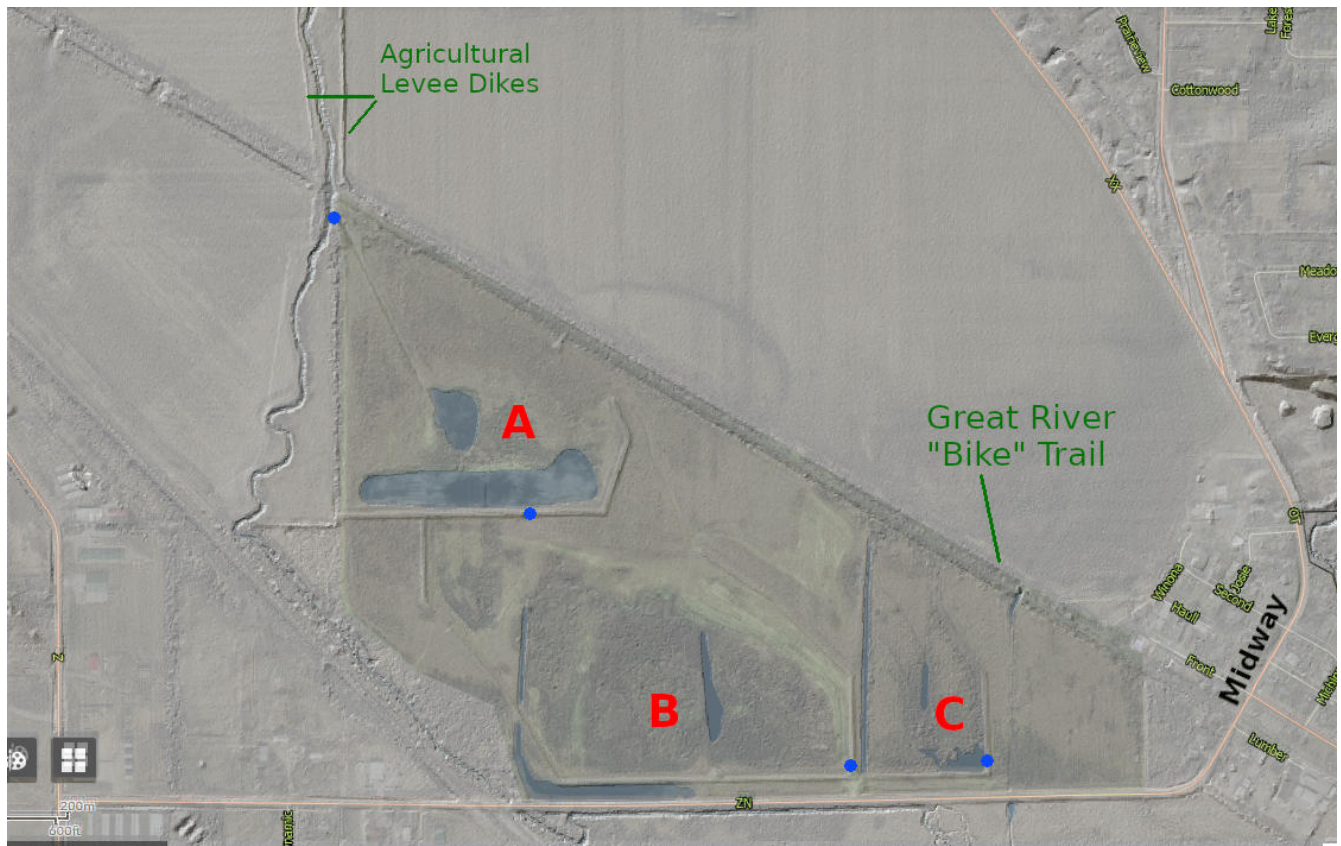


## October 20, 2022 Halfway Creek Marsh Project Tour Summary

Below and attached are edited notes from the October 20, 2022 tour of the Upper Halfway Creek Marsh Project. Many thanks to the US Fish and Wildlife Service for hosting the tour, and to the contributions from all of the participants.

