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## APPENDIX E

### Evaluation of Existing Administrative Controls

## Executive Summary

Peninsula Harbour is located in the north shore of Lake Superior. The nearest communities in Peninsula Harbour are the Town of Marathon and the Ojibways of Pic River First Nation. Elevated levels of Mercury and PCB are found in the sediment in Jellicoe Cove. The selected management option to address the risks posed by these contaminants was to place a 15 to 20 cm sand cap down on the most contaminated areas.

The objectives of the Peninsula Harbour Contaminated Sediment Management Project (Project) are:

- To reduce risk to biota from contaminated sediment in Jellicoe Cove thus reducing bioaccumulation into the food chain;
- To reduce the spread of contaminated sediment from Jellicoe Cove to the rest of Peninsula Harbour;
- To expedite the natural recovery of Jellicoe Cove which will contribute to “delisting” as an Areas of Concern (AOC) identified in the *Great Lakes Water Quality Agreement between Canada and the United States*.

This evaluation document assesses the efficacy of the existing administrative controls to regulate future activities in and around the cap.

The evaluation includes the following *questions*:

- 1) Are effective administrative controls currently in place?
- 2) What types of activities pose the greatest disturbance?
- 3) Which agencies are involved in administering these controls?
- 4) Are there any activities which are not presently controlled?
- 5) Can we improve the current process?

This report concludes that:

- 1) Effective administrative controls are currently in place.
- 2) Dredging activities pose the greatest disturbance risk.
- 3) The following agencies are involved in administrative controls in Peninsula Harbour: Ontario Ministry of Natural Resources, Ontario Ministry of the Environment, Department of Fisheries and Oceans, Transport Canada, Environment Canada.
- 4) The current process is sufficient.

There are many regulations that govern future works in Jellicoe Cove. The list of applicable regulations is presented in Table 2. Some examples include:

- The Public Lands Act administered by Ontario Ministry of Natural Resources (MNR) requires work permits for:
  - Construction of a building on public land;
  - Construction of a trail, road and water crossings on public lands;

- Dredging of shore lands (includes both Crown and private land);
  - Filling of shore lands;
  - Removal of aquatic vegetation from specific shore lands; and
  - Construction on shorelines that occupies more than 15 square metres.
- The Fisheries Act administered by Fisheries and Oceans Canada (DFO) requires an authorization for activities that may harmfully alter, disturb, or destruct fish habitat.
- The Navigable Waters Protection Act administered by Transport Canada (TC) requires a permit for work that is built or placed in, on, over, under, through or across navigable water in Canada. MNR, DFO and TC will take the presence of contaminated sediment and the thin-layer cap into account prior to permitting any development in this area.

Anyone wishing to undertake physical work in the cap area must submit appropriate applications to relevant agencies.

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## **1 Objective**

The purpose of this report is to assess the effectiveness of existing administrative controls (policies, standards, procedures and guidelines) to regulate future activities in Jellicoe Cove, Peninsula Harbour. The report is based on discussions between government agencies and stakeholder groups (see Section 2 for a list of participants). These discussions focused on approaches to control future human activities that may disturb the cap and the contaminated sediment. The intent of the report is to:

1. identify the types of activities that occur along the shoreline or in the water that could disturb sediment, including the thin-layer cap;
2. evaluate the ability of existing administrative control mechanisms to regulate these potentially harmful actions; and
3. if necessary, develop recommendations for additional tools to control activities with the potential to significantly disturb contaminated sediment.

## **2 Geographic Scope**

The location of Peninsula Harbour is shown in Figure 1. The geographic scope of this document is limited to the boundary of the thin layer cap in Jellicoe Cove as indicated Figure 2.

The main area of the cap is located south of Skin Island in Jellicoe Cove. Marathon Pulp Inc. (MPI) owns part of the waterlot in Jellicoe Cove as identified in red in Figure 2. Most of the cap area is Crown land administered by MNR.

