

2021 Land Update

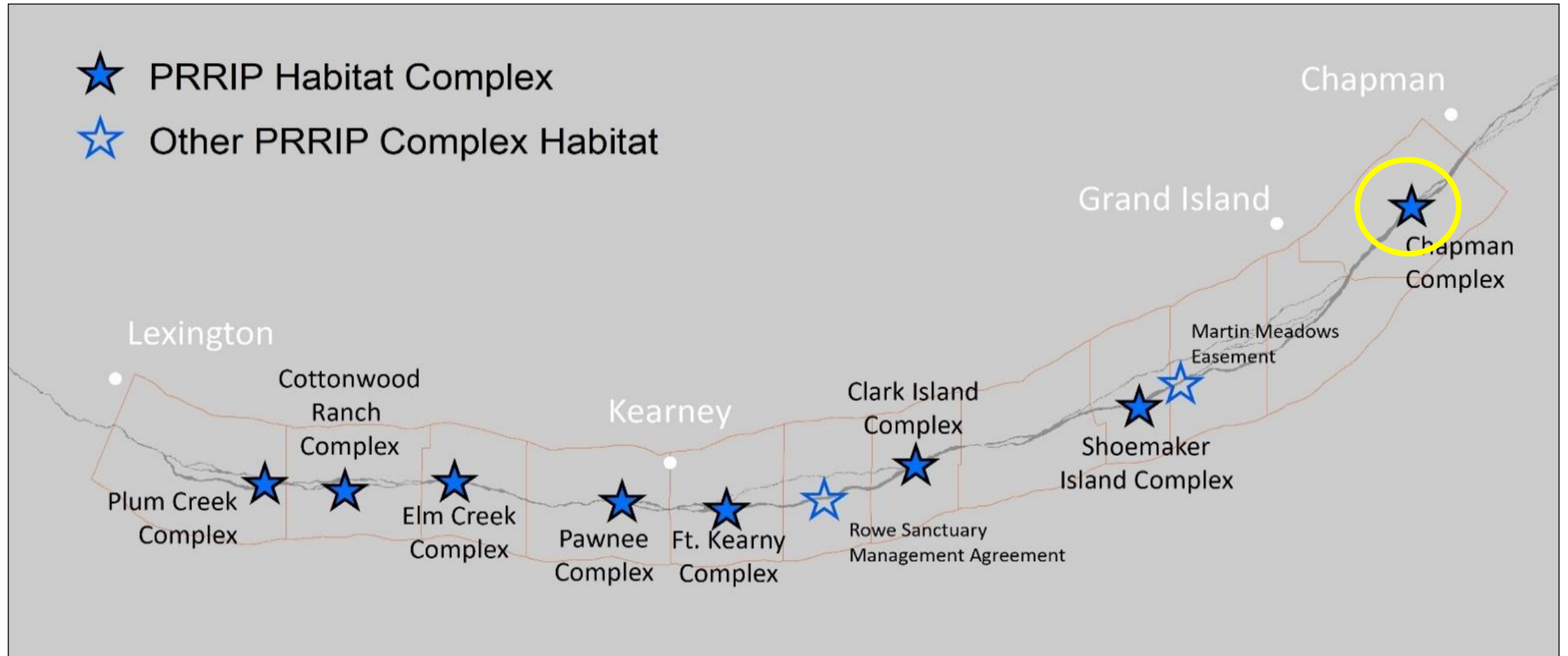
Tim R. Tunnell

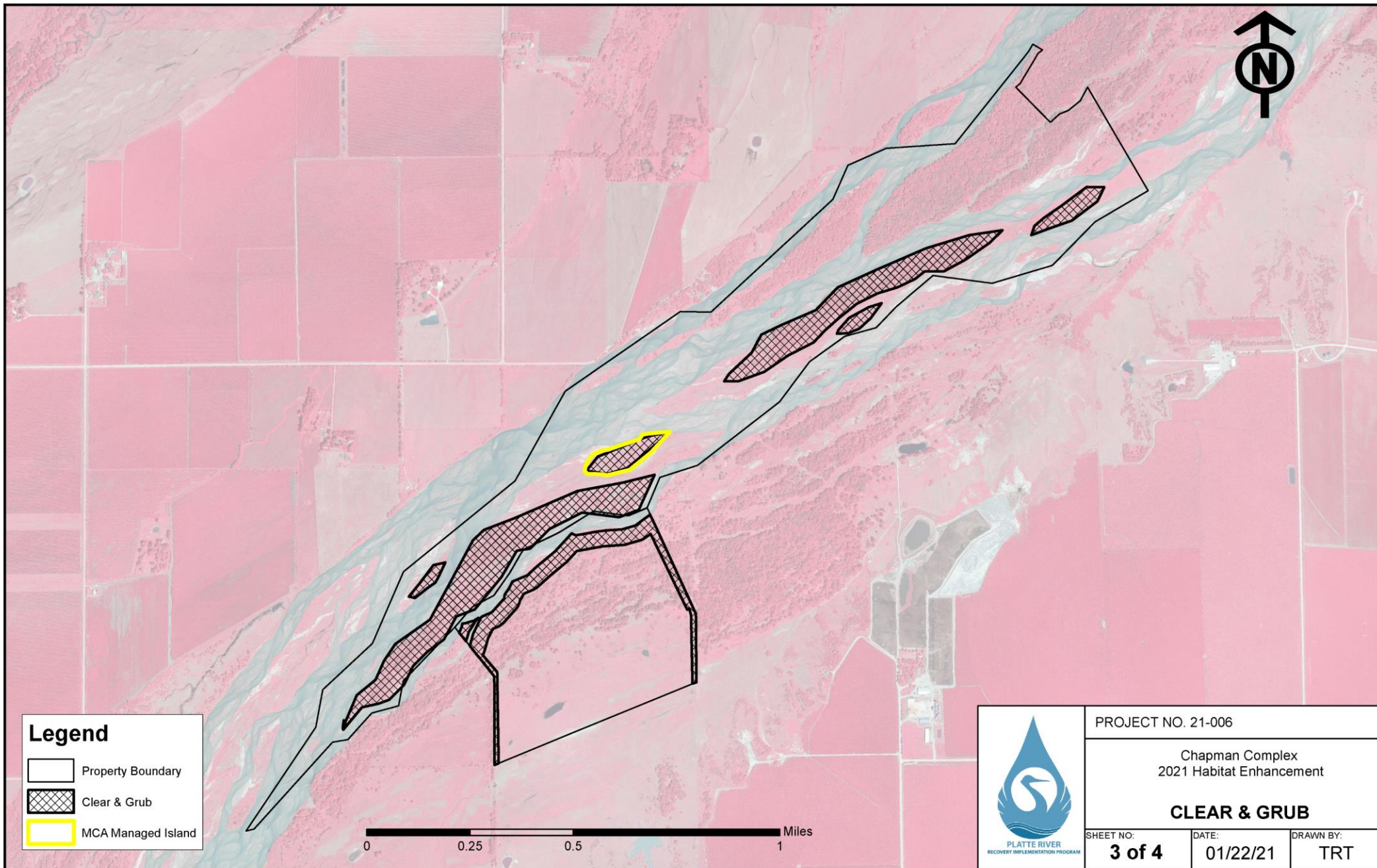
Senior Land Manager

Habitat Type	Purch.& Ease.	Lease & Sponsor.	Man. Agree.	Total
Complex (9,200 ac)	9,033	2,665	1,703	13,401
Non-Complex (800 ac)	841	15	0	856
Plus-Up (1,500 ac)	881	0	0	881
Total	10,755	2,680	1,703	15,138



PRRIP Complex Habitat





Legend

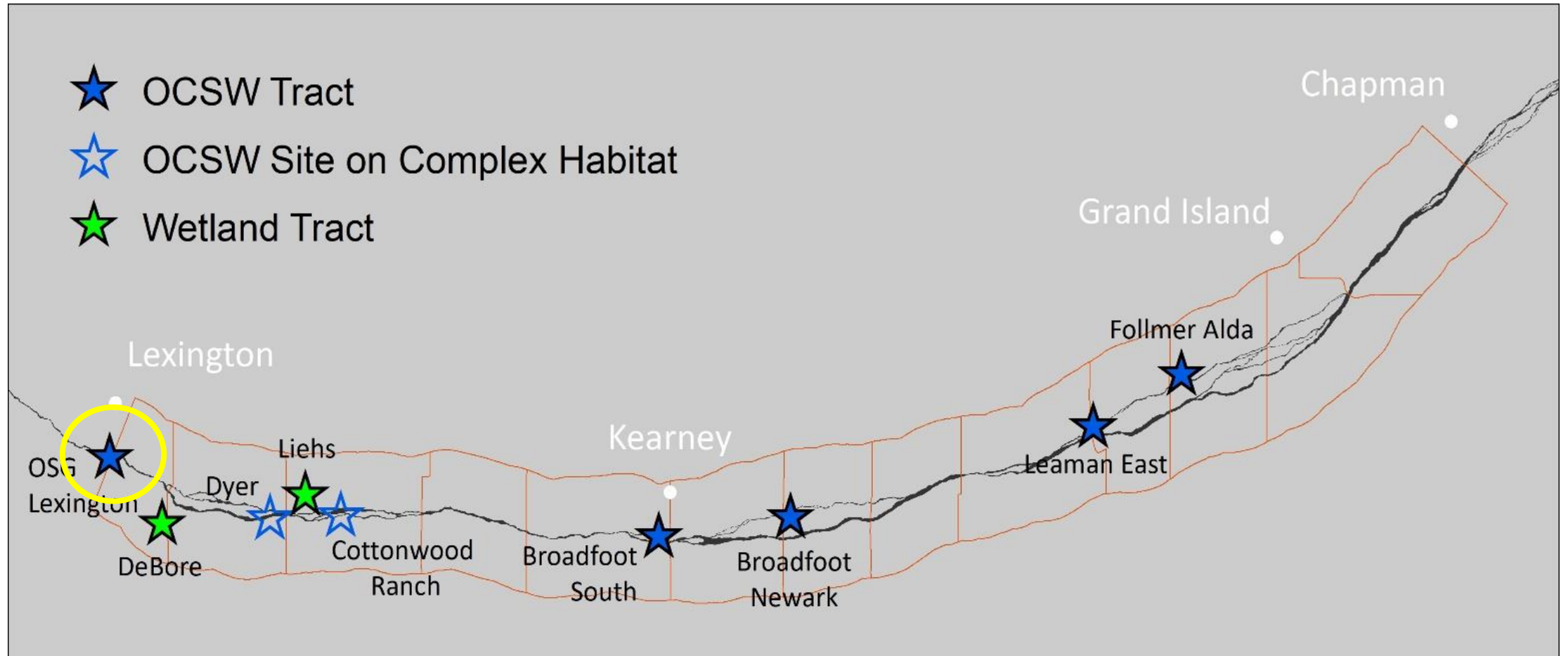
-  Property Boundary
-  Clear & Grub
-  MCA Managed Island

