



Marshall Creek Instream Flow Public Meeting

Spokane Conservation District
10/19/2023

Walt Edelen, Water Resources Department

An aerial photograph of a rural property. In the center, there is a two-story yellow house with a brown roof. To the left of the house is a smaller red shed with a white roof. A large, dark pond is situated to the right of the house. A paved road or driveway runs along the top of the property. The surrounding area is green with trees and grass. The word "Welcome" is overlaid in large white text at the top center.

Welcome

- Cell Phones
- Bathrooms
- Refreshments
- Questions
- Courtesy and Respect
- Meeting Agenda

Tonight's Agenda

- 6:00 pm Welcome and Introductions
- 6:10 pm Presentation: Marshall Creek Watershed
 - History and Land Use
 - Current Issue(s)
 - Data; Flows and Fisheries
- 6:45 pm Potential Solutions
 - Short-Term & Long-Term Strategies
- 7:00 pm Panel Q&A and Public Feedback
 - Local Agency Panel Questions (Ecology, WDFW, County, Others)
 - Public Comments on Future Options
- 8:00 pm Meeting Adjourned



Why Are We All Here Tonight?

Marshall Creek is dry for the lower 2.5 miles and does not contribute water to Hangman Creek over the past several years.

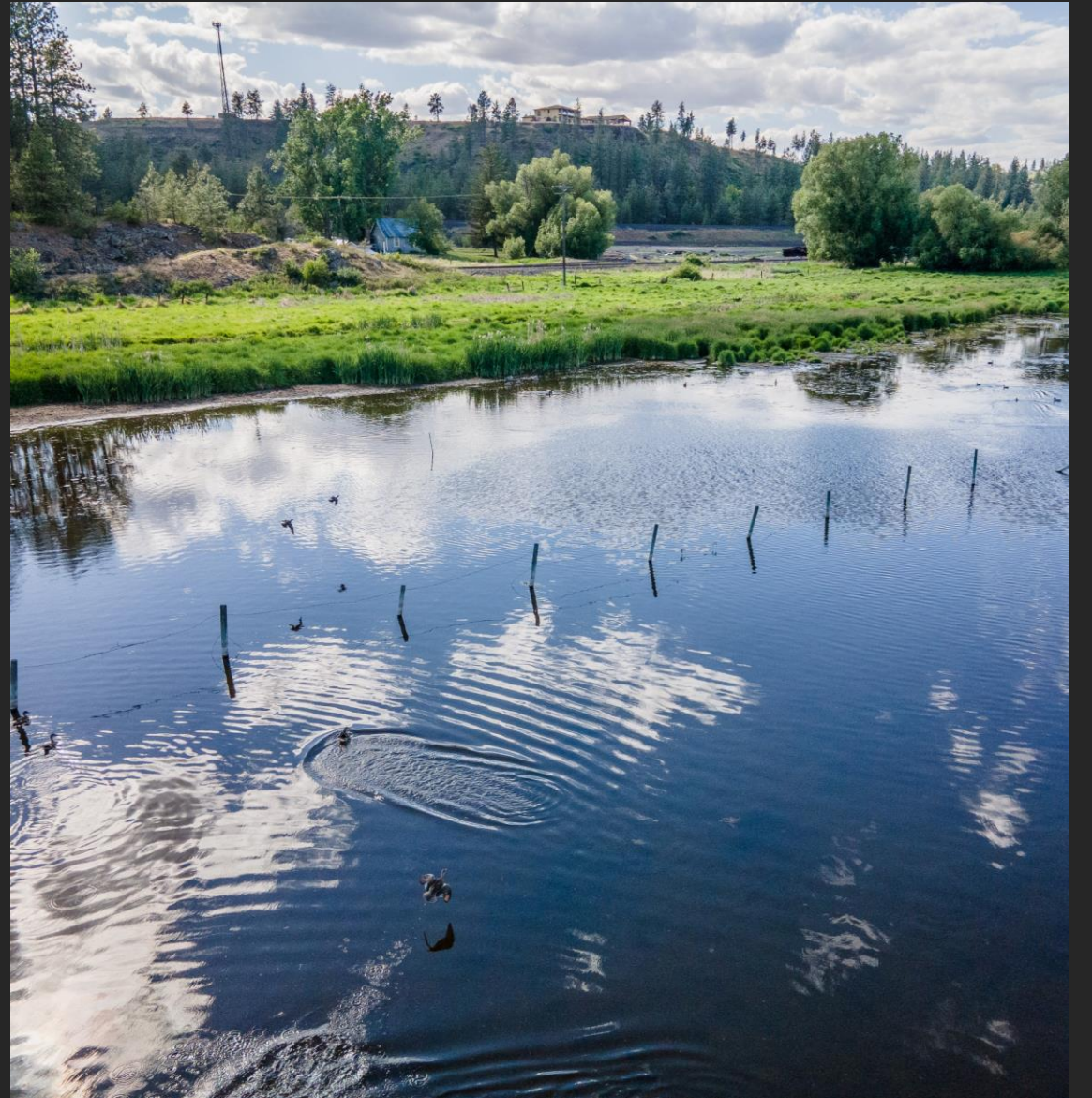
- Instream flow concerns
- Critters in the creek
- Habitat
- Your well is dry or impaired
- Your water right is impaired



Flow Loss Issue

- Horton's Field
- Historical Land Uses
- Ponds/Diversions
- Water Right Activity







Brief History

In 1878 William H. Marshall arrived at Section 22 where the meadow meets Lake Creek, eight miles southwest of downtown Spokane and six miles northeast of Cheney. He filed his homestead claim in January of 1880. Having been a lumberman in California, he dammed the creek to form a small lake and set up a water-powered sawmill. The creek and the site soon came to be known as Marshall. He sold the sawmill by 1886 but continued with his flour milling business.

Broadview Dairy

Elizabeth McKenzie purchased 250 acres from Mr. Marshall in 1891. She and her partner, Allen Flood, began operation for the Broadview dairy around 1893. It continued into the early 1900s.



Historical Records in Marshall

- 1902 – population was 75
- Convict camp established and used creek for crushed rock operation.
- 1910 – dynamite factory
- 1918 – Spokane Greenhouses built over the creek. Water used to run coal fired steam heating system.
- 1930 – four dynamite factories



Cattle



Hay



Marshall Creek History Timeline

150 YEARS OF HISTORY

1873

JANUARY

Pre-Settlement conditions

1880

FEBRUARY

William Marshall homesteads and builds first dam on Marshall Creek. Railroad built in 1881.

1889

MARCH

Broadview Dairy operation begins in field and on creek

1930-40

APRIL

Accounts of creek being moved and straightened. Field is used for hay and cattle

1959-90

MAY

Tim Peters and father use the field for agriculture. Hay and cattle. Control Minnie Creek irrigation. Creek dry

1990-10

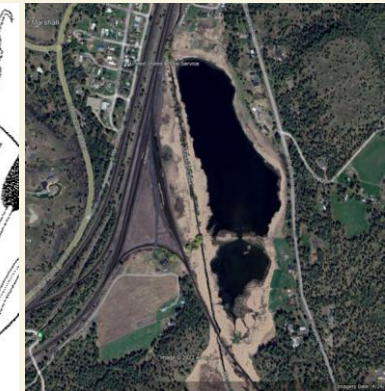
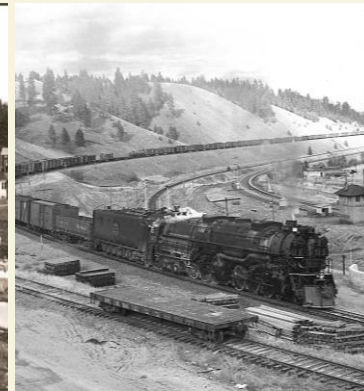
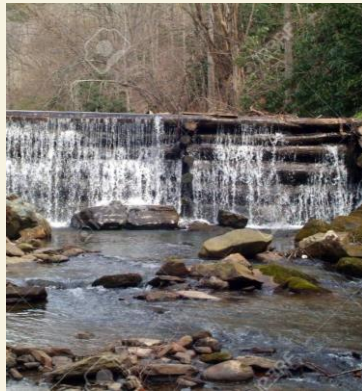
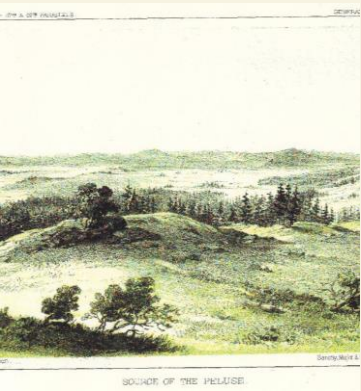
JUNE

Marshall Community Coalition restoration efforts. Flow is restored.

2017-23

JULY

Field is abandoned and flooding occurs. Creek goes dry once again.



Marshall Community Coalition (1990s – 2010s)

- Beverly Keating, Tom Stralser, and others.
- Flow issues, water quality, habitat
- Conservation, education efforts
- Riparian planting
- Student activities
- Monitoring
- Vegetation removal











US Fish and Wildlife Projects

1.3 miles stream channel enhancement

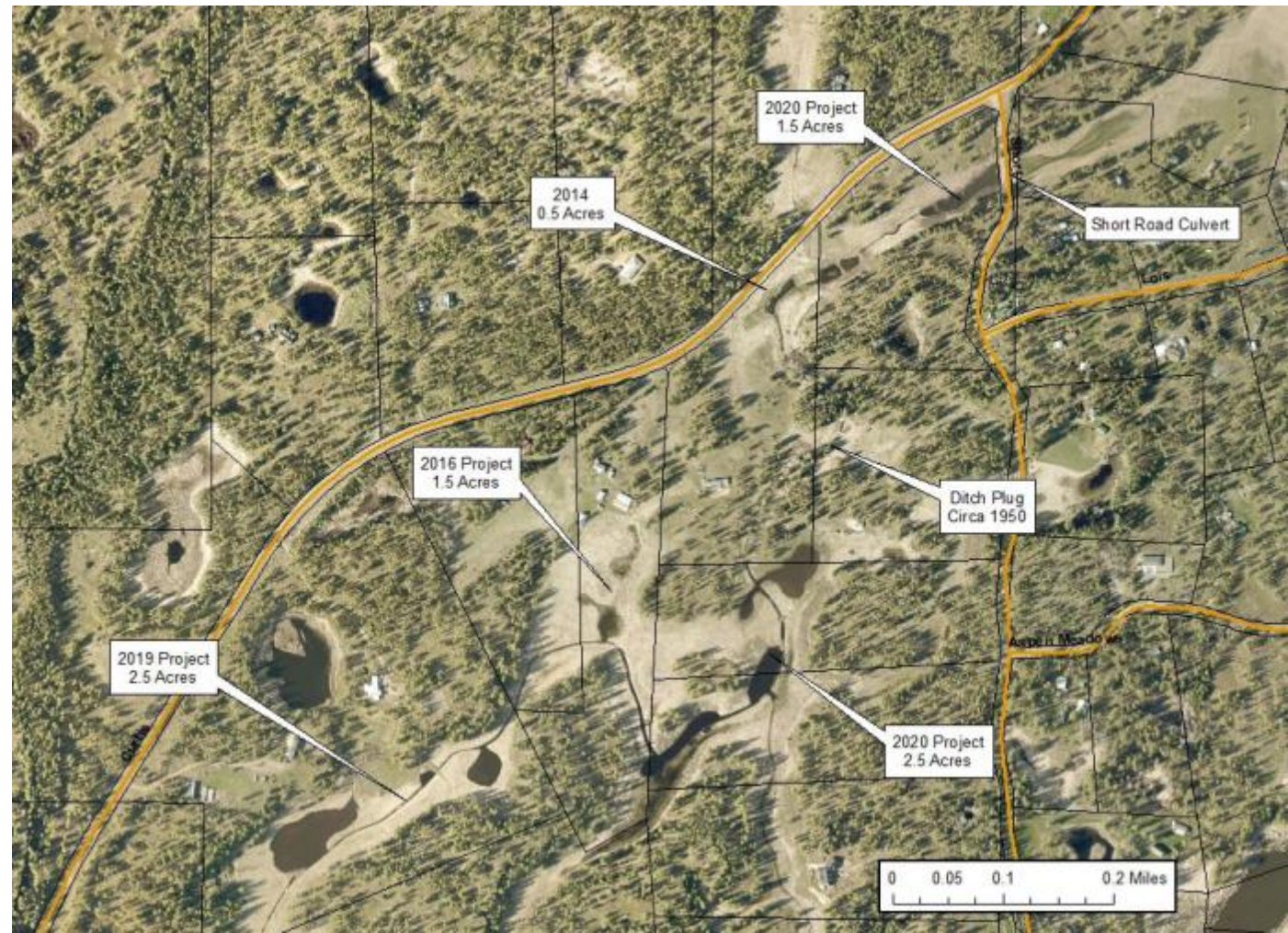
- 15 acres riparian revegetation
Approximately 8,000 trees and shrubs
- Native grass re-establishment

