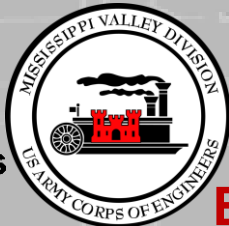


LAKE TRAVERSE WATER CONTROL MANUAL UPDATE

Public Open Houses
Winter 2023



US Army Corps
of Engineers®



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We are here to:

share about the Corps effort to update the Lake Traverse
Water Control Manual
AND
listen to your ideas for Lake Traverse operations



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This presentation is also
streaming on Facebook live



2021 PUBLIC MEETING

5



Summer of 2021: Sustainable River Project for Mud Lake

- This effort to improve shorebird habitat is on-going
- Corps expects to complete a drawdown of Mud Lake ~September 2023
- Any comments submitted during the Mud Lake effort that addressed Lake Traverse operations **will** be considered in the Water Control Manual update



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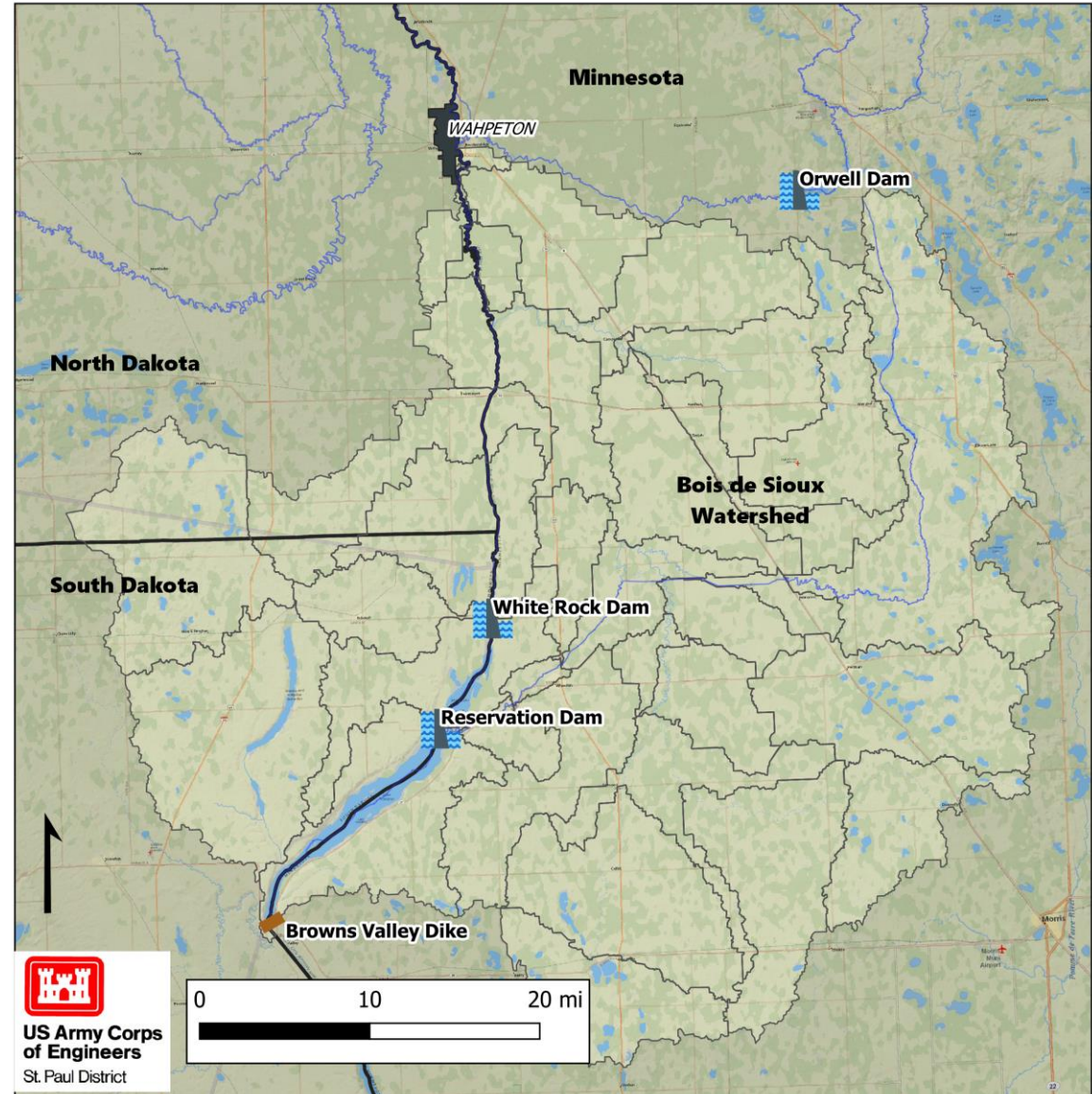