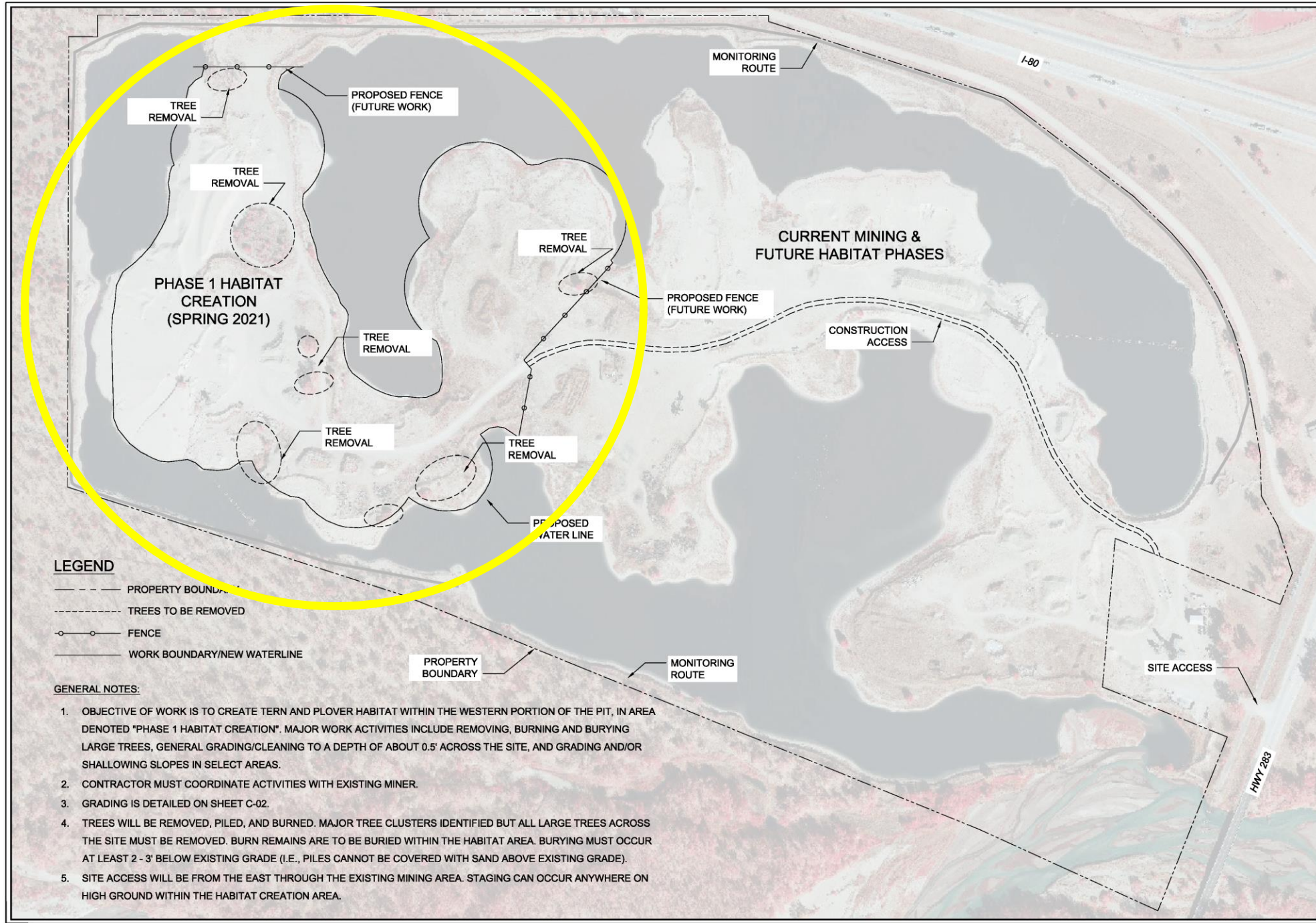


PROJECT NO. 21-006		
Chapman Complex 2021 Habitat Enhancement		
CLEAR & GRUB		
SHEET NO: 3 of 4	DATE: 01/22/21	DRAWN BY: TRT



PRRIP Non-Complex Habitat





LEGEND

- PROPERTY BOUNDARY
- TREES TO BE REMOVED
- o-o- FENCE
- WORK BOUNDARY/NEW WATERLINE

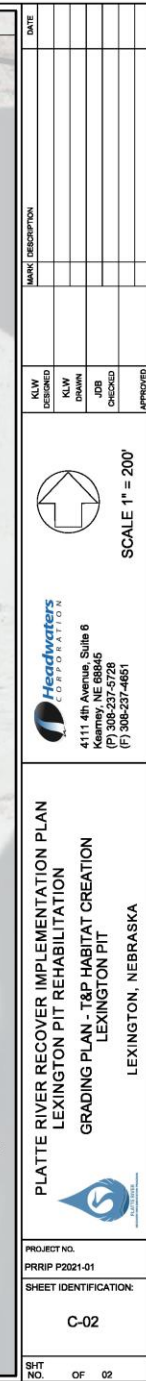
GENERAL NOTES:

1. OBJECTIVE OF WORK IS TO CREATE TERN AND PLOVER HABITAT WITHIN THE WESTERN PORTION OF THE PIT, IN AREA DENOTED "PHASE 1 HABITAT CREATION". MAJOR WORK ACTIVITIES INCLUDE REMOVING, BURNING AND BURYING LARGE TREES, GENERAL GRADING/CLEANING TO A DEPTH OF ABOUT 0.5' ACROSS THE SITE, AND GRADING AND/OR SHALLOWING SLOPES IN SELECT AREAS.
2. CONTRACTOR MUST COORDINATE ACTIVITIES WITH EXISTING MINER.
3. GRADING IS DETAILED ON SHEET C-02.
4. TREES WILL BE REMOVED, PILED, AND BURNED. MAJOR TREE CLUSTERS IDENTIFIED BUT ALL LARGE TREES ACROSS THE SITE MUST BE REMOVED. BURN REMAINS ARE TO BE BURIED WITHIN THE HABITAT AREA. BURYING MUST OCCUR AT LEAST 2 - 3' BELOW EXISTING GRADE (I.E., PILES CANNOT BE COVERED WITH SAND ABOVE EXISTING GRADE).
5. SITE ACCESS WILL BE FROM THE EAST THROUGH THE EXISTING MINING AREA. STAGING CAN OCCUR ANYWHERE ON HIGH GROUND WITHIN THE HABITAT CREATION AREA.

DATE	
MAINT DESCRIPTION	
DESIGNED	KLW
DRAWN	KLW
CHECKED	KLW
APPROVED	KLW
SCALE	1" = 300'
Headwaters CORPORATION	
4111 4th Avenue, Suite 6	
Kearney, NE 68845	
(P) 308-237-5728	
(F) 308-237-4651	
PLATTE RIVER RECOVER IMPLEMENTATION PLAN	
LEXINGTON PIT REHABILITATION	
SITE OVERVIEW - T&P HABITAT CREATION	
LEXINGTON PIT	
LEXINGTON, NEBRASKA	
PROJECT NO.	PRRIP P2021-01
SHEET IDENTIFICATION:	C-01
SHT NO.	OF 02



1. GRADE ENTIRE AREA TO A DEPTH OF 0.5' TO EXPOSE CLEAN SAND. FINISHED SITE WILL BE ENTIRELY CLEAN SAND. ALL OTHER MATERIAL MUST BE COVERED OR PUSHED INTO PIT.
2. TO THE EXTENT POSSIBLE, PUSH GRADED MATERIAL TO SLOPE AREAS LABELED WITH "GRADE AND SMOOTH", ETC. GRADED MATERIAL DIRECTLY ADJACENT TO STEEP SLOPES CAN BE PUSHED DIRECTLY INTO PIT.
3. ARROWS DENOTE GENERAL GRADING AND MATERIAL PUSHING DIRECTIONS. MOST MATERIAL TO BE USED TO SHALLOW AND GRADE SLOPES WHERE SHOWN. SLOPE LOBES SHOULD BE EXPANDED WHERE POSSIBLE. GOAL IS TO MAKE ALL SLOPES TO WATER AS SHALLOW AS POSSIBLE. FINISHED SLOPES WILL BE APPROVED ON-SITE AND SHOULD BE BETWEEN APPROX 10:1 OR 20:1 (H:V).
4. KNOCK DOWN AND SMOOTH SMALL EARTHEN BERM ALONG RIDGE LINE. CAN PUSH DIRECTLY INTO PIT.
5. MAJOR SOURCE AREAS, DENOTED AS 'SOURCE AREAS' 1, 2 AND 3 ARE TO BE FLATTENED BY PUSHING MATERIAL AWAY FROM THESE AREAS IN THE GENERAL DIRECTIONS SHOWN. MATERIAL WILL BE REMOVED TO MATCH SURROUNDING GRADES.
6. CREATE MOATS WITH WIDTH APPROX 100' AND DEPTH APPROX 5' WHERE SHOWN.
7. PAYMENT WILL BE BASED ON AGREED TO HOURLY RATE. TOTAL EARTHWORK QUANTITIES ARE APPROX 100,000 TO 130,000 CUBIC YARDS BUT COULD VARY BASED ON SITE CONDITIONS.
8. CLEAR PATH FOR MONITORING ROUTE ALONG WESTERN AND SOUTHERN BOUNDARIES THAT TIES INTO EXISTING HAUL ROAD AT THE NORTHWEST CORNER OF THE PROPERTY. NO FILL REQUIRED. SIMPLE CLEARING AND GRADING TO CREATE ROUTE TO BE PASSABLE WITH A PICKUP TRUCK.



Thank You & Questions!

