

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
Fond Du Lac River and Van Dyne Creek Fish
Passage Assessment Report

131100, 134000, 135900, 132600



Image 1: LITZ cord solar set up located at the Eldorado Marsh Dam. Photo credit: Wisconsin DNR



Angelo Cozzola
DNR Senior Fisheries Biologist

Nate Schimanski
DNR Fisheries Technician/Biologist

August 10th, 2023

Introduction

The fisheries management team covering the Winnebago System conducted a fish passage project on the Fond Du Lac River (FDLR) and Van Dyne Creek (VDC) in 2023. In early to mid-March PIT tag arrays were installed in strategic locations along both water bodies. From March 24th through April 7th fish were captured in fyke nets and inserted with passive integrated transponder (PIT) tags, a small pill shaped object, that assigns a unique ID number to each fish (Image 2). The netting location and date, species, sex, and length of tagged fish was recorded and linked to the unique ID numbers. The PIT tagged fish are detectable on our in-water arrays allowing us to track fish movement over time giving us insight on fish habitat use, seasonal movement trends, and potentially identify areas that may restrict fish passage.



Image 2: Northern pike PIT tag insertion. Photo Credit: Wisconsin DNR.

One of the primary reasons for this investigation was to evaluate fish passage through the spillway at the Eldorado Marsh dam. During high spring flows, water volume and velocity through the spillway can rise significantly. During this time of high-water levels, congregations of white sucker and northern pike can be observed at the lower end of the spillway. This has led to the question of whether or not the spillway creates a barrier to fish passage. In addition to the FDLR, VDC was also chosen for the passage assessment due to its proximity to the FDLR and comprehensive survey fyke netting locations on Lake Winnebago.

Methods

Array Installation

The project utilized two types of PIT tag detecting arrays including LITZ cord antenna systems (Image 1) and submersible disc antenna systems (Image 3). Prior to array installation, sites were selected based on probable fish passage routes and suitability for array operation (stream width and depth). LITZ cord array locations included the Howard Litscher Dr crossing near Supples Marsh, the Western Ave crossing on the east branch of the FDLR, the Esterbrook Rd crossing on the west branch of the FDLR, directly above the dam spillway at the Eldorado Marsh Wildlife Area, and the west branch of the FDLR in the town of Eldorado near the CTY RD C crossing (Figure 1). Submersible disc array



Image 3: Submersible disc array located at Van Dyne Road. Photo credit: Wisconsin DNR.

locations included an unnamed tributary to the FDLR near Adelaide Park at the N Hickory St crossing, the west branch of the FDLR at the HWY 26 crossing, and VDC at the Howlett Rd, Van Dyne Rd, Townline Rd, and Nitschke Rd crossings (Figures 1 and 2). Submersible arrays were installed on March 16th by fisheries staff utilizing paracord, wolf fang anchors, and a hand operated driver. LITZ cord arrays were installed on March 21 and 23 utilizing both fisheries staff as well as contracted divers to anchor antennas with a combination of triangle earth anchors (2-4 inches), paracord or cable depending on substrate, and weighted concrete anchors when driving into substrate was not possible.

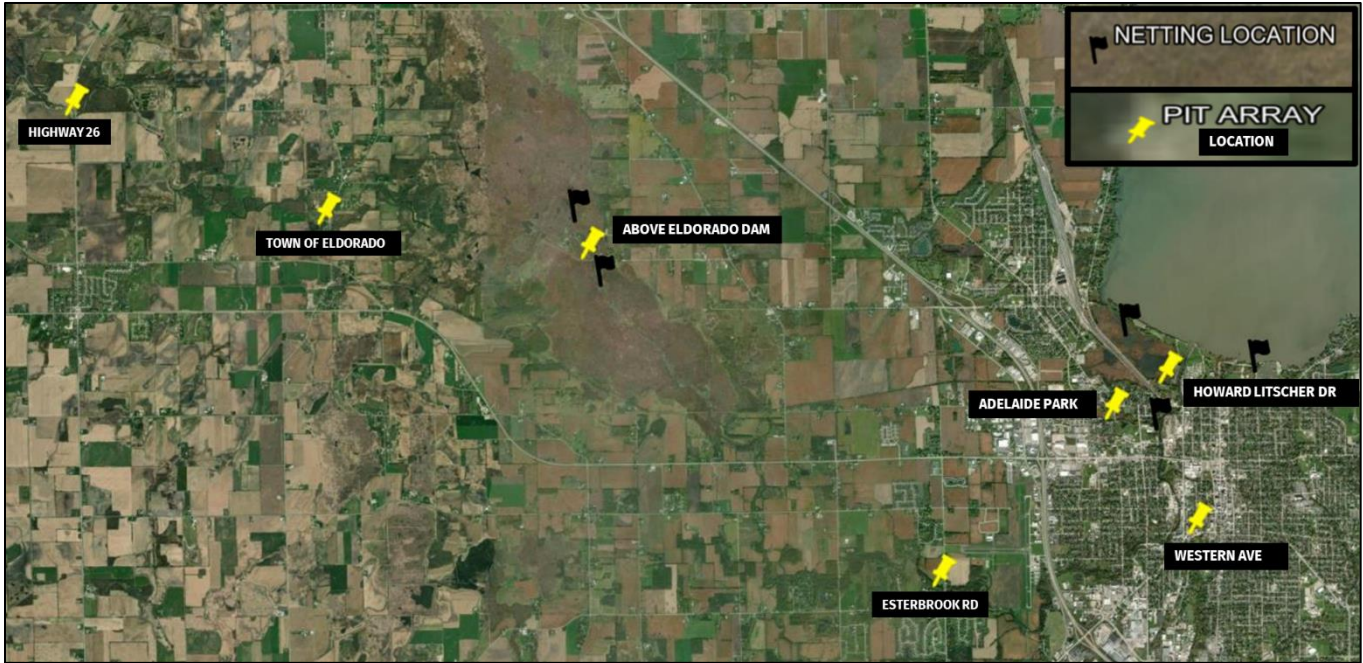


Figure 1: Map of study area on the Fond Du Lac River displaying netting locations and PIT array sites.