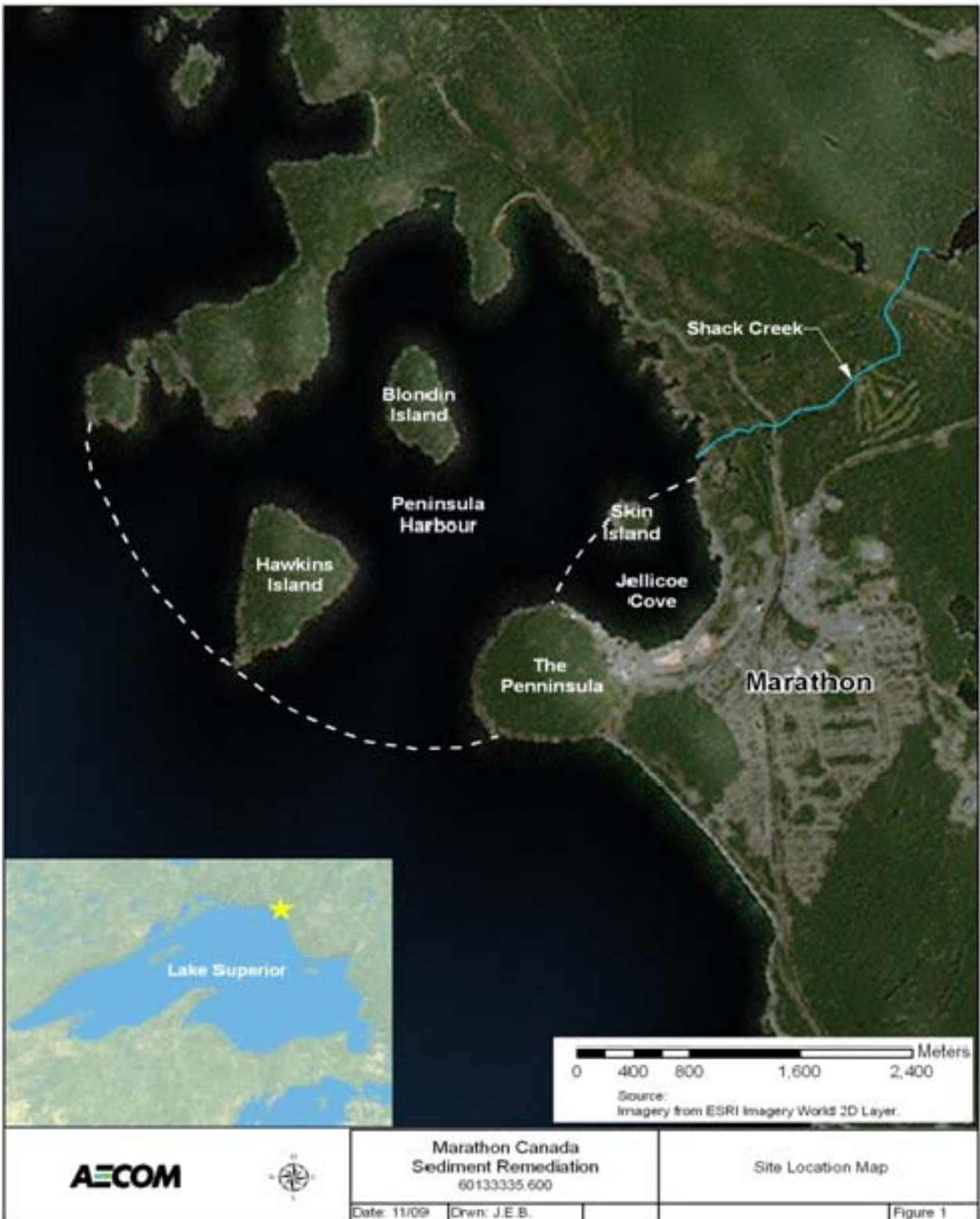


Figure 1. Area of Peninsula Harbour

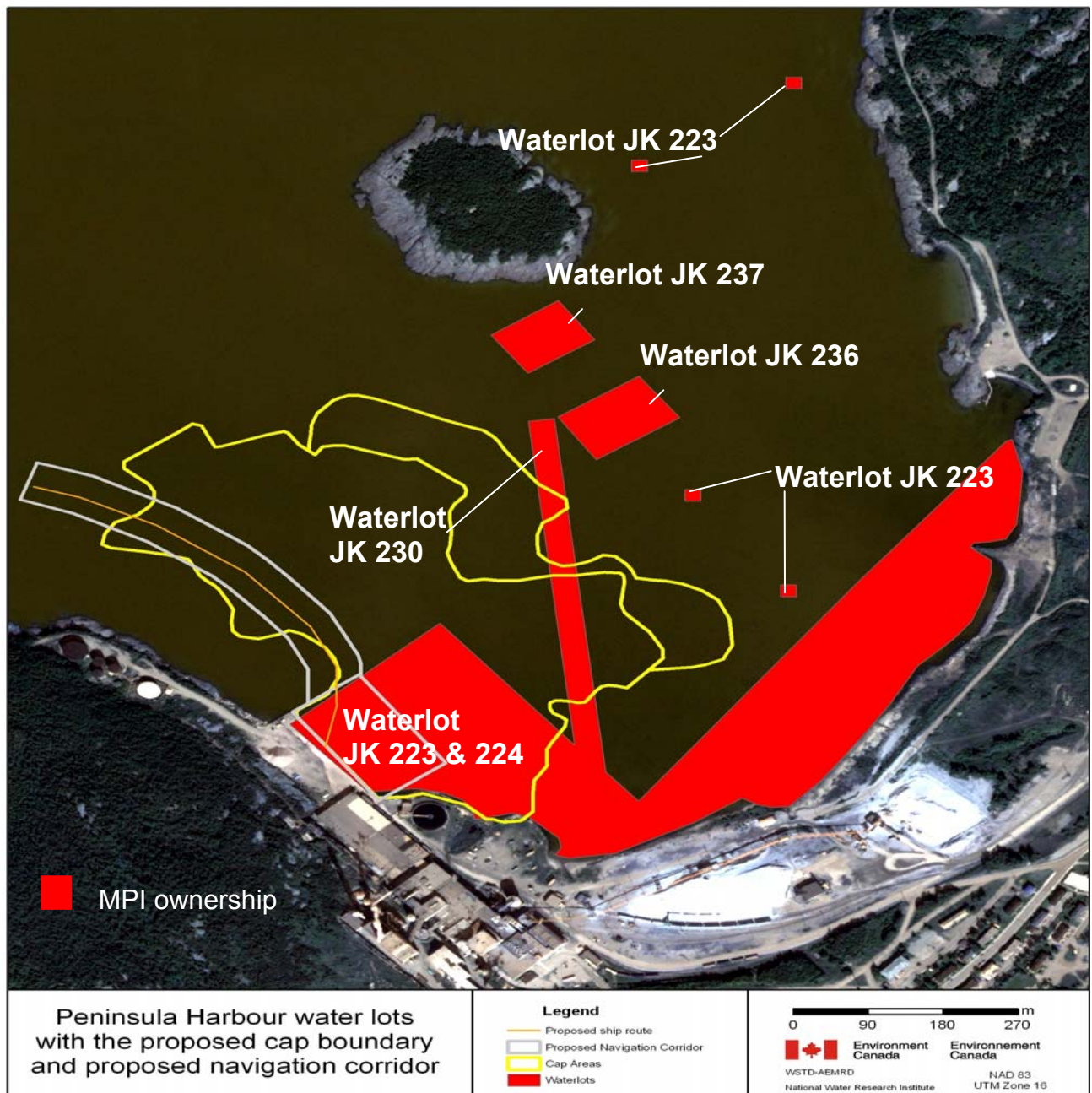


Figure 2: Capping Area and Waterlot Status in Jellicoe Cove (For Illustration Only)

### 3 Participating Parties

The following are the regulatory agencies and stakeholders that may govern/participate in the aforementioned approval, permitting and planning processes:

- Ontario Ministry of Natural Resources (MNR) – First Point of Contact
- Ontario Ministry of the Environment (MOE)



- Department of Fisheries and Oceans (DFO)
- Transport Canada (TC)
- Environment Canada (EC)
- Ojibways of Pic River First Nation
- Town of Marathon

#### First Point of Contact - MNR

The primary contact for proponent to obtain information on the site before submitting permit and/or authorization applications will be MNR. The information pertaining to the contaminated sediment and the thin layer cap placement will be housed in the MNR database system, Natural Resources Values Information System (NRVIS). As MNR is the administrator of the Crown lands in Jellicoe Cove, activities listed in Table 2 will require a permit under the Public Lands Act. More details are provided in Table 2.

As the first point of contact, MNR will inform the proponent of site history and any environmental concerns from the proposed project. MNR will assist the proponent through the permitting and planning processes of various government agencies and help guide the proponent in relocating/redesigning the project/remediating the site to minimize potential environmental concerns.

