
CITY OF KELOWNA

MEMORANDUM

Date: October 23, 2006
File No.: 5280-08
To: City Manager
From: Environment & Solid Waste Manager
Subject: Aquatic Habitat Index –Okanagan Lake Foreshore

RECOMMENDATION:

THAT Council receive as information the Aquatic Habitat Index Report;

AND THAT Council support use of Aquatic Habitat Index information for preparation of the Waterfront Management Strategy and by the City for the review of development proposals along the Kelowna waterfront.

BACKGROUND:

In March 2005 the City retained EBA Consulting Ltd. to comprehensively evaluate the foreshore (includes upland edge, foreshore, and offshore) of Okanagan Lake for determining areas of aquatic and ecological significance. The study was cost shared by the proponent of the Lawson's Landing development as it had triggered works that the City had not anticipated doing in the 2+ year horizon at that time.

The objective of the assessment was to gather fish and wildlife information along the shoreline so that the City could prepare a Waterfront Management Strategy that would incorporate scientifically based identification of the environmentally sensitive areas.

The work plan began with strategic direction (DFO - Environmental Principles and Objectives endorsed by Council on March 21, 2005 - Attach #1) that built upon OCP and Strategic Plan Policy. The work plan also included:

- existing baseline inventory (Foreshore Inventory Mapping)
- 1 year of data collection, with fish sampling (largest component of works)
- stream/lake mapping
- productivity ratings
- air photo analysis
- preparation of an Aquatic Habitat Index (AHI) .

The AHI or ranking of habitat value of different segments along Kelowna's foreshore also had to be defensible with the regulatory agencies as an accepted scientifically based framework that could assist with future assessments.

Results of the index indicate that approximately 53% of Kelowna shoreline habitat is very High or High value habitat, 37% is Moderate and 10% is Low or Very Low value habitat. The habitat

value in the far northern and far southern areas was of highest value likely due to less development but also due to more suitable spawning areas and larger vegetated areas.

The report and information can be used as a reference when the Waterfront Management Strategy gets underway (new name for Kelowna Foreshore Plan) and for assisting when reviewing proposed developments along Kelowna waterfront areas.

The last piece of scientific information needed for understanding Kelowna's foreshore is Physical Baseline data (and/or model) that can determine how foreshore processes are affected by changes to the foreshore. This study is planned in 2007. These works and assessments will become the backbone to future foreshore planning.



Mark Watt, Environment and Solid Waste Manager

Approved for inclusion:
John Vos,
Director of Works & Utilities

Cc: Recreation, Parks & Cultural Services
Community Development and Real Estate
Policy, Research and Strategic Planning
RDCO Planning & Development Services
MOE Fisheries Section (Penticton)

ATTACH #1: Foreshore Environmental Principles and Objectives

COPY OF THE AQUATIC HABITAT INDEX REPORT AVAILABLE FOR VIEWING IN THE
OFFICE OF THE CITY MANAGER

Attachment 1

Environmental Principles

The Environmental Principles required for the Waterfront Management Strategy are as follows.

1. The Waterfront Management Strategy will identify appropriate actions toward restoration of damaged ecosystems and ecological health of the lake in the region, and for the benefit of the entire watershed.
2. The Waterfront Management Strategy will seek to maintain ecological linkages and biodiversity, wherever practical, including wildlife movement corridors and aquatic and terrestrial pathways.
3. The Waterfront Management Strategy will not support development in high ESA's.
4. The Waterfront Management Strategy will not support trade-off of unacceptable environmental effects for economic gain (i.e., economic development projects will be directed to locations and/or design options that avoid impacts to environmentally sensitive areas).
5. The Waterfront Management Strategy will support only net neutral or net positive effects for biophysical resources.
6. The Waterfront Management Strategy will not support "significant" adverse effects to any biophysical resource on the basis that compensatory habitat works may offset such effects. Any compensatory habitat works that may be considered within the context of the Kelowna Shore Zone Plan must instead follow the DFO Decision Framework for the Determination and Authorization of Harmful Alteration, Disruption or Destruction of Fish Habitat and be consistent with the "No Net Loss" guiding principle of The Department of Fisheries and Oceans Policy for the Management of Fish Habitat.
7. The Waterfront Management Strategy will not support restorative or enhancement habitat works as an acceptable trade-off for incomplete mitigation where more effective mitigation efforts are feasible. A business case will be required to prove mitigation feasibility.
8. The Waterfront Management Strategy will require that no net loss or that a net gain in the productive capacity of biophysical resources is realized prior to, or as a condition of, any approval of shoreline-altering projects.
9. The Waterfront Management Strategy will support only those planning and development compromises or trade-offs that will result in substantial, long-term net positive production benefits for biophysical resources.
10. The Waterfront Management Strategy will encourage the use of Green Technologies and recyclable materials.
11. The Waterfront Management Strategy will encourage recreational pursuits (biking, non-motorized boating), pedestrian traffic and interpretive opportunities in moderate to high sensitive areas, where sensitivities allow.