The Lake Onalaska Protection and Rehabilitation District organized a US Fish and Wildlife Service-led tour of the Upper Halfway Creek Marsh project on Thursday October 20, 2022. Participants met at the Midway Bike Trail parking lot for introductory remarks, then carpooled to the project parking lot along County Highway ZN, and hiked the dike-top trails out to the inlet structure by the Great River trail. Most notes are from USFWS tour guide Tim Miller, with other contributors noted.



*Map of the three constructed wetland ponds of the Upper Halfway Creek Marsh Project*

## **PROJECT DESCRIPTION**

The Upper Halfway Creek Marsh Project was initially constructed in 1999, and consists of three diked, constructed-wetland ponds designed to trap sediment and nutrients flowing from Halfway Creek. An inlet control structure from Halfway Creek is located just below the bridge where Halfway Creek passes under the Great River "Bike" Trail (see attached map), and adjustable culvert-dam structures control the flow between the three ponds and the outlet. Initial scoping for constructed wetlands and detention basins for Halfway Creek was part of Vierbicher Associates (1995) detailed recommendations to the Town of Onalaska following the severe flooding in Midway during the 1993 flood.

Principal partners on the Upper Halfway Creek Marsh Project were USFWS and Ducks Unlimited with many other agencies, organizations, and individuals contributing. A revamped sign recognizing these many partners will be installed very soon at the project.

The project consists of three sediment-trapping, diked ponds:

Pond A 24 acres

Pond B 46 acres

Pond C 15 acres

The project area was all cropland at one time, being farmed most recently by Earl Pedretti and Johnsons before the project began. Wetness of the area made it marginal cropland - the soft ground almost completely buried a piece of Pedretti's equipment at one point (Dave Paudler)

The project is maintained by USFWS with ongoing assistance from Ducks Unlimited.

Sediment and nutrient trapping efficiency of the constructed wetlands and adjacent natural wetlands was studied by Kreiling et al. (2013).

Sedimentation history of Halfway Creek 1846-2006 is detailed by Fitzpatrick et al. (2008, 2009).

## **PROJECT MAINTENANCE: SEDIMENT REMOVALS**

In the initial scoping for the project, a cleanout cycle of 5 to 10 years was initially envisioned for sedimentation basins (Vierbicher Associates 1995).

In the winter of 2020-2021, 6,187 cubic yards of sediment were removed from Pond A. Approximately 6" to 24" (by A--> B control structure) of new sediment had accumulated in Pool A. Strupp trucking was contractor, running 3-4 trucks daily, with multiple trips per truck, every morning until the tops of the levees started to get slick. Proceeds of sale of removed material as valuable topsoil helped to fund the removal. The removals were performed in winter when ice had stabilized the ground. The area of sediment removal can still be plainly seen in the bands of cattails.

Earlier in 2020, USFWS used a small excavator to dig out the inlet trench leading from the control structure to Pool A. 3.5 feet of sediment had to be removed to get back down to the rock riprap lining of the inlet trench. Excavated sediment from the trench was removed in 2021 with the rest of the Pool A excavation.



*Group discussion at the outlet control structure from pond "A"*

Pool A also had sediment removed ~2007-2008, but a smaller amount. Marc Schultz recollects some small removals from Pond A in the 2000s by contractor Todd Wright.

Pond B has a sedimented base showing 6" bury on the staff by B-->C control structure. Need sediment to dry up more in B and C before it can be removed; recent periods have been too wet, even this year.

### **PROJECT MAINTENANCE: DIKES AND FLOW CONTROL STRUCTURES**

High water conditions and furbearer damage have caused problems with dikes and control structures. NAWCA grants (arranged by DU) were used to restore dikes from 2018 flooding washouts of control structures. Muskrat tunnelling in the control structure area had weakened culvert placements and caused washouts during high water events. Damaged control structures and culverts were removed and replaced in 2018. Muskrat deterrent fencing was installed around the control structure area. Beavers have dammed control structures and low "spillway" sections of the dikes, after which beavers were trapped.

A second spillway from Halfway Creek around Pool B was re-rocked in 2016 and trees were removed from the dike.

### **PROJECT MAINTENANCE: Haying, discing, invasive species control**

After project completion, bids were put out for haying dry portions of the project on a 3 year cycle, often performed by Todd Wright. Recently there have been no bidders. Discing is also used in dry

areas.