LAKE TRAVERSE PROJECT

- **Two lakes (reservoirs)**
Lake Traverse
Mud Lake
- **Three structures**
White Rock Dam @ Mud Lake outlet
Reservation Dam @ Lake Traverse outlet
- **Flood Management**
Stage at Wahpeton, ND gage
Orwell Dam compliments operation
- **Main Purposes**
Flood Control and Water Conservation
- **Secondary Purposes**
Recreation, Fish and Wildlife, Water Quality



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WHAT IS A WATER CONTROL MANUAL?



The water control manual dictates how the Corps manages the water at the Lake Traverse project under various conditions

→ Corps staff cannot deviate from the manual unless it is an emergency **or** higher-level approvals have been received



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LAKE TRAVERSE GENERAL OPERATION: ***CURRENT MANUAL***

8



Summer and Fall

- Maintain steady pool level



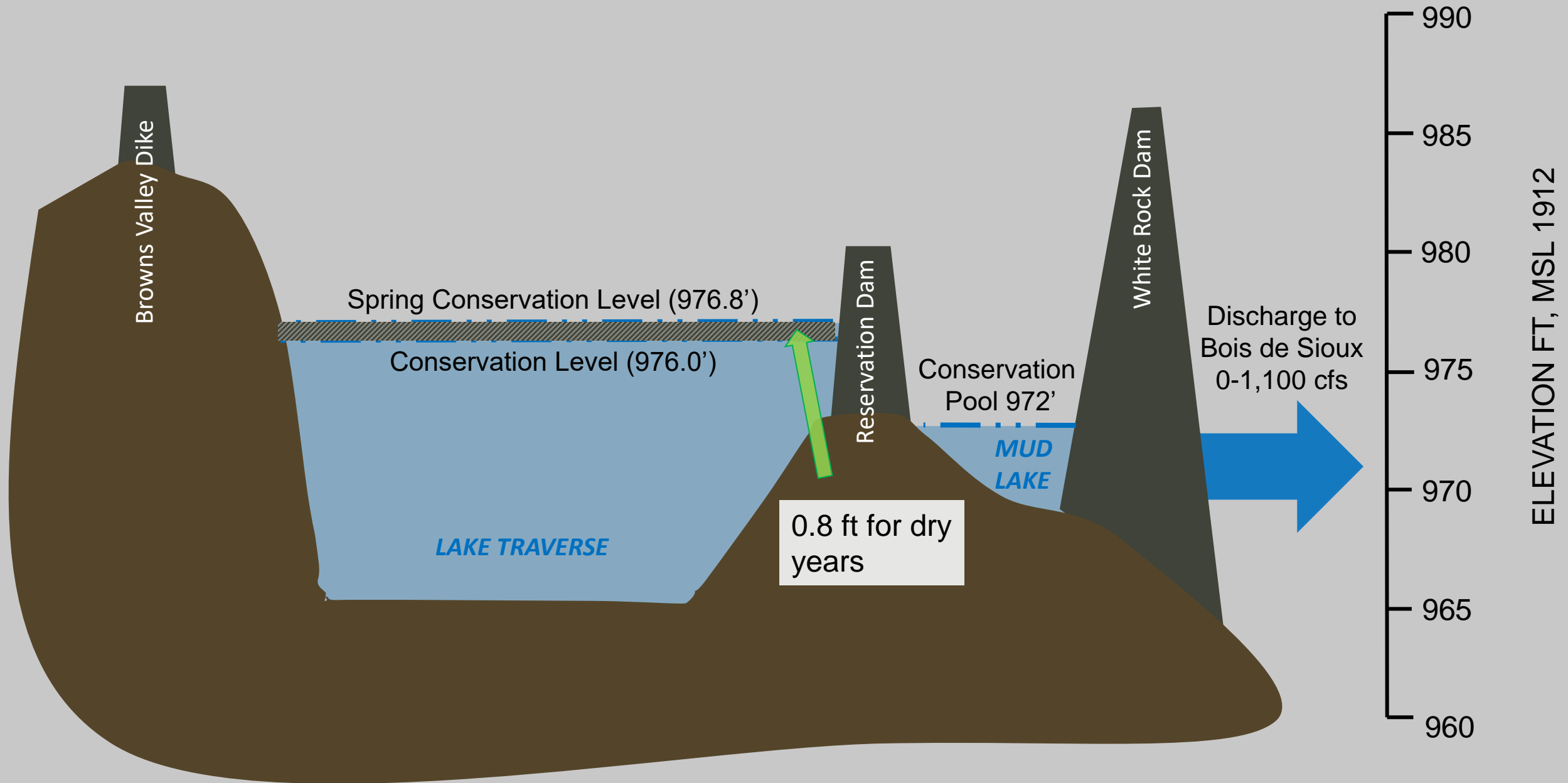
Flood Control/ High Water

- Lake Traverse pool is lowered in spring to a level dependent on snowpack.
- Store flood water from Bois De Sioux until the flood peak has passed at Wahpeton.
- Operation is coordinated with Orwell Dam which regulates the Otter Tail River.