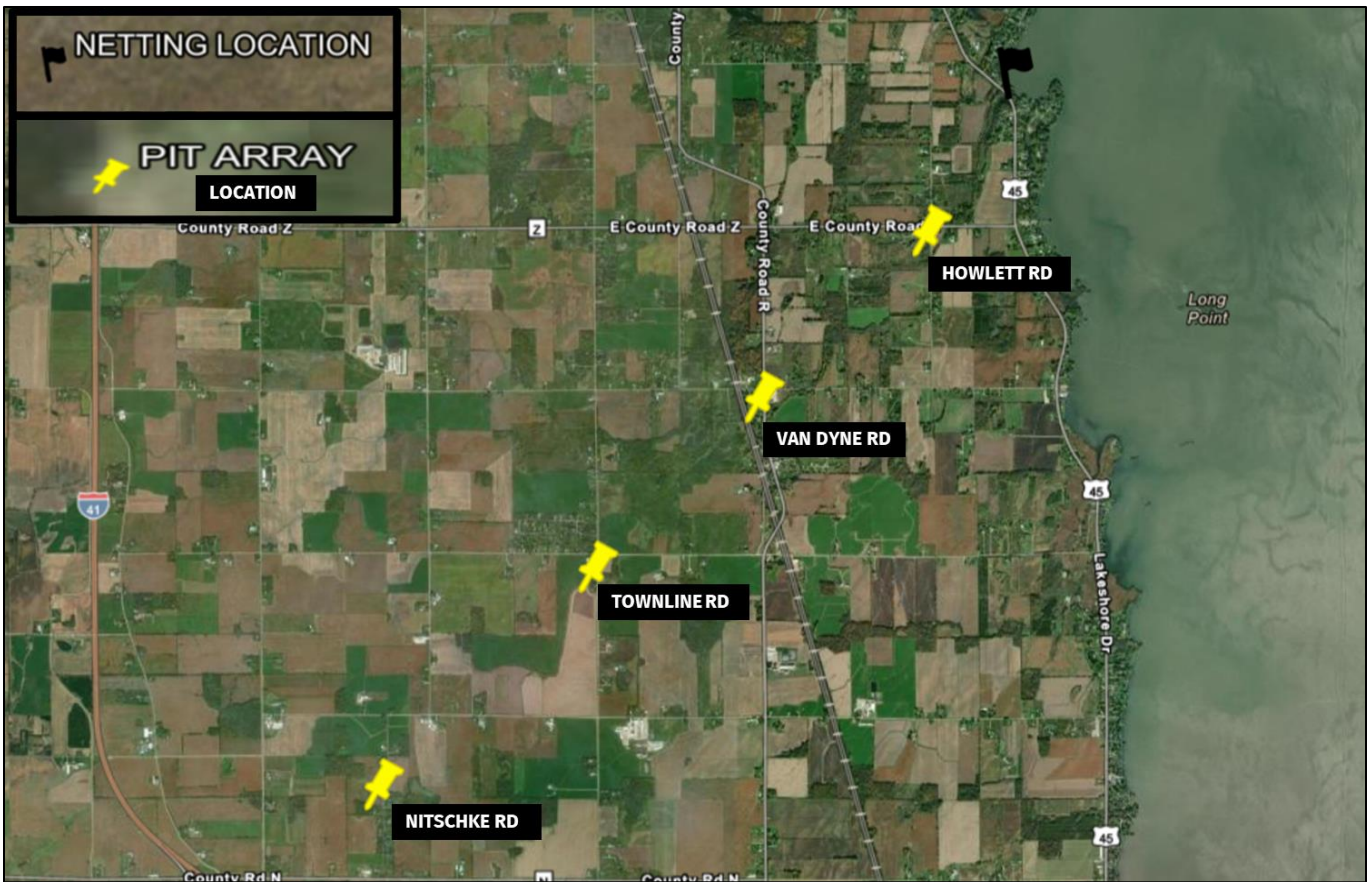


Figure 2: Map of study area on Van Dyne Creek displaying netting location and PIT array sites.

Fish Netting and Tagging

Netting locations included rotational comprehensive survey sites (Big Hole and Van Dyne) as well as additional locations in an effort to capture and tag fish entering the area of study (the FDLR, Supples Marsh, below the Eldorado Marsh Dam, and above the Eldorado Marsh Dam (Figures 1 and 2)). Two- and three-foot fyke nets were used depending on conditions at each site. Net set time ranged from one to four days due to catch rates and adverse weather conditions. Number of netting sites at each location were Big Hole (n=2), Supples Marsh (n=3), FDLR (n=9), below the Eldorado Dam (n=2), above the Eldorado Marsh Dam (n=3), and Van Dyne (n=2). The primary target of the netting/tagging effort was northern pike, though other species including white sucker, largemouth bass, walleye, sauger, common carp, and burbot were also tagged. The length and sex (when possible) of all tagged fish was recorded. Panfish species (yellow perch, bluegill, black crappie, and pumpkinseed) were counted and measured. In addition to the fyke netting efforts, dip nets were used to capture white sucker (n= 52) that congregated below the spillway of the Eldorado Marsh Dam on April 12th. The additional dip netting effort was to increase the number of fish tagged directly below the Eldorado Marsh Dam in order to investigate the pass-ability of the spillway.

Array Maintenance and River Monitoring

Detection data downloads and battery replacement were conducted weekly on LITZ cord arrays and every three weeks on submersible arrays. The LITZ cord arrays located at Esterbrook road and above the Eldorado dam were equipped with solar panels eliminating the need for weekly battery replacement.

Water levels at the dam were recorded via the stationary gauge on the upstream side by both fisheries and wildlife staff throughout the study (Image 4). Dam gate operations were also recorded, though gate modifications were limited throughout the study. These values were recorded to provide insight on the relationship between water levels and temporal fish passage through the dam spillway.



