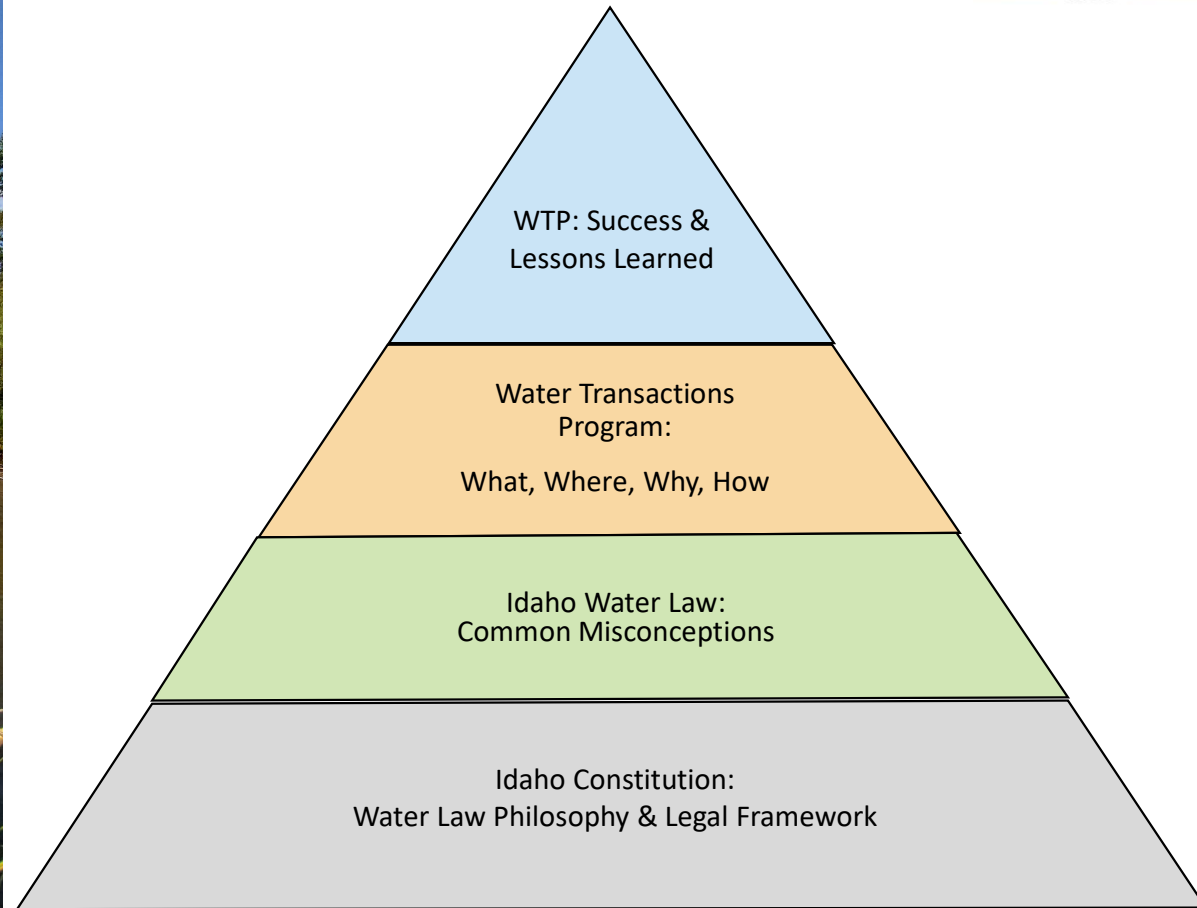
## ***Administering Minimum Streamflows in Idaho with Voluntary, Market-Based Water Transactions***

### ***A Primer in Idaho Water Law and 20 years of Water Transactions in the Upper Salmon Basin***



## Water Transaction Tools:

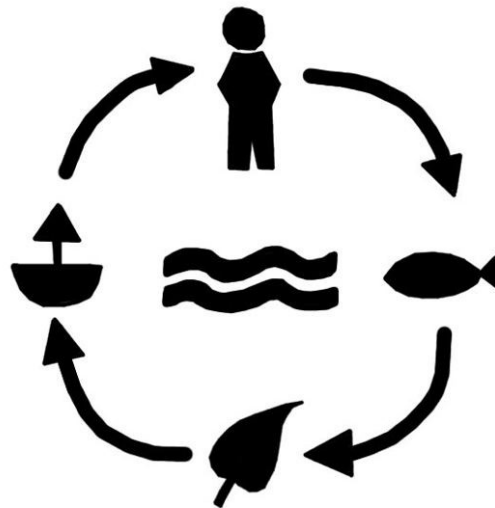
- Source Switch
- Landowner Agreements
- Subordination
- Water Supply Bank – Lease/Rental
- Acquisition or Donation





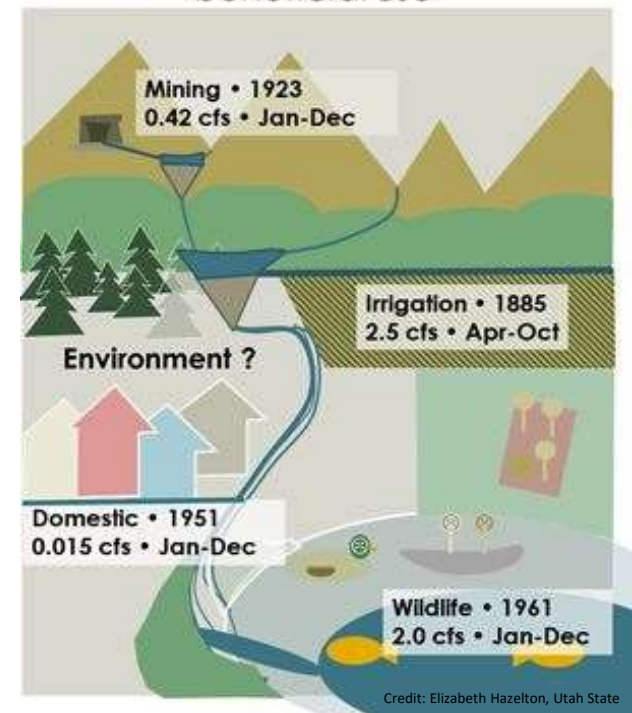
# Prior Appropriations Doctrine

- First in time, First in Right
- Priority Date
- Beneficial Use



Credit: Katharina Conradin, Seecon Int'l

Everyone and everything needs  
a water right with a priority &  
beneficial use



Credit: Elizabeth Hazelton, Utah State



## Idaho Constitution - Article 15. Sections 1-7.

"Use of all waters ...hereby declared to be a public use, and subject to the regulations and control of the state in the manner prescribed by the law." & "...priority in time shall give superiority of right to the use of such water."  
*First in time, first in right.*

### Idaho Legislature

#### Idaho Department of Water Resources

IDWR mission is to serve the citizens of Idaho by ensuring that water is conserved and available for the sustainability of Idaho's economy, ecosystems, and resulting quality of life.

Water Rights  
Adjudication and  
Compliance

#### Idaho Water Resource Board

IWRB is responsible for the formulation and implementation of a state water plan, financing of water projects, and the operations of programs that support sustainable management of Idaho's water resources.

Water Supply Bank and  
Water Transactions Program



# IDAHO

## Water Resource Board



- Governor-appointed
- 8-members, serve 4-year term
- Bi-partisan (4 members from each political party)
- Represent 4 Districts that encompass all geographic locations of the state
- Fund projects and programs for sustainable management of Idaho's water



## Idaho Statutes

### TITLE 42 IRRIGATION AND DRAINAGE - WATER RIGHTS AND RECLAMATION

#### CHAPTER 17 DEPARTMENT OF WATER RESOURCES - WATER RESOURCE BOARD

42-1732. IDAHO WATER RESOURCE BOARD. Pursuant to the provisions of article 15, section 7, of the constitution of the state of Idaho, there is hereby established as the constitutional water agency within the department of water resources the Idaho water resource board which shall consist of eight (8) appointed members. The eight (8) appointed members shall be qualified electors of the state, no more than four (4) of whom shall be members of the same political party. Appointment of board members shall be made solely upon consideration of their knowledge, interest and active participation in the field of reclamation, water use or conservation and no member shall be appointed a member of the board unless he shall be well informed upon, interested in, and engaged actively in the field of reclamation, water use or conservation of water. Four (4) of these members shall be appointed at large and no more than three (3) of the eight (8) members shall be residents of a single district. To insure representation of water users of all geographic locations of the state, one (1) member shall be appointed from each of the following districts:

District No. 1 which shall consist of the counties of Boundary, Bonner, Kootenai, Shoshone, Benewah, Latah, Clearwater, Nez Perce, Lewis and Idaho;

District No. 2 which shall consist of the counties of Adams, Valley, Washington, Payette, Gem, Boise, Canyon, Ada, Elmore and Owyhee;

District No. 3 which shall consist of the counties of Camas, Gooding, Jerome, Twin Falls, Cassia, Blaine, Lincoln, Minidoka, Lemhi, Custer and Butte;

District No. 4 which shall consist of the counties of Clark, Fremont, Jefferson, Madison, Teton, Bingham, Bonneville, Power, Bannock, Caribou, Oneida, Franklin and Bear Lake.

All appointments shall be made by the governor with the advice and consent of the senate. As soon as practicable after passage of this act, the governor shall appoint all eight (8) members; four (4) members shall be appointed to terms which will expire on January 1, 1967, four (4) members shall be appointed to terms which will expire on January 1, 1969, and thereafter all appointments shall be to four (4) year terms. Any vacancy caused by death, removal, disqualification, or resignation, shall be filled by the governor for the unexpired term caused by the vacancy. The appointed members shall be compensated as provided by section 59-502(h), Idaho Code.

