

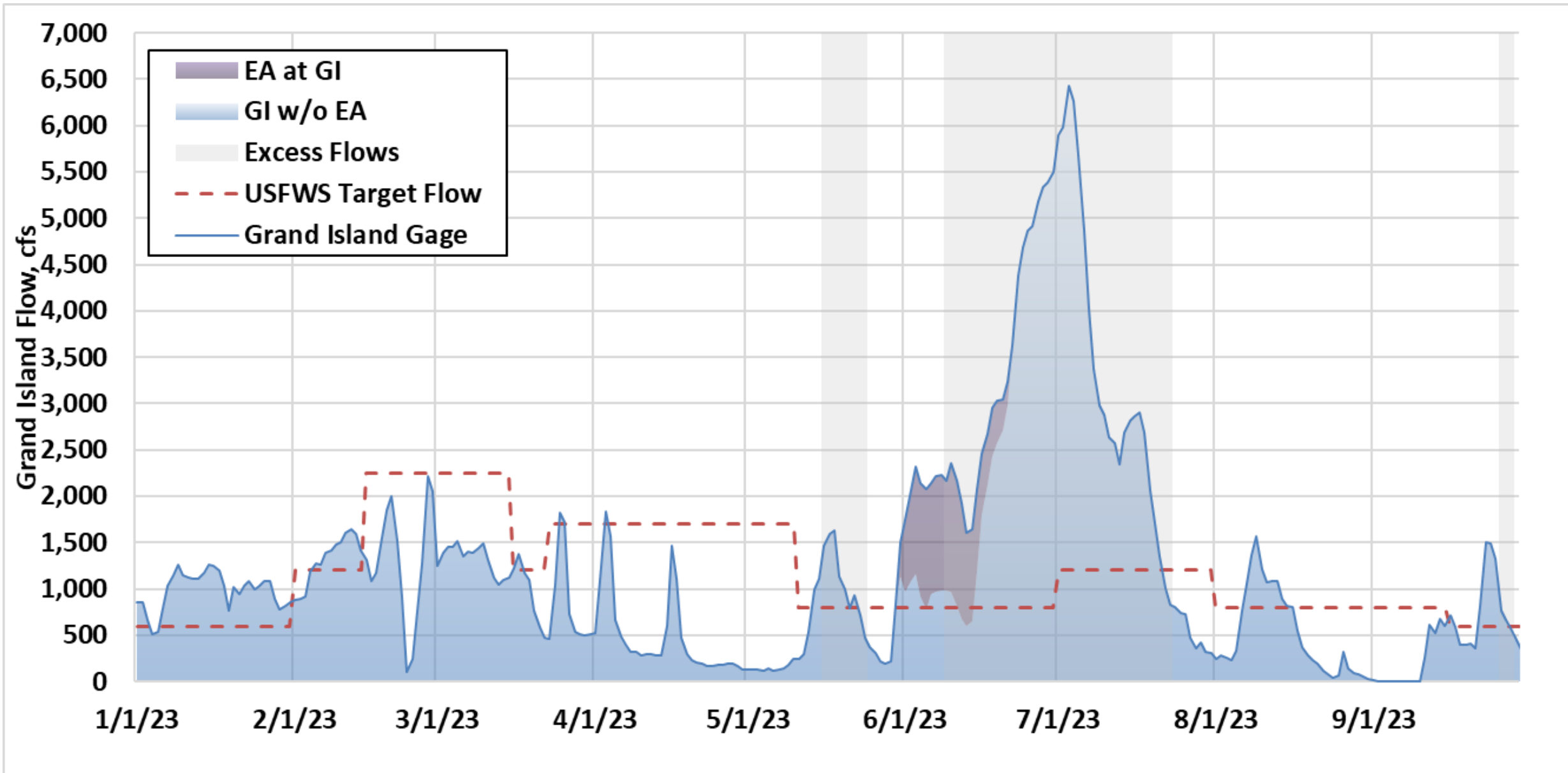
Platte Basin Hydrology Update

PRRIP Water Advisory Committee

October 24, 2023

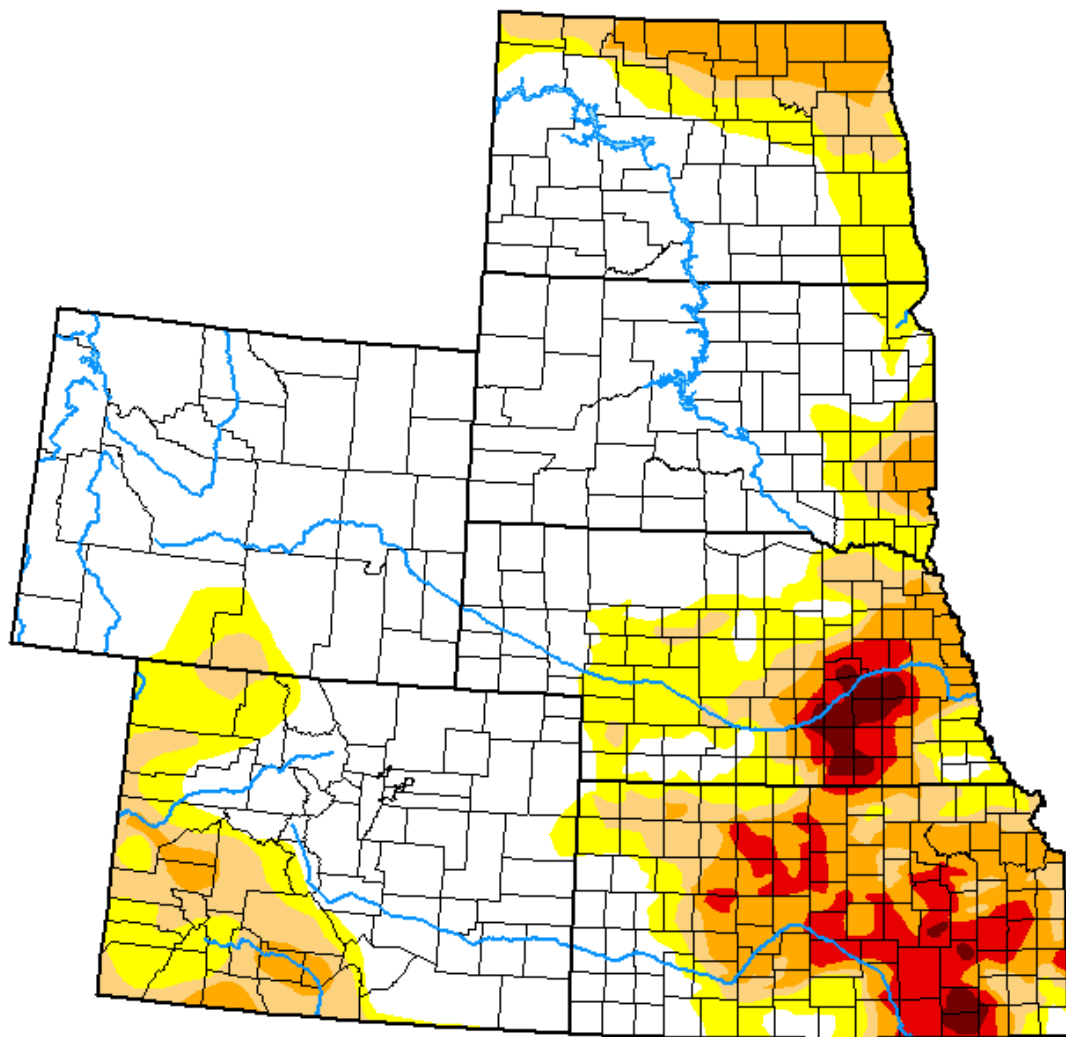
Ed Weschler, E.I.