6.7 acres shallow excavations

- Generally, 1 to 2.5 feet max depth

1 Concrete control structure with adjustable riser and gate

- Set at height of legacy ditch plug
- Allows for water release after waterfowl nesting season (July 15

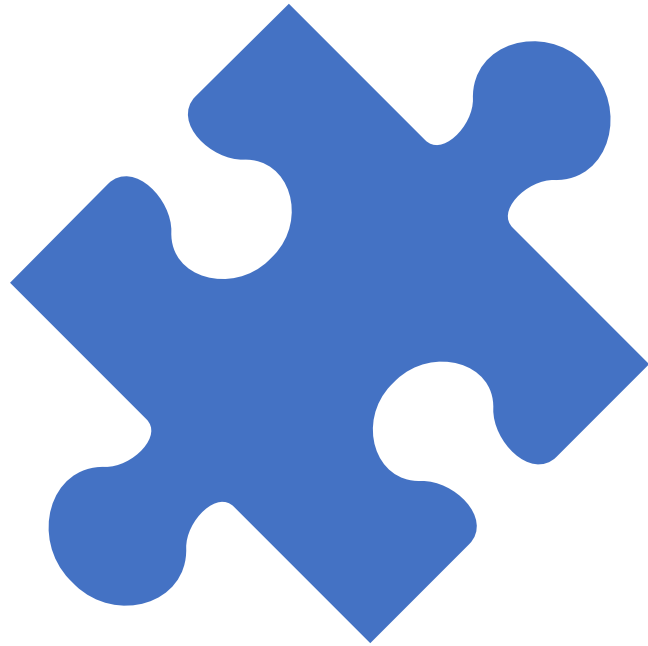




Today's Issue

Marshall Creek no longer has perennial base flow during the critical summer period (since 2018). This is affecting:

- Instream flow contributions to Hangman Creek
- Associated riparian habitat
- Local fisheries
- Water quality
- Senior water rights



What has been done so far?

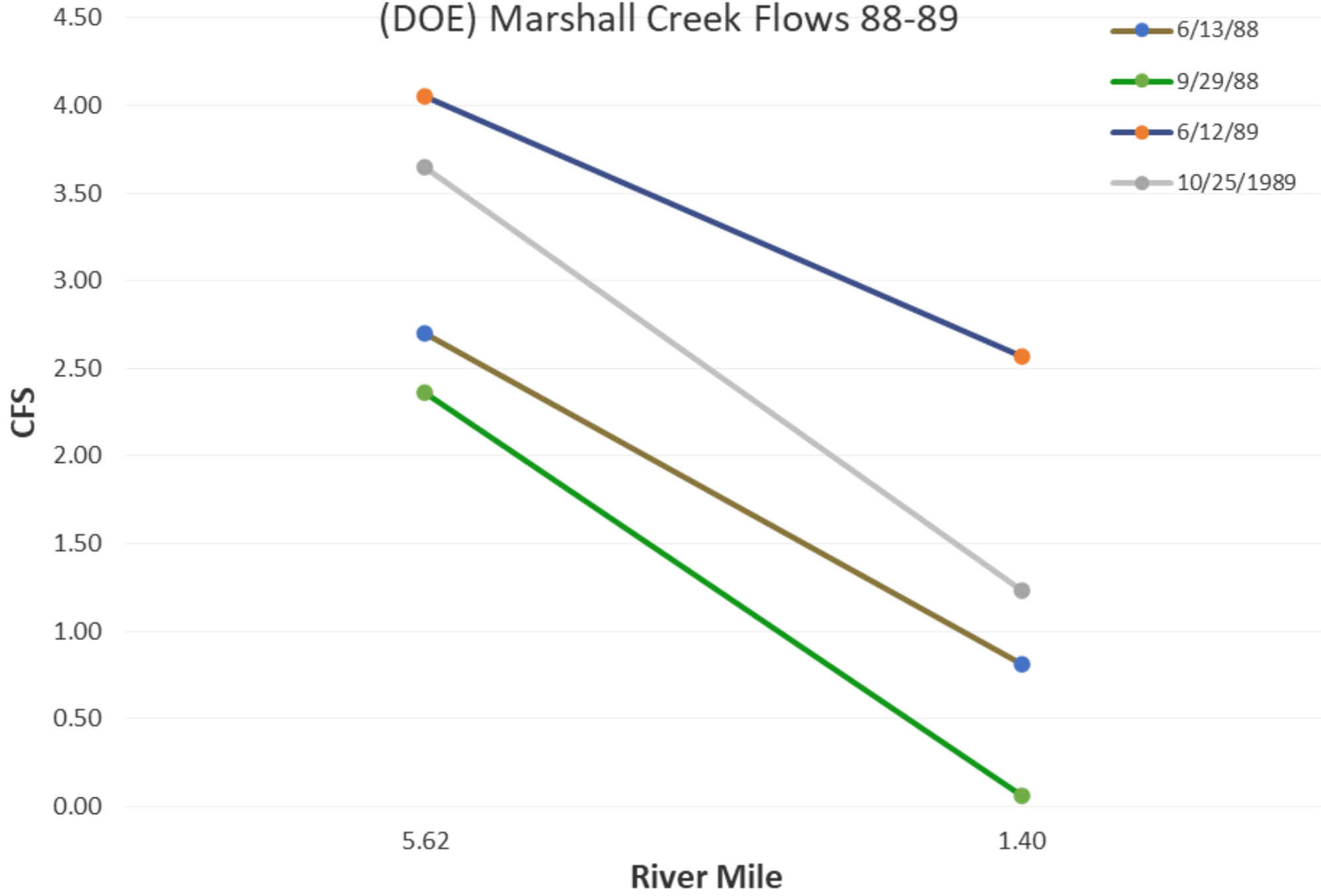
- Local agency staff getting phone calls from residents.
- Only pieces of the puzzle provided.
- SCD made some site visits and realized the complexity of the issue. We convened a meeting.
- SCD has worked with the County, WDFW, and Ecology.
- SCD conducted a hydrological investigation (seepage run) on Marshall Creek in late September.
- We contacted residents, conducted interviews, and gathered more information and data.



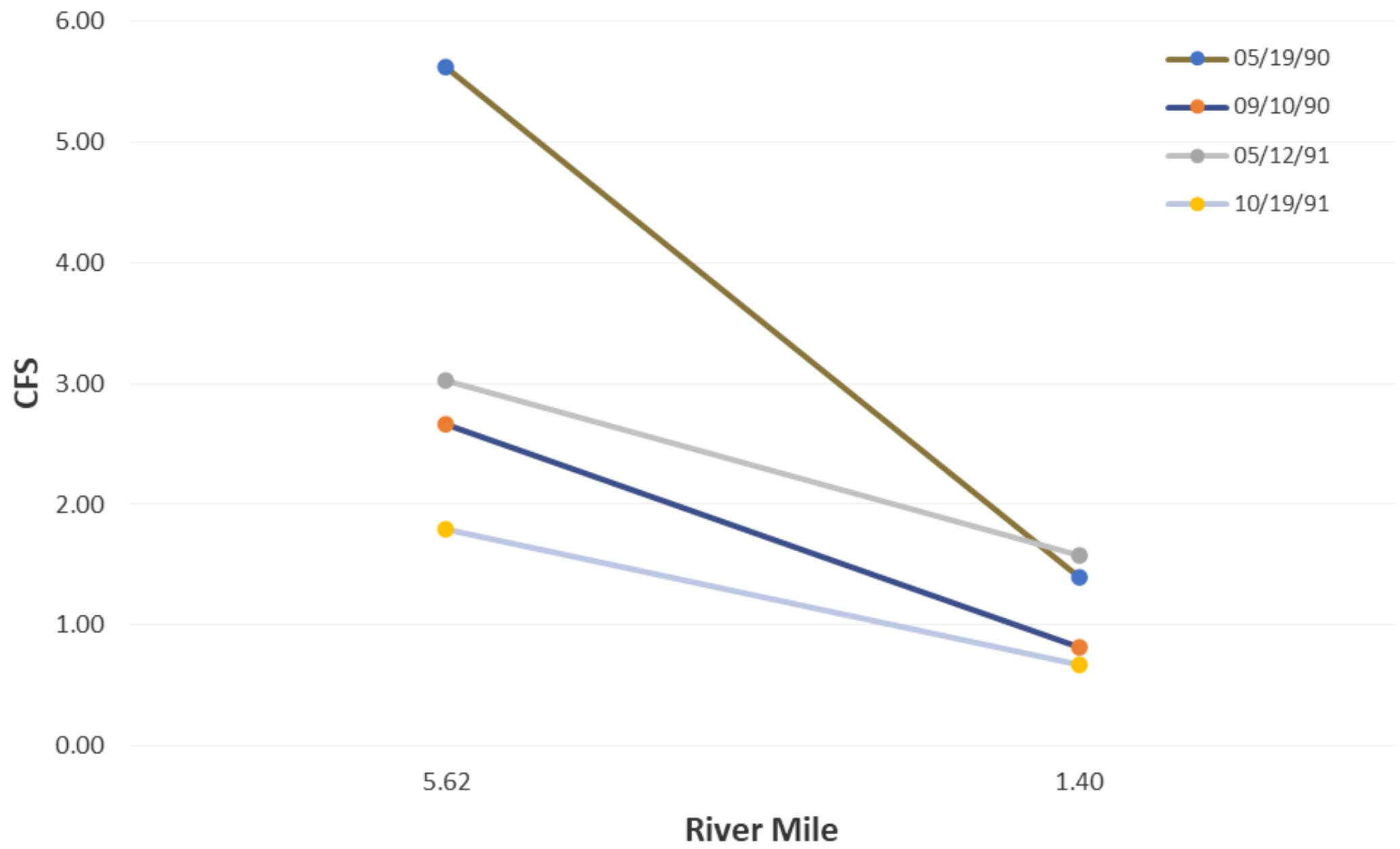
Data Review

- SCD flow data
- Ecology flow data
- Stralser flow data
- WDFW fisheries data
- Marshall Creek Coalition