History:

[42-1732, added 1965, ch. 320, sec. 2, p. 901; am. 1974, ch. 20, sec. 22, p. 533; am. 1980, ch. 247, sec. 42, p. 1]

# IDAHO

Department of  
Water Resources





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Water Supply Bank and  
Water Transactions Program





Water Resource Board



## WATER RIGHT REPORT

1/6/2022

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report

WATER RIGHT NO. 74-15834

Owner Type	Name and Address
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Current Owner	SHINER RANCH INC
---------------	------------------

Priority Date: 10/09/1911

Basis: Decreed

Status: Active

Source	Tributary
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LEMHI RIVER	SALMON RIVER
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Beneficial Use	From	To	Diversion Rate	Volume
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IRRIGATION	03/15	11/15	1.09 CFS	
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Total Diversion			1.09 CFS	
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Location of Point(s) of Diversion:

LEMHI RIVER|NESW|Sec. 04|Township 17N|Range 24E|LEMHI County

Place(s) of use:

Place of Use Legal Description: IRRIGATION LEMHI County

Township	Range	Section	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres
17N	24E	4	4	NWNW	7.3		SWNW	21.2		SENE	1.9			
				NESW	5.7									

Total Acres: 36.1

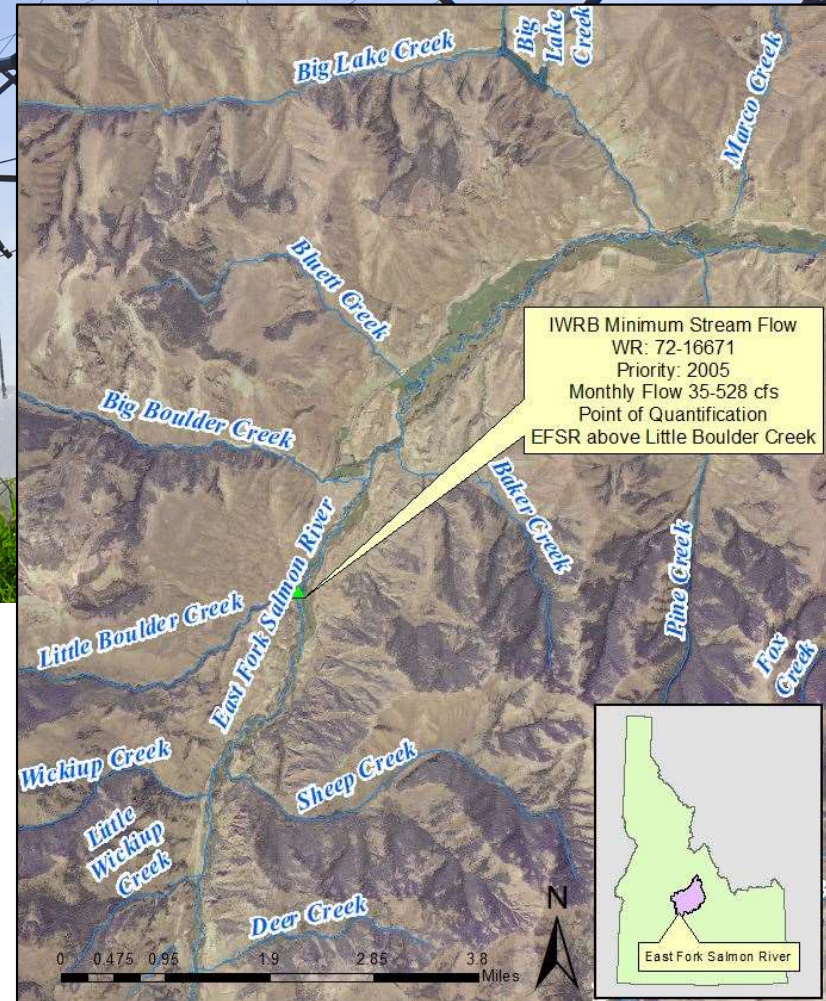
- Who Own's the WR
- What's the Priority Date
- Where's the water From
- What's the Beneficial Use
- Season of Use and MAX Diversion Rate
- Where's the Point-of-Diversion
- Where's the Place-Of-Use
- What's the MAX irrigated acres under the right

## Common Misconceptions

- Point-of-Diversion and Place-of-Use
  - Diversion Rate (CFS) and Acre Limits
- <https://maps.idwr.idaho.gov/agol/WaterRightLocator/>



Water Right 72-16671				
<b>Owner Type</b>	<b>Name and Address</b>			
Current Owner	STATE OF IDAHO IDAHO WATER RESOURCE BOARD 322 E FRONT ST PO BOX 83720 BOISE, ID 83720-0098 (208) 287-4800			
<b>Priority Date:</b> 4/1/2005				
<b>Basis:</b> Decreed				
<b>Status:</b> Active				
<b>Source</b>	<b>Tributary</b>			
EAST FORK SALMON RIVER	SALMON RIVER			
<b>Beneficial Use</b>	<b>From</b>	<b>To</b>	<b>Diversion Rate</b>	<b>Volume</b>
MINIMUM STREAM FLOW	12/1	12/31	42,000 CFS	
MINIMUM STREAM FLOW	1/1	1/31	37,000 CFS	
MINIMUM STREAM FLOW	2/1	2/28	35,000 CFS	
MINIMUM STREAM FLOW	3/1	3/31	35,000 CFS	
MINIMUM STREAM FLOW	4/1	4/30	51,000 CFS	
MINIMUM STREAM FLOW	5/1	5/31	196,000 CFS	
MINIMUM STREAM FLOW	6/1	6/30	528,000 CFS	
MINIMUM STREAM FLOW	7/1	7/31	351,000 CFS	
MINIMUM STREAM FLOW	8/1	8/31	135,000 CFS	
MINIMUM STREAM FLOW	9/1	9/30	74,000 CFS	
MINIMUM STREAM FLOW	10/1	10/31	63,000 CFS	
MINIMUM STREAM FLOW	11/1	11/30	52,000 CFS	
	<b>Total Diversion</b>		528,000 CFS	
<b>Source and Point(s) of Diversion</b>				
EAST FORK SALMON RIVER	SENEW	Sec. 22, Twp 09N, Rge 17E, Custer County(E)		
<b>Place Of Use</b>				
MINIMUM STREAM FLOW				

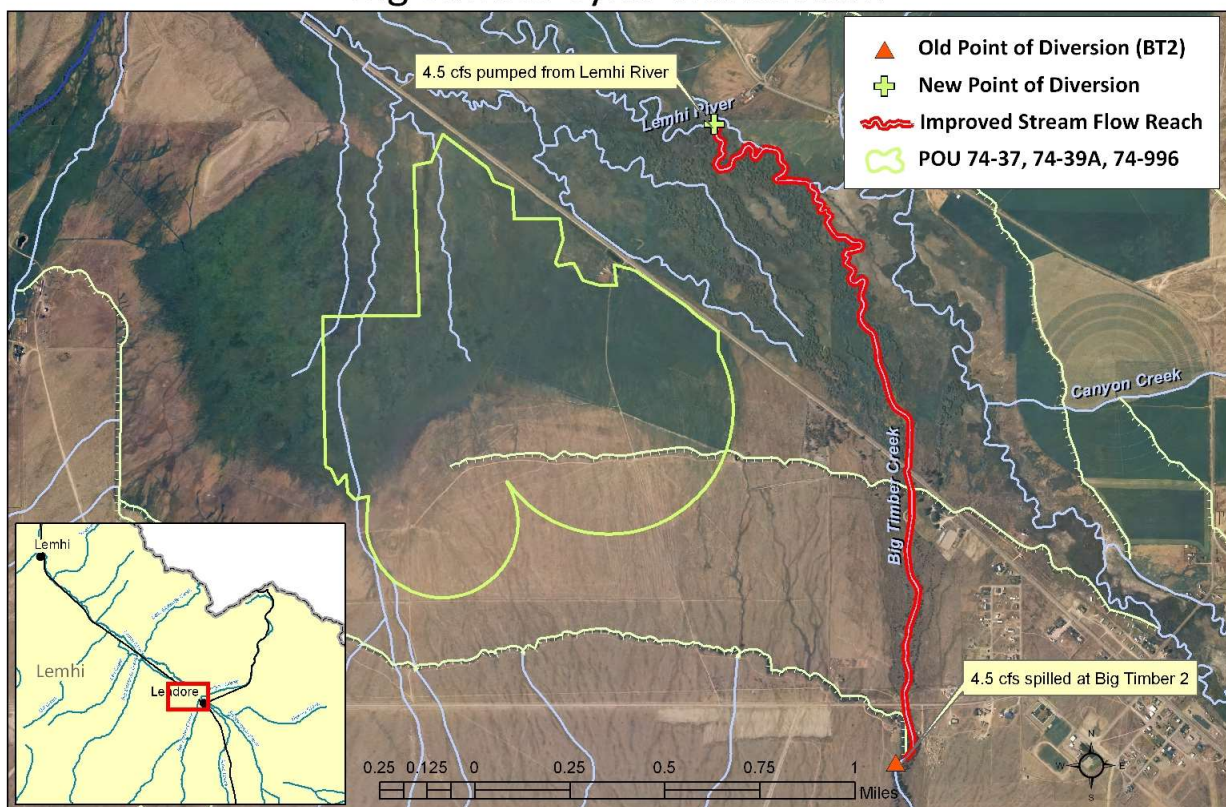


## Common Misconceptions

- Minimum Stream Flow WR  $\neq$  In-Stream Flow
  - Priority Date Matters
  - Water Transactions = In-Stream Flow @ Minimum Stream Flow WR's
- Minimum Stream Flow vs Target Flow
  - Actual WR vs Landowner Agreement