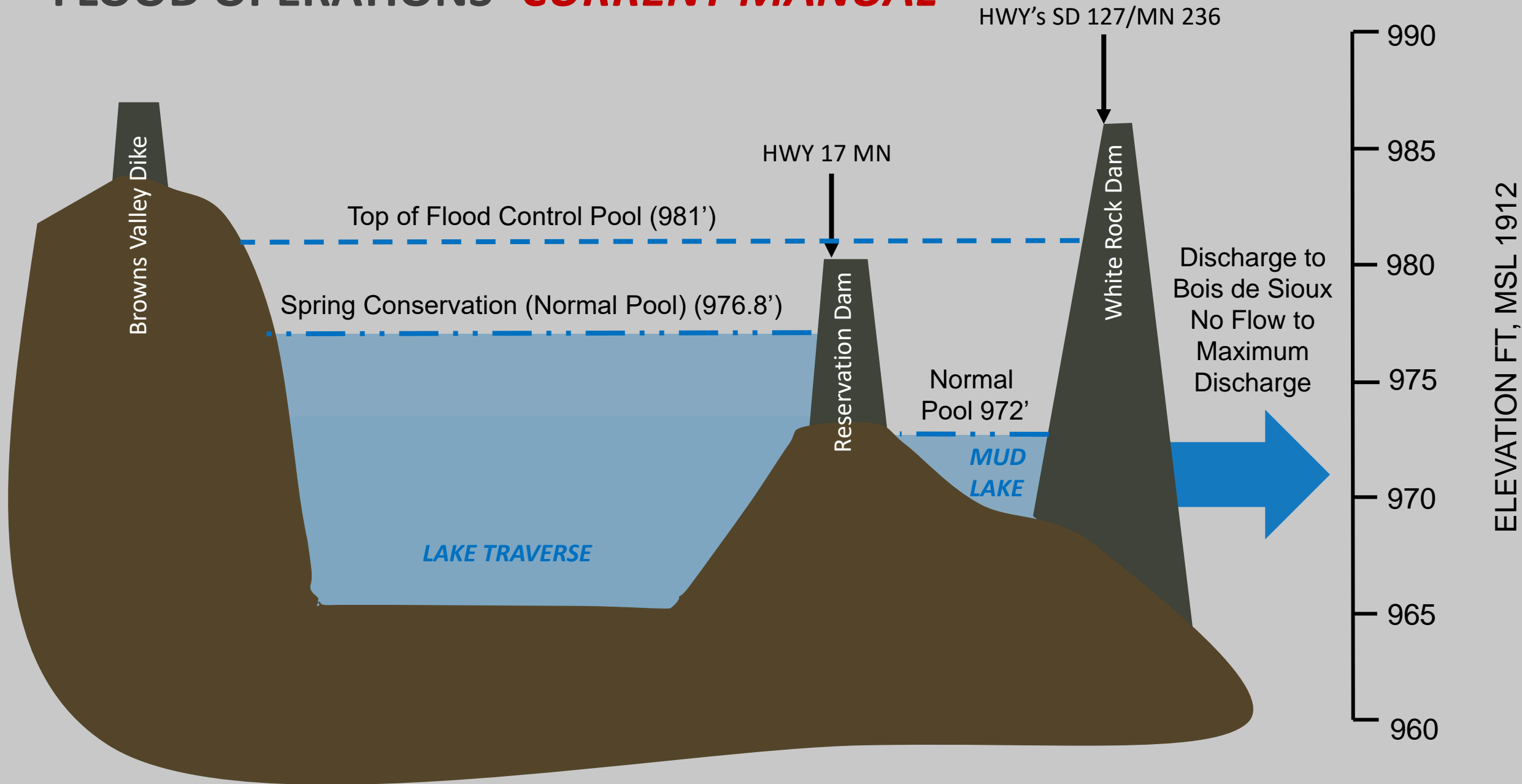


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NORMAL OPERATIONS- *CURRENT MANUAL*



FLOOD OPERATIONS- *CURRENT MANUAL*





2019 FLOOD PEAK POOL OF 980.6'



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ORWELL DAM

Purpose: Flood Control and Water Supply