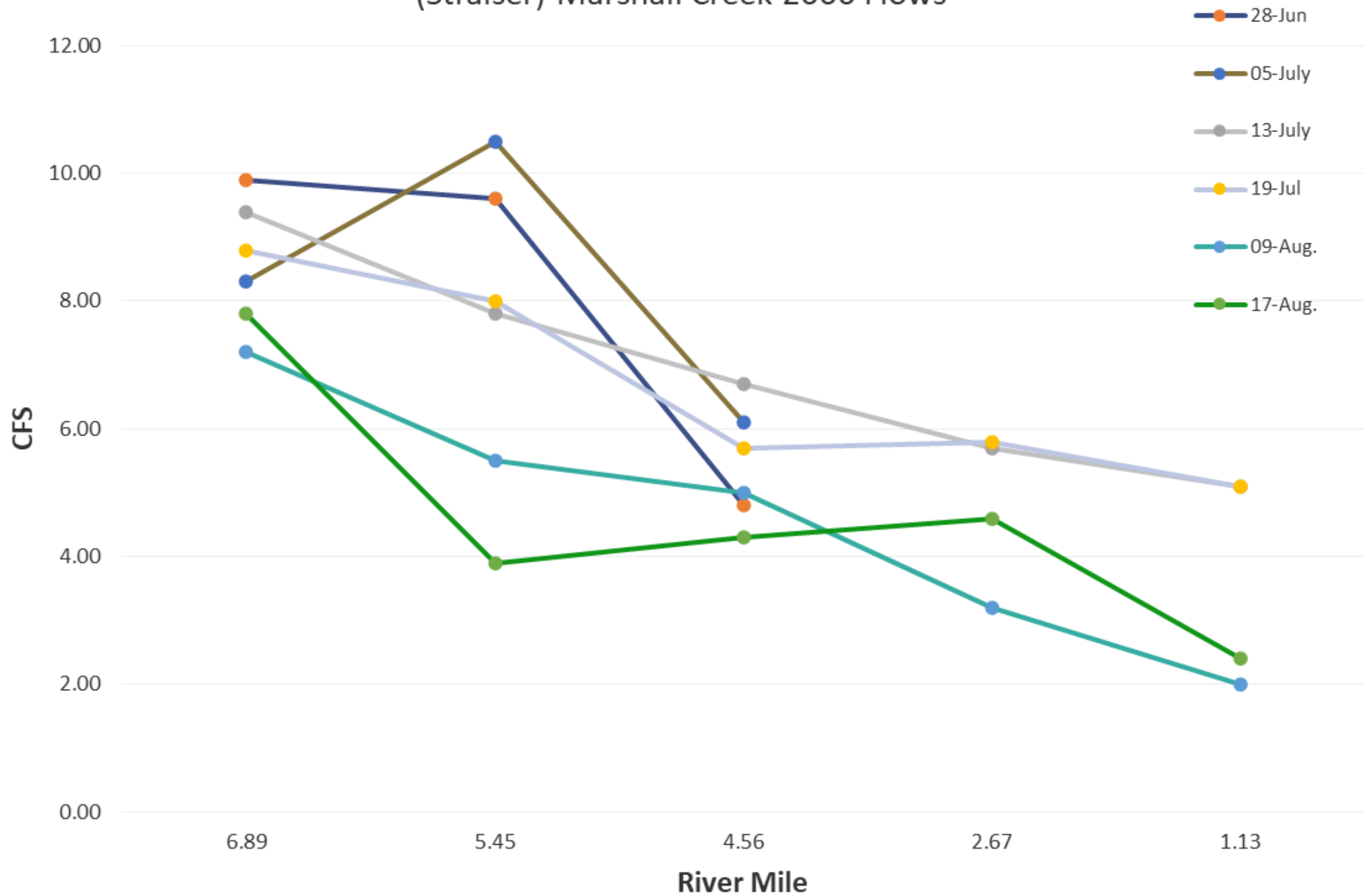
(DOE) Marshall Creek Flows 88-89



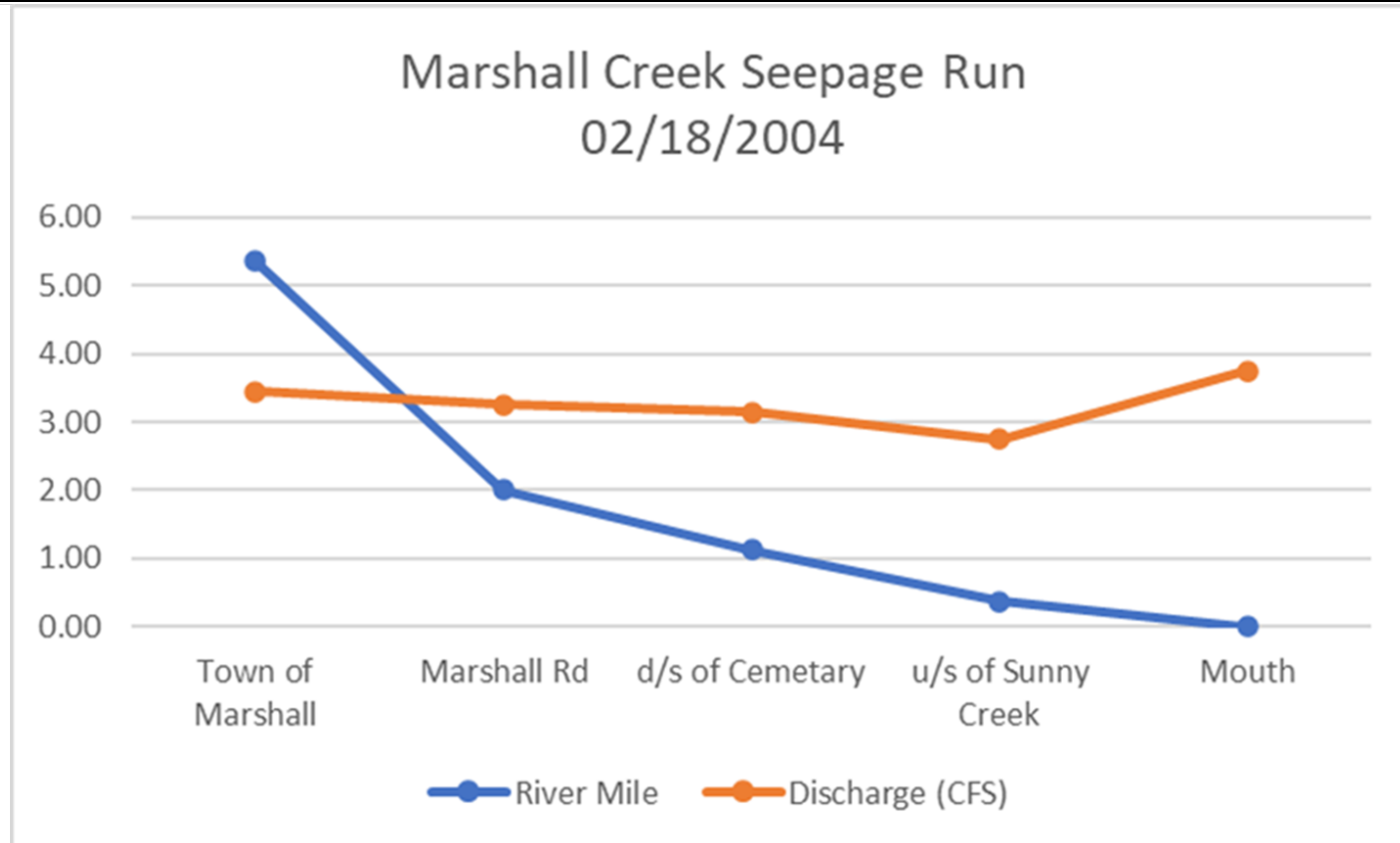
(DOE) Marshall Creek Flows 90-91



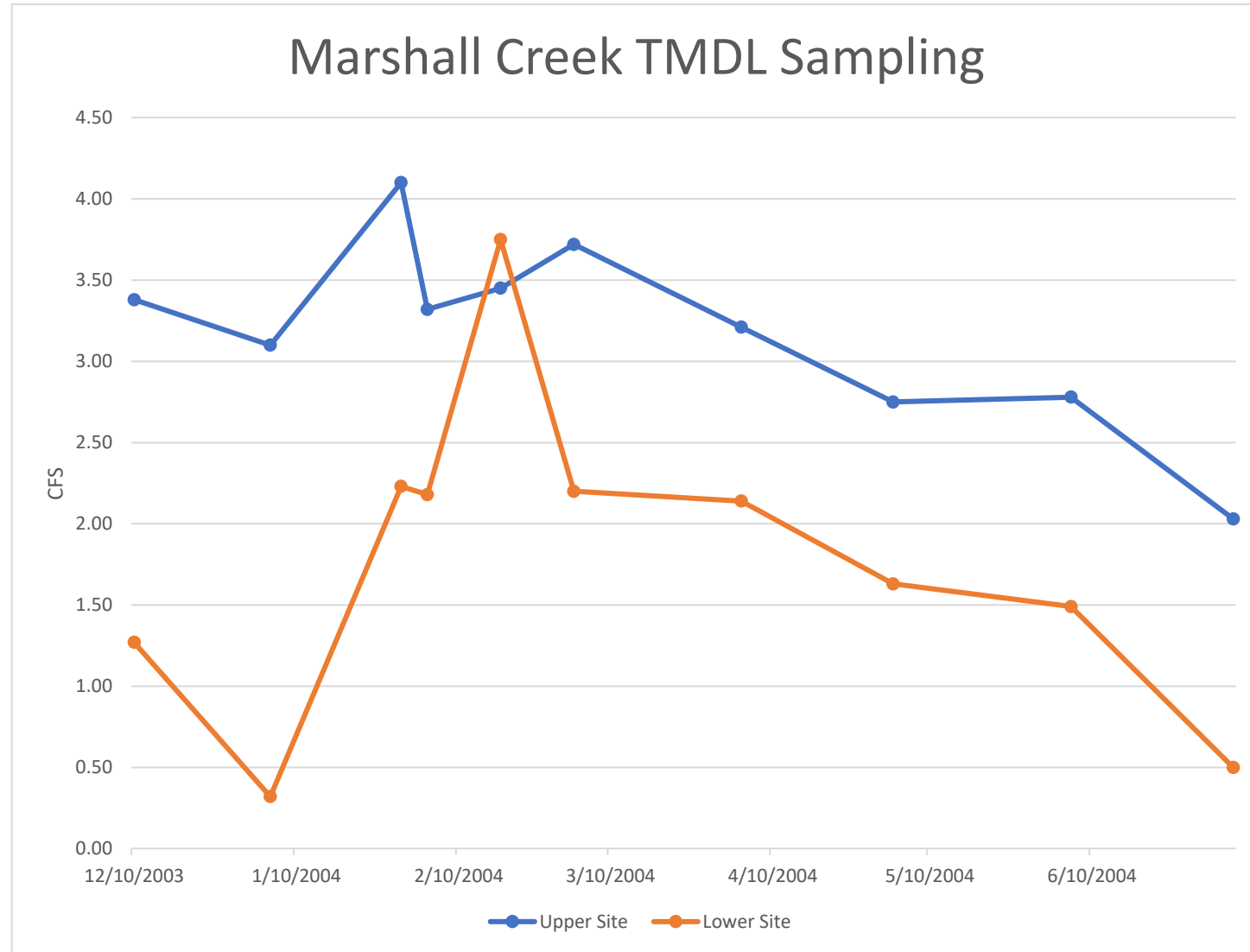
(Stralser) Marshall Creek 2000 Flows



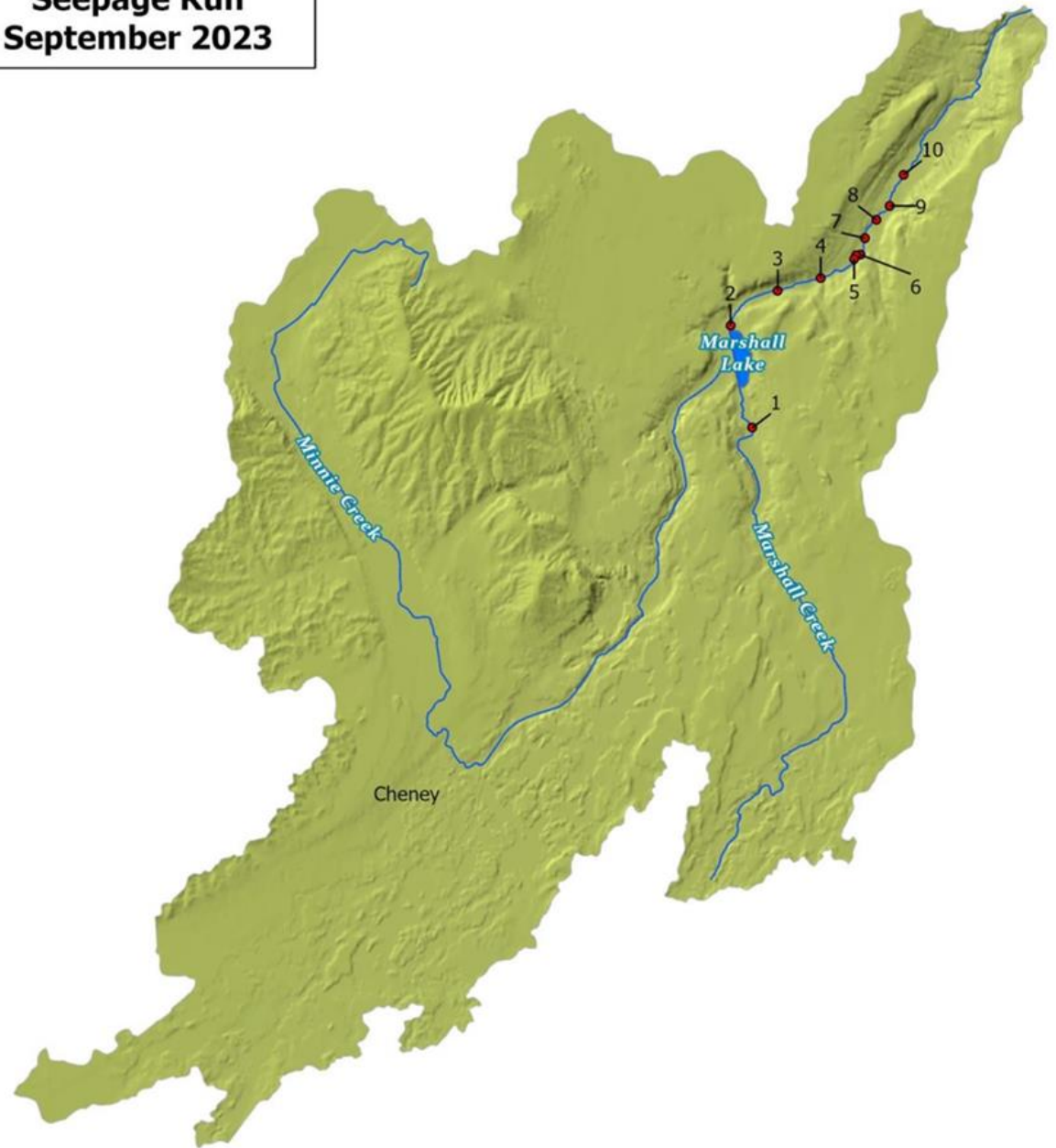
Marshall Creek Seepage Run 02/18/2004		
Sample Site		
	River Mile	Discharge (CFS)
Town of Marshall	5.36	3.45
Marshall Rd	2.00	3.26
d/s of Cemetary	1.13	3.15
u/s of Sunny Creek	0.37	2.75
Mouth	0.00	3.75



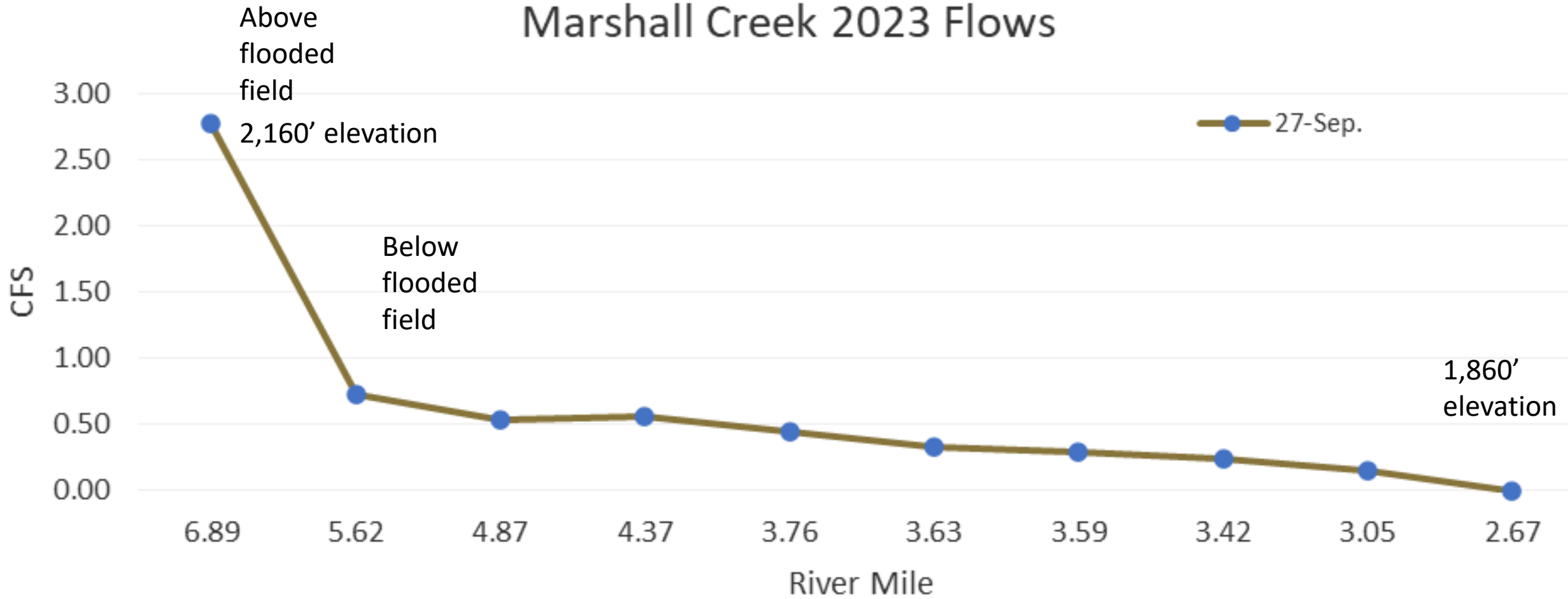