## Big Timber Tyler Transaction



## Common Misconceptions

- Minimum Stream Flow WR  $\neq$  In-Stream Flow
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  - Water Transactions = In-Stream Flow @ Minimum Stream Flow WR's
- Minimum Stream Flow vs Target Flow
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# Idaho Water Transaction Program

- Low stream flow is a limiting factor for salmonids at MULTIPLE life-stages
- Competition between instream flow for fish and irrigation
- Water transactions protect water in stream AND on paper
- Program Mission: support innovative, voluntary, grassroots water transactions that improve flows to tributary streams and rivers
- Benefits of Increased Flow: 1) improve passage at all salmonid life stages, 2) improve egg-to-smolt survival, 3) reduce density-dependent limiting factors, 4) increase species diversity

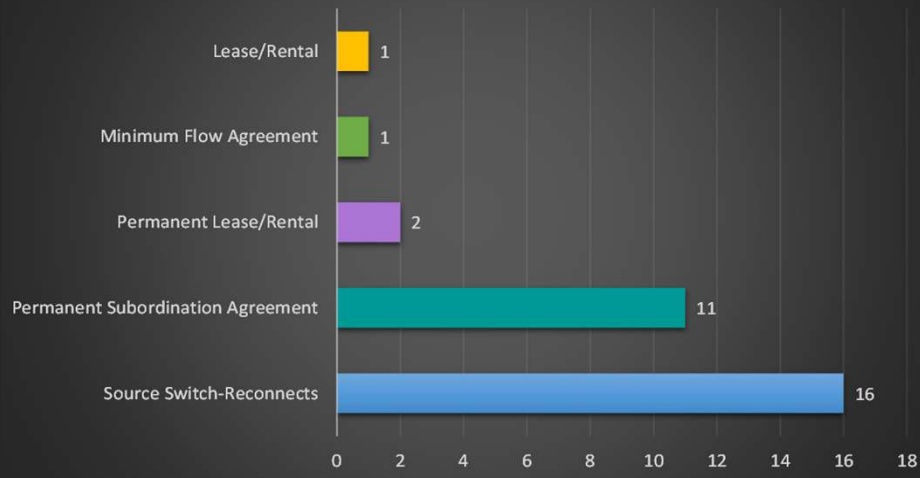




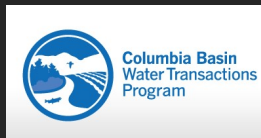
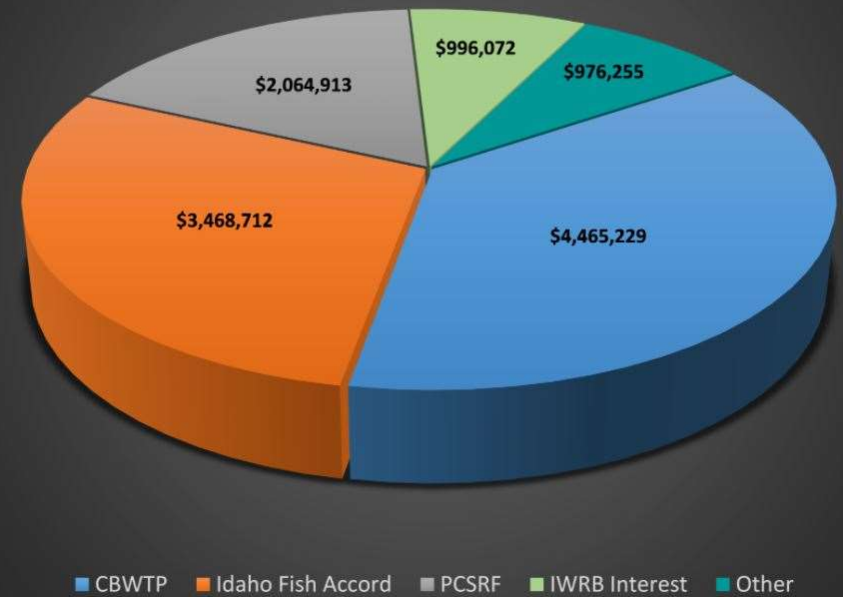
# Idaho Water Transaction Program



2020 Active Accord Transactions



Idaho Water Transactions Program  
Funding by Source 2003 - 2020





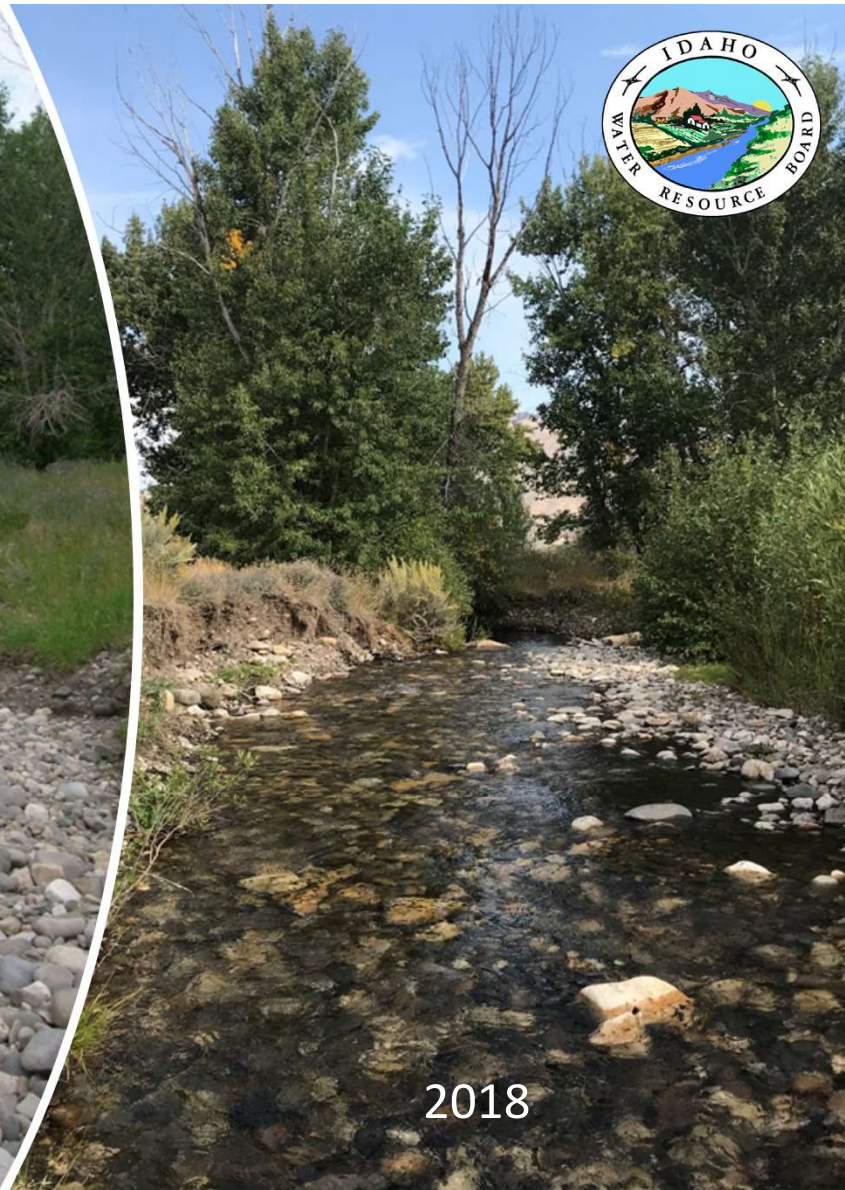
## Source Switch Projects/ Administrative Agreements

- Reconnect tributaries
- New POD via WR Transfer
- New irrigation infrastructure
- 20-yr Administrative Agreement

