



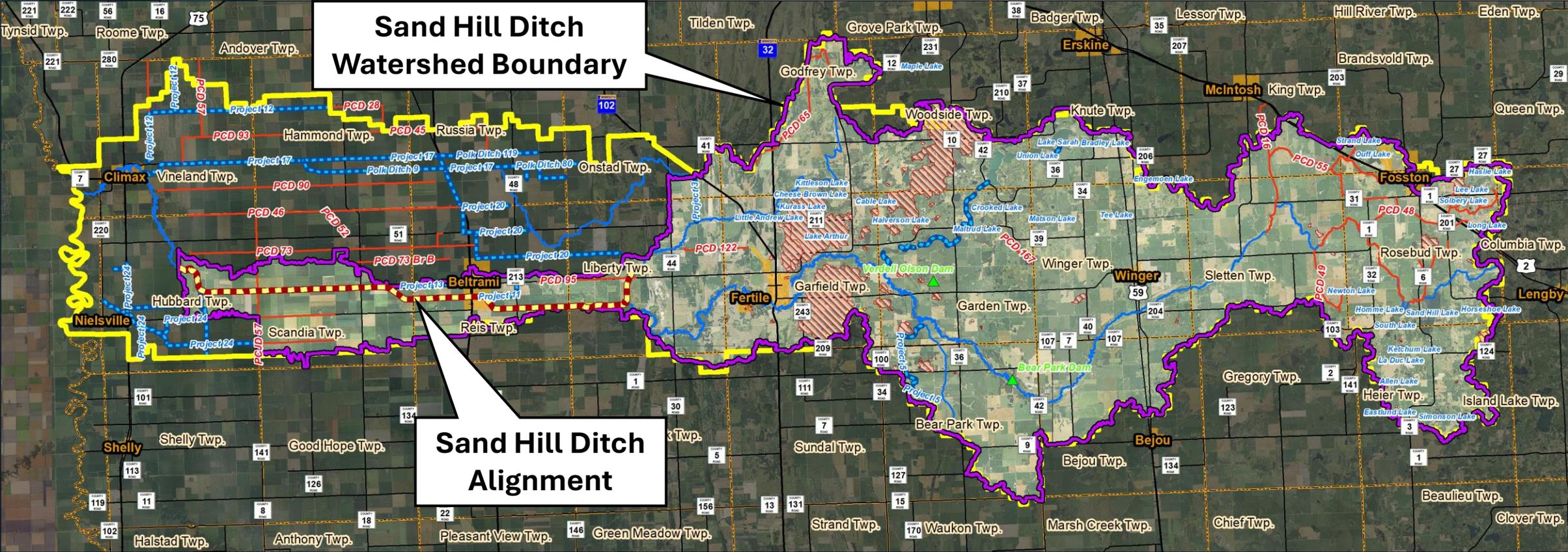
**SAND HILL RIVER**  
WATERSHED DISTRICT

Sand Hill Ditch

# Historical Grant Opportunities

# Enhancements performed relating to the Sand Hill Ditch

The Sand Hill Ditch, a legal system under MN Statute 103E is apart of the Sand Hill River. This channel starts at Kittleson Creek and ends south of Climax, MN.