Marshall Creek TMDL Sampling		
Sample Date		
	Upper Site	Lower Site
12/10/2003	3.38	1.27
01/05/04	3.10	0.32
01/30/04	4.10	2.23
02/04/04	3.32	2.18
02/18/04	3.45	3.75
03/03/04	3.72	2.20
04/04/04	3.21	2.14
05/03/04	2.75	1.63
06/06/04	2.78	1.49
07/07/04	2.03	0.50



**Marshall Creek
Seepage Run
September 2023**



Marshall Creek 2023 Flows

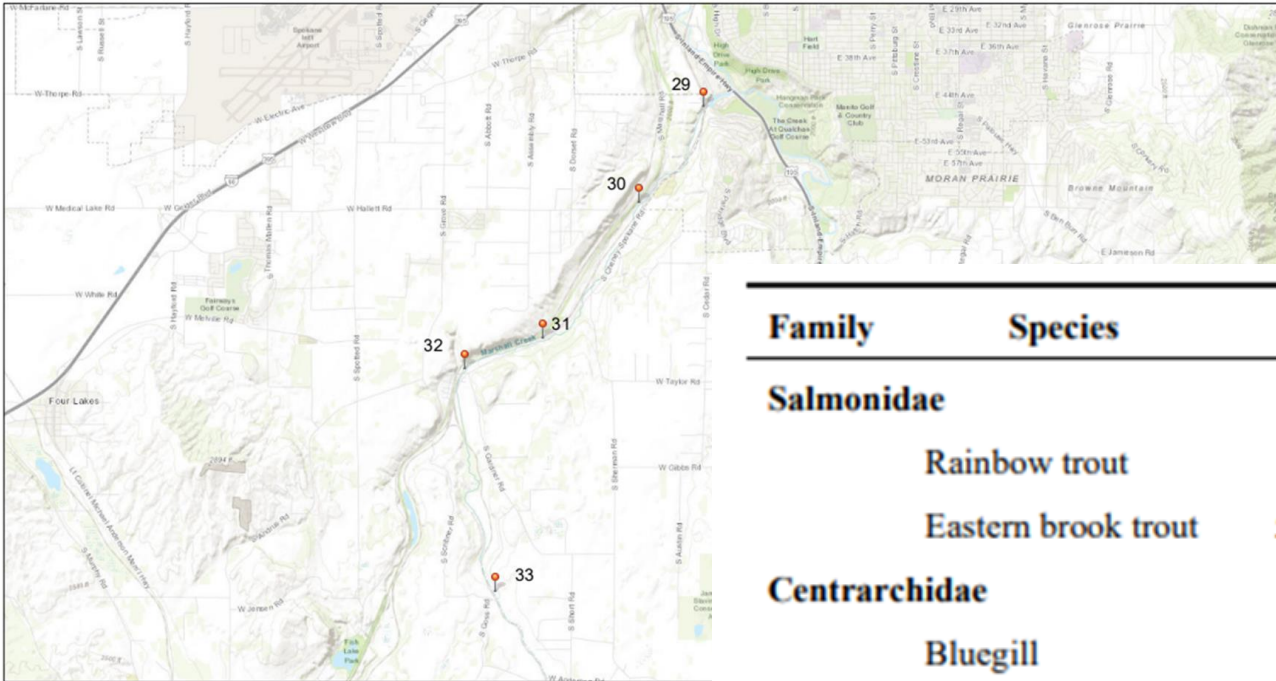


**W. Marshall Creek Lane to Hangman Creek confluence is approx. 360' difference in elevation

WDFW Fisheries Data

(Lee, 1998-2002)