Image 4: Stationary gauge located on the upstream side of the Eldorado Marsh Dam. Photo Credit: Wisconsin DNR.

Results

Netting and Tagging

The Fyke netting effort for this project occurred over 14 consecutive days, and total netting effort was 113 net nights. There was a total of 319 northern pike and catch per effort ((CPE) = # of fish/net night) ranged from 0.13 to 12.8 across sites (Table 1). Length of female northern pike captured (n=181) ranged from 20.5 to 37.9 inches with an average length of 29.0 inches, male northern pike captured (n=122) ranged from 10.0 to 29.1 inches with an average length of 20.5, and unknown sex northern pike captured (n=16) ranged from 11.0 to 16.0 inches (Figure 3). There was a total of 105 largemouth bass captured and CPE ranged from 0 to 7.5 across sites. Largemouth bass length ranged from 4.6 to 19.1 inches with an average length of 12.2 inches. Yellow perch catch total was 634 and CPE ranged from 0.2 to 10.5 across sites. Yellow perch length ranged from 3.6 to 11.0 inches with an average of 7.2 inches. Total bluegill catch was 275 and CPE ranged from 0 to 26.8 across sites. Bluegill length ranged from 3.7 to 10.0 with an average of 6.7 inches. Site specific catch data for the most commonly captured game and panfish species are summarized in Table 1. There was a notably high catch of yearling size walleye with total of 68 fish. Other species captured throughout the survey included bullhead (n=64), common carp (n=46), golden shiner (n=43), rock bass (n=43), bowfin (n=29), freshwater drum (n=6), common shiner (n=6), burbot (n=4), gizzard shad (2), channel catfish (n=2), redhorse (n=1), sauger (n=1), and goldfish (n=1).

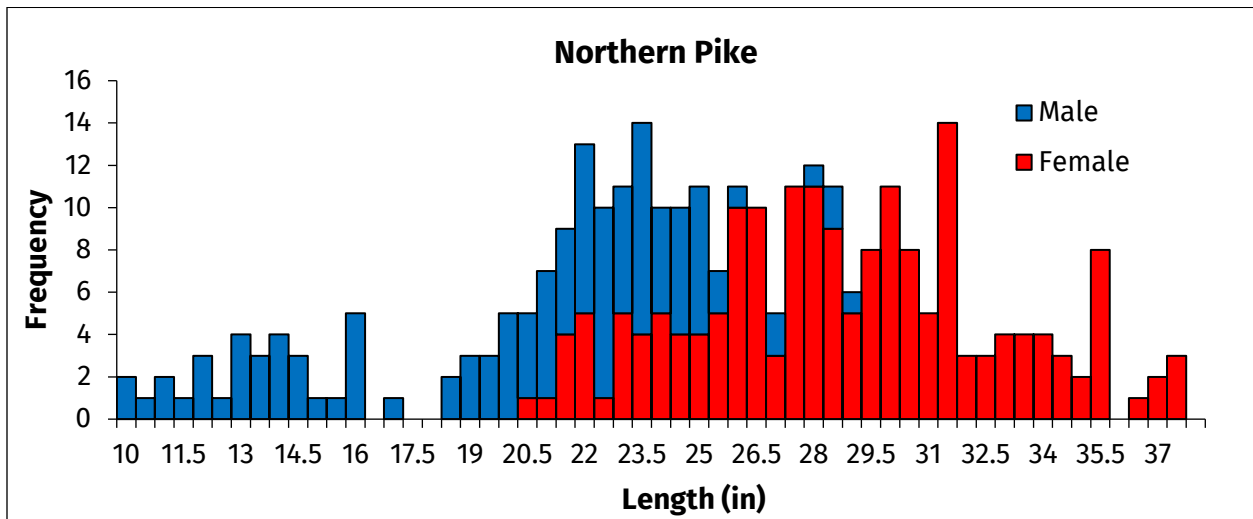


Figure 3: Length Frequency for male and female northern pike captured in all netting locations.