Flow updates

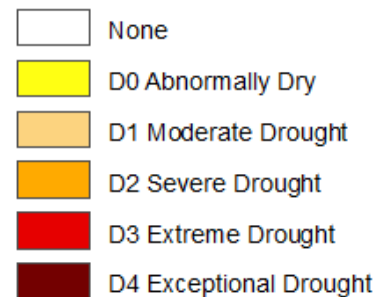


U.S. Drought Monitor High Plains

October 17, 2023
(Released Thursday, Oct. 19, 2023)
Valid 8 a.m. EDT



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

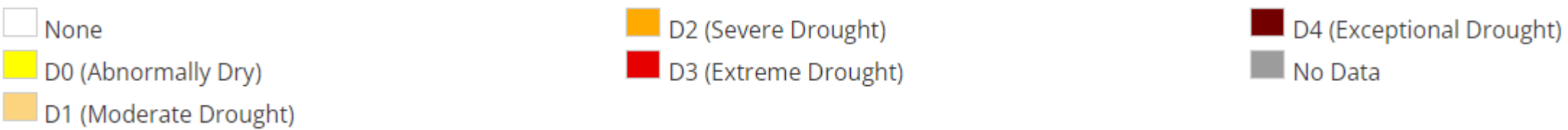
Author:

Rocky Bilotta
NCEI/NOAA

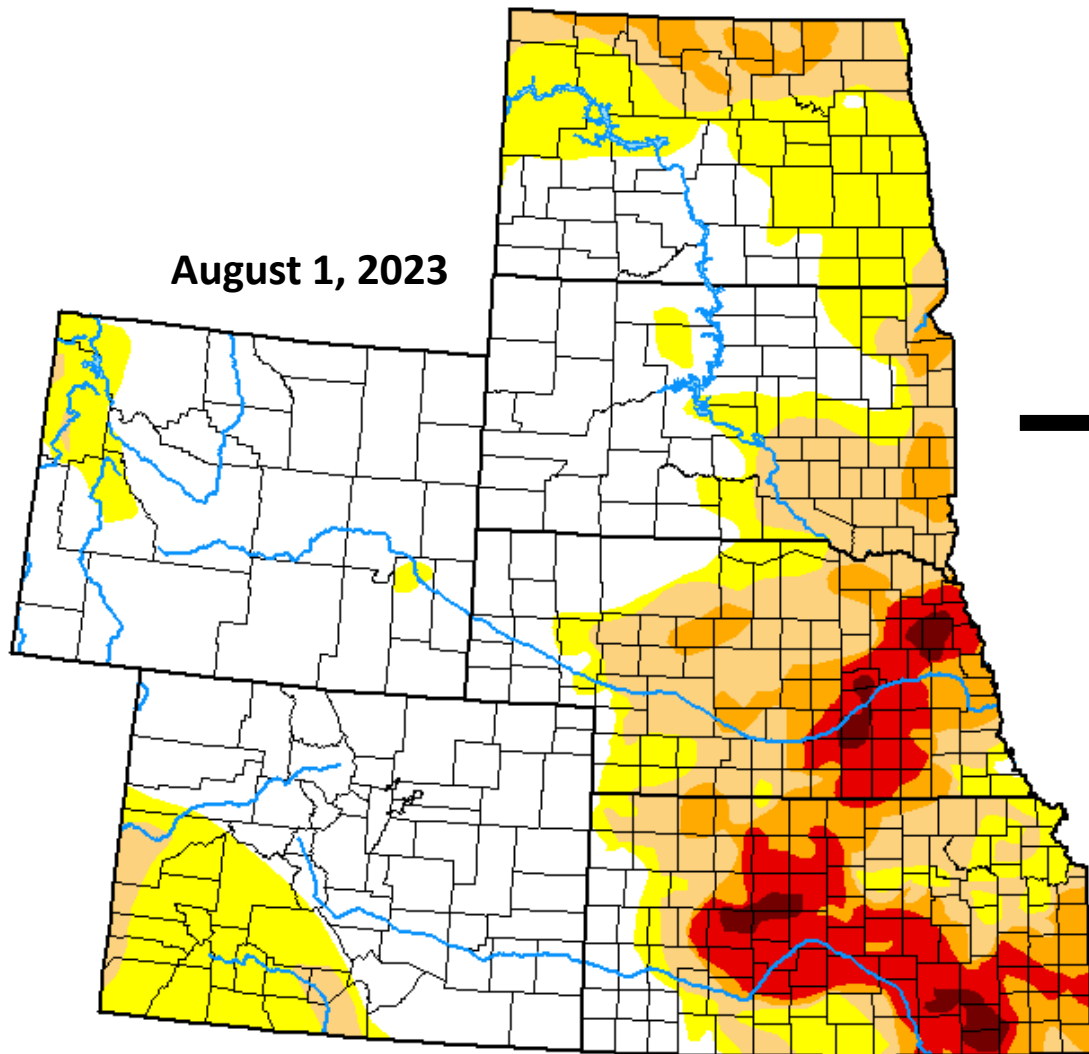