Chuck Lee's Thesis

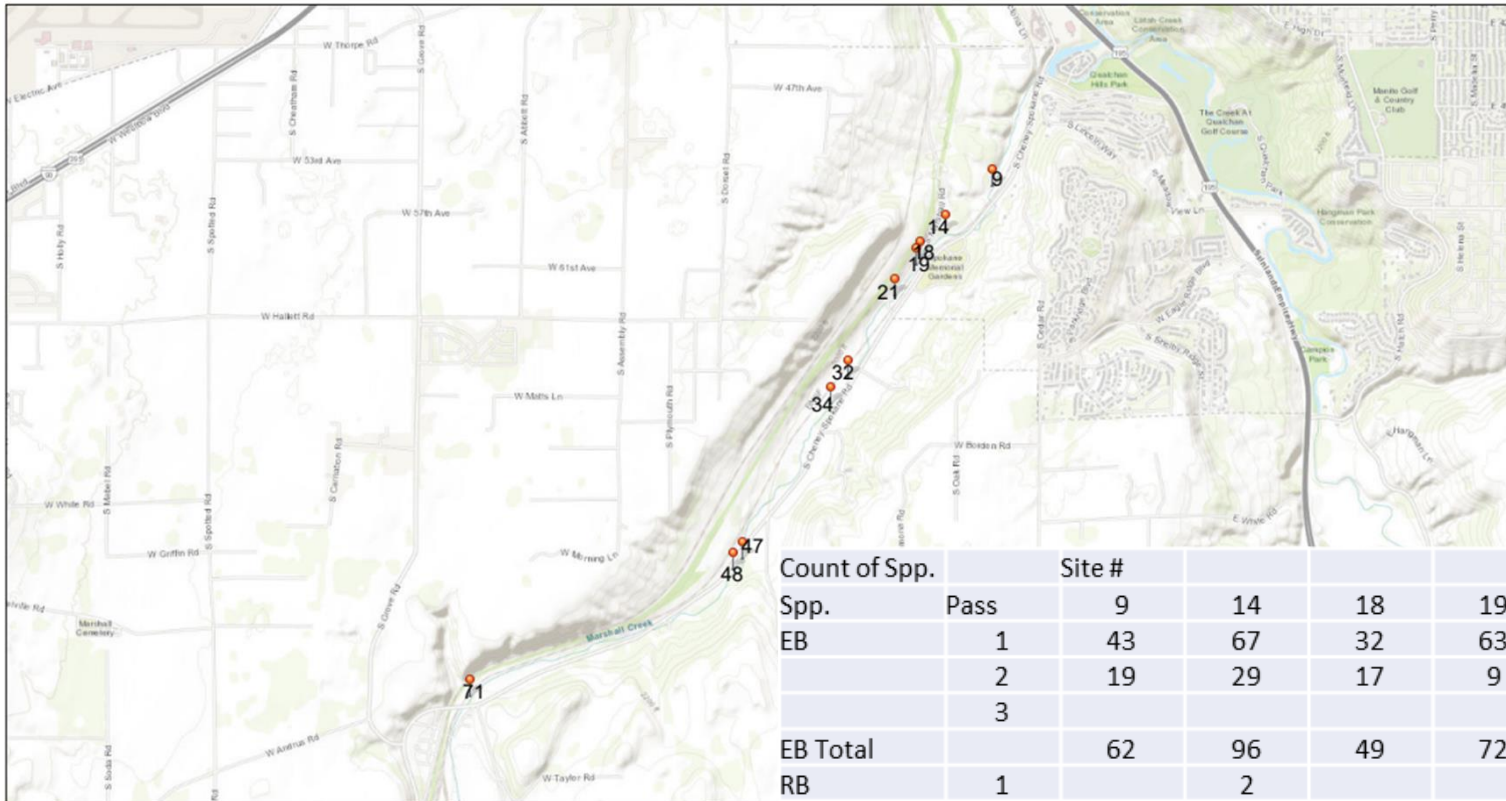


Family	Species	n	% RA	CPUE	Range of TL (mm)	Mean TL (±SD)
Salmonidae						
	Rainbow trout	160	21.7	57	49-308	101 (47)
	Eastern brook trout	575	78.0	206	35-317	114 (47)
Centrarchidae						
	Bluegill	1	0.1	>1	71	71
	Pumpkinseed	1	0.1	>1	-	-
Grand Totals		737	100.0	264	35-317	111 (48)

WDFW Fisheries Data

(McLellan, 2004)

McLellan 2004



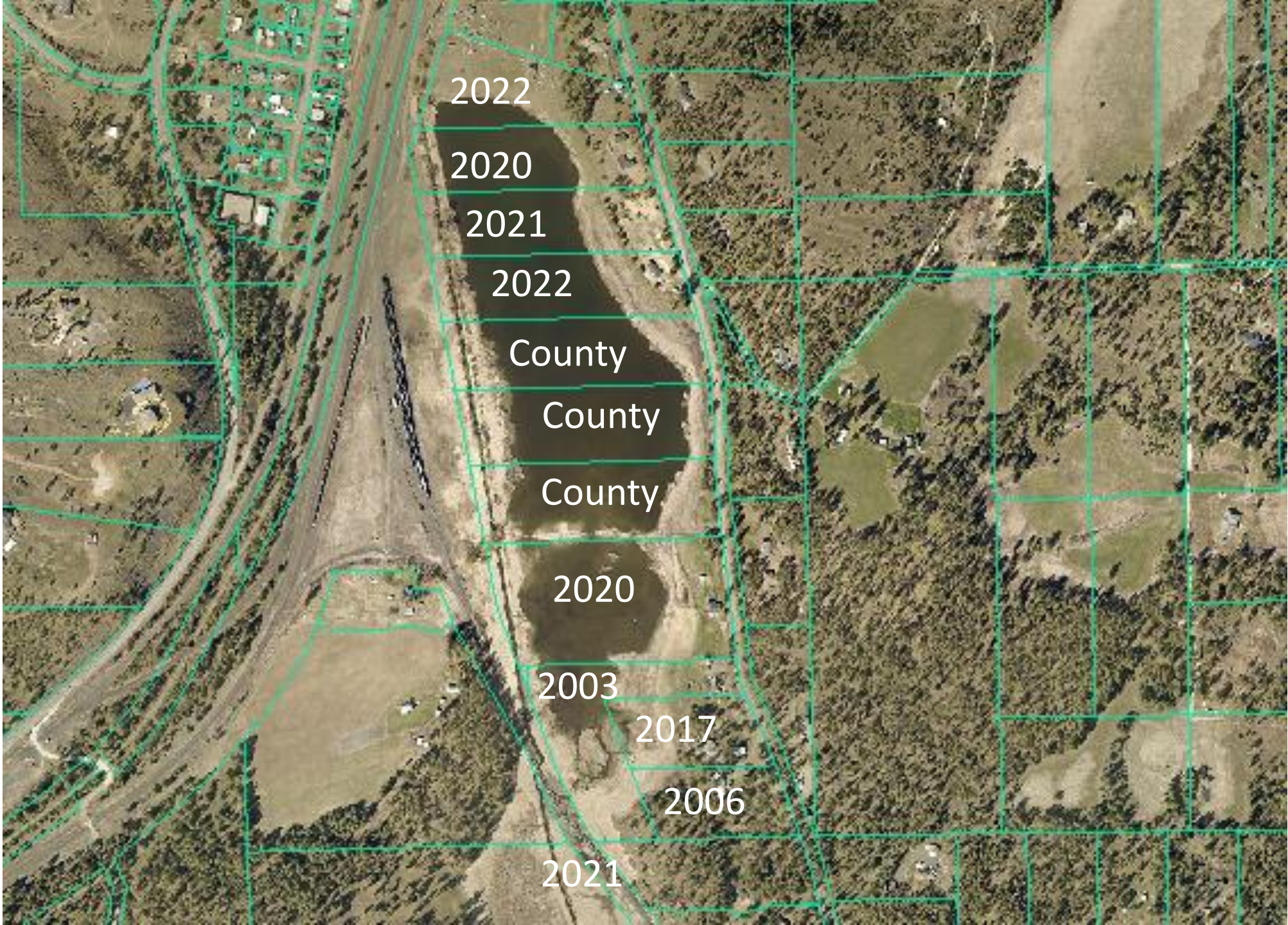
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Count of Spp.	Site #											Grand Total
	Pass	9	14	18	19	21	32	34	47	48	71	
EB	1	43	67	32	63	105	112	138	132	116	90	898
	2	19	29	17	9	68	53	36	35	40	48	354
	3					43		13			27	83
EB Total		62	96	49	72	216	165	187	167	156	165	1335
RB	1		2			1	1	11	38	12	11	76
	2							8	8	2	2	20
	3											3
RB Total			2			1	1	22	46	14	13	99
Grand Total		62	98	49	72	217	166	209	213	170	178	1434

When Did Issue Begin? Why?

- 2016/17 – Horton had issues with water in field and basement. Neighbors helped by digging ditch at end of field to drain it.
- The Horton field went into foreclosure, was divided and sold by County. The drainage ditch was no longer maintained, and the field began to fill with water. Lots sold as waterfront property?
- Railroad replaced the trestle upstream and removed the gravel berm. Water could freely migrate across field.
- Ponds and Diversions? Are they an issue?