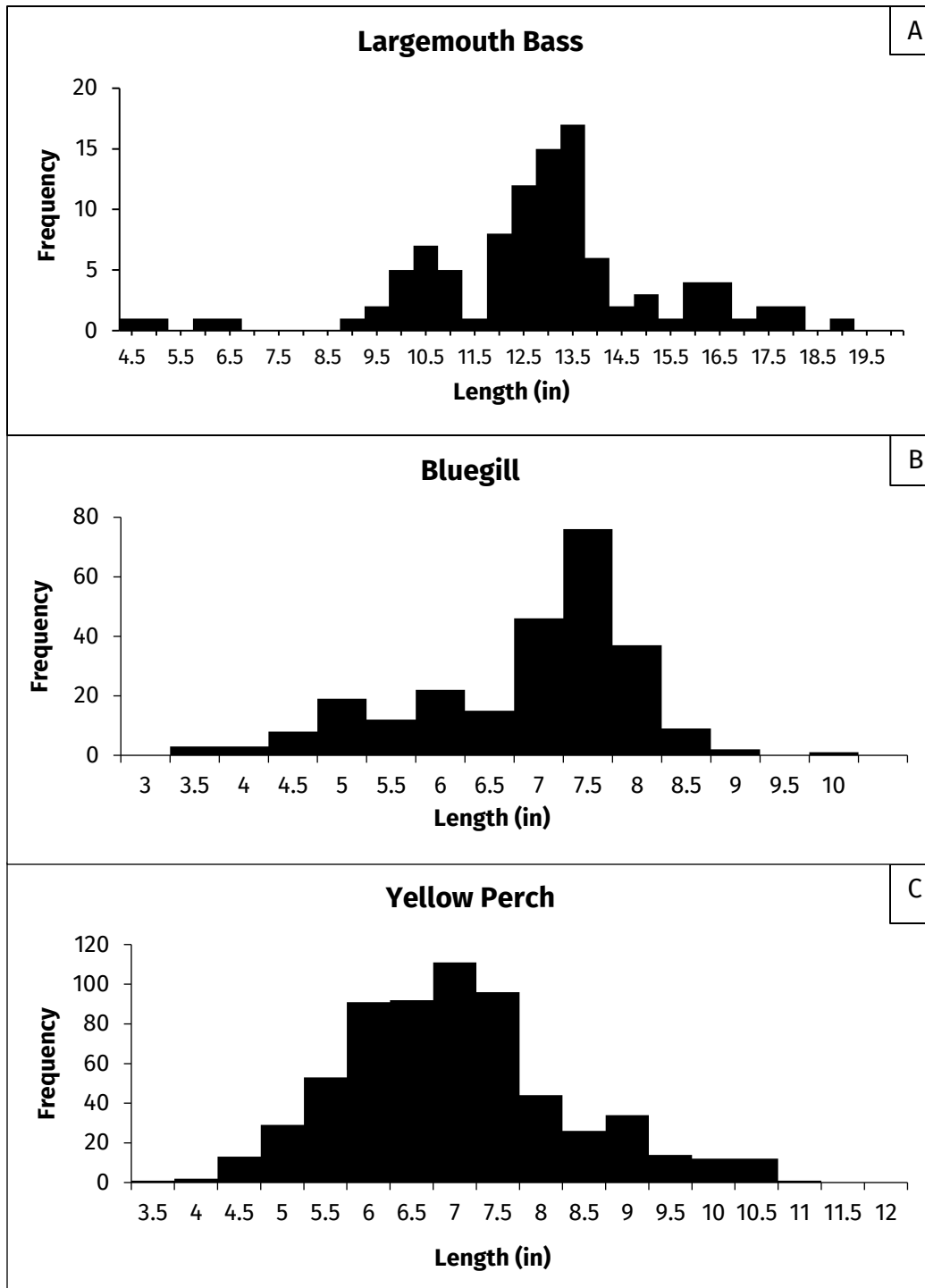


Figure 4: Length frequency for largemouth bass (A), bluegill (B), and yellow perch (C) captured at all netting locations.

Table 1. Catch data for northern pike, largemouth bass, yellow perch, bluegill, and black crappie for all netting locations.

	Northen Pike	Largemouth Bass	Yellow Perch	Bluegill	Black Crappie
Fond Du Lac River					
Catch	149	42	313	19	7
CPE	4.6	1.3	9.6	0.6	0.2
Min Length	9.5	9.3	3.6	5.3	3.6
Max Length	37.8	16.8	10.9	8.1	7.4
Average Length	27.1	12.8	7.1	6.5	4.9
Supples Marsh					
Catch	74	12	179	33	9
CPE	4.4	0.7	10.5	1.9	0.5
Min Length	12.2	4.6	4.8	4.5	3.5
Max Length	35.5	15.8	10.7	8.2	7.7
Average Length	22.3	11.2	7.4	6.5	4.8
Big Hole					
Catch	6	6	36	60	13
CPE	0.6	0.6	3.6	6.0	1.3
Min Length	19.7	5.2	6.0	3.7	3.4
Max Length	37.9	13.0	11.0	9.0	8.3
Average Length	29.2	10.9	8.5	6.8	5.1
Van Dyne					
Catch	77	45	53	161	9
CPE	12.8	7.5	8.8	26.8	1.5
Min Length	9.0	10.1	4.8	3.9	3.4
Max Length	37.8	19.1	9.5	10.0	8.5
Average Length	24.7	14.0	7.3	7.5	4.9
Below Eldorado Marsh Dam					
Catch	2	0	3	0	0
CPE	0.1	0.0	0.2	0.0	0.0
Min Length	29.8	-	6.3	-	-
Max Length	34.6	-	6.8	-	-
Average Length	32.2	-	6.6	-	-
Above Eldorado Marsh Dam					
Catch	11	0	50	2	0
CPE	0.3	0.0	1.6	0.1	0.0
Min Length	10.0	-	5.2	6.3	-
Max Length	22.7	-	7.8	6.4	-
Average Length	14.3	-	6.2	6.4	-

There was a total of 567 fish PIT tagged in the study including northern Pike (n=306), white sucker (n=187), largemouth bass (n=70), walleye (n=1), sauger (n=1), burbot (n=1), and common carp (n=1). northern pike were tagged in the FDLR (n=145), Supples Marsh (n=71), Van Dyne (n=71), Big Hole (n=6), above the Eldorado Marsh Dam (n=11), and below the Eldorado Marsh Dam (n=2) (Table 1). Tagged northern pike consisted of 180 female fish ranging in length from 20.5 to 37.9 inches with an average length of 29.0 inches, 118 male fish ranging in length from 10 to 29.1 inches with an average of 20.5 inches, and 7 immature fish ranging in size from 11.7 to 15.4 inches. White sucker were tagged in the FDLR (n=36), Supples Marsh (n=6), Van Dyne Creek (n=38), Big Hole (n=11), Above the Eldorado Marsh Dam (n=9), and below the Eldorado Marsh Dam (n=87). Largemouth Bass were tagged in the FDL River (n=16), Supples Marsh (n=9), Van Dyne Creek (n=43), and Big Hole (n=2). The walleye (n=1), sauger (n=1), and burbot (n=1) were all tagged in the FDLR, and the common carp (n=1) was tagged above the Eldorado Marsh Dam (Table 2).

Table 2: Number of tagged fish per site.