Big Timber Creek,  
Lemhi River tributary



2009



2018

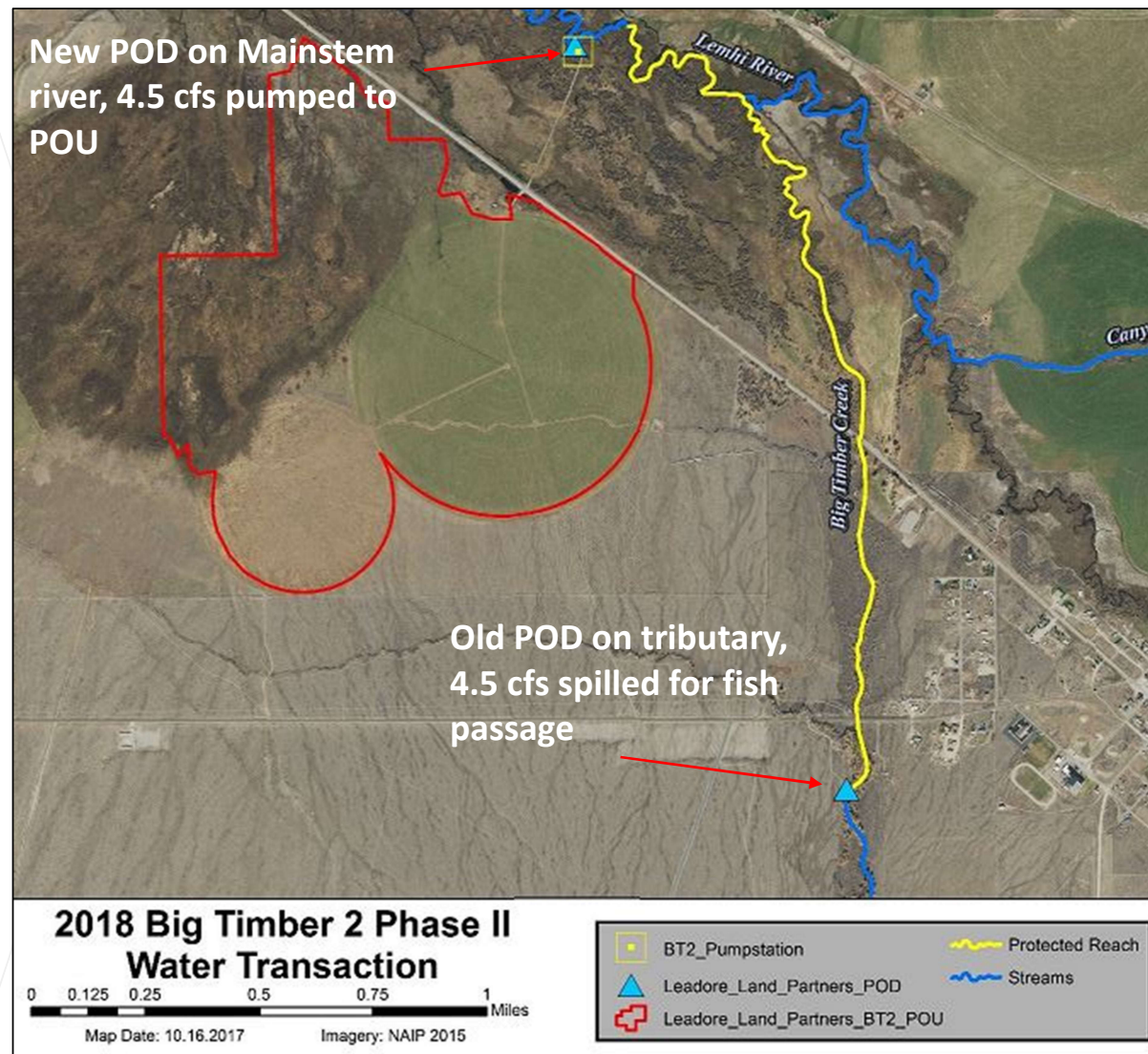




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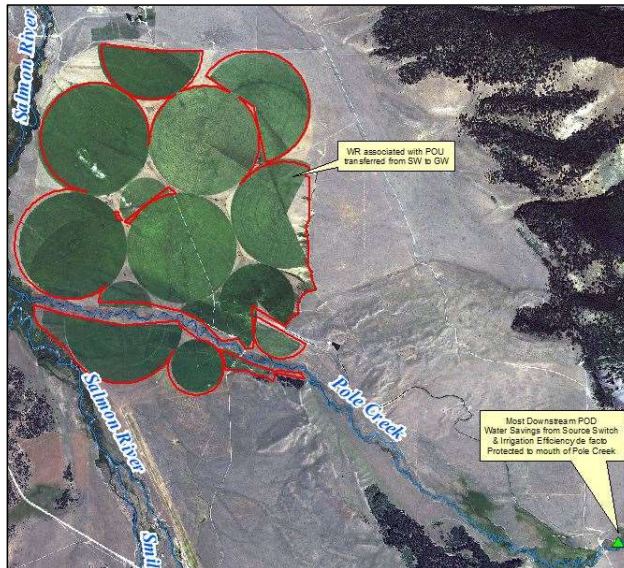


## Public Service Announcement

Irrigation Efficiency  $\neq$  Water Transaction

Any instream water savings from irrigation efficiency projects (flood to sprinkler, piping/lining ditches) is not legally protected and can be diverted by downstream users.

Pole Creek, Salmon River  
headwater tributary

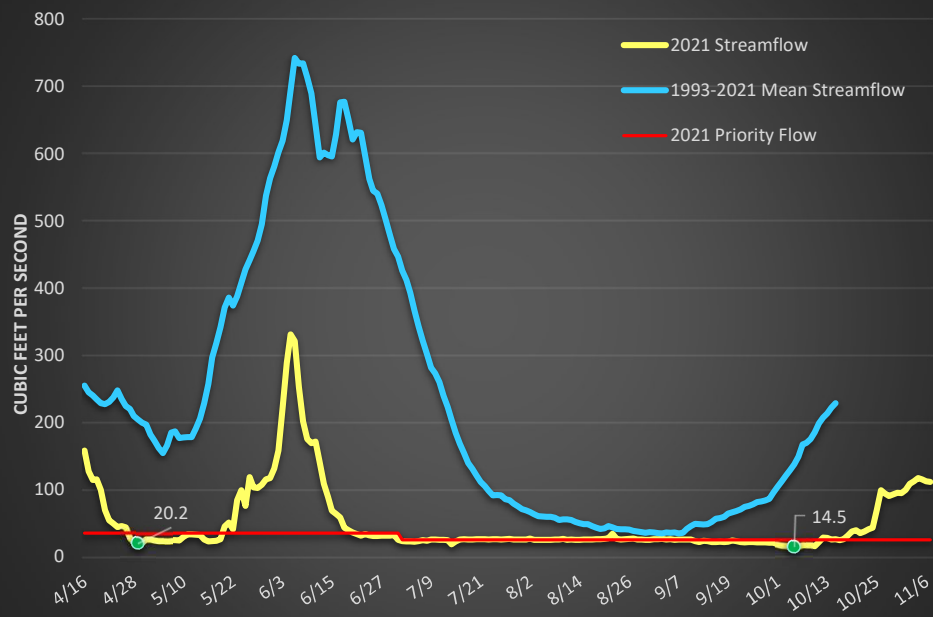






# Annual and Permanent Subordination Agreements

- Board-held MSF WR: Lemhi River @ L-6 Diversion
- Since 2004: 25-35 CFS protected for 100 days, March – November
- Senior water rights voluntarily subordinate and are compensated for any lost production at a fair-market rate.




October 2021

2001 – Lemhi River dewatered at L-6 prompting ESA enforcement







# Annual and Permanent Subordination Agreements

Lemhi River @ L-6 Diversion

- Annual Subordination = \$90 per CFS per day for 100 days MAX/yr
- Permanent Subordination = one-time \$100,00 per CFS for up to 100 days MAX/yr
- Administration of Subordination Agreements requires a competent, locally-elected Watermaster and a working relationship with local Water District
- Watermaster also compensated annually for administration of subordination agreements



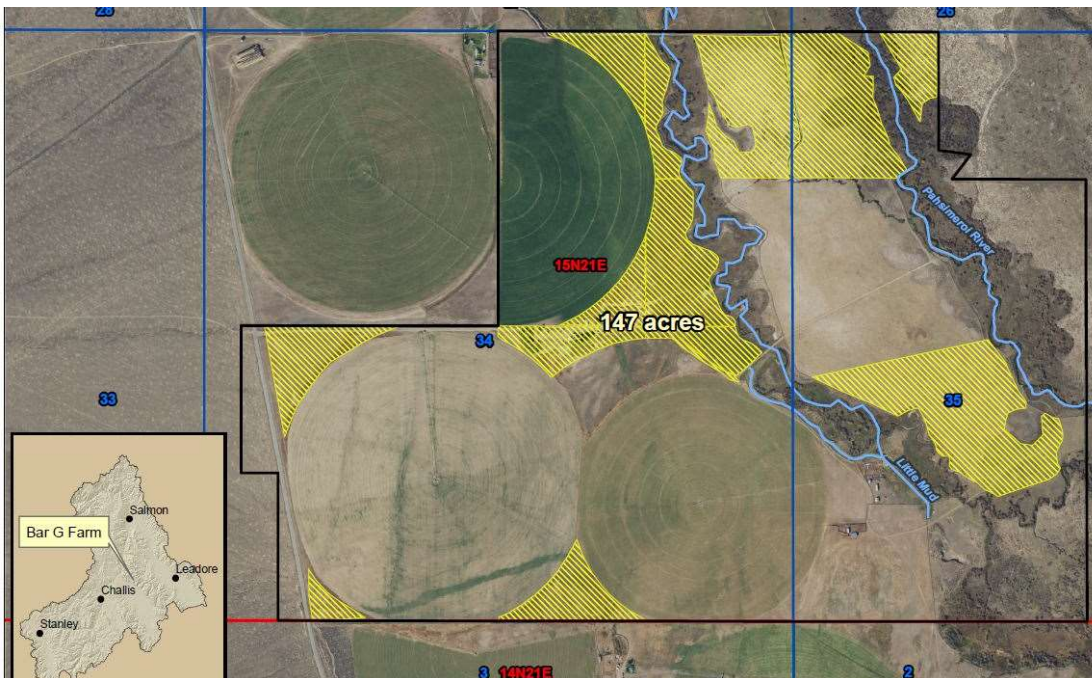
October 2021



# Water Supply Bank Lease/Rental Agreements

Idle irrigated acres to increase flow,  
primarily to connect tributaries to  
mainstem habitat

