

Oregon-Washington Water Year 2022 Recap

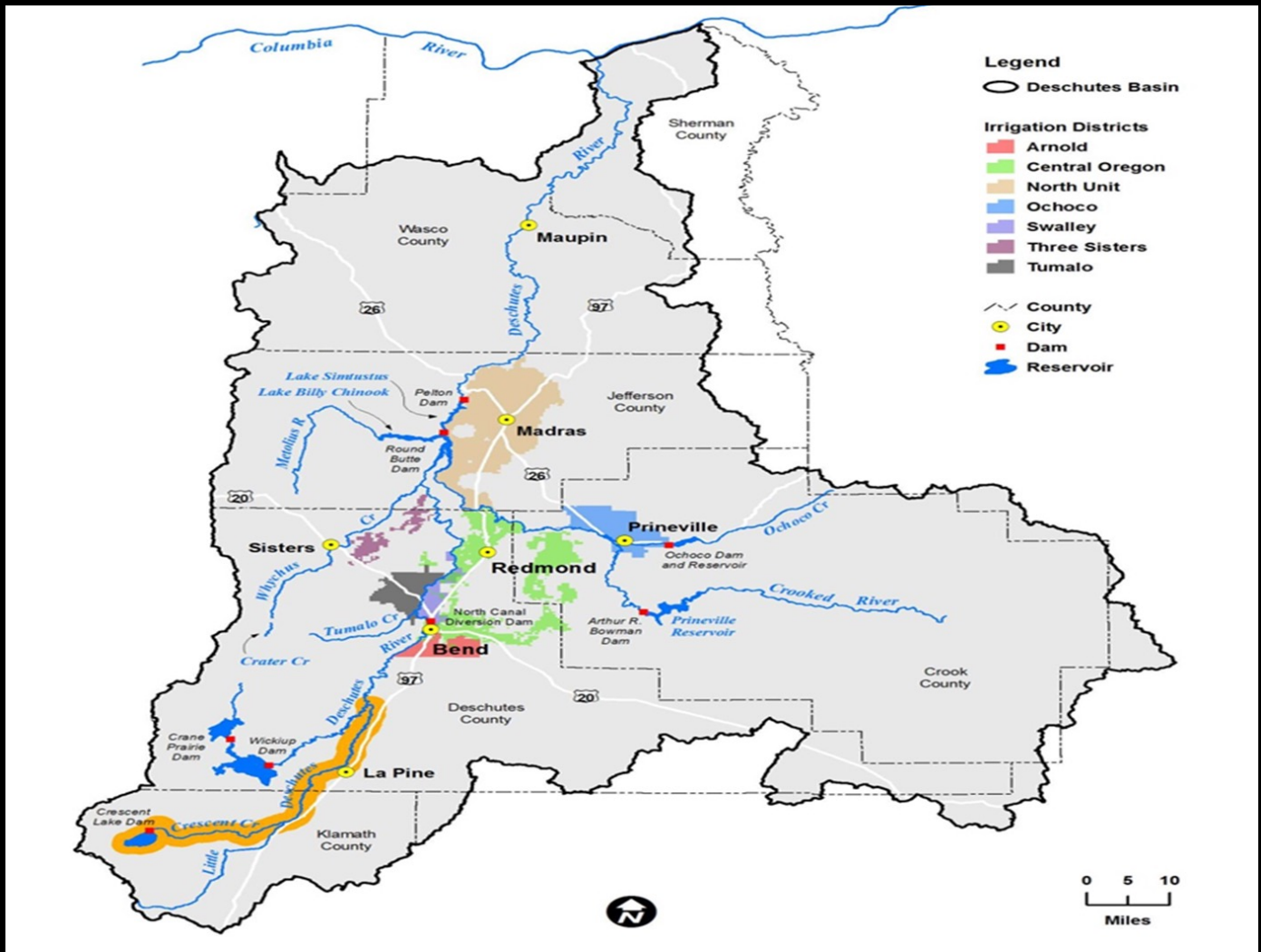
October 24, 2022

Overview of the North Unit Irrigation District

**Presentation by Josh Bailey
General Manager**

North Unit Irrigation District





NUID Facts

- Formed in 1916 as the Jefferson Water Conservancy District.
- Renamed NUID around 1925 when the State of Oregon and the Bureau of Reclamation partnered on a Basin Study.
- After many studies and approval by Franklin D. Roosevelt, Construction commenced in August of 1938, and the first water was delivered in May 1946.
- 2nd Largest Irrigation District in Oregon, encompassing 133,000 acres of land with nearly 60,000 irrigated acres and approximately 1000 patrons.
- 27 Full-Time Employees.
- 2 Reservoirs/Dams (Wickiup 200K AF, Haystack 6,600 AF)
- 65 Miles of Main Canal and 235 miles of Laterals and Pipelines.
- Pumping facility located on the Crooked River near Smith Rock that pumps on average (pre-drought) approx. 20,000 AF of live flow and Prineville Reservoir stored water.