droughtmonitor.unl.edu

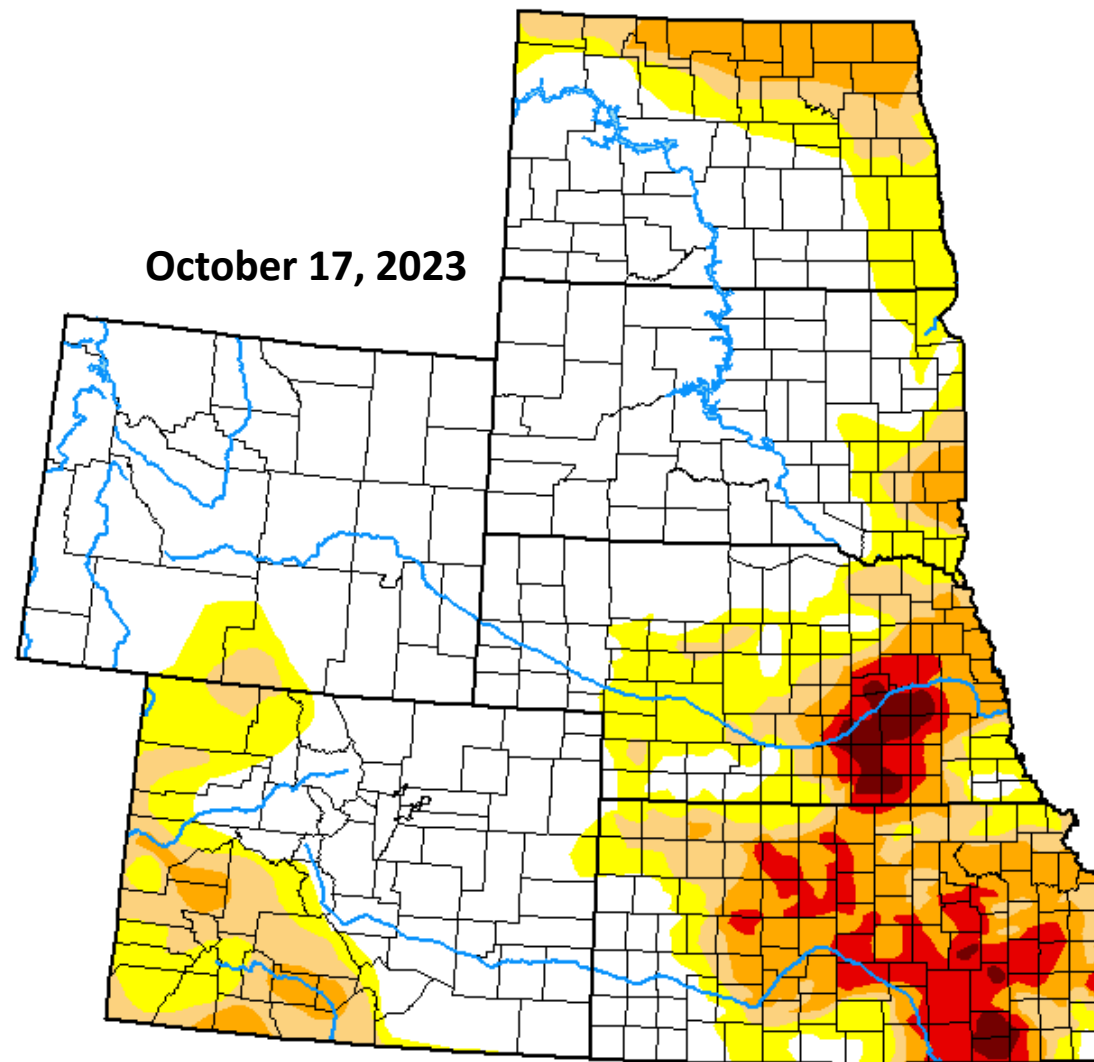
Drought Classification



August 1, 2023



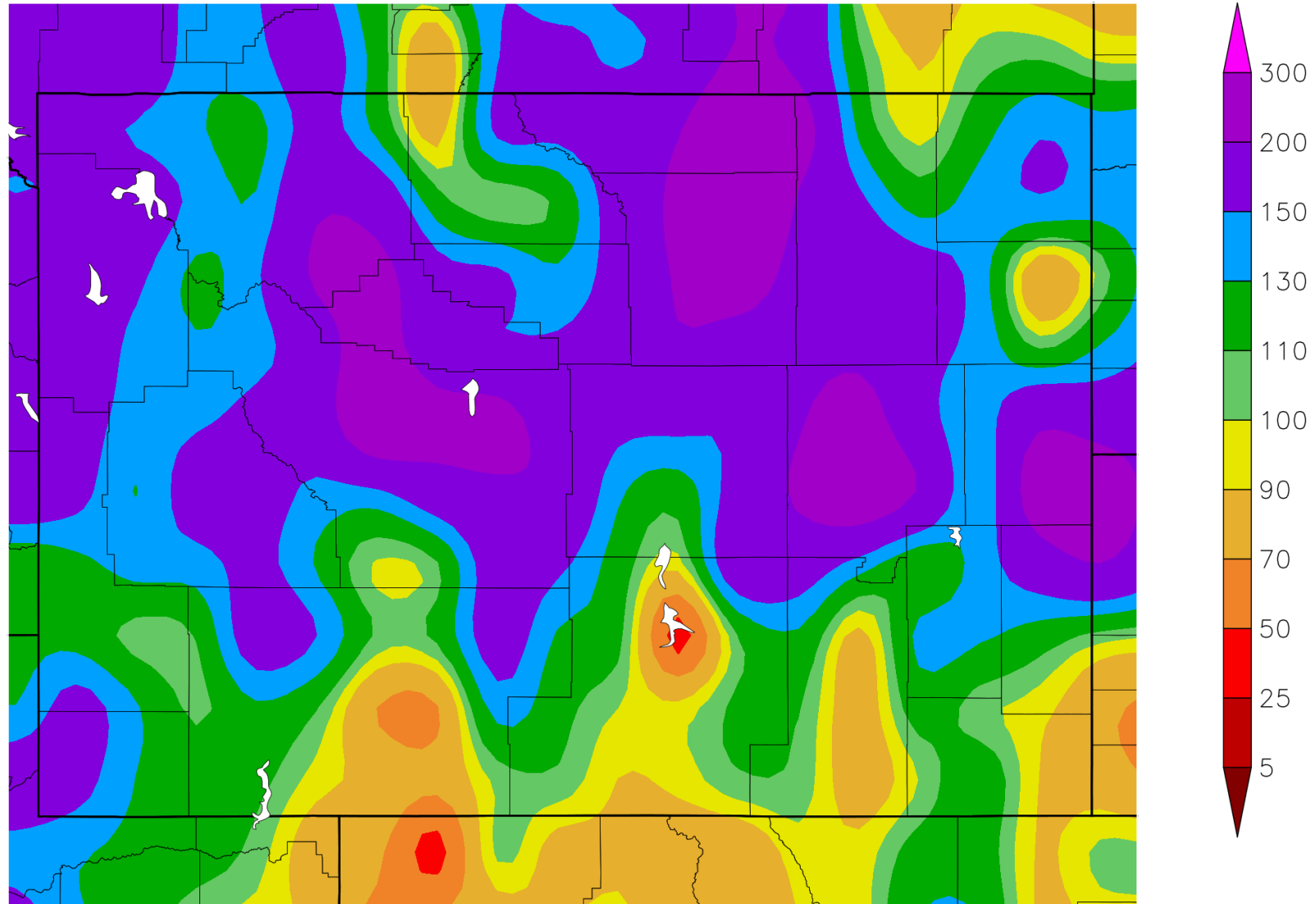
October 17, 2023



Percent of Normal Precipitation (%)

7/22/2023 – 10/19/2023

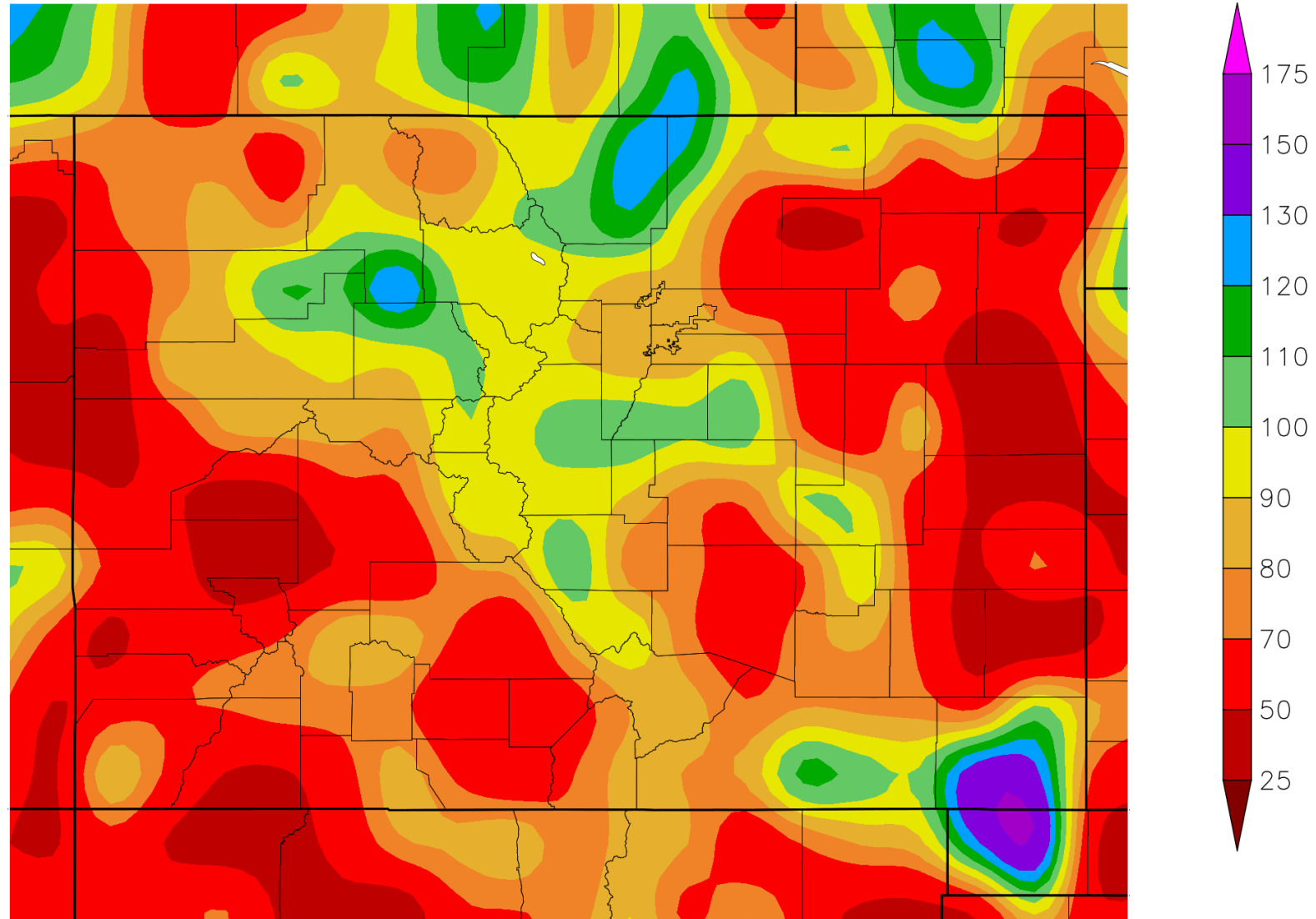
Wyoming



Percent of Normal Precipitation (%)