Little Mud Springs Creek,  
Pahsimeroi River tributary



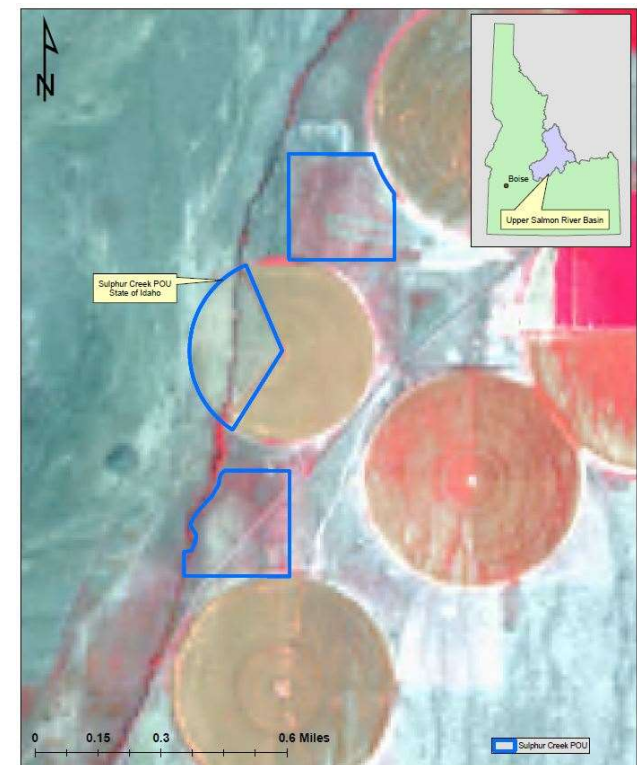


# Water Supply Bank - Lease/Rental Agreements

- Submit a water supply bank lease *and* rental application at the same time
- Provide evidence of beneficial use for last 5 years
- Rental payments: \$20-57/acre of idled ground
- Water Resource Board approval if longer than 5 years; advertised for public comment

**Water Supply Bank Calendar**

	Month	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
	Season	Summer			Fall			Winter			Spring		
Process Rental Proposals		Standard Priority						High Priority				Standard Priority	
Process Lease Proposals		Standard Priority			High Priority		Medium Priority				Standard Priority		
Request Rental Fees					Standard Priority								
Cancel Unpaid Rentals								Standard Priority					
Issue Lessor Payments					High Priority								
Process Lease Releases		Standard P...	High Priority				Standard Priority						
Expiration Reminders		Standard Priority											
Close Expired Leases								Standard Priority					
Close Expired Rentals								Standard Priority					



Imagery Source Sentinel: T11TQK\_S2A\_20210811\_CIR

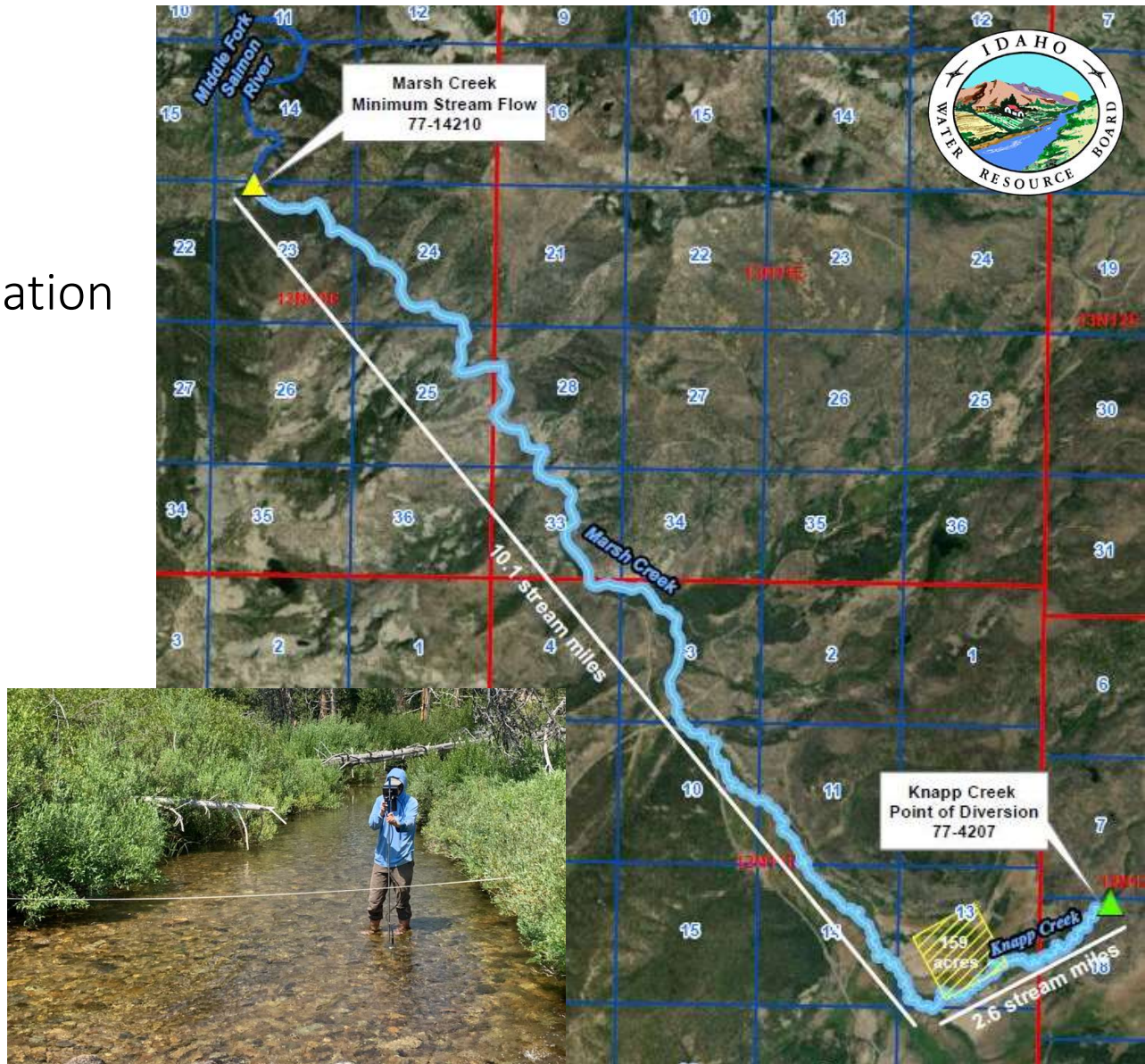
Sulphur Creek 349-12  
August 11, 2021



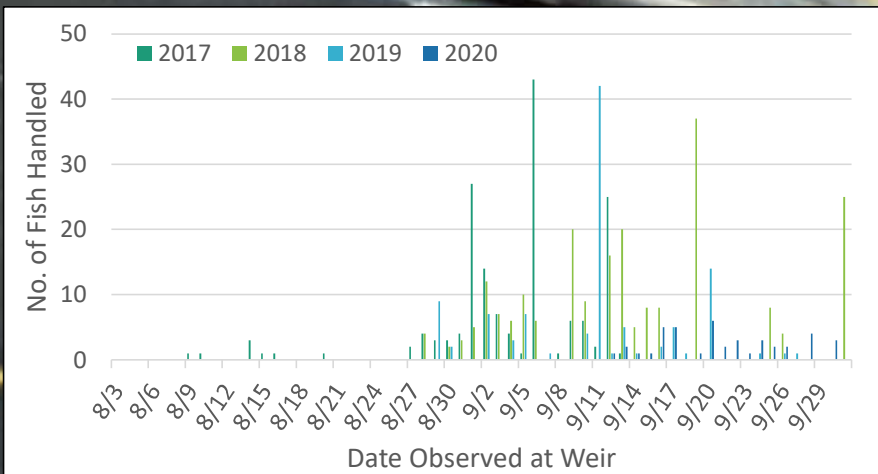
# Water Right Acquisition or Donation

Knapp Creek,  
Middle Fork Salmon River

- Acquisition of irrigated acreage
- Water right now owned by IWRB
- Water permanently rented and delivered to meet a Minimum Stream Flow water right.