NUID Facts Continued..

- On normal water years, NUID Farmers produce over 50% of the world's Carrot Seed!
- 10 Million Pounds of Kentucky Blue Grass Seed!
- 7 Million Pounds of Potato Seed!
- 30,000 Acres worth of Forage Crops.
- Fresh Mint, Dill, Lavender, Parsley, Garlic, Radish, Onion, beets, pumpkins, grapes, and nursery trees. (Just to name a few)



Wickiup Reservoir

- Constructed between 1938 – 1946
- 200k AF capacity – 10,200 acres of water surface area
- Earth Filled Structure 3,400' long and 90' high
- Wickiup Reservoir was constructed for the purpose of supplying water to NUID and is the primary source of water for NUID. NUID also has “live or natural river flow” rights but as the junior water right holder on the river, NUID is last in line when it comes to receiving natural flow.
- As much as 50% of the water released from Wickiup is lost in “transportation” mainly through seepage and evaporation. Keep in mind NUID’s last delivery point is nearly 120 miles away from Wickiup.



Crooked River Pumps

- Constructed in 1968
- 9 - 450HP Pumps with 200 CFS total pumping capacity.
- Lifts water approximately 200' from the Crooked River into NUID's 540' Flume.
- Upgraded Fish Screens in 2007
- \$400k+ annual operating costs
- Pump live flow and stored water from Prineville Reservoir.





Crooked River Flume
&
Wickiup Reservoir as of 10/11/22



Haystack Reservoir

- Re-regulating reservoir
- Water takes 3 days to get to Haystack from Wickup Reservoir.
- 6,600 AF Capacity – 225 acres of water surface area
- Constructed between 1956-1957
- Earth-filled structure 105' high



NUID Grows the most crops in Central Oregon with the least amount of water!



