

BALDHILL DAM AND LAKE ASHTABULA WATER CONTROL MANUAL UPDATE

Public Meeting
5/8/24



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WHO IS ALL HERE: CORPS STAFF

2



Scott Tichy
ND Section
Supervisor



**Michael
Swenson**
Water
management
hydrologist



Liz Nelsen
Supervisory
engineer



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WHAT IS A WATER CONTROL MANUAL?

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The water control manual dictates how the Corps manages the water at the 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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TIMELINE FOR WATER CONTROL MANUAL UPDATE

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Part 1: Sep 8 – Nov 10, 2023

- ☐ Collect and organize public comments on areas for possible improvement

Part 1: Nov 2023 – Apr 2024

- ☐ Prepare modeling and performance indicators
- ☐ Study alternatives based on feedback on areas for possible improvement



NOW

Part 1: May – Jun 2024

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

Part 1: Jun – Sep 2024

- ☐ Study alternatives based on feedback on 1st round of results



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

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



Opportunities for
public input



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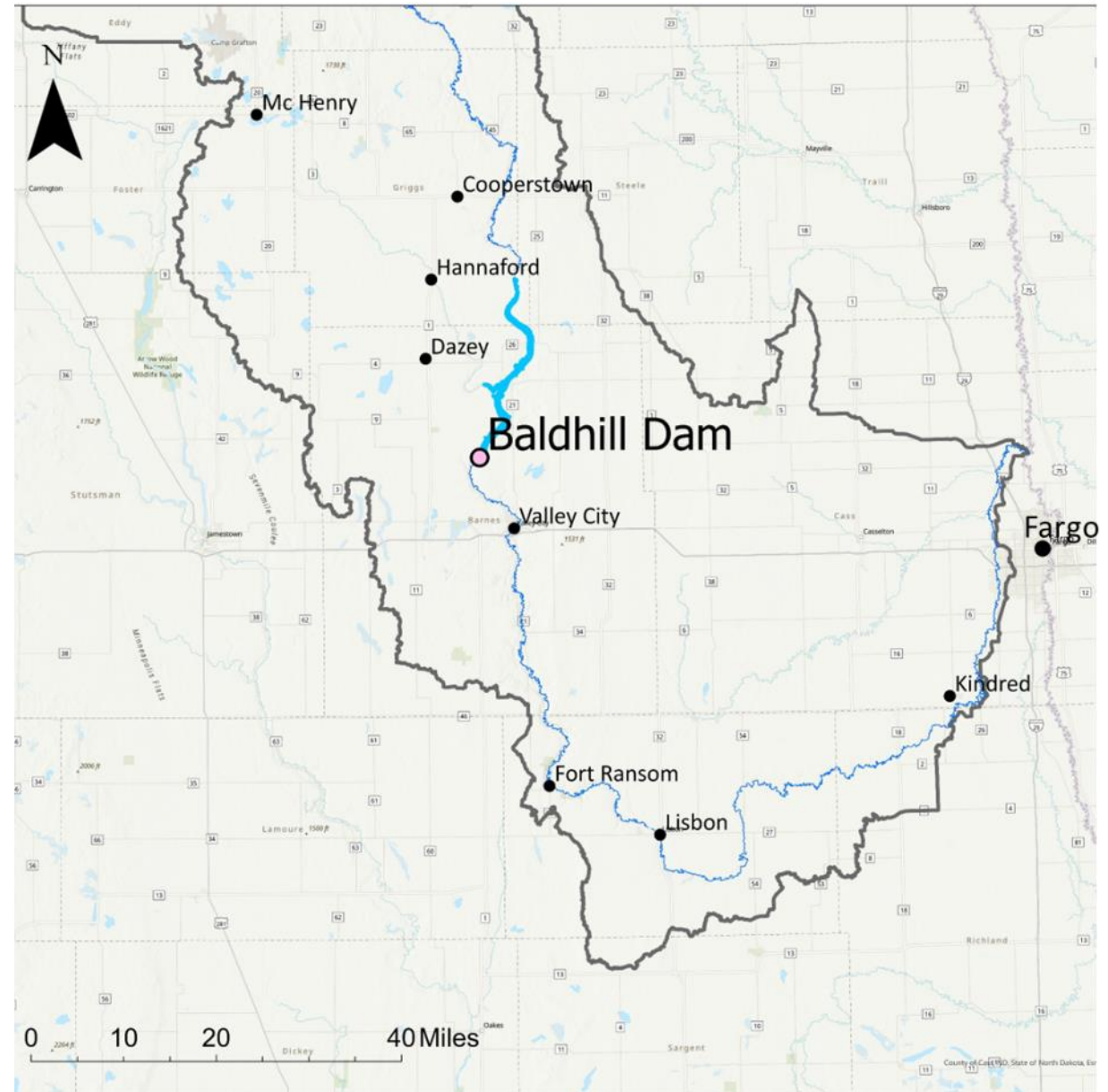
BALDHILL DAM/ LAKE ASHTABULA PROJECT

