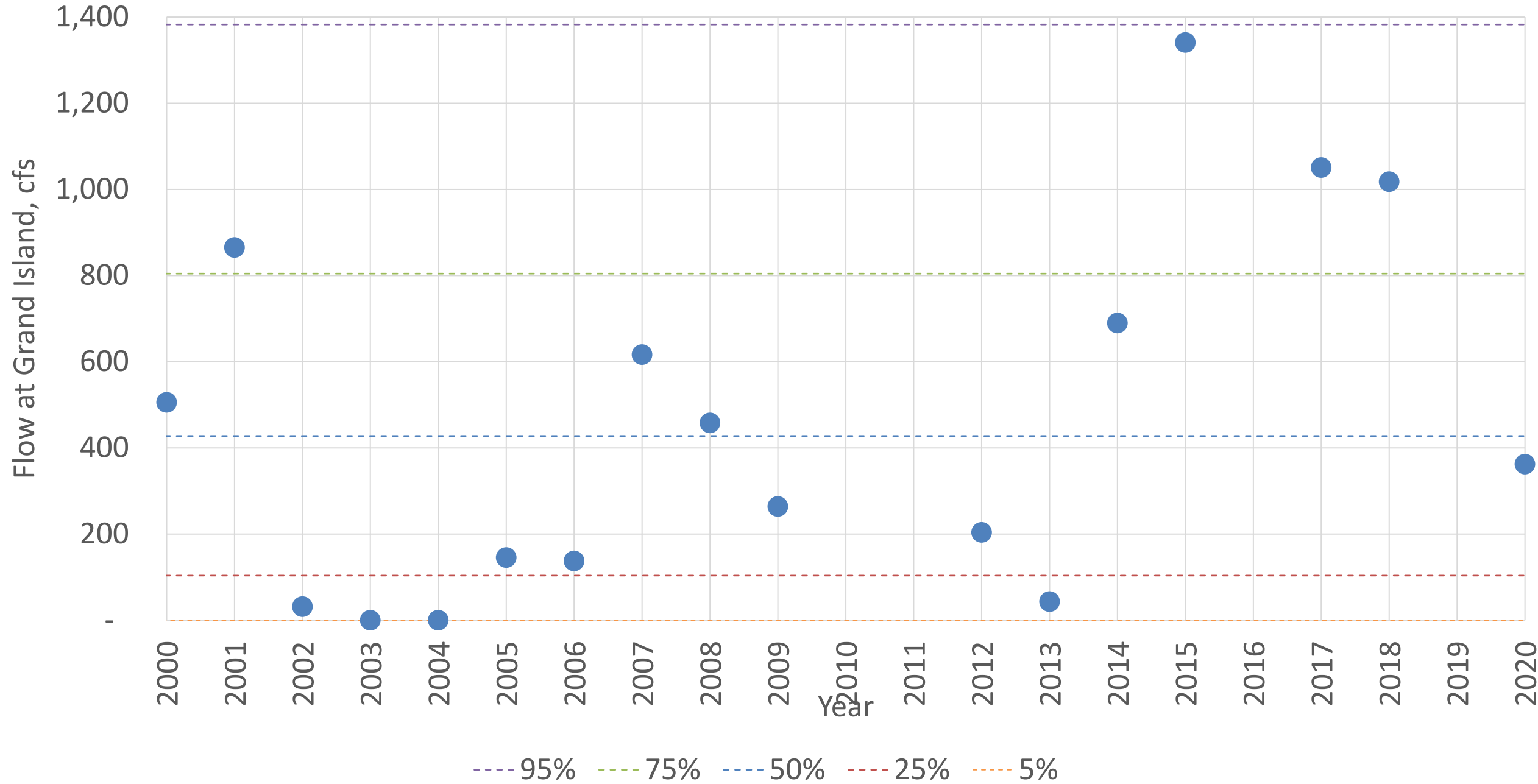
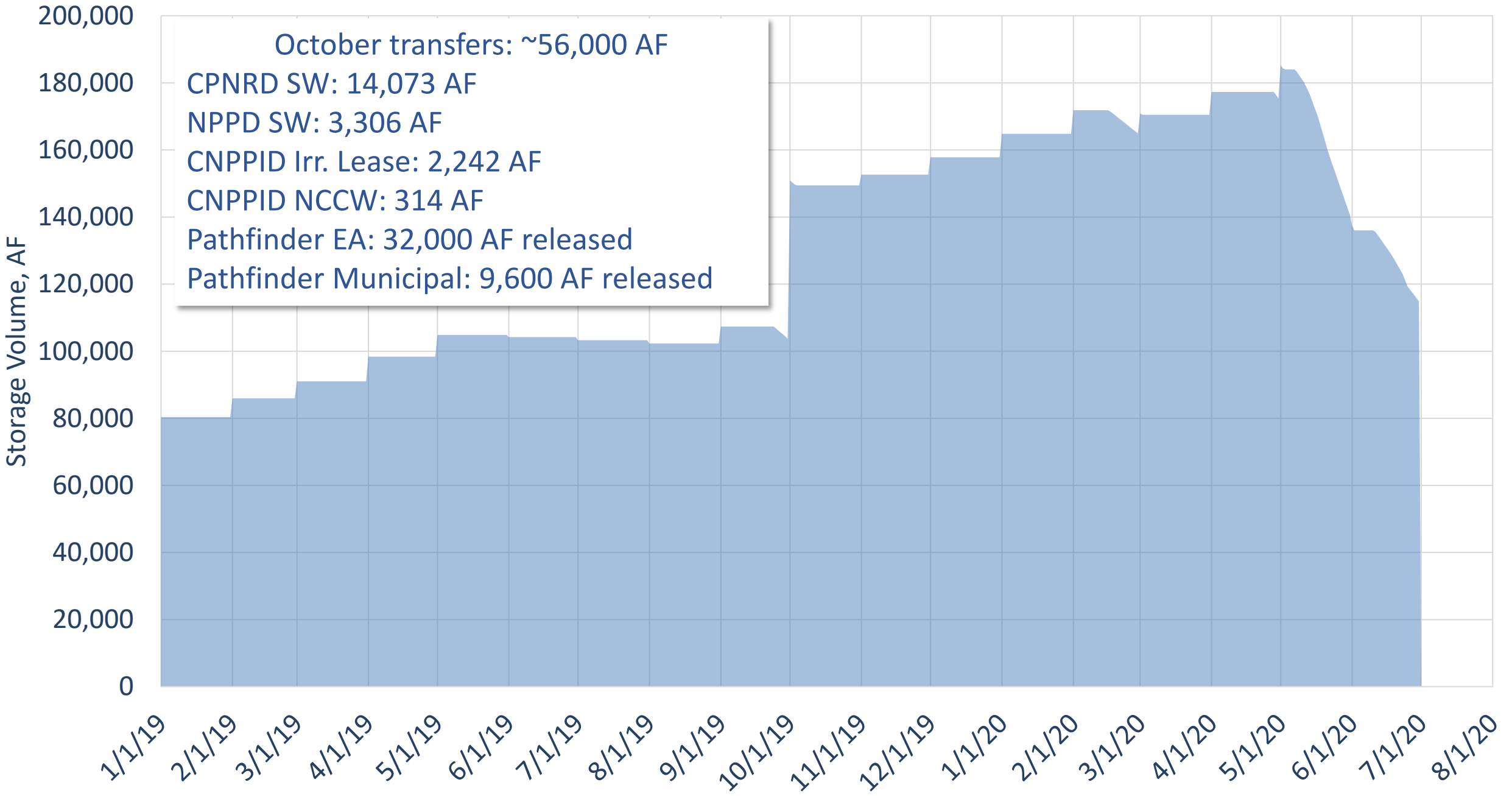


