Federal Coordination Regulation
Information

Responsible Authority:	Fisheries and Oceans Canada – Small Craft Harbours
Project Title:	Harbour Development, Tiverton, Digby County, N.S.
Proponent:	Public Works and Government Services Canada
Contact Person:	Paul Rowe
Telephone:	(902) 496-5535

Project Description

The proposed project at Tiverton Harbour, Digby County, Nova Scotia consists of the development of a new harbour to provide improved access and facilities for local users. Tiverton is located on Long Island on the west side of Petit Passage at latitude 44° 23' 00" N, and longitude 66° 13' 30" W (see **Figure 1** for topographic map indicating proposed project location and surrounding areas, and **Figure 2** for topographic map indicating shellfish closure area, ferry route, and proposed project area).

The proposed location of the new harbour is approximately 100 m north of the Tiverton Provincial Ferry wharf that is owned by the Federal Department of Transport, and approximately 200 m north of the existing Fishermen's wharf (see **Figure 3** for aerial photo indicating proposed project site).

The proposed harbour development will be a phased construction over five years. Project components are listed below (see **Figure 4** for site plan indicating proposed harbour development):

- Construction of new breakwater;
- Installation of 7 floating wharves, access ramp and parking area; and
- Dredging of berthing area, installation of pipe piles and construction of marginal wharf.

The first phase of the proposed project is the construction of an armourstone breakwater. The breakwater will extend 149 m east and then 69 m southward. The length of the proposed breakwater is approximately 220 meters. The breakwater will be 5 meters wide at the crest and approximately 50 meters wide at the base, depending on water depth (see **Figure 5** for cross-sections A and B through proposed breakwater). The breakwater will be constructed of clean rock and will consist of a 0.2 – 100 kg corestone surrounded by 2 layers of 200 - 800 kg filterstone, 1.5 meters thick. The north side (seaside and crest) will be protected with 2 layers of 8-10 tonne armourstone and a single layer of 6-8 tonne armourstone will protect the south side. Approximately 40,000 tonnes of armourstone, 25,000 tonnes of filter stone and 93,000 tonnes of core stone will cover an area of approximately 9,500 square meters on the harbour bottom. An additional infill of rock will extend along the shoreline for a length of approximately 120 m. This infill will be constructed of rockfill and two layers of 500-1000 kg filterstone (see **Figure 6** for cross-section C of rock infill). The tentative construction schedule for the

armourstone breakwater is a start date of January 2004 and a completion date of August 2004.

The second phase of the proposed project (FY 2005/2006) is the installation of seven floating docks to allow for maximum berthing capacity of 20 vessels. The floating docks will be anchored to the breakwater with concrete anchors. An access ramp or boat haul-out will be constructed of concrete slab on grade. A parking area will also be constructed where the breakwater meets the shoreline. The parking area will provide parking space for up to 70 vehicles.

The final phases of the project (between April 1, 2006 and March 31, 2008) involve dredging of the harbour, installing steel pipe piles and the construction of a marginal wharf. An excavator will be used in the proposed land-based dredging to attain a depth 2 meters below present Chart Datum. The anticipated dredge volume is approximately 2000 cubic meters. The proposed area to be dredged is within the new berthing area (see **Figure 4** for site plan indicating proposed dredge area). The dredge material (50% rock, 50% overburden) will be disposed on land on proposed parking lot area. A total of ten steel pipe piles will be driven to anchor the remaining floating wharves (berthing capacity of 15 vessels). A marginal wharf will be constructed to serve as an unloading area. The marginal wharf will be constructed of timber piles secured to the existing Provincial Ferry wharf. The marginal wharf construction will measure approximately 90 m long by 4 m wide. The marginal wharf will be finished with a concrete deck.

No other work is planned.

Environmental Setting

Tiverton, Nova Scotia is located on Long Island on the west side of Petit Passage, approximately 44 km west of Digby, Nova Scotia. Petit Passage separates Brier Island from Digby Neck. Tiverton is directly opposite East Ferry, which is on the western tip of Digby Neck. A ferry runs between the two villages to provide access to Long Island from Digby Neck.