➤ Primary Purposes

- Flood Risk Management
- Water Supply

➤ Secondary Purposes

- Recreation
- Fish and Wildlife
- Water Quality





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ASSESSMENT PHASE OF MANUAL UPDATE

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Received comments from the public and agencies in October 2023. Based on these comments, we assessed a few **potential** minor changes to current operating plan.

Specifically Looked at:

- Improving the drought operation plan
- During drought, is the winter drawdown always necessary?
- Increasing the minimum flow from 13 CFS to 23 CFS (Requested by ND Game and Fish)
- During very snowy winters, is there a flood benefit of 11 feet of drawdown compared to 9 feet of drawdown?



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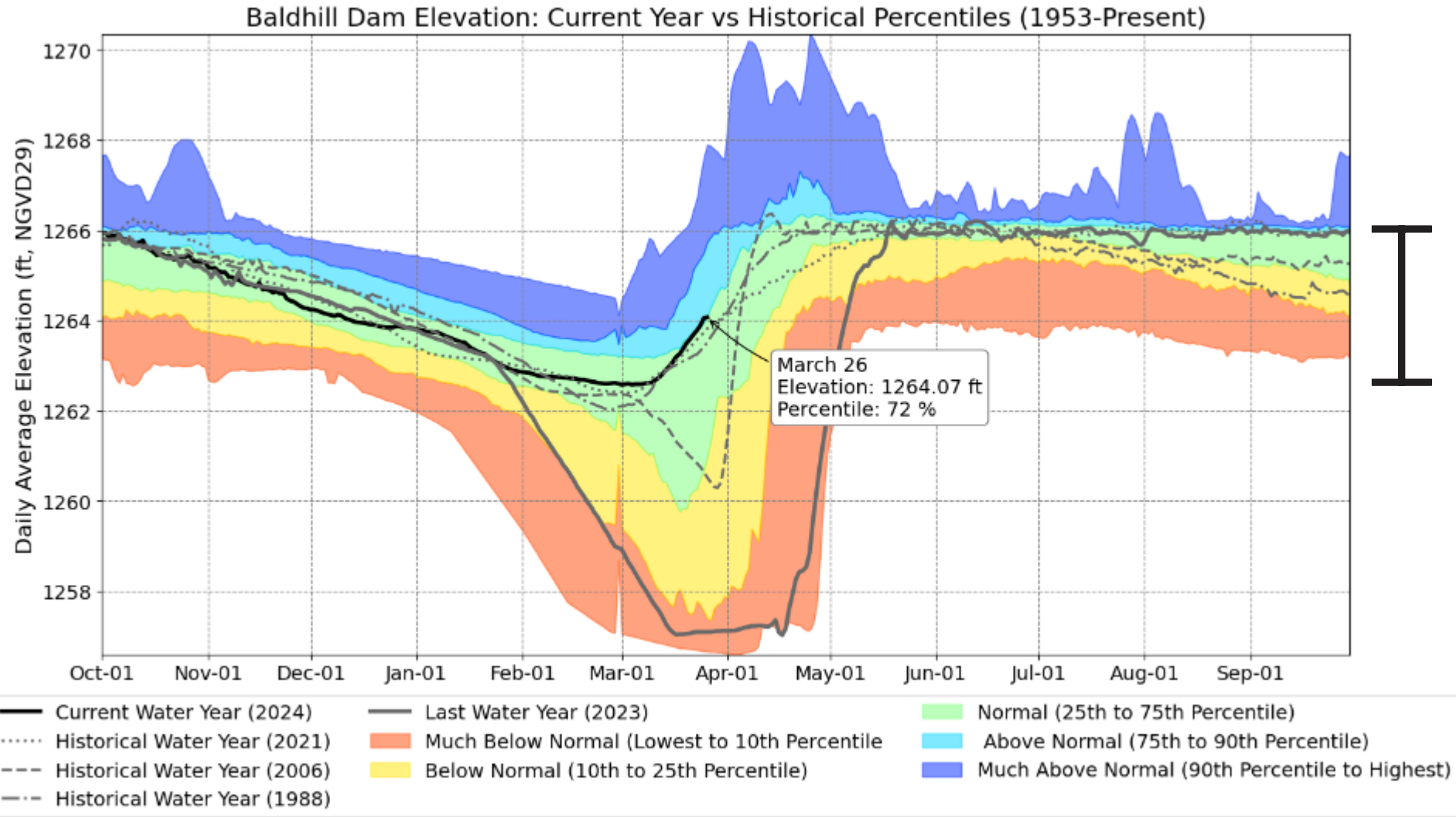