	Northern Pike	White Sucker	Largemouth Bass	Walleye	Sauger	Burbot	Common Carp
Fond Du Lac River	145	36	16	1	1	1	0
Supples Marsh	71	6	9	0	0	0	0
Van Dyne Creek	71	38	43	0	0	0	0
Big Hole	6	11	2	0	0	0	0
Above Eldorado Marsh Dam	11	9	0	0	0	0	1
Below Eldorado Marsh Dam	2	87	0	0	0	0	0

Fond Du Lac River Detections

Howard Litscher Drive

There were 74 fish detected at Howard Litscher Drive consisting of northern pike (n= 59), white sucker (n= 5), and largemouth bass (n= 9). Northern pike detected at Howard Litscher drive were initially tagged at Supples Marsh (n=38), The FDL River (n= 20), and Van Dyne Creek (n=1). The white sucker detected were tagged in Supples Marsh (n=3), the FDL River (n=1), and below the Eldorado dam (n=1). The largemouth bass detected were tagged in the FDL River (n=5), Supples Marsh (n=3), and Van Dyne Creek (n=1). Detection dates ranged from 3/26/23 to 6/21/23.

Adelaide Park

There were 8 northern pike detected at the Adelaide Park array. No other species were detected. Northern pike detected at Adelaide Park were initially tagged in The FDL River (n=5) and Supples Marsh (n=3). Detection dates ranged from 4/03/2023- 4/19/2023.

Western Avenue

There were 52 fish detected at the Western Avenue array consisting of northern pike (n=27), white sucker (n=22) and largemouth bass (n=3). Northern Pike detected at Western Ave were initially tagged at several locations including Supples Marsh (n=6), The FDL River (n=19), Big Hole (n=1), and Van Dyne Creek (n=1). The white sucker detected were tagged in Supples Marsh (n=2), The FDL River (n=13), Big Hole (n=5) and Van Dyne Creek (n=2). The largemouth bass detected were tagged in Supples Marsh (n=1) and The FDL River (n=2). Detection dates ranged from 3/27/23- 6/01/23.

Esterbrook Road

There were 2 fish detected at Esterbrook Road consisting of northern pike (n=1) and white sucker (n=1). Both Fish were initially tagged below the Eldorado dam.

The array located at Esterbrook Road was malfunctioning for the majority of the study.

Above Eldorado Dam

There were 70 fish detected directly above the dam consisting of northern pike (n=8) and white Sucker (n=62). Northern pike detected above the dam were initially tagged at several locations including The FDL River (n=5), Van Dyne Creek (n=1) and above the Eldorado Dam (n=2). White Suckers detected above the dam were tagged above the dam (n=6), below the dam (n=56) and Big Hole (n=1). Detection dates ranged from 4/12/23 to 6/14/23.

Town of Eldorado

There were 50 fish detected at the Town of Eldorado crossing, consisting of northern pike (n=1) and white suckers (n=49). The northern pike detected in the town of Eldorado was tagged above the Eldorado dam (n=1). The white suckers detected at Town of Eldorado were initially tagged Above the Eldorado dam (n=6) and below the Eldorado dam (n=44). Detection dates ranged from 3/30/23 to 5/16/23.

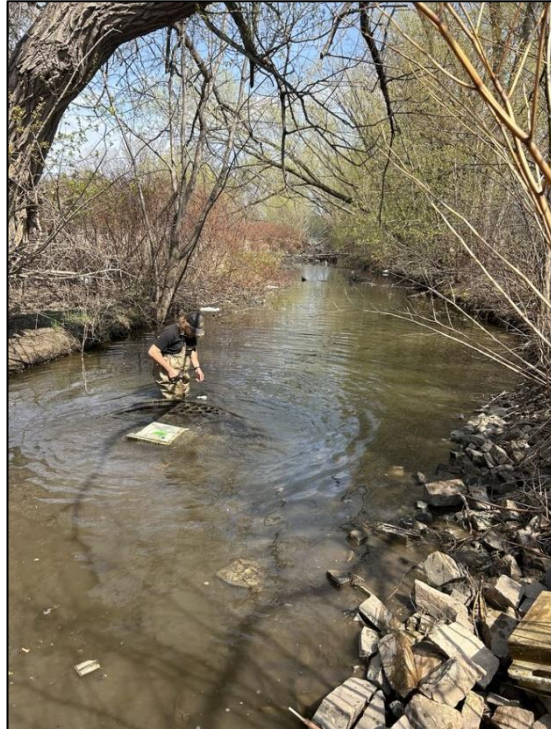


Image 5: Fisheries Staff Nate Schimanski conducting a battery swap on the submersible disc array located near Adelaide Park. Photo Credit: Wisconsin DNR.

Highway 26

There were 3 fish detected at the Highway 26 crossing all of which were white suckers. The white suckers detected at Highway 26 were initially tagged Below the Eldorado Dam (n=3). Detection dates ranged from 4/15/23 to 5/04/23.

Van Dyne Creek Detections

Howlett Road

There were 9 fish detected at Howlett Road consisting of northern pike (n=3) and white sucker (n=6). All fish detected at Howlett Road were initially tagged in Van dyne Creek. Detection dates ranged from 4/05/23-6/01/23.

Van Dyne Road

The only fish detected at Van Dyne Road was a white sucker, which was initially tagged in Van Dyne Creek on 4/6/2023. The detection date was 5/12/23.

Townline and Nitschke Road

There were no fish detected at Townline Road and Nitschke Road.

Non-Study Tag Detections

There were two tagged fish detected on our in-water arrays that were not tagged as a part of this study. One of the non-study fish detected was a male lake sturgeon at the Howard Litscher Drive array on June 3rd. This fish was initially tagged in the Wolf River below the Shawano dam in April of 2015 at 59.3 inches and following its initial tagging it was recaptured in May of 2022, again below the Shawano dam. The second non-study fish detected was a muskellunge at the Western Ave array in the east branch of the FDL River on May 2nd. This fish was originally stocked in Lake Poygan in August of 2015 at a length of 14.4 inches.