7/22/2023 – 10/19/2023

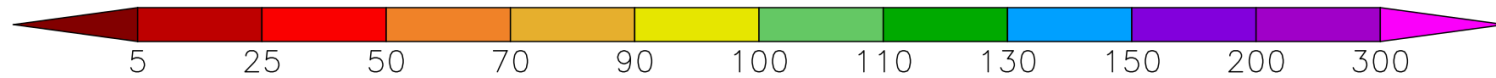
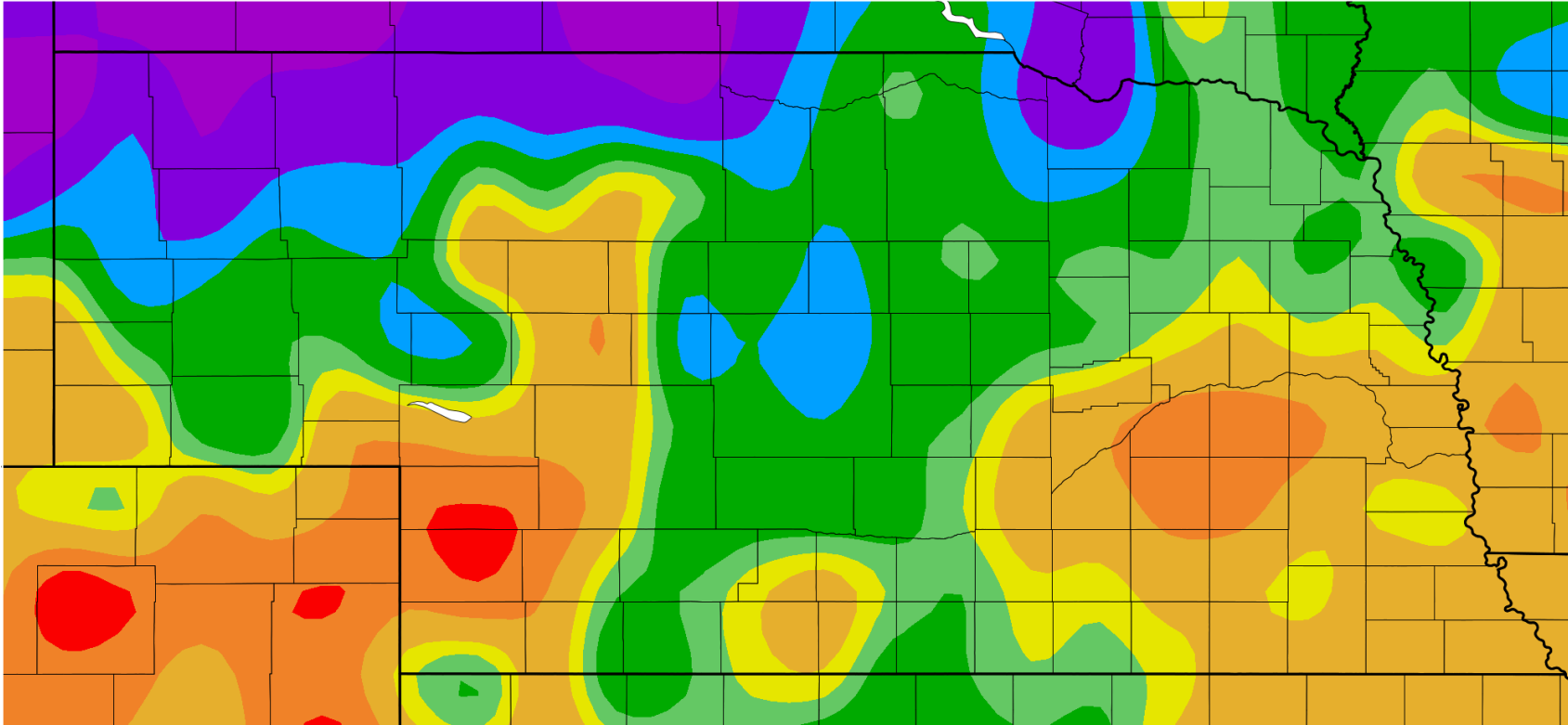
Colorado



Percent of Normal Precipitation (%)

7/22/2023 – 10/19/2023

Nebraska



Questions?



10/24/23

Elwood Expanded Recapture Reconnaissance Study Water Advisory Committee Meeting

LRE WATER.COM

ROCKY MOUNTAIN | MIDWEST | SOUTHWEST | TEXAS

AGENDA

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Introduction

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Watershed &
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Assessment

