

# KLETZSCH PARK RIVER ACCESS & FISH PASSAGE PROJECT - FREQUENTLY ASKED QUESTIONS



GREAT LAKES RESTORATION INITIATIVE - MILWAUKEE ESTUARY AOC - KLETZSCH PARK IMPROVEMENTS



# Background

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This FAQ provides information on the proposed improvements at Kletzsch Park. There are three main components to this project: east abutment dam repairs; improved public river access, portage and overlook; and the introduction of a fish passage. Public information meetings for the project were held in January and September of 2019, and a public comment period is currently open. As a result, public input has significantly informed the current design. This FAQ was developed to answer community questions and offer an update on the project.

## Summary of Questions

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- How is the Milwaukee Estuary Area of Concern (AOC) related to the Kletzsch Park improvements?
- Why a fish passage at the Kletzsch Dam?
- Why improve the river access & portage?
- Why do we need wheelchair access to the river?
- What is universal design?
- Why improve the overlook area?
- What is the history of the Kletzsch Park dam and what repairs are required?
- Will this project impact the mature oaks?
- Will the project impact Native American burial mounds or other cultural resources?
- Were Tribal Communities in Wisconsin notified about this project?
- What approvals are required for cultural and natural resources?
- What is the in-river west bank fish passage and how does it impact the river?
- Why can't the fish passage be on the east bank of the river?
- Were capture-and-release or fish cannons considered?
- Is dam removal an option?
- What fish species will benefit from a fish passage?
- Will walleye use the fish passage?
- Will invasive species become a problem upstream of the dam?
- Who will maintain the fish passage?
- Why wasn't my question answered during the public information meeting Q &A?
- What is the project schedule?
- What are the next steps?

## How is the Milwaukee Estuary Area of Concern (AOC) related to the Kletzsch Park improvements?

AOCs are areas across the Great Lakes where tributaries, estuaries or harbors have been federally identified as having experienced immense environmental degradation – often due to legacy industrial pollution and impacts from urban and agricultural land uses. As a result, today the public is unable to fully use the resource in a safe or beneficial way.

Since 1987, 43 AOCs have been identified in the US and Canada. The Great Lakes Water Quality Agreement (GLWQA), which includes the AOC Program, is a commitment between the U.S. and Canada to protect and restore the Great Lakes. This agreement works to address legacy impairments to restore the health of our waterways, environment, and community. Some AOC restoration actions include: creating habitat for fish and wildlife, improving water quality, removing invasive species, planting native vegetation, remediating legacy pollutants, and improving beach conditions to reduce closures.

The Milwaukee Estuary has been identified as an AOC, and it includes the confluence of three major tributaries to Lake Michigan: the Milwaukee, Menomonee, and Kinnickinnic rivers, plus segments of Lincoln Creek, Little Menomonee River and Cedar Creek. It also includes Milwaukee’s nearshore waters of Lake Michigan. Some of the impairments found within the Milwaukee Estuary AOC include fish tumors, bird and animal deformities, restrictions on fish and wildlife consumption, loss of fish and wildlife habitat, beach closings, and the presence of undesirable algae. The proposed improvements at Kletzsch, including the fish passage, will address specific impairments at this site.

The Great Lakes Restoration Initiative, established in 2010, funds most AOC projects with additional funding and support coming from local/regional stakeholders. Funding for the Kletzsch improvements includes \$1.4M in grant funding from Great Lakes Restoration Initiative and Fund for Lake Michigan for fish passage, \$330K in WDNR Municipal Dam Grant and Milwaukee County funding for the dam repairs, and \$226K in WDNR Stewardship grant funding for the improved river access and overlook. Additionally, the Great Lakes AOC program sees a 2-3x return on every dollar invested in increased tourism, recreation, and property values.

Restoration work is underway to protect and restore Milwaukee’s waterways: providing better natural ecological function within our local rivers and estuary, generating local and regional economic opportunities, and improving public access to waterways. Work at Kletzsch will build upon work happening in locations across the Milwaukee Estuary AOC and the state, as well as unlock future funding for AOC projects within the Milwaukee Estuary.



