

Roseau Lake Rehabilitation Project

The Roseau Lake Rehabilitation project is a Natural Resource Enhancement (NRE) / Flood Damage Reduction (FDR) water management project located about 6 miles northwest of the City of Roseau. This is a joint project of the Roseau River Watershed District (RRWD) and Minnesota Department of Natural Resources (MN DNR) with the purpose of improving habitat conditions in the Roseau Lake and the Roseau River and to manage the available storage capacity of the lake basin to reduce flood damages near and downstream of the lake basin.

In 2011 the RRWD and the MN DNR hosted three meetings with landowners in the Roseau Lake area, or the Lake Bottom, as it is locally known. The purpose of these meetings was to gather information on landowner problems and concerns and get their input on possible solutions. The RRWD and DNR gained a lot of insight into the need for the project from these meetings.

The RRWD Board of Managers initiated a Project Team in 2014 which met on a regular basis for over 4 years. A Project Team is a group of landowners, regulatory agency staff, local government officials, and other interested parties that develop a Purpose and Need Statement for the project, various alternative to meet the criteria of the Purpose and Need Statement, and choose a preferred alternative. The project team is also involved in the drafting of the Operation and Maintenance Plan for the project. Basing the direction of the project on the information received in 2011 the Project Team recommended, and the RRWD Board concurred with, choosing the alternative known as Alternative 2A'.

This newsletter provides the current status of the project, what the Alternative 2A' looks like and hopefully provides answers to some questions that we've been asked about the project.



Frequently Asked Questions

How much water will be stored in the lake for wildlife management? The operating plan for the project hasn't been developed yet. However, the DNR has recommended that the state should manage water levels during spring and summer up to the 1028.0 elevation to manage for shallow marsh habitat for ducks and other waterbirds. At 1028.0 elevation, 1655 acre-feet or 8% of the project's gated storage north of the river would be used. In the fall, the desired elevation is somewhat higher (1030-1031 elevation) to provide for a bigger area to hold and hunt waterfowl. At 1031.0 elevation, 10,020 acre-feet of storage, or 47% of the project's gated storage north of the river would be used.

How much of the spring flood storage of the basin north of the river would be available? All of it. Water will be metered out of the basin in late fall each year to provide for spring flood storage. At 1034.0 elevation (the proposed managed level of gated storage), the basin will hold 21,090 acre-feet of water.

How will the project be operated? Under the preferred alternative for the project (designated 2A'), the stage of river in a given flood event will be raised such that more of the river's water is forced downstream than currently is the case. Then, once a "trigger" elevation of flooding is attained at the Ross gauge, water would be allowed to flood the basin to reduce the downstream flood peak. Water will be held in the basin to allow water from adjacent lands to more efficiently drain. Once the river has receded, water will be metered out of the basin back into the river in preparation for the next event. All project operating procedures will be outlined in an operations plan.

Why do this project? Isn't the flooding problem caused by sources upstream of Roseau? Why not spend the money for a project there? This project will not solve all of the flooding problems in the watershed. But it has the potential to significantly reduce the impact of flooding near and downstream of Roseau Lake for the smaller, more frequent floods. The RRWD and other project partners are seeking additional opportunities in the Roseau River watershed to reduce downstream flooding.

What else is being done to reduce flood damages on the Roseau River? There are a number of projects that are operational, under construction, or in the planning stages. They are: (1) Palmville WMA (operational): This project acts to slow the rate of discharge of waters from the fen and enhance the natural functions of the fen. (2) Norland/Hay Creek (operational): This project moderates flood water contributions to the Roseau River via temporary storage in impoundments. (3)

Whitney Lake (planning): The goal of the project will be to moderate flooding in the western reaches of the Roseau River via improved timing of storage in impoundments and other measures. (4) Roseau River WMA—Pool 3 Outlet (operational): (a) Drawdown management in 2 pools provides spring flood storage and (b) improve timing of discharges from the pools to reduce flood peaks on the western reaches of the river.

How will the project reduce flooding downstream of the basin? The peak of flooding on the river and the duration of time that water is on the land will be reduced by the project for more frequent (<10 year) events. This will be accomplished by forcing water past the lake basin early in a flood event followed by storing water in the basin once the river downstream of the lake is predicted to go above a specified level (i.e. a "trigger" elevation). Once the flood peak has passed downstream of the lake, the water stored in the lake will be metered out at a rate that will not cause flooding downstream. Basin water levels will be returned to pre-flood levels in anticipation of the next event.