The proponent must submit applications to MNR, DFO, TC and others as required, and will be responsible for all costs, including engineering and if necessary, removal, handling and disposal of the contaminated sediment.

## 4 Guiding Principles

The following principles will guide the decisions of the parties when reviewing all in-water development activities that may potentially impact the cap in Jellicoe Cove:

- Prevent Disturbance - There must be no **significant** disturbance, exposure or resuspension of contaminated sediments.
- Mitigate Impacts of Public Infrastructure and Utility Projects - Public infrastructure and utility projects that cannot be relocated nor redesigned and may potentially disturb contaminated sediment must have a remediation plan that indicates how contaminated sediment will be removed, handled and disposed of in a safe and environmentally protective manner.

- Monitor and Mitigate Impacts of Emergency and Disaster Situations - When emergency and disaster situations occur within the geographic scope of this guidance document, the impacts must be monitored and appropriate actions taken to mitigate further disturbance to the cap and the contaminated sediment.
- Proponent is Responsible for Worker Safety and Costs - The proponent of any activity is responsible for worker safety and all costs associated with the administrative controls process, including engineering reports and the removal, handling and disposal of contaminated sediment.
- Decision-Making Process - All parties will apply the following Decision-Making Process to review in-water use/development activities.

## 5 Decision-Making Process

All projects and activities proposed in the footprint of the thin layer cap must be reviewed in consideration of the following principles:

- In the order of precedence, regulatory organizations/applications must consider **RELOCATION, REDESIGN, or REMEDIATION**;
- No development or activity may impede future remedial measures to address contaminated sediments; and
- Projects that cannot be relocated or redesigned and may potentially disturb the cap and contaminated sediments must have a remediation plan that indicates how all contaminated sediments, within the full extent of the affected area will be handled, removed and disposed of in a safe and environmentally protective manner.

It is important to note that proponents are responsible for costs associated with following the administrative control processes, as required, for their application. Please see Figure 3 for the decision making framework.

All parties will apply the following Decision-Making Process to review in-water use/development activities:

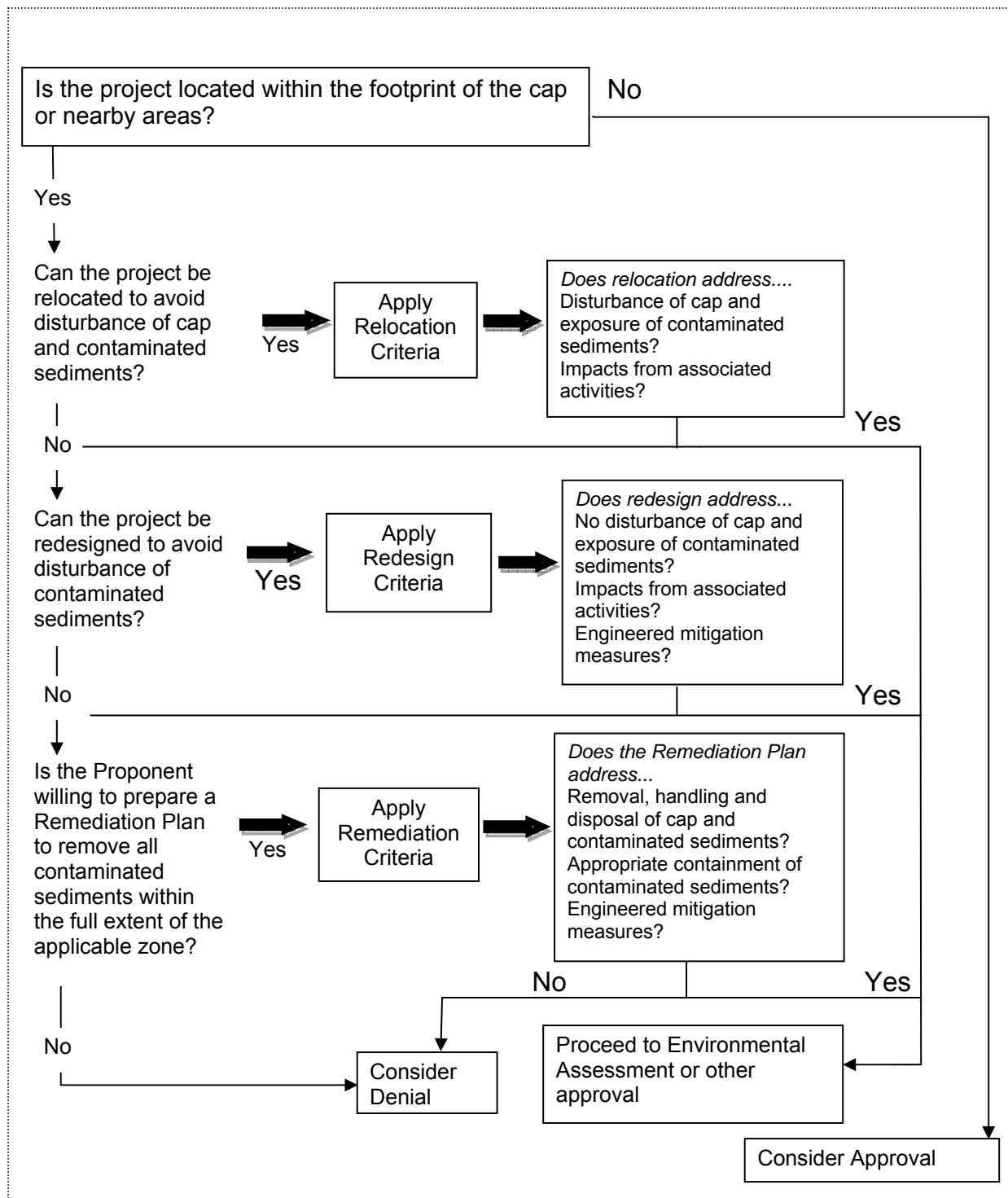


Figure 3 Decision Making Process

## 6 Review of Existing Administrative Controls

Administrative controls are permits and approval processes that regulatory agencies use to control development and other human activities.

Table 2 outlines the applicable administrative controls that may apply to future projects. Note that currently, there are no municipal by-laws that govern activities in Peninsula Harbour (<http://www.marathon.ca/article/bylaws-223.asp>, May 19, 20011).

### 6.1 Assessing the Risks of Activities

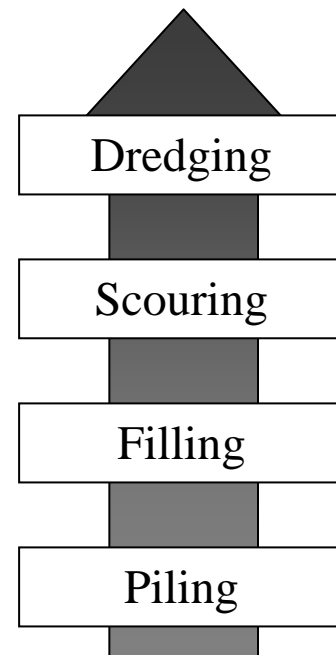
As the complexity of each development scenario varies by the type of actions that would be required, it is difficult to predetermine the associated risks. However, it is possible to provide a general assessment of the activities that would result in a higher risk than others to the cap and contaminated sediment.

The following is a simple qualitative analysis of potential risk arising from in-water activities—a detailed assessment of proposed in-water activities would be required as part of the review process. The intent of the analysis is to outline whether certain activities pose a high, medium or low risk of disturbance to the cap and contaminated sediment. This analysis is based on the following assumptions:

- Risk is significantly increased when dredging occurs.
- Risk is significantly increased when more than one in-water activities occur.
- Thin layer cap is providing enhanced natural recovery and as such, mixing will not affect the overall integrity of the thin layer cap in Jellicoe Cove.

Please note, a detailed assessment of in-water activities has not been undertaken in this exercise. Detailed assessment will be conducted during the application review process by the respective agencies.

**MOST** likely to disturb



**LEAST** likely to disturb

**Figure 4: Degree of Disturbance Resulting from Specific Actions.**

## **6.2 Actions that Disturb Cap**

Disturbance to the cap and the underlying contaminated sediment can result from human development and from natural activities. Figure 4 identifies four general actions that may affect the cap's integrity.