Aug 15 to Sep 15 average flow

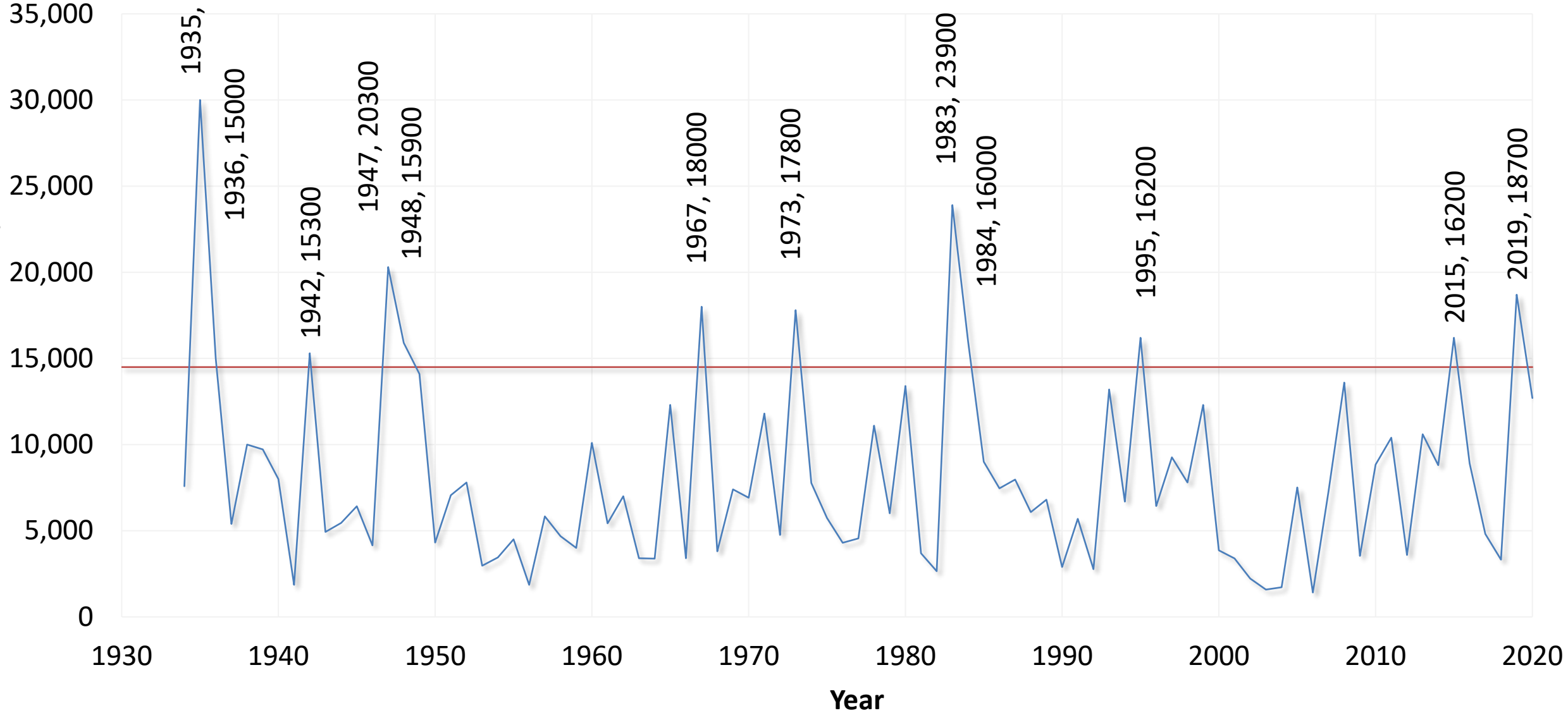


EA Storage



Grand Island Peak Annual Flow

Peak Annual Flow, cfs



14,496 cfs (10 yr flow)