- Hold 1064.0 +/- 0.5 feet year-round except for flood control.
- Minimum Flow is 80 cfs.
- Downstream channel capacity is 1,200 cfs.



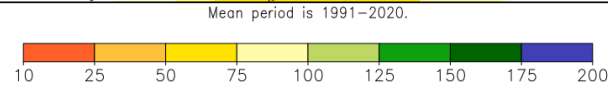
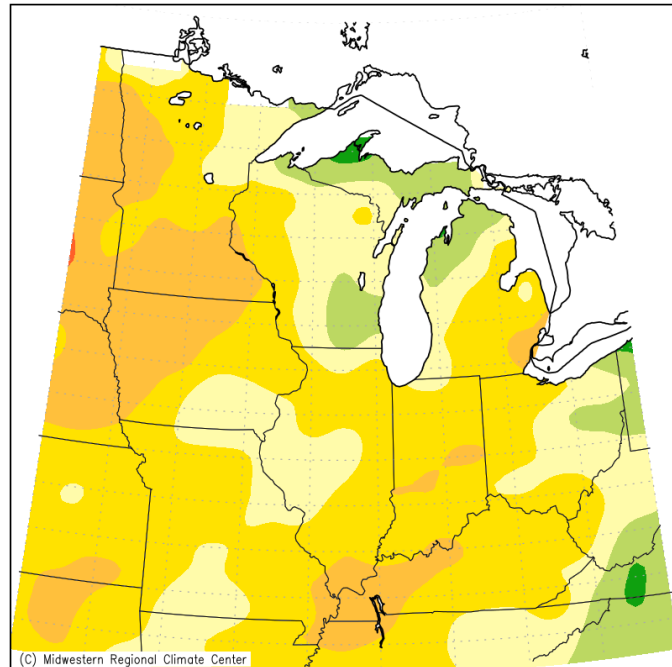
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CURRENT CONDITIONS



Accumulated Precipitation: Percent of Mean
September 1, 2022 to November 30, 2022