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LAKE ASHTABULA ELEVATION DURATION HYDROGRAPH

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Lake Ashtabula is drawn down by 3.5 feet every winter. Is this necessary every winter, especially during droughts?



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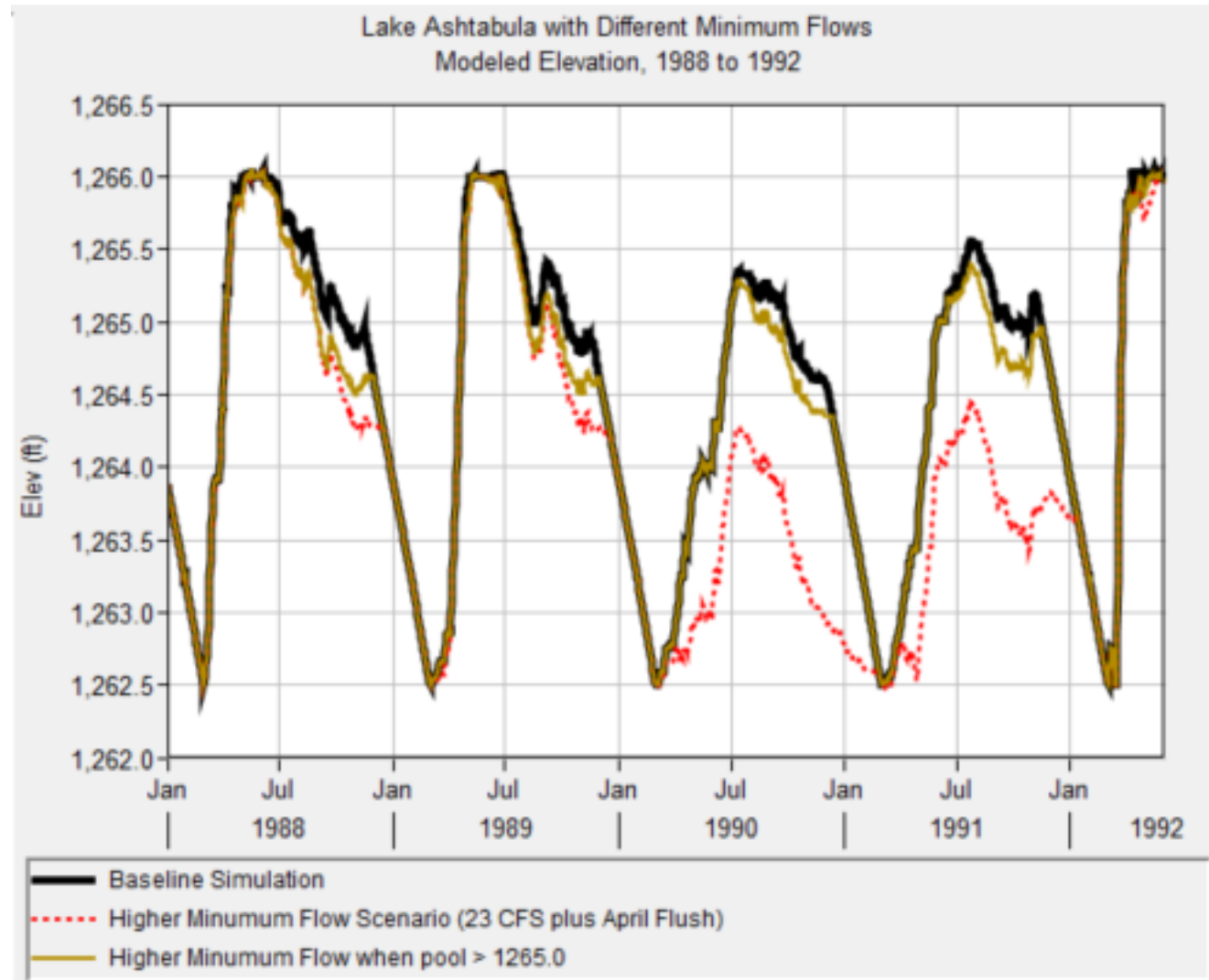
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HIGHER MINIMUM OUTFLOWS DURING DROUGHT (1988 - 1992 MODELED)