The mean tidal range at Tiverton is 4.6 meters and the maximum tidal range is approximately 6.4 meters. The tides are semi-diurnal. Petit Passage is 3 km long and 400 meters wide at its narrowest point. Strong tidal currents flow through Petit Passage between the Bay of Fundy and Saint Mary's Bay. These currents may reach 10 knots in mid-channel.

Local marine fish species that support important commercial fisheries include lobster, herring and scallop. Smelt migrate near shore in the late fall, and are present throughout the winter in near shore areas. They move away by March and migrate to rivers in April. Shad and gaspereau (alewife and blueback herring) are believed to migrate very near the coastline from mid May through June, staging and feeding in the nearshore areas before migrating into rivers to spawn. Adult and juvenile gaspereau have emigrated from the rivers by the autumn and move offshore as pelagic schooling fish. In the summer mackerel schools may move inshore to feed. Other marine fish species likely to be found near the project site are winter flounder, sculpin, stickleback and mummichog. The immediate area around Tiverton is closed to shellfish harvesting. Whales, including

Minke Whales and the endangered Right Whale are common in the Bay of Fundy near Tiverton and a whale-watching operation is based there.

The local lobster-fishing season will run from Nov 25 – May 31. A small stream flows into Petit Passage through a lagoon approximately 500 meters south of the proposed project site. The drainage area of this stream is 1.7 square kilometers.

White Spruce and Balsam Fir are the most common species of tree with some maples, birches and aspens. Black Spruce and Larch are common on the more poorly drained areas. The immediate vicinity of the projec site has been cleared of forest to about 300 meters from the coast but farther inland the land is forested.

Nearby Brier Island is an important staging area for migrating birds and bats. A breeding colony of Turkey Buzzards exist on Long Island.

Tiverton attracts numerous tourists and birdwatchers. The area is noted for unusual rock formations on the shore including the famous "balancing rock". No heritage sites, or other sensitive elements have been identified that would be adversely affected by the project.

A fish-processing plant is located at Tiverton approximately 1.2 km south of the proposed project site and another plant is located across Petit Passage in East Ferry, about 600 km from the site.

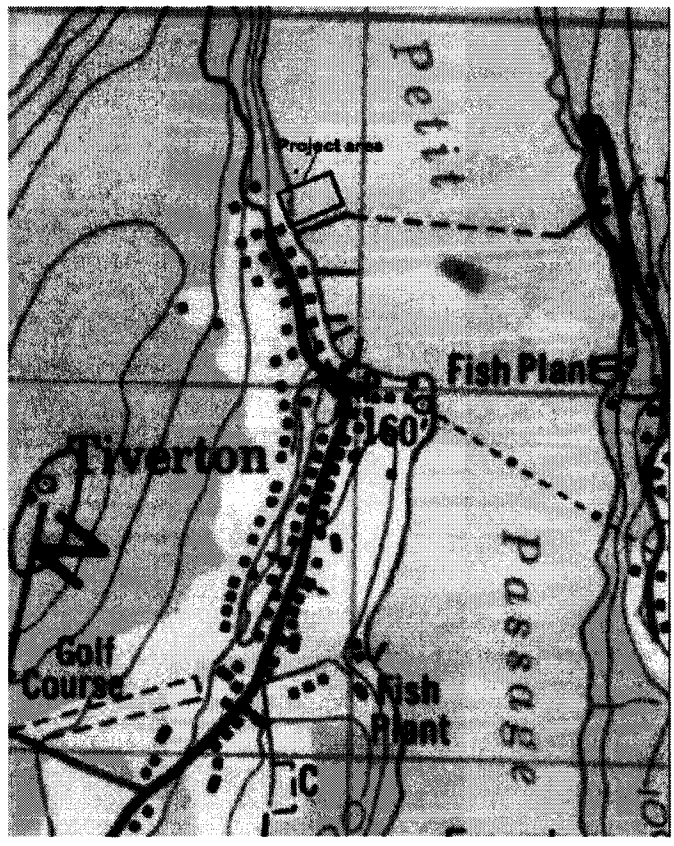

Figure 1. Topographic map of proposed project location and surrounding areas, Tiverton, N.S. Each square represents 1 square kilometer.