# Water Supply Bank Lease/Rental for Instream Flow

Hydrologic connectivity for resident fluvial bull trout



# Source Switch, Tributary Reconnect

Increase anadromous fish distribution in tributaries

POU

POU

POU

BHC-3

Bohannon Creek

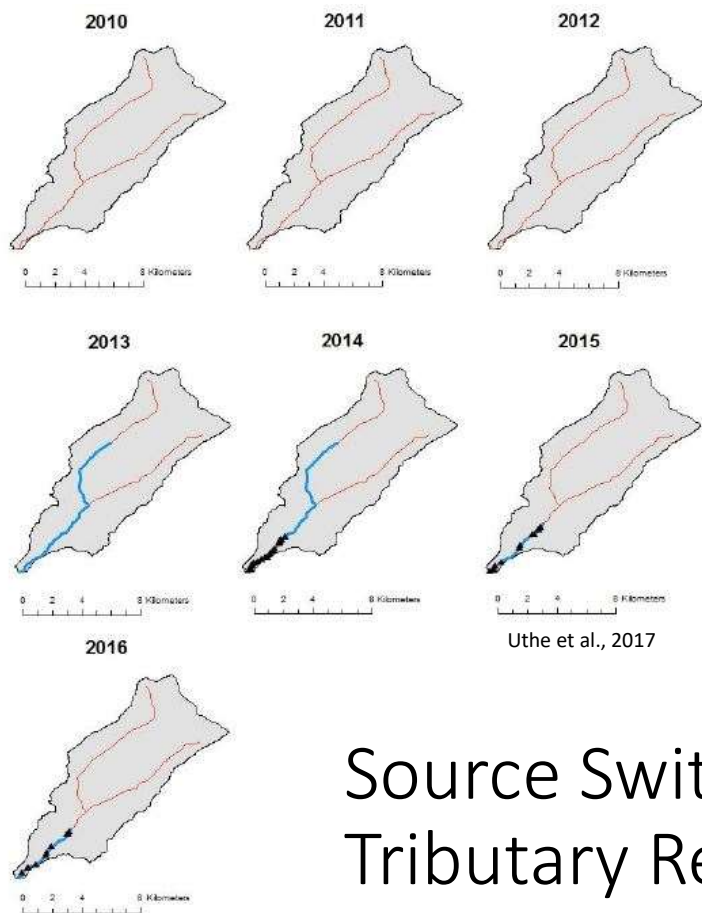
*Lemhi River*

Bohannon-3 head gate

New POD on Lemhi River







## Source Switch, Tributary Reconnect

Increase anadromous fish  
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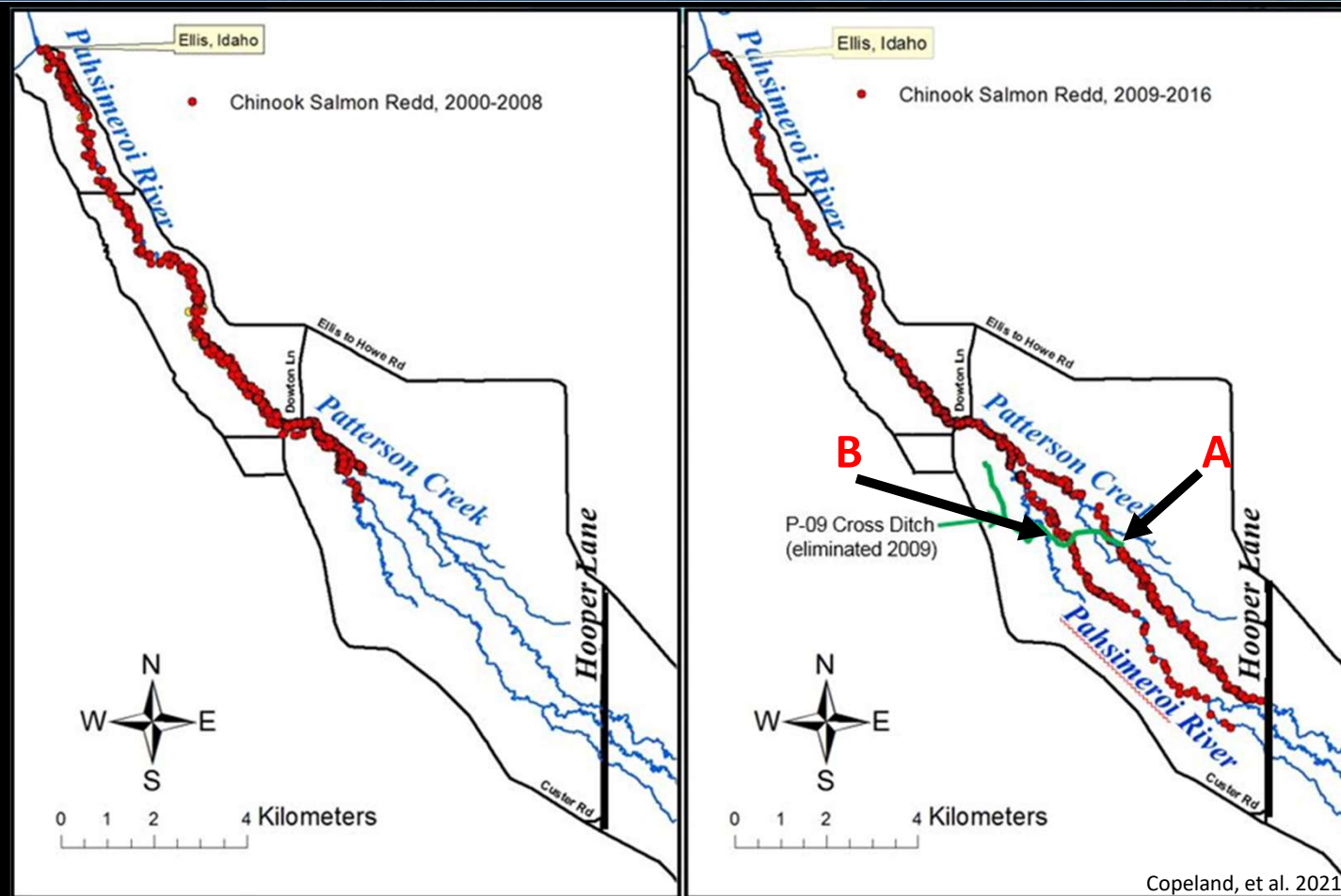




## Source Switch, Tributary Reconnect

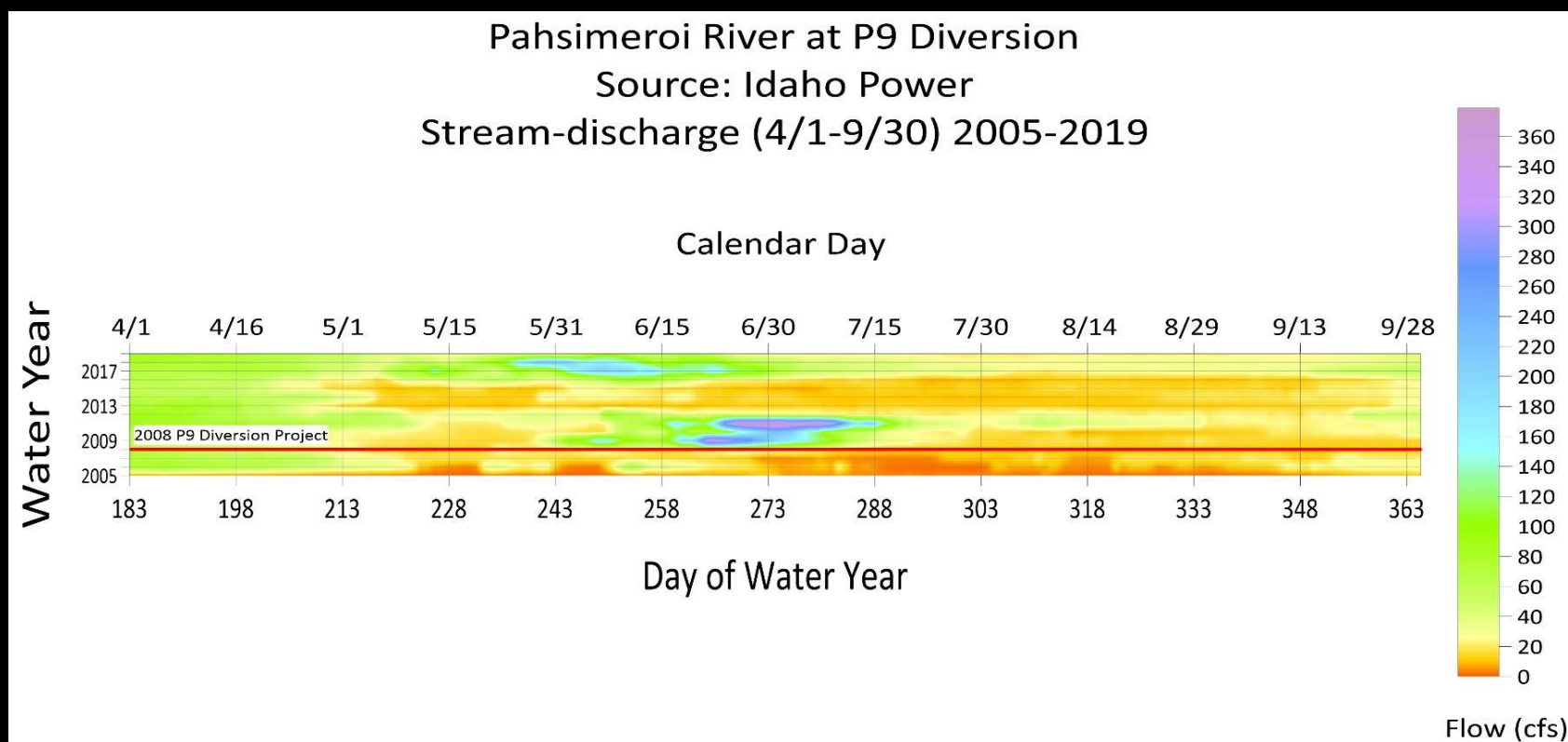
### P-9 Cross-Ditch, Pahsimeroi River

- 20 cfs diverted from Patterson Big Springs Creek
- Dumped sediment and warm water into Pahsimeroi River
- De-watered two spring-fed creeks.





