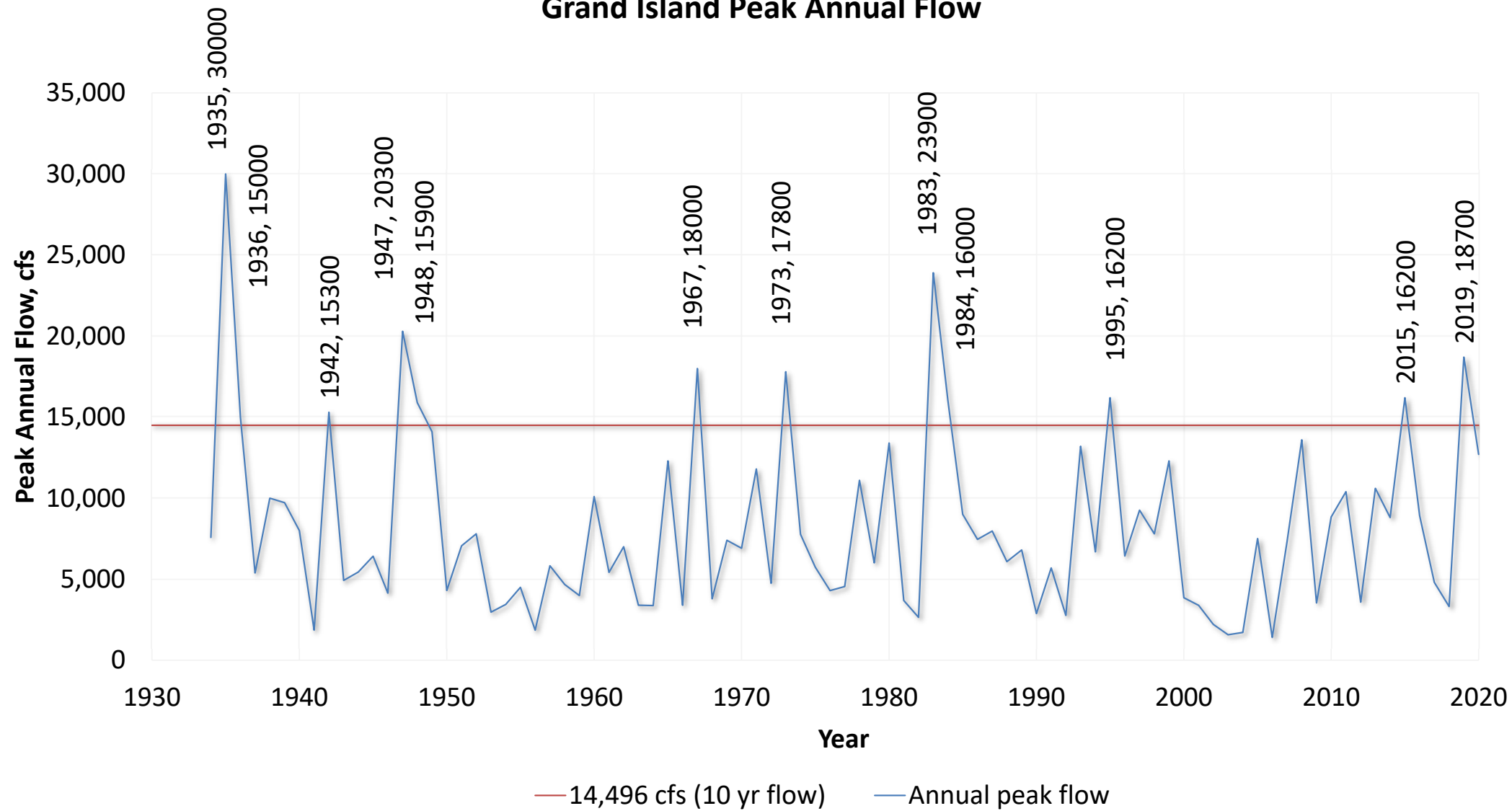
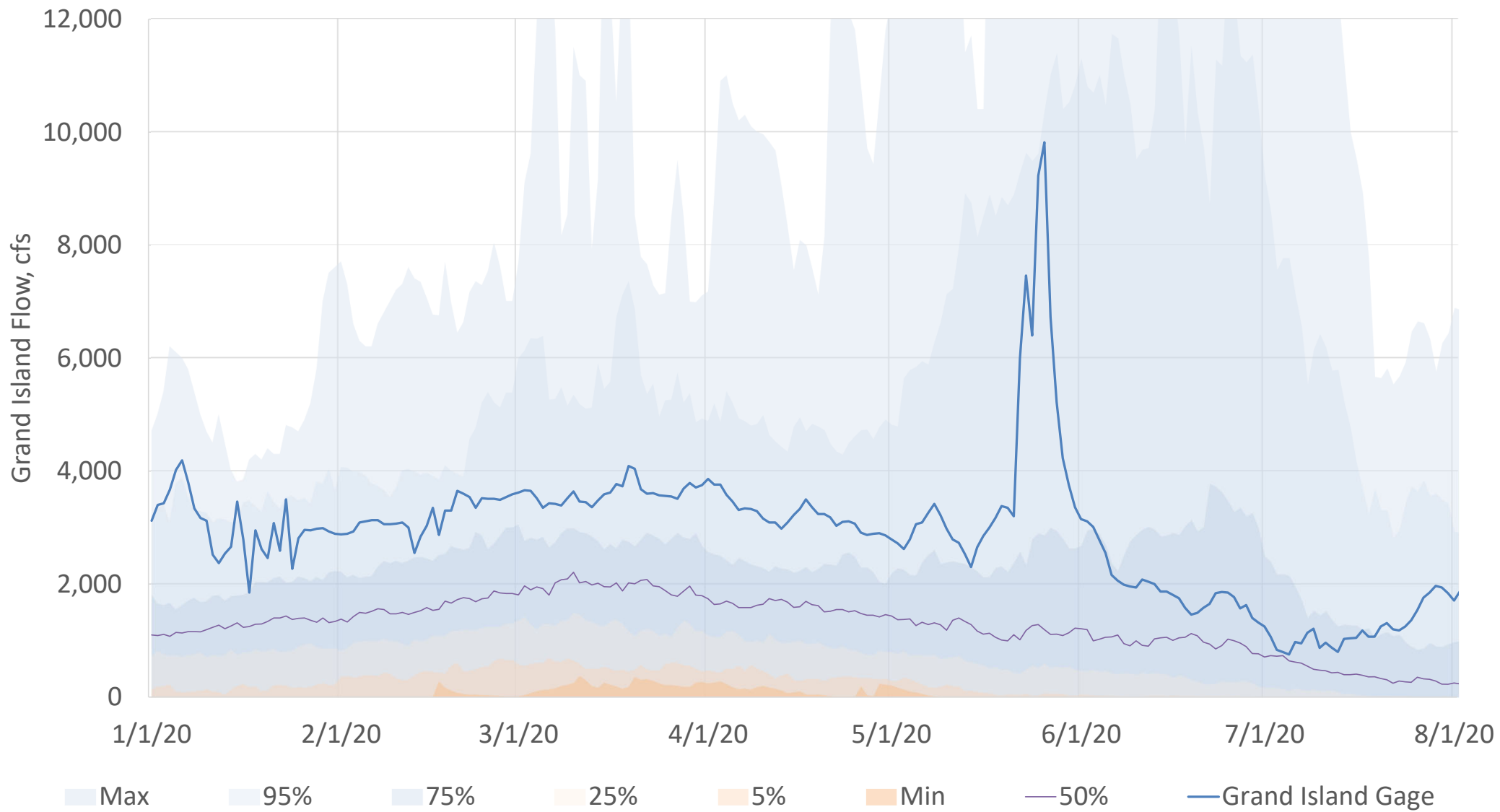
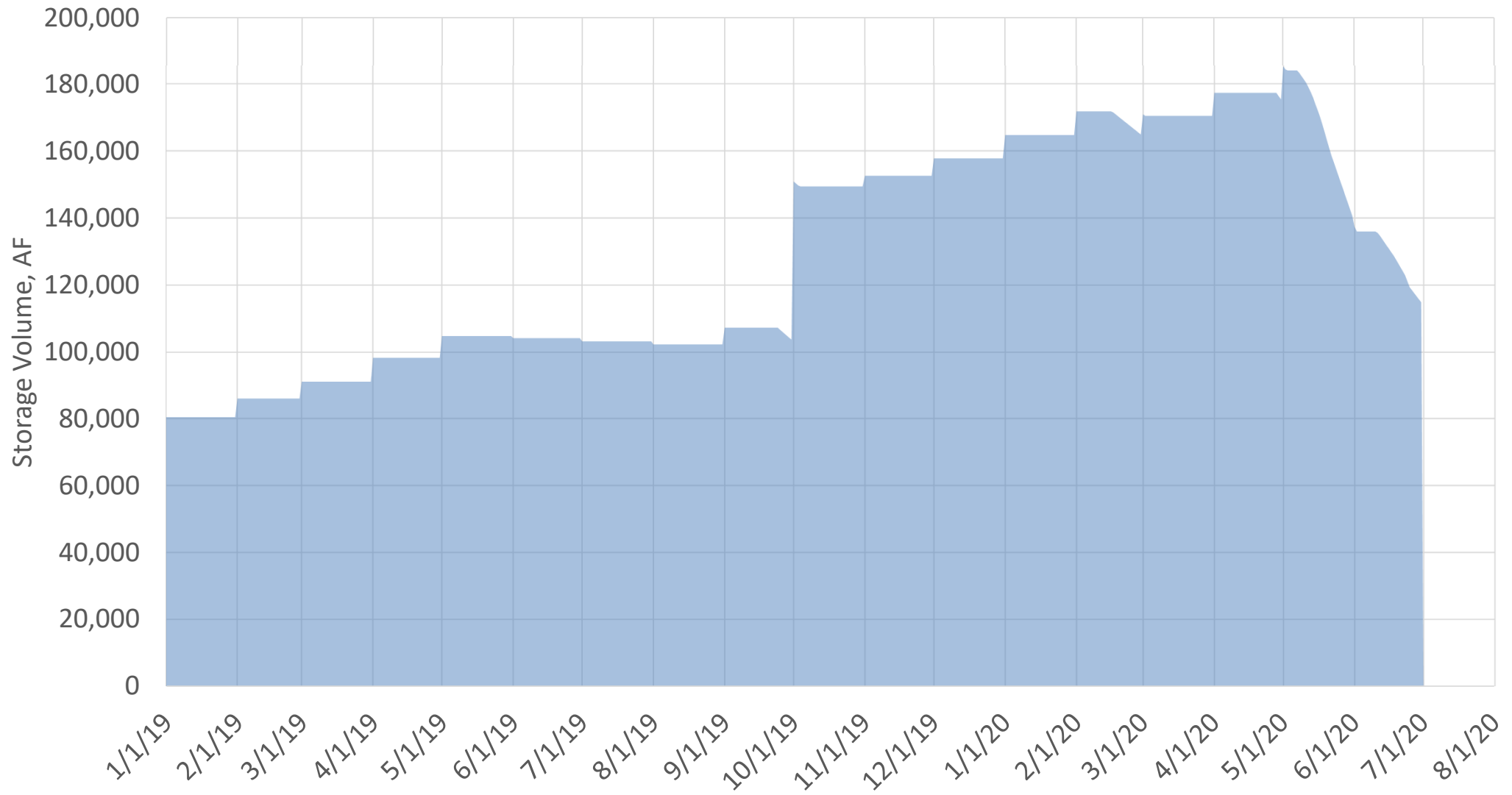


