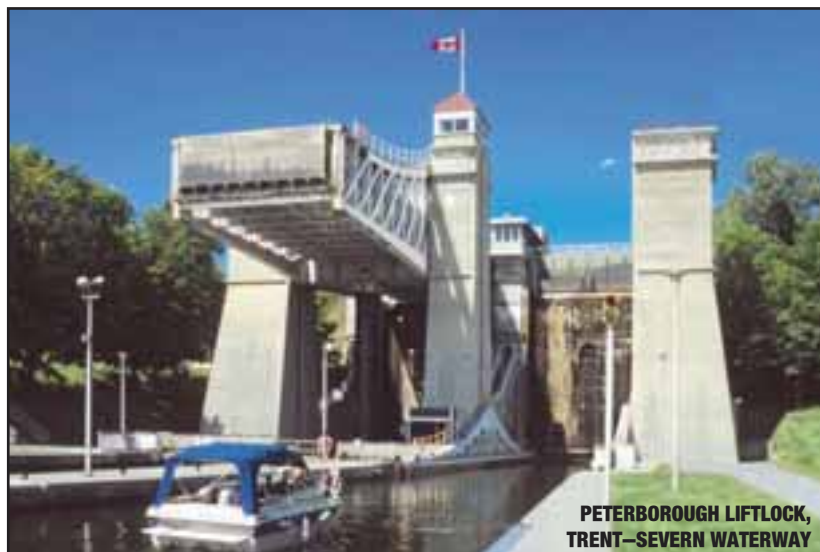
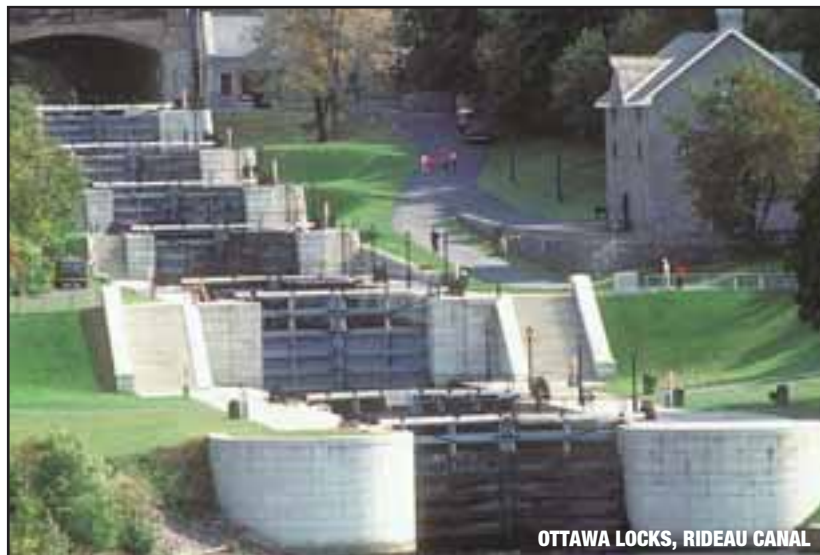




RIDEAU CANAL AND TRENT-SEVERN WATERWAY

NATIONAL HISTORIC SITES OF CANADA

*Policies for In-Water and Shoreline Works
and Related Activities*



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NATIONAL HISTORIC SITES OF CANADA

*Policies for In-Water and Shoreline Works
and Related Activities*

2007

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1. INTRODUCTION

Parks Canada's Historic Canals

Parks Canada manages and protects nine historic canals for the use, enjoyment and benefit of all Canadians. In Ontario, the Trent Severn Waterway and the Rideau Canal are historically and environmentally significant heritage resources that find their roots as nineteenth century transportation systems, but continue to contribute to Canadian society today. These heritage waterways provide outstanding recreation and learning opportunities and make significant economic contributions to their regions and to Ontario.

As part of its responsibility for setting long term management direction for historic canals, Parks Canada is implementing balanced and responsible shoreline management policies that will facilitate the needs of shoreline property owners, yet ensure that the heritage and recreational values of the waterways are sustained for the benefit of current and future generations of Canadians.

Objective

The objective of this document is to provide clear direction for the construction of in-water and shoreline works and related activities normally associated with the development and use of waterfront properties for residential purposes adjacent to the Rideau Canal and Trent–Severn Waterway National Historic Sites of Canada.

The policies will:

- Provide shoreline residents with clear and consistently applied policies with respect to shoreline development activities;
- Contribute to ensuring the commemorative integrity of these national historic sites;

- Ensure the protection of cultural resources;
- Minimize the cumulative effects of in-water and shoreline works;
- Contribute to the ecological health and sustainability of the Canals;
- Contribute to the public enjoyment of the canals by preserving the visual landscape and minimizing noise disturbance; and,
- Protect public safety by ensuring that in-water and shoreline works do not interfere with navigation or other uses of the canals.

Key Policy Directions

The Rideau Canal and Trent–Severn Waterway National Historic Sites of Canada are managed to provide a wide range of benefits to Canadians. They protect extremely important elements of the historic fabric of Canada including First Nations cultural sites dating back 6,000 years and historic assets, which are remnant of Canada in the early 19th century.

The Historic Canals also make important ecological contributions to Ontario through protection of wetlands, attention to water quality and preservation of habitats for many species including an impressive array of species at risk. Both canals also play an important role in managing water to provide for navigation, hydro-electric production and flood minimization.

The canals are important recreational assets providing outdoor recreation opportunities for boaters, fishers, picnickers, campers, cottagers, resort goers and others. In an age when our population is growing and access to public open space is diminishing, this is an important contribution.

There is little doubt that the canals also make valuable contributions to the economic well-being of the Province and of Canada. Many

thousands of boaters use the canals each year. Millions visit and enjoy the lock stations and other public sites along the Canals. Many community businesses thrive by providing service to those who visit and use the canals and, indeed, some communities are literally built around the lifestyles that are associated with water.

The broad purpose of these policies is to ensure that the many values, which the Canals provide to Canadians are sustained. Parks Canada will use these policies to evaluate proposed in-water and shoreline works through the permit process. The intent is that landowners, in planning and designing for in-water and shoreline work, will contribute to ensuring the site's overall commemorative integrity and the protection of cultural resources; and that their project has the lowest possible impact on the environment and will not interfere with navigation and public safety. These policies apply to work associated with single residential lots.

These requirements are consistent with widely accepted standards for the construction of in-water and shoreline works and are based on the most current understanding of environmental effects as well as being consistent with the current legislative authorities and policies noted in Appendix A. A list of the beds of the lakes and rivers owned by the federal government and administered by Parks Canada on which these policies apply is provided in Appendix B.

These policies will be reviewed every five years to assess their effectiveness in meeting the objectives. Amendments may be made in the interim to address technical or other issues.

2. IN-WATER AND SHORELINE WORKS AND RELATED ACTIVITIES SUBJECT TO THE POLICIES

In-water and shoreline works are defined as all work taking place, and all structures built on or over the beds of the Trent–Severn Waterway and Rideau Canal and those at the shoreline, which clearly impact on Parks Canada’s interests.

The following among other things, are considered to be in-water, shoreline works and related activities over which Parks Canada has jurisdiction and include, but are not limited to, installation, repairs & replacements, modifications or additions and annual or sporadic maintenance.