Annual peak flow

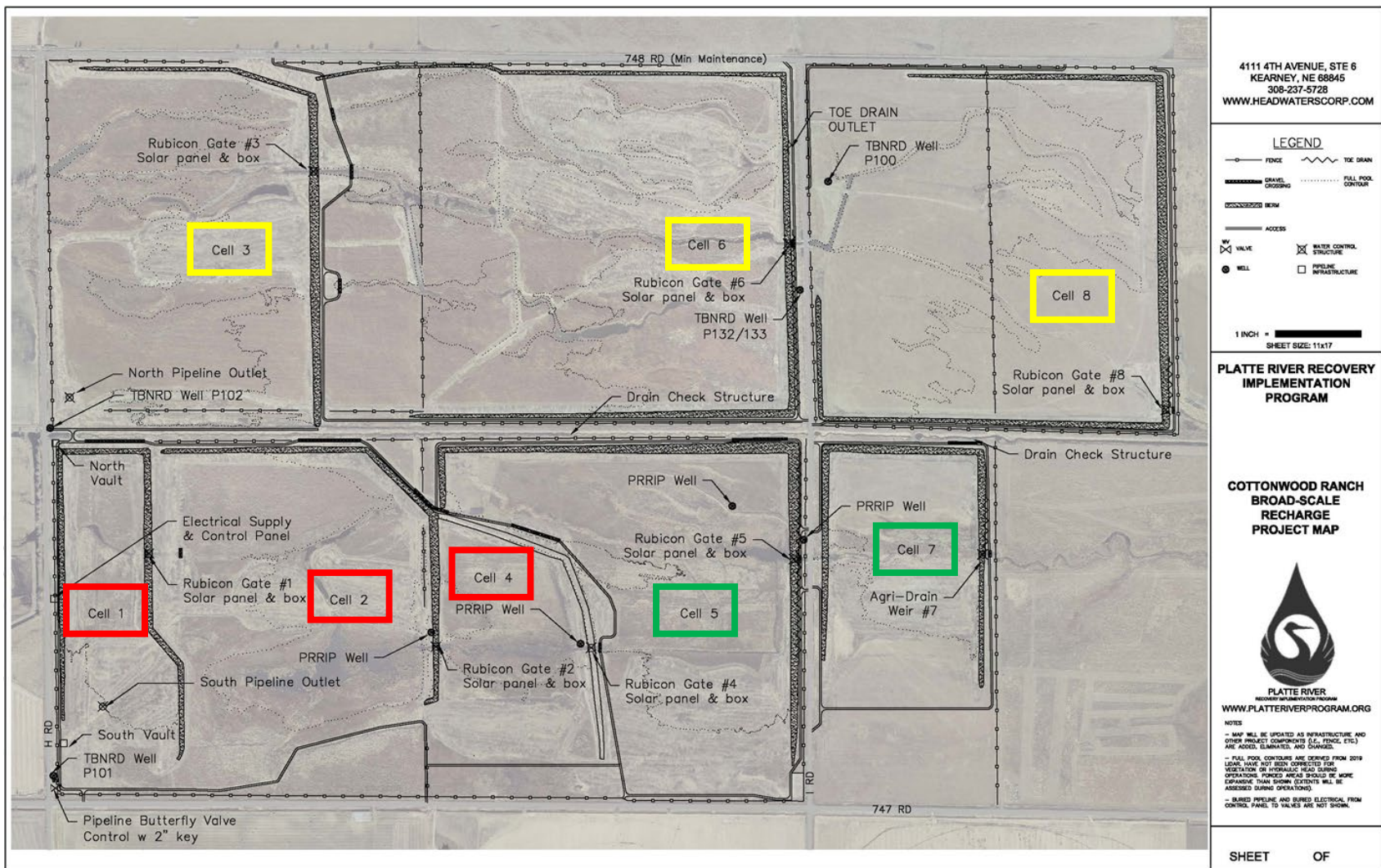
Cottonwood Ranch Broad-Scale Recharge

WAC Meeting

10/27/2020

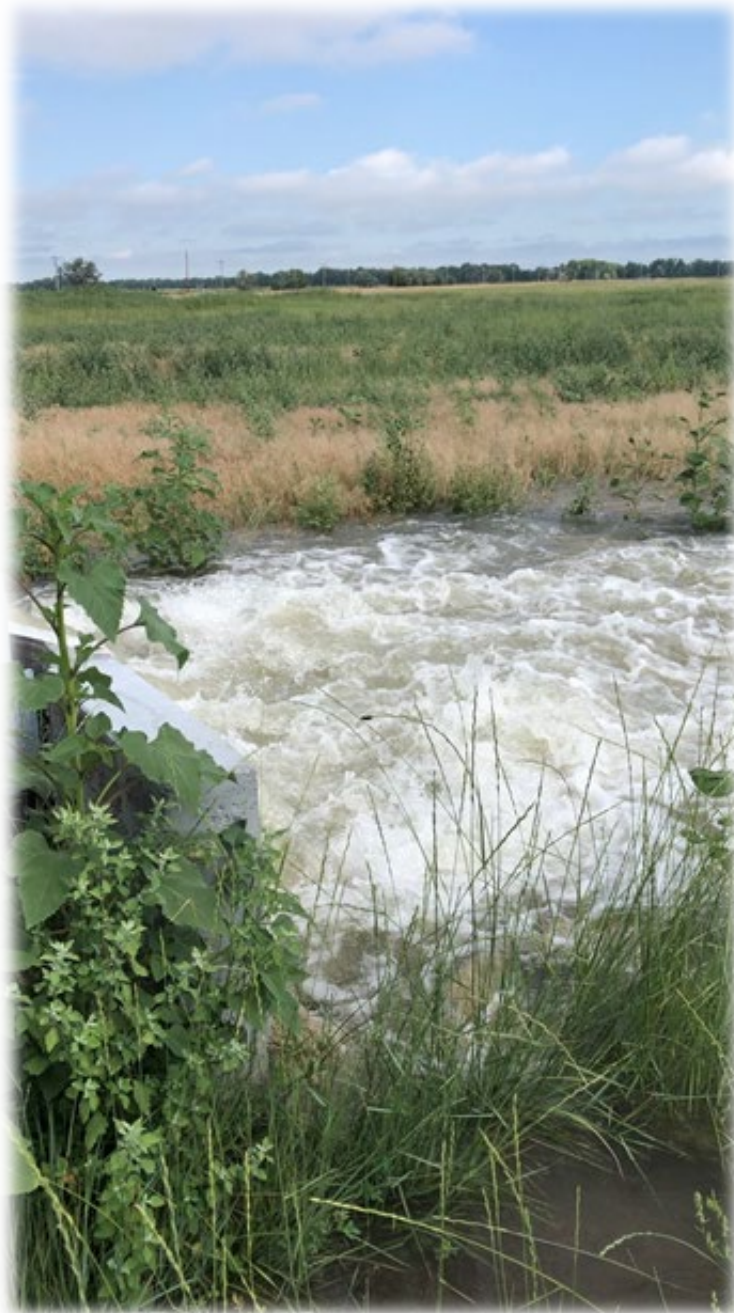
First Fill Objectives

- Test/learn about project infrastructure
- Identify improvements and maintenance items
- Identify long-term monitoring needs