Grand Island Peak Annual Flow





EA Storage



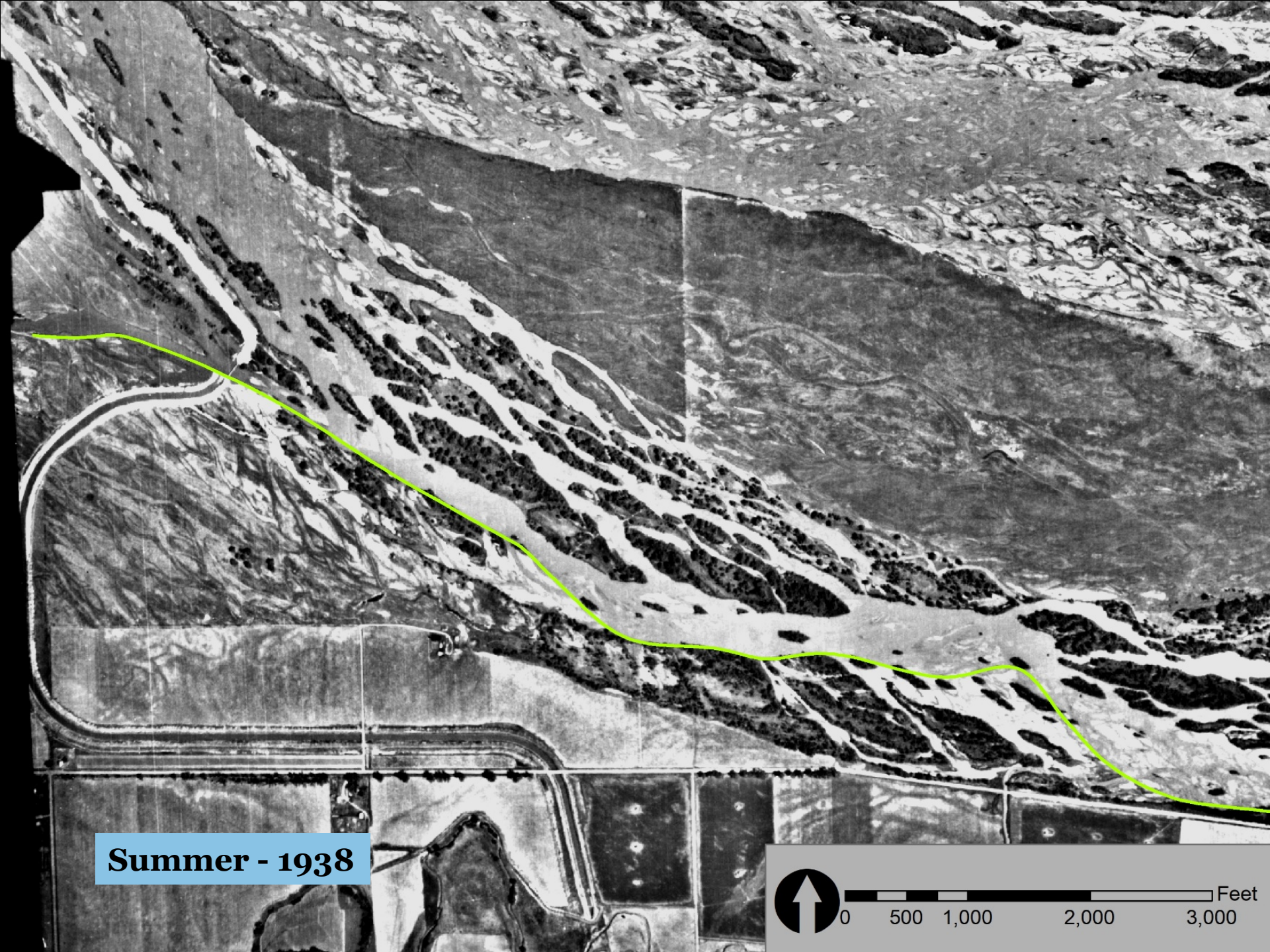


Full-Scale Sediment Augmentation - UPDATE

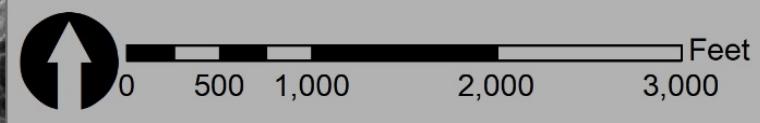
Water Advisory Committee Meeting
August 4, 2020



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

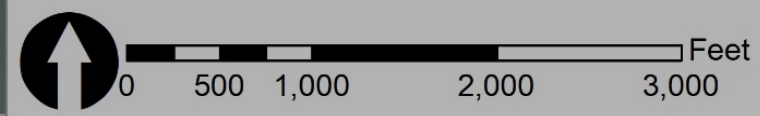


Summer - 1938





Fall - 2016



2017 Summary

- 55,200 tons directly augmented to the main channel with more coming in laterally
- 18,500 tons augmented to the cutoff meander