- Docks and boatlifts
- Boathouses & boat ports
- Dredging including the removal or relocation of sunken logs, stumps or rocks
- Shoreline stabilization
- Beach creation
- Inland boatslips and mooring basins
- Launch ramps
- Marine railways
- Waterlines
- Mooring buoys, swimming buoys, swimming rafts, and water ski courses and ramps
- In-water and shoreline works in narrow channels
- In-water and shoreline works in wetlands

All of the above activities require written permission from Parks Canada in accordance with the Historic Canals Regulations and other legislation identified in Appendix A.

The application form and approval process is found on the following website addresses:

Rideau Canal:

www.pc.gc.ca/lhn-nhs/on/rideau/index

Trent–Severn Waterway:

www.pc.gc.ca/lhn-nhs/on/trentsevern/index

The Policies for In-water and Shoreline Works and Related Activities are enforceable under the authority of the Historic Canals Regulations pursuant to the *Department of Transport Act*.

Failure to comply may result in fines and/or restore orders and removal of unauthorized works.

Provincial and federal legislation regarding water quality, fish and wildlife habitat, floodplains and hazard lands may also apply.

3. GENERAL POLICIES

The following general policies apply to in-water and shoreline works and related activities. Proponents of projects must ensure that the policies applicable to a particular type of work are considered when submitting an application. In addition, specific policies for each type of work or activity must also be adhered to.

Dimensions for in-water and shoreline works in these Policies are provided in metric and imperial units. The conversions from metric to imperial are approximate. Proponents may submit plans and undertake work using either system.

POLICIES

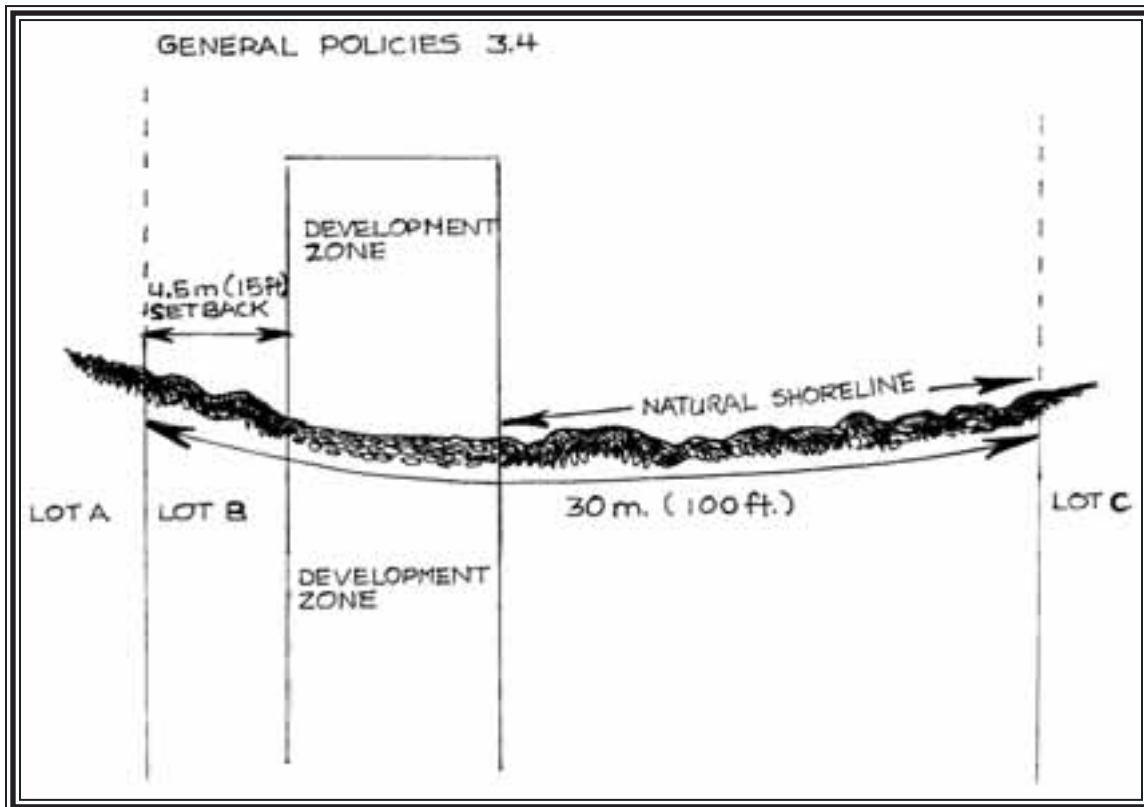
- 3.1 Construction of in-water and shoreline works and related activities may only proceed once a permit is issued, and the work must conform to the conditions as stated in the approved permit/letter.

Parks Canada may inspect the work to ensure compliance.

- 3.2 It is the applicant’s responsibility to ensure that the proposed work meets the requirements of all other federal and provincial agencies and the municipality. The applicant will obtain a building permit if required by the municipality. In the case of boathouses and boat ports, where a building permit is not required, the applicant will produce a plan of the proposed work and an inspection report prepared by a registered building inspector upon completion of the work to ensure that it meets the requirements of the Ontario Building Code.
- 3.3 Where an encroachment onto the bed of the waterbody already exists, permission to undertake in-water

and/or shoreline works will only be considered if the property owner obtains authority to occupy the filled area.

- 3.4 No more than 25% or 15 m (50 ft), whichever is less, of any one residential property owner’s shoreline may be developed with in-water or shoreline structures, exclusive of shoreline erosion protection/retention works.
- 3.5 To protect warm water fish spawning activity, no in-water work will be permitted during spawning activity between March 15th or March 31st depending on the water body, and June 30th inclusive in any year. Additional restrictions during the fall/winter may also apply to coldwater lakes to protect lake trout and whitefish spawning activity.



- 3.6 Sediment and erosion control measures are required to prevent the entry of sediments into the water and to control turbidity levels.
- 3.7 Mitigation measures will be implemented to ensure all in-water and shoreline works have minimal impacts on fish and wildlife habitats.
- 3.8 Species at risk and their habitats will be protected.
- 3.9 Wetlands will be protected. No new in-water and shoreline works that could have a significant adverse impact will be permitted.
- 3.10 Proponents may be required to provide a detailed environmental assessment for projects where significant impacts on cultural and/or ecological resources may occur.
- 3.11 There must be no impact on the commemorative integrity of the national historic site. This includes ensuring the protection of cultural resources and associated historic values of the national historic site.
- 3.12 Cultural resources on the bed of the Canal and Waterway will be protected.
- 3.13 In-water and shoreline works must be located a minimum of 4.5 m (15 ft.) away from the side lot line as projected into the water from the shoreline. In unusual circumstances a variance may be granted provided the proponent also seeks to obtain the written comments from adjacent property owners.
- 3.14 Regular maintenance and repair that does not alter an existing structure or involve an addition will be allowed without a permit. All other major structural repairs and renovations such as repairs to beams, joists, stringers, cribs and piles will require a permit, and where possible, have a net positive impact on the environment.
- 3.15 In-water works, shoreline works and related activities must not constitute a public safety hazard.
- 3.16 Treated wood that meets provincial and federal guidelines will be allowed provided the wood is pre-treated and dry. Creosote preservative and wood treated with creosote will not be approved. Treated wood will not be allowed where it has contact with the water.
- 3.17 These Policies do not apply to existing in-water and shoreline structures. Applications for replacement works must conform to the Policies.
- 3.18 All applications for in-water and shoreline works require detailed plans or sketches showing the location and nature of the work. Photos or digital images illustrating the location of the proposed work and condition of the site may also be required along with a plan showing the orientation of the photos.
- 3.19 All activities including maintenance procedures shall be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other deleterious substances into the water.
- 3.20 Structures, works, facilities and activities must not interfere with or pose a hazard to navigation.
- 3.21 Previously approved structures such as floating docks that are removed annually may be replaced in the same location during the fish spawning period as long as there is no disturbance of the bed.