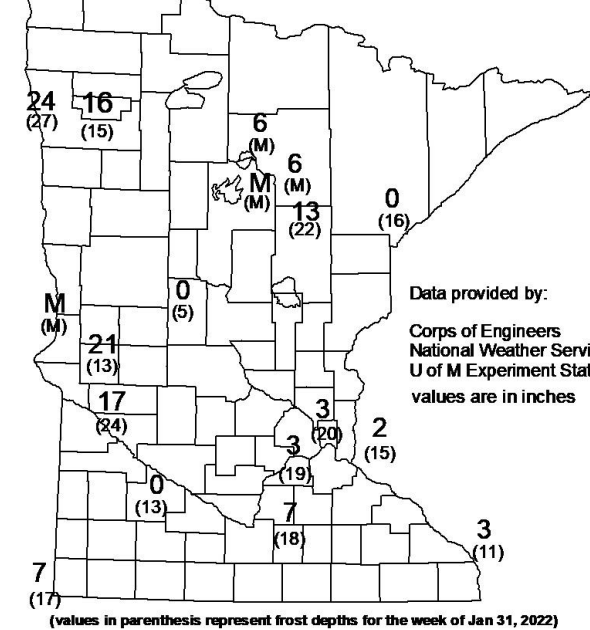


Midwest Regional Climate Center
Purdue University

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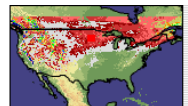
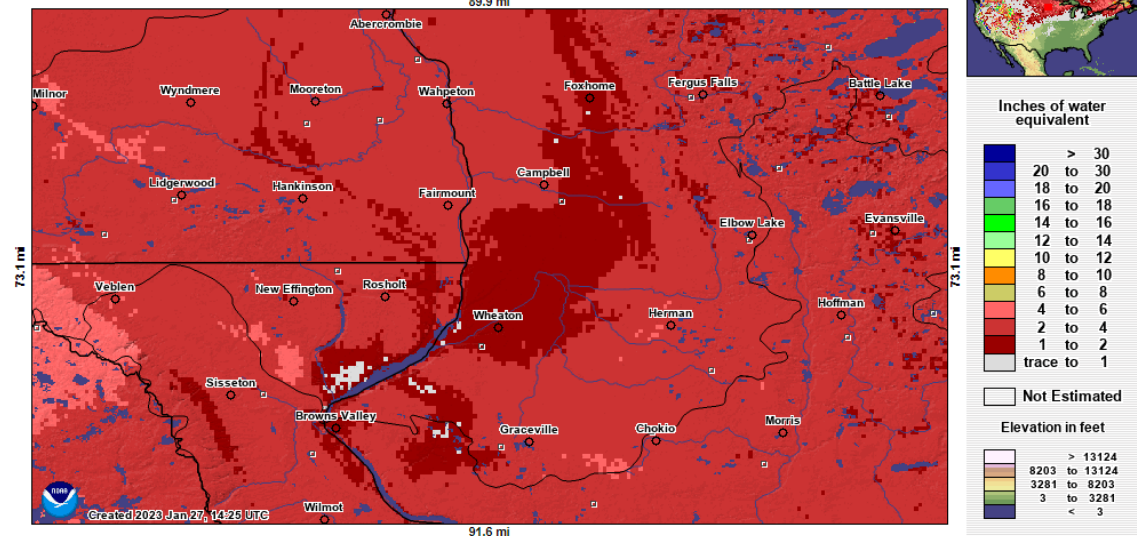


Frost Depths under Sod
Week of January 23, 2023

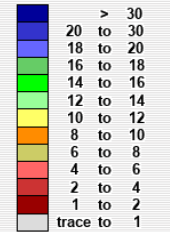


Data provided by:
Corps of Engineers
National Weather Service
U of M Experiment Station
values are in inches