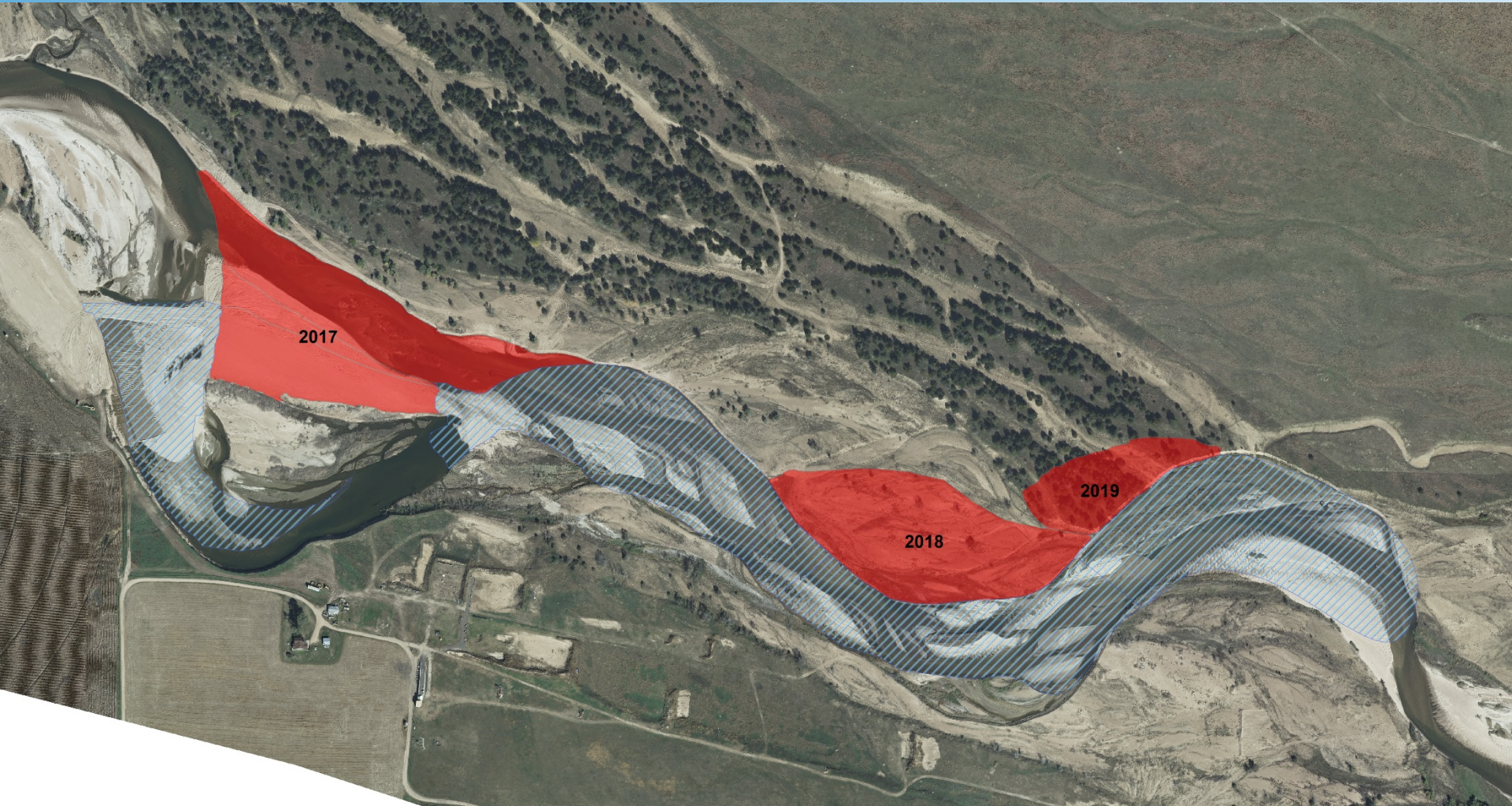
2018 Summary

- 60,000 tons augmented to the main channel

2019 Summary

- 63,500 tons augmented to the main channel

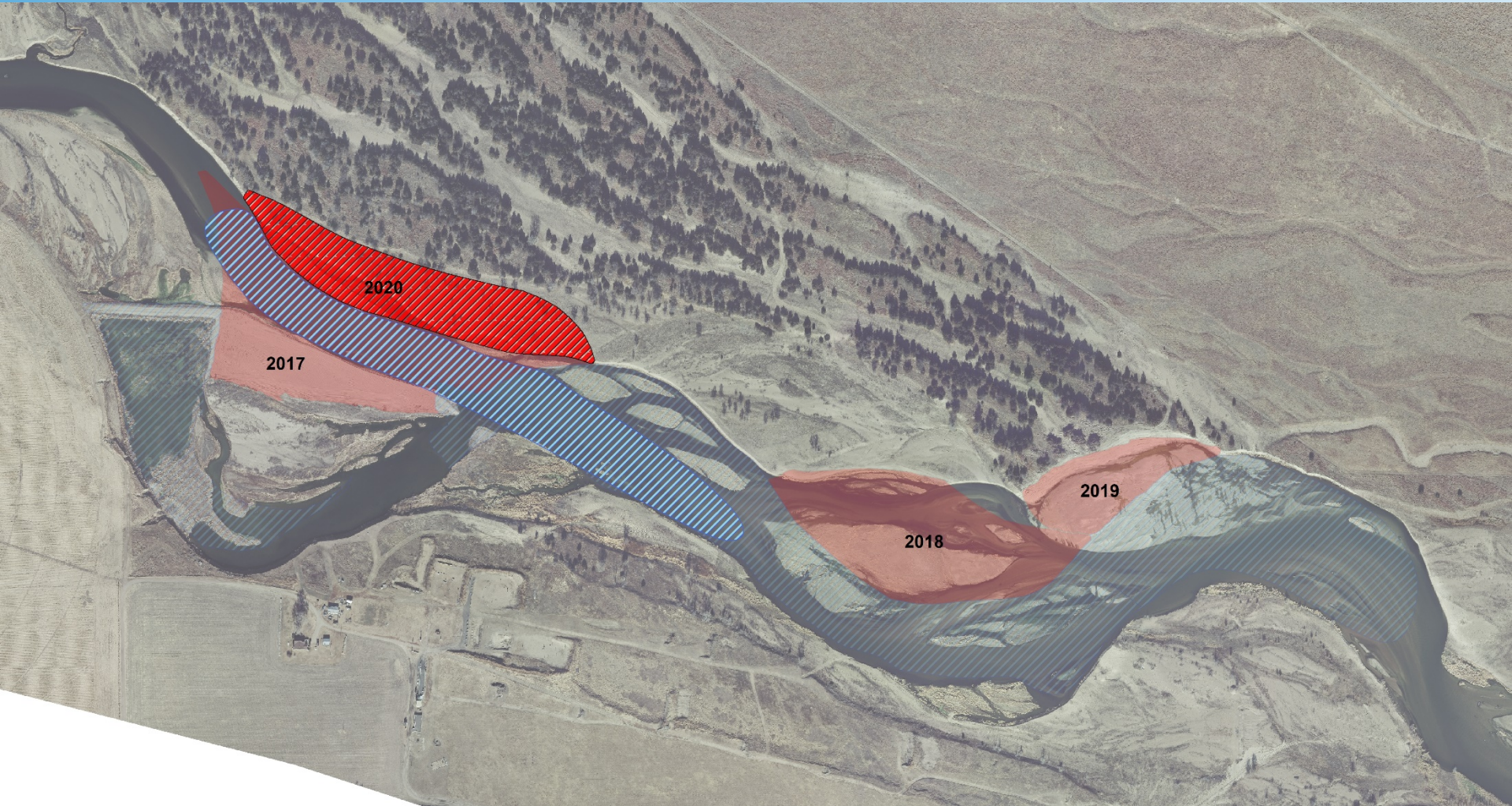
2017 through 2019



2020 Design Approach (Permit for 60,000-80,000 tons/yr)

- Increase to 75,000 tons (49,300 CY)
- Move upstream and widen into high terrace.
- Arrest incision and knock down the energy.
- Pre-Bid last week – Bid Opening 8/10/2020

2020 Design Approach



2021 Design...





Tom Smrdel 970-775-3355
smrdelt@headwaterscorp.com

Cottonwood Ranch BSR: First Fill #1

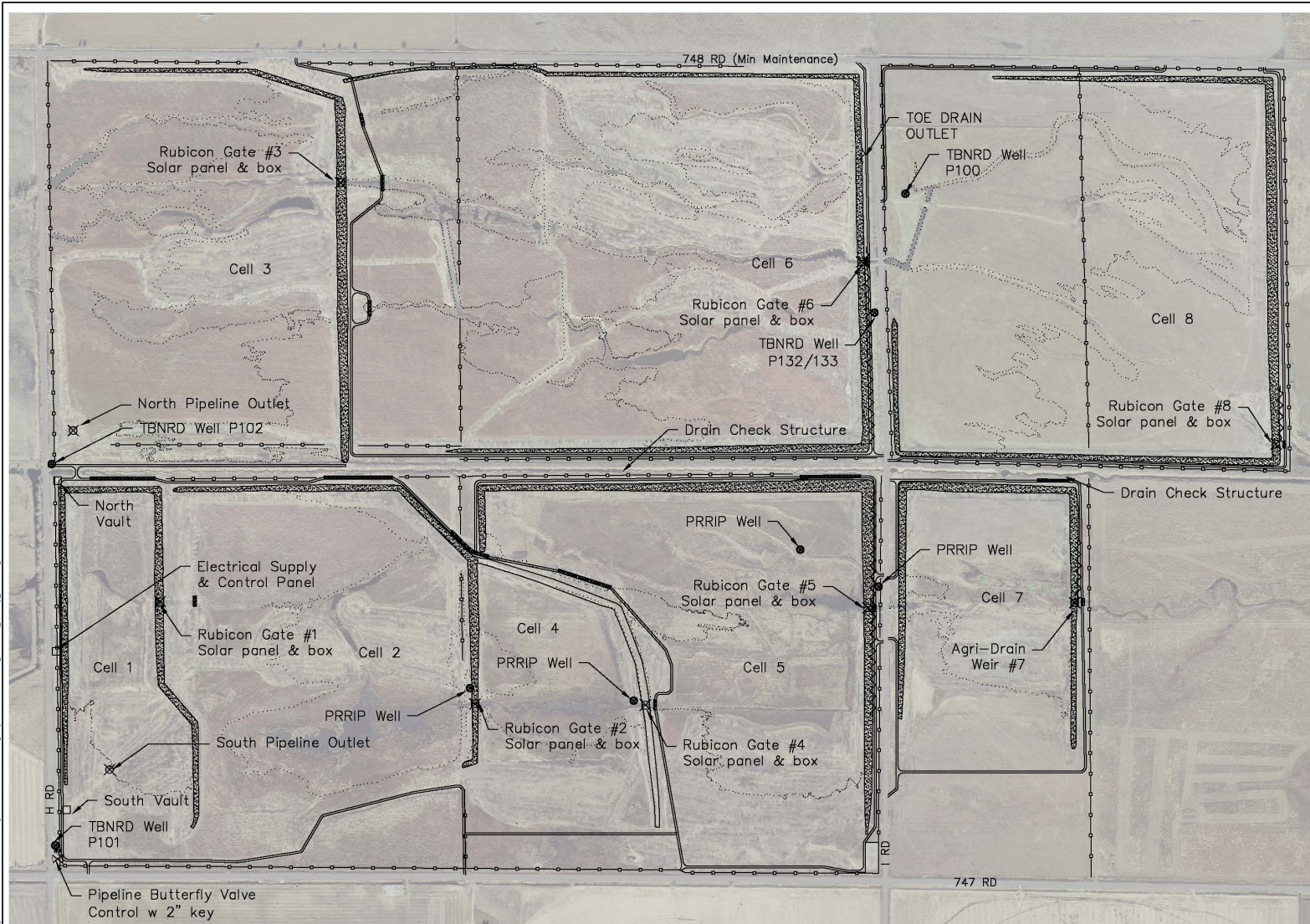
WAC Meeting
August 4, 2020

First Fill Objectives

- Test project infrastructure
- Identify improvements and maintenance items
- Identify long-term monitoring needs
- Learn and adjust