## Source Switch, Tributary Reconnect

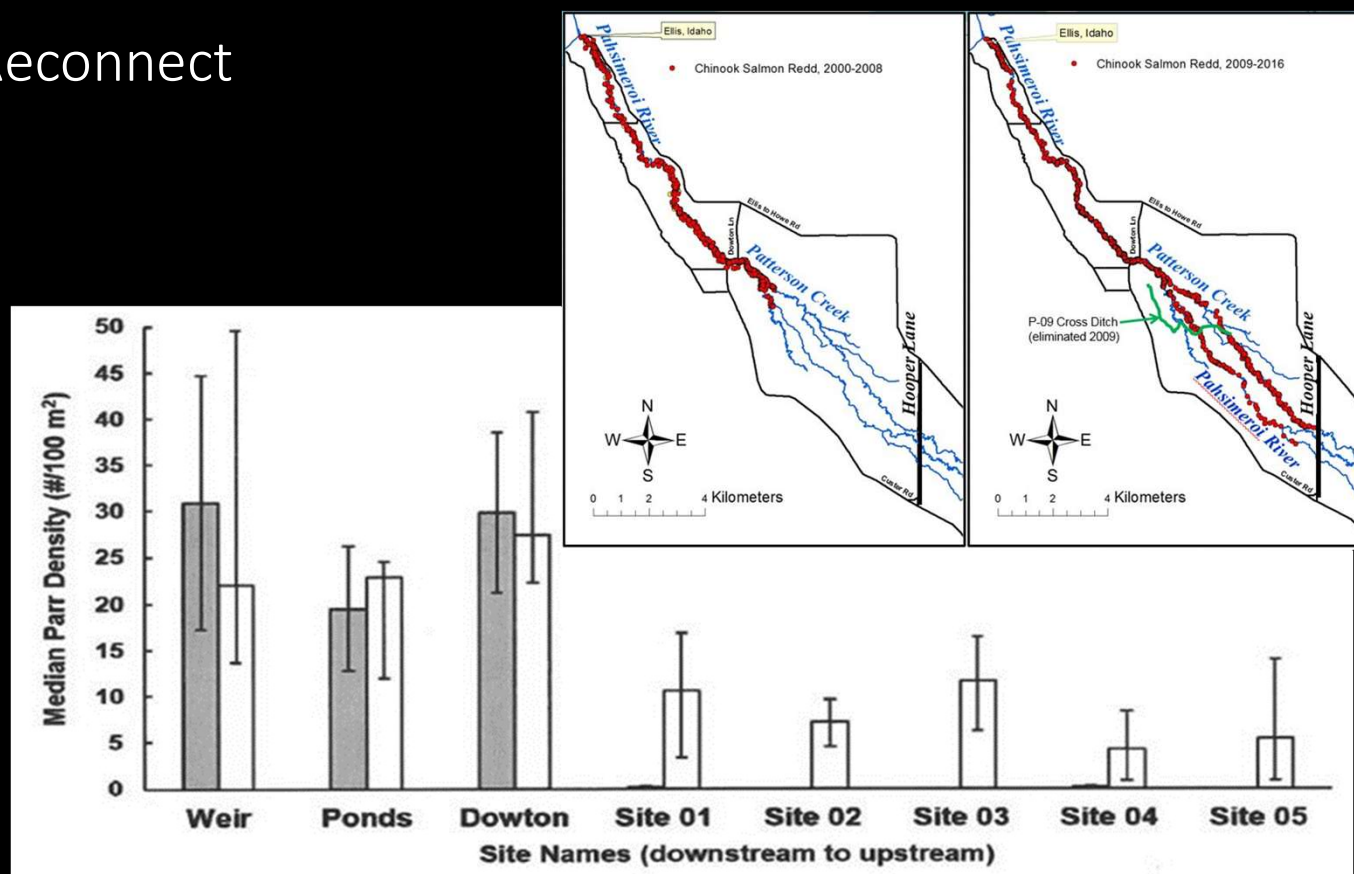




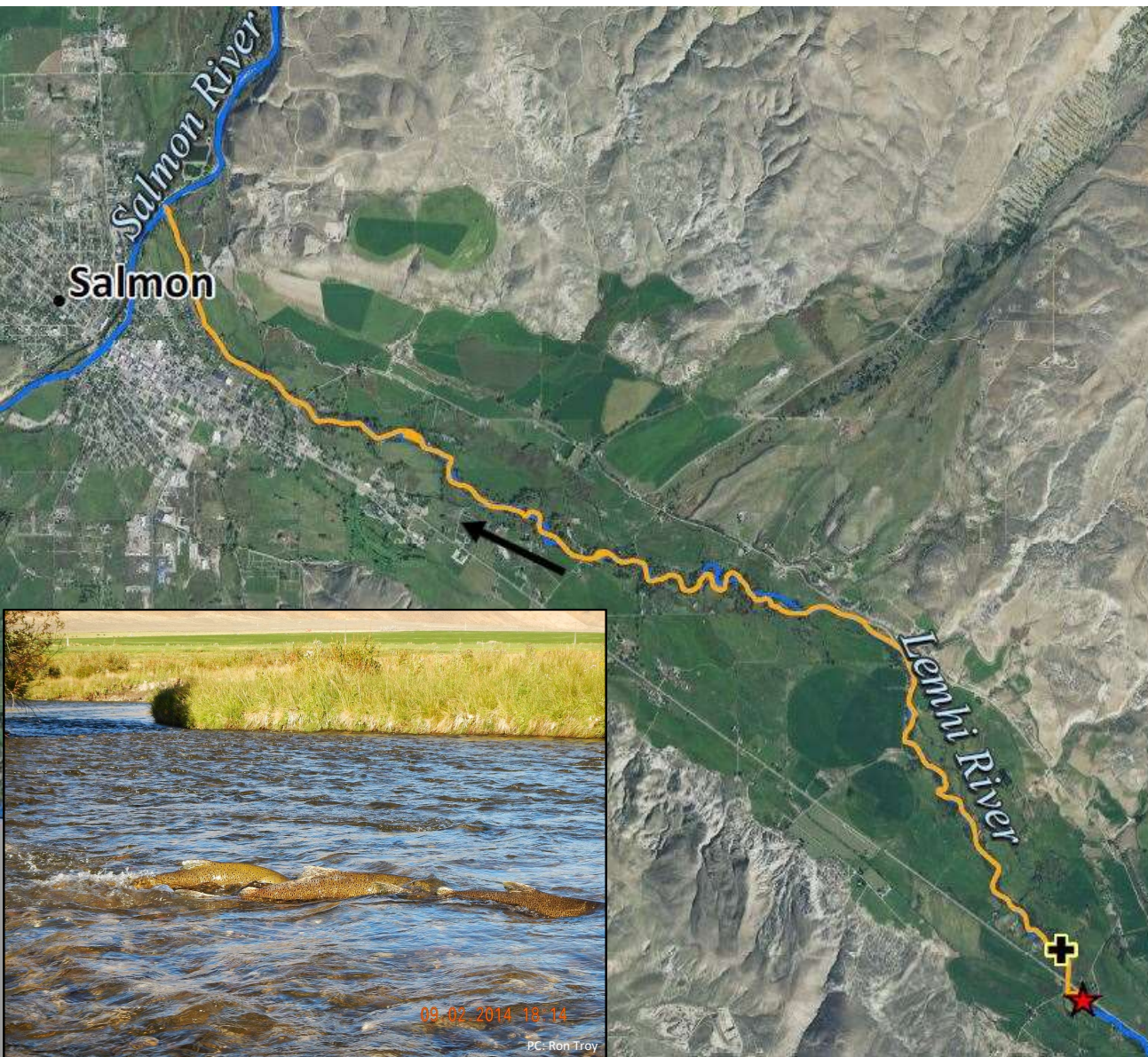
## Source Switch, Tributary Reconnect

### P-9 Cross-Ditch Removal:

- Opened 40.5 river miles to salmonids
- Rearing habitat increased by 246 %
- 42 % of Chinook redds found above reconnected reach
- Juvenile productivity (smolt-per-female past Lower Granite Dam) increased significantly
- Juvenile rearing density-dependent limiting factors may be alleviated.