The details of each action are described below:

- 1) Dredging (excavation) physically alters the integrity of the thin layer cap through the removal of the capping materials. Dredging is generally performed to clear or deepen the harbour bottom, or to prepare an area for the placement of a structure (e.g. pipelines or foundation). Appropriate mitigation measures are required to reduce the risk of uncovering the contaminated sediment through permanent removal of the capping material.
- 2) Scouring (incidental disturbance) – means moving, scraping, or eroding the top layer of the harbour bottom by such activities as dragging an object on the bottom of the harbour. This action moderately increases the potential to expose contaminated sediment depending on the width and depth of the trough that is created.
- 3) Filling (covering) – refers to the physical alteration of the harbour bottom by covering the capped area with soil, sediment, concrete, cribs or any other material. This action by itself may result in a minimal and incidental re-suspension of the capping material and of the contaminated sediment. However, due to the sudden force of material being dropped onto the capped harbour bottom, the affected area could experience re-suspension of the capping material and contaminated sediment, potentially resulting in the exposure of the underlying contaminated sediment below.
- 4) Piling (vibration) – means the driving of a beam or post into the harbour bottom, the purpose of which is to attach something to the top of the beam, such as a dock. The beam is often referred to as the pile. This action only slightly increases the risk of disturbing the cap/sediment through the vibration or movement of the pile into the substrate.

As an example, building a new industrial pier could include all four actions (dredging, scouring, filling, and piling) while the construction of a single residential dock may only involve one action (piling). Each action has a varying potential to remove the capping material and expose the contaminated sediment. Activities that occur on land are less likely to disrupt the cap integrity than the activities that occur nearby in the water. The duration, location and the extent of the action will also affect the likelihood of disturbance to the cap. Based upon qualitative and best professional judgement, it is generally assumed that the physical removal (i.e. dredging) has the greatest potential to disturb the thin layer cap.

### **6.3 Categories of Development Activities**

Activities have been categorized into four groups: Public Works and Utilities, Private Construction and Development, Boating and Shipping, Recreational Activity and Others. Any one of these activities may involve a combination of the four aforementioned general actions.

**Public Works and Utilities:** Development activities conducted by public works or utilities are usually done in conjunction with federal, provincial and municipal approvals, where applicable and are subject to an Environmental Assessment Process by triggering either the Canadian Environmental Assessment Act or the Ontario Environmental Assessment Act. These activities often involve the provision of a public service such as a bridge, highway, telephone or gas pipeline that result in a benefit to the general public. Public works and utilities related activities may occur in the harbour and on adjacent shores.

**Private Construction and Development:** This type of activity typically involves a private company or interest that is constructing infrastructure for their own purpose. These types of developments can include the construction of private buildings and structures and often involve all four types of actions (i.e. dredging, scouring, filling and piling). These activities may occur in both the water and on the adjacent shore lands and can be major or minor in nature (e.g. residential docks). Private construction and development may trigger an environmental assessment and other regulatory processes under the Canadian Environmental Assessment Act or the Ontario Environmental Assessment Act.

**Commercial Shipping and Recreational Boating:** This activity includes both commercial shipping and recreational boating. Commercial shipping could take place at the former Marathon Pulp Inc. (MPI) dock assuming the dock has been inspected for safe operation and navigation, as large commercial vessels have berthed at this dock for loading and unloading of goods during the mill's operation. Recreational boating is currently active in this area. A small public dock is located across the cove from the MPI dock. Potential impacts from ships and boats include: propeller wash, anchoring, change in navigational channels and shipping lanes, and increasing the depth of channels to improve navigation.

**Recreational Activities:** Recreational activities may include swimming, fishing and scuba-diving. The impact of these activities to the cap will be minimal.

**Other.** Other events that could increase the risk of disturbing the thin layer cap include:

- Natural disasters (i.e. earthquake)
- Climate change (i.e. leading to a drop in water level (>1m), or changes in water flow patterns)

It is not feasible to anticipate these “other events”, and there are no specific controls over them. Mitigation measures may be required following any one of these events. Studies on the thin layer cap concluded that the integrity of the cap will be maintained under normal conditions (wave heights  $\leq 6.4$  m).

## 6.4 Scenario Review

Many development activities have the potential to affect the stability of the thin layer cap and the underlying contaminated sediment. Analyzing situations which have the potential to occur within Jellicoe Cove area helps to:

- recognize legislative triggers and processes;
- assess the effectiveness of the administrative controls currently in place; and
- identify gaps in current administrative control processes.