Week	July	August
1	Rubicon/CNNPID installs/EDO inspection	Evaluate Phase 1
2	Plan Phase 1	Plan Phase 2
3	First Fill (Phase 1)	First Fill (Phase 2)
4	Evaluate Phase 1	Evaluate Phase 2
Week	September	October
1	Evaluate Phase 2	Plan Phase 4 (if needed)
2	Plan Phase 3	Phase 4 (if needed)
3	First Fill (Phase 3)	Phase 4 (if needed)
4	Evaluate Phase 3	Evaluate Phase 4

M:\Projects\Platte River Water Authority\Platte River Water Authority\Broad Scale Recharge\Operations\Map\RechargeMap_11x17.dwg



4111 4TH AVENUE, STE 6
KEARNEY, NE 68845
308-237-5728
WWW.HEADWATERSCORP.COM

LEGEND

—○—	FENCE	—○—	TOE DRAIN
—	GRAVEL CROSSING	—○—	FULL POOL CONTOUR
—	BIEN		
—	ACCESS		
⊗	VALVE	⊗	WATER CONTROL STRUCTURE
●	WELL	□	PIPELINE INFRASTRUCTURE

1 INCH =

SHEET SIZE: 11x17

**PLATTE RIVER RECOVERY
IMPLEMENTATION
PROGRAM**

**COTTONWOOD RANCH
BROAD-SCALE
RECHARGE
PROJECT MAP**

PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM
WWW.PLATTERIVERPROGRAM.ORG

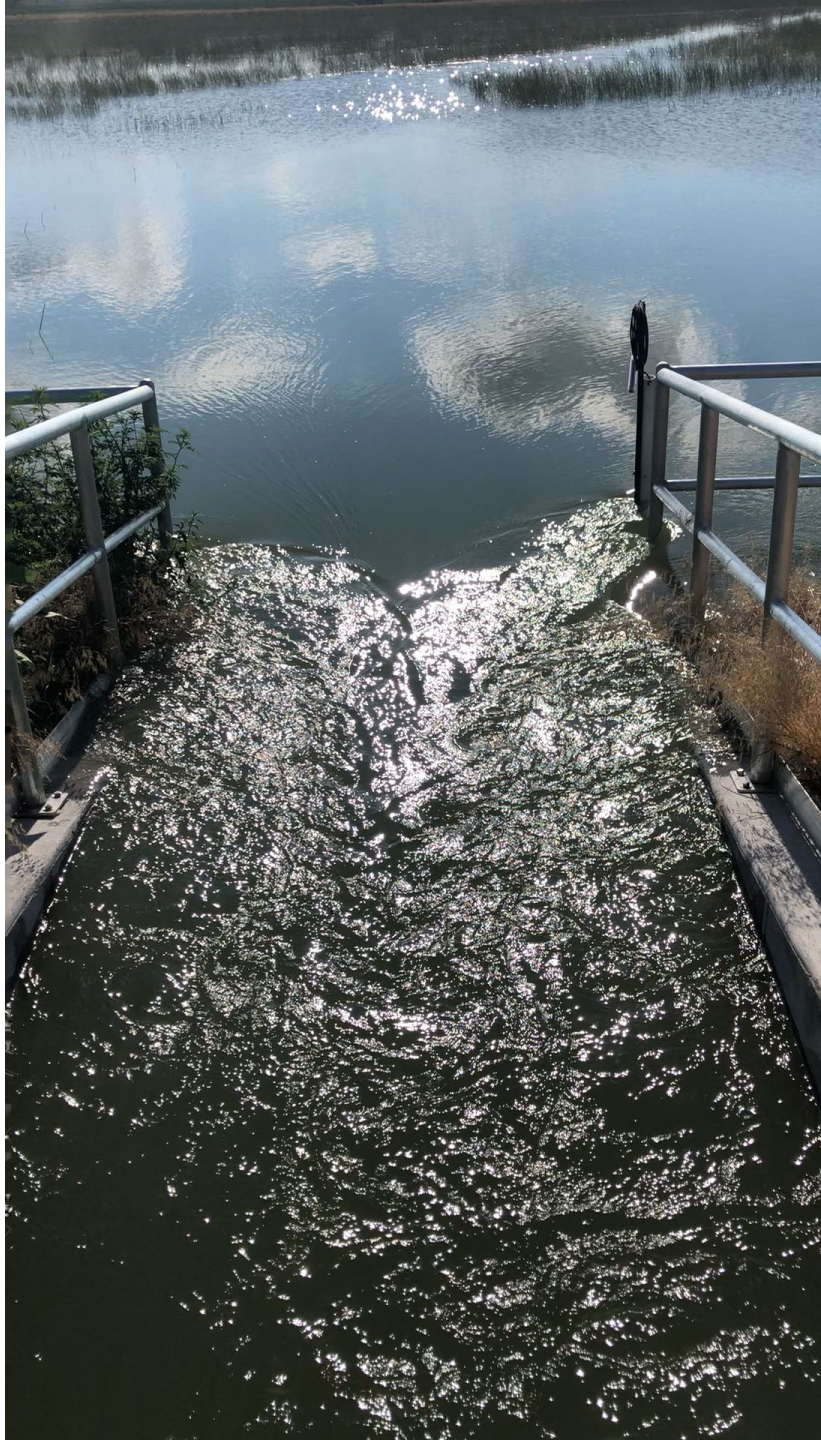
NOTES

- MAP WILL BE UPDATED AS INFRASTRUCTURE AND OTHER PROJECT COMPONENTS (I.E. FENCE, ETC.) ARE ADDED, ELIMINATED, AND DRAWN.
- FULL POOL CONTOURS ARE DERIVED FROM 2019 LEADS. HAVE NOT BEEN CORRECTED FOR VEGETATION OR HYDRAULIC HEAD DURING OPERATIONS. FORCED AREAS SHOULD BE MORE EXPANSIVE THAN SHOWN. EXTENTS WILL BE ASSESSED DURING OPERATIONS.
- BURIED PIPELINE AND BURIED ELECTRICAL FROM CONTROL PANEL TO VALVES ARE NOT SHOWN.







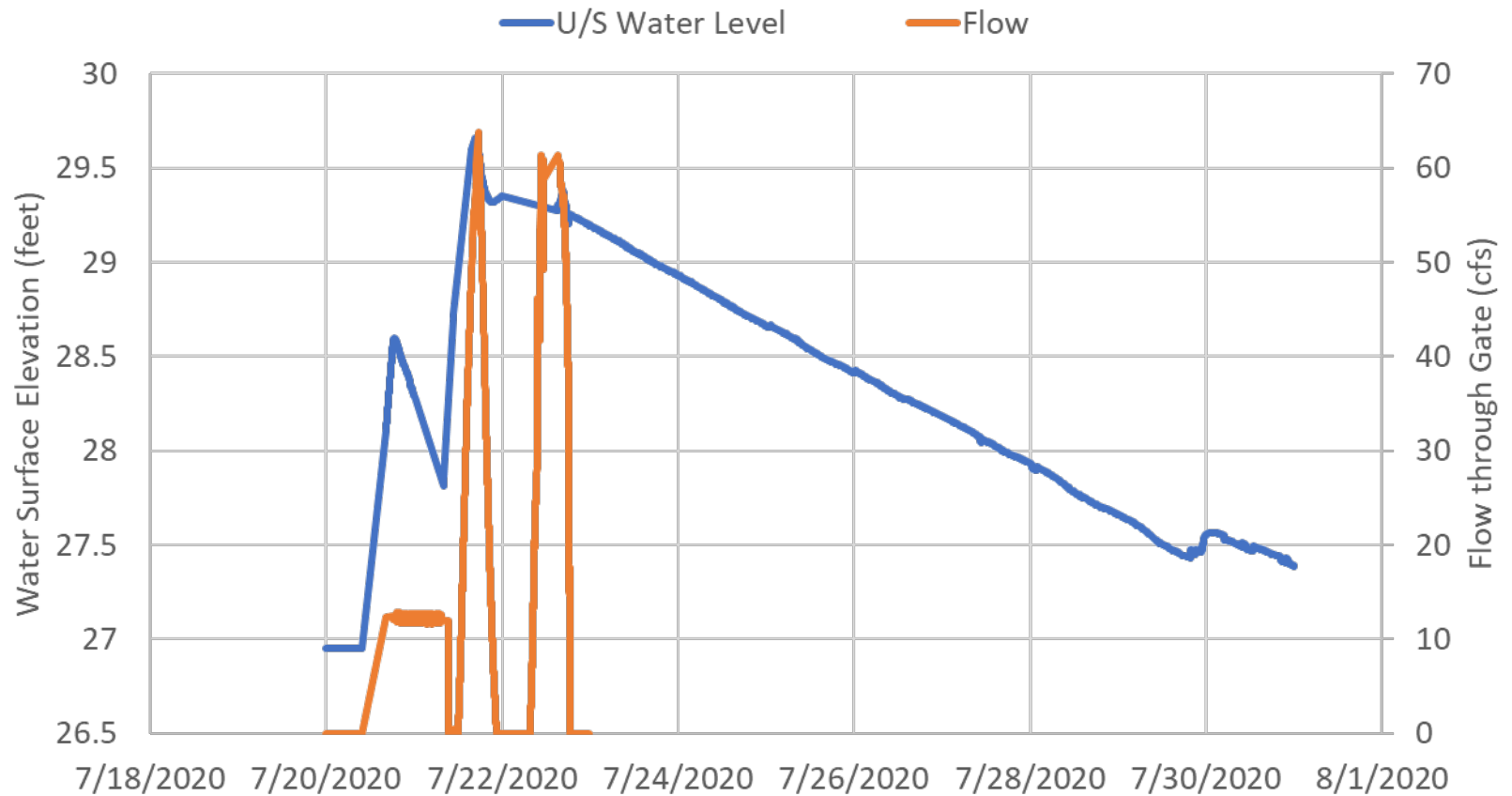








Monitoring





North Platte Chokepoint Test Flow Release

PRRIP Water Advisory Committee
August 4, 2020

Acknowledgements

- ❑ U.S. Fish and Wildlife Service (EA Manager)
- ❑ CNPPID
- ❑ National Weather Service
- ❑ Nebraska Department of Natural Resources
- ❑ City of North Platte
- ❑ Lincoln County Emergency Manager
- ❑ NPPD, USBR, CWCB, WWDO
- ❑ EDO Staff