How will the project reduce flooding between Highways 89 and 310? Early in a given flood event, additional water (as compared to the present condition) will be forced downstream. Once a "trigger" elevation is attained at the Ross gauge, flow will be directed into the lake north of the river. After the flood peak passes downstream and water has receded from private lands located near the river that lie between Highways 89 and 310, releases of water out of the basin will commence. As flood waters recede, the operating plan will give priority to drainage off of private lands (as opposed to the public lands north of the river) to make storage available for the next flood event. Efficiency of drainage by exterior dikes and of lands contained within the floodway will be given attention in project planning.

Will this project be effective in reducing the effects of the big (>25-year event) floods? For the larger floods, the project will not make conditions worse than they are now, but damage from such floods will not be decreased by the project. The amount of land and infrastructure needed to reduce damages for the larger floods would be cost-prohibitive. The footprint of the project would take in a lot of private land, which would likely be unacceptable. The project work team has several farmers as members. They indicated that if the project helped farmers manage their lands better for the more frequent floods (i.e. < 10 years), this would be helpful.

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Frequently Asked Questions (continued)

What will the fishing be like on the river after the project is built? The project will restore low-to-moderate flows to the oxbow, which starts at the Mikkelson Bridge and re-enters the channelized river near the outlet of the old lakebed. This will improve fish habitat along that stretch as well as moderate velocities downstream of the project under low-to-moderate river flows, thus improving conditions for fish along that stretch of river. In addition, opportunities for additional access both for boats and for river bank fishing will be explored in the vicinity of Roseau Lake.

Who is in charge of building and operating this project? How much will it cost to build the project? The Roseau River Watershed District and Minnesota DNR will share responsibility for constructing and operating the project. The cost of building the project is approximately \$15million for the alternative chosen.

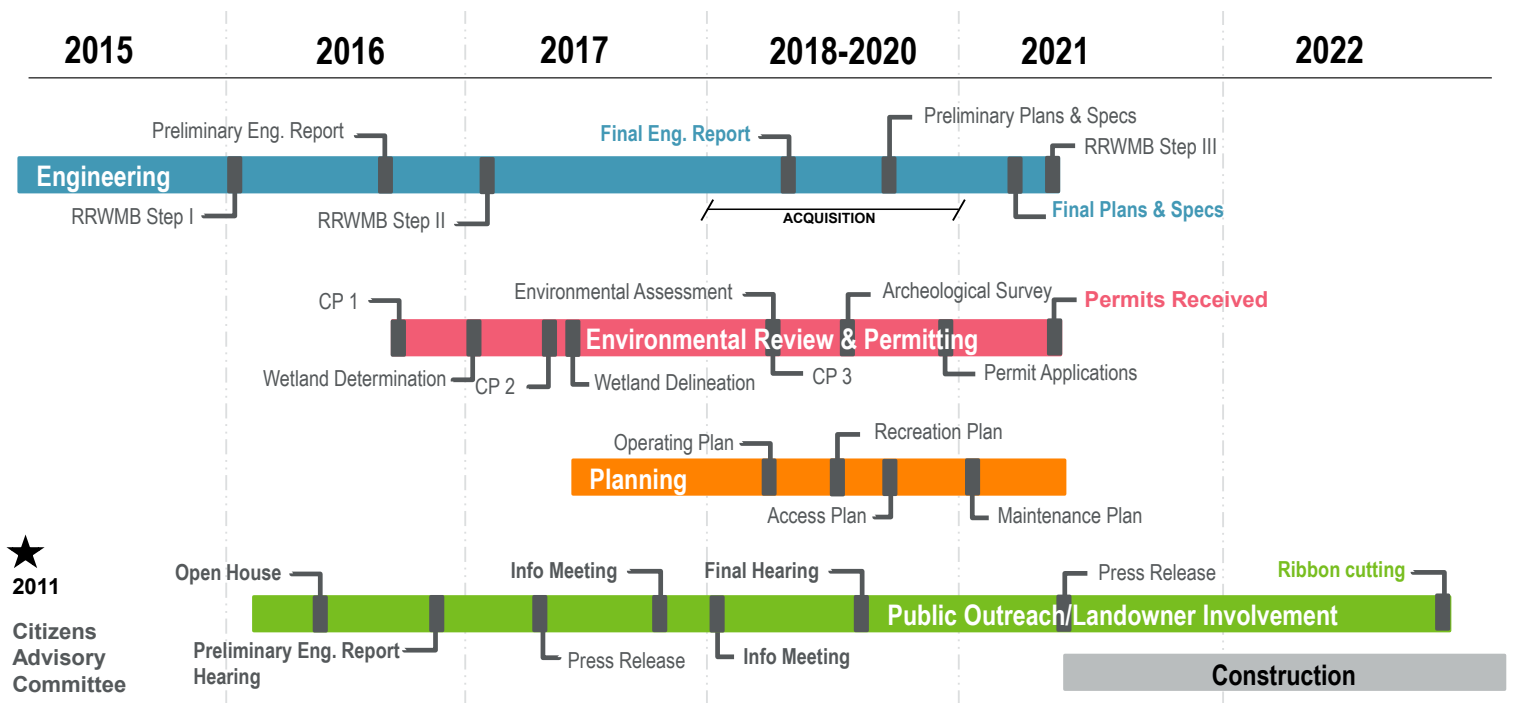
What will happen to the lake bottom road? The road will have a lift placed on it such that the top of the road will be the same elevation as the top of the dikes (i.e., 1036.0 feet). Part of the road (just north of the Stoe Bridge) will actually be part of the dike system. Concrete culverts of sufficient size will be placed to allow water to pass under the road rather than have to flow over the road when the lake floods.