4. DOCKS AND BOATLIFTS

CONTEXT

Docks are the most common form of in-water work. A boatlift is a device used to lift a boat clear of the water.

Docks have a great potential for harmful effects owing to their popularity and location in the most sensitive part of the littoral zone.

The potential impacts include:

- Detrimental impacts on, or destruction of submerged cultural resources or fish spawning habitat as a result of dredging and construction activities;
- The loss of natural shoreline and aquatic vegetation;
- Erosion, siltation and other impacts caused by altering natural water flows;
- Blocking of sunlight needed by aquatic plants thus resulting in a loss of fish habitat;
- Associated human use on land and water, which can result in further habitat loss and disturbance of natural shore vegetation.

Docks and boatlifts are routinely approved as long as there are no significant adverse environmental or cultural resource impacts, and public safety and navigation are not compromised.

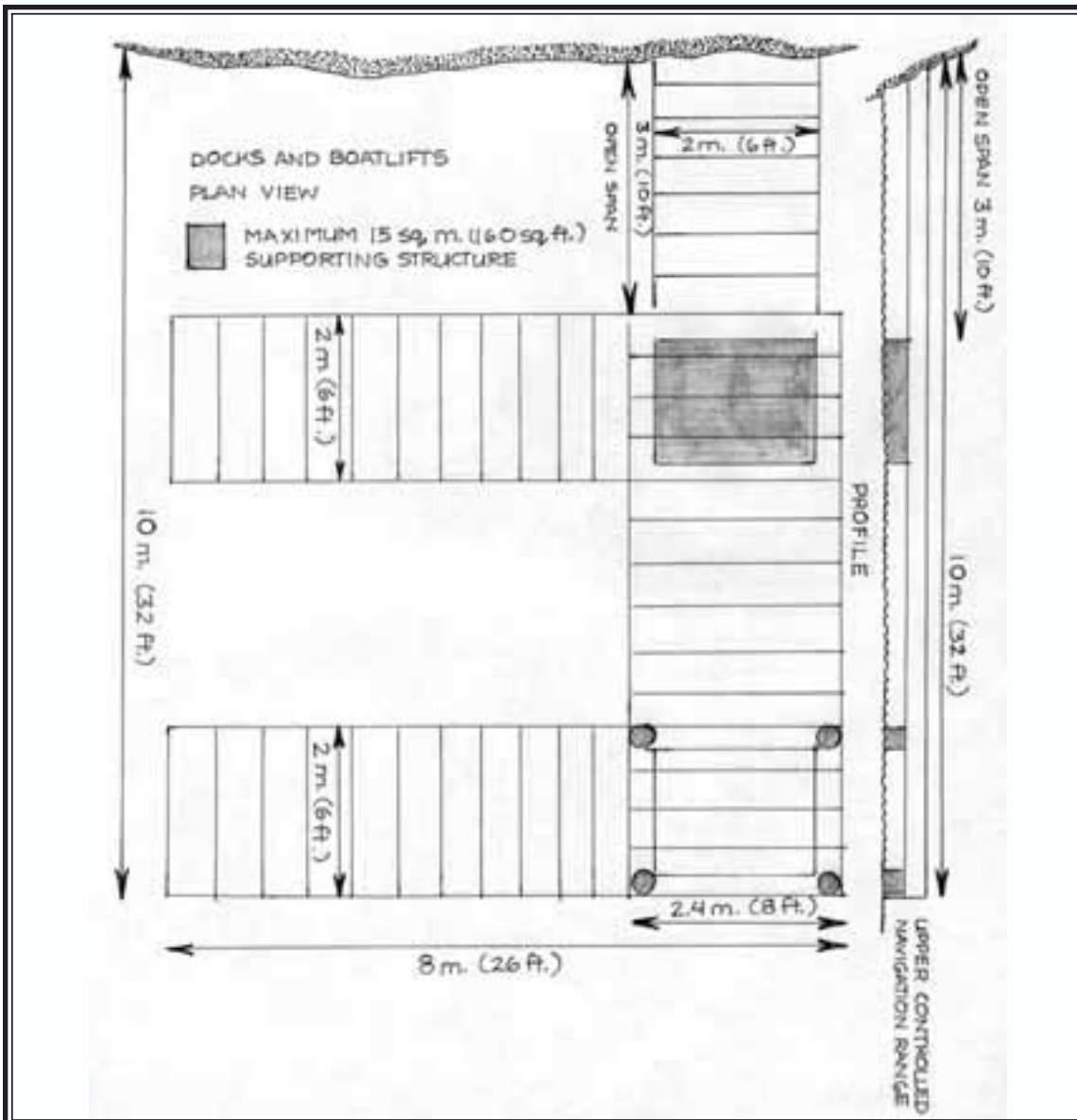
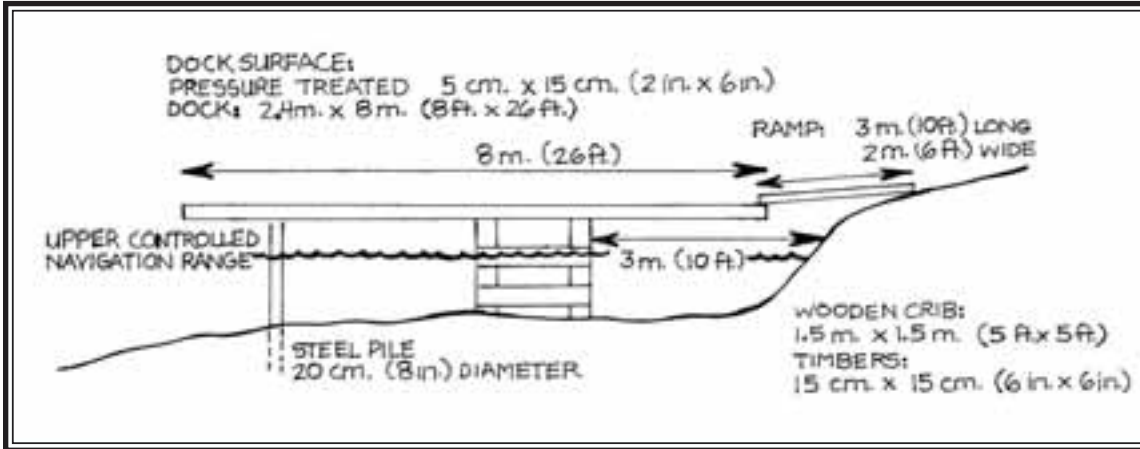
POLICIES

1. Generally, cantilevered, floating, and docks supported on legs, posts or pipes are recommended. Crib style docks with open spans may also be permitted if certain circumstances warrant such as areas of heavy wave action and large vessels. Open pile-supported docks are also allowed. Docks consisting of solid in-water structures will not be approved.
2. Where crib and span arrangements are used (i.e. in crib & span designs), they must be open-faced.
3. Rocks used to fill cribs must be clean and free of soil, taken or imported from land but not from a lake or river bottom or shoreline.
4. Structures to secure docks to the shore shall be installed above the upper controlled navigation (water) level.