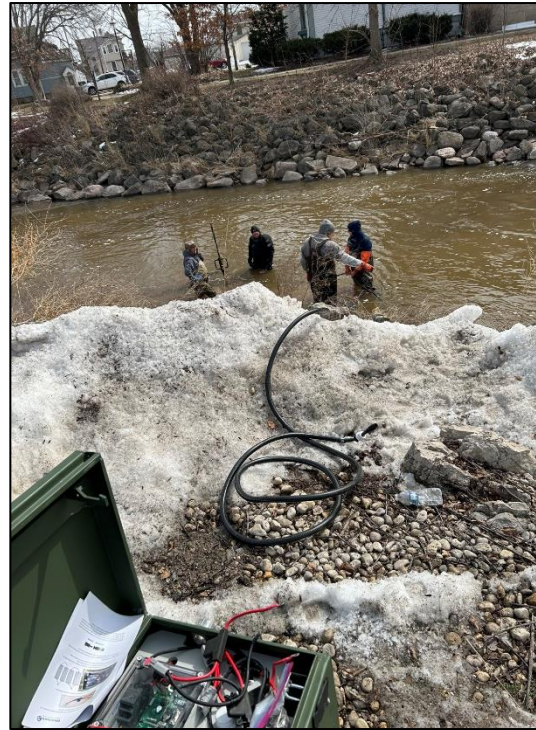


Image 6: Fisheries staff and contracted divers installing the LITZ cord array at Western Ave on the East branch of the Fond Du Lac River. Photo Credit: Wisconsin DNR.

Discussion

One of the primary reasons for this study was to evaluate fish passage through the spillway at the Eldorado Marsh dam and whether or not high spring water levels create a barrier to fish passage. The water volume and velocity through the spillway show significant variation, specifically in spring, due to fluctuations in water levels and to a lesser extent dam operations (gate modifications) (Image 7). Northern pike and white sucker from five tagging locations (Below and above the Eldorado Marsh Dam, FDLR, Big Hole, and Van Dyne) were detected above the dam, confirming that the spillway is passable. This study aimed to assess passage on a temporal basis in order to investigate the relationship between water levels and passage through the spillway. The time stamped detection data and recorded water levels at the stationary gauge located at the dam provides evidence that high spring flows create a barrier or at least a deterrence for fish passage.

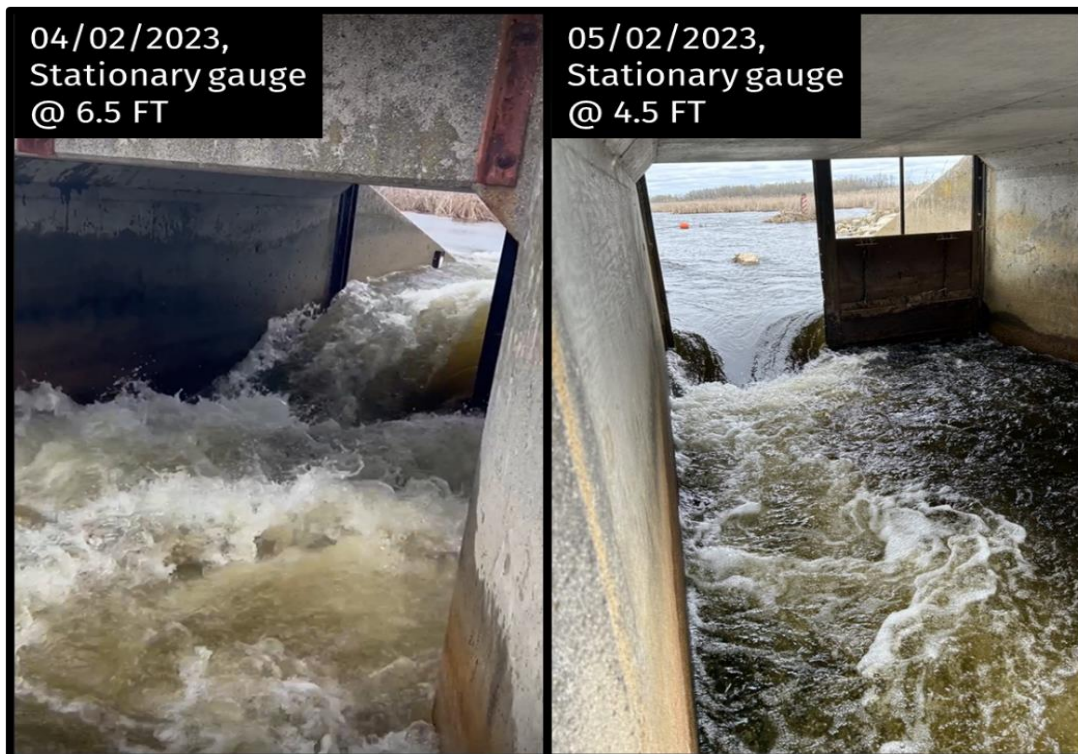


Image 7: View of Eldorado Marsh Dam spillway at different water levels. Photo Credit: Wisconsin DNR.

Netting efforts directly below the Eldorado Marsh Dam began March 24th, though no fish were captured until April 2nd. On April 2nd there were 26 white sucker and 1 northern pike (34.6-inch female) captured and tagged. On April 5th there were 9 white suckers and 1 northern pike (29.8-inch female) captured and tagged. Nets below the dam were pulled on April 5th due to increasing water levels causing nets to roll and drift downstream. On April 10th large congregations of white sucker and several northern pike were observed below the dam. The white sucker present were actively

swimming in the current, occasionally being pushed up on to the concrete wall below the dam (Image 8). In order to increase the number of tagged fish directly below the dam, dip nets were used to capture white sucker (n=52) on April 12th. northern pike were also present, in much lower abundance than white sucker, though dip netting efforts were unsuccessful. The first fish detected above the dam was a white sucker on April 12th. The fish was initially tagged below the dam on April 2nd (Figure 3) indicating it remained in the pool below the dam for 10 days before passing the spillway. On April 13th 12 more white sucker were detected above the dam including fish from all three tagging events below the dam (April 2nd (n=5), April 5th (n=2), and April 12th (n=5)). On April 14th 34 more fish were detected above the dam including 1 northern pike tagged in the FDLR on April 7th and 33 white sucker initially tagged below the dam (n=32) and Big Hole (n=1). April 15th was the last large passing of fish through the spillway with 9 white suckers detected. These observations of temporal passage through the spillway shows that regardless of when fish arrived at the pool below the dam, passage through the spillway was largely concentrated over a span of three days.