North Platte Chokepoint Test

- ❑ Program Water Management Activities
- ❑ NPR @ North Platte flood stage/discharge
- ❑ Objectives of chokepoint test
- ❑ Planning process, timeline
- ❑ Implementation Plan and Monitoring
- ❑ EA release and observed streamflows
- ❑ Observations during chokepoint test
- ❑ Outcomes of chokepoint test



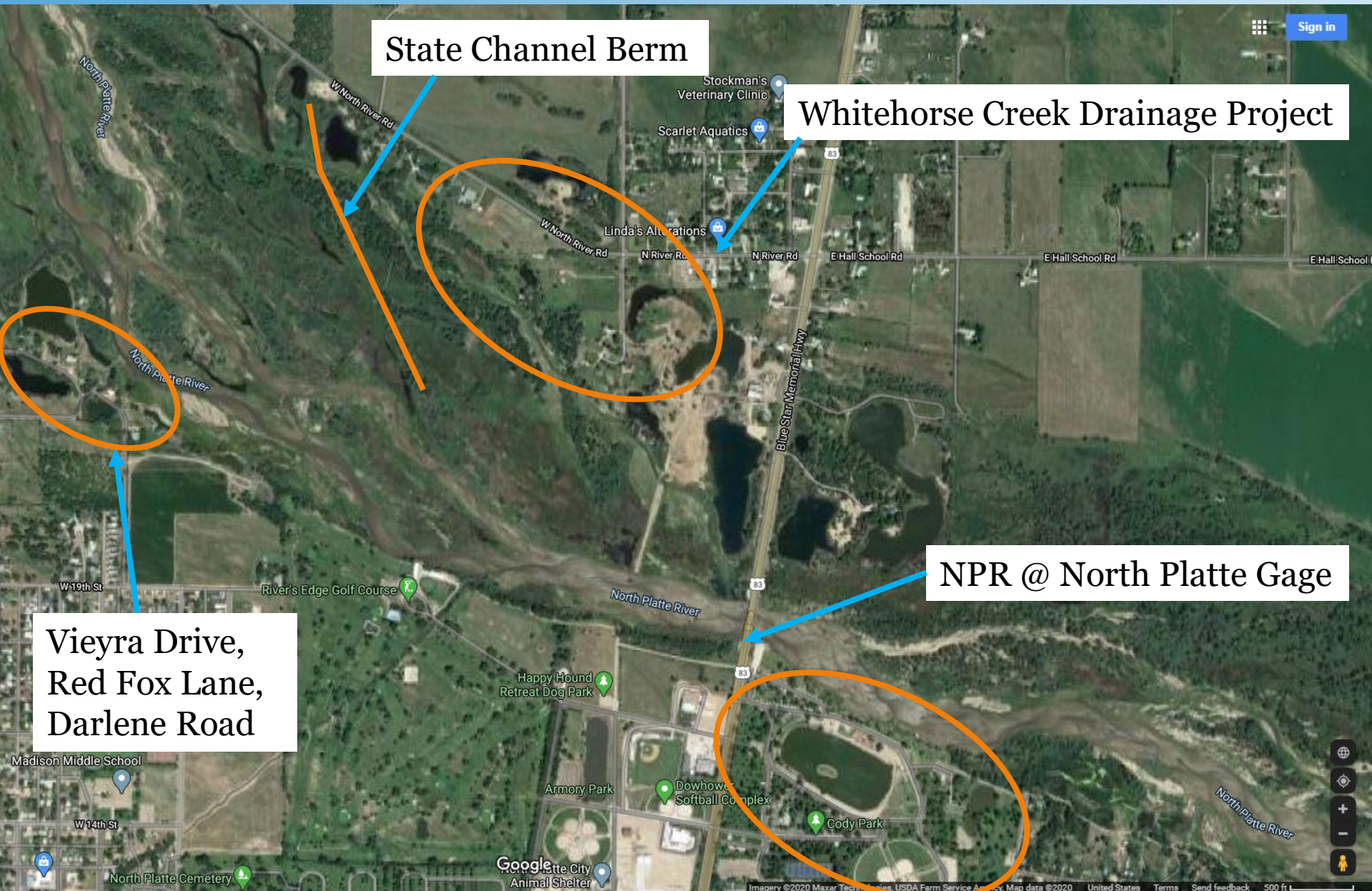
Program Document*

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.
- Implement water releases including short-duration high flows (SDHF) and target flows once Program water projects are operational and choke point conveyance issues are resolved.
- The Program will continue to evaluate the efficacy of available Program water and choke point capacity through time to ensure Program water meets its intended purposes.

*Addendum to the Final Platte River Recovery Implementation Program – First Increment Extension, Section II.B. June 7, 2017





State Channel Berm

Whitehorse Creek Drainage Project

NPR @ North Platte Gage

Vieyra Drive,
Red Fox Lane,
Darlene Road

NWS Flood Stage and Discharge

- Before test, minor to moderate impacts:
 - ▣ Along north bank to the west of Hwy 83 and south of North River Road
 - ▣ Low-lying areas of Cody Park

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



Chokepoint Test Objectives

- Increase minor flood stage from 6.0 ft to 6.5 ft
 - ▣ Release EA water to achieve target stages
 - ▣ Extensive monitoring and data collection
 - ▣ Document for review by NWS
- Evaluate performance of restored State Channel Berm under high flow conditions



Test Planning Timeline

- ❑ Test planning postponed from March 2019
- ❑ Planning Workgroup: April 16, June 9, July 7
 - ❑ Started with PRRIP stakeholders
 - ❑ Added NWS, Nebraska DNR, City of North Platte, Lincoln County
- ❑ Test schedule iterations
 - ❑ Lake McConaughy fill-and-spill or late July/early August
 - ❑ NWS recommended up to 7-day steps
 - ❑ Preferred monitoring on weekdays
 - ❑ Nebraskaland Days reschedule
 - ❑ River at 6.0 ft by July 5



Implementation Plan

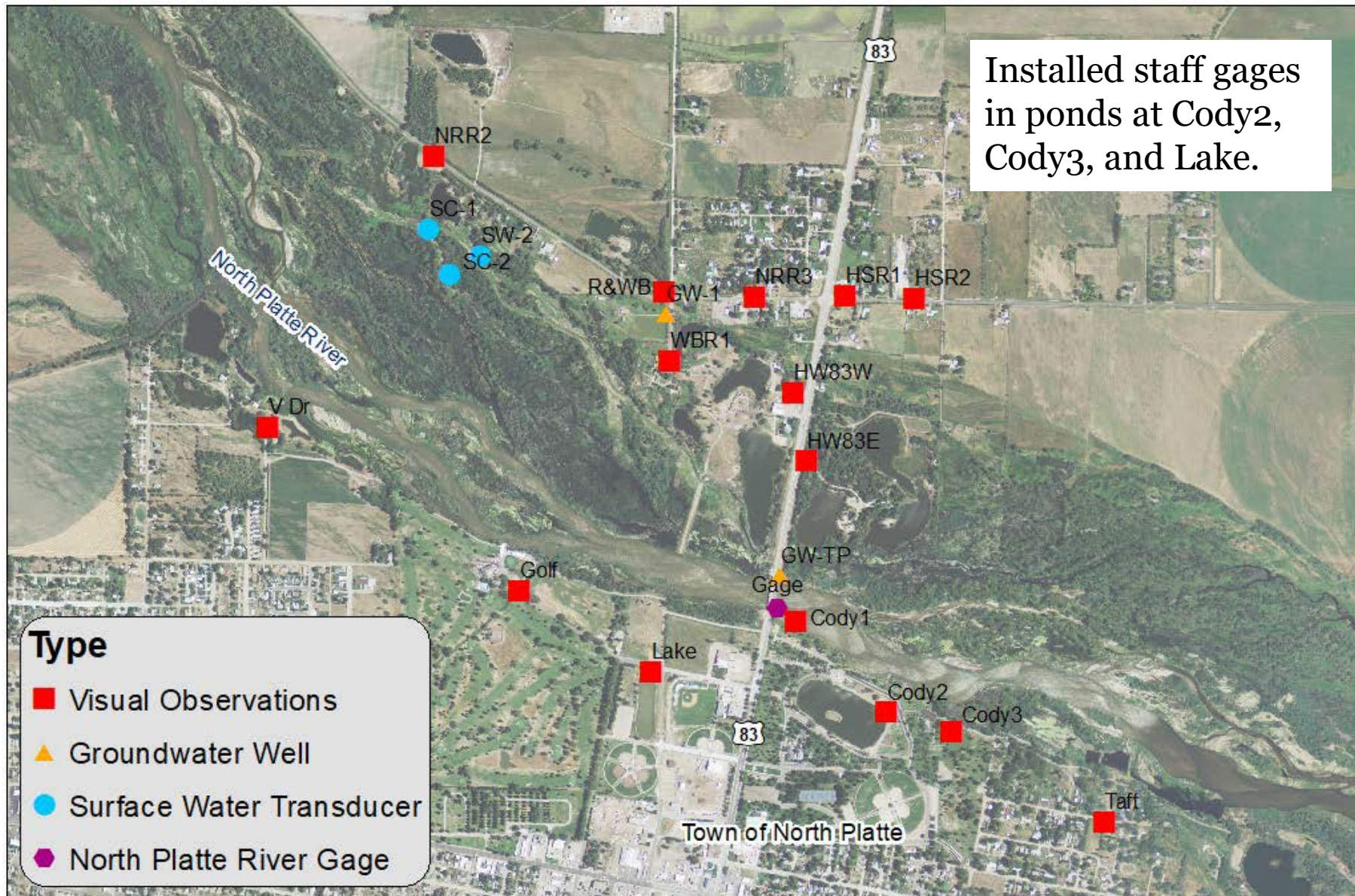
- ❑ Test flow release objectives
- ❑ Coordination (staff and roles/responsibilities)
- ❑ Communication protocols
 - ❑ Advisory signs
 - ❑ Press release (media outlets, PRRIP website banner)
- ❑ Schedule for EA release and stage targets at North Platte
- ❑ Monitoring (where, what, when)
- ❑ Triggers for termination
- ❑ Post-test assessment