5. Size limits for new or replacement docks, including any attached fingers are as follows:
 - It will fit within an 8 m x 10 m (26 ft. x 32 ft.) rectangular area or envelope adjacent to the shore;
 - The maximum width of a dock is 2.4 m (8 ft.);
 - A maximum of two fingers no wider than 2 m (6 ft.) may be installed from the main dock section;
 - The combined maximum surface area of a dock and fingers is 45 m² (452 ft²);
 - Access ramps, if used, are not to exceed 2 m (6 ft.) in width;
 - The first 3 m (10 ft.) of dock adjacent to the shore must be as an open span to accommodate water circulation and exchange and fish movement;
 - The maximum total footprint of a supporting structure for a dock is 15 m² (160 ft²);
 - A minimum of 50% of the total length of a dock, including any attached fingers, must be one or more open spans.
6. Boatlifts must be located within or adjacent to the specified dock.
7. Boatlifts must be an open design; enclosed walls are not permitted.
8. Gazebos on docks are not permitted.
9. In the case of very shallow water an extension may be granted up to a depth of 1 m (3 ft.) to allow for sufficient depth for boat mooring.
10. Docks must not interfere with water flow and currents.
11. Flotation for floating docks shall be enclosed and contained, where necessary, to prevent the escape or breakup of the flotation material into the water.
12. The installation of floating docks and other structures will be permitted during the mid-March to June 30th period provided they can be floated in and secured to their anchors without causing harmful disturbance to fish spawning activity or habitat. No other work or heavy equipment is allowed on the bed during this period.
13. Only one dock per lot is allowed unless it is a water access only property.





5. BOATHOUSES AND BOAT PORTS

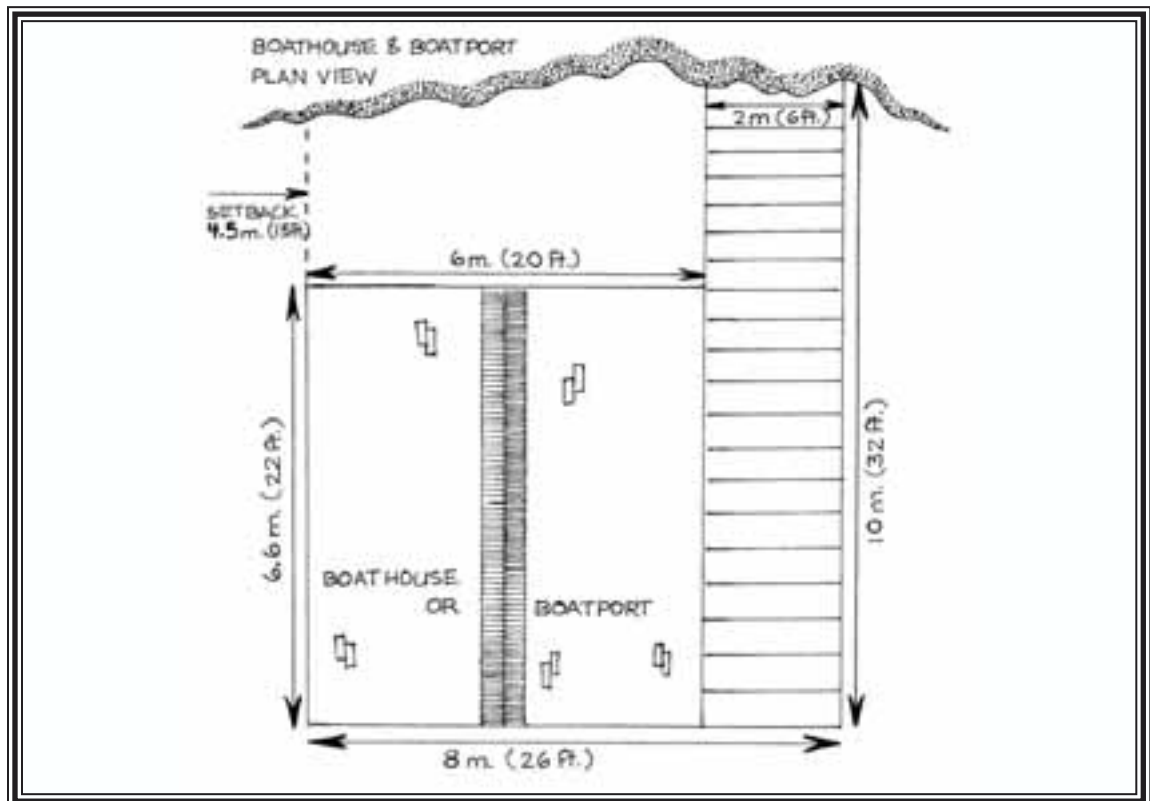
CONTEXT

Boathouses and boat ports are structures designed to shelter boats from the sun and rain and are often used to provide storage during the winter. A boathouse has walls and a front door while a boat port consists of a roof only without walls. These structures are usually built over water and may include docks on both sides to allow for boat mooring and access to deep water. Care must be exercised in site planning and design of these structures in order to avoid harmful effects owing to their scale and highly visible location in both the littoral and/or riparian zone.

Boathouses and boat ports have much the same potential impacts as docks in addition to the following:

- A change in the visual character of the waterfront, with the introduction of a highly visible structure on the shoreline.
- A potential to affect views from neighbouring properties.
- Owing to their larger overall footprint, boathouses prevent sunlight from reaching the littoral and riparian zones, thereby altering the characteristics of the aquatic ecosystem.
- The potential for more contaminants to leach into the water body (e.g. from an asphalt shingle roof).

Applications for boathouses and boatports which address the requirements of the policies are routinely approved.

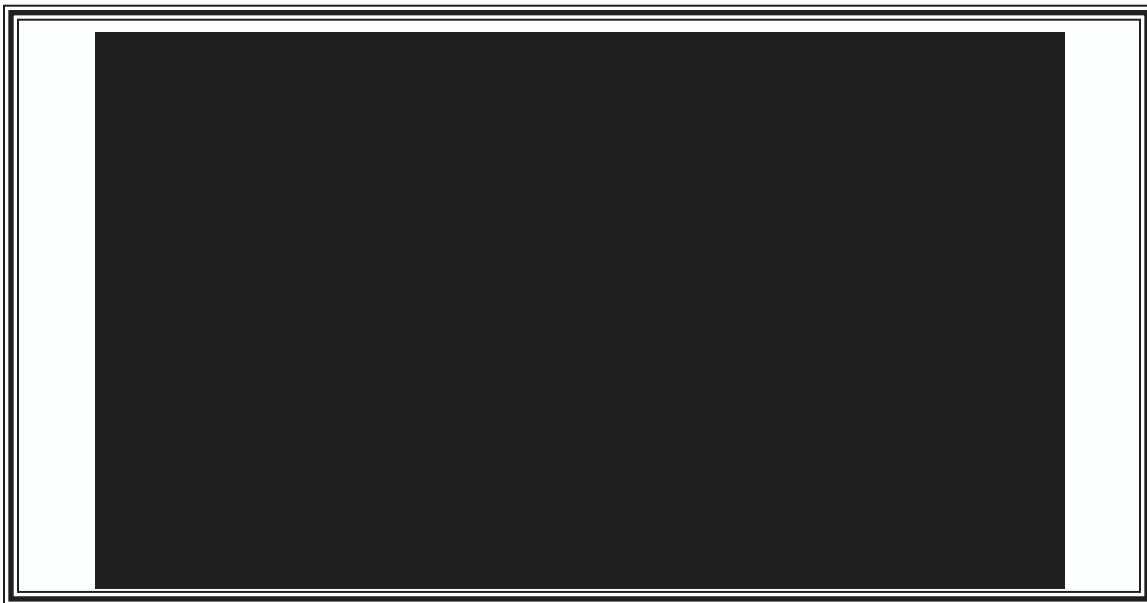


POLICIES

1. In addition to the submission of a detailed application to address the requirements of the boathouse and boat port policies, the proponent may be required to undertake an environmental screening to address potential environmental impacts of the proposed works, including impacts to cultural resources and other heritage values such as viewscales.
2. The outside dimensions of the structure including any cribs, the roof eaves, attached walkway or dock must fit within an 8 m x 10 m (26 ft. x 32 ft.) rectangular area or envelope.
3. The width of the structure parallel to the shore will be included in the 25% or 15 m (50 ft.) limit on the development of in-water works along the water frontage of a property.
4. The maximum footprint of supporting structures is 15 m² (160 ft²).