2022

2020

2021

2022

County

County

County

2020

2003

2017

2006

2021



New Trestle – Berm Removed



Old Trestle – Gravel Berm

- Peters – berm installed with help of Railroad to block cattle movement

Marshall Lake Site – historical review

12/1985 – Earliest available



07/1995



Marshall Lake Site – historical review

08/2003

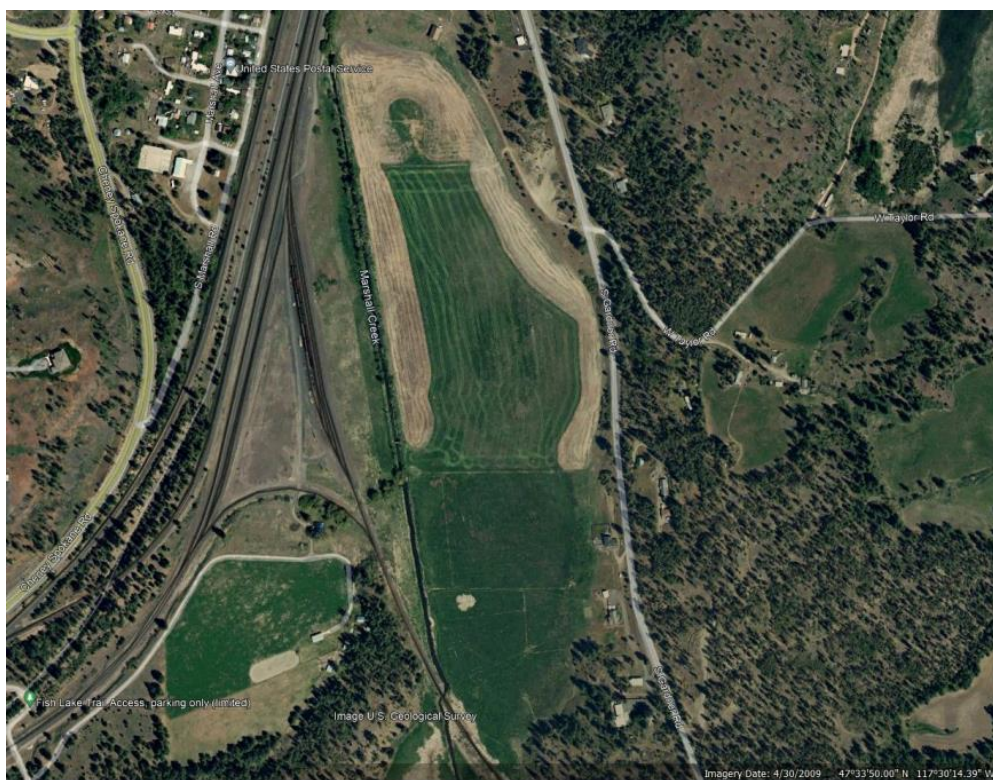


07/2005



Marshall Lake Site – historical review

05/2009

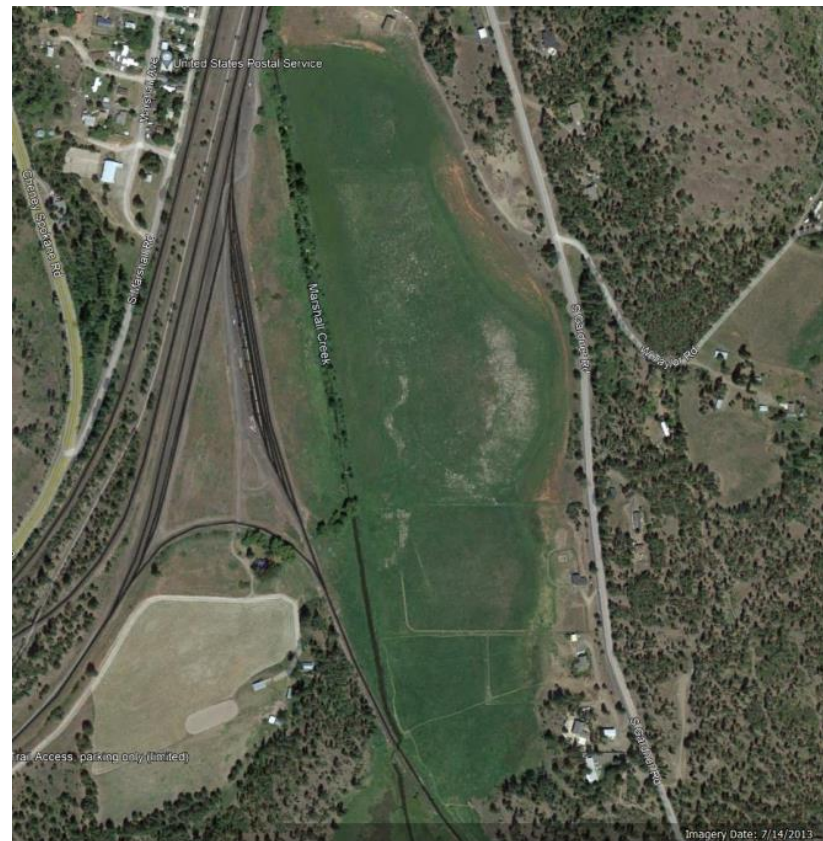


09/2011

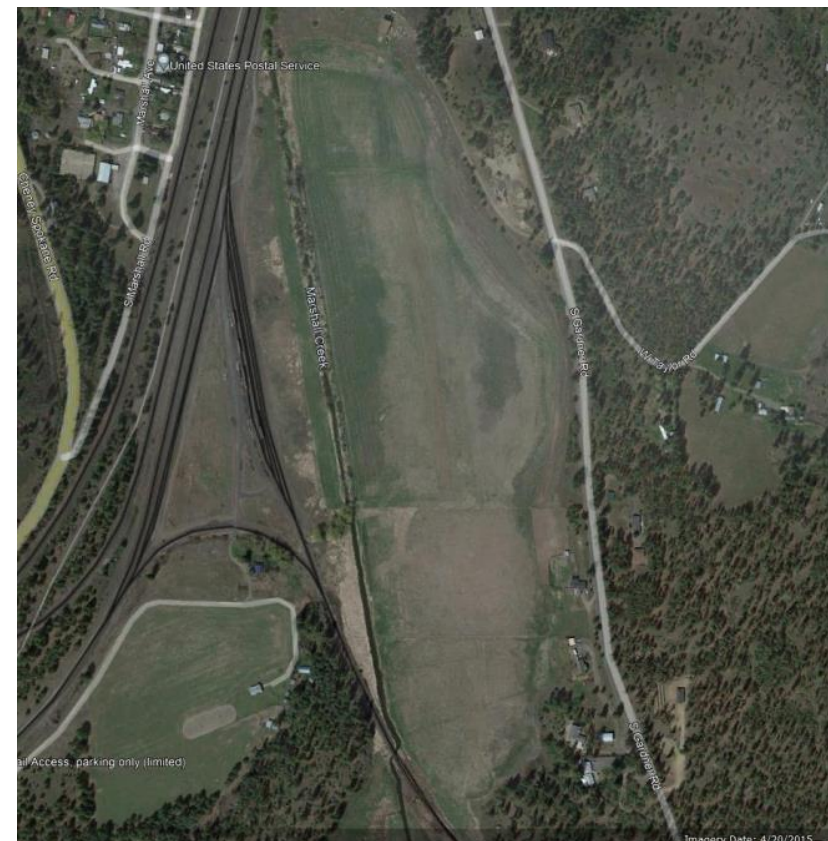


Marshall Lake Site – historical review

07/2013



04/2015



Marshall Lake Site – historical review

04/2016



06/2017



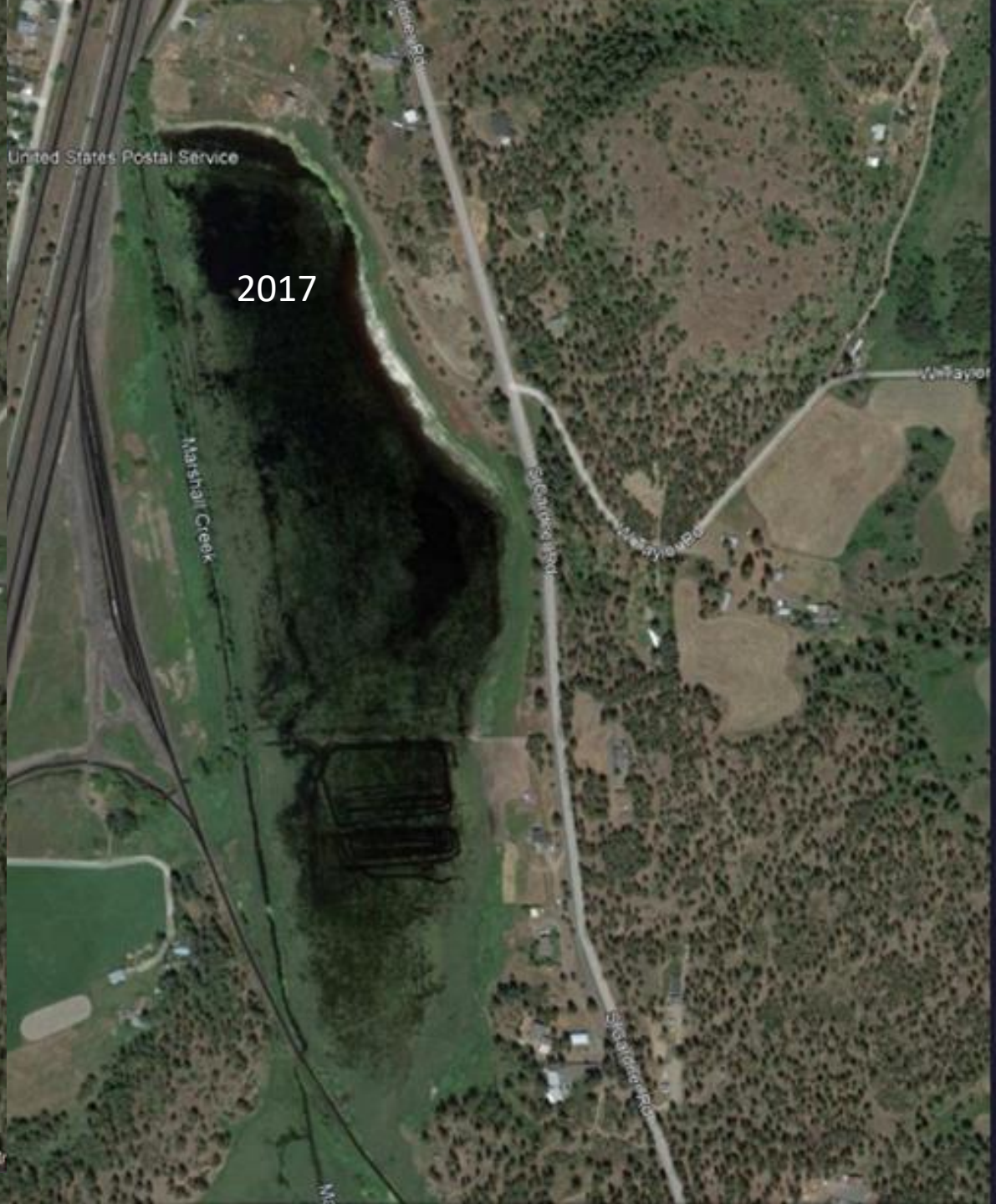
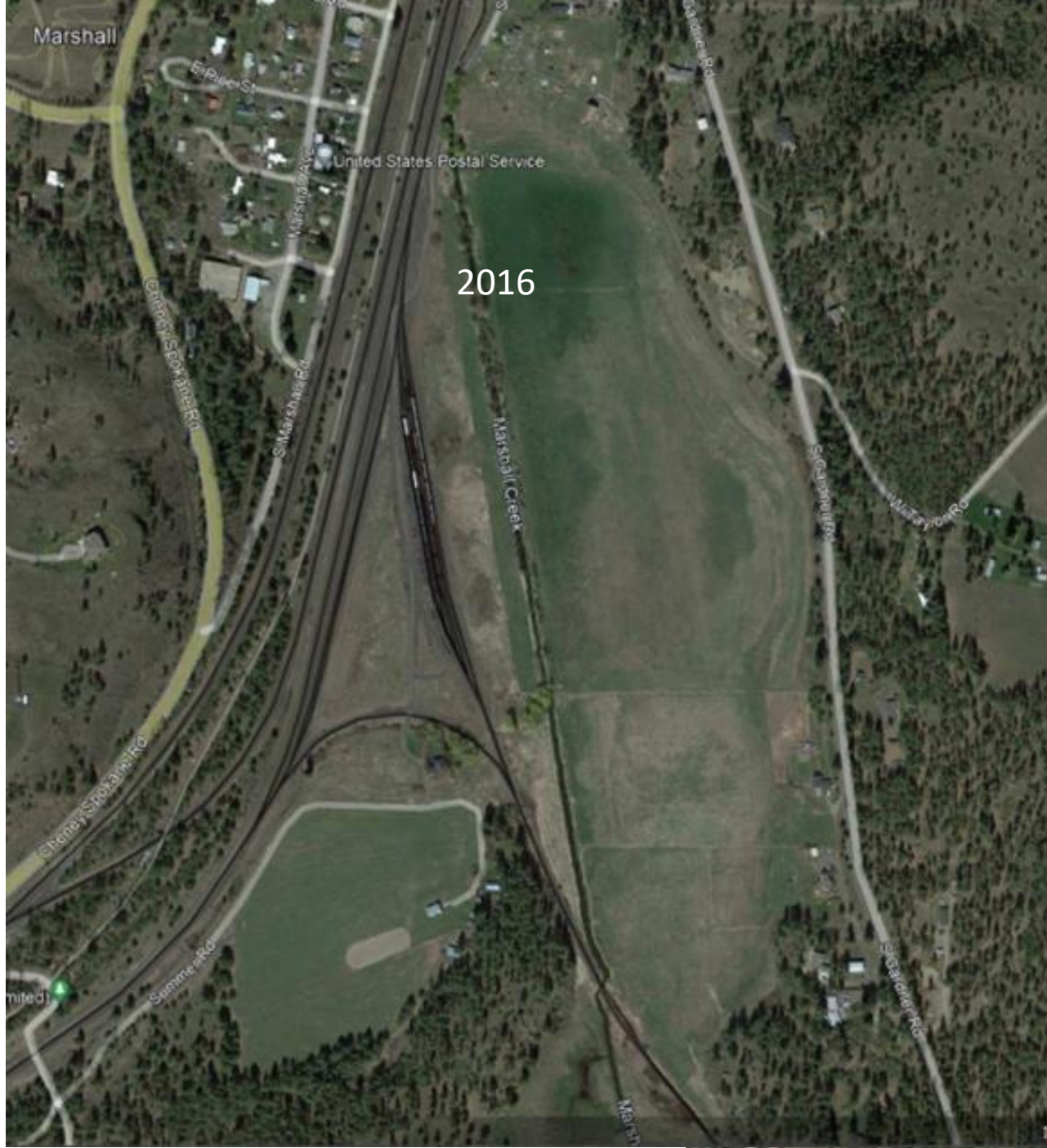
Marshall Lake Site – historical review