CAUTION

**North Platte River
Temporary High Flows
July 13-August 4**

**For Information
www.platteriverprogram.org**





Type

- Visual Observations
- ▲ Groundwater Well
- Surface Water Transducer
- North Platte River Gage



-DRAFT-

North Platte Choke Point Monitoring

0 0.15 0.3 Miles



Date: 6/16/2020

Advisory Signs – July 9

GW-1 at N. River Rd & N. Washboard Rd.



River's Edge Golf Course



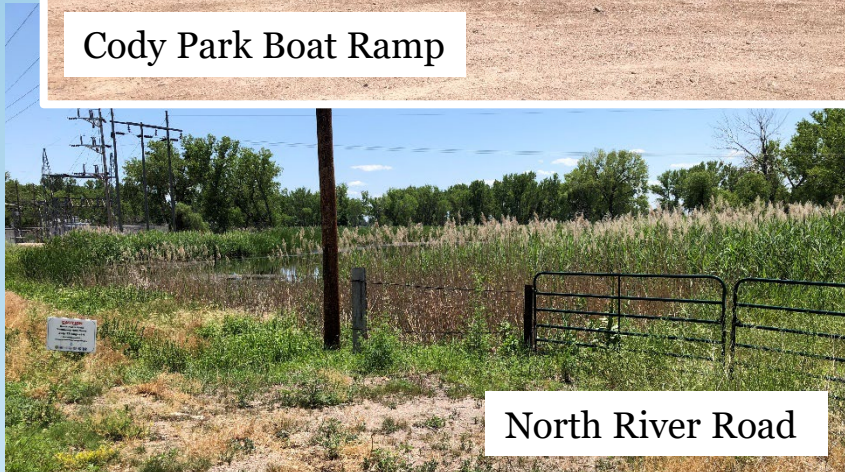
Cody Park Boat Ramp



Buffalo Bill Campground



North River Road



Near Highway 30 Bridge



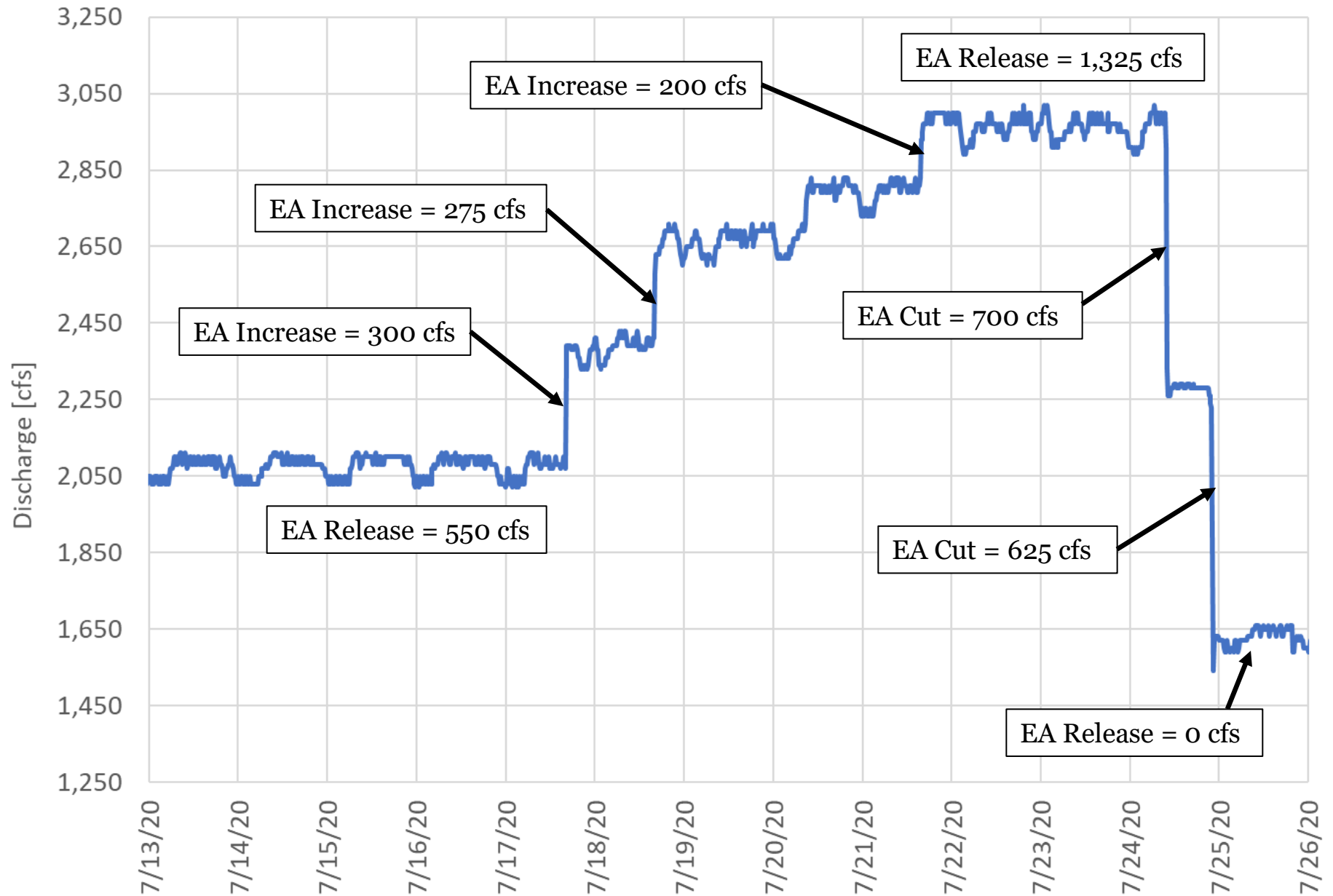
Chokepoint Test EA Release and River Flows