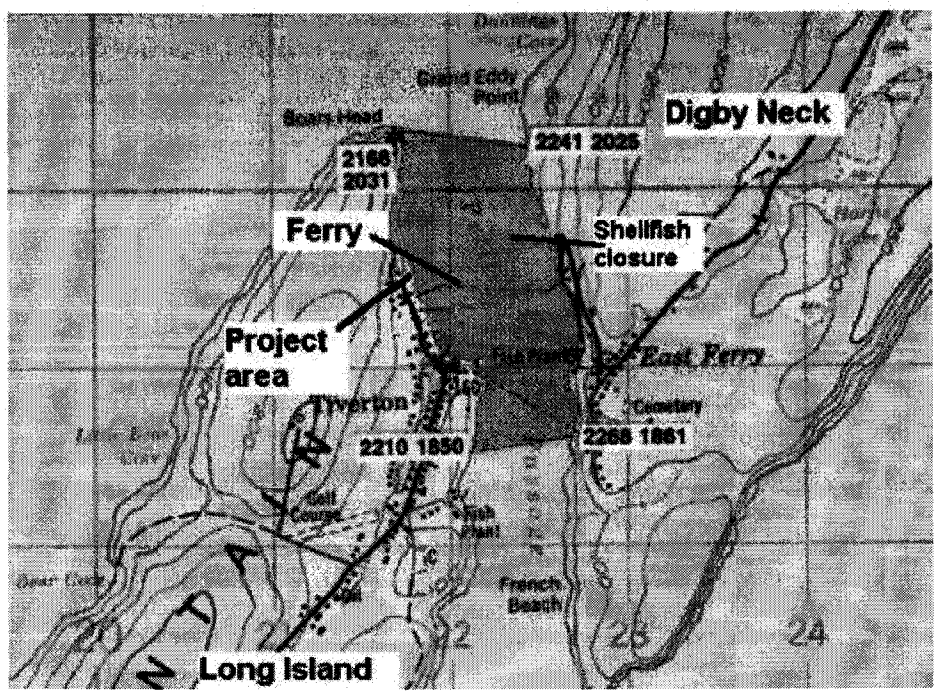

Figure 2. Topographic map indicating shellfish closure area, ferry route, and proposed project area, Tiverton, N.S. Each square represent 1 square kilometer.

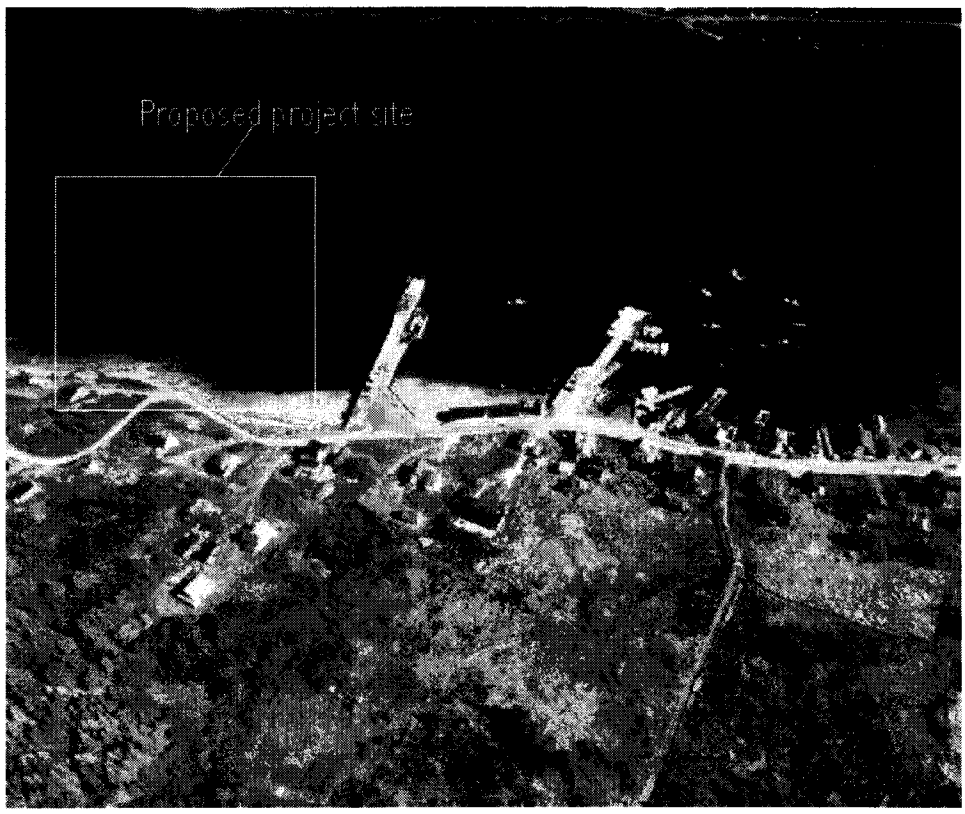

Figure 3. Aerial photo of proposed project site, Tiverton, N.S.