Fill	Dates	Target Cells	Volumes
1	7/20 - 22	1, 2, 4	152
2	8/17 - 18	5, 7	110
3	9/21 - 22	3, 6, 8	98

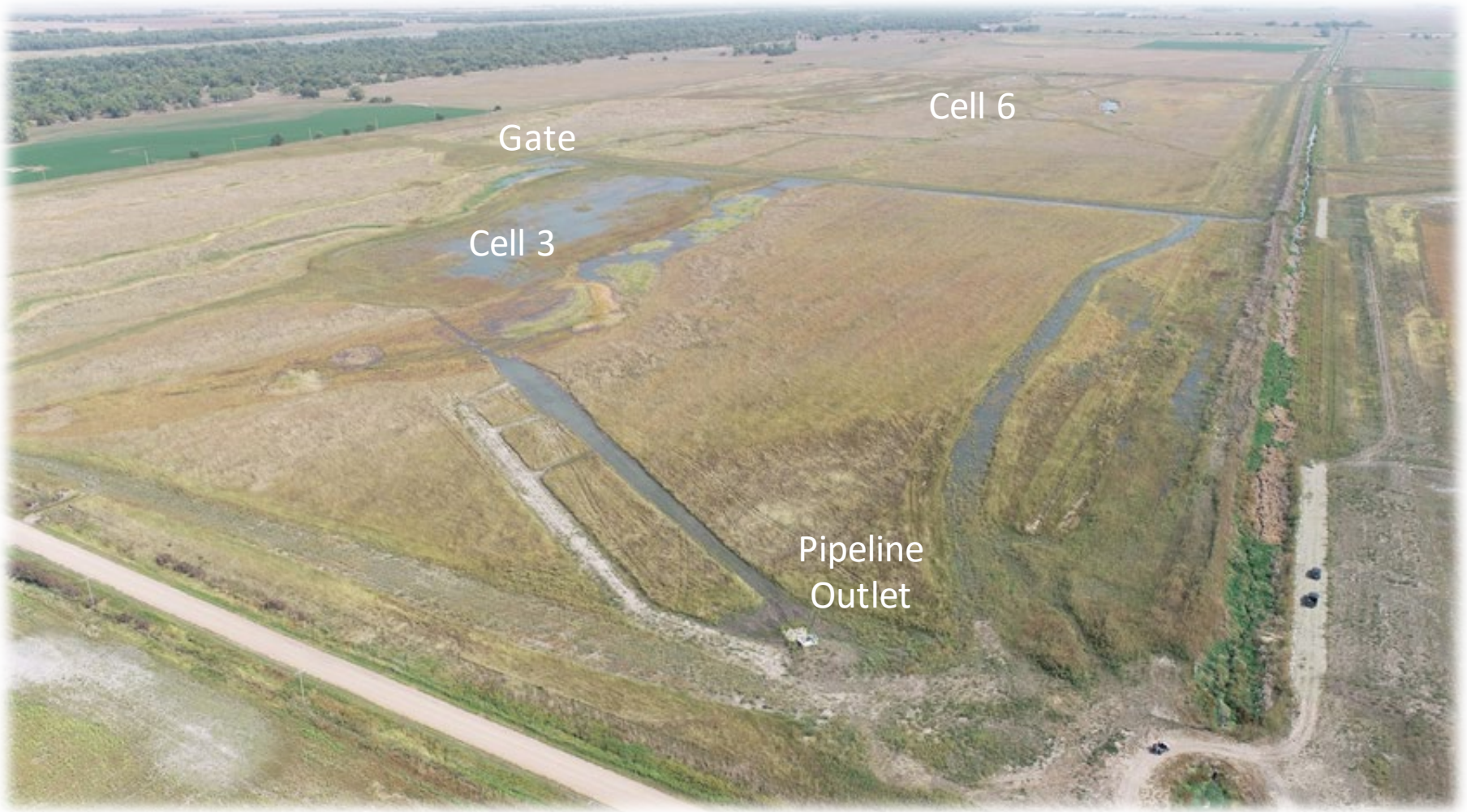
Infrastructure











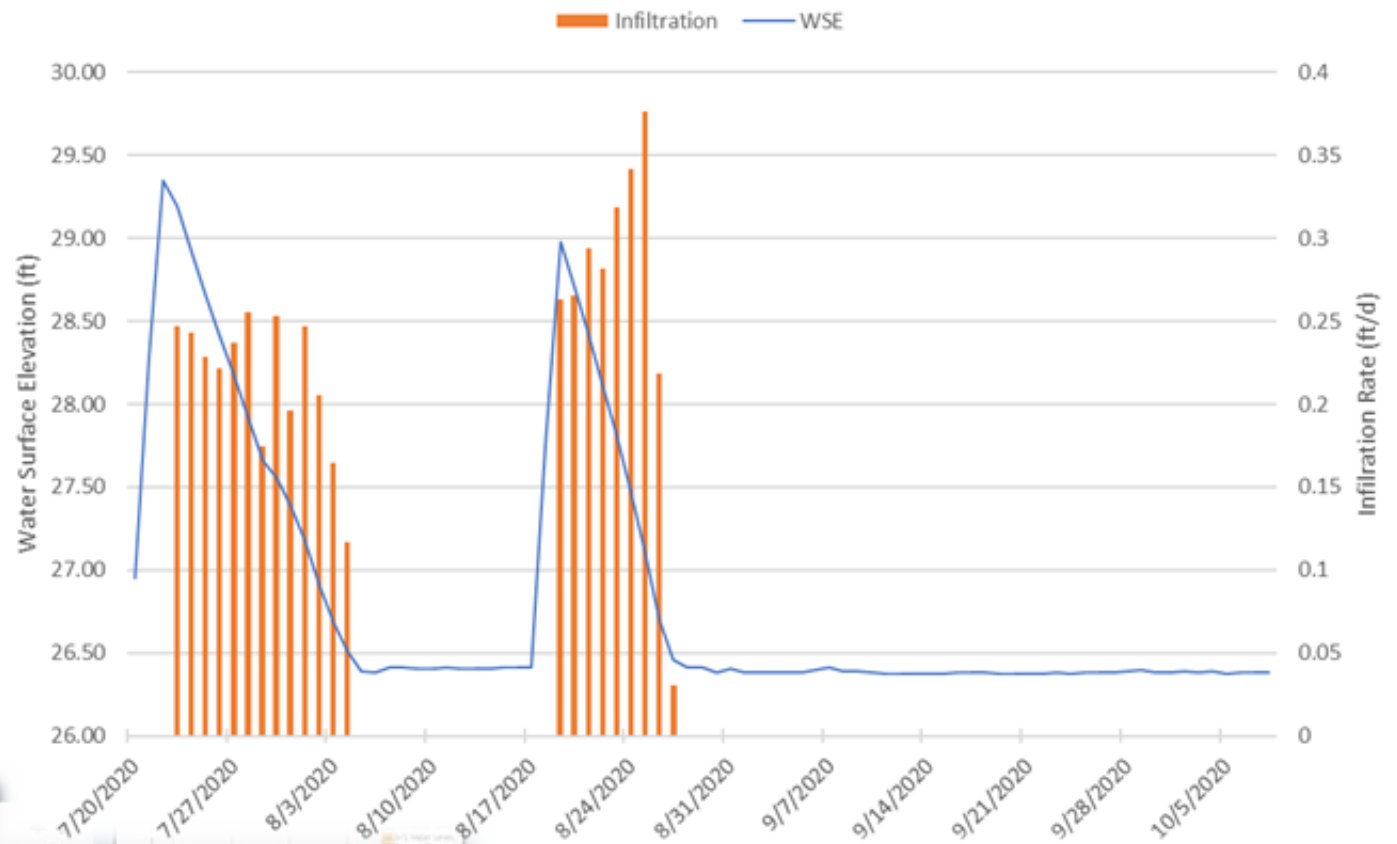
Gate

Cell 6

Cell 3

Pipeline
Outlet

Monitoring



PRRIP GATE 1

Gate 1 Local-Remote **REMOTE**
RTU Software Version No. 6.0320
Operating Level 8.000ft

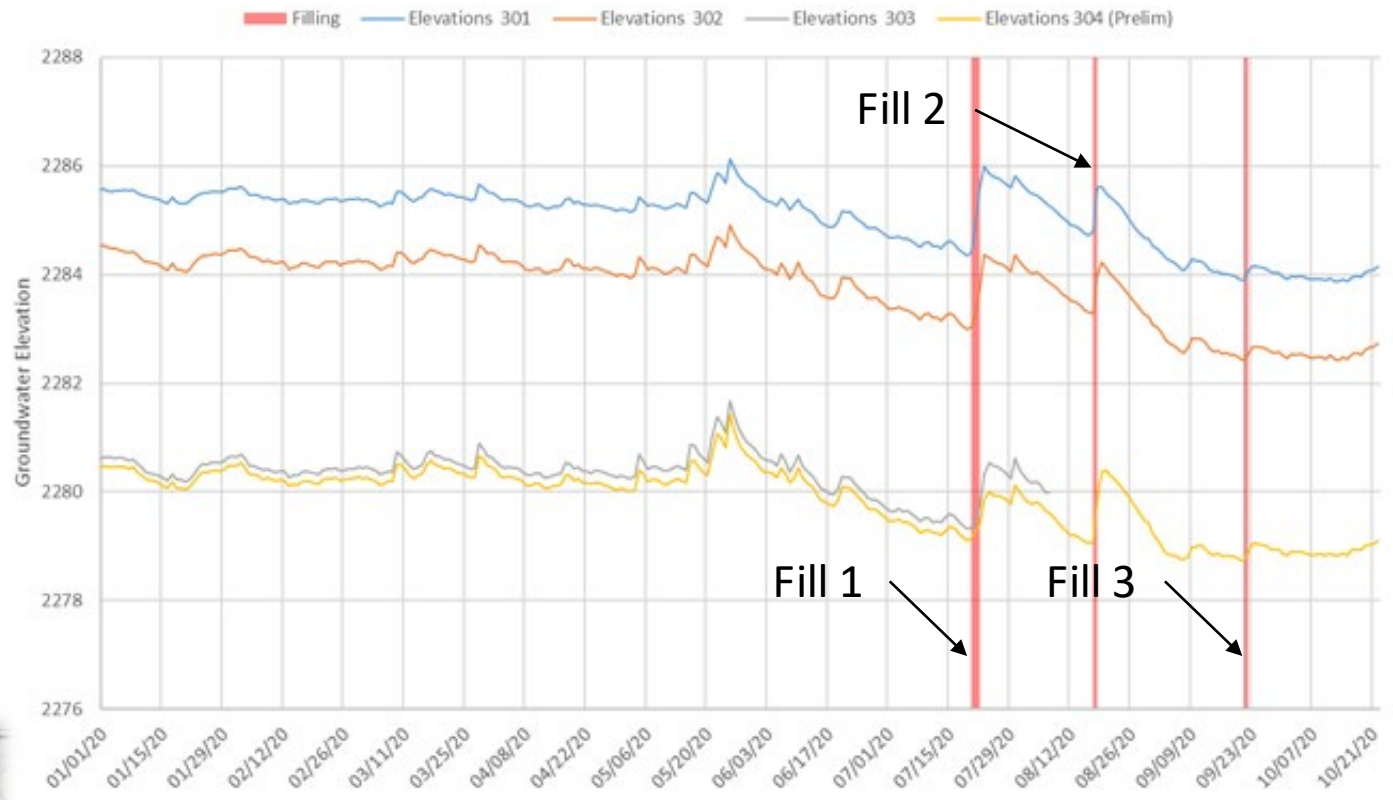
RTU Site ID: 17000
Design SL: 0.000

Communication Status	OK
Control Mode	POSITION
Gate 1 Position Setpoint	22.91 in
Gate 1 Position	22.91 in
US Water Level	26.383 ft
DS Water Level	26.380 ft
Current Flow	0.0 cfs
Current Volume for Season	153.8 AcreFt

Gate 1

Gate 1 Elevation	29.264 ft
Gate 1 Flow	0 cfs

- Infiltration rates and other characteristics vary from cell to cell.
- Range is approximately <0.05 to 0.4 ft/day.