# Permanent and Annual Subordination Agreements

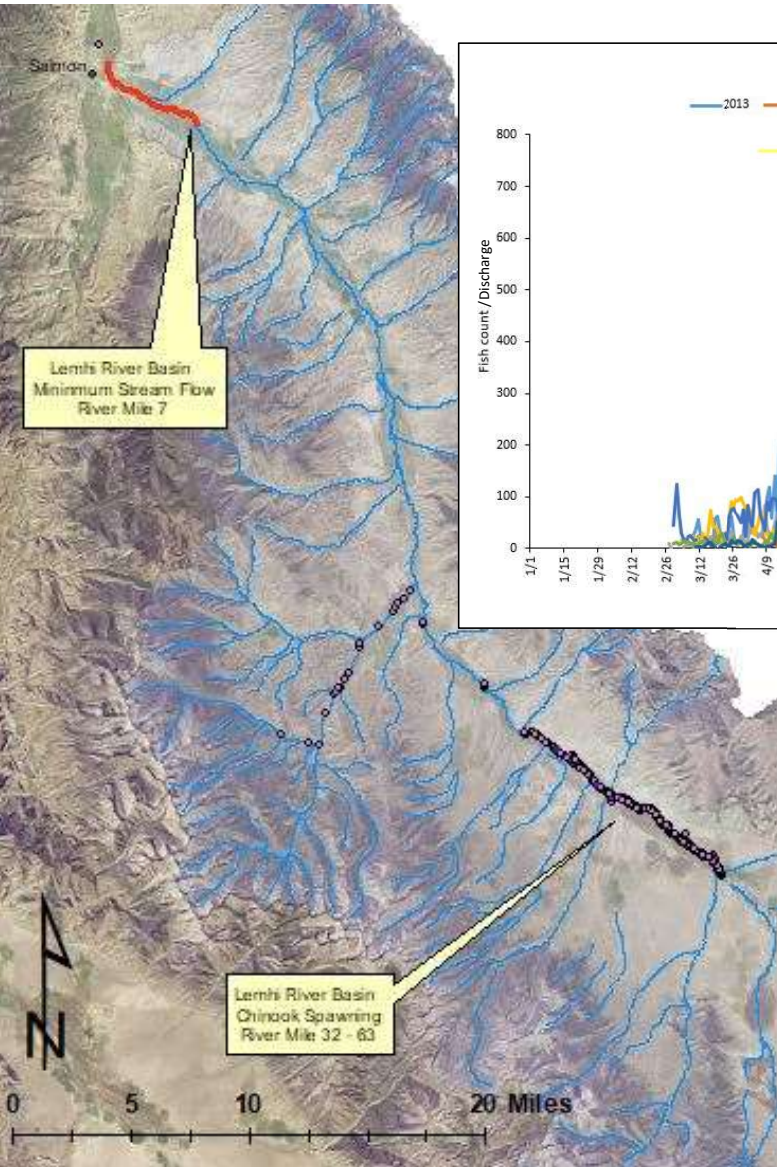
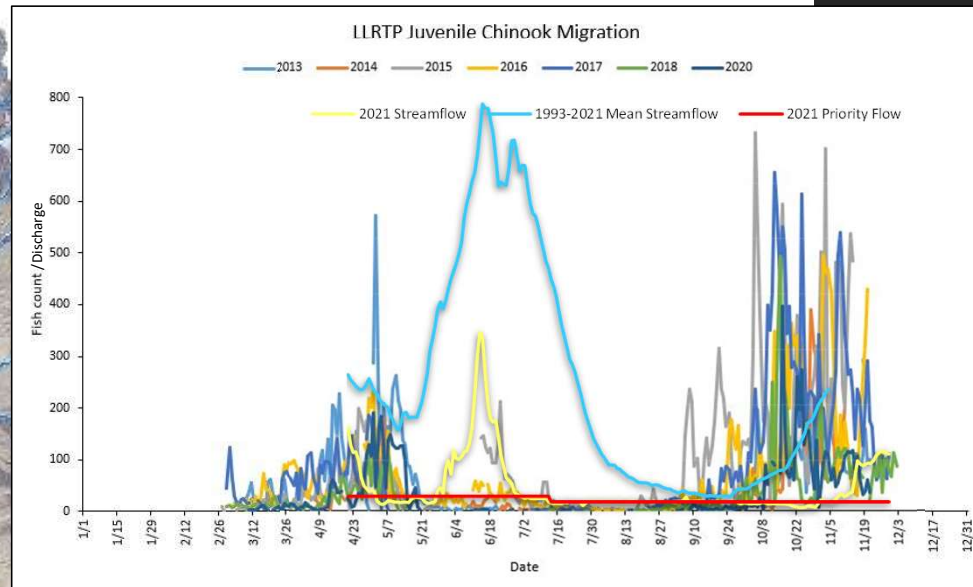
Address chronic dewatering issues in major tributary to allow passage of anadromous fish at multiple life stages



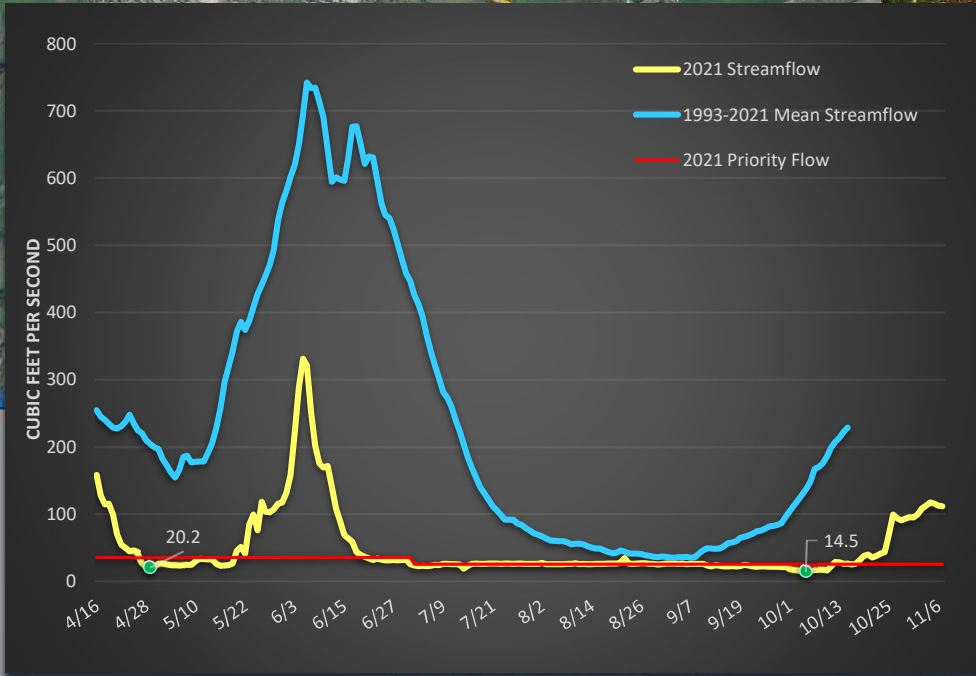


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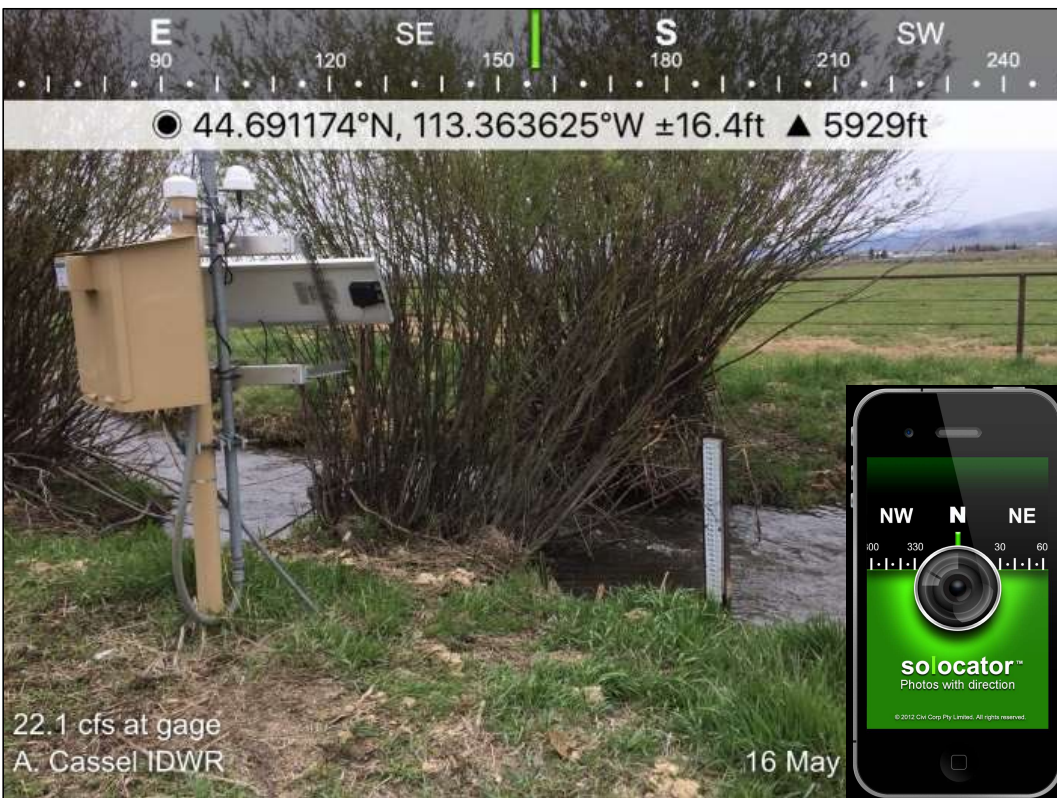




## Developing transactions...

- Ideally, collect streamflow data prior to the water transaction
- Gather biological data if it exists
- Take before transaction photos
- Work from the bottom up on rivers and streams
- Discuss your plans with regional IDWR office, water district, and watermaster early on
- Develop a monitoring plan – is a continuous stream flow gage necessary?







# Upper Salmon Basin Watershed Program Technical Team

aka “the Tech Team”



"Management and conservation of freshwater habitat requires fine spatial resolution, watershed-scale, and life-stage specific methods due to complex linkages among land, climate, water uses, and aquatic organism necessities."

Carmichael et al., 2020





## NEXT STEPS FOR THE UPPER SALMON BASIN

- **MANAGED AQUIFER RECHARGE**
- **BEAVER DAM ANALOGS**
- **TMDL's for SEDIMENT & TEMPERATURE**

Find your well diggers' report: <https://idwr.idaho.gov/wells/find-a-well-map/>

Irrigation Rights Finder map: <https://maps.idwr.idaho.gov/agol/IrrigationRights/>

Keep tabs on your reservoir levels: <https://www.usbr.gov/pn/hydromet/select.html>

Ground Water and the Rural Homeowner: [https://pubs.usgs.gov/gip/gw\\_ruralhomeowner/](https://pubs.usgs.gov/gip/gw_ruralhomeowner/)

Find your irrigation organization: <https://maps.idwr.idaho.gov/agol/IrrigationOrganizations/>

Learn about Idaho Water Resource Board Projects and Programs: <https://idwr.idaho.gov/iwrb/>

Find your regional Idaho Department of Water Resources Office: <https://idwr.idaho.gov/contact-us/>

Learn more about the Upper Salmon Basin Watershed Program: <https://modelwatershed.idaho.gov/>

Establishing a new water right: <https://idwr.idaho.gov/wp-content/uploads/sites/2/water-rights/water-rights-brochure.pdf>

Idaho Water Transaction Program Story Map: <https://idwr.maps.arcgis.com/apps/MapSeries/index.html?appid=299faa7a23f748dc9a4cbbdb38b4cebfb>