Deschutes Basin Irrigation District Water Rights

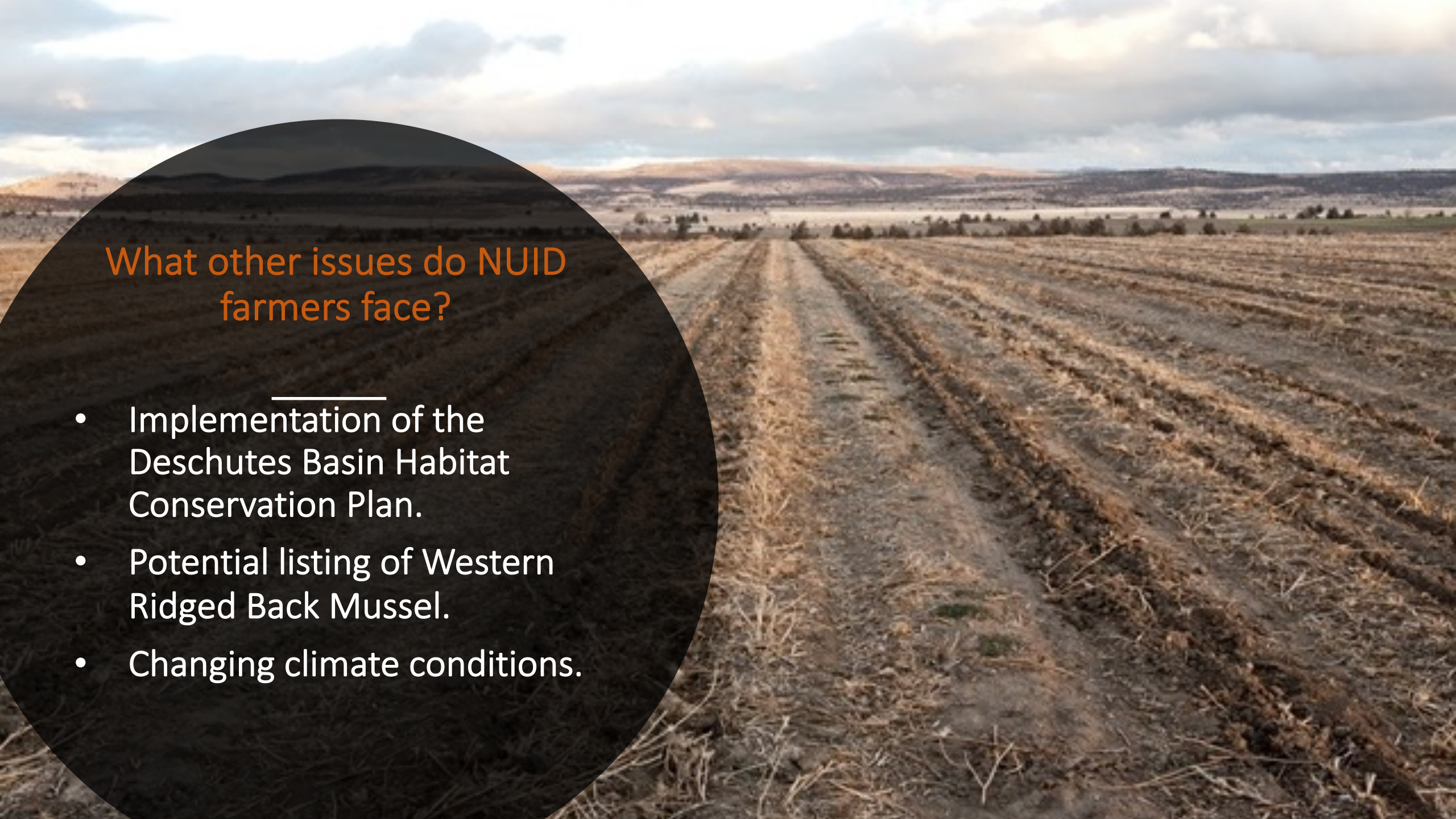


- Three Sisters 7,651 acres / 1895
- **Swalley** 4561 acres / 1899
- **Central Oregon** 44,784 acres / 1900
- **Lone Pine** 2,369 acres / 1900
- Tumalo 7,381 acres / 1905
- **Arnold** 4,384 acres / 1905
- **North Unit** 58,868 acres / 1913
- Ochoco 20,332 acres / 1928



The Years of Drought!

- 2020 Wickiup Reservoir filled 70%
 - Water allotment was set at 1.25 AF
- 2021 Wickiup Reservoir filled 55%
 - Water allotment was set at 1.00 AF
 - Water allotment reduction of .20 mid-season due to lack of “live flow”.
 - Dry Reservoir August 21, 2021
- 2022 Wickiup Reservoir filled 55%
 - NUID Board of Directors set a water allotment of .55 acre-foot of water per acre.
 - Wet spring helped, but not enough.
 - Up to 60% fallow ground in the district.
 - Increased fuel, fertilizer, and labor costs.
 - Literal dust bowl conditions in the district due to fallow fields.
 - Emergency drought relief funds paid the patron water bill. Water is less than 10% of input costs.



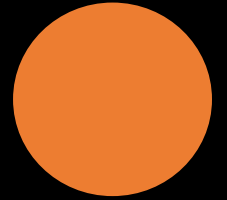
What other issues do NUID farmers face?

- Implementation of the Deschutes Basin Habitat Conservation Plan.
- Potential listing of Western Ridged Back Mussel.
- Changing climate conditions.

What is the Deschutes Basin HCP?

30,000 Foot View

- Plan that took 12 years to construct and over 9 Million in costs.
- Partnership with 8 Central Oregon Irrigation Districts and the City of Prineville.
- 30-year plan to restore/stabilize flows on the Deschutes River.
- Designed to help protect and restore habitat for the Oregon spotted frog, Bull trout, and Steelhead trout.
- NUID is required to meet year around flow targets on the Deschutes River.
- Winter flow requirements out of Wickup Reservoir. 100 CFS years 1-7, 300 CFS years 8-12, and 400-500 CFS years 13-30