5. While the structure is to be built as close as possible to the natural shoreline, a 3 m (10 ft.) open span along the shore is required to allow for along-shore current movement.
6. A minimum of 50% of the total length of the supporting structure that extends out from the shoreline must be open span.
7. A maximum of one boathouse attached to one lot.
8. To minimize the visual impact of boathouses and boat ports the following design conditions will apply:
 - The roofline of double pitched or hipped roofs will be no more than 4.5 m



(15 ft.) above the upper controlled navigation level. Flat roof structures will not be allowed.

- No services other than electricity are permitted; exterior illumination will be designed to minimize light pollution.
 - The application for a boathouse or boat port may require photographs from a variety of angles on the water and along the shoreline during the navigation season to clearly show the proposed location and setting of the structure and its relationship with the existing in-water and shoreline works and adjacent properties.
 - Proponents will use materials and colours that blend in with the surrounding landscape.
 - Elaborate buildings are generally discouraged.
 - A boathouse may have up to two openings towards the water.
9. Proponents must provide proof that they have informed adjacent property owners
- of their intent to apply for permission to build a boathouse or boat port and provide them with an opportunity to comment on the application to Parks Canada.
10. For the construction of upland boathouses, the following policies apply:
- All excavated and dredged material must be placed upland at least 15 m (50 ft.) from any watercourse, or in accordance with the requirements of another agency, whichever is greater, and must be stabilized to prevent the dredged material from re-entering the water;
 - The policies for dredging would apply if dredging is required to provide access to the boathouse;
 - The removal of upland shoreline vegetation shall be the minimal amount necessary to accommodate the installation of the new boathouse.
11. Conversion of a boat port into a boathouse will require a new application.



6. DREDGING INCLUDING THE REMOVAL OR RELOCATION OF LOGS, STUMPS OR ROCKS

CONTEXT

Dredging is the removal, relocation or dislodging by digging, gathering or pulling out or otherwise, or to alter any natural or other material or object for the purpose of the following activities: commercial harvesting, creating new channels or boat slips, altering the shoreline, constructing or placing any in-water structures such as wharves or retaining walls or maintaining previously dredged areas or openings to any dredged area on private land.

The potential impacts are:

- Loss of aquatic habitat for a wide variety of aquatic organisms;
- Disturbance or destruction of cultural resources;
- Destruction of fish and fish spawn;
- Turbidity and re-suspension of sediments from the bed;
- Alteration of water circulation and exchange;
- Deposition of sediment in nearby waters.

Since dredging is highly disruptive, Parks Canada generally discourages dredging applications.

POLICIES

1. Sunken logs, stumps and rocks may not be removed from the water. In some circumstances they may be relocated in front of the property in an area of similar water depths.
2. Dredging will not be allowed if cultural resources will be destroyed.
3. Dredging will not be allowed in wetlands or in areas containing rock rubble on the lake or river bed, unless shown to be environmentally beneficial.
4. The size and depth of the area proposed for dredging should be minimized. No more than 25% of the shoreline length to a maximum of 15 m (50 ft.) may be dredged in front of residential property.
5. A single boat channel dredged through a shallow area to deeper water may be no wider than 6 m (20 ft.); dredging of communal boat channels shared among adjacent property owners may not exceed 8 m (26 ft.) in width.
6. Proponents for dredging will be required to undertake an environmental assessment to demonstrate that there will be no significant adverse environmental impacts or impacts to cultural resources; fish spawning and nursery areas must be avoided.
7. Dredged material must be tested for contaminants, placed upland at least 15 m from a watercourse and above the flood plain, or in accordance with the requirements of another agency, whichever is greater, and must be stabilized to prevent the dredged material from re-entering the water.
8. For open water dredging, a silt or turbidity curtain must be properly installed and maintained around the entire work area prior to the start of dredging and maintained in an effective condition.
9. Vertical edges must be avoided and the final slopes of the dredged area must allow for the natural slope and stabilization of the bottom material.
10. Nighttime dredging and dredging during the winter will require specific authorization.

7. SHORELINE STABILIZATION

CONTEXT

Shoreline stabilization refers to a variety of works designed to prevent or reduce erosion. These works include the preferred methods of bio-engineering or rip-rap, or a variety of vertical shore walls which are usually composed of armour stone, masonry rock, concrete, steel, wood, plastic, or gabion baskets.

While vertical shore walls have short-term benefits, the retention of existing emergent aquatic vegetation and planting of additional trees and shrubs on the shoreline bank (bio-engineering) is the preferred and most

effective method of arresting and preventing further erosion in an environmentally responsible manner. Rip-rap, which is the placement of clean angular stone or rock rubble on a slope, may be used in combination with, or where bio-engineering methods alone would not be effective. Properly sized rip-rap placed along a waterfront over a geo-textile filter fabric is quite effective in dissipating wave action, and preventing soil particles from washing out while allowing land-based moisture to naturally percolate back into the water body.

The most damaging impacts of vertical shore walls as opposed to other methods of shoreline stabilization are:

- Transformation and hardening of the shore;



- Encroachment onto the bed of the Canal or Waterway;
- Alteration of the overall heritage character of the Canal or Waterway;
- Disturbance/destruction of cultural resources;
- Alteration, disruption or destruction (loss) of fish habitat;
- Altered wave energy and current patterns;
- Sediment transport, turbulence and scouring of the bottom;
- Disruption of the life cycle of aquatic organisms, such as blocking access by amphibians and reptiles back and forth between water and land;
- Short or long-term loss of native waterfront vegetation that plays an important role in preventing erosion and sheet runoff into the waterbody;
- Poorly constructed walls are far more prone to damage due to frost-heaving, erosion when inundated by water or pounded by waves, and destruction by ice movement.

Parks Canada routinely approves environmentally sensitive shoreline stabilization measures.