The following table describes some in-water activities, their corresponding actions, and risk to the cap:

Table 1. Activities, actions, and risk to cap and exposure of contaminated sediments

Activities	Potential Actions	Risk to Cap
Repair/Expand the MPI dock	P, F, D	Med to High
Dredging to increase water depth at MPI	D	High
Re-development/Repair of the Intake	P, F, D	Med to High
Anchoring*	S	Low to Med
Wind power testing	P, F, D	Med to High
Remediation of emergency spills/Spill Response	D, F	Med to High

P: Piling  
F: Filling  
S: Scouring  
D: Dredging

\* A request will be made to Transport Canada to mark/identify the cap area as "thin layer capped area (contaminated sediment)" on hydrographical charts to ensure the public is aware of the presence of the cap *and* to reduce loss and *removal from anchoring*.

## 7 Summary of Administrative Controls

Table 2 summarizes the permitting requirements and assessment processes that may apply to future activities in Jellicoe Cove. It also describes in detail when such authorizations or permits may be required.

**Table 2 Permit and Planning Requirements and Regulatory Agencies**

<b>Permit Requirements/Assessment Process</b>	<b>Legislation and Administration</b>	<b>Applications</b>
Habitat Alteration, Disturbance and Destruction Authorization (HADD)	Fisheries Act by Fisheries and Oceans	An authorization is required to undertake activities that may alter/disturb/destroy fish habitat
Navigable Waters Protection Act (NWP) Approval	Navigable Waters Protection Act by Transport Canada	A permit is required to undertake activities that may affect navigable waters in Canada
Endangered Species Act Authorization	Endangered Species Act by Ministry of Natural Resources	<p>When a species is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species, the habitat of that species is protected. Permits to move species at risk individuals and/or encroach on their habitat may be provided, which may contain conditions and/or be amended or revoked. This permit authorizes a person to engage in an activity specified in the permit that would otherwise be prohibited by section 9 or 10 (2007, c. 6, s. 17 (1)) such as an activity:</p> <ul style="list-style-type: none"> <li>I. Necessary for the protection of human health or safety;</li> <li>II. To assist in the protection or recovery of the species specified in the permit;</li> <li>III. That will not assist in the protection or recovery of the species specified in the permit, but provides benefit to the species imposed by conditions of the permit; or</li> <li>IV. That will not assist in the protection or recovery of the species specified in the permit, but the activity will result in a significant social or economic benefit to Ontario.</li> </ul>



<b>Permit Requirements/Assessment Process</b>	<b>Legislation and Administration</b>	<b>Applications</b>
Water Taking Permit	Ontario Water Resources Act by Ministry of Environment	Permit is required for withdrawing more than 50,000L of water on any day by any means.
Public Lands Act Work Permit	Public Lands Act by Ministry of Natural Resources	<p>Pursuant to Ontario Regulation 453/96, work permits are required for:</p> <ul style="list-style-type: none"> <li>I. Construction of a building on public land;</li> <li>II. Construction of a trail, road and water crossings on public lands;</li> <li>III. Dredging of shore lands (includes both Crown and private land);</li> <li>IV. Filling of shore lands;</li> <li>V. Removal of aquatic vegetation from specific shore lands; and</li> <li>VI. Construction on shorelines that occupies more than 15 square metres.</li> </ul> <p>Shore lands under this regulation are defined as the lands covered or seasonally inundated by the water of a lake, river, stream or pond; and dredge is defined to mean the removal or displacement of material from any shore lands, but does not include removal or displacement relating to the installation of service cables, heat loops or water intakes for private residences.</p>
Onshore Windpower Development on Crown land Policy	Ministry of Natural Resources	A proponent of would require 'Applicant of Record' status to pursue wind testing on Crown land. All testing requirements are set out in 'MNR's Approvals and Permitting Document for Renewable Energy Projects'.
Certificate of Approval	Environmental Protection Act and Ontario Water Resources Act by Ministry of	Section 27 of the Environmental Protection Act states that "no person shall use, operate, establish, alter, enlarge or extend, a waste management system or a waste disposal site, unless a certificate of approval or provisional certificate