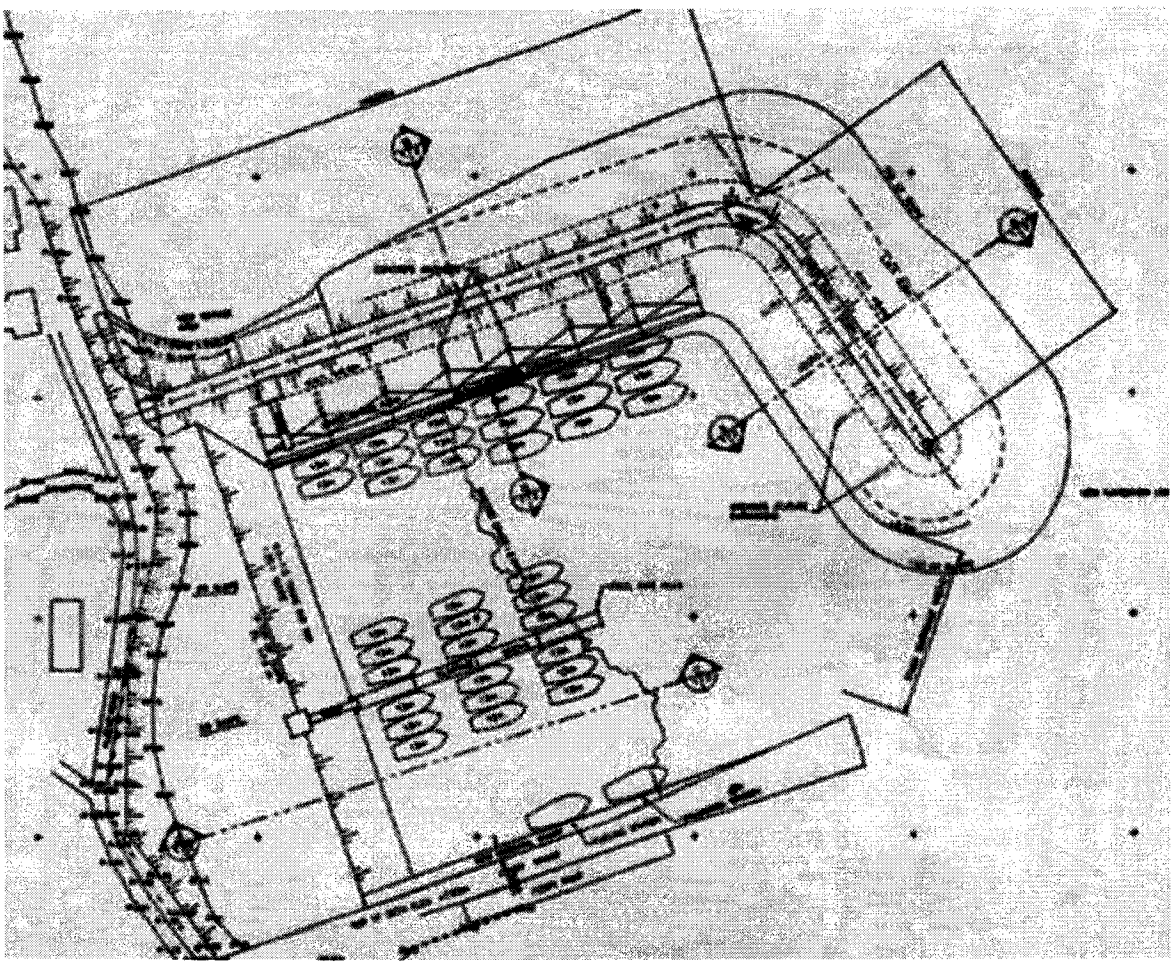

Figure 4. Site plan of proposed harbour development at Tiverton, N.S.