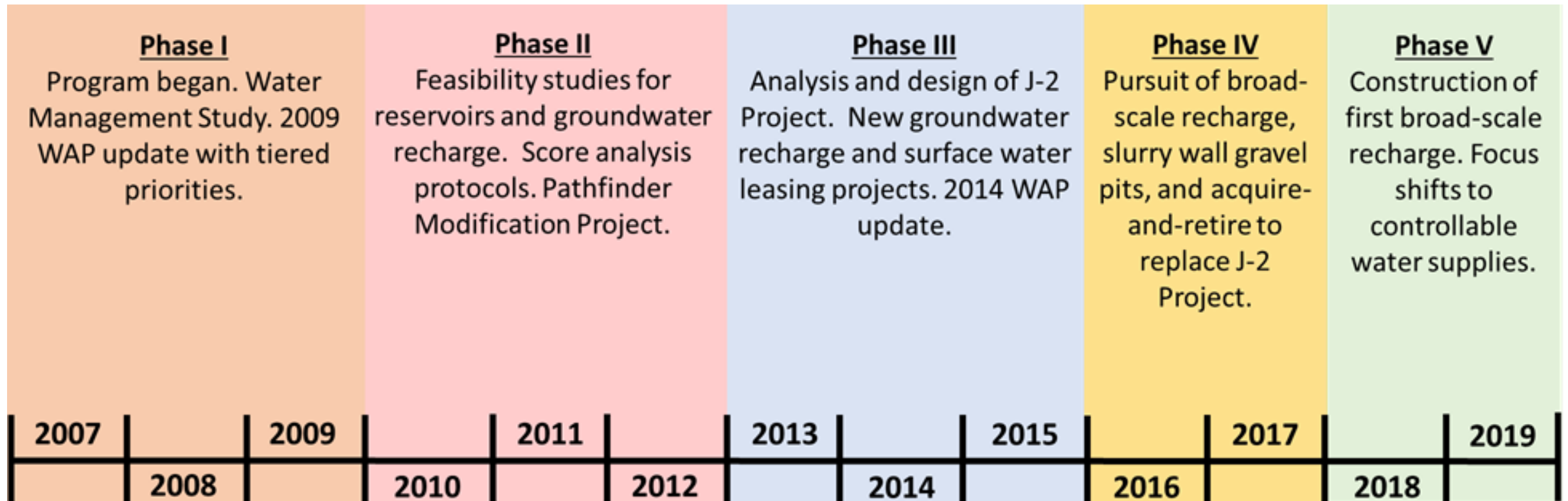
Water Action Plan and North Platte Chokepoint Updates

Seth M Turner, PE

PRRIP Adaptive Management Plan Reporting Session

February 16, 2021

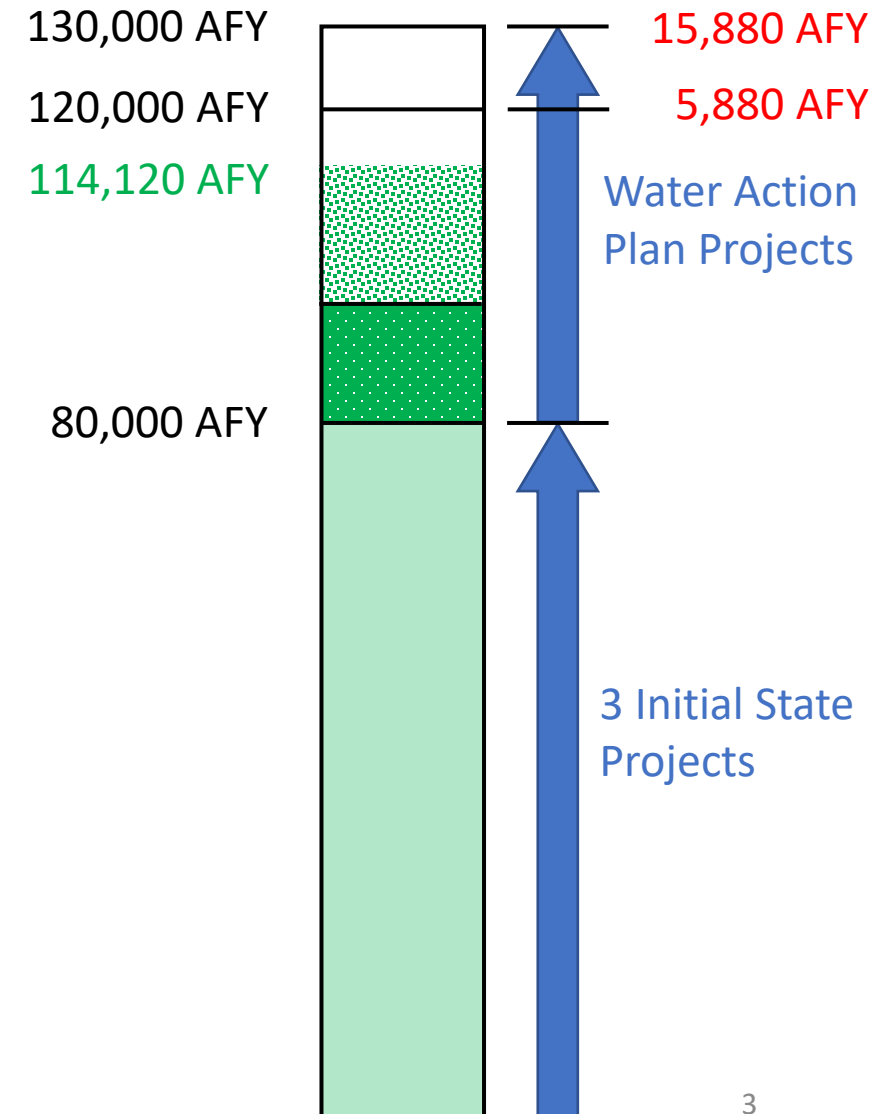
WAP Update Report: First Increment Progress, 2007-2019



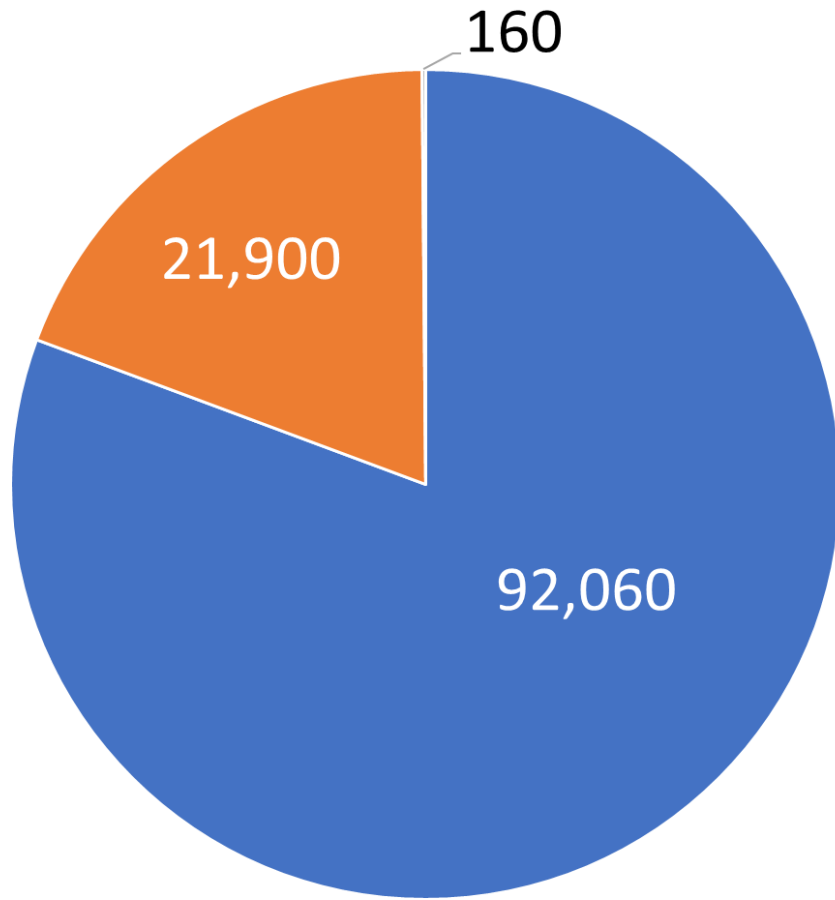
Status of Program Water Projects

Project	Score [AFY]
3 Initial State Projects	80,000
6 Active WAP Projects (Accepted)	14,170
5 Active WAP Projects (Estimated)	19,950
TOTAL =	114,120

Score analysis for CPNRD and NPPD recharge projects is in progress.