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Schedule

LRE Water Project Team





Jonathan Mohr
Environmental Scientist /
Project Manager



Dave Hume, PG
VP of Midwest Operations
Hydrogeologist

RECAPTURE WELLS

**Roscoe Sopiwnik,
PG, GISP**
Hydrogeologist / Well
Assessment

Jacob Bauer, PG
Hydrogeologist /
AWAS Modeling

ADDITIONAL SUPPORT

Jon Libra
Hydrogeologist

ELWOOD OUTLET

Tom MacDougall, PE (RJH)
Geotechnical Engineer

Brena Sheridan, PE (RJH)
Hydraulic & Structural
Engineer

ALTERNATIVES ASSESSMENT

Mark Mitisek, PH
Hydrologist / Data
Assessment

Page Weil, PE
Water Resources
Engineer

Hanna Anderson, PE
Project Engineer / GoldSim

ADDITIONAL SUPPORT

Ryan Gilliom, PH
Project Hydrologist
/ GoldSim

STREAM ASSESSMENT

**Maren Hansell
(Inter-Fluve)**
Water Resources Engineer
/ Stream Assessment

**Josh Epstein
(Inter-Fluve)**
Geomorphologist /
Stream Assessment

ADDITIONAL SUPPORT

Greg Koonce, PF-C
Sr. Fisheries Biologist

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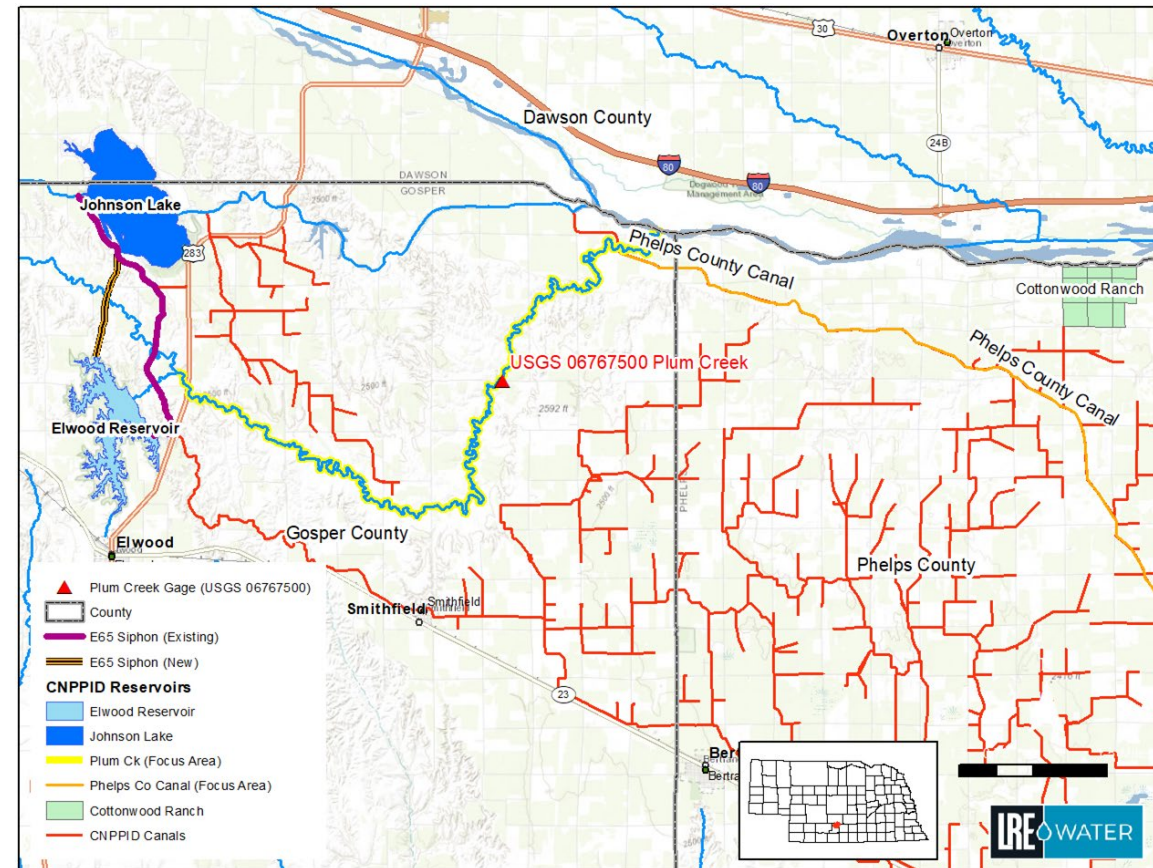
Hydrogeological
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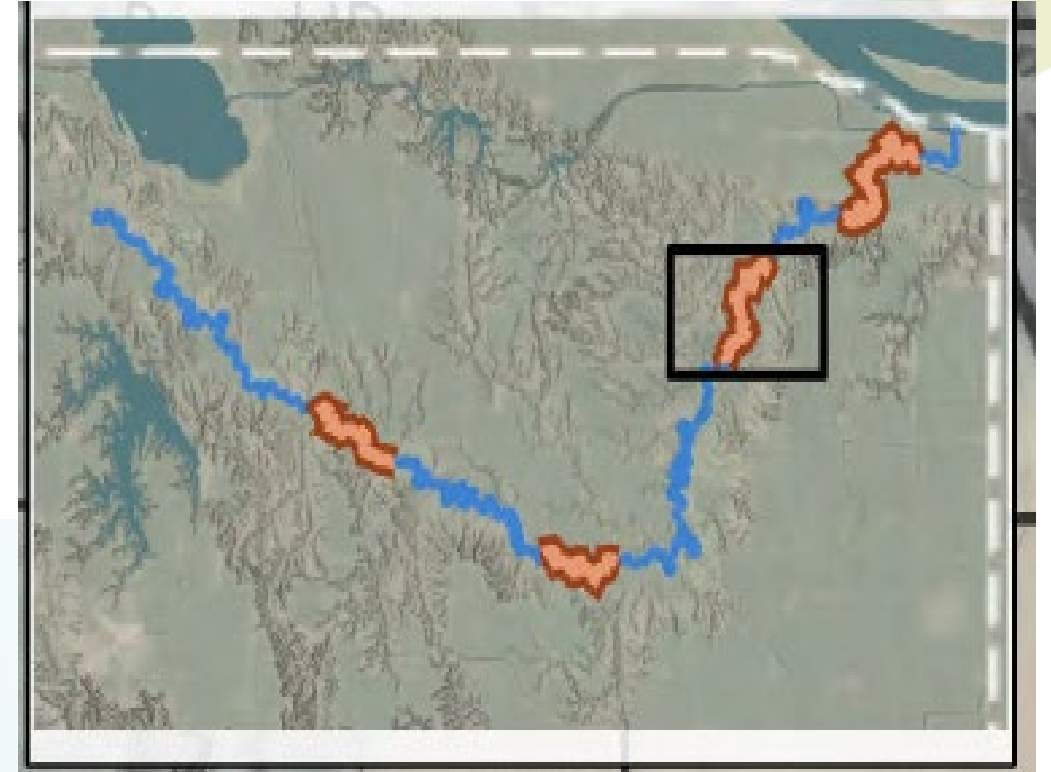
GROUP SITE VISIT

- Group Site Tour
 - PRRIP, NeDNR, TBNRD, LRE, and CNPPID
 - Sep. 19th- CWR-BSR, recapture wells,
 - Sept. 20th - Elwood, E65, Plum Creek



WATERSHED AND STREAM ASSESSMENT

- Tri-Basin NRD leading communication with property owners
- Obtained access along the majority of four priority reaches
- Field work scheduled for November 7, 8, 9



WATERSHED AND STREAM ASSESSMENT

- RTK topographic survey of Plum Creek at 10 locations
 - Bed, bank, floodplain, bridge/infrastructure, crossings
- Take photos and make observations of surficial sediment, vegetation, geomorphology, and infrastructure
- Two temporary stage/streamflow sites are being used to confirm fluctuations in water elevation
 - T-post and perforated PVC pipe