Image 8: White Sucker swimming below the Eldorado Marsh Dam. Photo Credit: Wisconsin DNR.

The Water level recordings at the stationary gauge were limited to the times fisheries and wildlife staff were on site to observe the gauge, though there is clear relation between water levels and fish passing the spillway (Figure 5). The highest gauge reading was on April 3rd at 6.6 feet, almost topping the gauge. The water level gradually decreased to 6 feet by April 10th. Following April 10th, the water level at the dam began to decrease more rapidly, hitting 5.4 feet by April 12th, 5.1 feet by April 13th and 4.2 feet by April 17th. Detection data above the dam indicates that fish did not pass through the spillway until the gauge was at 5.4 feet with only a single white sucker detected. While the single fish detection on April 12th shows passage through the spillway is possible at a gauge height around 5.4 feet, the majority of fish were observed to pass on April 13th and 14th when the gauge was around 5 feet. The presence of tagged fish in the area directly below the spillway, the timing of fish detections above the dam, and recorded water levels indicates the spillway creates a barrier when the gauge is above 5.4 feet and remains a deterrence to passage until a gauge height of around 5 feet (Figure 5).

It is worth noting that there were a total of 11 northern pike captured in fyke nets above the dam (Table 1) with capture dates ranging from March 26 through April 2nd. Length of northern pike captured above the dam ranged from 10.0 to 22.7 inches, with only 3 fish being greater than 13.3 inches. It is possible that these fish came from

downstream and passed through the spillway, though due to size structure of catch above the dam and the observation of larger fish being temporally restricted through the spillway, it is likely that the northern pike captured above the dam were marsh resident fish. It is also possible that these fish resided in the FDLR and entered the marsh prior to water level increases. While the current study documented a temporal barrier to fish passage during times of high spring flows, it is worth noting that our observations are temporally restricted to one spring season. The spring river flows in the study area can fluctuate across years and in years of lower water the barrier described in this study may not occur.

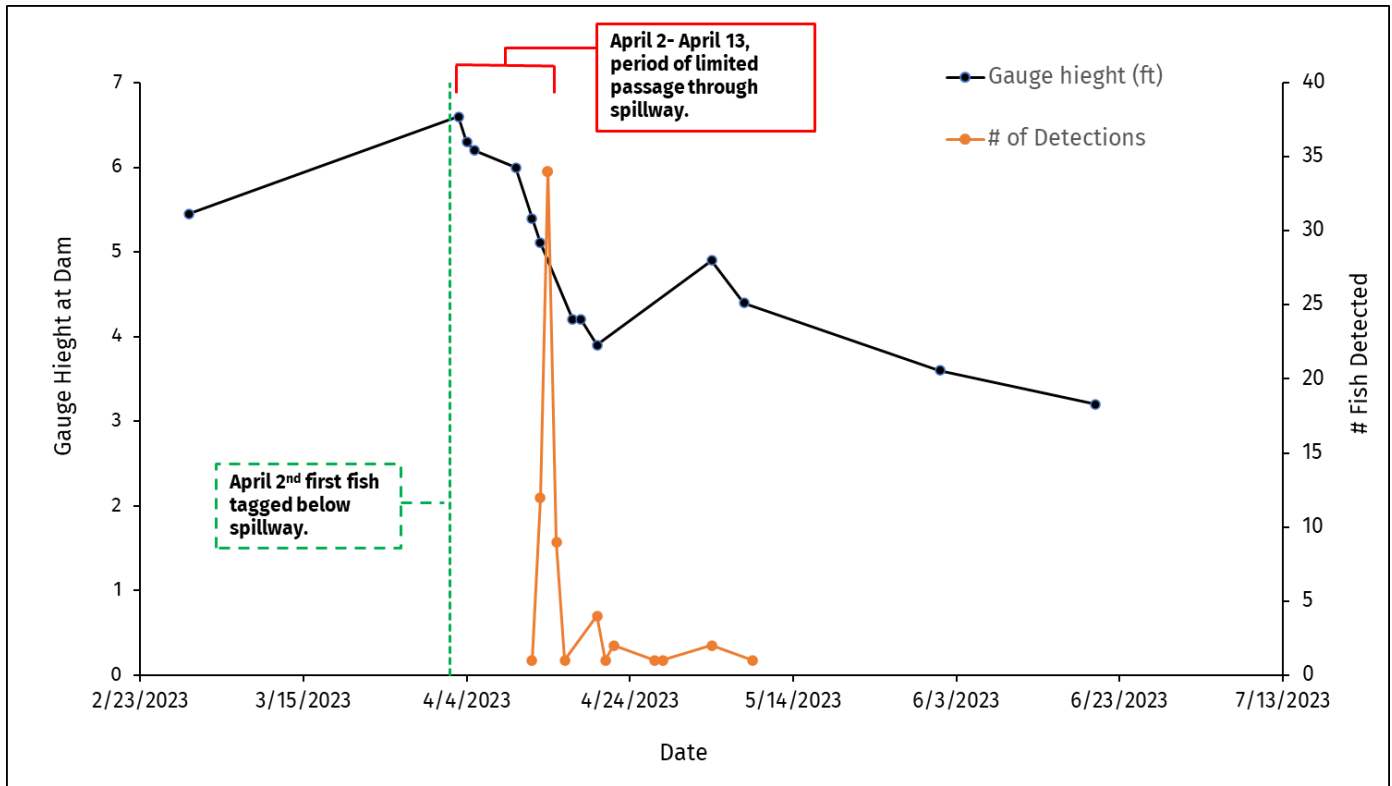


Figure 5. Water Level observations at the stationary gauge located above the Eldorado Marsh Dam spillway and number of detections on the PIT tag array located above the dam over time.