POLICIES

1. The retention of native shoreline vegetation, bio-engineering and rip-rap are, in order, the preferred methods for shoreline stabilization.
2. Rip-rap is normally approved for shoreline stabilization subject to the following:
 - The material used is clean imported angular stone or rock between 10 and 45 cm (4 - 18 in) in size;
3. Encroachment of rip-rap shoreline stabilization onto the lake or river bed of up to 1 m (3 ft.) for shrubs and 1.5 m (5 ft.) for trees may be permitted if it can be demonstrated that:
 - A geotextile filter fabric is to be installed under and behind the rock;
 - A 3:1 (horizontal : vertical) slope ratio is recommended and may not be steeper than 2:1 unless justifiably proposed in an accredited geo-technical report;
 - Excavation to create the slope shall be upland; excavation or dredging of the bed is not normally permitted;
 - Natural stone must be imported and not removed from the lake or river bed for shoreline stabilization.
4. Other methods of shore stabilization may be considered if:
 - The encroachment is required to protect significant trees, shrubs and other natural vegetation threatened by erosion;
 - The encroachment onto the bed will not harmfully affect fish or fish spawning sites;
 - The shore stabilization work would result in the removal of significant natural shoreline vegetation;
 - In exceptional circumstances an encroachment beyond 1.5 m (5 ft.) may be allowed if is supported by a geotechnical study.
4. Other methods of shore stabilization may be considered if:
 - Bio-engineering or rip-rap have been considered and found to be unacceptable due to site conditions;
 - The work will be constructed upland of the high water mark and no

encroachment onto the bed of the waterbody will occur;

- The work will not alter the existing shoreline contours;
- The work will not result in the removal of natural shoreline vegetation;
- The work will not have a significant impact on the heritage character of the national historic site;
- The shore wall will not result in the harmful alteration, disruption or destruction of fish habitat or other wildlife habitat;
- The backfill will be clean imported material;

- Filter cloth will be installed behind the work to prevent the migration of fines into the water;
- Clean imported rip-rap or rock rubble, of a size approved by the Canal or Waterway and free of silts and organic debris, will be placed along the toe of the work to prevent scour and create aquatic habitat;
- The construction of these works has been approved by the appropriate agency with jurisdiction over waterfront development.

To rectify unique or unusually unstable slope issues, a geotechnical report will be required which may supercede the above slope stabilization policies.



8. BEACH CREATION

CONTEXT

Beach creation consists of the placement of granular material on the shore and in the water. Natural sand beaches and swimming areas are uncommon along much of the Rideau Canal or Trent–Severn Waterway. As a result some property owners have created upland beaches and swimming areas to enhance the recreational use of the waterfront.

The negative effects of placing sand for beaches or swimming areas can include:

- Encroachment onto the bed of the Canal and Waterway;
- Disturbance/destruction of cultural resources;
- Alteration, disruption or destruction of fish habitat;
- Destruction of habitat for benthic organisms;
- Removal of native waterfront and aquatic vegetation;
- Transport of sand or aggregate materials to other sensitive aquatic habitats by water currents or wind, waves, or ice action;
- Transport of sand in front of neighbouring properties.

Upland beaches are usually less environmentally disruptive than the installation of in-water beaches. In occasional instances (and providing the beach is seldom used in spring & early summer), in-water beach creation and swimming areas can improve fish spawning sites if the material is suitable for fish spawning activity and is placed in an area where spawning habitat is marginal. Experience has shown, however, that in areas where a natural beach does not exist, in-water beach building efforts are

usually unsuccessful or require continual maintenance that can be costly to the environment and expensive. For this reason Parks Canada generally discourages applications for beach creation below the high water mark.

POLICIES

1. Beaches will be allowed above the high water mark provided the aggregate material is stabilized and contained to prevent entry into the water.
2. Aggregate may not be placed over areas of larger material such as natural rock rubble, or within wetland areas.
3. Beaches and swimming areas created below the high water mark may be permitted if it can be demonstrated that fish spawning sites will not be affected and there will be a net gain of fish habitat.
4. The maximum sized area approved for in-water beaches is 4.6 m (15 ft.) width by 15 m (50 ft.) distance out into the lake or river, provided the 25% rule is respected.
5. The material placed on the lakebed shall be either pea gravel or clean or washed pit run material, 60% sand, and 30-40% gravel. The material placed on the bed will not be placed over larger-sized materials, including rock or stone.
6. The work must not result in the removal of rock, stone, logs or stumps.

9. INLAND BOATSLIPS AND MOORING BASINS

CONTEXT

An inland boat or wet slip is a small artificial slip or basin excavated into the shoreline bank and designed to provide a protected mooring area for one or possibly two boats. The term mooring basin is used to describe an upland excavated enclosure for several boats usually with a small narrow access channel to the waterbody. These types of facilities are on private land and can offer greater protection for boats from wave action and currents.

The impacts of these facilities can be:

- The removal of aquatic, shoreline and waterfront vegetation and associated upland habitats;
- Disturbance/destruction of cultural resources;
- Dredging of the shallow littoral zone to provide adequate depth for vessel access and use;
- Siltation, erosion and alteration of currents which in turn could negatively affect the aquatic environment on a long-term or on-going basis;
- Creating areas which can trap floating debris and thereby affect water quality;
- The potential creation (often nominal) of new fish habitat.

Inland boatslips and mooring basins are routinely approved provided that any dredging and shoreline stabilization work is consistent with the policies for these activities.

POLICIES

1. Shoreline stabilization requested for the walls of a basin and boatslips shall be assessed according to the shoreline stabilization policies. Vertical walls within basins and boatslips will be considered
2. Any dredging of the water body bed to provide sufficient depth for boat access shall be assessed according to the dredging policies.
3. Material removed during the construction of the basin shall be disposed 15 m (50 ft.) upland or above the floodplain.
4. Mooring basins will not be allowed in wetlands or near known fish spawning areas.
5. The width of the basin shall be incorporated into the maximum shoreline disturbance limit of 25% of the frontage or the dock/boathouse envelope of 8 m (26 ft.), whichever is less.
6. Efforts should be made where possible to enhance fish habitat in the basin by placing suitable substrate material.
7. A turbidity curtain must be installed before the removal of bank material.



10. LAUNCH RAMPS

CONTEXT

Boat launch ramps are usually located at marinas or public parks but are occasionally proposed for a residential waterfront property. The requirements for a ramp usually require excavating or cutting into the shoreline and placing gravel, rock or concrete to accommodate the launching of a boat

Installation of a ramp involves dredging, filling or cutting of the bank, which may result in:

- Short term or on-going siltation, erosion and alteration of water movement patterns;
- Disturbance/destruction of cultural resources;
- The loss of fish habitat resulting from the placement of ramp material;
- Removal of shoreline vegetation;
- A public safety hazard when the launch ramp is constructed in a narrow channel or near the navigation channel.

Launch ramps are routinely approved when the application addresses the following policies.

POLICIES

1. Boat launches shall be incorporated into the maximum shoreline disturbance limit of 25% of the frontage or 15 m (50 ft.), whichever is less.
2. Launch ramps must not be constructed in known fish spawning areas or result in the destruction of emergent aquatic vegetation.
3. Concrete and wood may be used above the upper controlled water elevation level. The in-water portion of a launch ramp shall be an aggregate mixture such as pea gravel or clean granular “B” pit run material: 60 - 70% sand, 30 - 40% gravel (1/8 in [0.2 cm] - 3 in [8 cm] diameter). A steel grid base may also be permitted.
4. Asphalt surfaces will not be approved in or near the water due to the detrimental leaching impacts on water environments of this petroleum-based product.
5. Launch ramps must not be located within 30 m (100 ft.) of navigation channels.
6. Shoreline alterations to accommodate launch ramps must be minimized.
7. If dredging is required, then the dredging policies will apply.



11. MARINE RAILWAYS

CONTEXT

A marine railway consists of a set of tracks and carriage leading into the water that will allow a boat to be lifted entirely out of the water and transported upland when not in use. Marine railways are sometimes associated with upland boathouses or boat ports that provide safe vessel storage and overwintering of boats.

Although usually less intrusive than other structures such as in-water boathouses, the construction of a marine railway can still require dredging, filling and/or cutting of the bank, all of which can have negative effects such as:

- Removal of shoreline vegetation;
- Disturbance/destruction of cultural resources;
- A navigation or swimming hazard;
- Trapping floating aquatic vegetation which decays and can affect water quality;
- In-water supports can harmfully alter fish habitat.