Shifting Flow Targets

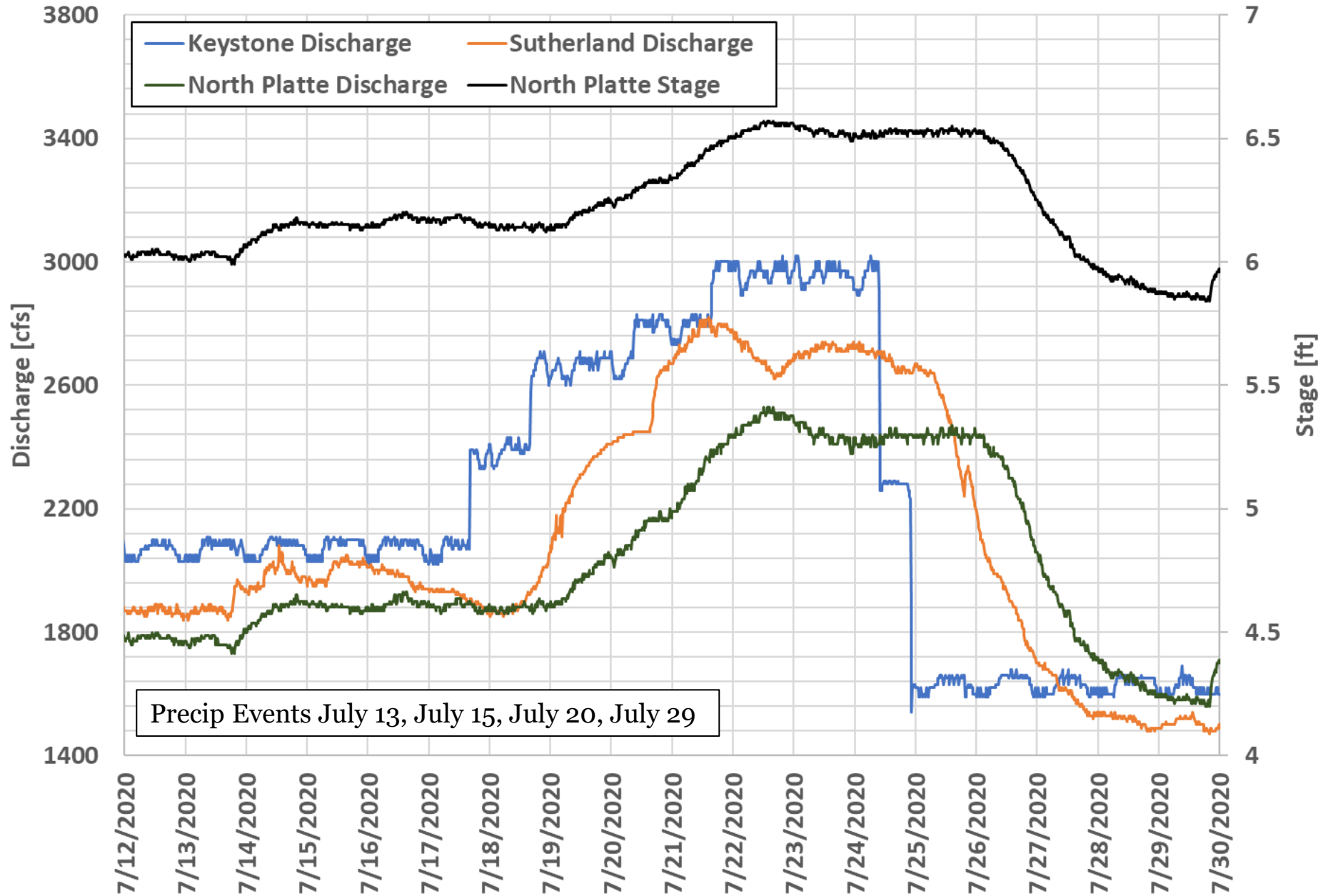
Date	Shift	Discharge [cfs]		
		Stage = 6.0 ft	Stage = 6.5 ft	Stage = 6.75 ft
April 2020	Rating Curve	1930	2770	3250
July 2	-0.09	1790	2610	3070
July 17	-0.21	1620	2400	2840
July 20	-0.17	1680	2470	2920
July 23	-0.22	1610	2380	2820