- Pulled logger from Well 303
- Will data from regional NRD and CNPPID wells to analysis

Lessons Learned

- Tests generally went well
- Will take time to maximize operational efficiency
- SCADA system is very important
- Preliminary data is generally “as expected”
- Site-wide accounting based on local observations and measurements

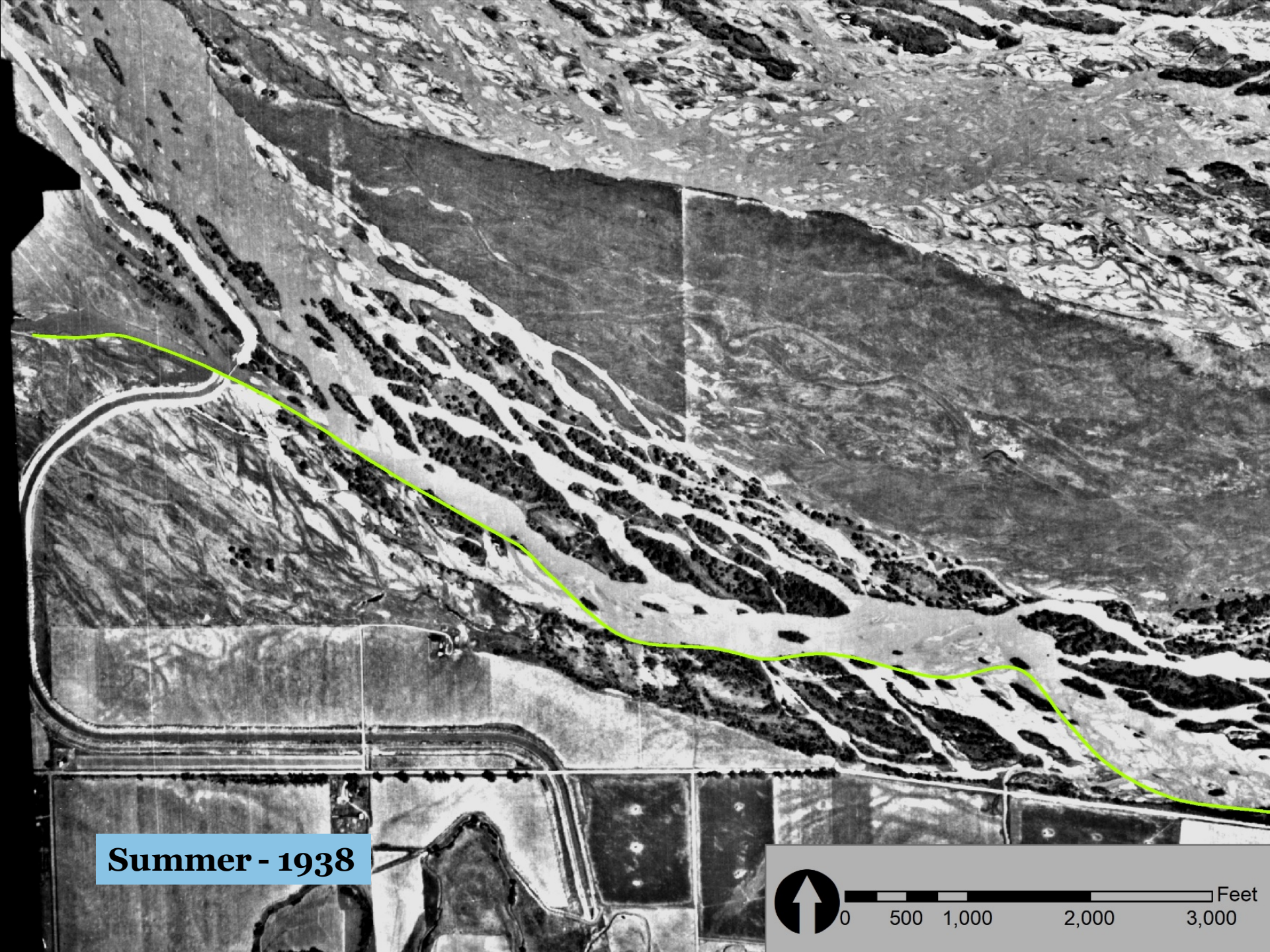
2021 Draft Annual Ops Plan

- Prioritize filling during spring and fall crane migrations
- Fill during other times when excesses are available
- Site maintenance (fix fences and gates, etc.). Likely will not graze or burn, might mow/hay