Controllable vs Uncontrollable



Storage -
Controllable

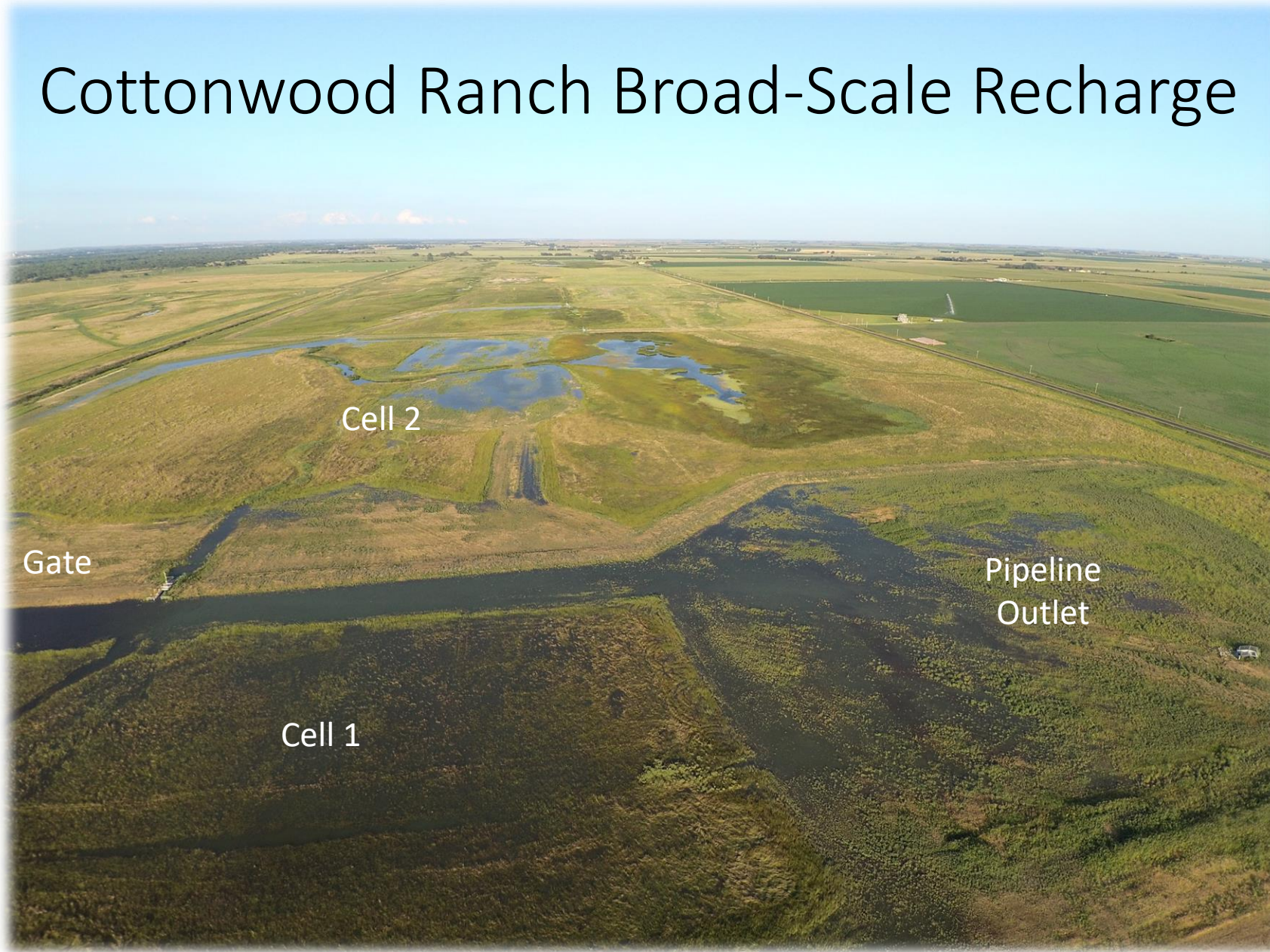


Retiming -
Uncontrollable

Retiming -
Controllable

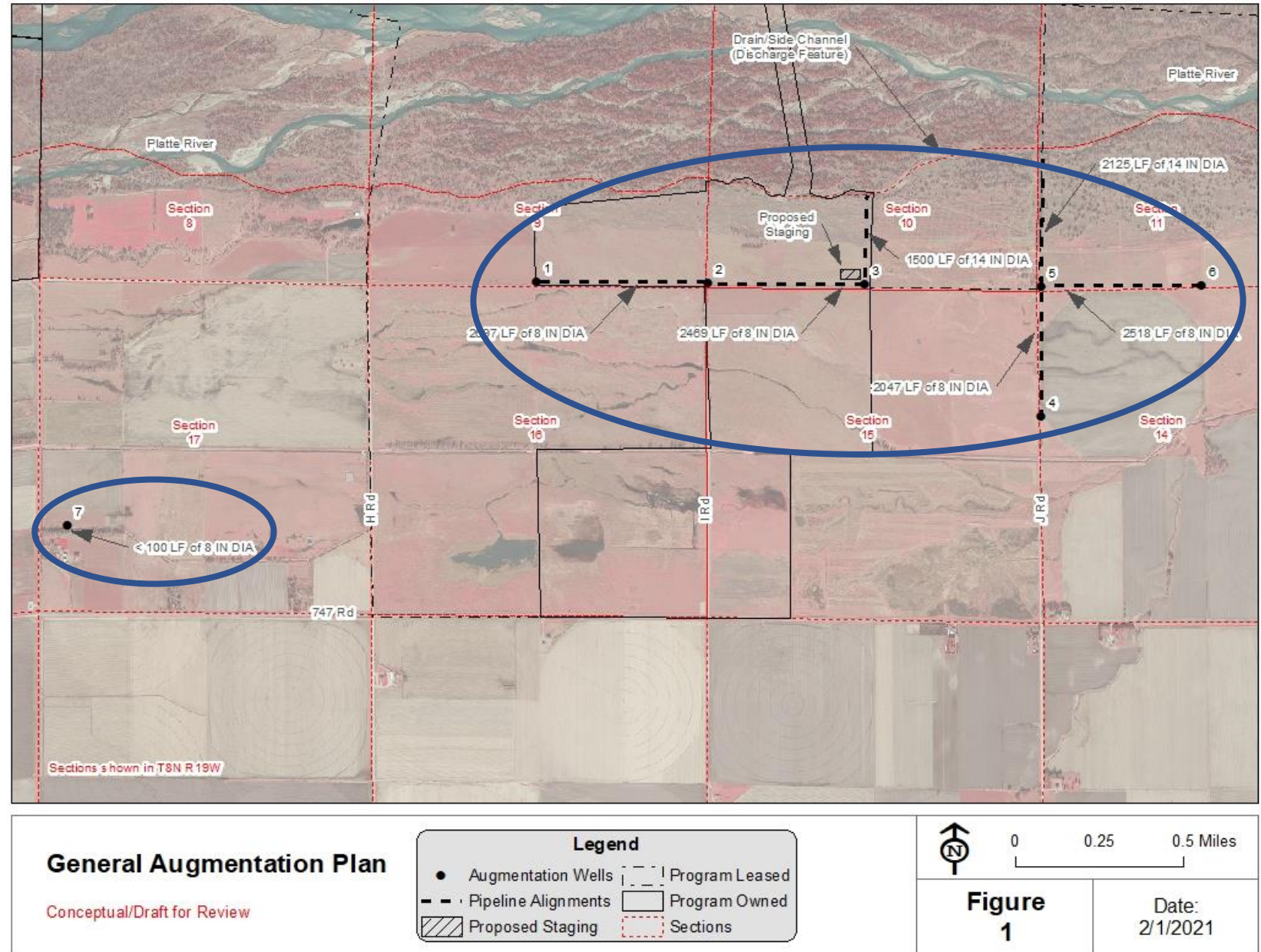


Cottonwood Ranch Broad-Scale Recharge



Recapture Well Network Pilot Project

- Controllable element of recharge projects
 - Operational flexibility
 - Increases efficiency
- Phase I – Pilot scale network of 7 wells
- Phase II – Expanded regional network

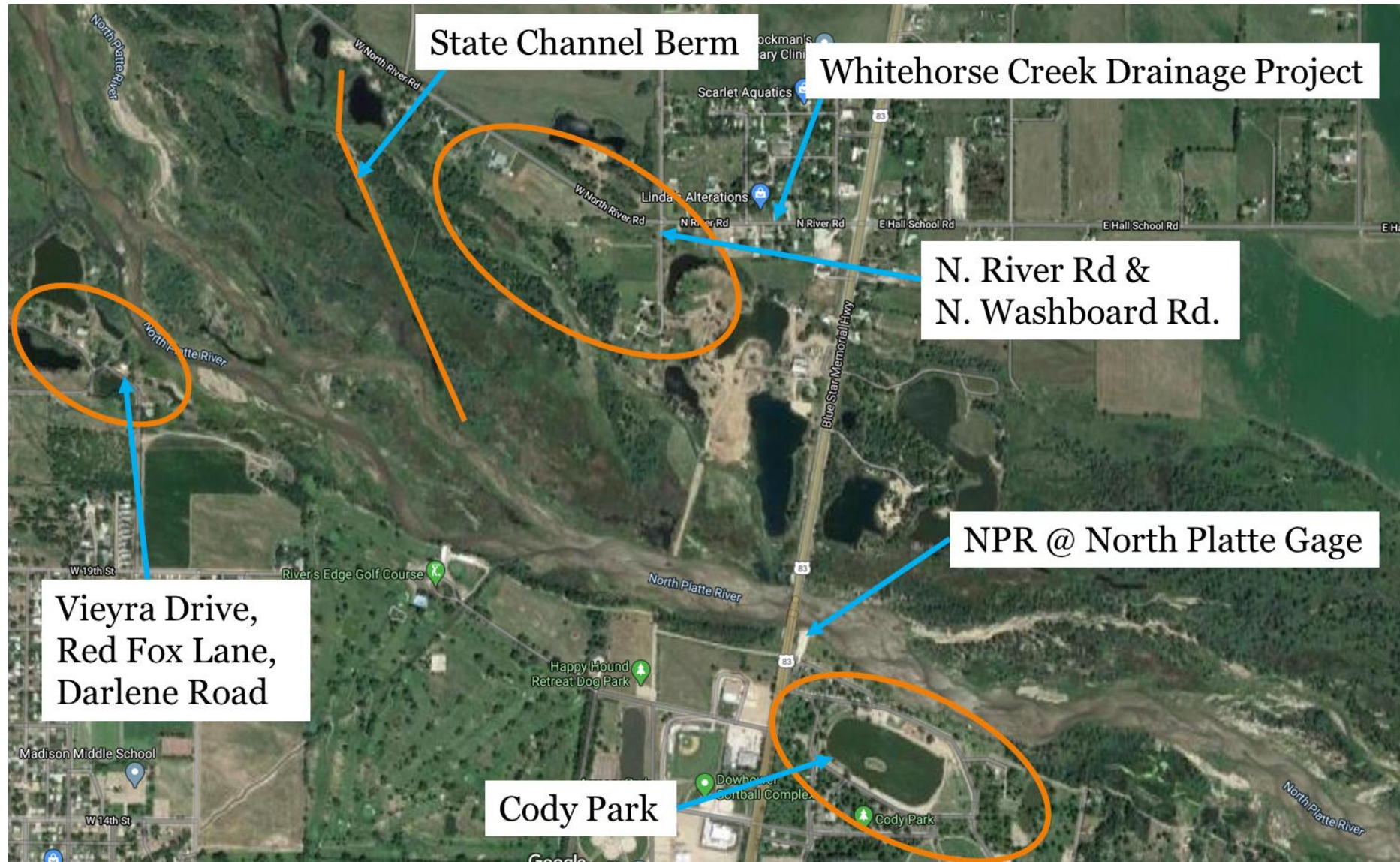


Water Action Plan – Next Steps

- Need ~6,000 AFY to reach 120,000 AFY
- 3 potential future projects
 - Controllable water supplies
 - Combinations provide flexibility
 - Buffer for active WAP projects
- Nebraska grand water bargain
 - Recharge + storage water projects
 - Long-term funding
 - Exceed 120,000 AFY on paper
- On track, but 2021 is pivotal

Project	Score [AFY]
Recharge Recapture Project(s)	8,000
North Platte Irrigator Lease(s)	2,500
CNPPID Storage Lease	6,600
TOTAL =	17,100

North Platte Chokepoint



North Platte Chokepoint Flow Test

Program Water Management

- Aggressively continue to implement channel conveyance improvements at North Platte choke point through efforts directed toward achieving and maintaining at least 3,000 cfs conveyance capacity while remaining below flood stage, with additional capacity developed as practicably achievable with available resources.