8

- A **constant** higher minimum flow substantially affects the pool elevation.
- A **tiered** higher minimum flow has a minor impact on the pool elevation.





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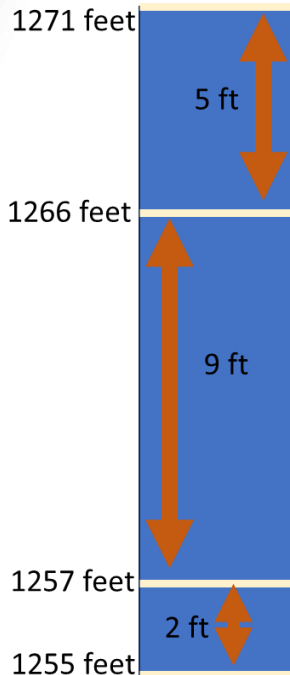


LAKE ASHTABULA 11-FT DRAWDOWN VS. 9-FT

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Lake Ashtabula
Elevation
1271 feet

Storage (10,000 Acre-feet)



Flood Storage



3.0

Winter Drawdown



3.8

Additional drawdown



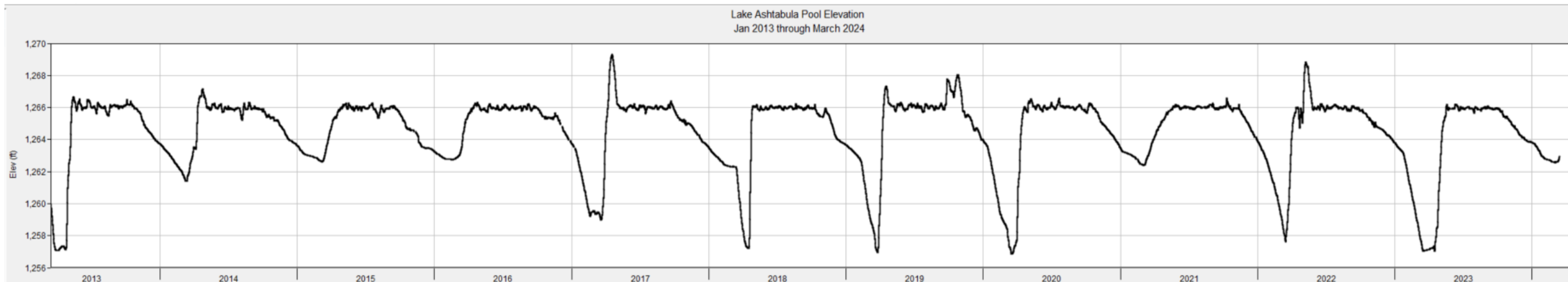
0.5

Total Volume of flow into Lake Ashtabula in
spring 2009 (10,000 acre-feet)



51.4

Since 2013, there have been five winters when Lake Ashtabula was lowered by a full 9 feet, based on snow amounts. The water quality conditions have never allowed the pool to be lowered an additional 2 feet (to an elevation of 1,255 feet).