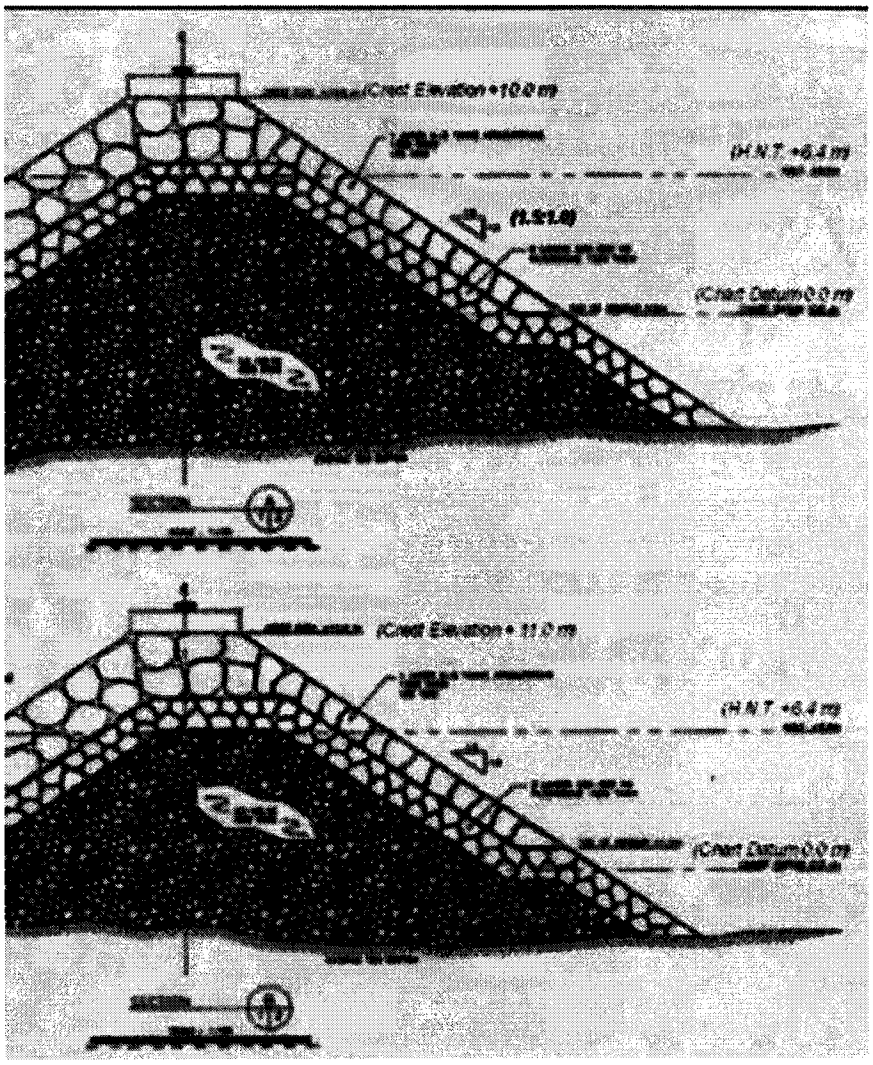

Figure 5. Cross-sections through proposed breakwater (sections A and B) at Tiverton, N.S.