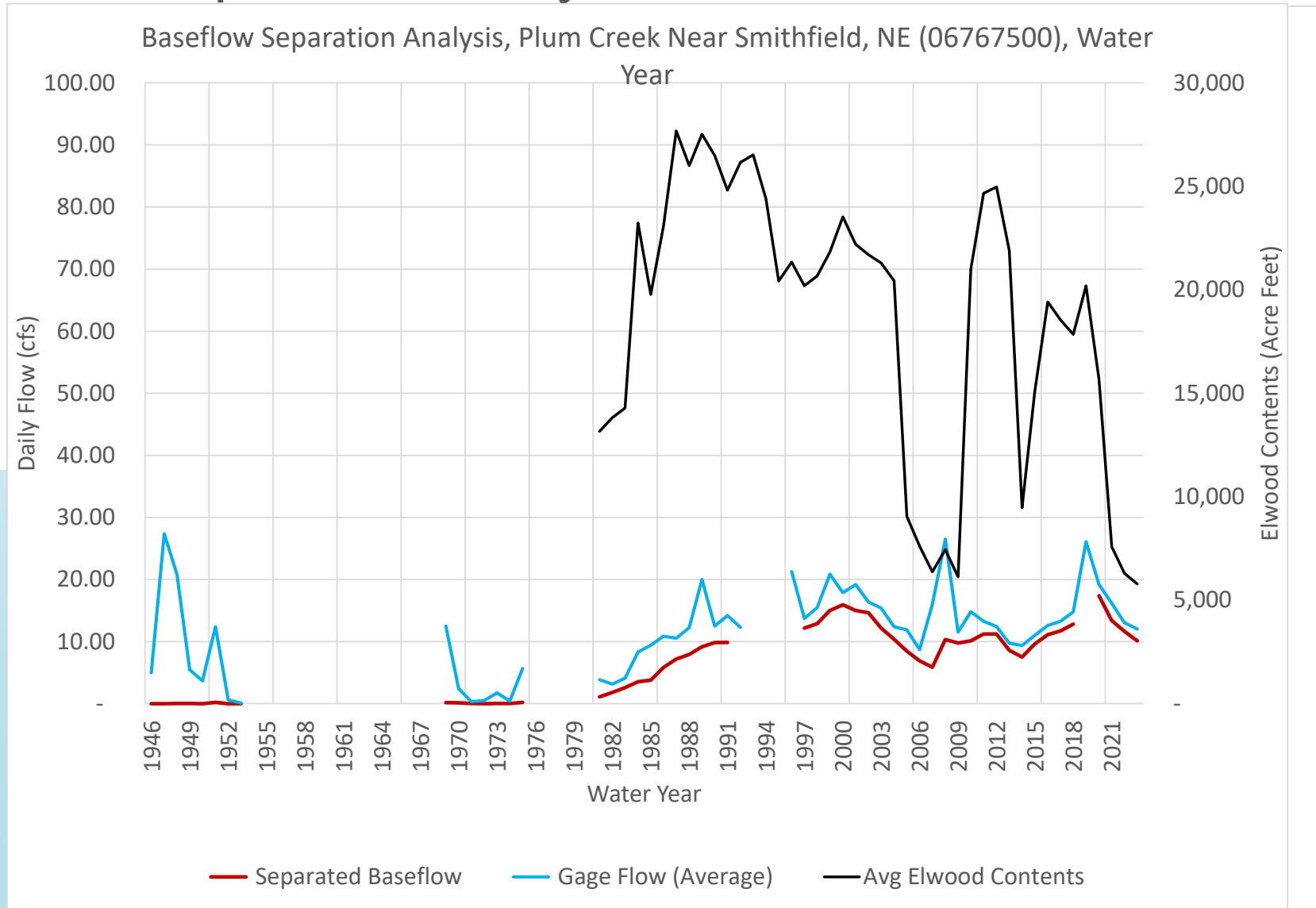


WATERSHED AND STREAM ASSESSMENT

- Hydrology/Watershed Assessment is Underway
 - ✓ Base flow separation analysis
 - ✓ Transit loss analysis (based on daily observations 2004)
- Currently working on historical streamflow/stage estimates above and below USGS station to pair with RTK surveys to determine stream capacities

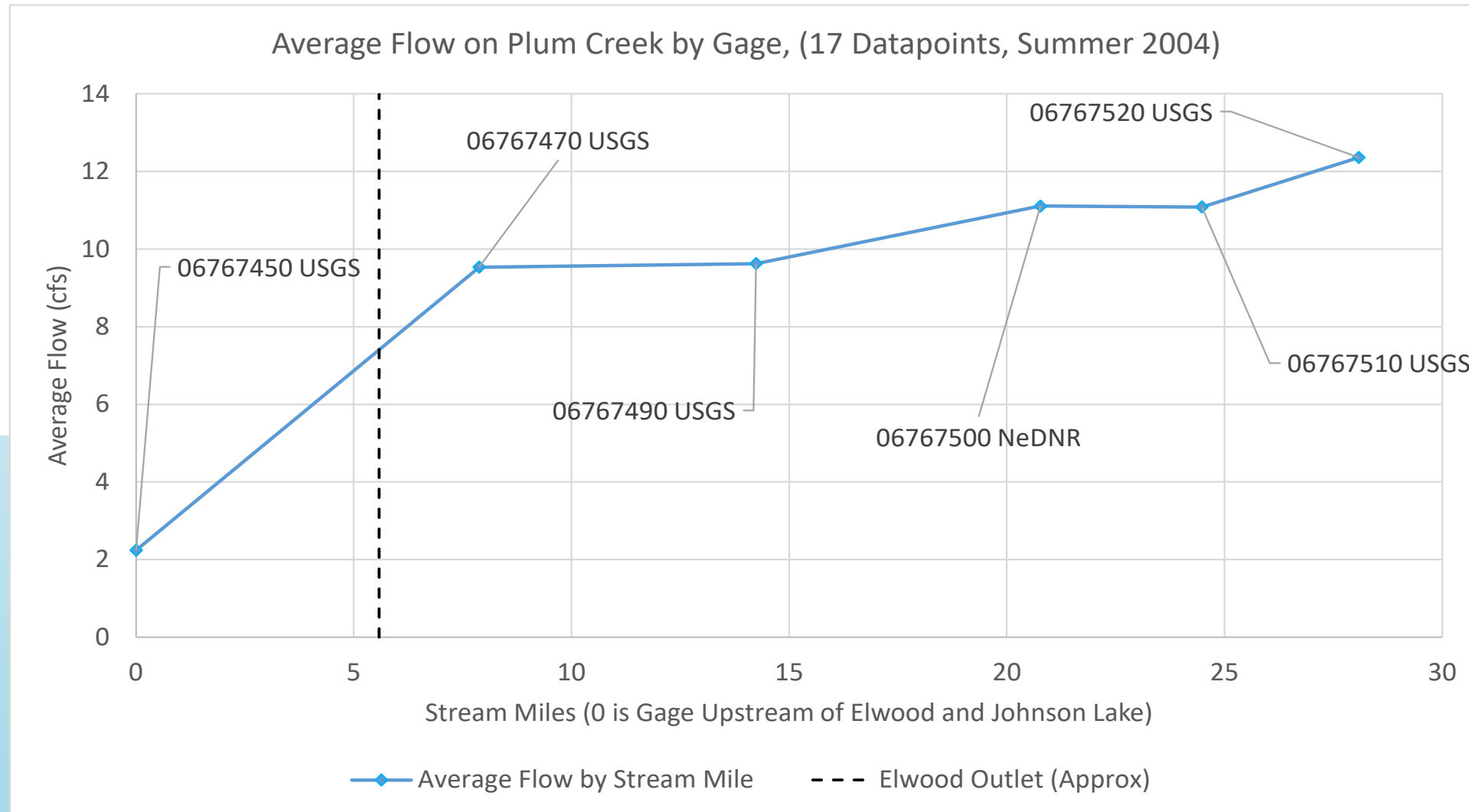
WATERSHED AND STREAM ASSESSMENT

✓ Baseflow separation analysis



WATERSHED AND STREAM ASSESSMENT

- ✓ Transit loss analysis (based on daily observations 2004)