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HOW TO SHARE INPUT

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Share comments by June 10, 2024:

1. **Written** in open house session

2. **Electronically**

to Lake.Ashtabula@usace.army.mil



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FINDING ADDITIONAL INFO

GENERAL LAKE ASHTABULA INFORMATION:

www.mvp.usace.army.mil/Missions/Recreation/Lake-Ashtabula-Baldhill-Dam/

UPDATED GAGE DATA:

www.mvp-wc.usace.army.mil

US Army Corps of Engineers St. Paul District Website

Home / Missions / Recreation / Lake Ashtabula - Baldhill Dam

Lakes & Recreation Areas

- Blackhawk Park
- Cross Lake
- Eau Galle
- Recreation Area
- Gull Lake
- Homme Lake
- Lac qui Parle
- Lake Ashtabula & Baldhill Dam
- Lake Traverse
- Lake Winnibigoshish
- Leech Lake
- Orwell Lake
- Pokegama Recreation Area
- Sandy Lake
- Volunteer Opportunities
- Boating Safety

Ashtabula Lake and Baldhill Dam

Lake Ashtabula is located 12 miles northwest of Valley City, N.D., and is situated in one of the most scenic river valleys in the region, offering visitors a wide range of recreation opportunities. The lake offers activities for every season of the year. Fishing and snowmobiling are available in the winter. The spring and fall bring a beautiful view of the migrating waterfowl. There are plenty of activities available in the summer, such as fishing, boating, camping, swimming and picnicking.

There are three designated swimming areas around the lake. Seven boat launching ramps are maintained to provide boaters and fisherman access to all areas of the lake. Picnic facilities and playgrounds are located at most sites. All sites have access to drinking water and rest rooms.

Anglers get your fishing poles oiled and geared. Lake Ashtabula has an abundant population of walleye, northern pike, white bass, yellow perch and black bullheads. The name "Ashtabula" is a Native American word meaning "Fish River," which suits its fish population.

The Corps of Engineers operates seven recreation areas at Lake Ashtabula, providing a variety of facilities and services, as well as actively manages 14 separate wildlife areas at Lake Ashtabula. These areas provide quality habitat for many species of wildlife. All Corps' wildlife management areas are open to the public for hunting. Contact the North Dakota Game and Fish Department for seasons, restrictions and licenses.

Campground reservations

RESERVE NOW

[Click here to make a reservation for Lake Ashtabula campground](#)

US Army Corps of Engineers
St. Paul District

Water Management Date: Wed, 30 Aug 2023 13:52:11 GMT

[Home](#) [Reports](#) [Gages](#) [Data](#) [Contact](#) [- St. Paul District Home -](#)

Baldhill Dam

PHOTO

CURRENT VALUES

Parameter	Latest Value	Date
Pool (ft) :	1266.02	30 Aug 2023, 13:00
Tailwater (ft) :	1224.85	30 Aug 2023, 13:00
Flow-In (cfs) :	254	30 Aug 2023, 01:00
Flow-Out (cfs) :	287	30 Aug 2023, 13:00
Total 24 hr Precip. (in) :	0.00	28 Aug 2023, 13:00

Water Control Manual available on national website:
water.usace.army.mil



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BALDHILL DAM GENERAL OPERATION: **CURRENT**

MANUAL

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Summer

- Maintain steady pool level

Fall/Winter

- Lake Ashtabula is lowered for flood storage to a level dependent on the snowpack.

Spring

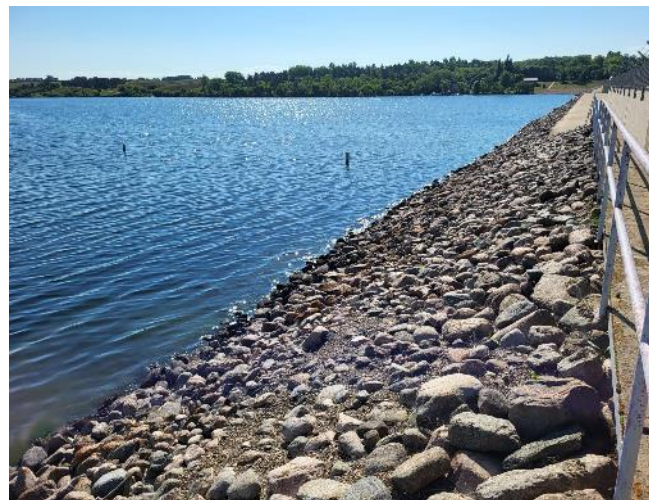
- Lake Ashtabula is managed to minimize downstream flooding and then raised to the summer level.