Modeled Snow Water Equivalent forecasted for 2023 January 30, 6:00 UTC

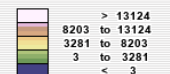


Inches of water equivalent



Not Estimated

Elevation in feet

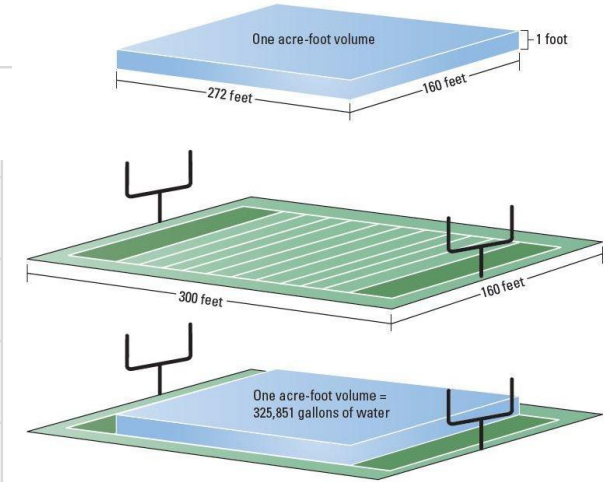
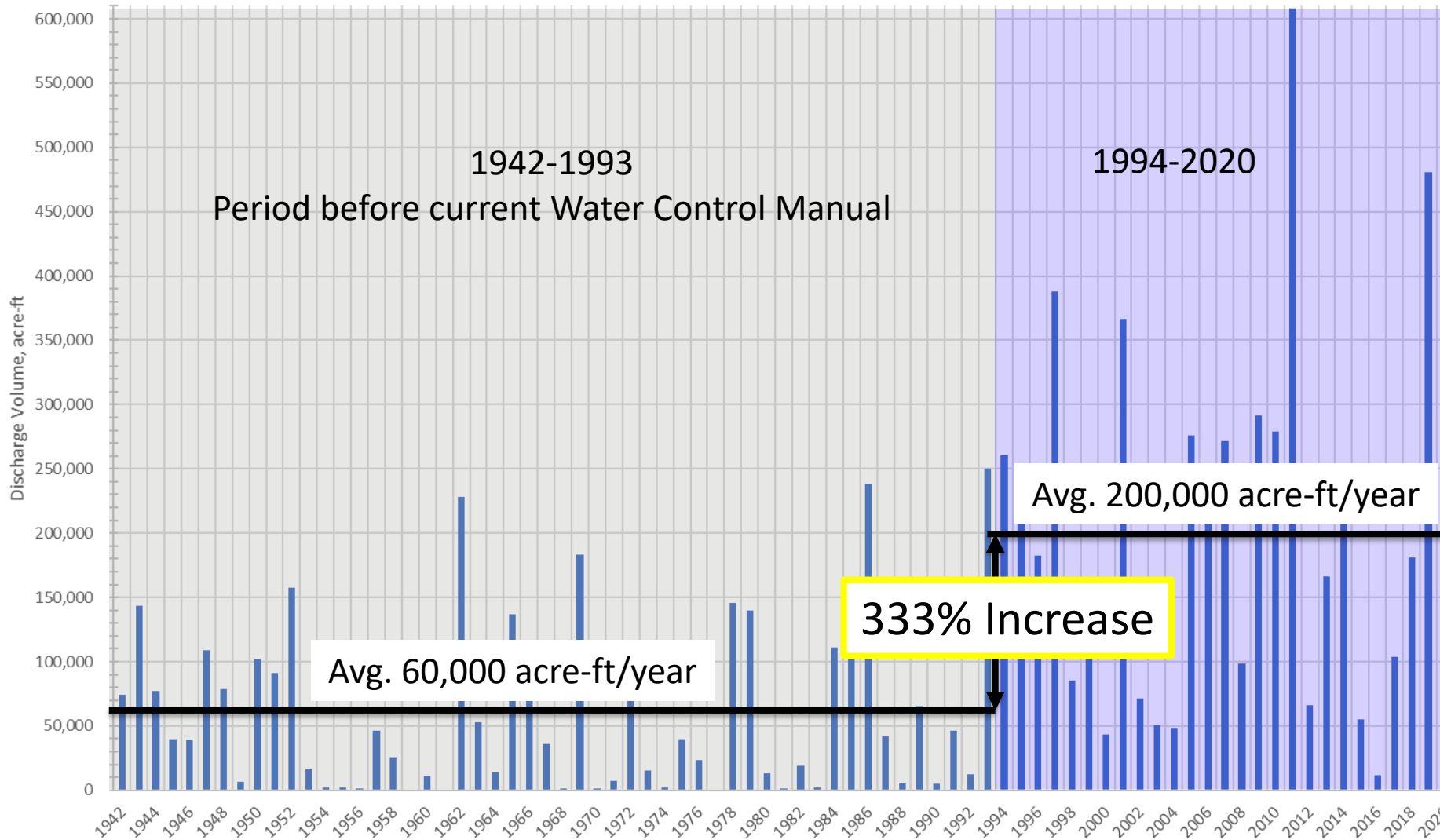




WHAT HAS CHANGED SINCE 1990s



Annual Discharge Volume From White Rock Dam



Modified from Colorado State University, <https://waterknowledge.colostate.edu/water-management-administration/water-use>

Difference in two periods of record:
140,000 football fields covered in 1 foot of water

Data courtesy of USGS



LAKE TRAVERSE ENVIRONMENT – POSITIVES



- Fish and wildlife
 - Productive sport fishery
 - Lake Traverse
 - White-tailed deer
 - Waterfowl
 - Migratory birds
 - Mississippi Flyway
- Vegetation
 - Wetlands (Mud Lake)
 - Native prairie grasses
 - Shrubs and forests