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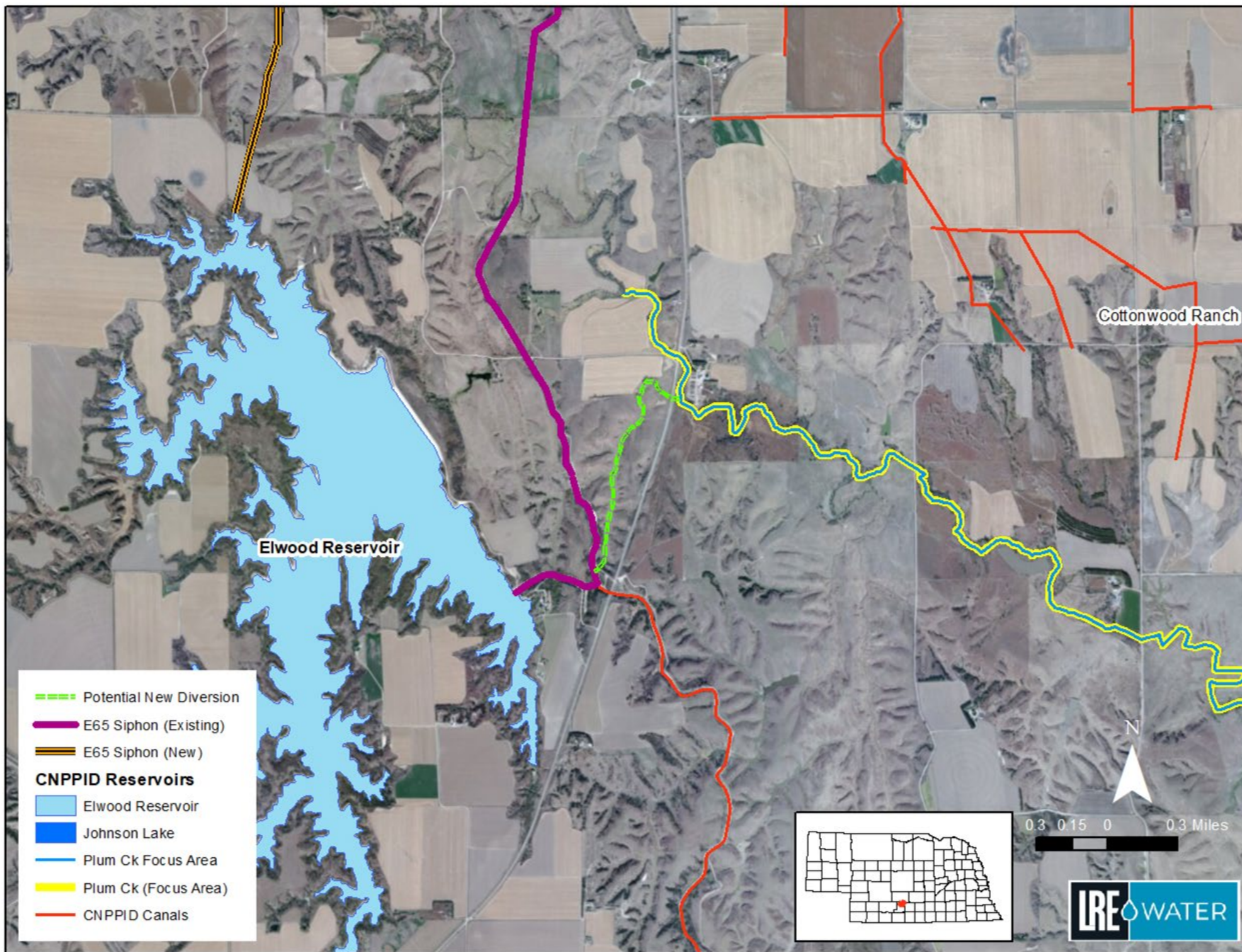
Hydrogeological
Assessment

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Schedule

GRAVITY OUTLET SUMMARY

- Will begin the gravity outlet assessment in November
- Will be targeting a location on the existing E65 siphon near the tailrace
- RJH/LRE will be visiting the site with Central staff
 - RJH already working on dam seepage repair
- After site visit, will begin engineering review of site suitability



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HYDROGEOLOGIC ASSESSMENT

- Have yet to begin the hydrogeologic assessment
- Will review well construction details of existing recapture wells
- Create hydrogeologic cross sections
 - Establish aquifer parameters
- GIS-based Site Selection of New Recapture Well Locations
 - Floodplain
 - Natural drainages
 - Saturated thickness
 - Land ownership
 - Well setbacks
 - Other factors TBD

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SCHEDULE

- November 7-9, field work for stream assessment
- November - begin hydrogeologic analysis and gravity outlet assessment
- December - January wrap up Watershed/Stream Assessment
- January - April complete alternatives assessment (GoldSim model)



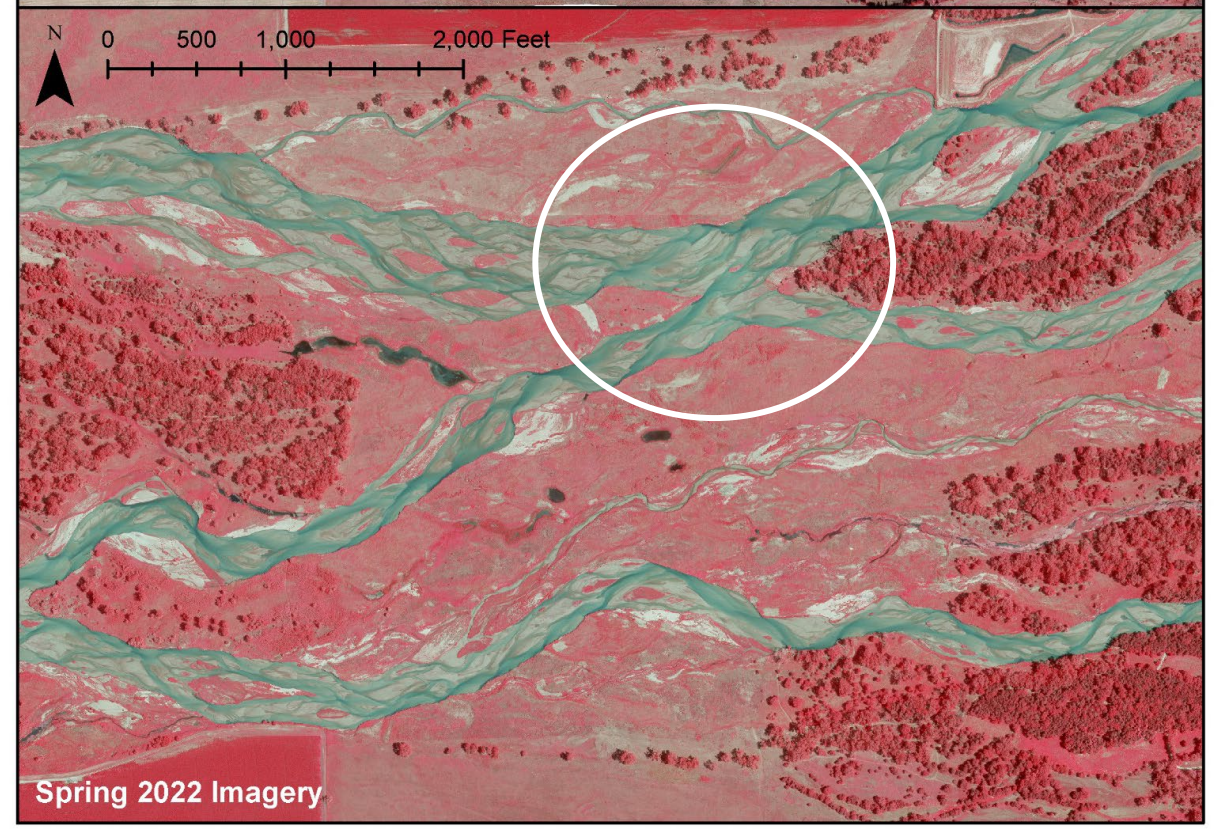
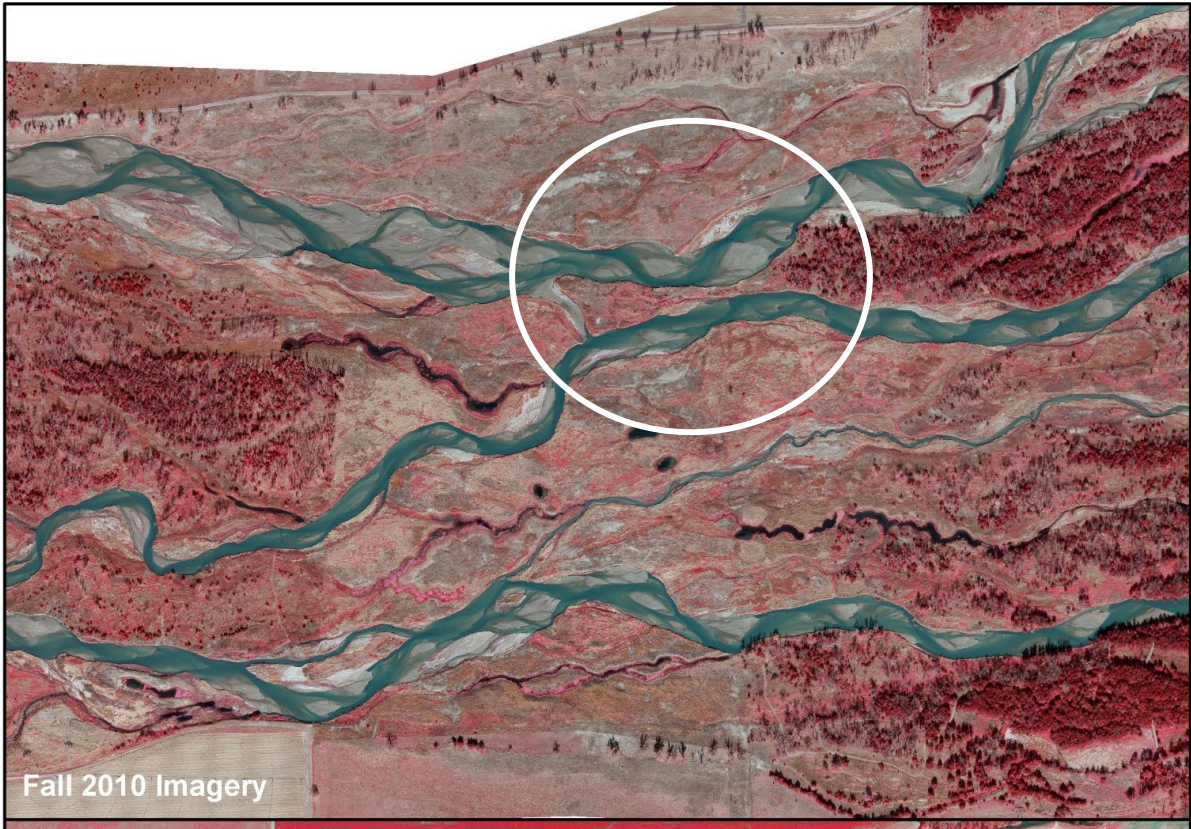
Wyoming Property Flow Split