## Why a fish passage at the Kletzsch Dam?

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A Fish passage at the Kletzsch Park dam is needed to connect native fish, like northern pike and lake sturgeon, to higher quality spawning, nursery, and wetlands habitat in the upper reaches of the Milwaukee River. The fish passage will support an increase in native fish populations, reversing the cumulative loss of fish and wildlife habitat while increasing access to healthy fish for our community.

Native fish are weak jumpers and unable to move past the dam to complete their travels upstream to spawn. This fish passage will allow fish native to the Milwaukee Estuary to move from Lake Michigan to areas upstream of the dam, including 22 miles of river, 29 miles of tributary streams, and 2,400 acres of wetlands. Studies show that fish such as catfish, sturgeon, walleye, smallmouth bass and northern pike will travel over 100 miles up and down river annually.

Fish passage at Kletzsch builds upon significant, recent Milwaukee River restoration investments including: fish bypass channel construction at the Thiensville Village Park; the removal of the North Avenue, Estabrook, Lime Kiln, and Chair Factory dams; the Seminary Dam removal on Pigeon Creek; and the removal of numerous fish barrier culverts and obstructions. Additionally, fish passage will support the Milwaukee River lake sturgeon stocking program started in 2006. Prior to this program, no sturgeon had been found in the river since the 1890s.

The proposed in-stream channel at Kletzsch is similar to the fish passage on the Rock River in Jefferson, Wisconsin. Fish tagged below the Jefferson dam have been recovered upstream of the dam, showing that fish are able to move through the in-stream channel. Fish passage projects have improved fish migration on many rivers in all parts of the country.

## What is the history of the Kletzsch Park dam and what repairs are required?

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The Kletzsch dam was built for recreational purposes in 1934. It replaced a timber crib dam that was constructed in 1848 and destroyed by a flood in 1924. Documentation from when the dam was constructed states that "...a fish ladder was built into the face of the dam at one point." Other documentation says that "no special fishway was provided... submerging of the dam will offer some facilities for fish migration." The referenced fish ladder, if it exists, was never a functioning fish passage for native fish species.

The dam was last inspected in 2013, during which time dam deficiencies were identified and repairs were ordered by the WDNR. These repairs will be located at the dam abutment area on the east bank of the river and include: the removal of woody vegetation within a 20' radius of the abutment, repairs to deteriorated stone façade material, removal of sediment blocking the in-dam bypass structure, and re-establishment of the bypass structure's function. The bypass structure consists of two conduits closed by timber planks, and it enables inspection and repairs to the dam.



## Why improve the overlook area?

While the overlook area is loved by many visitors to Kletzsch Park, it is also very degraded. Much of the grass and ground cover is gone, leaving bare soil and exposed tree roots. Severe compaction of the tree roots is also occurring. This improvement will help repair the natural landscape while developing an overlook that serves the large number of visitors. The re-design of the overlook areas will provide universal access and include a planting plan with new native trees, shrubs, ground cover, and riparian plantings. This project presents an incredible opportunity to diversify the vegetation, enhance the available resources for wildlife, and provide the community with a beautiful overlook.

## Why improve the river access & portage?

River access is an important improvement at Kletzsch to better support the number of people using the Milwaukee River at this location for recreational purposes, including anglers and paddlers.

The existing portage access consists of a few rustic steps in poor condition that are located too close to the dam to ensure safe exit from the water. Additionally, there is no formal public river access downstream of the dam. The rock walls and slippery slopes along the bluff are dangerous to navigate, and paddlers are challenged by the rock while portaging a boat.

Universal design principles are the basis of the proposed access, and will help retain the natural character of the setting while providing a portage, launch site, and angler access that supports people of all abilities. Connecting people directly to the water promotes stewardship of the river.



## Why do we need wheelchair access to the river?

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The Americans with Disabilities Act (ADA) requires that ANY new projects undertaken by state or local governments are to be accessible (28 CFR 35.151 New Construction and Alterations). Because this is a new project and accessibility can be provided, it must be provided. Grant funding from the state also requires accessibility within the project area.

People with mobility challenges, or those pushing wheelchairs or strollers, want - and deserve - to enjoy the same recreational opportunities as everyone else. Universal design concepts for the new path, overlook, and access to the water's edge will give everyone, to the greatest extent possible, the opportunity to enjoy the Milwaukee River at Kletzsch Park.