Will my property taxes go up to pay for this project? No. This project will be funded using State bonding (Flood Hazard Mitigation Bond), regional (Red River Watershed Management Board), State Legacy

Amendment funds (Lessards Sams Outdoor Heritage Council), and local constructions which are currently included in the Roseau River Watershed District levies. The project partners will also pursue other funding as the project progresses and opportunities become available.

Why isn't the project building the dikes higher to store more water? The proposed dike elevations (top = 1036' and weir = 1034') balance natural resource enhancements (NRE) and flood damage reduction (FDR) against cost. Building dikes above the heights proposed brings no added value for NRE or FDR. Roseau Lake's existing condition provides storage, and storage volume will not be increased by the project. The project changes the timing of when Roseau Lake floods by restricting early flood water from entering Roseau Lake, thus allowing for storage later on in a flood. This restriction of flow into Roseau Lake delays the storage for frequent flow events (e.g., 2- 5-, or 10 year events), thereby increasing downstream water levels during the early stages of a flood. The change in storage timing will result in reduced overall downstream water levels and flood durations later on in a flood. The project will be most effective for the more frequent floods. A higher dike would force even more water downstream early in a flood, but a higher dike would not increase flood storage in the basin and would come at a much higher cost.

Timeline



★
2011
Citizens
Advisory
Committee

ROSEAU RIVER WATERSHED DISTRICT

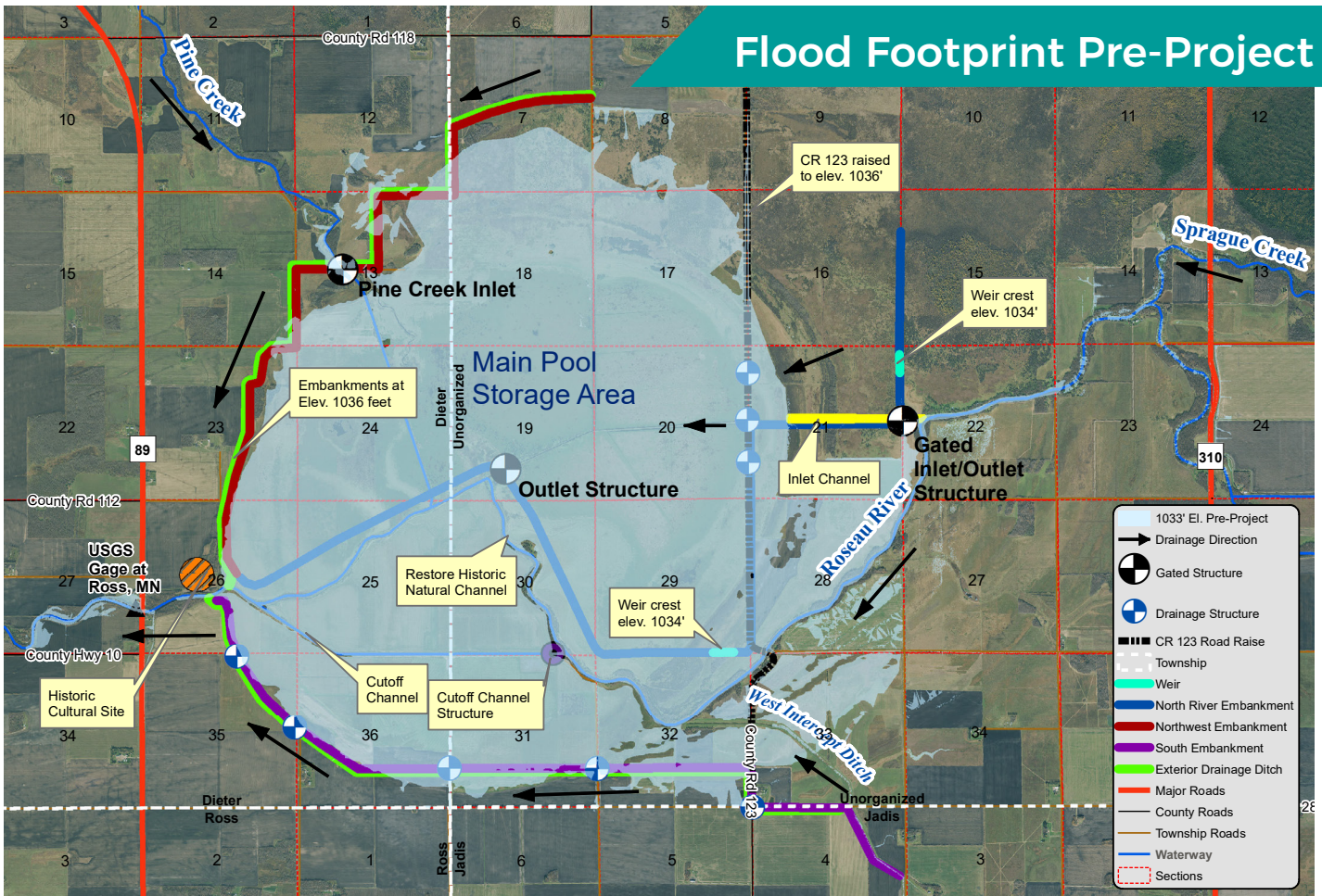
Funding

RRWMB / MnDNR F&W / FDR

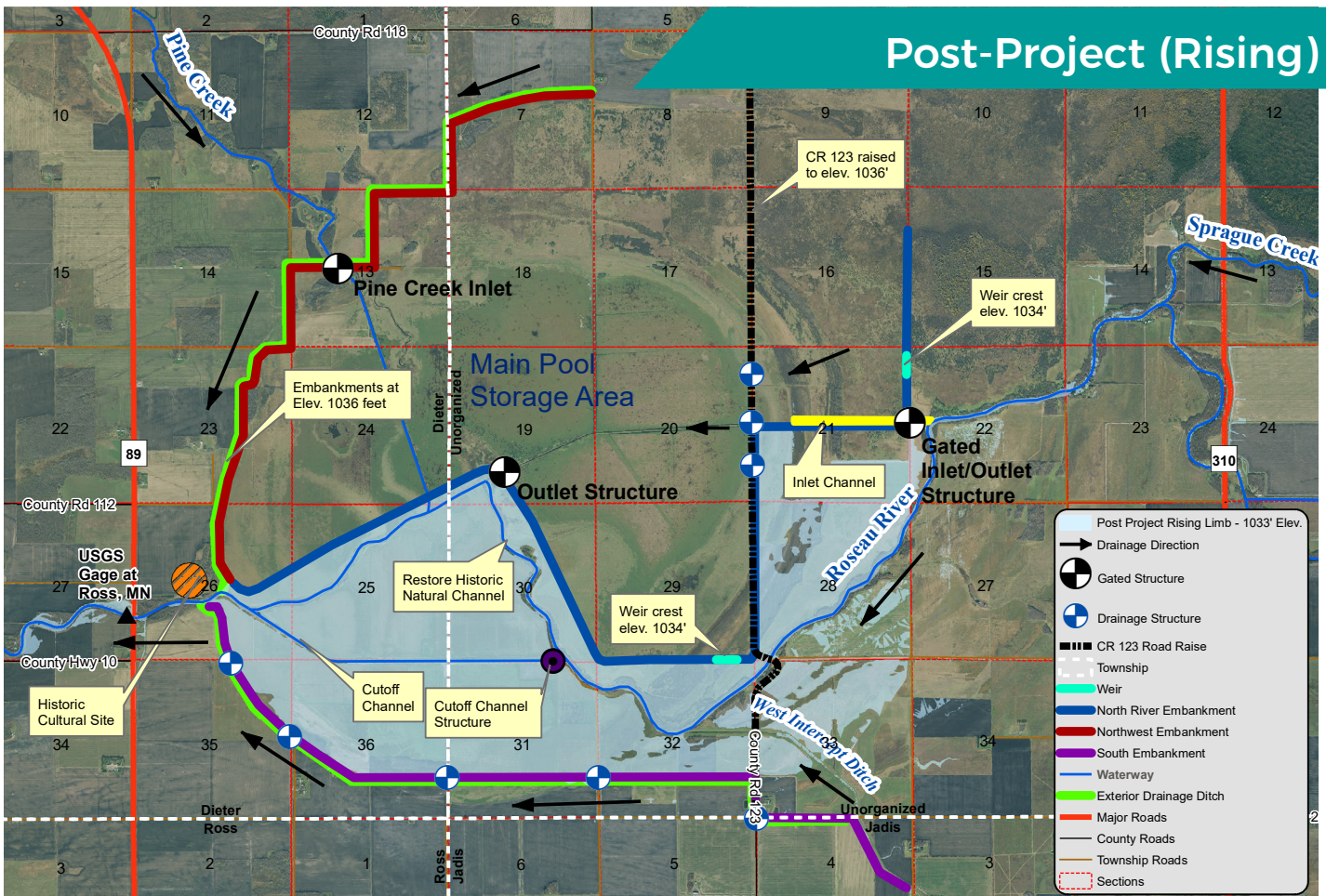
LESSARD-SAMS OUTDOOR HERITAGE COUNCIL

OTHER, USFWS, DU

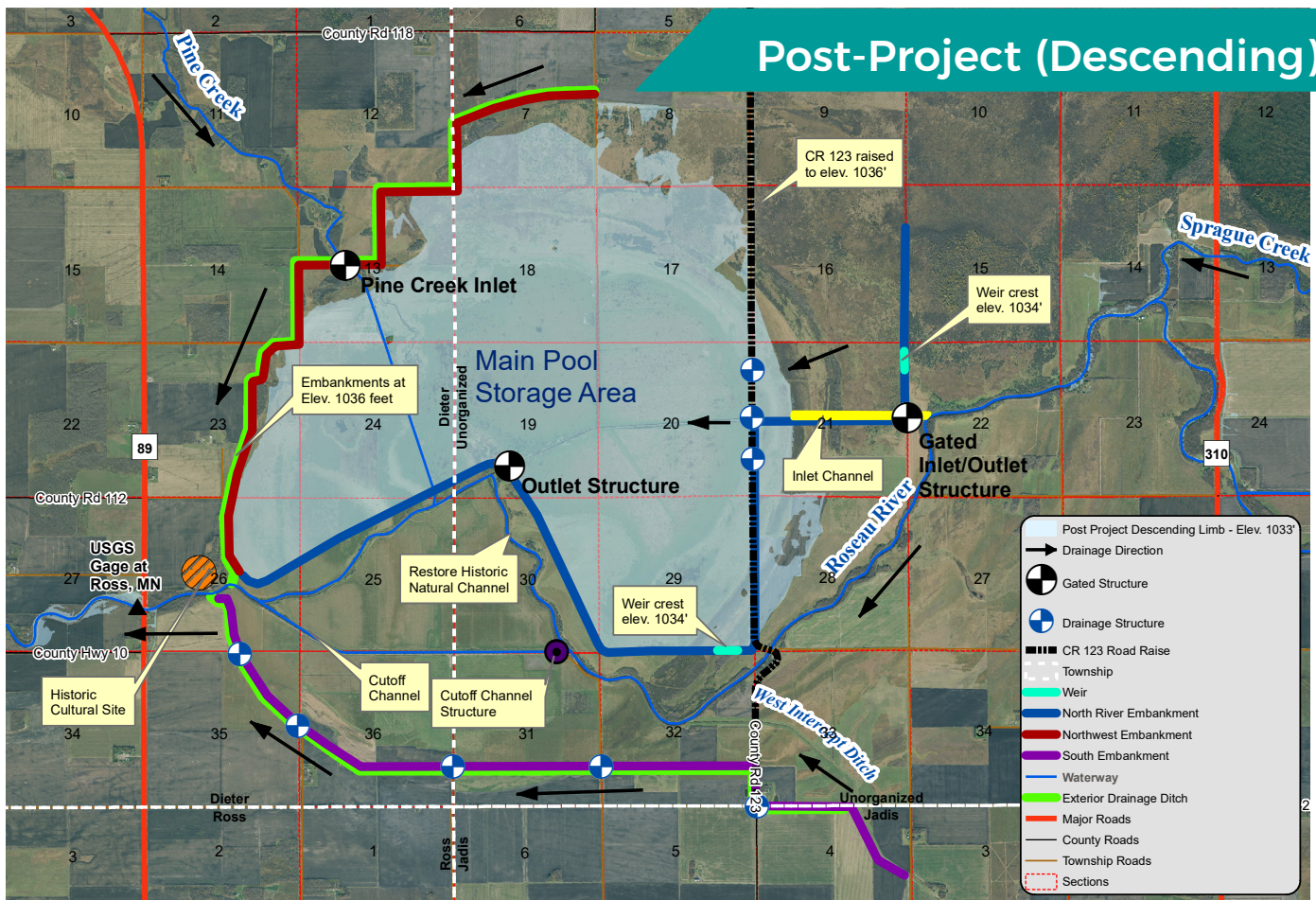
Flood Footprint Pre-Project



Post-Project (Rising)