Invasive reed canary grass quickly colonizes newly-deposited sediment, along with sandbar willow. Sediment removal and burning aid in control.

Purple loosestrife is being actively excluded from the project, using Highway ZN as a control line.

Pool A Inlet control structure at Halfway Creek: DU had arranged NAWCA grant for placing a diversion dam in Halfway Creek itself to increase flow into the project inlet, but the control structure is frequently completely overtopped during the now-larger discharge events (of 4 to 6"), so a dam really is not needed. A large amount of permitting would be required to place a dam in Halfway Creek itself.

## **RELATED PROJECTS: SEDIMENT TRAPS**

Dave Paudler: Town of Onalaska made an agreement with La Crosse County at the start of project to clean out Sand Lake creek in Midway as a sediment trap and Halfway Creek along ZN. ZN hasn't been done for 3 years.

Mary Rinehart: Cleaning the Sand Lake Creek sediment trap is currently awaiting the renewal of the DNR permit which had expired. Wisconsin DNR Permit processing is taking a long time (Marc Schultz). The Sand Lake Creek sediment trap has been cleaned out about 3 times in 3 years.

Dave Paudler: An upstream sediment trap site was identified after the 1993 flood (Vierbicher et al. 1995) at the first bend downstream from highway XX, but was never implemented.

Halfway Creek Bridge at Bike Trail. Dave Paudler: levee dikes (set 40 to 160 feet apart) constrain Halfway Creek upstream of the bike trail bridge towards XX. These dikes were constructed sometime in the early 1900s, before his family owned the land, to help keep the adjacent fields dry during flood events. The base elevation of the land between the levee dikes has filled with at least 3 feet of sediment (for the 300 yards visible upstream from the bridge that would equate to 10,000 cubic yards of sediment). When this levee dike system upstream from the bike trail (not in project area) is overtopped, water flows through the fields towards the Midway developed housing area along the bike trail. Some water passes under an additional bridge under the bike trail to flow through a ditch east of the project area, around Pool C, but not enough to relieve flooding in Midway during extreme discharge events.

## **FUTURE DIRECTIONS**

Several other sediment traps and other features recommended in the Vierbicher Associates (1995) plan have not been implemented.

Stream Gauging: USGS at one time had a continuous monitoring stream gauge by the bike trail bridge (or at XX crossing?)--Marc Schultz. A bent staff gauge is still visible at the bike trail bridge by the inlet structure. New stream gauge data for Halfway Creek would be essential to capture the new flow regime.

Paul Peterson - need to resurvey elevation drops from start to end of project area, and better understand the new base elevations everywhere, given the heavy sedimentation in the recent era.

9 Key Elements Plan for Halfway Creek: Consider the Halfway Creek portions of the 1983 "Lower Black River Priority Watershed Plan" as a prototype for a modern-era 9 Key Element Plan for Halfway Creek. Also, the nearby Bostwick Creek (a La Crosse River tributary) 9 Key Element plan may be helpful (Cindy Koperski).

<https://lacrossecounty.org/docs/default-source/land-conservation/bostwick-creek.pdf>

The Town of Onalaska received a WiDNR Large Scale Lake Planning grant in 1997 to develop engineered designs and bid specifications for a sediment trap for Halfway Creek at XX and for Sand Lake Coulee Creek: <https://dnr.wi.gov/Water/projectDetail.aspx?key=10099965>.

The Town of Onalaska received a WiDNR Small Scale Lake Planning Grant in 2007 to study sediment and pollution contributors to Lake Onalaska, which included sediment and nutrient trapping facilities: <https://dnr.wi.gov/Water/projectDetail.aspx?key=17934201>

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**October 20, 2022 TOUR PARTICIPANTS**

USFWS: Tim Miller, Cheryl Groom

LOPRD Members: Fritz Funk, Marc Schultz, Connie and Don Welch, Bruce Friell, Mike Schultz, Paul Peterson

TOWN OF ONALASKA: Mary Rinehart

LANDOWNERS: Dave Paudler

WI DNR: Shawn Giblin, Cindy Koperski

Trout Unlimited: Sara Strassman, Paul Krahn