## What is universal design?

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Universal design is the design and construction of environments so that they can be accessed, understood, and used by ALL people to the greatest extent possible regardless of age, size, or ability and without the need for adaptation or special design. The seven principles of universal design include: equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, size and space for approach and use. In short, everyone benefits from universal design.

## Will this project impact the mature oaks?

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Everyone loves the oak trees at Kletzsch! As designed, the in-river fish passage does NOT include removal of any of the oak trees. County Parks Natural Areas and Forestry staff are providing expertise to ensure that all aspects of the Kletzsch improvements are designed to preserve these beloved oaks. Additionally, vertical mulching and charcoal amendments are being researched to help address compacted soils and exposed, damaged tree roots.

## Will the project impact Native American burial mounds or other cultural resources?

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Archaeologists with the State Historic Preservation Office (SHPO) at the Wisconsin Historical Society conducted extensive research about the project area including a review of early maps, correspondence, and publications. These evaluations concluded that there is NO historic documentation of burial mounds associated with the Indian Prairie site within or adjacent to the project area, and that there is NO visible evidence of burial mounds remaining on the landscape.

Rather, the earliest documentation located the mounds near the present-day rail trestle, about 400 feet south of the project area. Historic documents indicate that the surface features of the mounds had been largely damaged or destroyed as early as the 1930's. In subsequent years, gravel quarrying and development destroyed the remainder of the visible features of the mounds.

The Wisconsin Historical Society and archaeologists also conducted independent computer analyses of maps of historic mounds, surveyed in the 19th and early 20th centuries, to establish their location with respect to the project. Models placed the nearest mound location approximately 400 feet south of the southernmost extent of the proposed project area.

In addition to archival research, archaeologists conducted a thorough field investigation of the entire project area. This included excavation of several shovel test pits to inspect for cultural material and assess subsurface deposits to determine whether the soils were in an undisturbed, native state. These tests identified Native American habitation material intermixed with modern debris, confirming that the landscape has been heavily impacted by prior development. NO indication of subsurface Native American features or burials were identified during investigations.

As such, the SHPO requirement of photo documentation for archaeological sites pertains ONLY to work related to the historic dam, not to the archaeological site. Because of the known, extensive site disturbance from prior modern development, SHPO concurred with the findings of the archaeologists' field investigation that the proposed project will NOT adversely affect the portion of the archaeological site south of the project area.

A final stage of archaeological investigation will coincide with construction of the Kletzsch project. During construction, an archaeologist will be on site to monitor activities. In the unlikely event that evidence of human burials is identified, excavation will be suspended, and protocol dictated by Wisconsin's Burial Sites Preservation Law will be followed.

## Were Tribal Communities in Wisconsin notified about this project?

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Yes, project notifications and request for comment/consultation were sent to Tribal Historic Preservation Officers. Requests for consultation between federally recognized tribal governments are supported on a government-to-government basis between the federal government and Indian Tribes. To date there have not been any responses to the project notifications.

## What approvals are required for cultural and natural resources?

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The use of federal funding from the EPA means that this project is subject to Section 106 of the National Historic Preservation Act, which requires approval from both the Wisconsin State Historic Preservation Office and the EPA. Additionally, the Milwaukee River Parkway is on both the National and State Register of Historic Places, thus approval of the project design by the City of Glendale Historic Preservation Commission is also required. The date for that meeting is scheduled for November 5, 2019. An Environmental Impact Statement for this project is NOT required, and environmental reviews occur through the permit and agency review processes.

## What is the in-river west bank fish passage and how does it impact the river?

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The in-river west bank fish passage, located upstream from the dam, is a design alternative developed to address concerns shared during the first public information meeting held in January 2019. The design includes parallel sheet pile walls that extend 350 feet along the upstream riverbank and pools that step the level of the water above the dam to the level of the water below the dam. The fish passage will be located in a 23.5-foot notch on the west side of the dam.

Since this project CANNOT impact the floodplain by law, hydraulic modeling was completed on the preliminary plans to ensure that the fish passage will have NO effect on the floodplain. Final design will verify this impact and structural engineers will be involved in any dam modification.