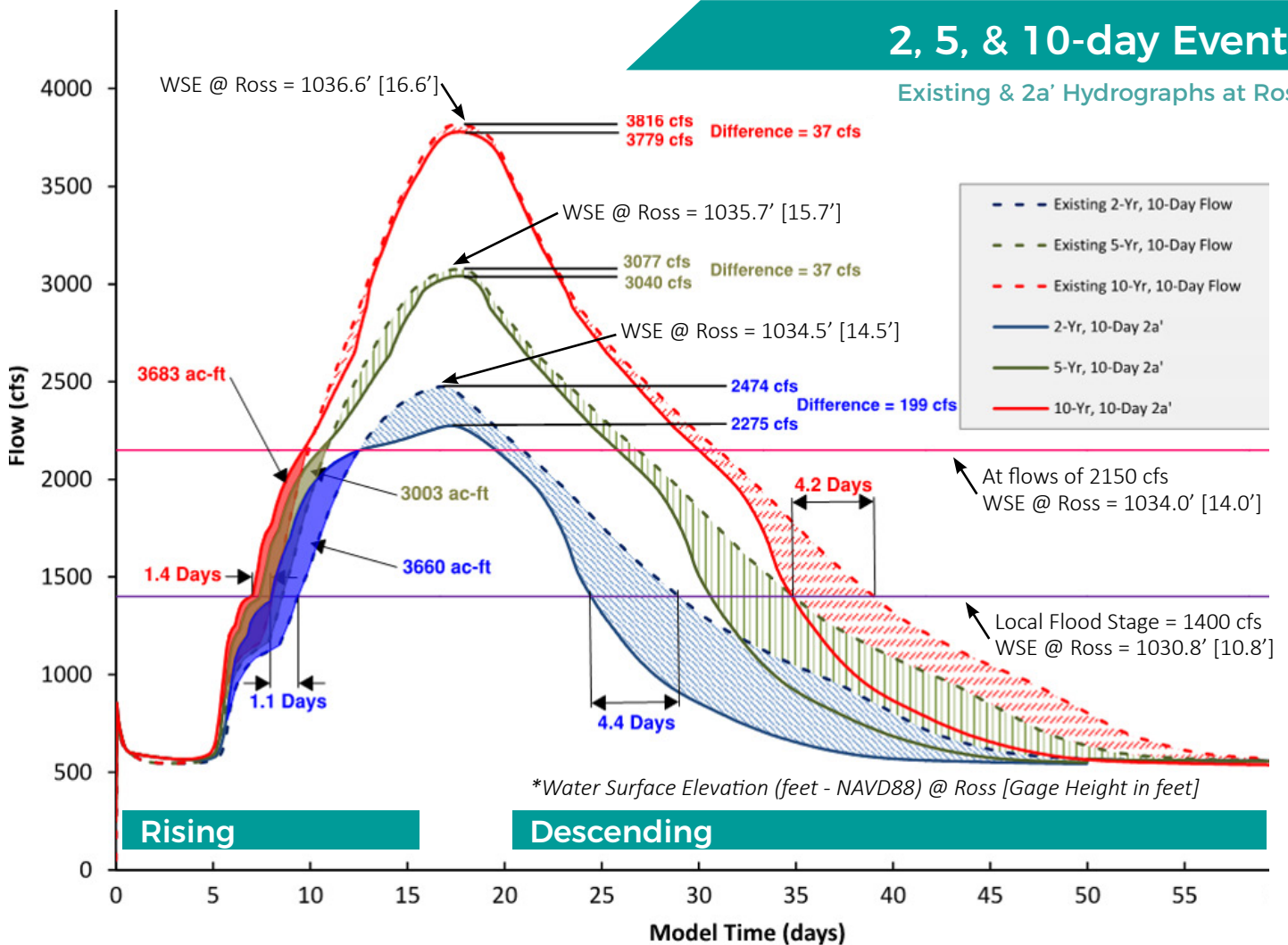


Post-Project (Descending)