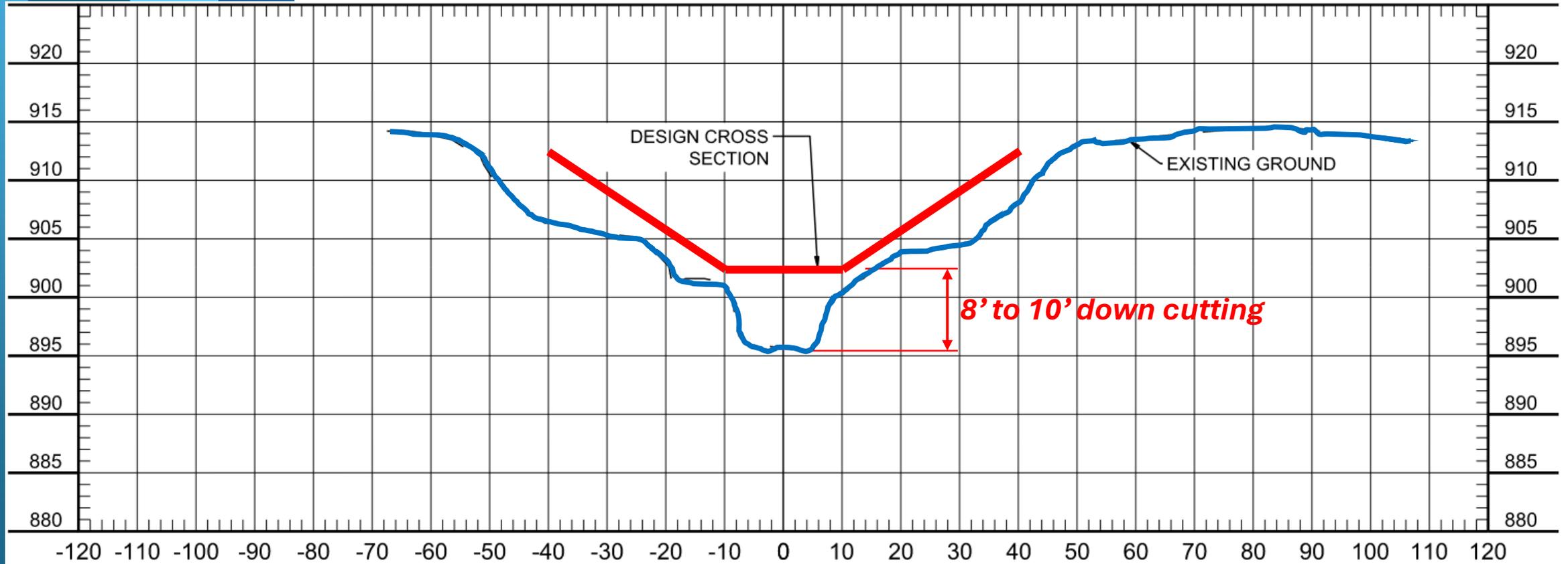


# Enhancements performed relating to the Sand Hill Ditch

Since completed by the USACE in the 1956, the Sand Hill River has been plagued by failing channel side slopes, increasingly turbid waters, and fragmented riparian habitat, leading to loss of private property, risk to public safety, degraded water quality, and limited recreation opportunities.

Because of our legal jurisdiction, the Sand Hill River Watershed has been proactive in grant opportunities to enhance the Sand Hill River, which ultimately enhance the Sand Hill Ditch. All of these project ahead enhance the Sand Hill Ditch indirectly by improving water quality, habitat or direct benefits such as erosion and head cutting.

# Channel Incision (Deepening)



# Resulting Bank Failure (examples)



# Sand Hill Ditch Low Water Crossing (2007)

- **Scandia/Reis Township Line**
- **Problem:**
  - The existing crossing limited riparian connectivity for fish and other aquatic life but was necessary as a critical crossing for our area agricultural producers.
- **Solution:**
  - Install a low water crossing, with box culverts for low flows that would allow for fish passage.



# West Mill Removal (2007)

- **West of Fertile, Mn (east of the Sand Hill Ditch)**
  - An old mill dam was removed and replaced with a box culvert and several rock riffles to provide connectivity for fish and other aquatic life.



# Sand Hill Ditch Drop Structure Rock Arch Rapids Retrofit (2016):

- The USACE to retrofit four concrete drop structures in the Sand Hill Ditch with rock arch rapids at a grade and boulder placement suitable for fish passage.



# **Sand Hill Ditch Grade Stabilization – Phase I (2016) & Phase II (2020): (aka: Rock Riffles)**

- Installation of 34 rock riffles through degrading portions of the Sand Hill Ditch. Each riffle was sized to minimize future channel incision, provide fish passage, and enhance floodplain accessibility.





# **Kittleson Creek Outlet & Sand Hill Lake Dam Arch Rapids Retrofit (2019)**

- **Remaining funds from Lessard-Sams Outdoor Heritage Fund used for the USACE Rock Arch Rapids project.**
- **Kittleson Outlet:**
  - The SHRWD installed a box culvert at a lower elevation and riffles at the outlet of Kittleson Creek to provide connectivity for fish and other aquatic life.
- **Sand Hill Lake Dam Rock Arch Rapids Retrofit (2019):**
  - The existing vertical sheetpile structure was retrofit with a rock arch rapids. This project featured a meandering low flow channel within the rapids due to site constraints that wouldn't allow for an ideal slope.





# Poissant Bridge Removal and Riparian Enhancement (2021):

- **The historic bridge for MN Highway 32 had remained in-place and became the property of a private landowner.**
- **As this structure continued to degrade, there were substantial public safety concerns with the bridge.**
- **The bridge also limited riparian function for the Sand Hill River in this area.**
- **The SHRWD worked with the landowner to remove the bridge and approach embankments and install a rock arch rapids at the prior bridge location. The end result provides enhanced riparian function in this region of the Sand Hill River.**



**BEFORE**



**AFTER**

# Partners

A total of \$3.2 million+ was received through grants and partnerships. Under \$10,000 was spent locally towards these projects. Of the local share, \$0 was spent by the assessed area of the Sand Hill Ditch. Many partners contributed with “in-kind” services.



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# Upcoming Funding!

At least \$1.7 million is earmarked from FEMA to return stretches along the Sand Hill Ditch to pre-disaster conditions resulting from the 2022 flood.

Almost \$1 million is earmarked from HSEM to repair 2023 damages in Liberty and Scandia Township with a 75/25 cost share. The Sand Hill River One Watershed One Plan efforts have reserved \$125,000 for the local share of the damages in Scandia Township for bank stabilization.

The Sand Hill River One Watershed One plan has earmarked \$252,313 for the SH River Ecosystem Restoration feasibility study and design. The Flood Damage Reduction Workgroup has also reserved at least \$10,000 towards this effort.





# What's next?

**Contact our office with feedback by September 30, 2024:**

**Calling: 218-945-3204**

**E-mail: [april.Swenby@sandhillwatershed.org](mailto:april.Swenby@sandhillwatershed.org)**

**Stop by: 219 North Mill Street | Fertile, Mn**

**By Mail: PO Box 584 | Fertile, MN 56540**

**Online submission: [www.sandhillwatershed.org](http://www.sandhillwatershed.org)**

**All feedback will be placed permanently in the record. Our board will be reviewing all feedback received at the October 3, 2024 board meeting.**