Steel was identified as the passage wall material for several reasons: steel walls are easier and quicker to construct; they can be built with less disruption to the existing channel bottom; and existing steel passage structures in Wisconsin have been successful in the past.

The fish passage will be integrated into the existing spillway structure to ensure stability of both the existing dam and the passage. Additionally, the separation wall between the passage channel and the main river channel will be constructed to withstand forces from river flow and ice loading. Construction of the fish passage will likely take between 60-120 days to complete, pending weather conditions impacting the flow of the river.

## Why can't the fish passage be on the east bank of the river?

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An east bank bypass fish passage option was investigated for this project. To understand the impacts on the floodplain, hydraulic modeling is required by the WDNR, the City of Glendale, and Federal Emergency Management Agency (FEMA), which are the regulatory and permitting agencies. Hydraulic modeling of the east bank concept demonstrated that the floodplain would increase upstream of the dam for an approximate distance of 700 feet. Wisconsin floodplain management statutes (s. 87.30 and 44 CFR 59-72) do NOT allow construction within the floodplain that will cause ANY rise in the floodplain water elevation. This increase would also impact four private properties with insurable houses and garages on the east bank. Impacting insurable structures is not allowed under FEMA rules and would prevent permitting, further preventing an east bank bypass option from being considered.

An in-river east bank fish passage, like what is proposed on the west bank, may not impact the floodplain and could likely be built for a similar cost. However, it would extend along the river bank in front of several private properties, compromising their access to the river. Additionally, property rights would be required from the property owners for maintenance access to the passage.

## Were capture-and-release or fish cannons considered?

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Neither of these options were considered due to the high cost and infrastructure required.

A capture-and-release approach for fish above the dam has extremely high costs and potentially detrimental aesthetic impacts. This approach would require a trapping and sorting facility to be constructed on site which would have a significant, negative aesthetic impact on the park. Capture-and-release would also require significant staff capacity that does not exist.

Fish cannons also have significant challenges. While cannons are used in some parts of the country for salmon, this technology is NOT suitable for the much larger sturgeon targeted for migration above the Kletzsch Park dam. Fish cannons require on-site infrastructure, which would again significantly change the aesthetics of the park and require tremendous amounts of staff time.

## Is dam removal an option?

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Removal of the dam would allow the river to flow freely and native fish species to migrate upstream to spawning habitat. However, the current County Board-adopted policy for the Kletzsch dam project includes east abutment dam repairs, improved public river access/overlook, and the fish passage.

While dam removal is NOT included or considered in the adopted policy, removal of the dam would likely not impact the 100-year floodplain downstream from the dam and, therefore, could be permitted. However, the existing dam is structurally in good condition and can support the proposed fish passage. A new dam is NOT necessary to incorporate fish passage.

## What fish will benefit from fish passage?

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The fish passage is designed to be used by any fish that lives in the Milwaukee River or estuary. It is impossible to predict the number of fish that will use the passage because fish populations and migration runs fluctuate with things like spawning, rearing success, precipitation, and temperature.

Several native game and non-game fish species are expected to use the fish passage. These species include northern pike, lake sturgeon, smallmouth bass, largemouth bass, rock bass, green sunfish, pumpkinseed, white sucker, redhorse species, bullhead species, stonecat, stoneroller species, shiner species, hornyhead chub, blunt-nose minnow, johnny darter, and logperch. Northern pike were targeted in the fish passage design because of their weak swimming and leaping abilities. This means that if they can make it up the passage, other stronger swimming and leaping fish will be able to make it too.

Lake sturgeon will also benefit from the fish passage, building upon an existing repopulation program. Since 2006, sturgeon eggs have been hatched in a streamside rearing facility at Riveredge Nature Center in Newburg. There the sturgeon are raised for approximately 5-6 months in a hatchery using water from the Milwaukee River. This helps them imprint on the Milwaukee River so they will “home” back to the river to spawn when they are mature. Sturgeon are a long-lived species; females don’t mature until they are approximately 20 years old. This means it will take some time to see spawning in the Milwaukee River. However, juvenile sturgeon are showing up in assessments, indication that the stocked fish are surviving and growing well! Construction of this fish passage will expand lake sturgeon access to critical habitat in the Milwaukee River.