Marine railways are routinely approved when the following policies are addressed in the application.

POLICIES

1. The track and its supports must be constructed of material that will not leach contaminants into the water.
2. The marine railway must not constitute a hazard to navigation or other recreational users of the water.
3. The railway must be located within the allowable specified dock area.
4. The railway must not be placed in a known or potential fish spawning area.
5. The railway must be constructed and placed in a manner that will minimize the removal of shoreline vegetation and will not require substantial alteration to the shoreline.
6. Grease must not be used on those parts of a marine railway that will enter the water.
7. Dredging policies will apply if this activity is required.



12. HEAT PUMP LOOPS

CONTEXT

When properly installed, this type of facility may not have any significant environmental impacts. Fewer impacts (and restrictions) result if these works are also proposed outside of the critical fish spawning/nursery periods and away from significant wetlands. Licensing of these works will be required to ensure that there are no adverse impacts to navigation, cultural resources or the environment.

Possible implications resulting from improper installation of heat pump loops can be:

- Disruption or minor alteration of fish spawning sites;
- Increased erosion of shorelines;
- Short-term turbidity in the water;
- Loss of emergent aquatic vegetation during the installation;
- Damage to the line or loop resulting from ice movement;
- A hazard to navigation if installed improperly or at too shallow a depth.

Heat pump loops are routinely approved when the following policies are addressed in the application.

POLICIES

1. Installation of heat pump loops must not occur during fish spawning activity.
2. Removal of shoreline vegetation shall be minimized.
3. Heat pump loops may have to be trenched into the bed or laid in a minimum depth of water to protect them from ice damage. Any excavation of the shoreline to accommodate the heat pump

loop must be stabilized to prevent erosion.

4. Excavated material from the bed must be placed upland a minimum of 15 m (50 ft.) back from the high water mark and stabilized to prevent it from re-entering the water.
5. Material used to cover the submarine cable or heat pump loop on the bed must be clean imported material free of silts and organic debris.

13. WATERLINES

CONTEXT

Waterlines for residential properties can either be seasonal, which lay on top of the shoreline bank and extend out onto the bed of the water body, or permanent waterlines, which are excavated into the shoreline and into the bed of the lake or river to provide water year round.

Potential implications for the installation of waterlines include:

- Alteration, disruption or destruction of fish habitat;
- Disturbance/destruction of cultural resources;
- The removal of a portion of the shoreline and the associated vegetation;
- Loss of emergent aquatic vegetation during the installation.

Waterlines are routinely approved when the following policies are addressed in the application.

POLICIES

1. The installation of waterlines shall not result in a loss of wetland habitat or rock rubble on the bed of the waterbody.
2. Where rock rubble habitat exists, there may be allowances for this material to be carefully scraped to the side and then replaced back in the same location once the work is complete.
3. If dredging is required to install the waterline, the work shall be assessed according to the shoreline policies for dredging.
4. For waterlines excavated into the shoreline, the shoreline area shall be

stabilized and restored back to its original state or better.

5. Seasonal waterlines for personal use that lie on top of the bed of the waterbody, do not require excavation, and are removed in the fall, do not require a permit/letter.

14. MOORING BUOYS, SWIMMING BUOYS, RAFTS AND WATER SKI COURSES AND RAMPS

CONTEXT

These types of floating facilities are installed offshore to allow for recreational use of the water surface. If carefully installed and maintained, the environmental impact can be negligible as all that is required is an anchor to secure them to the bottom.

Potential implications of these facilities can be:

- Hazard to navigation;
- Noise;
- Breaking loose of anchor cables;
- Obstruction of other waterfront recreational uses;
- In the cases of water ski courses and ramps, high speed vessels in proximity to the shore.

The following policies apply to these facilities.

POLICIES

Mooring Buoys

1. Mooring buoys will only be allowed in exceptional circumstances, e.g. where there is insufficient depth for a deep draft vessel near shore, and only for the mooring of a vessel owned by the adjacent waterfront property owner.



2. The anchor to secure the buoy shall be sufficiently heavy to prevent movement.
3. The chain shall be of an adequate strength to provide a secure, permanent connection; its length shall be no less than twice and no more than three times the depth of the water.
4. The mooring swing, that being the combined length of the chain from the anchor to the buoy plus the mooring rope from the buoy to the boat plus the length of the boat, must be more than 4.5 m (15 ft.) from the side lot line as projected into the water and at least 30 m (100 ft.) from the navigation channel.
5. The mooring buoy must be as close as possible to the property of the boat owner and located directly in front of the boat owner's property.
6. The moored boat must not interfere with access from neighbouring properties to the navigation channel or interfere with traditional recreational use patterns and activities on the waterbody.
7. Mooring buoys must come under license for the occupation of the bed of the Canal or Waterway.

Swimming Buoys

1. Approval must be received from Transport Canada. Private swimming buoys must comply with private buoy regulations, in addition to an approval from the Rideau Canal or Trent–Severn Waterway.
2. The swimming buoys shall not extend closer than 4.5 m (15 ft.) to either side lot line projected into the water
3. The placement of the swimming buoys shall not interfere with access to or from

neighbouring properties, or with traditional recreational use patterns.

4. The swimming buoys shall be removed from the water at the end of the swimming season.



Swimming Rafts

1. The raft must be connected to an anchor with a chain, with a 360 degree swivel at the anchor.
2. The size can be no greater than 3 m x 3 m (10 ft. x 10 ft.) and the deck must be at least 50 cm (20 in.) above the water.
3. The raft must be as close as possible to the shore but no more than 30 m (100 ft.) out from shore, and must be at least 15 m (50 ft.) distance from the edge of the official navigation channel of the Trent-Severn Waterway or Rideau Canal where such applies.
4. The raft must be removed from the water at the end of the swimming season.



5. The raft must be at least 4.5 m (15 ft.) from the side lot lines as projected into the water and located directly in front of the owners property.
6. The raft must not interfere with access from neighbouring properties to the navigation channel or interfere with traditional recreational use patterns and activities on the waterbody.
7. Approval must be received from Transport Canada in addition to approval from the Rideau Canal or Trent-Severn Waterway.

Water Ski Courses and Ramps

1. The facility must be approved by Transport Canada and Parks Canada.
2. The ramp must be connected to an anchor with a chain.
3. The course and ramp must be located in an area that will not interfere with navigation, other recreational users or cause undue noise to waterfront property owners.
4. An annual permit is required for all water ski courses and ramps.
5. The course owner is responsible for the removal of skier turning balls when the course is not in use and all course markers must be removed by the end of October each year.
6. The course owner has the right to determine who uses the course, is responsible for all course users and for instructing these users in proper course etiquette and applicable ski course conditions and restrictions
7. The course owner must acquire liability insurance in the amount of two million dollars and the insurance must be valid for the time period the course is in use.
8. The ramp must be removed from the water each winter.
9. The ramp must not interfere with access from neighbouring properties to the navigation channel or interfere with traditional recreational use patterns and activities on the waterbody.
10. The facilities are located a minimum distance of 150 m (500 ft.) from cottages or residences (unless consent is given in writing), beaches, camp grounds, marinas, or commercial docks (unless consent is given in writing), water fowl nesting areas, fish spawning beds, erosion prone banks, traditional angling spots, or any structure and 61 m (200 ft.) away from any navigation channel.
11. The facilities are located a minimum of 30 m (100 ft.) from any shore.
12. Local residents, landowners and waterway users must be given an opportunity to comment (referral by letter to residents and landowners and by newspaper ad for water users) on the location of the course.
13. Water depths are conducive to installation in the area proposed.