07/2019

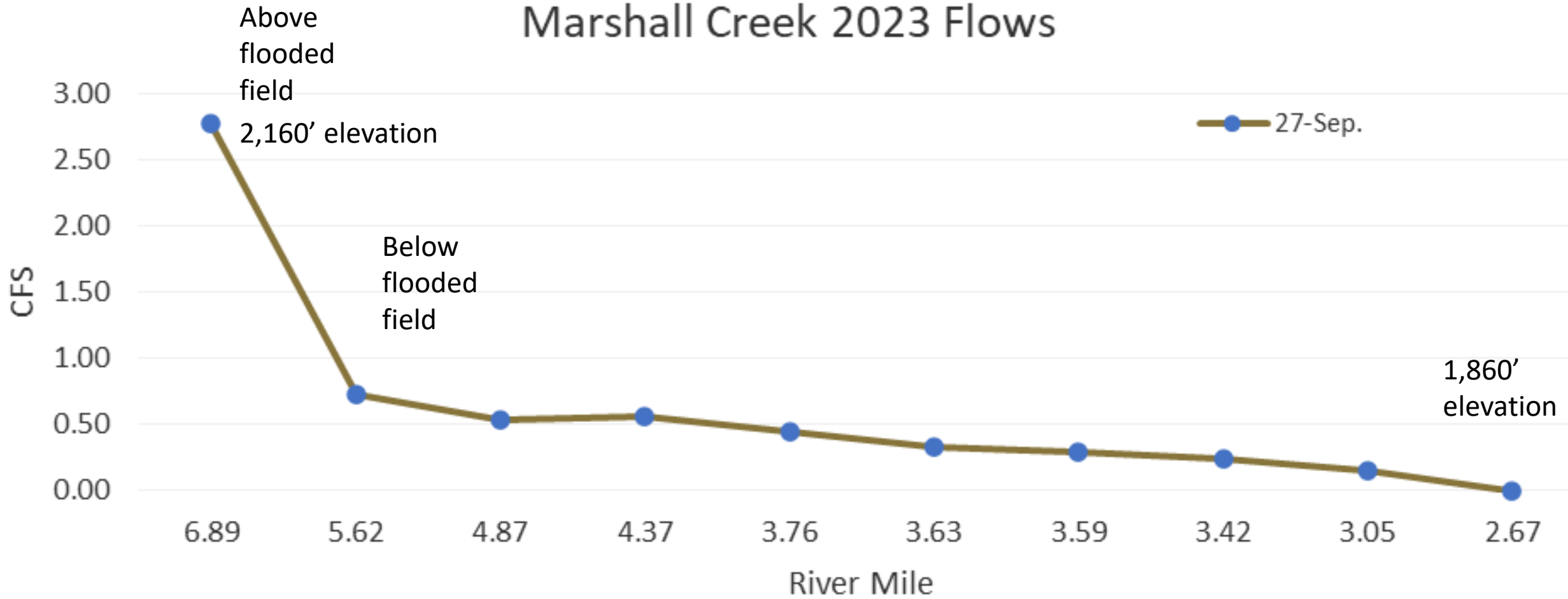


04/2023





Marshall Creek 2023 Flows



**W. Marshall Creek Lane to Hangman Creek confluence is approx. 360' difference in elevation

Marshall Creek Diversions, Dams, and Ponds

- 4 Ponds (up to .5 ac)
- 4 diversions (rock)
- 1 other dam



Solutions/Actions

An aerial photograph showing a narrow, winding river or stream that meanders through a vast, flat landscape of brownish, marshy vegetation. The terrain appears to be a wetland or a flooded field, with the water channel cutting through the dense, low-lying plants. The overall color palette is dominated by earthy browns and tans, suggesting a dry or late autumn setting.

Short-term

- **Vegetation removal – watercress, Golden willows**
- **Obtain permission to open clogged ditch in flooded field**
- **Investigate legality of dams/diversions/ponds/withdrawals (Ecology)**
- **Review and clean out culverts (County)**
- **Conduct hydrological investigation of current flow conditions(SCD)**



Long-term

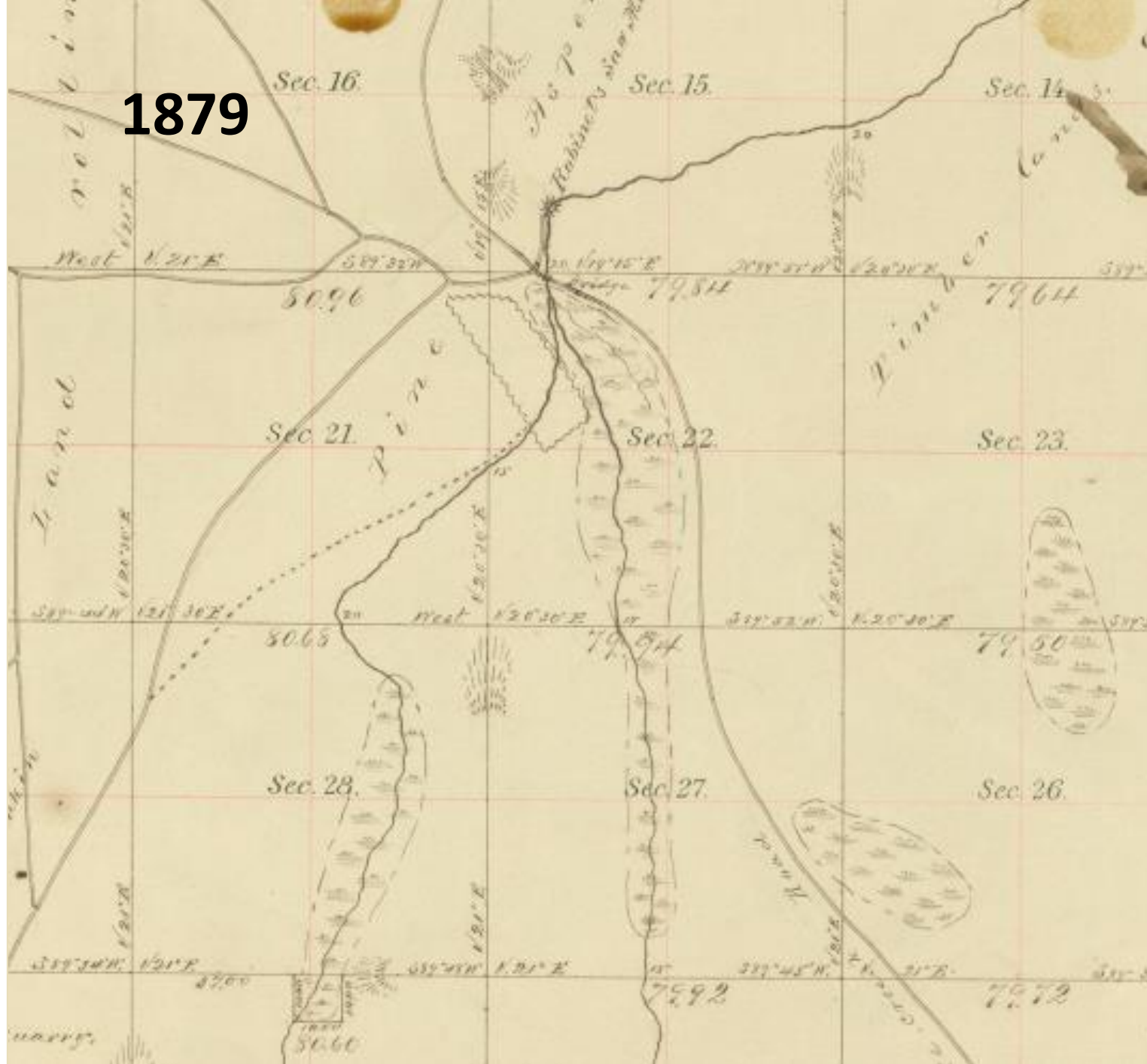
Research funding sources for feasibility study and implementation project.