• Objectives

- Increase minor flood stage from 6.0 ft to 6.5 ft
- Evaluate State Channel Berm under high flows

• Operations

- Involved USFWS, CNPPID, NWS, NDNR, etc
- EA release July 13-24, 2020
- Data collection and observations at stages from 6.0 ft to > 6.5 ft

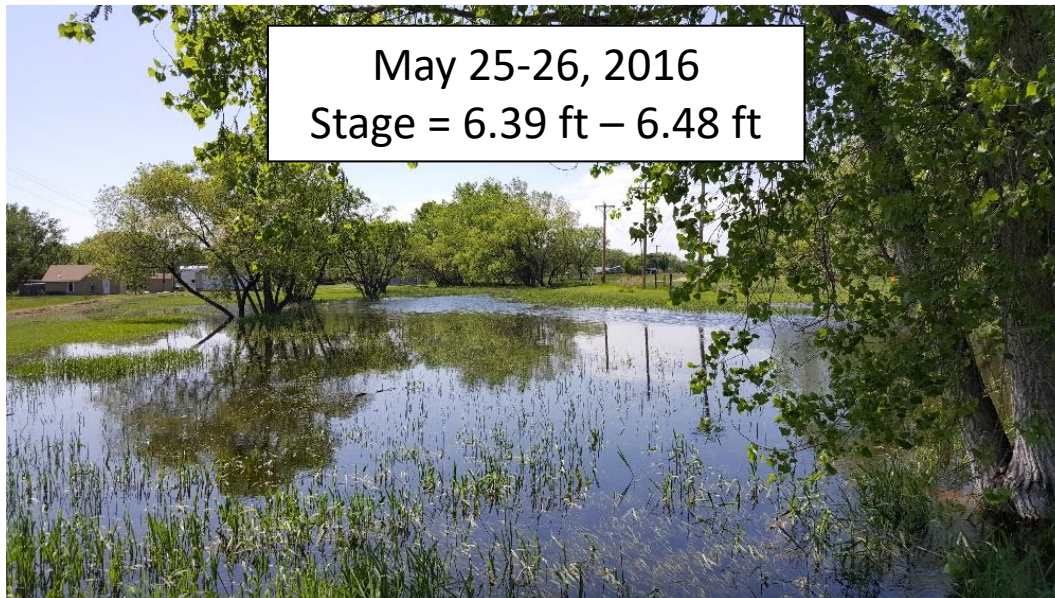
NWS Flood Stage	River Stage	Rating Curve Discharge
	[ft]	[cfs]
Minor	6.0	1,930
Moderate	6.5	2,770
	6.63	3,000
	6.75	3,250
Major	7.0	3,760

Checkpoint Test Outcome

- Evaluate performance of restored State Channel Berm under high flow conditions



- Performed as designed
- Did not observe water in the N. River Rd & N. Washboard Rd area
- Minor overtopping of low spots in berm, will evaluate maintenance needs



VS



Chokepoint Test Outcome

- Increase minor flood state from 6.0 ft to 6.5 ft
- NWS declared that observed impacts at Red Fox Lane and Darlene Road properties rose to level of “threat to property.”
- Per NWS July 29 letter, “flood categories will remain the same for the gage on the North Platte River, at North Platte.”
- Flood stage impacts definitions revised to reflect observations.
- EA release to remain limited by flow capacity at 6.0 ft



North Platte Chokepoint – Next Steps

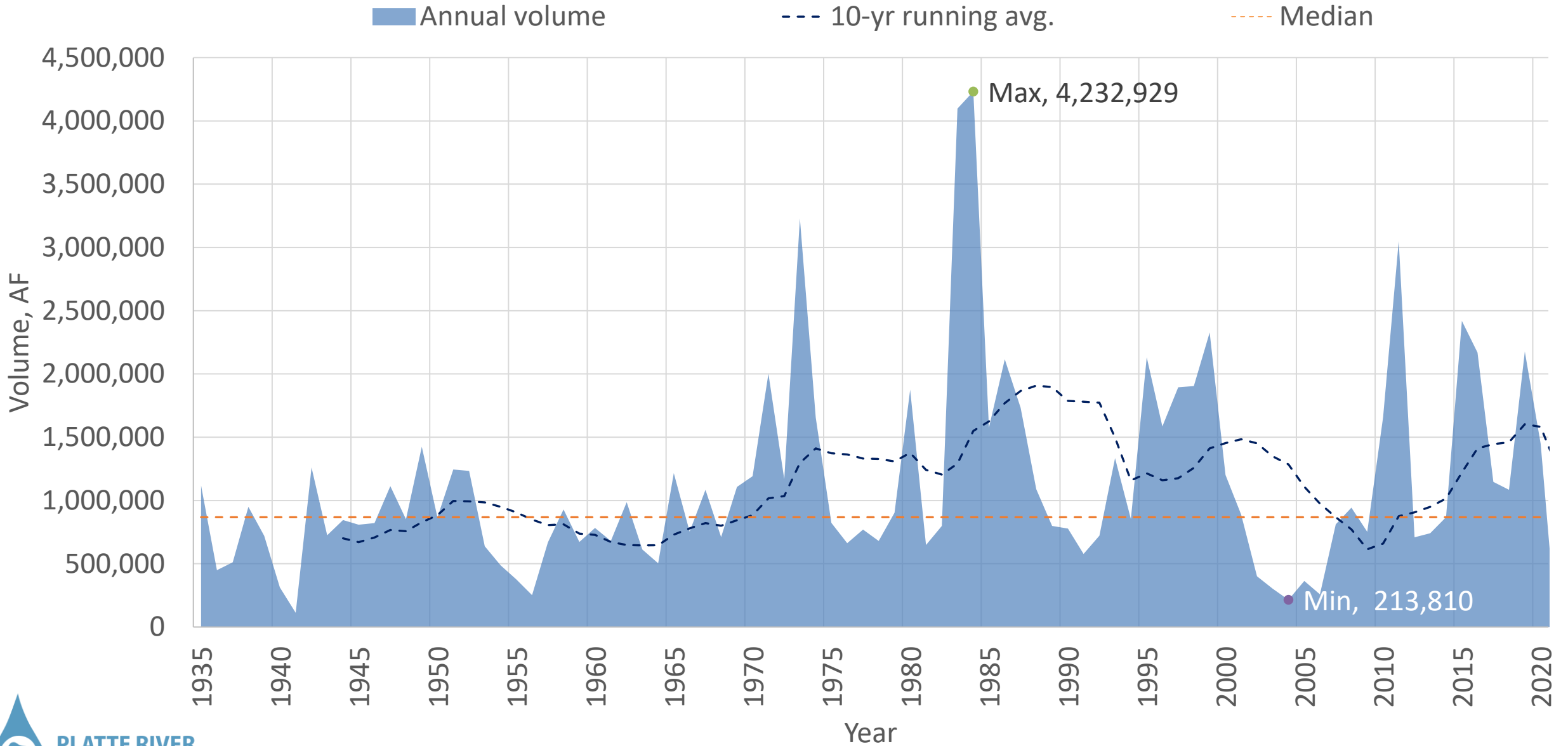
- Chokepoint Test Report finalized December 2020
- Options to consider
 - Large-scale engineering solutions
 - Property buyouts
 - Modify the Program Document
 - Work within existing flood stage and capacity constraints
- Reconvene Chokepoint Planning Workgroup (late Feb, early March)
- Recommended actions to be reviewed by WAC and GC
- Up to \$10k budgeted for vegetation control measures in 2021