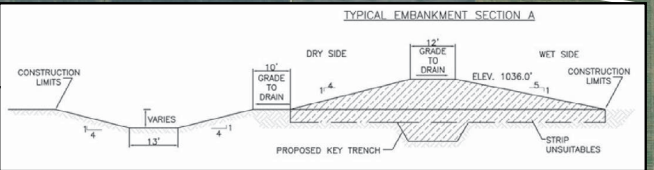
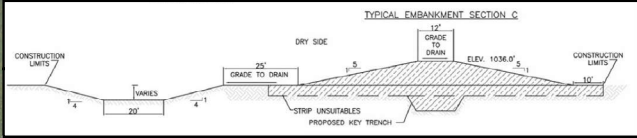
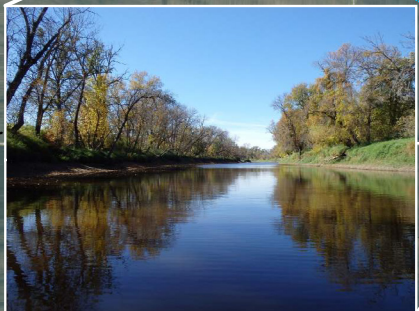
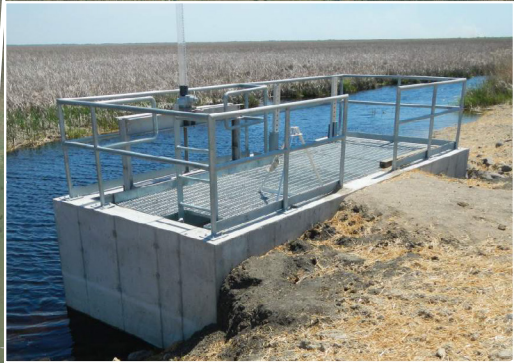
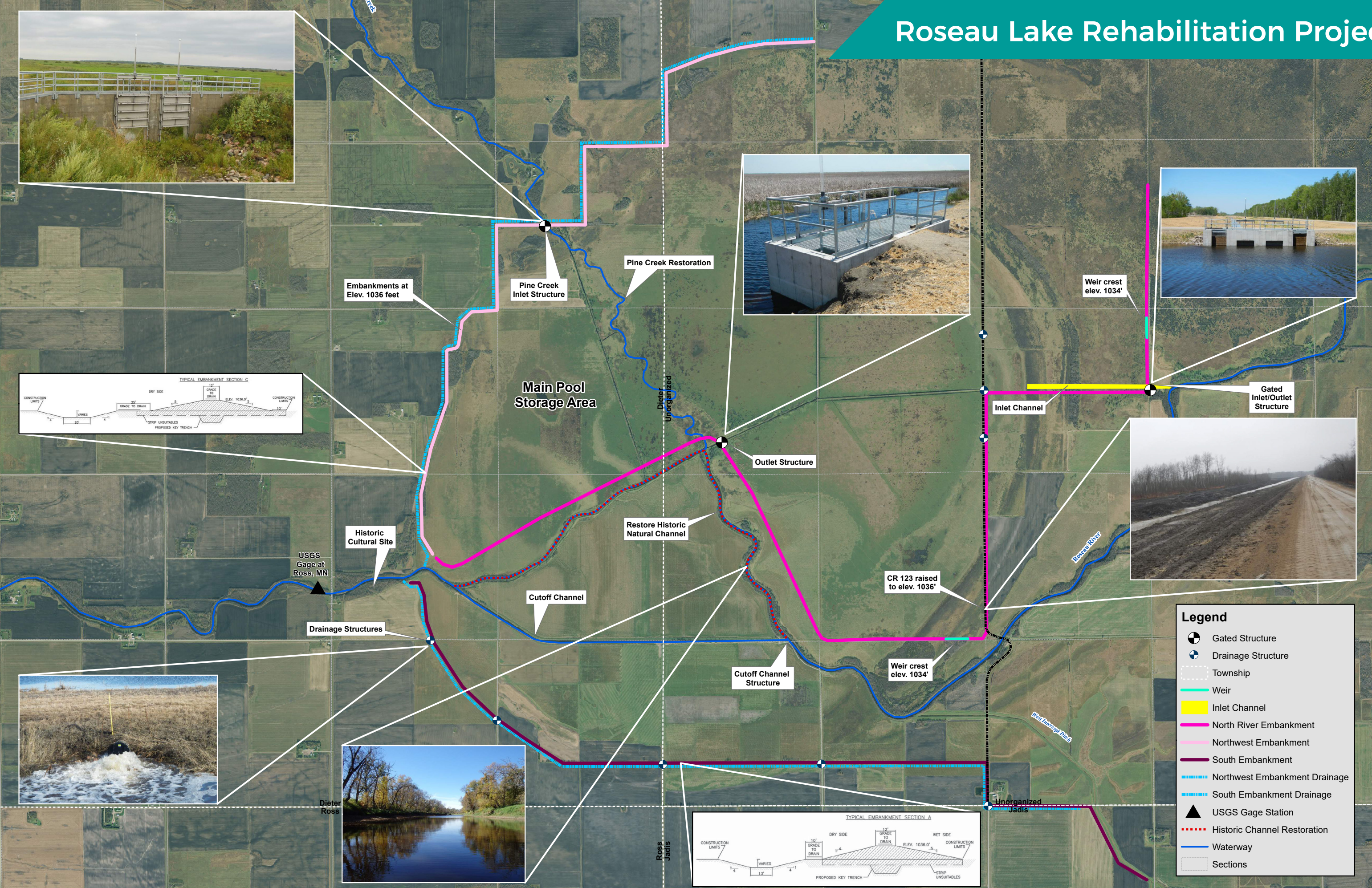


2, 5, & 10-day Events

Existing & 2a' Hydrographs at Ross



Roseau Lake Rehabilitation Project



Legend	
	Gated Structure
	Drainage Structure
	Township
	Weir
	Inlet Channel
	North River Embankment
	Northwest Embankment
	South Embankment
	Northwest Embankment Drainage
	South Embankment Drainage
	USGS Gage Station
	Historic Channel Restoration
	Waterway
	Sections

We want to hear from you!



1.) Complete this form



2.) Take a picture of the form and text it to: **218-242-1737**

**standard text message rates may apply*

QUESTIONS OR COMMENTS?



RoseauRiverWD.com



RRWD@mncable.net



(218) 463-0313


I would like more info about the Roseau Lake Project


Name: _____


Email: _____

Phone: _____

Contact us if you'd like to be added or removed from our mailing list.

RoseauRiverWD.com 

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- Roseau Lake Rehabilitation Map
- Frequently Asked Questions
- Project Timeline
- Outreach Form

WHAT'S INSIDE?



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