- 1. Ecology Streamflow Restoration Grant (Jan-Feb)**
 - Provide alternatives for local consideration**
- 2. Ecology 319/Centennial Grant (Oct)**

Contact upstream landowners in flooded field to determine potential for cooperation/coordination of projects

- 1. Obtain permission to open clogged ditch in flooded field.**
- 2. Other potential configurations (wetland/stream complex)**
- 3. Educate landowners on future of the current flooded field.**

1879



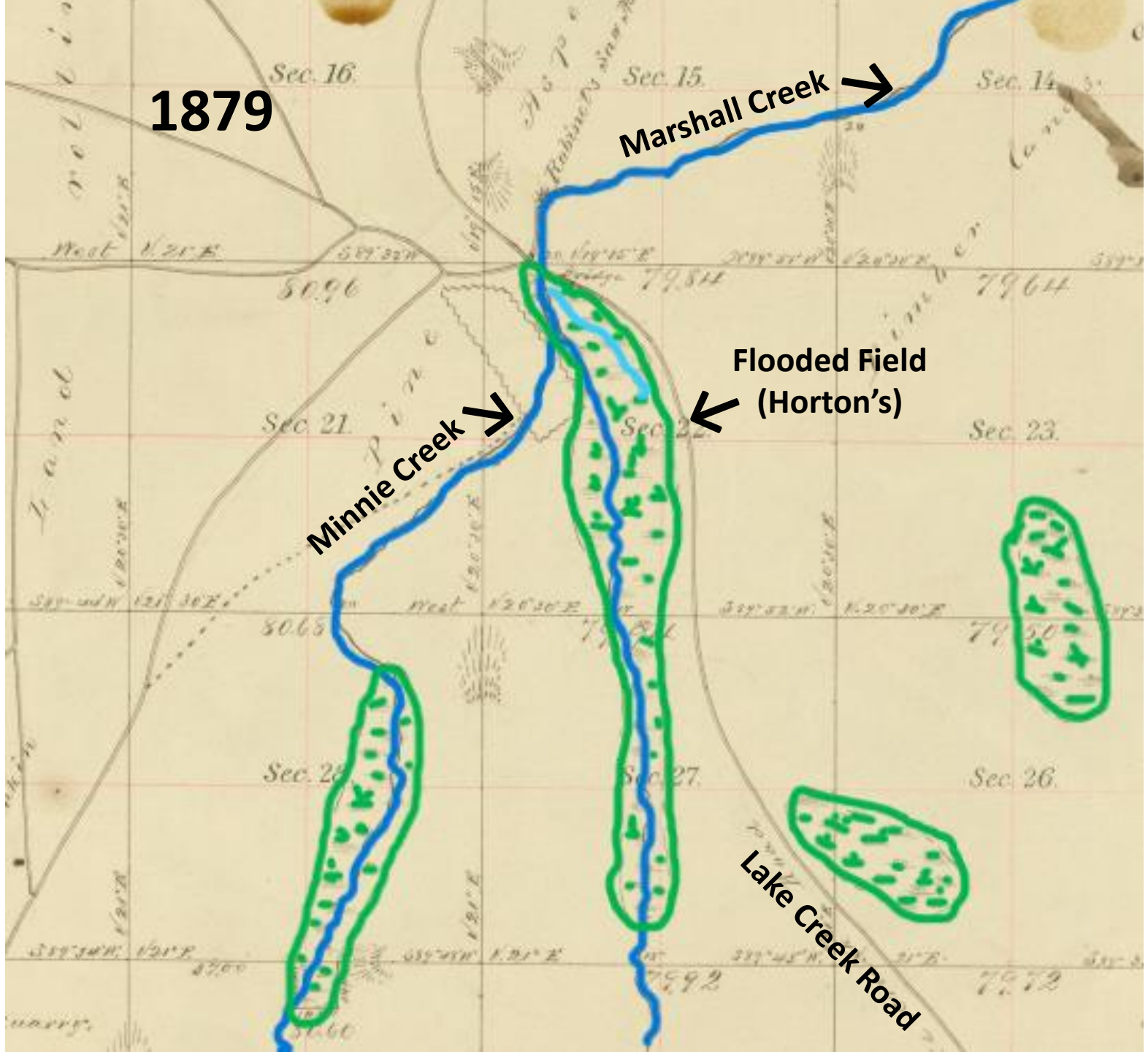
1879

Marshall Creek →

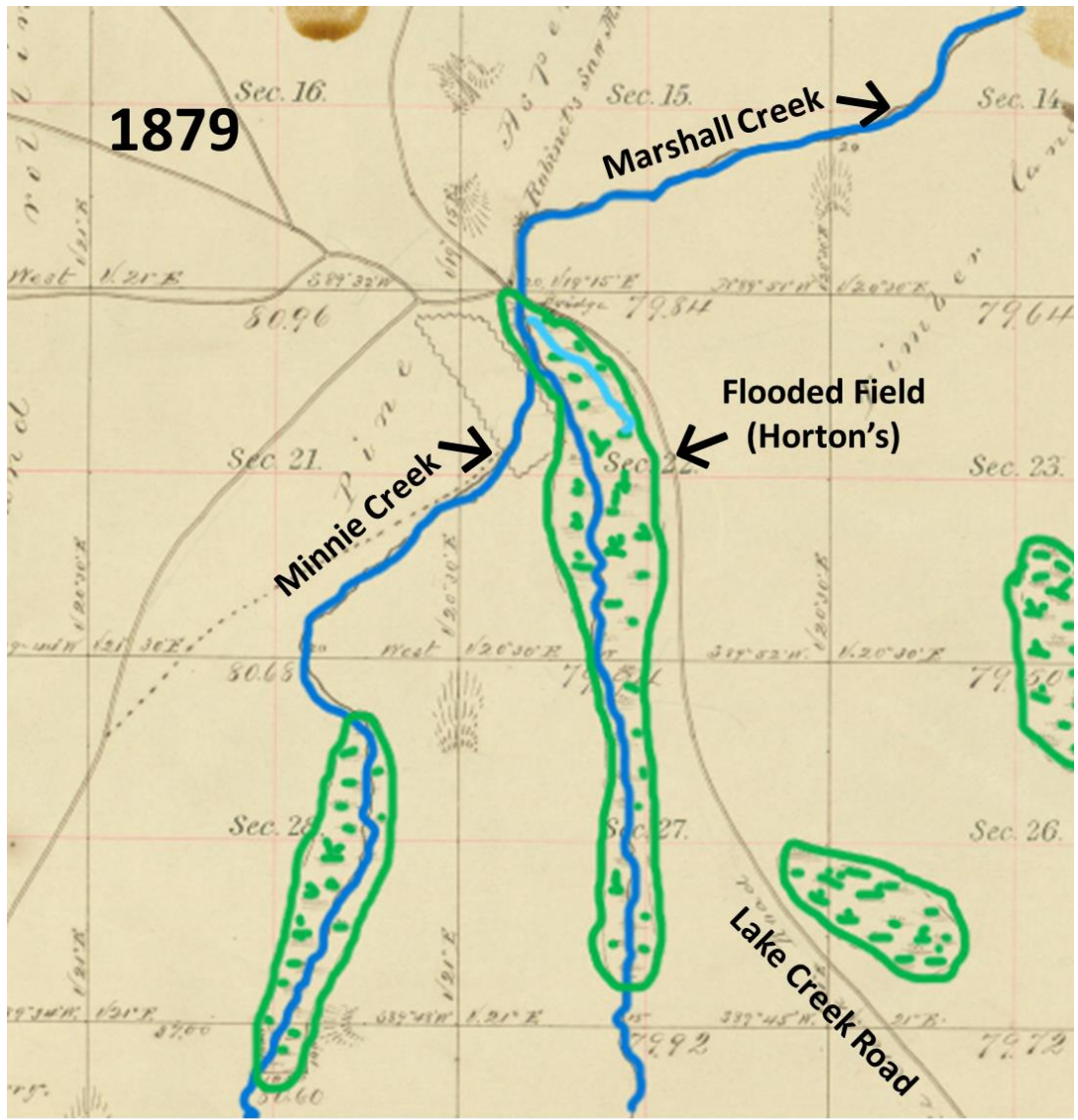
→ Minnie Creek

← Flooded Field (Horton's)

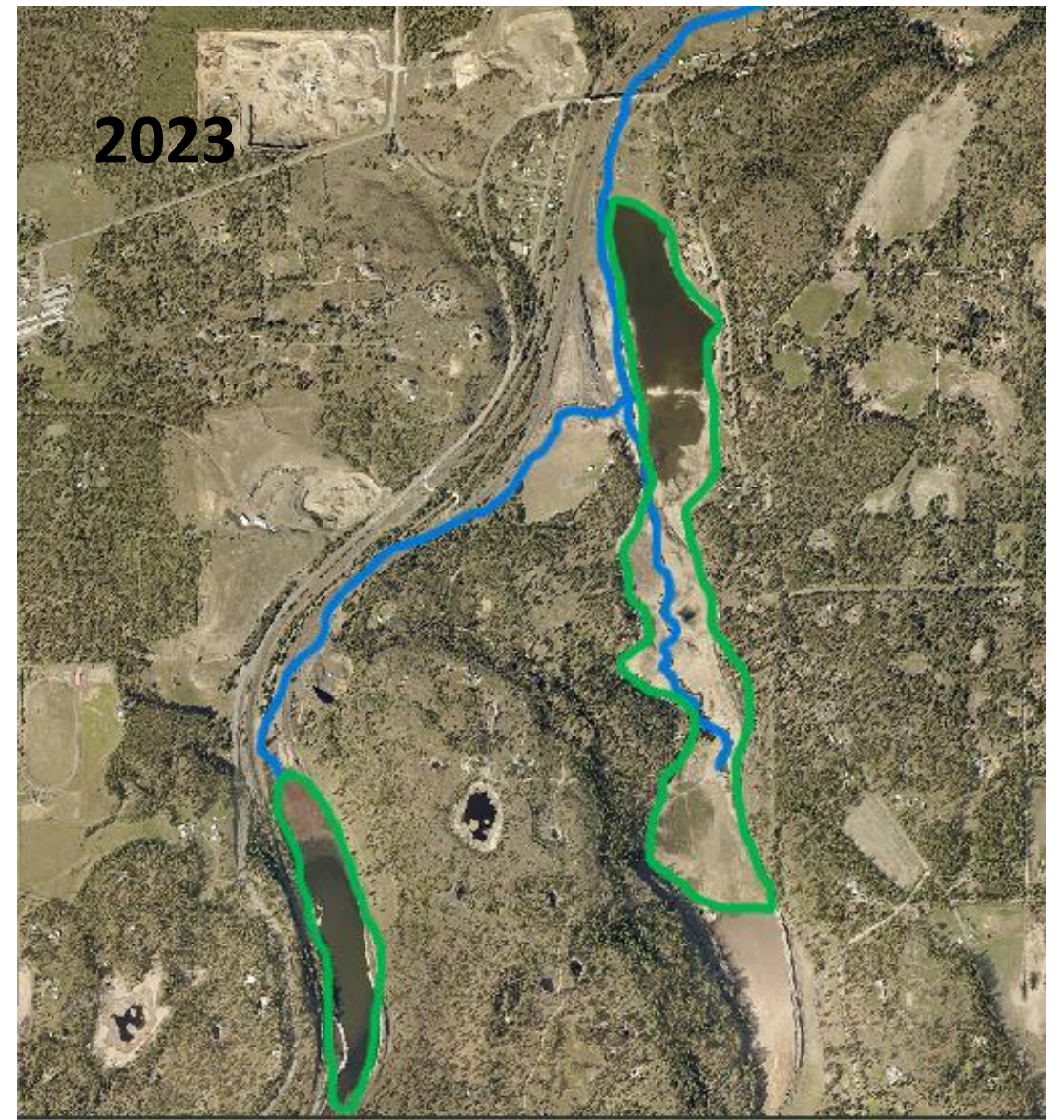
Lake Creek Road



1879



2023



Panel and Questions

- Walt Edelen – Spokane Conservation District, WR Manager
- Derek Vilar – Spokane County Water & Environmental Programs
- Jaime Short – Ecology, Section Manager (Water Resources)
- Kile Westerman – WA Fish and Wildlife, Biologist
- Mitch Redfern – Ecology, Water Quality Program
- Bruce Kincaid – Coeur d’Alene Tribe, Biologist
- Brian Walker – US Fish & Wildlife, Turnbull Wildlife Refuge
- Casey Flanagan – Spokane Tribe of Indians, Water & Fish Manager