Annual Flow Summary, 2020

Scott Griebling, Water Resource Engineer

Platte River at Grand Island

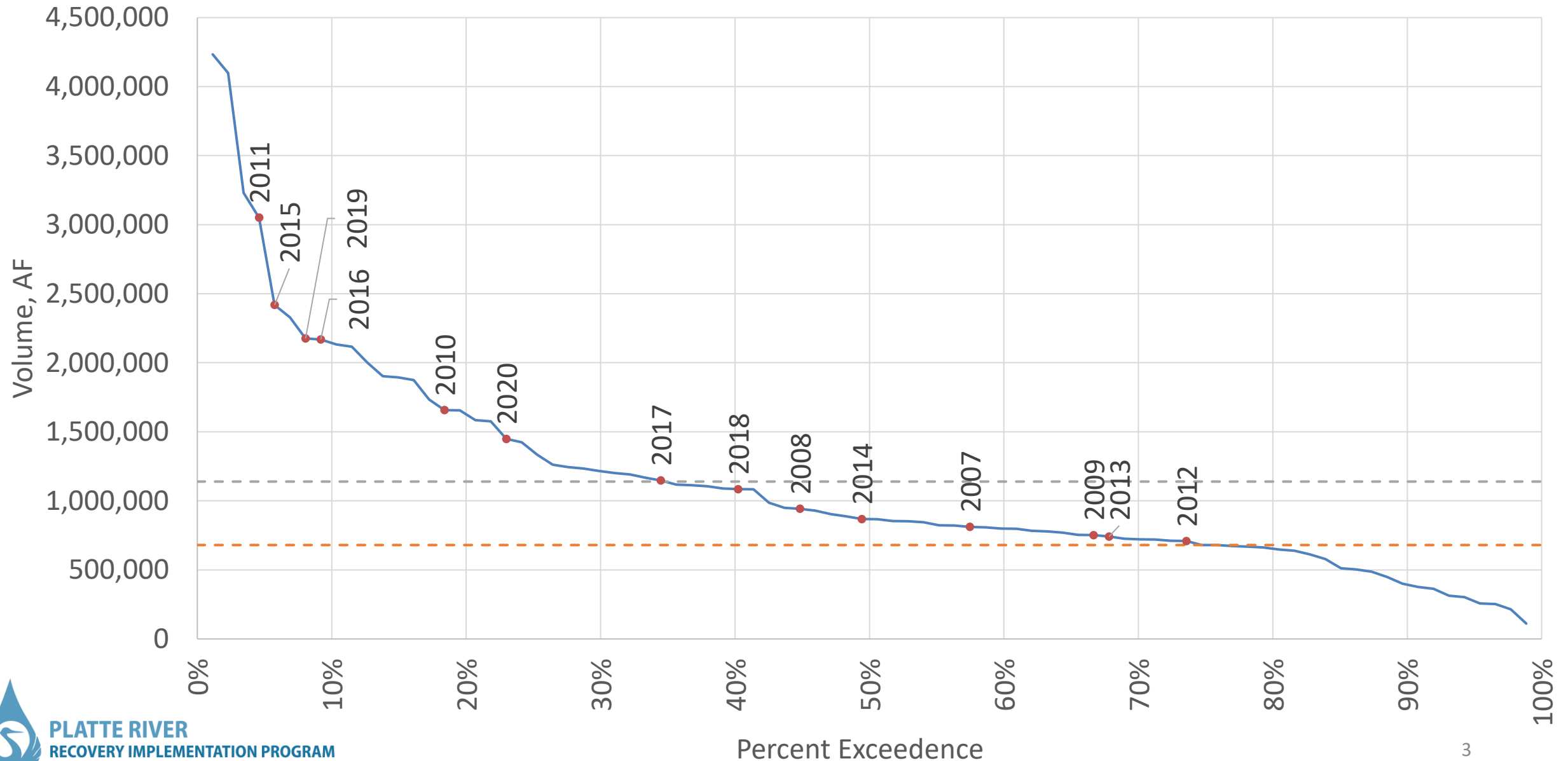


Platte River at Grand Island

— Annual volume

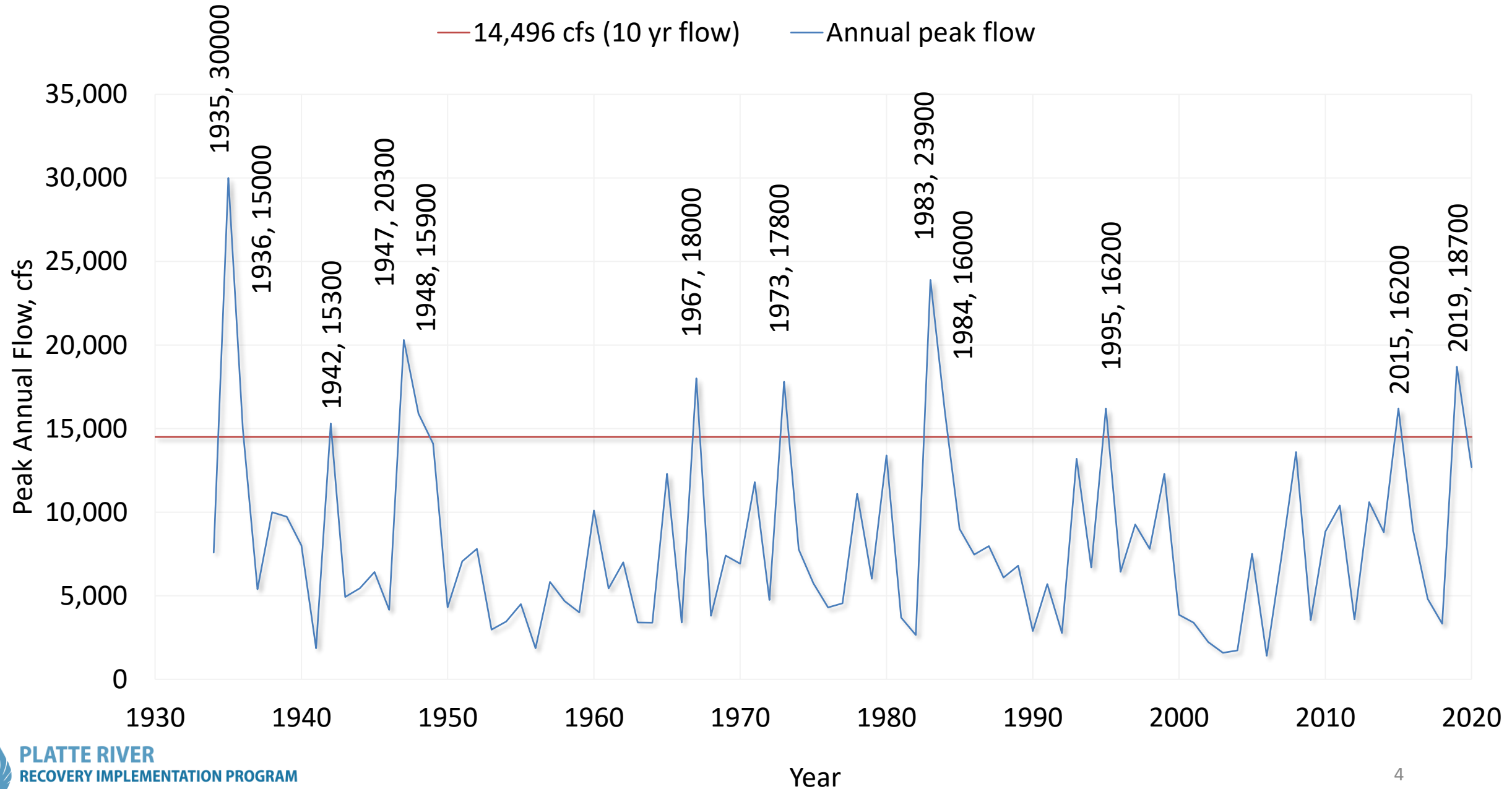
- - - Dry Year Threshold

- - - Wet Year Threshold

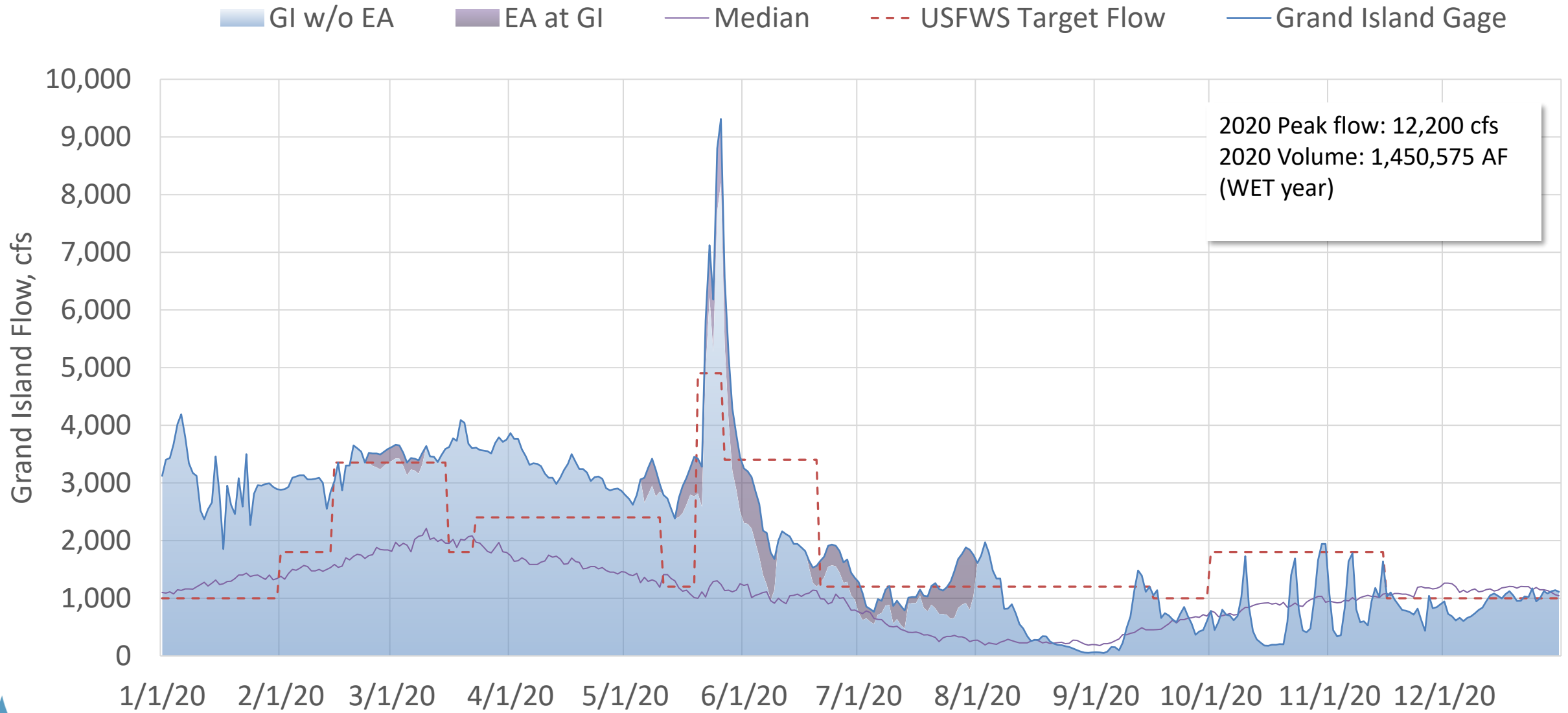


Grand Island Peak Annual Flow

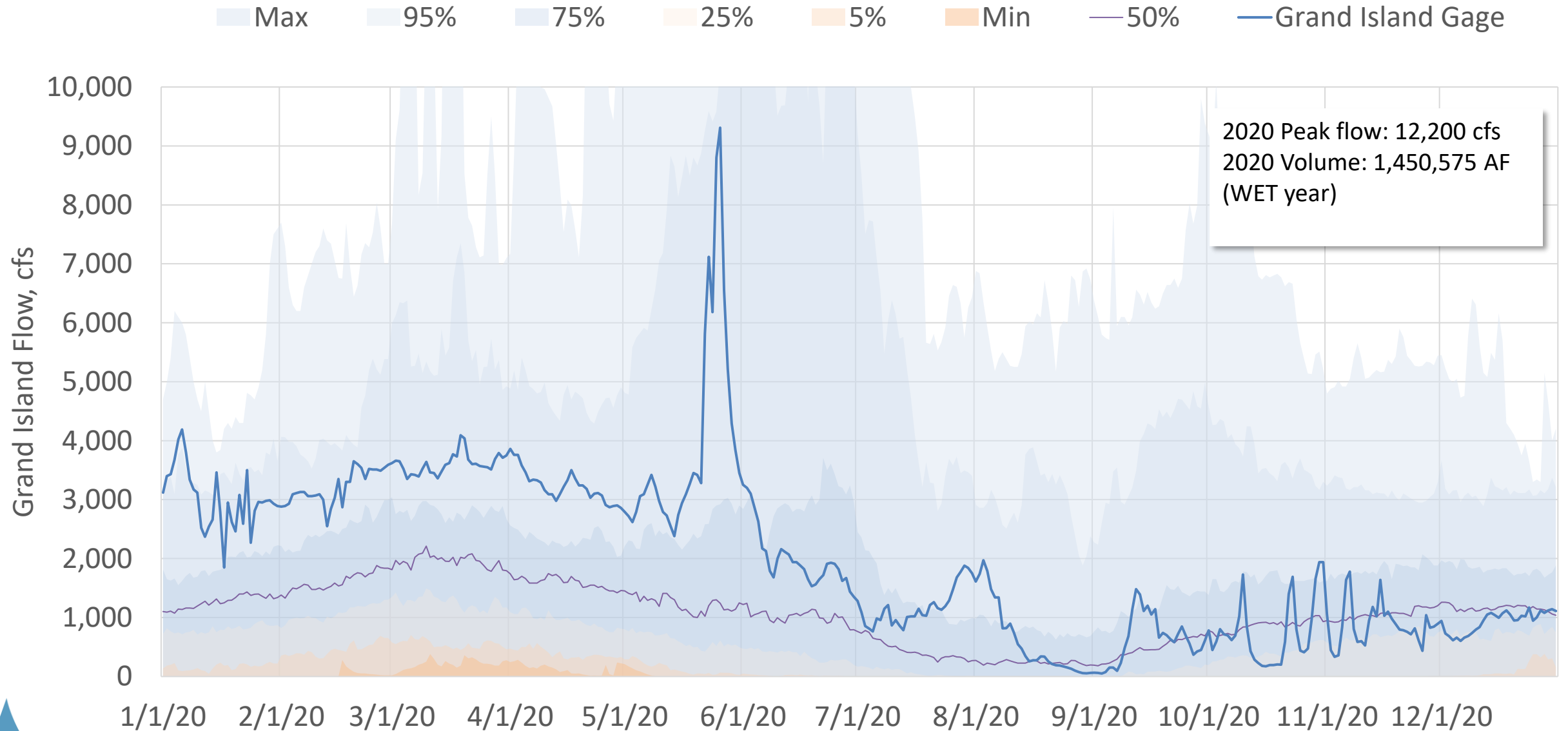
— 14,496 cfs (10 yr flow) — Annual peak flow



