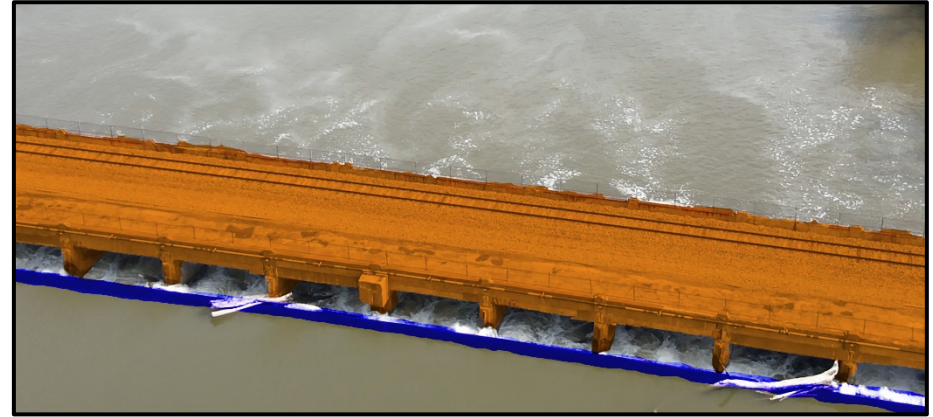


Public Question Log from the Flat Rock Dam Draft Feasibility Study

The following questions were submitted during the public open house on March 6, 2025, at the Flat Rock Community Center, and through our webpage, which was open until March 17, 2025. Questions are stated here exactly as asked with responses provided.

Since starting the feasibility study, there have been questions and comments regarding the condition of the bridge, located over the Flat Rock Dam. It is important to note that the Huron-Clinton Metropolitan Authority (Metroparks, HCMA) does not own the vehicular/ railroad bridge. In many of the photos, and site visit notes, it is indicated that the bridge is in poor condition with concrete spalling and cracking, exposed rebar, and concrete deterioration throughout. While additional deterioration of the bridge could affect the integrity of the dam, the bridge is not owned by HCMA, it is owned by CN Rail.



Caption: The Flat Rock Dam is largely a spillway that is submerged under the Huron River. The concrete structure that you see highlighted in orange in these photographs is a bridge owned by CN Rail. The areas highlighted in blue are the dam structure submerged under the river.

No.	Question	Response
1	Are there any plans for whitewater recreation opportunities? Grand Rapids is currently in the process of revitalizing the Grand River, with the implementation of rocks & boulders with the plan to create wave features for paddle sport enthusiasts. Is this something that could be considered? I think this would be a great opportunity increase local tourism to the Huron River & surrounding communities	The feasibility study is looking at all aspects of impact including recreation. Accessibility for paddle sports is being reviewed and considered with all the alternatives; however, the use of rocks and boulders and other substrate would first consider habitat and flood impacts.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
2	What effects will the dam removal have on the flood plains down stream? Have concerns about the drainage of the lake upstream.	If removal were selected, the removal of the dam would not adversely affect the floodplains downstream. If the removal is pursued, an incremental de-watering plan will be implemented to carefully manage the release of water and sediment, ensuring minimal disruption to water levels and the local river ecology. Additionally, the Flat Rock Dam was not constructed as a flood control structure. The flow attenuation study found that dam removal does not significantly impact the flood flows downstream of the project area.
3	When was sediment sampling performed?	Sediment samples were collected in September of 2023 as part of our feasibility study. Further details can be found in Appendix D of the Feasibility Study Report. Any future sediment testing will be completed per EGLE requirements. The current guidelines for sampling impounded sediment follow the WRD-048: Sediment Testing for Dredging Projects. PFAS sampling is not currently required. https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Policies-Procedures/WRD/WRD-048-sediment-testing.pdf
4	Residents off of Logan Dr wondering how much water will recede in Bayou?	This question assumes an alternative has been selected, for which no decision has been made. If the full dam removal alternate is selected, the proposed river channel bends southwest at the end of Logan Drive. As a result, the water surface elevation south of Logan Drive will decrease by approximately 2 ft for a 2-yr storm event and wetlands may begin to establish in the area. You can find more details in Appendix A.
5	Will PFAS be tested in the sediments?	Future sediment testing for any selected alternative will be completed per EGLE requirements. The current guidelines for sampling impounded sediment follow the WRD-048: Sediment Testing for Dredging Projects. PFAS sampling is not currently required. https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Policies-Procedures/WRD/WRD-048-sediment-testing.pdf

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
6	Who is responsible for cleanup/contamination?	Currently no contamination has been discovered through the preliminary sediment sampling conducted in 2023. If contaminated sediment is discovered within the project area that would be impacted by a proposed project, State of Michigan permitting agencies would require contamination directly impacted or exposed by a proposed project to be addressed by the project owners.
7	What is the impact of opening spawning grounds with PFAS contamination? Esp. regarding fishing populations in Lake Erie.	Many fish species already spawn upstream of the proposed project area. The species and numbers of fish that may spawn upstream of the project area could change, but the fish community that would presumably spawn upstream of the project area would at least in part be contingent on the selected alternative. The Huron River in Wayne, Livingston, and Monroe counties and the proposed project area is already subject to fish consumption advisories based on PFOS and/or other constituents (e.g., mercury, PCBs, Dioxins). Please see this link for the most up to date Eat Safe Fish guidelines published by the State of Michigan: https://www.michigan.gov/mdhhs/safety-injury-prev/environmental-health/topics/eatsafefish/guides
8	Option of revitalizing Flat Rock Dam to generate power? Hydro electric is considered renewable and carbon-positive.	Revitalizing the Flat Rock Dam for hydropower would be challenging, if even possible. Restoring the equipment needed to produce electricity can be costly, and in many cases, the expense of upgrading such facilities outweighs the potential revenue from power generation. While hydropower is renewable, other energy solutions may offer a more cost-effective path toward sustainability.
9	What happens to the wildlife that is not a fish? Eagles, osprey, otters.	Wildlife species have differing, sometimes competing, habitat needs. Some species will benefit from the different proposed alternative options, some will not. If otters are present within the system currently, their habitat would likely be improved by removing the dam and returning the river to a more natural state. Ospreys and eagles likely benefit from the presence of the impoundment, so they could lose habitat if the dam/impoundment are removed. However, both species do utilize riverine habitats and surrounding habitats, so they will still have habitats available. Turtle species, which have been mentioned by other commentators, would likely benefit greatly from removal of the impoundment and creation of a more natural river system.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
10	Instead of removing the dam, why not improve area for recreation purposes?	This feasibility study is a preliminary analysis that reviews and considers critical aspects of a proposed project in order to determine the best solution for the future of these dams. Currently, all options are being considered and no decision has been made yet.
11	How may residents obtain a copy of the land survey for the property deeded to HCMA? Why wasn't this included in the feasibility study?	It is posted here: https://www.metroparks.com/current-projects/#1
12	What historical research was performed regarding the land transfers in 1920s?	During the preliminary analysis, historical documents provided by HCMA were reviewed. A more in-depth historical review may be conducted in later stages of the project if necessary.
13	A property boundary survey does not "find" bottomland ownership. What additional work was performed to make such a confident, conclusory statement?	Review of HCMA deeds reflects a legal description of the property owned by the authority. Public sources of information such as Wayne County GIS and other sources have confirmed HCMA's ownership of the bottomlands.
14	Would you restore the back channel of the dam? Would homes here still be considered waterfront? Will the park still be an island with water all the way around? Is it an option to keep the back channel?	<p>Alternatives 1 and 2 will not impact the back channel originating from flow seeping through the existing powerhouse. Alternatives 3 and 4 would eliminate impounded water levels upstream of the powerhouse and active flow into the 'back channel' would be removed. In this scenario there are options for what could be done with this former channel. It could be back filled with clean material from the impoundment and restored with native seeding/plantings. In this case, Huroc Park would no longer be an island and any homes on the back channel may no longer be waterfront.</p> <p>Another option may be to leave the back channel as a backwater channel of the Huron River. This condition may result in primarily non-flowing water conditions and would need further investigation to understand what level of water may still exist in the back channel.</p> <p>The final condition of the back channel would be considered further in later design phases of any selected project alternative and there are various options that could be considered.</p>
15	Is the river still going to flow to Lake Erie?	The river flow to Lake Erie will be unaffected by any of the alternatives.
16	With alternatives, would property owners be impacted?	Under Alternatives 3 and 4, property owners could experience changes, including a reduction in waterfront property due to lowered water levels.
17	Would GEI get the job of taking the dam out?	There has been no decision made regarding the future of the dam at this point. When a decision is made, the construction of the project would be competitively bid out through our public bidding process. The lowest, most qualified bid would be awarded.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
18	Provide a more comprehensive hydraulic study to verify further downstream is not going to flood.	When an alternative is selected, additional hydraulic modeling will be conducted to evaluate that specific alternative. The current analysis indicates that any modification or removal of the Flat Rock Dam will not significantly impact downstream flooding.
19	Will removal or retention change FEMA/National flood insurance zones for homes within study region and further downstream?	Based on current analysis, FEMA/National flood insurance zones are not expected to significantly change under any alternative.
20	Has it been determined if the river will be rerouted, if so, do I now need to get flood insurance for my home?	Under each alternative, the current flood risk and FEMA flood insurance zones are not expected to change. Any project that increases the current flood zone would not be permitted.
21	How can I get in touch with the specific GEI folks that were at this open house meeting?	Please direct all questions to HCMA and we will coordinate with our consultant (GEI) to respond.
22	Why does the dam need to come out now? Is it not safe?	This study was conducted to evaluate key aspects of the proposed alternatives, including dam removal, to determine the best solution for the future of these aging structures. The dam is currently in fair condition; however, like any aging infrastructure, without ongoing maintenance and repair, it will continue to degrade over time. As such, we feel it is our responsibility to be proactive in the management of the dam and have as much information about future alternatives as possible to make decisions and to budget for future needs.
23	Will my house be flooded downstream if dam is removed during construction?	Residents and associated floodplains downstream of the dam would not be affected by dam removal. If removal is pursued, an incremental dewatering plan would be developed to carefully control the release of water and sediment, minimizing any disruption to water levels and downstream river ecology.
24	Who is responsible for cleanup of PFAS?	No PFAS testing has been completed. Currently there are no State of Michigan criteria for PFAS in sediment or soil. Any potential requirements for PFAS cleanup are undefined and undetermined at this time. If potential requirements for PFAS testing and/or cleanup change after a proposed alternative is selected, those requirements would become a component of that project. https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Policies-Procedures/WRD/WRD-048-sediment-testing.pdf
25	If the water drops, will the metropark put up a fence on the property line?	The Metroparks typically does not fence our boundaries.
26	If dam is removed, will Flat Rock Metal also be removed?	Flat Rock Metal will be unaffected if dam removal is pursued.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
27	What will happen to the race from the power house?	<p>Alternatives 1 and 2 will not impact the back channel originating from flow seeping through the existing powerhouse. Alternatives 3 and 4 would eliminate impounded water levels upstream of the powerhouse and active flow into the 'back channel' would be removed. In this scenario there are options for what could be done with this former channel. It could be back filled with clean material from the impoundment and restored with native seeding/plantings. In this case, Huroc Park would no longer be an island and any homes on the back channel may no longer be waterfront.</p> <p>Another option may be to leave the back channel as a backwater channel of the Huron River. This condition may result in primarily non-flowing water conditions and would need further investigation to understand what level of water may still exist in the back channel.</p> <p>The final condition of the back channel would be considered further in later design phases and there are various options that could be considered.</p>
28	Will Metropark turn over property to adjacent owners to allow river access?	<p>The Metroparks will retain their current property. Metroparks does not prohibit access by adjacent owners who would still be afforded river access since Metroparks' property is public property.</p>
29	Why do anything? Leave as is.	<p>The feasibility study is a preliminary evaluation that analyzes key aspects of the proposed project to determine the best solution for the future of the dams. It is essential to evaluate options and understand long-term impacts. This study is the first step in a multi- phase process that helps plan and assess the potential outcomes of different alternatives. The Flat Rock dam is currently in fair condition; however, like any aging infrastructure, without ongoing maintenance and repair, it will continue to degrade over time. As such, we feel it is our responsibility to be proactive in the management of the dam and have as much information about future alternatives as possible to make decisions and to budget for future needs.</p>
30	Who cleans up the mess when the water recedes?	<p>Assuming this question is referring to bottomlands restoration, after a possible dam removal, the responsibility for cleaning up sediment and restoration activities within the impoundment area typically falls to the project team overseeing the removal process. At this time a decision on a proposed alternative has not been made.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
31	Where can I get access to see all of these boards online?	They are now available on the project webpage: https://www.metroparks.com/current-projects/#1
32	Where would the funding come from? What about continued upkeep funding?	Various entities, including government agencies, private foundations, and non-profit organizations offer grants to support dam projects focused on environmental mitigation, safety, maintenance, and rehabilitation. Upon selecting an alternative, it is anticipated the HCMA and project partners will collaborate to identify and pursue specific grant opportunities in combination with HCMA budgeted funds. Once the project is complete, it is the responsibility of the landowner to maintain the property.
33	Home on river swamp like or no water?	It depends on the specific conditions of the property and how the area is managed after a selected alternative is pursued. However, it is unlikely that the area will become a swamp. If dam removal is pursued, the goal is to minimize disruption to the surrounding environment and ensure that any changes are appropriately managed.
34	Alternative one cost: without legislation change are \$3.35 million up front to construct the fish passage plus approx. \$280k/yr maintenance cost, correct?	The construction costs are estimated at \$3.35 million, with an additional \$2.5 million in operation and maintenance costs over the next 50 years, excluding inflation. For more details, refer to Table 10 in the feasibility report.
35	What are the flooding prospects for Pointe Mouillee and the homes in the south end of Brownstown along the Huron River?	There is no increased risk of flooding at the Pointe Mouillee State Game Area or downstream areas as a result of any activity at the Flat Rock and Huron Dams.
36	How long will be it be a smelly swamp?	It is important to note that a rock rapids approach will maintain water surface elevations at a similar elevation to the dam, so there should not be newly exposed sediment within the impoundment if this design option (partial dam removal) is selected. If a design option is selected that lowers the impoundment, exposed sediment may have an odor as the sediment in an anoxic or anaerobic condition transitions to soil in an aerobic condition. If these areas remain dry, vegetation may be able to grow in these areas and further reduce odors which should minimize over time. It is typical to see majority vegetation cover within 1 growing season. The time it will take for any odors to be reduced will also depend on the height of the sediment above the new water line and how often the sediment areas are inundated during storm events.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
37	Which dam is in need of critical repair?	Based on the last dam safety inspection report, EGLE provided a list of recommendations including concrete patching, reshaping and stabilizing depressions, and repair of erosion damage. (See section 4.1 of the Feasibility Study). The Flat Rock Dam is in fair condition. A dam in fair condition is generally considered functional but requires ongoing observation and timely maintenance to prevent its condition from worsening. The Huroc Dam is not a regulated dam due to its small size and is not required to be regularly inspected or its condition assessed.
38	I live on James St. How will the alternatives effect that area?	With Alternatives 1 and 2, water surface elevations will remain unchanged, and residents on James Ave will not be affected. For Alternatives 3 and 4, the river boundary may shift away from the property lines adjacent to the impoundment.
39	What is going to happen to the spillway at the walking bridge?	The outcome for the spillway at the walking bridge is still to be determined and will be a decision for the City of Flat Rock to make. The Huroc Dam, located below the walking bridge in Huroc Park, is owned by the City of Flat Rock. The feasibility study has considered the Huroc Dam in all alternatives, however, the decision makers for the Flat Rock and Huroc Dams are different and may choose different alternatives for each dam.
40	Of the threatened and endangered species only one was found on-site, while the remaining listed are only suitable or potentially Suitable. How would this project benefit the suitable species conditions?	The suitable habitat for threatened and endangered (T/E) species onsite is largely restricted to the floodplain forest in the upstream reaches of the site. The options presented likely will not create more of this habitat, which takes many years to develop. However, creation of a natural river corridor and enhancement of the adjacent wetlands through native species plantings and exclusion of invasive species would provide general benefits for the T/E species and all species within the area.
41	Does the Belleville dam impact this project at all or vice versa?	The Belleville Dam is 19 river miles upstream of the Flat Rock Dam. The Flat Rock Dam and any potential project at the Flat Rock Dam is too far downstream to affect the Belleville Dam. The Belleville Dam, depending on how it is operated, may impact river flows entering the Flat Rock Dam impoundment.
42	As the current water line boundary becomes much narrower, there does not appear to be a fact based plan for the resulting "green space". It is stated that "opportunities" exist for this space, without any commitment from the Metropark to improve it.	This feasibility study is a preliminary analysis to assess key aspects of the proposed project. Further planning for the green space would occur in later design phases, should Alternatives 3 or 4 be selected. This study serves as the first step in a multi-phase project.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
43	Will the 36 homes impacted have their property taxes adjusted?	This question assumes action on one of the alternatives, for which no decision has been made. Properties that are impacted are assumed to be those along the impoundment. If property values rise or fall, property taxes are typically addressed by the City's or Township's assessing office.
44	Deed to HCMA say "to center of the river". How is HCMA claiming to own the other side of the river never deeded to them?	HCMA does own the bottom lands. HCMA is only claiming ownership of land to which it had a legally deeded ownership right. Please see link to deed: https://www.metroparks.com/current-projects/#1
45	How did a private entity purchase a public waterway? Owning the dams is one thing, owning the river is a different story.	Metroparks is a public authority. The Metroparks purchased the dam and the bottom lands, the Metroparks did not purchase the Huron River.
46	How are migratory birds affected? Especially waterfowl.	Many migratory songbirds would see increased habitat in the form of emergent wetlands following full dam removal. Waterfowl (ducks, geese, and swans) which typically prefer larger areas of open water would see a decrease in favorable habitat following full removal of the dams and the impoundment. If full removal were selected.
47	What happens to the jumping fish when they reach the Belleville dam?	The hydraulic conditions will not be altered at the Belleville Dam by this project, so jumping fish will act in a similar manner as the current conditions. Depending on the presence and efficacy of a fish ladder at the Belleville Dam, the fish may not be able to pass upstream of that Dam.
48	There was no PFAS testing will that be done in the next phase?	Future sediment testing will be completed per EGLE requirements. The current guidelines for sampling impounded sediment follow the WRD-048: Sediment Testing for Dredging Projects. PFAS sampling is not currently required.
49	Will the parks put up a fence? (dam removal)	This question assumes action on one of the alternatives, for which a decision has not been made. The Metroparks typically do not fence our boundaries.
50	The 56 residences impacted by dam removal, how do they recoup loss? Is there a "grant" to assist those impacted?	This question assumes action on one of the alternatives, for which a decision has not been made. Any alternate design chosen may affect adjacent residences. The Metroparks is unaware of any grant programs that fit this description.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
51	If the water is removed from the river bottom, what happens to control or prevent the contaminants from becoming airborne?	<p>The preliminary sediment sampling has not shown any contamination. Additional sediment testing, as per EGLE requirements, would be conducted to confirm no contamination exists in the sediment prior to permitting and construction activities occurring.</p> <p>In the case where water levels are lowered and the bottomland soils are exposed, native seeds would be expected to establish as soils begin to dry out. Vegetation growth prevents soils from eroding.</p>
52	Can the Flat Rock Dam be revitalized to generate power again? Renewable energy, negligible impact to current environment, revenue control over time.	Revitalizing the Flat Rock Dam for hydropower would be challenging, if even possible. Restoring the equipment needed to produce electricity can be costly, and in many cases, the expense of upgrading such facilities outweighs the potential revenue from power generation. While hydropower is renewable, other energy solutions may offer a more cost-effective path toward sustainability.
53	Should the dam fail - how many gallons would be flooding into Flat Rock?	The Flat Rock Dam impounds approximately 13.95 million gallons of water.
54	Should the dam fail - who's responsible for the damage? Is the state looking at this in terms of potential impacts?	<p>Should the Flat Rock Dam fail, the HCMA carries some insurance to cover damages, though the insurance limits will likely be insufficient to cover all damages incurred. Liability is often determined through litigation and depends on proving negligence, failure to follow safety protocols, or inadequate response to known risks.</p> <p>One of the goals of the feasibility study is to reduce future risk of dam failures and possible downstream damage that could occur in the event of a failure. The current EGLE dam safety rating has classified the Flat Rock Dam as a high hazard potential dam. "High hazard potential" indicates a dam located in an area where a failure may cause serious damage to critical infrastructure, critically harm the environment, or where failure could cause potential loss of life.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
55	Will upstream silt be dredged and removed to get rid of the contaminated silt?	<p>The preliminary sediment sampling has not shown any contamination. Additional sediment testing, as per EGLE requirements, would be conducted to confirm no contamination exists in the sediment prior to permitting and construction activities occurring.</p> <p>Some dredging and or mechanical earthwork would be expected for all alternatives to prevent large amounts of sediment from being transported downstream at once.</p>
56	How do the belleville dam and flat rock dam work together? What do they do to control the waters in between?	<p>The Belleville Dam is 19 river miles upstream of the Flat Rock Dam. The Flat Rock Dam and any potential project at the Flat Rock Dam is too far downstream to affect the Belleville Dam. The Belleville Dam, depending on how it is operated, may impact river flows entering the Flat Rock Dam impoundment. Additionally, the Flat Rock Dam has no ability to manage flood water through gates or other mechanisms. The Flat Rock Dam was not constructed for flood control.</p>
57	How do residents obtain a survey of the HCMA property?	<p>We can provide the deed with legal descriptions. We do not have a survey of the entirety of HCMA property. A copy of that deed can be found at: https://www.metroparks.com/current-projects/#1</p>
58	How will the backwater section of the west side of Huron Park be affected? In all scenarios.	<p>Alternatives 1 and 2 will not impact the back channel originating from flow seeping through the existing powerhouse. Alternatives 3 and 4 would eliminate impounded water levels upstream of the powerhouse and active flow into the 'back channel' would be removed. In this scenario there are options for what could be done with this former channel. It could be back filled with clean material from the impoundment and restored with native seeding/plantings. In this case, Huroc Park would no longer be an island and any homes on the back channel may no longer be waterfront.</p> <p>Another option may be to leave the back channel as a backwater channel of the Huron River. This condition may result in primarily non-flowing water conditions and would need further investigation to understand what level of water may still exist in the back channel.</p> <p>The final condition of the back channel would be considered further in later design phases and there are various options that could be considered.</p>
No.	Question	Response

Public Question Log from the Flat Rock Dam Draft Feasibility Study

59	What is the natural flow of the river? How have the dams directed the flow?	The dams impound the water of the Huron River so that the natural path of the flow is not apparent. A 1920s survey provided by HCMA shows the river's original path before it was flooded by the dam. Refer to Section 8.3 of the feasibility report for details.
60	What happens to the blue heron and turtles upstream near Oakwoods?	Upstream areas near oakwoods are anticipated to have the least amount of impacts. Habitat for herons, turtles, and other wildlife species will remain throughout the project area, but particularly upstream near Oakwoods in the floodplain forest wetlands.
61	If we live by the dam how will the water levels change?	For Alternatives 1 and 2, the water surface elevation will remain unchanged. For Alternatives 3 and 4, the water level immediately upstream of the Flat Rock bridge will decrease by 5- 6.4 feet, tapering down to match the existing water elevation about 14,200 feet upstream. Within the area between Flat Rock and Huroc bridges, there is a 1.3-1.4 feet decrease in water surface elevation compared to existing conditions.
62	What repairs are needed on the dam?	According to the Dam Safety Inspection Report dated February 7, 2024, EGLE provided a list of recommendations. These include removing debris from the principal spillway weir wall, replacing deteriorated concrete at the abutment - right wall of the principal spillway, and reshaping and stabilizing depressions on the embankment slopes and the abandoned fish ladder conduit. It is important to note that Metroparks does NOT own the bridge, bridge piers, nor the road over the dam. Additionally, the sinkhole at the abandoned fish ladder conduit must be filled with MDOT Class II sand, and erosion damage at the downstream section of the auxiliary spillway needs regrading and surface protection. The full Dam Inspection report can be found in Appendix C of the feasibility report.
63	Provide an audit of revenue sources from the last 20 years - why doesn't HCMA have the money to fix it?	Audits dating back to 2010 are available on our website at https://www.metroparks.com/financial-information/ . Metroparks regularly fund repairs to the dam as necessary. Since 1990, the Metroparks has invested over \$1.7 million in regular maintenance and repairs to ensure the dam meets requirements and is structurally sound.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
64	What is wrong with the existing fish ladder? Can it be repaired?	<p>Section 4.7 of the Draft Feasibility Study contains further information on the existing Denil Fishway and its fish passage effectiveness.</p> <p>Of the 39 fish species present in the Huron River, the HRFA and DNR documented passage of eight different species including Steelhead, Gizzard Shad, Common Carp, Walleye, Bluegill, and multiple sucker species. This data suggests the fishway cannot be used by all the resident fishes in the Huron River. Some modifications that are described as Alternative 1 in Section 6 of the feasibility study could be implemented to potentially increase fish passage for additional species that are resident to the Huron River.</p>
65	Does HCMA acknowledge a fiduciary responsibility to property owners?	Metroparks is responsible for Metroparks' property. Property owners are responsible for their property.
66	What effects does the Flat Rock dam have directly on Huron twp properties near the high school area	The Flat Rock High School is well outside the 100-year floodplain and is not affected by the dam. The impact on other properties depends on their proximity to the floodplain.
67	The homes on the water - will they lose value? Will there be compensation? Will property taxes increase if bottom lands are exposed?	<p>An evaluation of the impact to property values in the circumstance of a dam removal was completed as part of this study. This evaluation consisted of an extensive literature review of real dam removal scenarios that evaluated property value pre- and post- dam removal. The results of the study showed dam removal can have varying impacts on property value and that the primary drivers to the impact were: 1. quality of the current amenity (impoundment) vs quality of what it is replaced with (greenspace), and 2. How the community values the amenity.</p> <p>This question assumes action on one of the alternatives, for which no decision has been made. Properties that are impacted as assumed to be those along the impoundment. If property values rise, or fall, property taxes are typically addressed by your city's or Township's assessing office.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
68	<p>How much money has been spent on Flat Rock dam maintenance annually to date since purchase...itemize as to exact purpose and to whom payment was made.</p> <p>Where would funding come from specifically to pursue any removal/restoration projects? Itemize grant sources from state, federal, and private sources. Tax funds? Other?</p>	<p>The Metroparks' maintenance staff conducts regular inspection and maintenance of the dam. Metroparks does not itemize its own staff time by facility. Since 1990, approximately \$1.7 million has been spent on maintenance and repairs by outside contractors. See Appendix M: Potential Grant Sources regarding the question asking about grant sources.</p>
69	<p>What has been spent to date and from what source(s)? Who has been paid for what so far?</p>	<p>It is assumed that this question is specifically referencing the cost and sources of funding being used to pay for the Feasibility Study. \$453,079.44 to GEI, \$15,000 to the Huron River Watershed Council, CE Raines (City of Flat Rock Engineer, Bruce Hammond): \$4713.25. Sources originate from NOAA's Fisheries Regional Partnership Grant through the Great Lakes Restoration Initiative as a sub awardee through the Great Lakes Fisheries Commission.</p>
70	<p>The stated purpose of the HCMA dam purchase was "maintaining the impoundment and adjoining natural areas for recreational use". What is the reason that HCMA no longer believes in preserving the natural areas?</p>	<p>The intentions of the Metroparks staff that purchased the dam in 1952 were as stated. There was no hydraulic modeling at that time to show how alternative options for the dam would affect natural areas upstream and downstream. More than 70 years later, we have the technology to model these alternatives. HCMA's remains firmly committed to environmental stewardship of natural resources and is evaluating the options that will support that commitment.</p> <p>We believe the Metroparks belong to all the people of Southeast Michigan, all their lives, and as such must evaluate our decisions on the needs of the region as a whole and our future sustainability. The current EGLE dam safety rating has classified the Flat Rock Dam as a high hazard potential dam. "High hazard potential" indicates a dam located in an area where a failure may cause serious damage to critical infrastructure, critically harm the environment, or where failure could cause potential loss of life. It does not denote the condition of the dam. The dam is currently in fair condition. The Flat Rock Dam meets all regulatory requirements that are part of the inspection process. However, like any aging infrastructure, it will continue to degrade over time. As such, we feel it is our responsibility as the owners of the Flat Rock Dam to be proactive in the management of the dam and have as much information about future alternatives as possible to make decisions and to budget for future needs. That is why we are currently conducting the feasibility study around this dam.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
71	What is the current reason HCMA is considering dam removals?	<p>The current EGLE dam safety rating has classified the Flat Rock Dam as a high hazard potential dam. "High hazard potential" indicates a dam located in an area where a failure may cause serious damage to critical infrastructure, critically harm the environment, or where failure could cause potential loss of life. It does not denote the condition of the dam. The dam is currently in fair condition. The Flat Rock Dam meets all regulatory requirements that are part of the inspection process.</p> <p>However, like any aging infrastructure, it will continue to degrade over time. As such, we feel it is our responsibility as the owners of the Flat Rock Dam to be proactive in the management of the dam and have as much information about future alternatives as possible to make decisions and to budget for future needs. That is why we are currently conducting the feasibility study around this dam.</p> <p>The Metroparks is reviewing all possible design alternatives for the dam.</p>
72	Is it fish propagation (fish passage analysis)?	<p>One of the goals of this project is to maximize fish passage without permitting upstream movement of invasive Sea Lamprey. The various fishery surveys performed by the Huron River Fishery Association (HRFA) and the Michigan Department of Natural Resources (MDNR) have documented passage of eight fish species (Steelhead, Gizzard Shad, Common Carp, Walleye, Bluegill, and multiple sucker species) through the Denil fishway, but there are 39 fish species present in the Huron River.</p>
73	If so, how many fish are currently passing through via the fish ladder?	<p>The various fishery surveys performed by the Huron River Fishery Association (HRFA) and the Michigan Department of Natural Resources (MDNR) have documented passage of eight fish species (Steelhead, Gizzard Shad, Common Carp, Walleye, Bluegill, and multiple sucker species) through the Denil fishway, but there are 39 fish species present in the Huron River.</p>
74	If so, how many fish are desired to pass?	<p>One of the goals of this project is to maximize fish passage without permitting upstream movement of invasive Sea Lamprey. There is not an established number of each species that should pass; instead, the feasibility study focused on the relative ability of each alternative to increase fish passage.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
75	If so, how shall the high water temperatures of the Huron River affect the spawning of the Steel Head and Sturgeon?	A potential Dam removal would not increase temperatures within or downstream of the existing reservoir. The dam releases water from its surface, and the reservoir behind the dam is probably not sufficiently deep to stratify (which would maintain lower temperatures in the deeper portion of the reservoir). Conversely, removing the dam would eliminate shallow reservoir water that was susceptible to heating during hot summer conditions. Therefore, removal of the dam could reduce water temperatures, so they were closer to historic conditions and more conducive to spawning for cold water fishes (i.e., Steelhead) and native fishes (i.e., Lake Sturgeon).
76	If so, is it due to pressure from an outside government agency?	No, the project is a collaborative effort involving HCMA, the Michigan Department of Natural Resources (MDNR), the Great Lakes Fishery Commission (GLFC), the Huron River Watershed Council (HRWC), and the City of Flat Rock with the Feasibility Study being funded through a National Oceanic and Atmospheric Administration (NOAA) Fisheries Regional Partnership Grant.
77	What are the estimated effectiveness levels of the three proposed Sea Lamprey mitigation structures?	The effectiveness of the proposed sea lamprey barriers depends on their location. At Huroc Dam, all alternatives have medium to low efficacy. At Flat Rock Dam, a structural barrier has medium to high efficacy. An electrical or behavioral barrier offers high efficacy. Additional details are available in Section 9 of the feasibility report.
78	Is it risk mitigation for a failure? If so, why is the risk not mentioned in the latest EGLE dam inspection?	One of the goals of the feasibility study is to reduce future risk of dam failures and possible downstream damage that could occur in the event of a failure. The current EGLE dam safety inspection has classified the Flat Rock Dam as a high hazard potential dam, meaning that a failure could cause significant damage to infrastructure, harm the environment, or even result in potential loss of life. One of the benefits associated with dam removal, if that alternative is chosen, is eliminating the risk of a dam failure. While the dam is currently in fair condition, like any aging infrastructure, it will continue to degrade over time. It is the responsibility of the dam owner to ensure the structure remains safe and adequate.
79	If so, what is the current risk level (probability) for a structural failure?	The dam is in fair condition, with no significant deficiencies for normal loading. However, rare or extreme events could lead to a dam safety issue.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
80	If so, what is the liability cost to HCMA?	We do not have enough information to answer this question. HCMA has a responsibility to maintain the Flat Rock Dam. HCMA has spent around \$1.7 million maintaining the same since the 1990s. No decisions have been made on which alternative will be selected so there is no defined liability at this time.
81	If so, how is the proposed chinking stone more likely to prevent a failure event than a solid concrete structure?	The proposed rapids option distributes the elevation drop of the dam over a much greater length than the current dam. This reduces the slope and therefore shear stress on the structure. Furthermore, the rapids design is comprised of three separate materials: armor stone, chinking stone, and boulders. The chinking stone is designed to fill void spaces within the larger armor stone mixture and provide stable bedding for the boulders. This design approach has been used on several rapids across the Midwest, and these have remained stable for a number of decades. This type of structure is also less likely to experience a catastrophic failure resulting in a full dam failure, unlike a concrete structure.
82	If so, what is the annual expense for insurance?	HCMA maintains an insurance policy with liability coverage for dam breaches of \$1,000,000 per occurrence, and property coverage under Structures Other Than a Building (SOTB) of \$30,000,000 per occurrence for HCMA.
83	If so, what is the annual expense for maintenance?	The Metroparks' maintenance staff conducts regular inspection and maintenance of the dam. Metroparks does not itemize its own staff time by facility. Since 1990, approximately \$1.7 million has been spent on maintenance and repairs by outside contractors.
84	If so, do costs come strictly from the HCMA budget or are funds provided to assist from outside governmental agencies?	Funds come from the HCMA budget for maintenance. Potential grant funds provided by state and federal sources are typically for removal scenarios and not ongoing maintenance.
85	If so, is it due to the availability of State and Federal funds toward removal?	The feasibility study is a preliminary evaluation that analyzes key aspects of the proposed project to determine the best solution for the future of the dams. It is essential to evaluate options and understand long-term impacts. This study is the first step in a multi- phase process that helps plan and assess the potential outcomes of different alternatives. The Flat Rock dam is currently in fair condition; however, like any aging infrastructure, it will continue to degrade over time. The decision to move forward with the feasibility study and to consider future alternatives of the dam are not due to any possible availability of State or Federal funds.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
86	How will the environment be affected with full or partial removal?	The full removal option will have the most impacts on the local ecology. The large impoundment immediately upstream of the dams will no longer exist, and the river will follow a more natural course through extensive emergent wetlands. Farther upstream, the forested wetlands are expected to remain, and the river channel is expected to follow a similar course. The partial removal alternative will maintain existing water surface elevations so there will be little to no environmental changes from the existing conditions.
87	If the structures cannot 100% prevent Sea Lamprey passage, will the State have to provide ongoing chemical treatments to the waterway?	Lamprey production potential in the Huron River has been determined to be low (Appendix L). It is anticipated USFWS would continue sea lamprey monitoring efforts and determine the need for a sea lamprey barrier at a later date if an infestation were detected. See Appendix L of the Feasibility Report for additional information regarding Sea lamprey consultation with the U.S. Fish and Wildlife Services.
88	If Sea Lampreys should pass upstream, what are the anticipated effects to existing fauna?	If sea lampreys pass upstream, they could negatively impact native fish populations. Response to sea lamprey escapement would be managed by the appropriate regulating agencies.
89	What is the actual reason HCMA is considering dam removal?	<p>The Metroparks is reviewing all possible design alternates for the dam. Dams do not last in perpetuity, and the Metroparks is doing their due diligence to review options for the future.</p> <p>The current EGLE dam safety rating has classified the Flat Rock Dam as a high hazard potential dam. "High hazard potential" indicates a dam located in an area where a failure may cause serious damage to critical infrastructure, critically harm the environment, or where failure could cause potential loss of life. It does not denote the condition of the dam. The dam is currently in fair condition. The Flat Rock Dam meets all regulatory requirements that are part of the inspection process.</p> <p>However, like any aging infrastructure, it will continue to degrade over time. As such, we feel it is our responsibility as the owners of the Flat Rock Dam to be proactive in the management of the dam and have as much information about future alternatives as possible to make decisions and to budget for future needs. That is why we are currently conducting the feasibility study around this dam.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
90	What is the plan to provide a replacement habitat for displaced species?	If the full removal option is pursued, seeding and planting of native wetland plant species is proposed along the course of the river. This will provide additional habitat for plant and wildlife species. Any protected mussels identified in a mussel survey would be relocated to suitable habitat on the Huron River outside the impacts of the construction project.
91	What are the anticipated species losses after full or partial dam removal?	No species losses are anticipated from partial removal. No terrestrial species are expected to be lost from the area as a result of the full removal option. There is potential for losses to freshwater mussel species that may currently reside within the impoundment. A mussel survey and relocation effort would likely be required prior to pursuing the full removal option to ensure these mussels are not destroyed if the impoundment is lost or modified.
92	How will residents be affected with full or partial removal?	The impact on residents will vary based on their residential location and specific concerns. Partial removal would have a minimal effect on the impoundment; however, it will change the aesthetics of the project site where the dam currently sits. Full removal would significantly change the landscape throughout the current impounded area. Adjacent property owners will lose the view of an open body of water, and it will be replaced with a free-flowing river and natural greenspace. Additionally, during construction, there will be an increase in construction traffic throughout the project area with construction activity, machines, and associated noise throughout the daily working hours. A more detailed response requires understanding of residents' specific concerns.
93	Shall homeowners incur the projected 25% loss in property values or shall HCMA be providing a remittance?	This question assumes action on one of the alternatives, for which no decision has been made. Metroparks is not responsible for the change in value of private property.
94	Shall homeowners be compensated for the loss of equipment such as boats, lifts, etc.?	No
95	Have you determined how many acres of wetlands will be destroyed if the dam is removed?	The preliminary estimate indicates a gain of 70 acres of newly established southern floodplain forest and wetlands, with a loss of 10 acres of original southern floodplain forest.
96	Will we reimbursed for our investment in water craft/docks?	No

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
97	Can homeowners expect a drop in property assessments and taxable values?	An evaluation of dam removal's impact on property value was completed as part of this study. This evaluation consisted of an extensive literature review of real dam removal scenarios that evaluated property value pre- and post- dam removal. The results of the study showed dam removal can have varying impacts on property value and that the primary drivers to the impact were: 1. quality of the current amenity (impoundment) vs quality of what it is replaced with (greenspace), and 2. How the community values the amenity.
98	Also has Ducks Unlimited or any other agency been advised of the loss of wetlands and if not why not?	This question assumes action on one of the alternatives, for which no decision has been made. Ducks Unlimited does important work for conservation. Ducks Unlimited and other stakeholders may be advised as the project moves forward with a selected alternative.
99	There are tons of fish going up the existing fish ladder as we speak. Why are we worried about more fish going up river if they cant even be eaten because of the pollutants. And why cant the fish you want up river be stocked for a much lower cost? In 2023 MI DNR stocked 9+ million fish at 705 sites.	There may be a large number of fish utilizing the existing Denil fishway, but the number of fish and the number of species moving up the fishway is very small compared to the numbers/species living in the Huron River. This is why the project has focused on improving fish passage (among other things). Even if they are not fit for human consumption, fish need to move/migrate to maintain healthy populations - some species cannot spawn in the short segment of the river between the Flat Rock/Huroc dams and the mouth of the Huron River. While stocking game fish helps maintain the recreational fishery, it cannot replace the migrations that historically sustain fish populations; this is particularly true for species that are ecologically important but not economically important. "Trap and transport" of fish from below the dam to above it (or in the case of some salmon, from upstream to downstream of the dam) is used in some locations. However, this technique is extremely costly, labor- intensive, and many fish do not survive the relocation process.
100	How does the partial dam removal effect water levels on W. Huron River Drive passage? How does this effect the other water ways, Frank & Poet drain? And other city flood zones?	Partial removal would maintain current water surface elevations in the impoundment and not affect other waterways or city flood zones. The floodplain would remain as it is with the dam in place.
101	What toxic materials are in the sediment above the dam and how will they be removed before the dam is removed so as to prevent them from going into Lake Erie and polluting the lake.	Preliminary sediment sampling was completed in 2023 and did not find any contamination in the sediment above the dam. Future sediment testing would be completed per EGLE requirements. The current guidelines for sampling impounded sediment follows the WRD- 048: Sediment Testing for Dredging Projects.

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
102	In the initial stage of this study the sea lamprey infestation up stream was the 1st concern. Isn't it true that if the dam is untouched the sea lamprey won't be able to go upstream just as they can't right now?	While the Flat Rock Dam blocks sea lamprey, the lamprey infestation potential in the Huron River is low. USFWS would monitor and assess the need for a sea lamprey barrier if an infestation occurs. See Appendix L of the Feasibility Report for additional information regarding Sea lamprey consultation with the U.S. Fish and Wildlife Services. Additionally, the existing Denil fishway does not block sea lamprey so to truly be a barrier to sea lamprey, the Denil fishway should be closed during the sea lamprey migration period.
103	What if Flat Rock does nothing with their dam, what good would removing your dam do?	If the City of Flat Rock takes no action regarding the Huroc Dam, all alternatives for the Flat Rock Dam remain feasible. While fish migration would continue to be challenging around the Huroc Dam, many other benefits associated with each alternative would still be achieved.
104	How is the removal of the dam going to effect property value, harm to fish populations during the removal process, sediment mobilization, and what kind of contamination will be left in the river bed effecting homeowners? Is there sufficient funds to fully remove the dam and address the issues above?	<p>An evaluation of dam removal's impact on property value was completed as part of this study. This evaluation consisted of an extensive literature review of real dam removal scenarios that evaluated property value pre- and post- dam removal. The results of the study showed dam removal can have varying impacts on property value and that the primary drivers to the impact were: 1. quality of the current amenity (impoundment) vs quality of what it is replaced with (greenspace), and 2. How the community values the amenity.</p> <p>The preliminary sediment sampling has not shown any contamination. Additional sediment testing, as per EGLE requirements, would be conducted to confirm no contamination exists in the sediment prior to permitting and construction activities occurring.</p> <p>There is no funding in place currently for the alternatives, potential sources are cited in Appendix M.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
105	<p>1.HMCA's stated purpose for the dam purchase is "maintaining the impoundment and adjoining natural areas for recreational use". Why does HMCA no longer believe in preserving the impoundment? 2. In 1951 and 1986, Miller Canfield stated the Authority's obligation to "maintain the dam so as not to adversely affect the rights of nearby owners of river-front property". How does dam removal not make that a lie? 3. If the dam is removed, how will HMCA contain the toxins in the river silt that will become airborne when the river water is no longer containing it?</p>	<p>This question assumes action on one of the alternatives, for which no decision has been made.</p> <p>The Authority maintains its commitment to maintaining the impoundment and the adjoining natural areas for recreation use. This does not mean the Authority has made a commitment that the impoundment and surrounding natural areas will be maintained in the same configuration as they existed in 1951 or 1986. The Authority reserves its rights to review its decisions and priorities as facts change. If the impoundment is modified, the Authority will continue to maintain its property in a manner that serves the region by balancing environmental and ecological needs of the Huron River in a manner that minimizes impacts on the nearby owners of river-front property.</p>
106	<p>What type of rock will be used to build the dam? The moderator suggested limestone. Limestone will degrade and cause maintenance issues. What is the silt removal plan, upstream, to mitigate silt travel downstream?</p>	<p>The material used to build the rapids will be determined if it is selected as a feasible design option. Input from the owner, engineer, and contractor will determine the rock material and source. Limestone rock has been used on several rapids built throughout the Midwest with minimal degradation, including the Chesaning rapids in Michigan. The silt and overall sediment removal plan will also be determined based on the goals of the owner, the recommended approach from the engineer, the requirements of regulatory review, and contractor input. One advantage of building a rapids is water levels would be maintained at a similar elevation to the existing dam, which may lead to less sediment mobilized when compared to the dam removal.</p>
107	<p>To whom it may concern, 1. I am worried about the contaminated soil that will result from the removal of the dam. If the river dries up, all the chemicals will become airborne and it will be hazardous to our health. who will clean the mess? 2. The value of my property will go down considerably. Will I be compensated for my loss? 3. I may not be able to sell my house. Who would want to live with a swamp in their back yard? I am against total removal of the dam.</p>	<p>1. The preliminary sediment sampling has not shown any contamination. Additional sediment testing, as per EGLE requirements, would be conducted to confirm no contamination exists in the sediment prior to permitting and construction activities occurring. 2. This question assumes action on one of the alternatives. Any alternate design chosen may affect adjacent residences. Metroparks is responsible for Metroparks' property, property owners are responsible for theirs, there is no compensation for potential loss of value of private property. 3. Metroparks acknowledges this comment.</p>

Public Question Log from the Flat Rock Dam Draft Feasibility Study

No.	Question	Response
108	<p>As a resident living by the river, I would have great concerns about the effect on my property value of dam removal or reduction of the water level. Does the Metropark believe it is liable for compensation to river residents for loss of property values? In addition, it has been explained that the Metropark has riparian rights and will own any land between my property and the new river path. Is there is a possibility that the Metropark will block residents' access to the river? An even greater concern for me is the loss in quality of life and detrimental effect on the habitat of wading birds. On a typical day I can often view blue herons, egrets, sandhill cranes, cormorants as well as bald eagles and ospreys hunting in the shallow waters and marsh land. Once, I even spotted pelicans on a log in the river. It would greatly sadden me to no longer be able to view this diverse wildlife.</p>	<p>Metroparks is not liable for the change in private property values. The Metroparks will not block residents' access to the river, the Metroparks' property is public property. The suitable habitat for threatened and endangered (T/E) species onsite is largely restricted to the floodplain forest in the upstream reaches of the site. The options presented likely will not create more of this habitat, which takes many years to develop. However, creation of a natural river corridor and enhancement of the adjacent wetlands through native species plantings and exclusion of invasive species will provide general benefits for the T/E species and all species within the area.</p>