Valley City 2/24/23

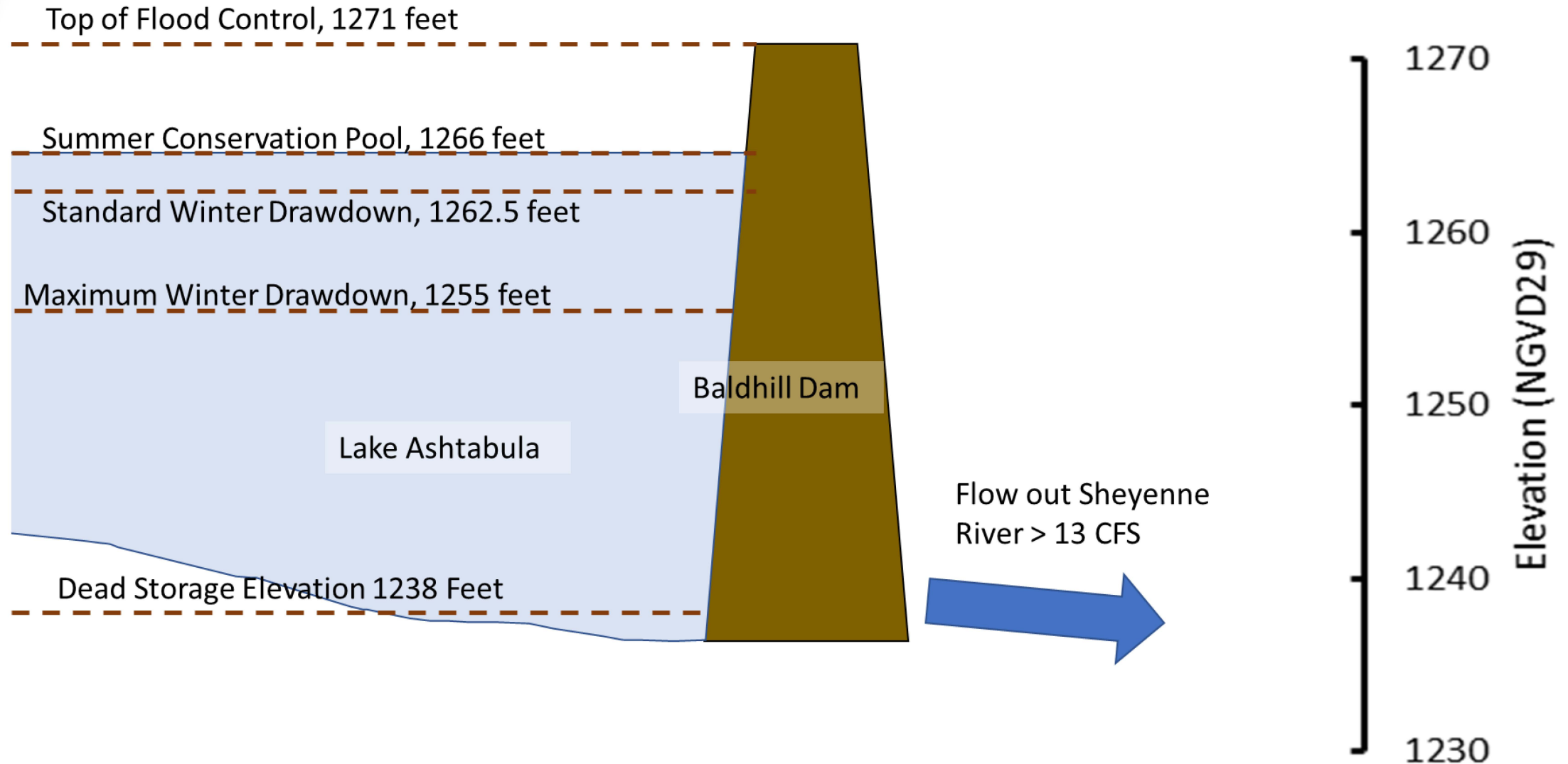


USGS Gage at Valley City 4/14/23



Pool at summer conservation level from the dam, 8/2/23

NORMAL OPERATIONS- *CURRENT MANUAL*





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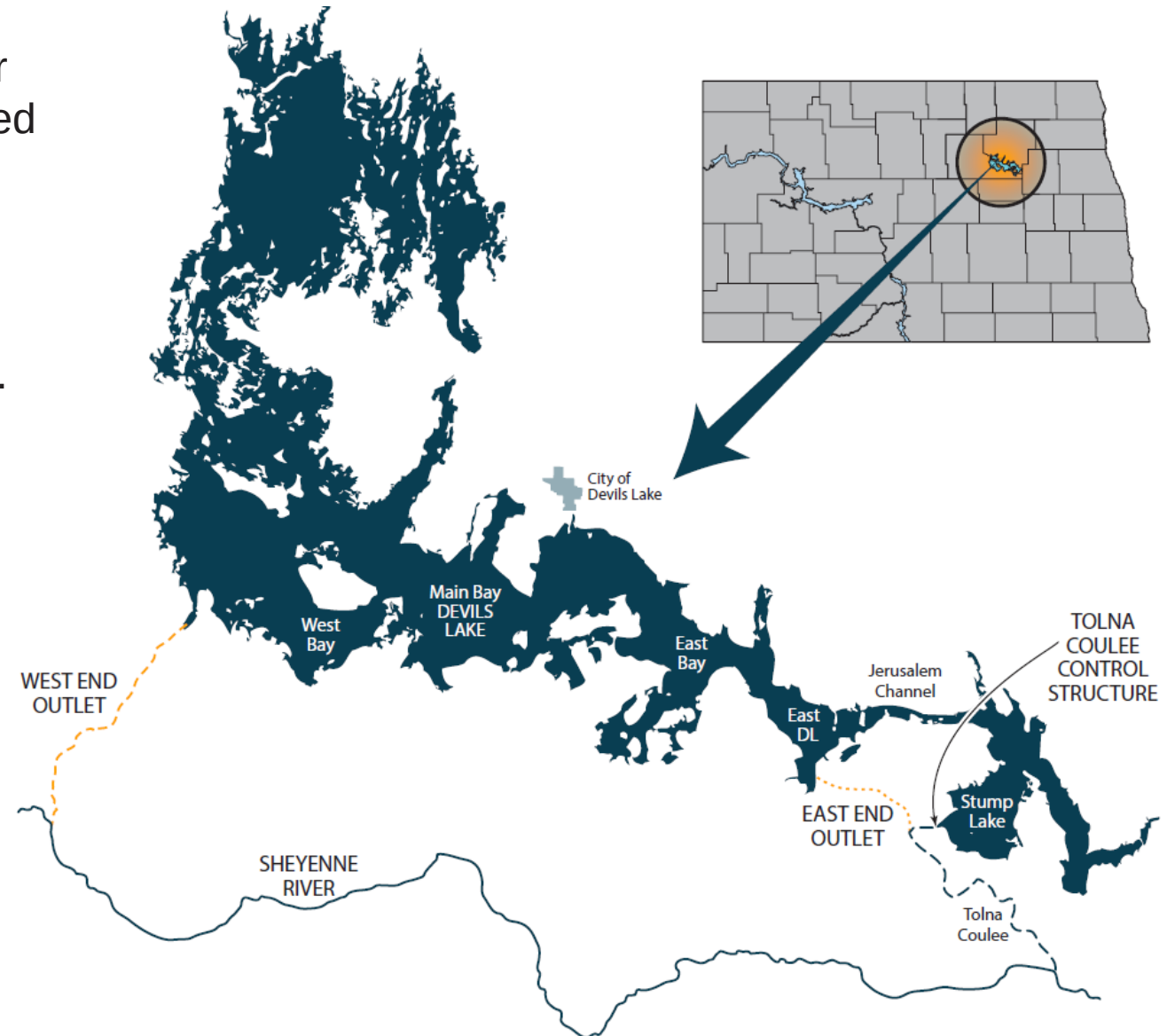
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DEVILS LAKE OUTLET

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- Devils Lake outlets into the Sheyenne River upstream of Baldhill Dam via two constructed outlets, constructed in 2005 and 2012
- Total capacity 600 CFS
- Not controlled by USACE
- Average summer flow into and out of Lake Ashtabula is much higher than before 2005.