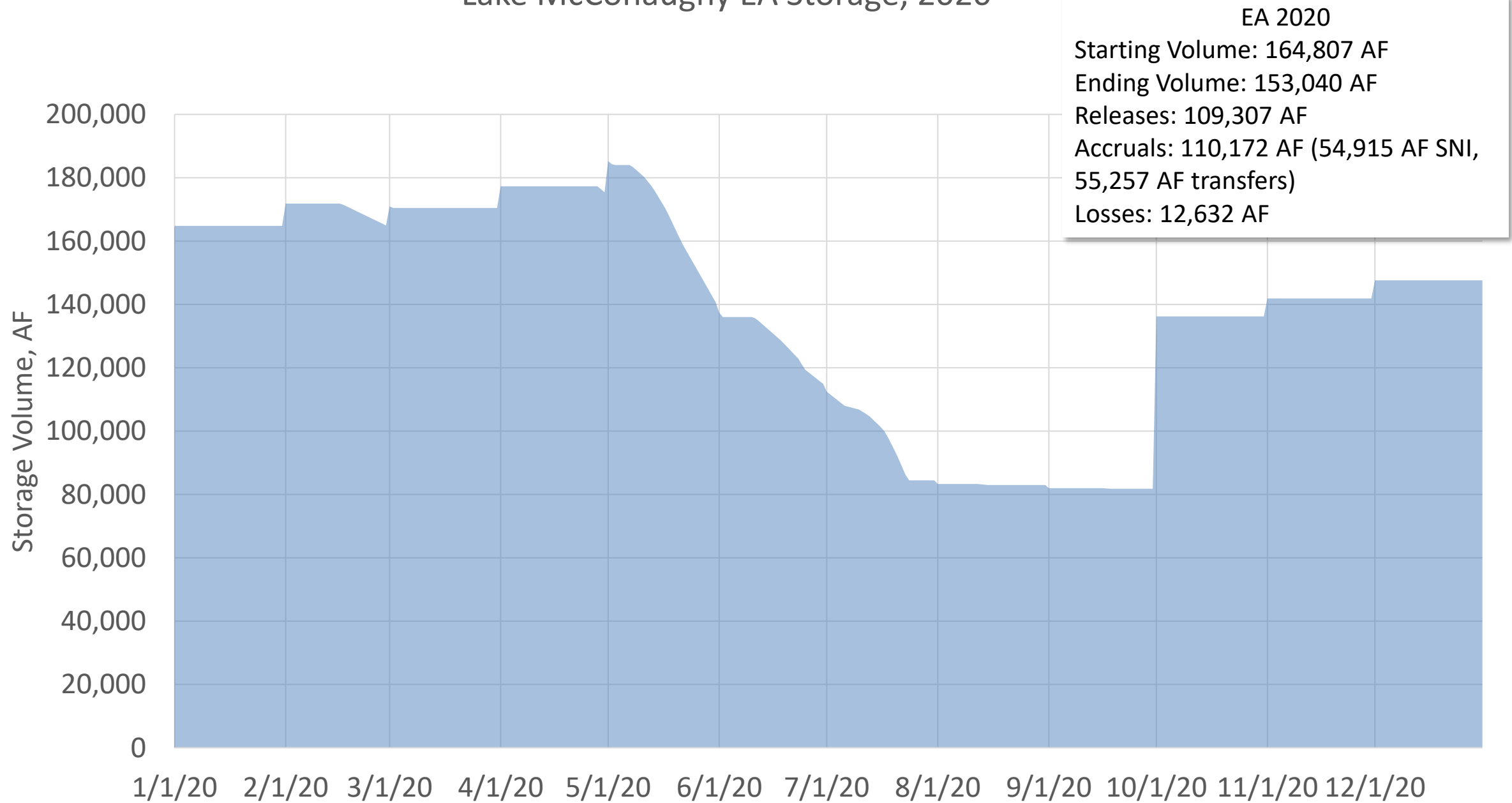
Platte River at Grand Island, 2020



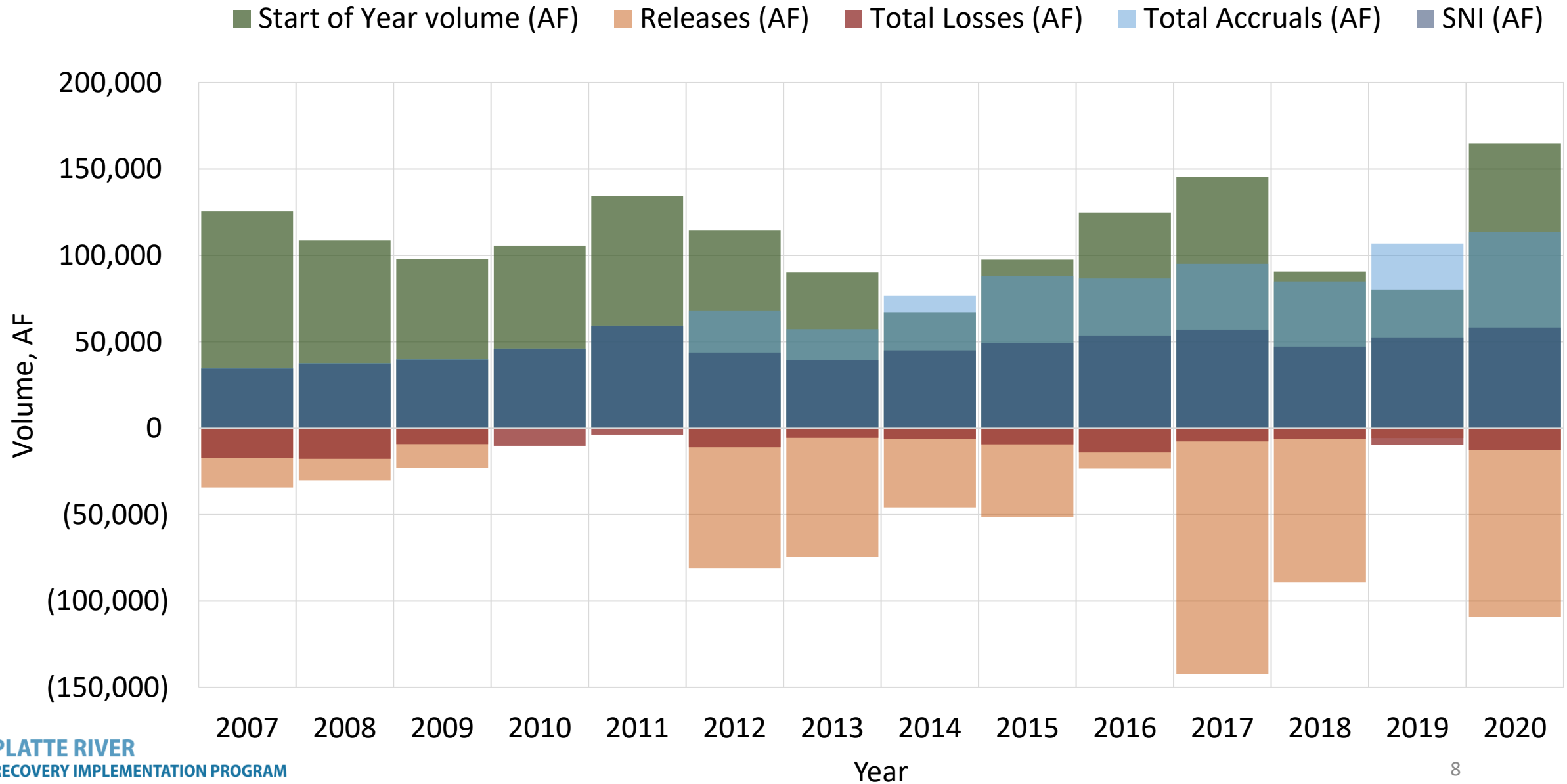
Platte River at Grand Island, 2020



Lake McConaughy EA Storage, 2020



Lake McConaughy EA Volumes



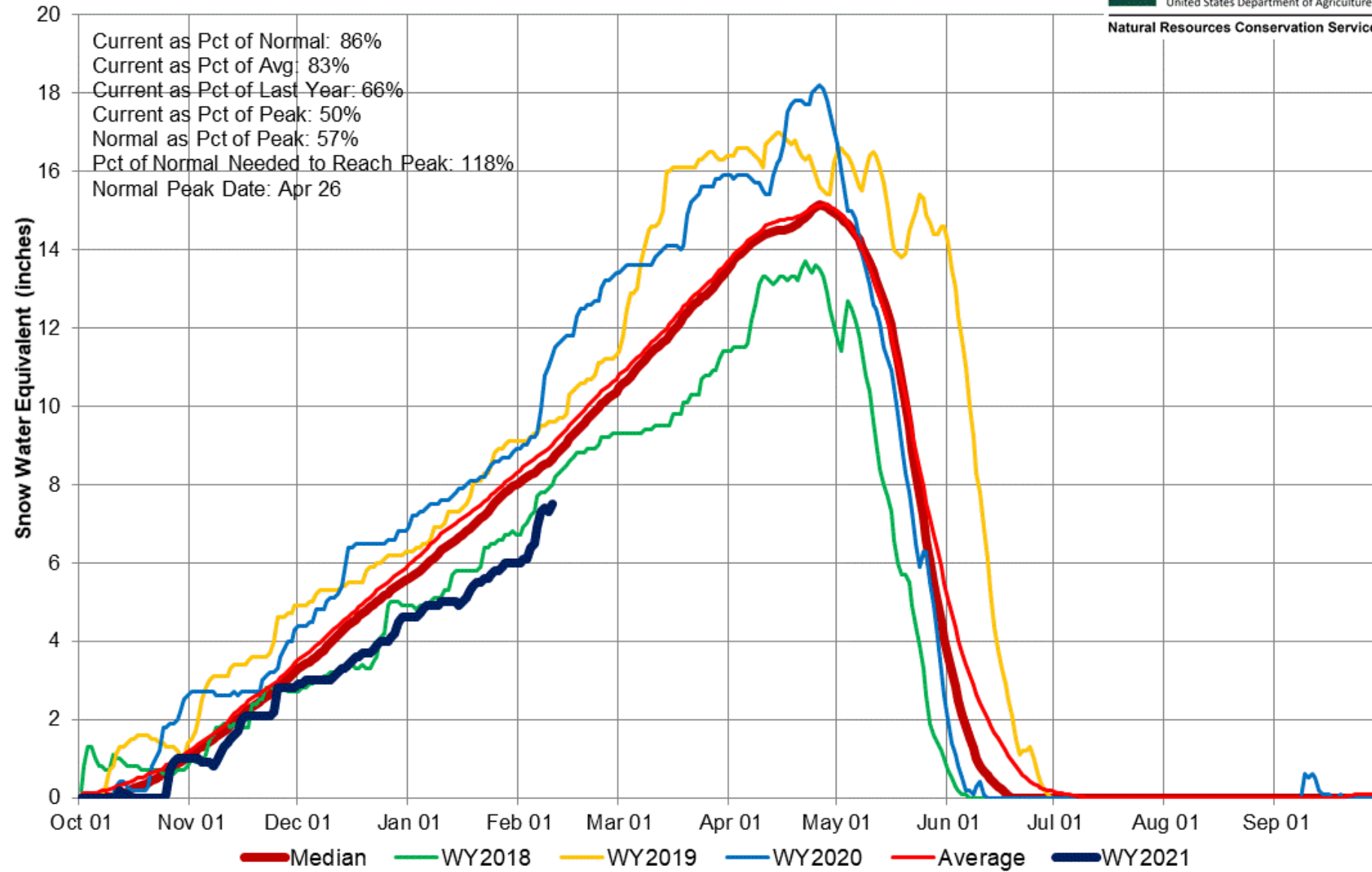
South Platte River Basin Time Series Snowpack Summary

Based on Provisional SNOTEL data as of Feb 10, 2021

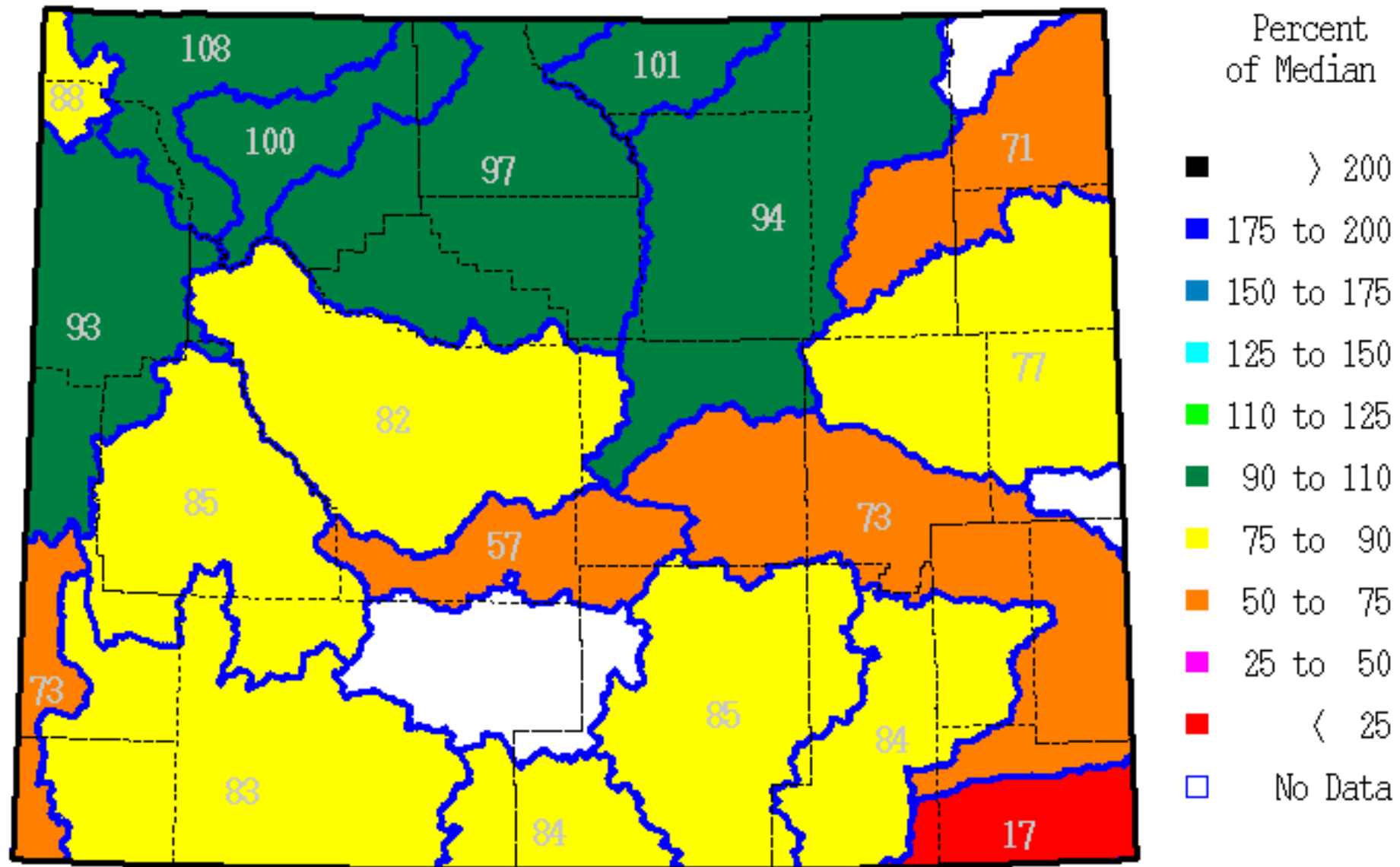


United States Department of Agriculture

Natural Resources Conservation Service