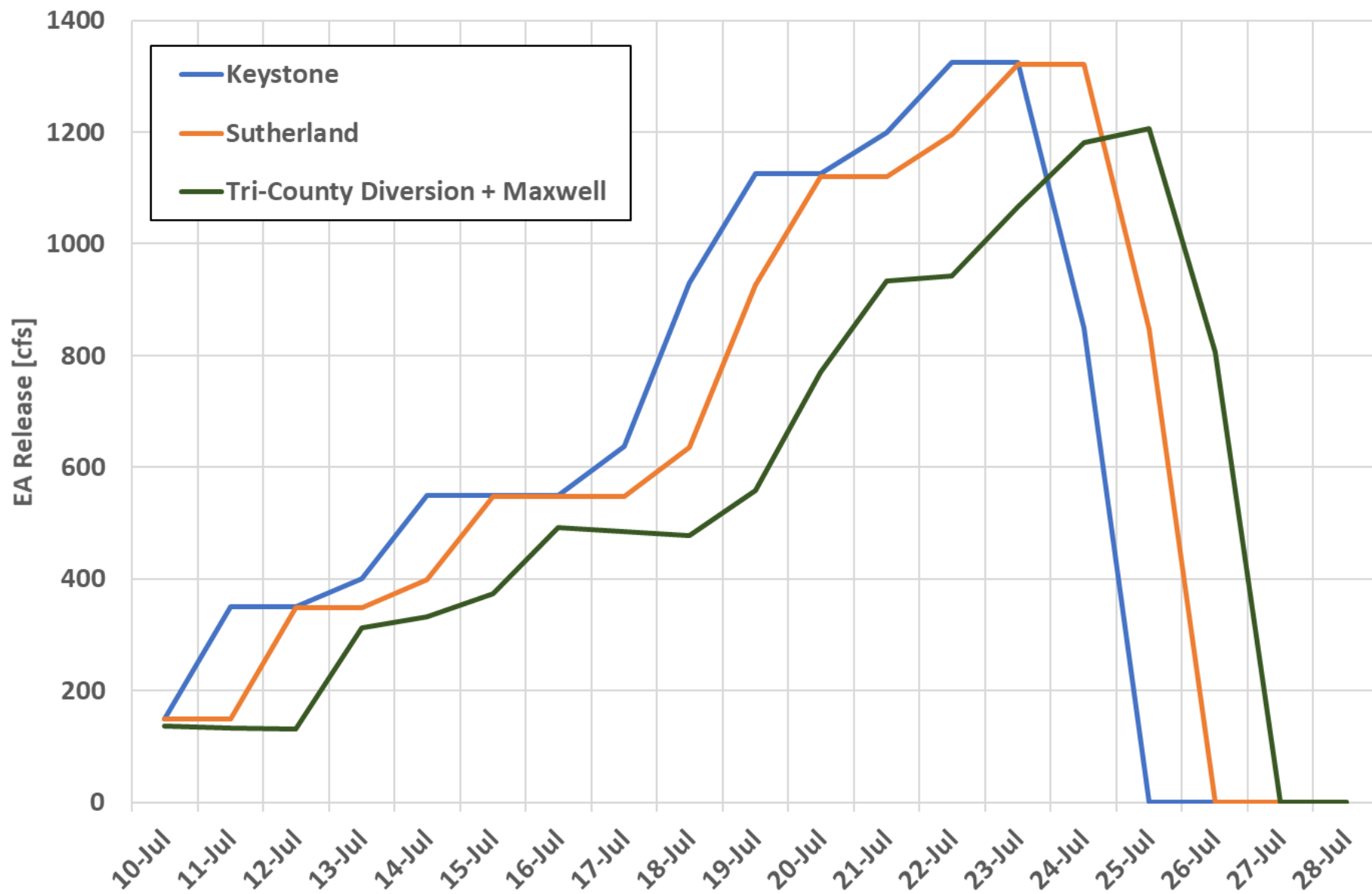
Keystone Discharge



North Platte River Discharge and Stage, July 12-30, 2020



PWAP Tracking of EA Release, July 10-28



Chokepoint Test Observations

Cody Park Boat Ramp

July 2, Stage = 5.86 ft



July 9, Stage = 5.93 ft



July 15, Stage = 6.15 ft



July 20, Stage = 6.29 ft



July 23, Stage = 6.53 ft



July 26, Stage = 6.43 ft



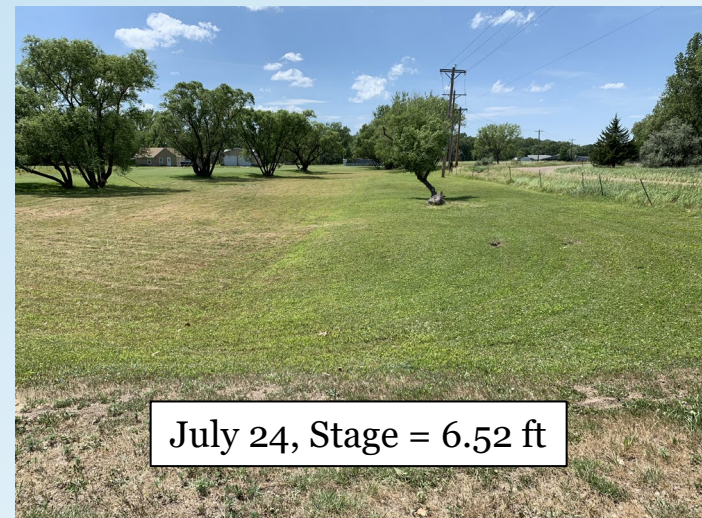
July 30, Stage = 5.94 ft



River's Edge Golf Course Bridge



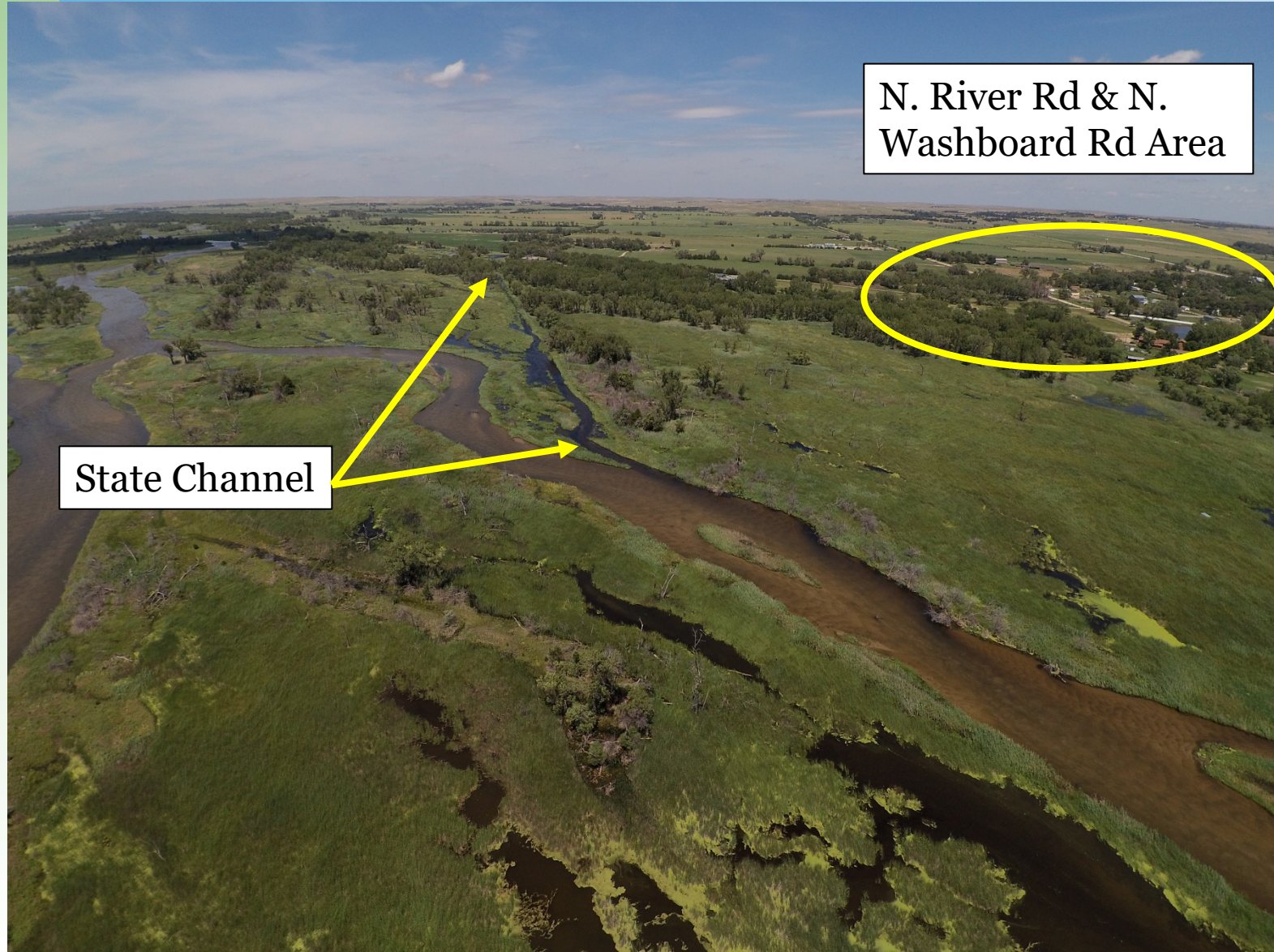
N. River Rd & N. Washboard Rd



State Channel Staff Gage



State Channel – July 24

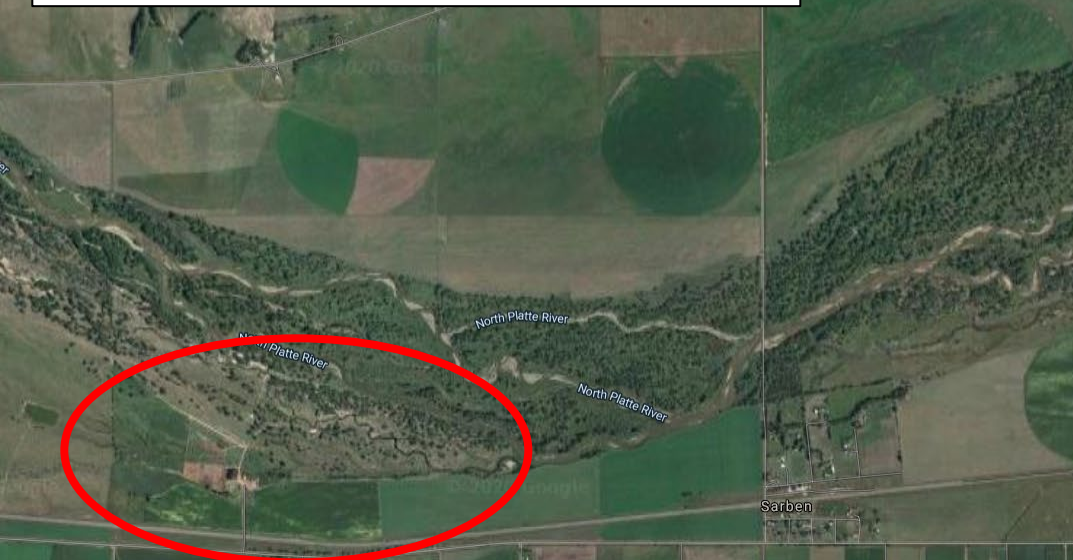


State Channel – July 24



Chokepoint Test Trouble Spots

White Property and Haymeadow
near Sarben – July 22



Looking West



Looking East



Looking West

Colvin Property near Muskrat Run – July 22

North Platte River

Muskrat Run
State Wildlife
Management
Area

North Platte River

North Platte River
North Platte River

© 2020 Google

Looking West

Looking East



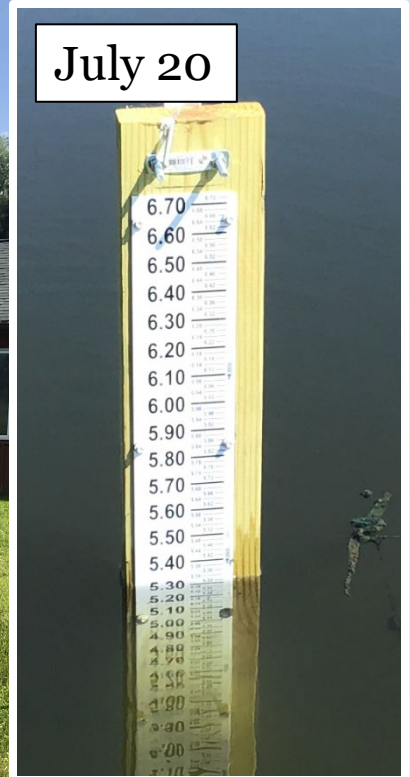
Darlene Road Property

Albrecht Property

Albrecht Property – July 16



July 20



Albrecht Property – July 23



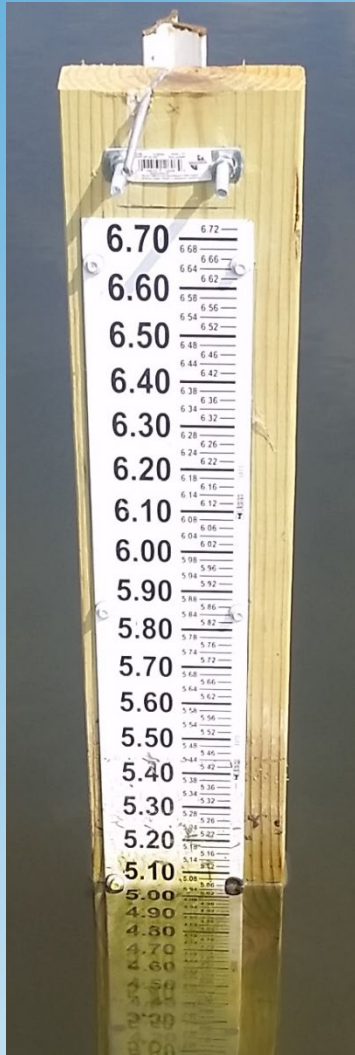
Albrecht Property – July 24



Staff Gage



Albrecht Property – July 27



Darlene Road Property – July 24



Stand-alone
cellar, about 2/3
underground

Chokepoint Test Outcomes



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service
5250 E Lee Bird Drive
North Platte, Nebraska 69101

DATE: July 29, 2020

TO: PRRIP Chokepoint Test Group

FROM: *Teresa Keck*
Teresa Keck, Meteorologist in Charge
North Platte, Nebraska

SUBJECT: NWS Observations from the July 2020 Test Flow Release

During the test flow release, there were notable differences between the north side of the North Platte River and areas along the south side of the river. The National Weather Service determined the established flood stage of 6.0 feet results in minor flooding along the south side of the North Platte River. Minor impacts began at 6.0 feet and at 6.5 feet; the impacts observed rose to the moderate flood category with inundation to structures and roads.

On the north side of the river no flood waters were observed impacting properties in the neighborhood around North River Road, nor along and south of Hall School Road.

Instead, impacts were along the southern portion of the river, where observed minor to near moderate flooding as defined by [National Weather Service definitions and general terminology dated November 26, 2019](#). Two significant impacts were near the River's Edge Golf Course and the Buffalo Bill State Park Campground to include:

- At 6.0 feet, water was observed flowing over the riverbank near a residence on Red Fox Road. The homeowner stated the weekend of July 18-19; his septic system began having issues as his leach field flooded. At around 6.5 feet, the water reached within five feet of the foundation of his home.
- The homeowner on Red Fox Road stated the river is now flooding at a lower flood stage level than previously seen since 2011 when the river overflowed the bank at 7.0 feet.
- On Vieyra Drive, floodwaters surrounded an abandoned structure with water flowing from the river.
- On Darlene Road, we observed a cellar with about two feet of water inside that appeared to be caused by groundwater. The homeowner reported septic tank issues and said toilets would not flush. A barn on the northeast side of the property was inaccessible due to water flowing across the access road. The homeowner stated the structure was flooded with a couple of feet of water.
- Additional minor flooding not previously observed of agricultural land observed about six miles northwest of the Highway 83 bridge, near the Muskrat Run State Wildlife Management Area.
- At Cody Park, the historical flood observations did not change.

In review, flood categories will remain the same for the gage on the North Platte River, at North Platte.

Checkpoint Test Outcomes



Increase minor flood stage from 6.0 ft to 6.5 ft

- ▣ Per NWS, “flood categories will remain the same for the gage on the North Platte River, at North Platte.”
- ▣ EA release to remain limited by flow capacity at 6.0 ft (1,610 cfs with current shift)



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
- ▣ Will need to evaluate maintenance needs