PRRIP Water Advisory Committee

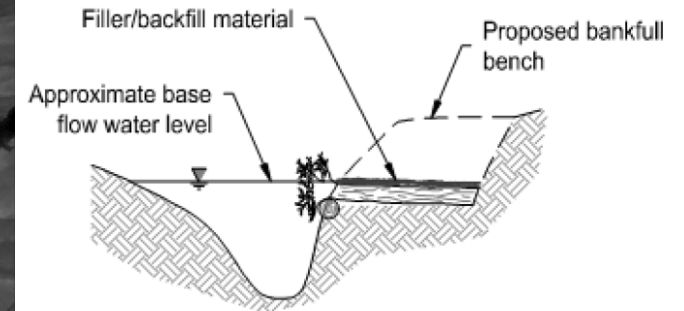
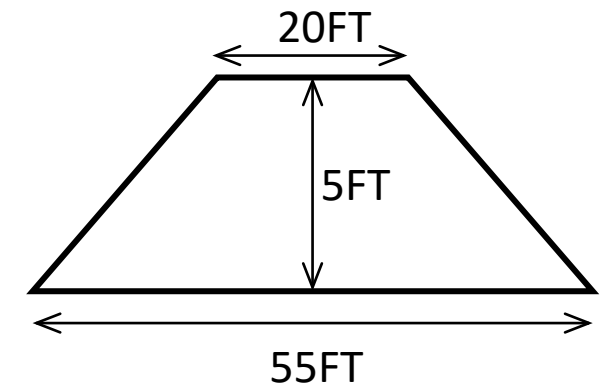
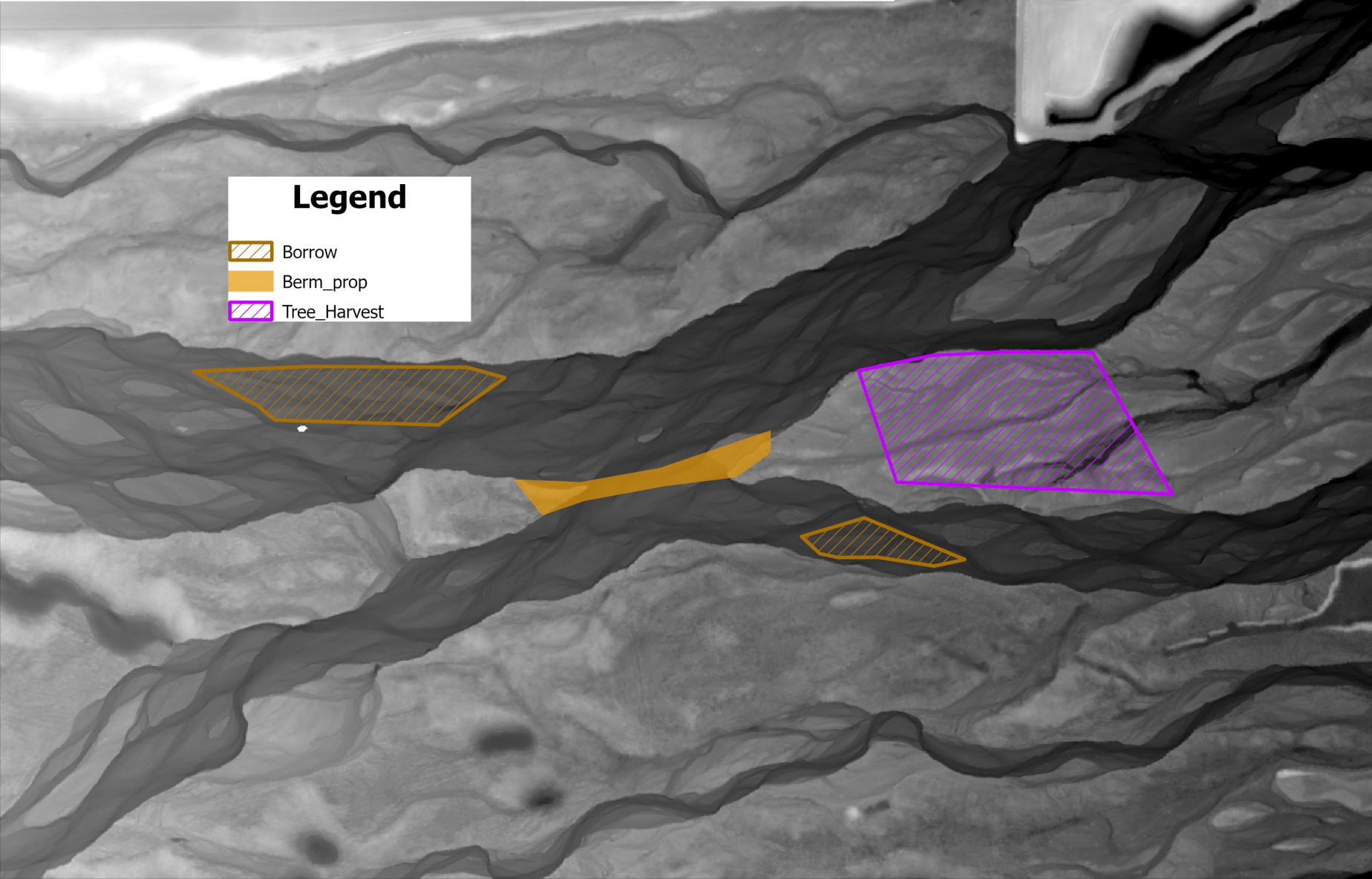
October 24, 2023

Libby Casavant, PE





Item	Unit	Units Needed
Excavation	CY	7,000
Footer trees	FT	325
Trees w/root wad (min 35FT)	#	50



Wetland
Delineation



Permit
Application
(Mid-Nov)



Bid and
Selection
(~\$70,000)



Construction
by March 2024

-  Borrow
-  Berm_prop
-  PEMA/C
-  PFOA
-  <all other values>
-  Study_Area
-  ConsLands
-  Tree_Harvest