## Will walleye use the fish passage?

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Walleye is not the focal species for the Kletzsch fish passage, and, currently there is no plan to stock additional walleye in the lower Milwaukee River. The Kletzsch fish passage is intended to support existing populations of native species like northern pike and sturgeon.

In the 1980s and 90s, walleye were stocked as fry. From those earlier stocking efforts, DNR surveys rarely captured any adult walleye, indicating poor survival rates. A second walleye stocking effort took place from 1995-2007 with larger fingerlings. Unfortunately, hatcheries were unable to produce enough fish, limiting the density of adult spawning walleye in the river and the program was discontinued.



## Will invasive species become a problem upstream of the dam?

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The U.S. Fish and Wildlife Service determined that the Kletzsch Park dam is NOT a barrier to invasive species such as sea lamprey nor fish, such as salmon, that can be infected with viral hemorrhagic septicemia (VHS). Strong swimming and jumping species such as salmon can pass the spillway during high flows when it is submerged. High flows are only present at certain times of the year, dependent almost exclusively on rainfall or spring thaw to provide the perfect flow for fish passage.

The Bridge Street dam in Grafton is the first complete barrier to aquatic invasive species on the Milwaukee River. This dam prevents invasive fish or those carrying diseases from moving further upstream. As far as nuisance species such as carp, surveys of the Milwaukee River have shown a dramatic decrease in the number of carp following removal of the North Avenue dam.

## Who will maintain the fish passage?

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Milwaukee County is responsible for maintaining the existing dam and maintenance of the fish passage will also be the responsibility of the County. The upstream end of the fish passage will be designed and constructed to divert debris around the structure. The adjacent maintenance path will be accessible to light machinery for debris removal and adjustment of boulders. Additionally, the fish passage should be inspected before fish migration seasons. The structure itself will not require significant annual maintenance and will be designed to withstand forces experienced during major flood events and from river ice. A maintenance plan will be developed as part of design.



## Why wasn't my question answered during the public information meeting Q &A?

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The objective of the public information meetings was to share various project design concepts and get public input to inform the development of a final design that both addresses community concerns and achieves the goals of the project.

The format of the second public information meeting was intended to provide a variety of opportunities for the community to ask questions and talk to staff one-on-one. Before and after the presentation, staff subject matter experts from partnering agencies were available for discussion at stations focused on specific aspects of the projects. Because addressing every question during the presentation would make for a very long meeting, questions were collected, grouped, and responded to by theme to provide the most information to as many community members as possible. Questions responses were also posted on the County website.

Again, the intent of the public information meetings, and this FAQ, is to ensure that as many community questions as possible are addressed. In hindsight, additional time could have been spent on the group Q&A session during the presentation, and this is a lesson learned for staff.

The timing of public engagement in this type of project is important. In terms of sharing design concepts with the community, concept designs should reach a 30% design completion PRIOR to public input to ensure that the concepts being publicly shared are, in fact, technically feasible. To be clear, none of the designs shared to date have been considered complete. The current concept is still in the early phases of the design process, and changes based on public input will be incorporated.

## What is the project schedule?

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The schedule for this project is planned as follows...

- Public comments will be reviewed and incorporated to the design through mid-October 2019.
- Construction documents will be in development from October 2019-February 2020. Project permits will also be processed during this time.
- Bidding and contract award are planned for February-March 2020.
- Construction is slated for April-November 2020.
- Substantial project completion is anticipated in November 2020.

## What are the next steps?

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The public comment period will be open through Friday, October 18, 2019. Comments may be sent to Karl Stave, Milwaukee County Engineer, at [karl.stave@milwaukeecountywi.gov](mailto:karl.stave@milwaukeecountywi.gov) or at 414-278-4863.

Milwaukee County Parks will present the design to the County's Parks, Energy, and Environment Committee (PEEC) on Tuesday, October 29, 2019 and an opportunity for public comment will be provided. The County Board of Supervisors will deliberate the item on Thursday, November 7, 2019.

Additionally, because the Milwaukee River Parkway is on the National and State Register of Historic Places, staff will present the project to the City of Glendale Historic Preservation Commission for approval. The meeting is scheduled for November 5, 2019.