SWE % of Median as of Thursday, 11 February 2021



Produced by the Wyoming Water Resources Data System: <http://www.wrds.uwyo.edu>

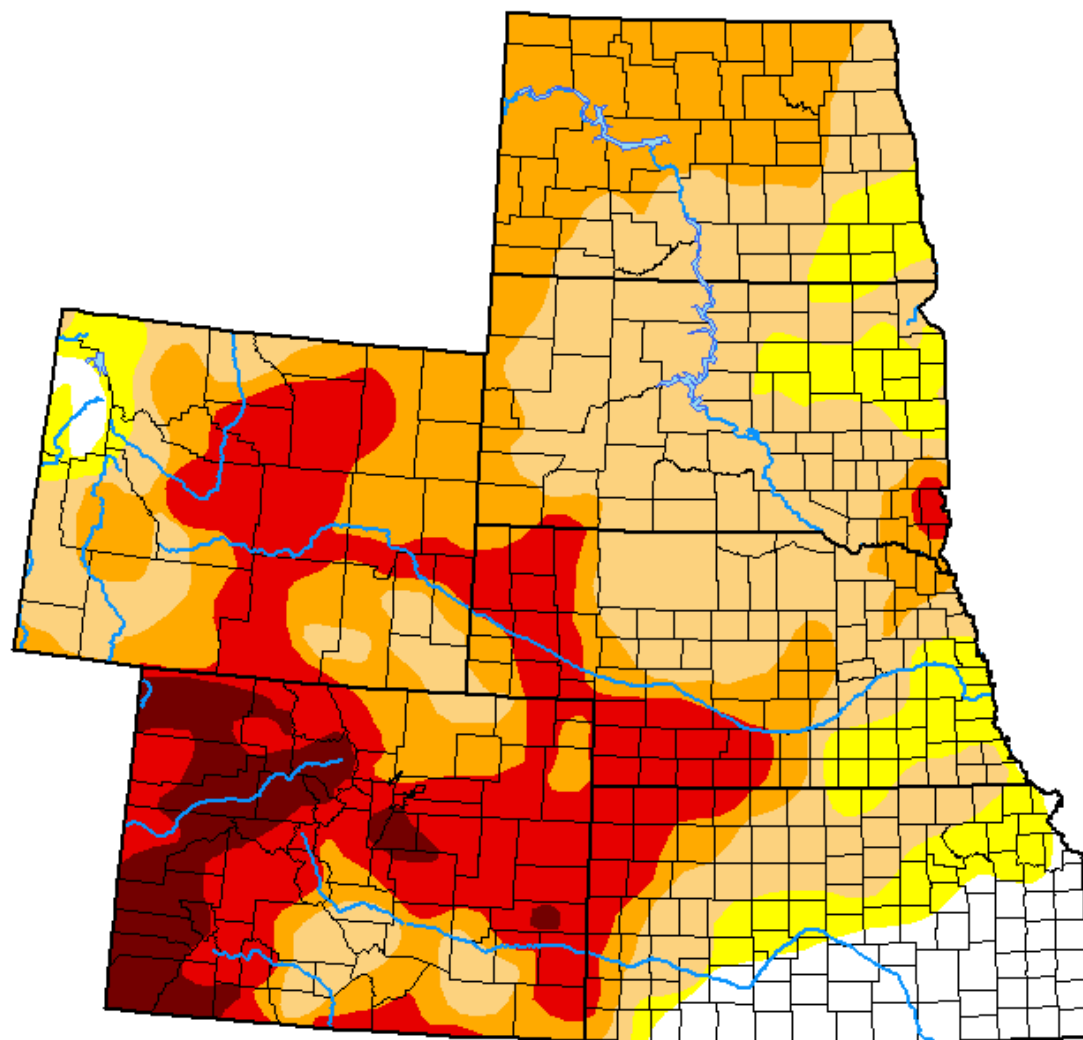
* = Data may not provide a valid measure of conditions



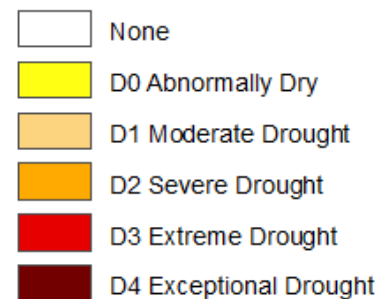
PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

U.S. Drought Monitor High Plains

February 9, 2021
(Released Thursday, Feb. 11, 2021)
Valid 7 a.m. EST



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:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM