

White, April (elle, la | she, her) (ECCC)

yo Mike Acheson
12 pages

From: White, April (elle, la | she, her) (ECCC)
Sent: November 7, 2022 1:32 PM
To: MICHAEL ACHESON
Subject: Request for Project Review to seek permit advice
Attachments: MMM Dyke Repair Project Description.pdf

--# 248-251-0059

Hello Mike
I hope this note finds you well.

As per earlier conversations, attached is a completed application to request a "Project Review" by our federal Department of Fisheries and Oceans (DFO) to seek advice on permit requirements for the implementation of the dyke repairs proposed in the engineered drawings. I realize there may be some changes to the drawings however, the need for permits is will likely remain.

Submitting the application for a project review does not commit the applicant to eventual implementation; it is to seek advice.

As you will see, the application has been completed for you and it for your review and signature in Section F. The review and receipt of permit advice will likely take months to complete but it is a necessary step in the process. Once it is signed, kindly return and I can submit it along with the engineered drawings.

If you want to chat further, feel free to call.

April



Request for Review

Please note that Guidance on Submitting a Request for Review is available at the end of this form. This guidance explains the requirements for a Request for Review by DFO under the fish and fish habitat protection provisions of the *Fisheries Act*. All information requested must be provided. If you attach documents to your application with additional information, you must still provide appropriate summaries in the spaces provided on the application document or your application will be considered incomplete.

A) Contact information

Name of Business/Company:

MMM Marsh LLC

Name of Proponent:

Michael Acheson

Mailing address:

261 Maple Road

City/Town:

Birmingham

Province/Territory:

Michigan, United States

Postal Code:

48009

Tel. No. :

248-705-6164

Fax No.:

Email:

macheson@me.com

Select additional contact:

Contractor/Agency/Consultant (if applicable):

Dan Krutsch
Landmark Engineers Inc.

Mailing address:

2280 Ambassador Drive

City/Town:

Windsor

Province/Territory:

Ontario

Postal Code:

N9C 4E4

Tel. No. :

519-972-8052

Fax No.:

519-972-8644

Email:

dkrutsch@landmarkengineers.ca

Is the Proponent the main/primary contact? Yes No



If no, please enter information for the primary contact or any additional contact.

Paul Drca or Jackie Serran
Essex Region Conservation Authority
360 Fairview Avenue West, Suite 311,
Essex, Ontario N8M 1Y6
P. 519-776-5209 x356

B) Description of Project

If your project has a title, please provide it.

MMM Marsh Dyke Repair

Is the project in response to an emergency circumstance*? Yes No

Does your project involve work in water? Yes No

If yes, is the work below the High Water Mark*? Yes No

What are you planning to do? Briefly describe all project components you are proposing in or near water.

Upgrade the exterior dyke shoreline sufficiently to mitigate long-term erosion from the effects of waves (wind and vessel generated) and ice.

How are you planning to do it? Briefly describe the construction materials, methods and equipment that you plan to use.

Armour the outer shoreline of the dyke with sufficiently sized rock. Resistance to the effects of ice scour is the governing criteria for the selection of a suitable rock unit size for armouring the outer dyke shoreline. We recommend that the armour layer consist of well graded layer of rock ranging in weight per unit between 0.5 and 3.0 tonnes, with the majority of the material being in the 1.5 to 2 tonne range. Since the interior of the dyke is not exposed to significant wave action or flow ice, the size of rock comprising the interior shore protection can consist of measurably smaller units. We recommend that the armour layer consist of well graded layer of rock ranging in unit size between 300 and 600mm. All materials should also be placed on a bed of gabion stone underlain with geotextile fabric to prevent loss of dyke core soil. It is also recommend that the dyke be improved such that a minimum top width of 4 metres is achieved throughout its length. It is also recommend that the dyke be widened at its west termination as depicted in the design drawings. This will enhance the stability of the dyke as well as allow sufficient space to complete a turning maneuver with a small ATV. The proposed design, as well as typical repair sections, are illustrated in the design, approval and construction drawings. In addition, details regarding methodologies and materials are provided in the Construction Notes section of the attached construction drawings.

Include a site plan (figure/drawing) showing all project components in and near water.

Are details attached? Yes No

Identify which work categories apply to your project.

- | | |
|---|---|
| <input type="checkbox"/> Aquaculture Operations | <input type="checkbox"/> Log Handling / Dumps |
| <input type="checkbox"/> Aquatic Vegetation Removal | <input type="checkbox"/> Log Removal |
| <input type="checkbox"/> Beaches | <input type="checkbox"/> Moorings |
| <input type="checkbox"/> Berms | <input type="checkbox"/> Open Water Disposal |
| <input type="checkbox"/> Blasting / Explosives | <input type="checkbox"/> Piers |
| <input type="checkbox"/> Boat Houses | <input type="checkbox"/> Riparian Vegetation Removal |
| <input type="checkbox"/> Boat Launches / Ramps | <input type="checkbox"/> Seismic Work |
| <input type="checkbox"/> Breakwaters | <input checked="" type="checkbox"/> Shoreline Protection |
| <input type="checkbox"/> Bridges | <input type="checkbox"/> Stormwater Management Facilities |



- Cable Crossings
- Causeways
- Culverts
- Dams
- Dewatering / Pumping
- Docks
- Dredging / Excavation
- Dykes
- Fishways / Ladders
- Flow Modification (hydro)
- Groundwater Extraction
- Groynes
- Habitat Restoration
- Ice Bridges
- Surface Water Taking
- Tailings Impoundment Areas
- Temporary Structures
- Turbines
- Water Control Structures
- Water Intakes / Fish Screens
- Water Outfalls
- Watercourse Realignment
- Weirs
- Wharves
- Wind Power Structures
- Other Please Specify

Was your project submitted for review to another federal or provincial department or agency? Yes No

If yes, indicate to whom and associated file number(s).

C) Location of the Project

Coordinates of the proposed project Latitude N Longitude W

OR UTM zone ; Easting
 Northing

Include a map clearly indicating the location of the project as well as surrounding features.

Name of Nearest Community (City, Town, Village):

Municipality, District, Township, County, Province:

Name of watershed (if applicable):

Name of watercourse(s) or waterbody(ies) near the proposed project:

Provide detailed directions to access the project site:

From the intersection of Sandwich St. S. and Simcoe St. (the centre of the Town of Amherstburg), travel 9.7 km north on Sandwich St. S. (Essex County Rd 20). Access laneway onto Essex County Rd, 20 is located at address: 2272 Front Rd. N. Google Maps Link: <https://www.google.com/maps/place/2272+Front+Rd+N,+Amherstburg,+ON+N9V+2Y7/@42.1819045,-83.0986605,17z/data=!3m1!1e3m4!1s0x883b3aa15d6e2f4b:0xbbed23cfc73c97e8!8m2!3d42.1819005!4d-83.0964718>

D) Description of the Aquatic Environment



Identify the predominant type of aquatic habitat where the project will take place.

- Estuary (Estuarine)
- Lake (Lacustrine)
- On the bank/shore at the interface between land and water (Riparian)
- River or stream (Riverine)
- Salt water (Marine)
- Wetlands (Palustrine)

Provide a detailed description of biological and physical characteristics of the proposed project site. This description should include information on aquatic species at risk* (<https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>), their residence* and critical habitat* if found in the area. An overview of the distribution of aquatic species at risk and the presence of their critical habitat within Canadian waters can be found here <http://dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html>

The proposed project consists of an in-water 'finger dyke' which extends into the Detroit River, which has been subjected to erosion. The dyke is critical in the protection of an extensive bed of submerged aquatic vegetation (SAV), which is protected from the flows and sediment of the main Detroit River channel by this dyke. Critical habitat for Pugnose Minnow (Threatened) is found within the project area. In addition, the following aquatic species at risk may also potentially be found within the project area: Channel Darter (Endangered), Northern Sunfish (Special Concern) and Spotted Sucker (Special Concern).

Include representative photos of affected area (including upstream and downstream area) and clearly identify the location of the project.

E) Potential Effects of the Proposed Project

Have you reviewed the Pathways of Effects (PoE) diagrams (<http://www.dfo-mpo.gc.ca/pnw-ppe/pathways-sequences/index-eng.html>) that describe the type of cause-effect relationships that apply to your project?

- Yes No

If yes, select the PoEs that apply to your project.

- | | |
|---|--|
| <input type="checkbox"/> Addition or removal of aquatic vegetation | <input checked="" type="checkbox"/> Placement of material or structures in water |
| <input type="checkbox"/> Change in timing, duration and frequency of flow | <input type="checkbox"/> Riparian Planting |
| <input type="checkbox"/> Cleaning or maintenance of bridges or other structures | <input type="checkbox"/> Streamside livestock grazing |
| <input type="checkbox"/> Dredging | <input type="checkbox"/> Structure removal |
| <input type="checkbox"/> Excavation | <input type="checkbox"/> Use of explosives |
| <input type="checkbox"/> Fish passage issues | <input type="checkbox"/> Use of industrial equipment |
| <input type="checkbox"/> Grading | <input type="checkbox"/> Vegetation Clearing |
| <input type="checkbox"/> Marine seismic surveys | <input type="checkbox"/> Wastewater management |
| <input type="checkbox"/> Organic debris management | <input type="checkbox"/> Water extraction |
| <input type="checkbox"/> Placement of marine finfish aquaculture site | |

Will there be changes (i.e., alteration) in the fish habitat*? Yes No Unknown

If yes, provide a description.

The fish habitat, consisting of the extensive bed of submerged aquatic vegetation (SAV) created by the existing dyke, will be protected and enhanced by the completion of the dyke repairs. Reduced sedimentation and a reduction in potentially detrimental water flows will result from the proposed protection works. Therefore, the alteration in the existing fish habitat is not a harmful alteration but a beneficial alteration, increasing the protection and quality of the existing fish habitat.

Is there likely to be a harmful alteration, disruption or destruction of habitat used by fish? Yes No Unknown

Is there likely to be destruction or loss of habitat used by fish? Yes No Unknown



What is the footprint (area in square meters) of your project that will take place below the high water mark*?

[Empty text box]

Is your project likely to change water flows or water levels? Yes No Unknown

If your project includes withdrawing water, provide source, volume, rate and duration.

N/A

If your project includes a water control structure, provide the % of flow reduction.

N/A

If your project includes discharge of water, provide source, volume and rate.

N/A

Will your project cause death of fish? Yes No Unknown

If yes, how many fish will be killed (for multi-year project, provide average)? What species and lifestages?

[Empty text box]

What is the time frame of your project?

The construction will start on and end by

If applicable, the operation will start on and end by

If applicable, provide schedule for the maintenance

N/A

If applicable, provide schedule for decommissioning

N/A

Are there additional effects to fish and fish habitat that will occur outside of the time periods identified above? Yes No

(If yes, provide details)

[Empty text box]

Can you follow appropriate Timing Windows (<http://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/index-eng.html>) for Yes No all your project activities below the High Water Mark*?

(If no, provide explanations.)

[Empty text box]

Have you considered and incorporated all options for redesigning and relocating your project to avoid negative effects to fish and fish habitat?

Yes No

If yes, describe.

There are no other options to the repair of an existing dyke which protects existing SAV fish habitat.



Have you consulted DFO's Fish and Fish Habitat Protection Measures Habitat (<https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html>) to determine which measures apply to your project? Yes No

Will you be incorporating applicable measures into your project? Yes No

If yes, identify which ones. If No, identify which ones and provide reasons.

The project will: respect timing windows to protect fish; implement an efficient implementation schedule; monitor for signs of sedimentation; maintain all machinery on site in a clean condition and free of fluid leaks to prevent any deleterious substances from entering the water; wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water; implement work stoppage if dead fish are observed.

Have you considered whether DFO standards and codes of practice apply to your project? No Yes

If Yes, include a list.

We have reviewed whether any of the DFO standards and code of practice apply to our project and have concluded that none apply.

Have you considered other avoidance and mitigation measures? No Yes

If Yes, include a list.

Are there any relevant measures that you are unable to incorporate? Yes No

(If yes, identify which ones.)

What harmful effects to fish and fish habitat do you foresee after taking into account the avoidance and mitigation measures described above?

None.

Do these include effects on aquatic species at risk*? Yes No

If yes, please describe, including how many individuals will be harmed, harassed, or otherwise affected by the project, and how?

None.

Do these include effects on areas identified as their residence or critical habitat? Yes No

If yes, please describe

Critical habitat will be protected and enhanced by the project. If the project is not completed, further erosion of the dyke will continue threatening the existing SAV fish habitat, which eventually will result in the loss of this habitat.

Are there any aquatic invasive species in the vicinity of your project area? Yes No

(If yes, identify which ones.)

Does your project aim to, or will it be likely to, effect any of these aquatic invasive species? Yes No

If yes, how?



F) Signature

I, Mike Acheson (print name) certify that the information given on this form is to the best of my knowledge, correct and completed.

Signature

MM/DD/YYYY 12/05/2022
Date

Information about the above-noted proposed work or undertaking is collected by DFO under the authority of the *Fisheries Act* for the purpose of administering the Fish and Fish Habitat protection provisions of the *Fisheries Act*. Personal information will be protected under the provisions of the *Privacy Act* and will be stored in the Personal Information Bank DFO-PPU-680. Under the *Privacy Act*, individuals have a right to, and on request shall be given access to any personal information about them contained in a personal information bank. Instructions for obtaining personal information are contained in the Government of Canada's Info Source publications available at www.infosource.gc.ca or in Government of Canada offices. Information other than "personal" information may be accessible or protected as required by the provision of the *Access to Information Act*.

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*



Guidance on Submitting a Request for Review

This document explains the requirements for a Request for Review by DFO under the fish and fish habitat protection provisions of the *Fisheries Act*. To determine whether you should request a review, visit DFO's Projects Near Water webpage (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>).

Incomplete Requests for Review will be returned to the applicant without review by DFO. All information requested must be provided. If you attach documents to your application with additional information, you must still provide appropriate summaries in the spaces provided on the application document or your application will be considered incomplete.

Section A: Contact Information

Provide the full legal name of the proponent and primary mailing address for the proponent. When the proponent is a company, identify the full legal registered name of the company.

If applicable, also provide the contact information of the duly authorized representative of the proponent. Please note that a copy of correspondence to Contractor/Agency/Consultant will also be sent to the Proponent.

Section B: Description of Project

This information is meant to provide background about the proposed project. All components of the proposed project in or near water, must be described.

Proponents should provide information about all appropriate phases of the project, i.e., the construction, operation, maintenance and closure phases for the proposed project.

All details about the construction methods to be used, associated infrastructure, permanent and temporary structure, structure type (e.g. corrugated steel pipe vs box culvert), structures dimension, building materials to be used, machinery and equipment to be used must also be provided. For example, the construction of permanent structures may require the construction of temporary structures such as temporary dikes, in conjunction with other associated activities like the withdrawal of water, land clearing, excavation, grading, infilling, blasting, dredging, installing structures, draining or removing debris from water. Similarly, the equipment and materials to be used may include hand tools, backhoes, gravel, blocks or armor stone (provide the average diameter), concrete (indicate if pre-cast or poured in-water), steel beams or wood.

When physical structures in or near water are proposed, provide the plan and specifications of those works which would require a review.

Section C: Location of the Project

The purpose for this information is to describe and illustrate the location of the proposed project, and to provide geographical and spatial context. The information should also facilitate an understanding of how the project will be situated in relation to existing structures.

The details to be provided must include:

- Coordinates of the project (e.g., Latitude and Longitude or Universal Transverse Mercator Grid coordinates);
- A map(s), site plan, or diagrams indicating the high water mark and the location, size and nature of proposed and existing structures (e.g., floating or fixed), landmarks and proposed activities. In a marine setting, it may be helpful to depict the approximate location of the proposed development on a nautical chart or showing the relation of the site to sea marks or other navigational aids. These plans, maps or diagrams should be at an appropriate scale to help determine the relative size of the proposed structures and activities, the proximity to the watercourse or waterbody and the distance from existing structures;
- The community nearest to the location of the proposal as means to provide a general reference point. When possible, proponents should use geographical names recognized by the Geographical Names Board of Canada (<http://www.nrcan.gc.ca/earth-sciences/geography-boundary/geographical-name/11680>).
- If available, provide aerial photographs or satellite imagery of the water source(s) and waterbody(ies);
- Names of the watershed(s), water source(s) and/or waterbody(ies) likely to be affected by the proposal; and
- Brief directions to access the proposed project site.



Section D: Description of the Aquatic Environment

Proponents must describe the environmental context and aquatic resources present at the proposed site. The information must identify the current state of the fish and fish habitat prior to the carrying on of the project.

It is important to include information about the fish species present, the biological, chemical, physical features present (habitat characteristics), and the fish life-cycle functions (fish characteristics).

The spatial scope for assessing fish and fish habitat should encompass the direct physical footprint of the project, and the upstream and downstream areas affected.

As an example, the following is a non-exhaustive and non-prescriptive list of some common attributes which may characterize the aquatic environment:

- Type of water source or watercourse (groundwater, river, lake, marine, estuary, etc.);
- Characteristics of the water source or waterbody could include:
 - Substrate characterization - describe the types of substrate (e.g., bedrock, boulder, cobble, gravel etc.), identify the predominant substrate type (e.g., 80% cobble, 20% gravel etc.) and provide maps of the substrate;
 - Aquatic and riparian vegetation characterization - identify the prevalent types of vegetation (e.g. rooted, submerged, emergent, etc.), identify the relative abundance of the vegetation (e.g., 10% cattails, 80% grass, 10% sedge) , indicate the predominant vegetation (e.g., by species or types) and identify the vegetation densities (e.g., type of vegetation/ area);
 - Flow characterization - specify if the flow is controlled or if it is natural, identify if the flow is permanent or intermittent, identify the current and tide (marine environment) etc.;
 - Physical waterbody characterization - identify the average depth of water for water bodies, identify bathymetry of water bodies, provide bathymetric maps where available, channel width (determine the width of the channel from the high water mark), slope ;
 - Water quality characterization - (e.g., annual or average pH, salinity, alkalinity, total dissolved solids, turbidity, temperature etc.);
 - Biological water quality characterization - (e.g., benthic macro-invertebrates, zooplankton, phytoplankton, etc.)
- Fish species characterization - identify the fish species (including molluscs, crustaceans, etc.) known or suspected to be in the area, predator prey relationships etc. Identify what source of information was used to determine the presence of fish in that area; and
- Estimate the fish abundance - estimate the number of fish present, estimate the year class for each species etc.

There are many different methods and attributes available to characterize fish and fish habitat. Proponents must describe all sources of information used, all fish and environment sampling techniques used, all modelling techniques used and all other approaches used to define the fish and fish habitat. Proponents are encouraged to use recognized fisheries inventory methods such as those approved by DFO or provinces and territories, and/or scientifically defensible methodologies and techniques whenever possible.

Whenever possible, proponents should support descriptions of the aquatic environment with the use of detailed drawings, such as plans or maps and photographs of the habitat features. In an offshore marine setting, photos may not be useful to depict the proposed development site. Instead describe and/or sketch the specific features of the sea floor which may include the presence of submarine features such as canyons, cliffs, caverns, etc.

Section E: Potential Effects of the Proposed Project

The objective of this section is to identify all anticipated effects on fish and fish habitat likely to be caused by the project. Proponents should consider all mitigation or avoidance techniques.

The description must include qualitative and/or quantitative information about the predicted/potential effects to fish species and fish habitat. Some examples of likely effects may include mortality to fish, area of habitat loss, change to flow, changes to habitat function, reduction in prey availability etc.



The spatial scope of the aquatic effects assessment would include the direct physical "footprint" of the proposed project, and any areas indirectly affected, such as downstream or upstream areas. The footprint of each component of the project below the higher water mark should be provided individually. This may also include areas in or on the water, on the shoreline, coast or bank(s) (i.e., in the riparian zone).

The assessment must include the following attributes:

- Identification of all fish species affected by the proposed project as well as their life stages (e.g., juvenile, yearling, adult, etc.);
- Identification of the type of fish habitat affected (e.g., spawning habitat - gravel and cobble, feeding and rearing areas - side channel slough, small tributaries, etc.), estimate of the affected area (e.g., square meters or hectares);
- Description of the effect (e.g., mortality to fish from entrapment, delayed migration of spawning adults, reduction in prey availability, etc.)
- Probability of the effect - this is the likelihood of the effect occurring (e.g., probability of fish strike from turbines for specific fish sizes, probability of sediment plume within a distance from source, etc., or qualitative assessment: low, medium, high)
- Magnitude of the effect - this is the intensity or severity of the effect (e.g., total number of fish affected, or qualitatively assessment: low, medium, high).
- Geographic extent of the effect - this is the spatial range of the effect (e.g., localized to 100m from the work, channel reach or lake region, entire watershed etc.); and
- Duration of the effect - this is the temporal period for which the effect will persist (e.g., duration of delay to fish migration in hours, days, months or years).

The information to be provided must also describe the methods and techniques used to conduct the assessment. As much as possible, methods and techniques used should be scientifically defensible.

The schedule should, at minimum, identify the proposed start and end dates for carrying out each proposed activity, and where applicable, identify the respective phase of the proposal; i.e., the construction, operation, maintenance and closure phases. In some cases, in order to provide additional context, it may be relevant to identify other information such as the expected life span of permanent and temporary structures.

Proponents must provide comprehensive information about all available measures that are proposed to avoid or mitigate potential harmful alteration, disruption or destruction of fish habitat, or death of fish (e.g., in standards or codes of practice).

Residual harmful impacts that remain after the application of such measures.

It is important to clearly describe and quantify harmful impacts because DFO will use this information as part of its decision making on whether harmful alteration, disruption or destruction of fish habitat or death of fish is likely and an authorization is required under subsection 35(2)(b) or 34.4(2)(b) of the *Fisheries Act*.

Section F: Submission and Signature

The proponent must sign their application. A signed original of the Request for Review must be provided to the regional DFO office (<http://www.dfo-mpo.gc.ca/pnw-ppe/contact-eng.html>), even if an electronic copy was sent by email. Should the review of your project indicate that harmful alteration, disruption or destruction of fish habitat or death of fish is likely, the information provided in the Request for Review document can be referred to in the subsequent application for an authorization under Paragraphs 35(2)(b) or 34.4 of the *Fisheries Act*.

Section G: Definitions

Aquatic Species at Risk: an extirpated, endangered, threatened species, or a species of special concern. A non-exhaustive list of aquatic species at risk found in Canadian waters can be found here (<http://www.dfo-mpo.gc.ca/species-especes/sara-lep/identify-eng.html>).

Aquatic Species at Risk Critical Habitat

the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species critical habitat in the recovery strategy or in an action plan for the species.



Aquatic Species at Risk Residence: the specific dwelling place, such as a den, nest or other similar area or a place that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding, or hibernating.

Aquatic invasive species: are fish, invertebrate or plant species that have been introduced into a new aquatic environment, outside of their natural range. Once introduced, aquatic invasive species populations can grow quickly because they don't have natural predators in their new environment. As a result, they can outcompete and harm native species. They can even alter habitats to make them inhospitable for the native species. A non-exhaustive list of aquatic invasive species can be found here (<http://www.dfo-mpo.gc.ca/species-especes/ais-eae/identify-eng.html>).

Emergency circumstance: If your project must be conducted in response to an emergency, you may apply for an Emergency Authorization. The emergency situations are:

- The project is required as a matter of national security
- The project is being conducted in response to a national emergency where special temporary measures are being taken under the federal *Emergencies Act*
- The project is required to address an emergency that poses a risk to public health or safety or to the environment or property.

Fish habitat: means habitat that can directly or indirectly support life processes. This includes but is not limited to: spawning grounds, nursery, rearing, food supply and migration areas.

Harmful alteration, disruption or destruction means any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes of fish.

High Water Mark: The usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to leave a mark on the land.