In addition to the assessment of fish passage through the spillway at the Eldorado Marsh Dam, the study also provided insight on several other aspects of fish movement in the FDLR and VDC. The project documented Winnebago system northern pike traveling approximately 12.5 miles up the west branch of the FDLR and 2.5 miles up the east branch of the FDL River. Northern pike likely travel further up the east branch of the FDL River, though the study was primarily focused on the passage assessment of the Eldorado Marsh Dam, so only one array was used on the east

branch. The furthest detection of Winnebago tagged northern pike in the west branch of the FDL River was at the array above the Eldorado Marsh Dam, though one northern pike that was captured and tagged above the dam was detected at the array in the town of Eldorado. The observation of the northern pike tagged above the dam traveling to the town of Eldorado makes it reasonable to believe that northern pike from Winnebago also travel to this area. Additionally, the array located in the town of Eldorado was not functional for a 12-day period from 5-15 to 5-27 due to one of the components malfunctioning, resulting in the potential for missed detections. While we observed fish from several tagging locations being detected above the Eldorado Dam, indicating fish passed the Esterbrook Road



Image 9: Oshkosh fisheries staff Nate Schimanski with the largest northern pike Captured in the survey (Big Hole, 37.9 inches). Photo Credit: Wisconsin DNR.

array, technical difficulties at this location resulted in a lack of fish detected (n=2). Northern pike that travelled up the west branch of the FDLR and passed through the spillway at the Eldorado Marsh Dam (~12.5 miles) were primarily tagged near the mouth of the FDLR (n=5), though there was 1 northern pike that was initially tagged in Van Dyne. The fish tagged in Van Dyne that was observed passing through the spillway was a 28.0-inch female tagged on April 6th. The fish was first detected above the Eldorado Marsh Dam on April 22nd, traveling at least 8.5 miles from its tagging location in Van Dyne to the mouth of the FDLR and then another 12.5 miles upstream for a total distance of over 20 miles in a 16-day period. There were two other northern pike tagged in Van Dyne (both tagged on April 6th) that traveled to the FDLR including a 29.5-inch female detected on the Western Ave array April 9th and a 20-inch male detected on the Howard Litscher Drive array May 2nd. There was also a largemouth bass tagged in Van Dyne on April 6th that was detected on the Howard Litscher Drive receiver starting on April 28th and continued to be detected until arrays were removed June 21st. There were two white suckers tagged in Van Dyne observed to enter the FDLR. Both fish were tagged on April 6th and both fish were detected on the Western Ave array on April 10th. The observation of fish tagged in Van Dyne traveling to the FDLR was unexpected though not surprising. These findings

document several fish species from multiple locations within the southern region of Lake Winnebago utilizing the FDLR during the spring and early summer.

While the netting effort in VDC was relatively low (6 total net nights), catch rates were high, resulting in a total of 152 fish tagged (71 northern pike, 43 largemouth bass, and 38 white sucker). Considering the number of fish tagged in the area, a relatively low number of fish were observed traveling up VDC (northern pike (n=3) and white sucker (n=6)). The furthest northern pike were observed to travel up VDC was the Howlett Road crossing, approximately 1.25 miles upstream of the tagging locations. The furthest white sucker were observed to travel was the Van Dyne Road crossing approximately 3 miles upstream of tagging locations (n=1). Detection dates for northern pike in VDC ranged from April 7th to April 9th. Considering the number of northern pike tagged in the area, the low number of detections, and short duration of detections, northern pike utilization of the upstream sections of VDC appears to be limited. Relatively high catch rates near the mouth of VDC indicate northern pike congregate and likely spawn in portions of VDC close to its confluence with Lake Winnebago, though upstream travel is limited. White sucker were observed to travel further upstream and also stayed in VDC longer than northern pike with detection dates ranging from April 6th to June 1st. VDC creek had the highest catch for largemouth bass out of all study sites though no largemouth bass were documented to travel up VDC to our first array.



Image 10: Fisheries operations staff Kyle Kossel with the largest largemouth bass captured in the survey (Van Dyne, 19.1 inches). Photo Credit: Wisconsin DNR.

Conclusion

The 2023 assessment on the FDLR and VDC provided insight on several aspects of fish movement in the southern region of Lake Winnebago. The primary goal of the study was to investigate the fish passage at the Eldorado Marsh Dam spillway. Notable fish passage observations include high spring flows creating a temporal barrier for fish passage through the Eldorado Marsh spillway, multiple species of fish from several

locations around the southern region of Lake Winnebago utilizing the FDLR in spring and early summer, and fish passage up VDC approximately three miles.

I hope you enjoyed reading our findings of fish movement through some of the lesser studied Winnebago System tributaries. If you have any questions on the project, general inquires for Winnebago System fish management, or are interested in becoming a DNR volunteer feel free to contact me at the phone number or email below.

Acknowledgements

Fish passage projects require a large dedication of time and resources to conduct. I would like to acknowledge several groups for their assistance in the completion of our 2023 project including the Oshkosh fisheries team, fisheries operations staff, Wildlife Management staff, Fond Du Lac County Parks Department, City of Fond du Lac Parks Department, the Town of Fond Du Lac, the Town of Eldorado, and SUNK? Dive and Ice Service.

I would like to thank the Fox River Trustee Council of the Natural Resources Damage assessment, Winnebagoland Conservation Alliance, Lake Poygan Sportsmen Club, Wisconsin Interscholastic Fishing association, Fond Du Lac County, and Butte Des Morts Conservation Club For their respective funding contributions that made this project possible.

Sincerely,

Angelo Cozzola

Winnebago System Gamefish Biologist
Fisheries Management Bureau/Division of Fish, Wildlife and Parks
Wisconsin Department of Natural Resources
(920) 410-9170, angelo.cozzola@wisconsin.gov