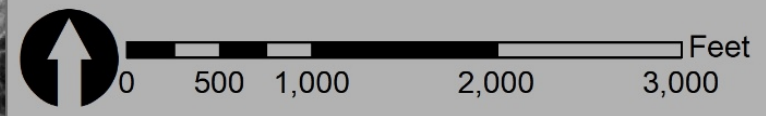


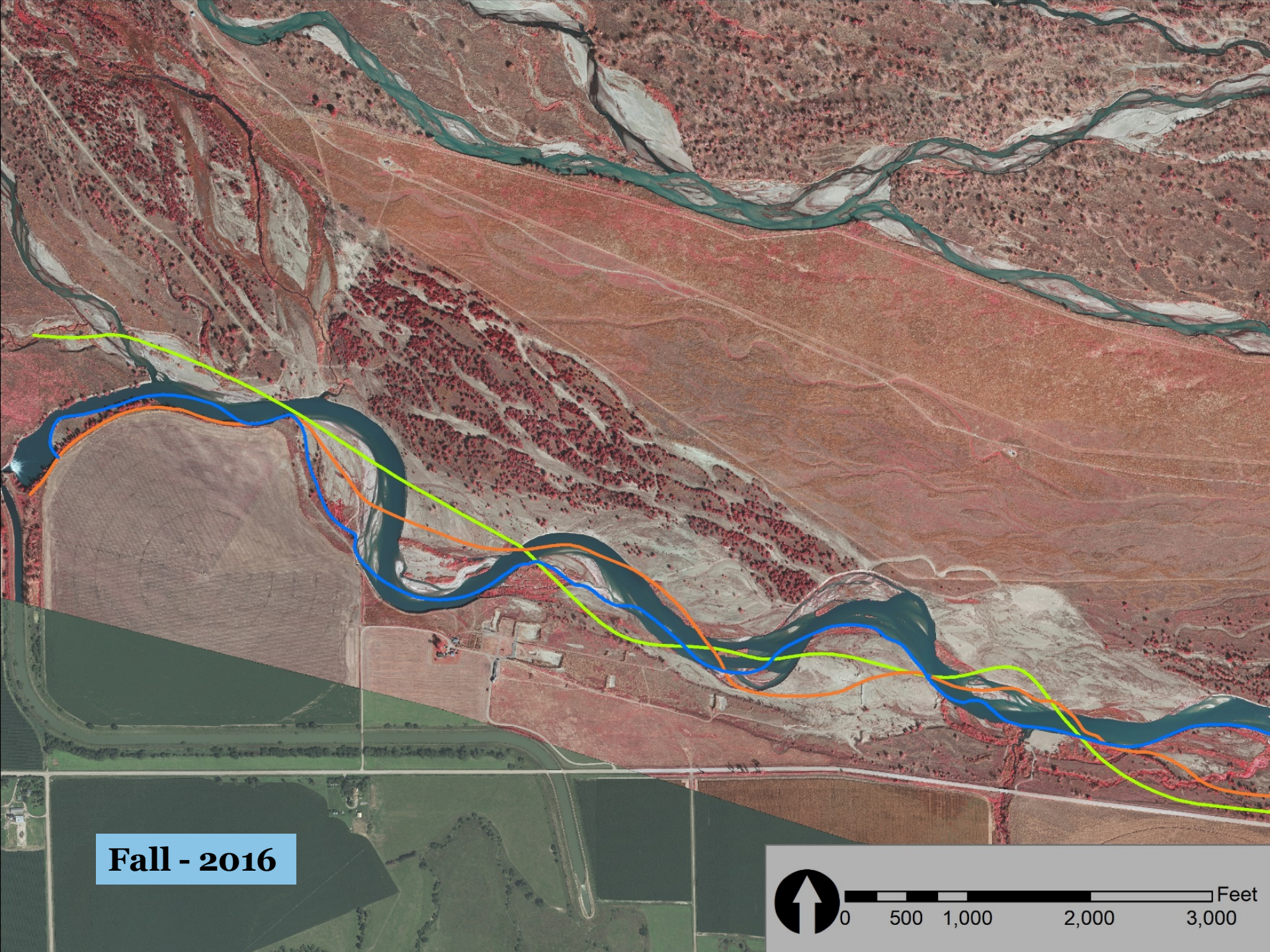
Full-Scale Sediment Augmentation - UPDATE