<b>Permit Requirements/Assessment Process</b>	<b>Legislation and Administration</b>	<b>Applications</b>
	Environment	of approval” that authorizes the activity has been issued by the Director. Section 53 of the Ontario Water Resources Act states that “no person shall use, operate, establish, alter, extend or replace new or existing sewage works except under and in accordance with an approval granted by a Director.” Sewage works includes the collection, treatment and disposal of sewage and the requirement applies to sewage works that discharge effluent to surface water and subsurface systems with a capacity greater than 10,000 litres/day (e.g. large septic tank and leaching bed systems).
Species At Risk Act Permit	Species At Risk Act by Environment Canada (terrestrial) and Fisheries and Oceans (aquatic)	Permits are to conduct activities that may affect species listed on Schedule 1 of Species At Risk Act, as extirpated, endangered, or threatened and which contravene the Act's general or critical habitat prohibitions. Under Section 73 of Species A Risk Act, the competent Minister may enter into an agreement or issue a permit authorizing a person to engage in an activity affecting a listed wildlife species, any part of its critical habitat or its residences.
Environmental Assessment	Canadian Environmental Assessment Act (CEAA) by Environment Canada	The CEAA is triggered when a federal authority: <ul style="list-style-type: none"> <li>I. Proposes a project</li> <li>II. Provides financial assistance to a proponent to enable a project to be carried out</li> <li>III. Sells, leases, or otherwise transfers control or administration of federal land to enable a project to be carried out, or</li> <li>IV. Provides a license, permit or an approval that is listed in the Law List Regulations that enables a project to be carried out.</li> </ul>
Environmental Assessment	Environmental Assessment Act by Ministry of Environment	The Environmental Assessment Act (EAA) may be triggered for proposed activities being undertaken by the Province, municipalities, or public bodies.

Permit Requirements/Assessment Process	Legislation and Administration	Applications
		Specific private sector projects may be designated by regulation passed under the Act. The EAA requires that the proponent of an undertaking subject to the Act must submit an Environmental Assessment (EA) document to the Minister of Environment and Ministry of the Natural Resources.

Note: Proponents must submit appropriate applications to each organization for approval/permit as required.

## 8 Conclusions

This Evaluation concluded the following:

Existing administrative controls are adequate to regulate potential future activities that may disturb the cap and the contaminated sediment in Jellicoe Cove. There is no need to formalize an inter-organization agreement.

### Potential Risk of Impact

1. All high risk and most medium risk activities (dredging, industrial dock extension, wind power testing) taking place on Crown land would require a permit under the Public Lands Act.
2. Some medium-high risk activities such as emergency or spill response are not regulated.
3. Most low risk activities (recreational boating, fishing and swimming) are not subject to administrative controls.
4. Development activities that include dredging may result in the highest risk of disturbing the cap and the contaminated sediment.

### Gaps in Regulation and Guidelines

5. Some activities are not regulated, such as:
  - a. Recreational boating and the anchoring of boats  
Recreational activities are low risk and unlikely to lead to the disturbance, exposure of contaminated sediment or the thin-layer cap. Anchoring will not be allowed within the footprint of the cap.
  - b. Swimming, scuba diving (not a risk)
  - c. Emergency response  
Emergency response activities are unlikely to occur, and response should not be regulated.

#### Lack of Coordinated Effort between Agencies

6. Only Environmental Assessment processes require a formal coordinated effort between agencies to evaluate the impact of potential development projects.

#### Lack of Awareness of the Issue

7. The approval process is complex; both public and agencies are unaware of overlapping requirements.
8. There is no communications program to educate the public, development industry and agencies regarding the presence of contaminated sediment, or current planning and permit review processes.
9. The Ministry of Municipal Affairs and Housing provides provincial comments on municipal planning applications; they should be aware of this issue and contact the Ontario Ministry of Natural Resources when necessary.

#### Enforcement and Monitoring

10. The need for monitoring to identify non-permitted activities may be sporadic, but continual vigilance is required to identify potential problems. There is a need for a responsible organization to coordinate the monitoring of all activities within the contaminated areas as well as monitor the effectiveness of existing Administrative Controls.

## **9 Recommendations**

The Town of Marathon could identify the location of the thin-layer cap in all future plans, as appropriate. This may help to further disseminate information about the cap to potential developers/users.

To increase public awareness of the location of the cap, a campaign targeted at users of Jellicoe Cove (e.g. recreational boaters, anglers, and divers) could be undertaken.