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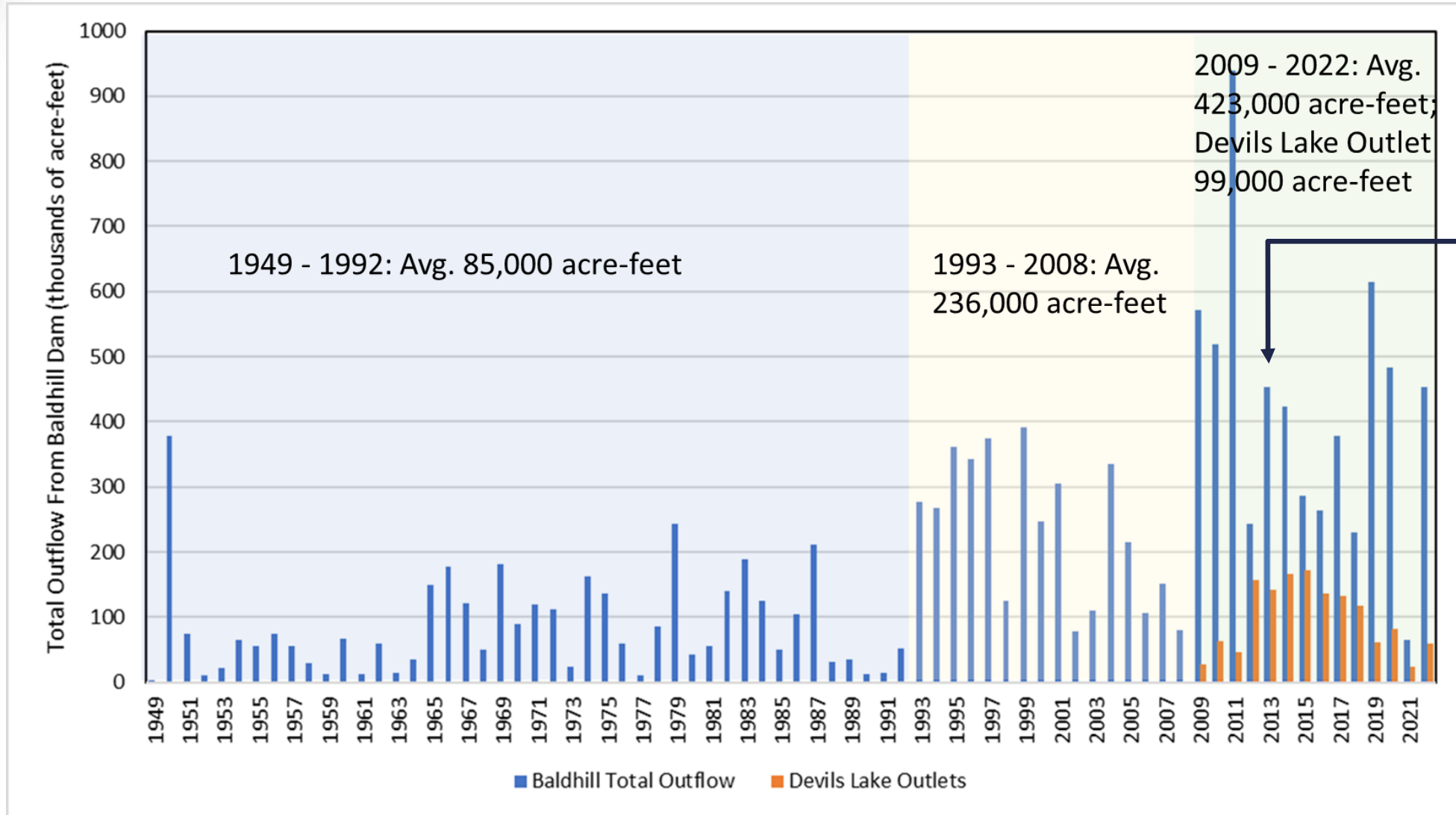
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WHAT HAS CHANGED IN RECENT YEARS?

Annual Total Discharge from Baldhill Dam

15



Last WCM
Update 2013