Water Advisory Committee Meeting
October 27, 2020

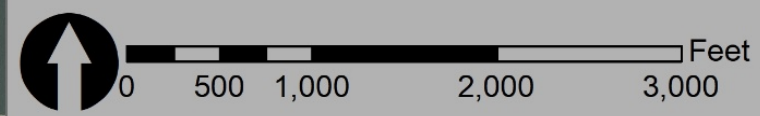


Summer - 1938





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

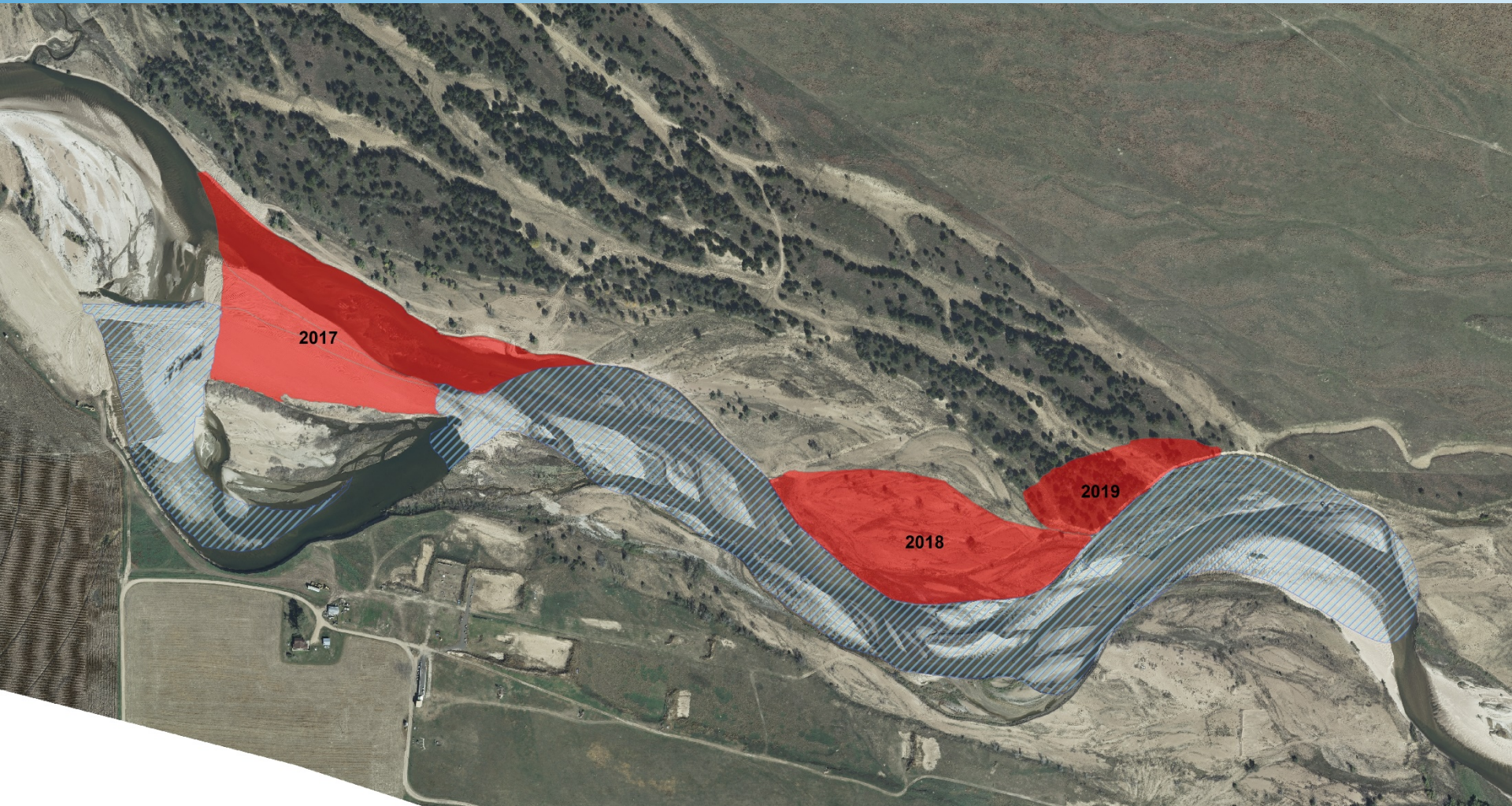
2018 Summary

- 60,000 tons augmented to the main channel

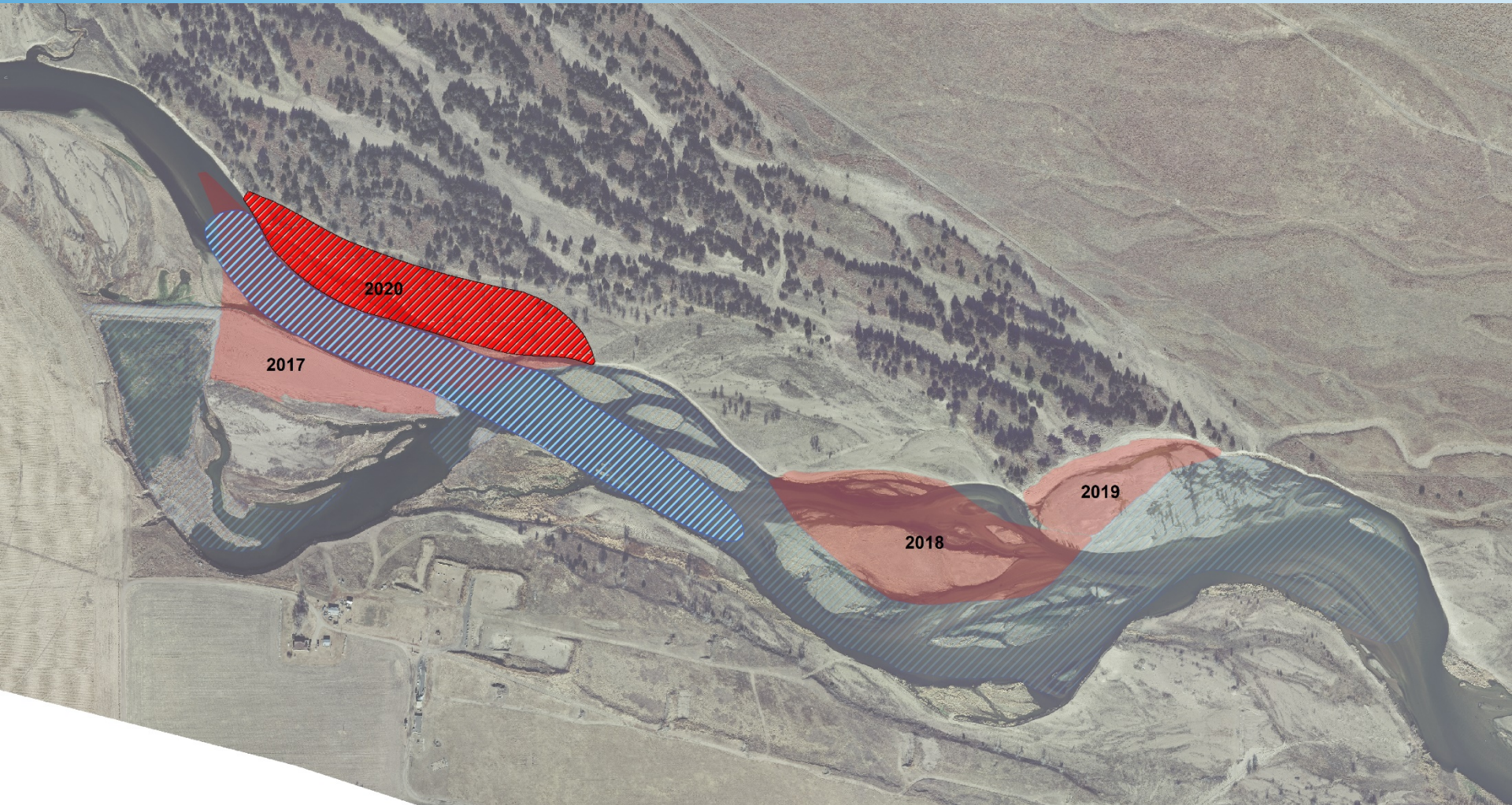
2019 Summary

- 63,500 tons augmented to the main channel

2017 through 2019



2020 Design Approach



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.

- Cook Construction in Kearney: \$138,320k
 - ▣ \$2.40/Cubic Yard + \$10k for mob and tree removal
 - ▣ Preliminary survey looks to be ~59k CY
 - ▣ Actual measurements dependent on Spring/Fall LiDAR (in process)

Pre-Project



Cut Begins 9/2



One Week In: 9/7/20



Post-Project 10/13



An aerial photograph of a river system characterized by extensive sandbars and meandering channels. The sandbars are light tan with visible ripple patterns, while the water channels are darker brown. Patches of green vegetation are scattered throughout the landscape, particularly along the riverbanks and in some of the larger sandbar areas. The overall scene depicts a dynamic fluvial environment.

Questions?

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