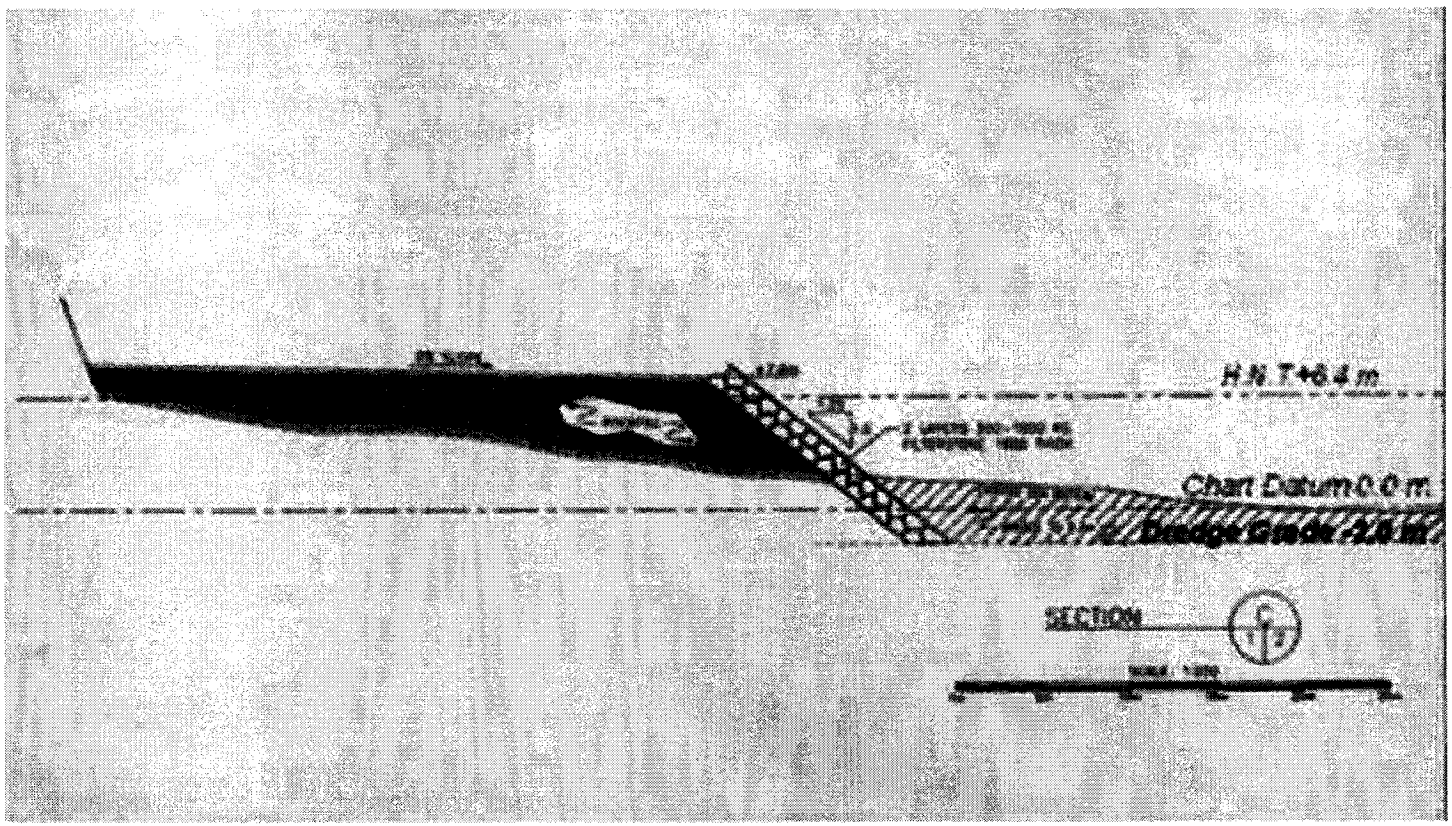

Figure 6. Cross-section through rock infill (section C) at Tiverton, N.S.

Federal Coordination Regulations

SECTION 6

RECORD OF DETERMINATION

Project Title:

Public Works and Government Services Canada, Harbour Development, Tiverton, Digby County, Nova Scotia

Federal Authority _____

Name & Title _____

Signature _____ Date _____

In accordance with the Federal Coordination Regulations (Section 6), under the Canadian Environmental Assessment Act (CEAA), is your Department / Agency

☐ **Likely** to be a Responsible Authority (RA), and thus require an environmental assessment under Section 5 of CEAA.

OR

☐ **Not likely** to be a Responsible Authority (RA).

AND

☐ In possession of expert and specialist information that is necessary to conduct an environmental assessment of this project.

OR

Does your Department / Agency

☐ Require **additional information** (below) to determine if likely to be an RA.
(The regulations require that additional information be requested with 10 days after making the determination)

PLEASE FAX THE ORIGINAL SIGNED COPY TO
PWGSC ENVIRONMENTAL SERVICES
FAX NUMBER (902) 496-5536