15. IN-WATER AND SHORELINE WORKS IN NARROW CHANNELS

For the purposes of these policies, a narrow channel is defined as a navigable water body that is less than 100 m (330 ft.) wide from shore to shore. These sections of the waterway and canal constitute more of a potential safety hazard to boaters and waterfront residents owing to the restricted space, short sight lines, concentrated boat traffic, and high flows. Among other impacts, the effects of noise, competing water recreational uses, and the visual impacts of waterfront development are often more problematic or noticeable in narrow channels. Some narrow channels already support a high (or increasing) level of waterfront development, while others so far remain areas of significant scenic (natural landscape) appeal.

Implications of in-water and shoreline works in narrow channels include:

- Public safety concerns relating to competing recreational uses within a restricted portion of the waterbody;
- Disturbance/destruction of cultural resources;
- Accelerated erosion of shorelines as a result of concentrated recreational activity;
- Loss of wetland habitat as a result of encroaching boat traffic;
- Less habitat available for use by wildlife species (e.g. basking turtles), and increased vulnerability of animals that remain in the area to conflicts with people and boats (e.g. by reptiles, amphibians, waterfowl broods, etc.);
- Further habitat fragmentation where wildlife travel corridors are seasonally disturbed;
- Potential loss of scenic character as a result of inappropriate development of in-water and shoreline works.

Applications for these facilities in narrow channels are routinely approved provided that the applicable policies are respected and public safety is not compromised.

POLICIES

1. Requirements to ensure public safety will take priority over, and may thus limit the type, size, location or even presence of in-water or shoreline works.
2. New facilities will normally not be approved where the natural channel is less than 30 m (100 ft.) wide or the channel is a man-made cut. 30 m (100 ft.) is the width of the navigation channel as defined in the Historic Canals Regulations.
3. Where the natural channel is between 30 and 50 m (100 and 165 ft.) wide and there are no sharp curves or turns to obstruct sight lines, facilities may be allowed subject to review by Parks Canada including the results of a public safety assessment. Approval is also subject to the navigation channel not being located in proximity to the shoreline and provided there are no existing boating activities that might be significantly impacted by the installation of the facility.
4. Facilities will normally be allowed where the narrow channel is between 50 and 100 m (165 and 330 ft.) wide, except where the navigation channel is located in close proximity to the shoreline and/or existing boating use patterns, and boater safety would be significantly impacted by the installation of the facility, and subject to the results of a public safety assessment if requested by Parks Canada.

16. IN-WATER AND SHORELINE WORKS IN WETLANDS

Wetlands are one of the most important and threatened natural resources along both waterways. Further significant loss of wetlands will result in the decline of biological diversity, water quality, manageable water flows, and recreational, natural resource and educational values. The maintenance (federal no net loss policy) of the wetland function takes precedence over access to water and proposals for the construction or installation of associated marine works or facilities.

Although all applications are reviewed with an eye towards avoiding or minimizing impacts on wetland habitat, the highest level of protection is afforded to provincially-significant wetlands.

The implications of in-water and shoreline works in or adjacent to wetlands include:

- Loss of wetland function;
- Significant impact to the overall heritage character of the national historic site;
- Reduction in biological diversity and habitats for species at risk;
- Habitat fragmentation and the loss of other wildlife species that require large undisturbed marsh areas to live within;
- Deterioration of water quality within the adjacent waterbodies;
- A reduction in flood level protection;
- Loss of educational and recreational value.

Parks Canada generally discourages applications for in-water and shoreline works in wetlands owing to the potential impact.

POLICIES

1. The construction or installation of new docks, boathouses, boat ports, boat launch ramps and other similar types of marine facilities and dredging will not normally be permitted in wetlands.
2. Should the construction of in-water and shoreline works and dredging be permitted, the proponent will be required to provide Parks Canada with an environmental assessment that demonstrates neither significant (unmitigable) adverse impacts nor net loss of wetland or fish habitat function will be caused by the construction and associated use of a proposed in-water and shoreline work before approval can be considered.

APPENDIX A: LEGISLATIVE AND POLICY FRAMEWORK

The *Parks Canada Agency Act* (ref. *PCA Act, s.1, 1998*) requires that management plans be prepared for national historic sites and states that it is in the national interest to ensure the commemorative integrity of national historic sites.

The *Historic Canals Regulations* under the *Department of Transport Act* provide the regulatory framework for the management, use and protection of the Rideau Canal and Trent–Severn Waterway in accordance with the Historic Canals Policy and the Management Plan.

The *Canadian Environmental Assessment Act* requires that the environmental impact of certain projects or activities on or directly affecting federal lands be assessed, and if significant, mitigated where possible, and not be permitted if the impacts are potentially significant and cannot be mitigated.

The *Fisheries Act* requires the protection of fish habitat. Under a Level 3 agreement between Parks Canada and Fisheries & Oceans the Canals have a responsibility to protect fish habitat.

The *Species at Risk Act* requires the protection of species at risk and their habitats on federal crown lands.

The *Canada Shipping Act* regulates boating activities.

The *Navigable Waters Protection Act* protects the integrity and navigation safety of navigable waters.

The *Historic Canals Policy*, which is part of the *Guiding Principles and Operating Policies*, sets

out policies for managing and operating historic canals.

The *Federal on Wetlands Policy* requires that there be no net loss of wetland functions in federally owned wetlands.

Cultural Resource Management Policy, provides a decision-making framework for the protection and presentation of cultural resources.

Web link for federal legislation:

<http://laws.justice.gc.ca/en>

Web link for Historic Canals Policy and Cultural Resource Management Policy
www.pc.gc.ca/docs/pc/poli/princip/sec1/index_e.asp

APPENDIX B:

LIST OF WATERBODIES UNDER THE JURISDICTION OF PARKS CANADA

Trent–Severn Waterway National Historic Site of Canada

Trent River

Rice Lake

Otonabee River including Little Lake except the part of the Otonabee River north of the Hunter Street Bridge north to the Nassau Bridge

Lake Katchiwanooka

Clear Lake

Stoney Lake

Lovesick Lake

Lower Buckhorn Lake

Upper Buckhorn Lake

Chemong Lake

Pigeon Lake

Little Bald Lake and Big Bald Lake

Big Bob and Little Bob Channels

Sturgeon Lake

Scugog Lake and the Scugog River

Cameron Lake

Rosedale River

Balsam Lake

Gull River south of Coboconk

Mitchell Lake, Canal Lake and the connecting channels

Talbot River between Canal Lake and Talbot Dam

Channel between Talbot Dam and Lake Simcoe

Channel between Lake Couchiching and the Severn River

Sparrow Lake

Severn River including Gloucester Pool and Little Lake

Rideau Canal National Historic Site of Canada

Rideau Canal from Ottawa Locks to Hogs Back

Rideau River to the Hogs Back Dam

Kemptville Creek to Highway 43

Lower Rideau Lake

Big Rideau Lake

Adams Lake

Tay River to Port Elmsley

Tay Canal

Upper Rideau Lake

Newboro Lake

Loon Lake

Pollywog Lake

Benson Lake

Mosquito Lake

Stevens Creek

Indian lake

Clear Lake

Opinicon Lake

Sand Lake

Whitefish Lake

Cranberry Lake

Little Cranberry Lake

Dog Lake

The River Styx

Cataraqui River including Colonel By Lake, and the Great Cataraqui Marsh to Bell Island