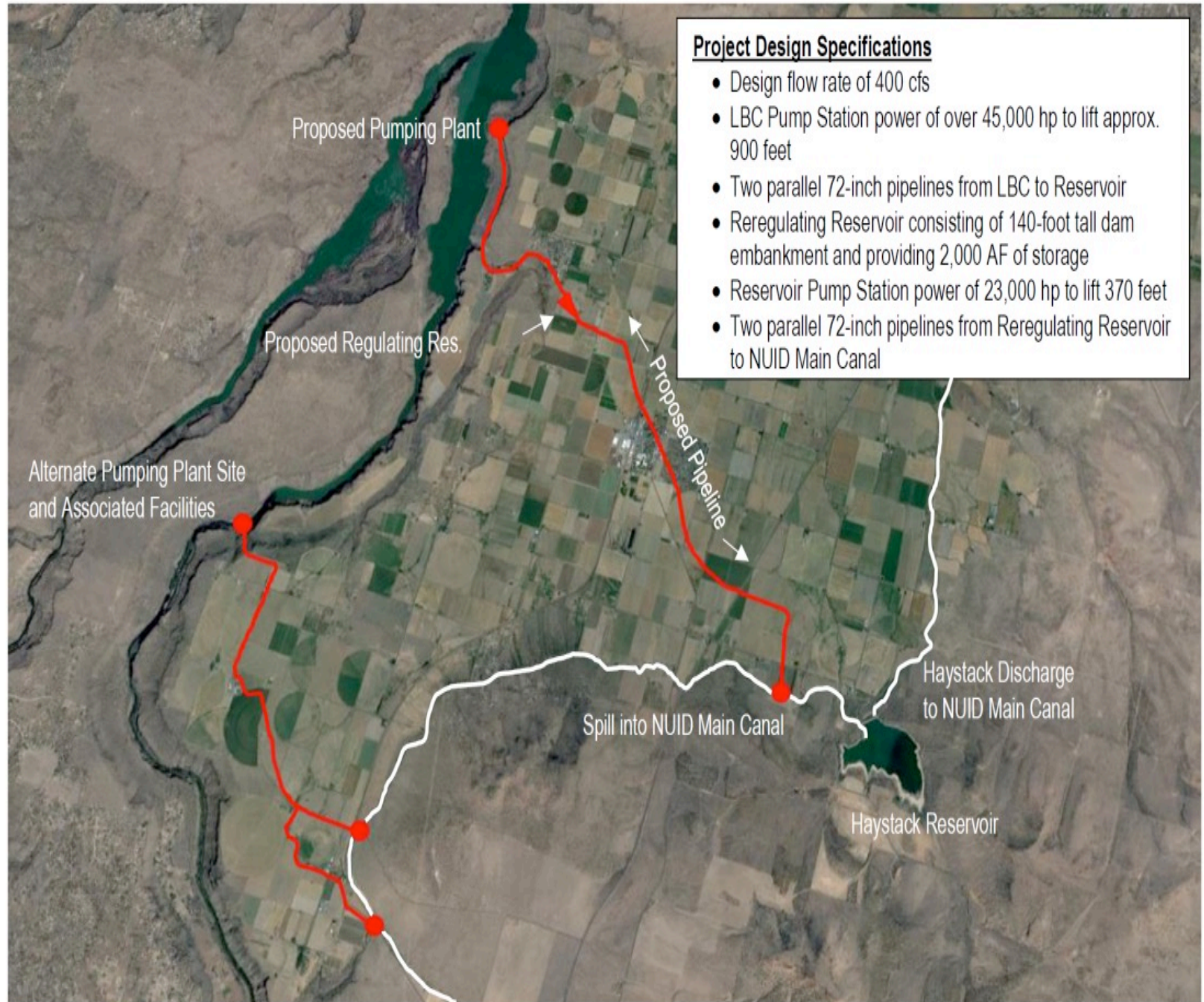
Question? If you release up to half of your stored water in the Winter, how are you expected to survive?

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- In partnership with the Deschutes Basin Board of Control, NUID has helped secure over 100 Million of funding through the Watershed Protection and Flood Prevention act P.L. 83-566 (PL-566)
 - Modernizing districts (Piping) open irrigation canals and laterals.
 - On-farm conservation by patrons, including piping private deliveries, converting to sprinklers, and improving current water systems



What else?

- NUID partnership with USBOR to conduct an Appraisal/Feasibility study to construct a new pumping facility on the confluence of Lake Billy Chinook and the Crooked river.
- The project would allow NUID to capture water that was released during winter flows.
- Improve biological conditions on the Crooked River by releasing the district's stored water for fish migration.



Questions?



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