LAKE TRAVERSE ENVIRONMENT – IMPAIRMENTS



- Poor water quality in both lakes
 - High turbidity
 - Wind/wave action
 - High nutrient levels
 - Farm field run-off
 - Algae blooms
- Fish kills
- Erosion
- Sedimentation
- Loss of aquatic vegetation
 - Turbidity
 - Lake level fluctuation



Bois de Sioux River

Photo credit: MN DNR 2021





ENDANGERED SPECIES



Species	Status	Group
Northern Long-eared Bat	Endangered	Mammal
Tricolored Bat	Proposed	Mammal
Red Knot	Threatened	Bird
Dakota Skipper	Threatened	Insect
Monarch Butterfly	Candidate	Insect
Western Prairie Fringed Orchid	Threatened	Plant





MIGRATORY BIRD SPECIES



Liliana Chavarria Duriaux



Scott Sanderson

Common Name	Migrating Period
Bald eagle	Dec 1 - Aug 31
Black tern	May 15 - Aug 20
Bobolink	May 20 - July 31
California gull	Mar 1 - Jul 31
Chimney swift	Mar 15 - Aug 25
Clark's grebe	Jun 1 - Aug 31
Franklin's gull	May 1 - Jul 31
Golden-winged warbler	May 1 - Jul 20
Hudsonian godwit	Breeds elsewhere
Henslow's sparrow	May 1 - Aug 31
Lesser yellowlegs	Breeds elsewhere
Red-headed woodpecker	May 10 - Sep 10
Short-billed dowitcher	Breeds elsewhere
Western grebe	Jun 1 - Aug 31
Willet	Apr 1 - Aug 5





TIMELINE FOR WATER CONTROL MANUAL UPDATE



Part 1: February-March 2023

- ☐ Collect and organize public comments

Part 1: April-September 2023

- ☐ Begin study of individual ideas

Part 2 of update (to be scheduled, pending funding)



- ☐ Study full alternatives
- ☐ Second set of public meetings and comment period on alternative operating plans

Part 3 of update (to be scheduled, pending funding)



- ☐ Final set public meetings and comment period on recommended plan
- ☐ Approval of plan and approval of updated Water Control Manual



Opportunities for
public input

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HOW TO SHARE INPUT



Share comments by 3 March 2023:

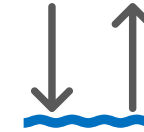
1. **Written** in open house session
2. **Electronically** to

Lake.Traverse@usace.army.mil

An updated water control manual could address:



Lake sedimentation



Changes to normal pool elevation (higher or lower)



Changes to outflow from dams



Modifications for environmental benefits



Other ideas?



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FINDING ADDITIONAL INFO



GENERAL LAKE TRAVERSE INFOMAITON:

www.mvp.usace.army.mil/Missions/Recreation/Lake-Traverse/

UPDATED GAGE DATA:

www.mvp-wc.usace.army.mil

The screenshot shows the US Army Corps of Engineers St. Paul District Website. The main heading is "Corps of Engineers seeks public, partners comments to enhance environment near Lake Traverse through the Sustainable Rivers Program." Below this, there is a "Contact" section with the address: U.S. Army Corps of Engineers, Traverse Lake, 6338 County Road 10, Wheaton, MN 56296-5469, Phone: (320) 563-4586, and the email: Lake.Traverse@usace.army.mil. There is also a "Make Reservations" section with a link to RECREATION.GOV. The page includes a sidebar with "Lakes & Recreation Areas" and a "White Rock Dam day-use recreation area" image.

The screenshot shows the US Army Corps of Engineers St. Paul District Water Management page. The main heading is "Lake Traverse - Reservation Dam". Below this, there is a "PHOTO" section with an image of the dam. To the right, there is a "CURRENT VALUES" table with the following data:

Parameter	Latest Value	Date
Pool (ft) :	977.30	24 Jan 2023, 17:00
Tailwater (ft) :	972.46	24 Jan 2023, 17:00
Flow-In (cfs) :	20	24 Jan 2023, 05:00
Flow-Out (cfs) :	78	24 Jan 2023, 17:00



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PUBLIC INPUT



It's time to **listen** to your ideas
for Lake Traverse operations



What issues or
resources
should be
studied?

What do you
want to stay
the same or
change?

What potential
water
management
options for
Lake Traverse
should be
considered?



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Thank you
for your
participation



Open House begins now



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