APPENDIX I

INFORMATION REQUIREMENTS/GUIDELINES FOR DOCKING PROPOSALS IN THE WC1A4 ZONE

For properties with WC1A4 zoning, the Township of Muskoka Lakes will consider applications for shoreline structures subject to the provision of the following supporting information and guidelines.

a) The following biophysical information will be required for the development or redevelopment of shoreline structures:

i) relevant information / mapping used in conjunction with, and in support of the District and local Official Plans;

ii) predominant wind, wave action, and currents;

iii) near-shore bathymetry, slope, normal high water mark, and seasonal operating ranges;

iv) type of substrate (percent composition of boulder, cobble, gravel, sand, silt, muck, etc.);

v) aquatic vegetation communities, species distribution and densities, (i.e., submergent, emergent, etc.);

vi) existing shoreline and in-water structures (i.e., docks, boathouses, breakwalls, groynes, abandoned cribs, etc.), and beaches;

vii) riparian characteristics (slopes, armouring and slumping of banks; seepage zones; forest, shrubs and herbaceous ground cover; and related wildlife habitat);

viii) in-water features providing cover for fish (submerged logs, branches, brush piles, boulders, etc.);

ix) fish community at/near site;

x) potential use of littoral areas for spawning, rearing, and supplying food, cover and migration routes for fish; and

xi) wildlife use of shoreline, either assumed from vegetation communities, or observed from viewing, signs or calls; backshore wetlands; habitat characterization including important elements (i.e., dead standing trees, downed woody debris).

b) Detailed descriptions of the following will be submitted by the applicant:

i) the work site including a map, survey plan or sketch (to scale) with dimensions indicating the location of existing buildings, existing and proposed shoreline and in water structures, property lines and the normal high water mark;

ii) a plan view (top-down) sketch or drawing of the work area showing existing shoreline (including normal high water mark) and proposed dock, boathouse or boat launch;

iii) a cross-sectional (side view) drawing showing the existing and proposed structure and normal high water mark;

iv) a list of heavy equipment that will be used, and related construction details;

v) the proposed start and completion dates;

vi) any potential effects on boat navigation (a requirement of the Canadian Coast Guard);

vii) proposed use of the shoreline structures (e.g.: number of boats, overnight parking, type of boats);

viii) a shoreline re-naturalization landscape plan, if required by Section e) xiv).

c) An Environmental Impact Study will be completed which identifies and evaluates fish and wildlife habitat, determines no development areas and areas where development can occur, assesses impacts of the proposed development and recommends mitigation options / measures.

d) Boating impact assessments may be required in accordance with the Township Official Plan.

e) In preparing the development proposal and related EIS, the following guidelines will be utilized to ensure that the shoreline structures will not negatively affect fish and fish habitat; wildlife and wildlife habitat; navigational and aesthetic considerations; and public safety.

i) Avoid significant fish and wildlife habitat in locating development.

ii) Selection of structures that minimize disturbance to the lake or river bottom. Cantilever, floating, and post-supported docks are preferred because they do not disturb bottom substrates, or restrict the movement of water.

iii) Use of open-face design in constructing cribs. Where cribs are built from timbers

and are filled with rock, it is best if the crib is open-faced; such structures provide fish and other aquatic organisms spaces to hide from predators.

iv) Avoidance of vertical planking. Docks are environmentally friendly if there is bridging between cribs or poles that allows water to circulate. Vertical planking is not suitable along the sides of the dock because it restricts water movement.

v) Use of clean rocks taken from dry land. Any rocks must be clean and free of soil, and not taken from the lake, river bottom or shoreline. Removal of rocks from these areas could destroy fish habitat and result in charges under the federal Fisheries Act.

vi) Ensure that there is as much bridging between solid components as possible. Generally, solid docks made from cement or sheet piling will not be approved by the Department of Fisheries and Oceans which administers the Fisheries Act. Such structures are vulnerable to ice damage, destroy fish habitat, and can create stagnant backwater areas. If docks require a concrete abutment, they should be located entirely on upland property, and preferably above the normal high water mark.

vii) Selective use of pressure treated wood. Such wood should not be used below the normal high water mark, and if employed, all cutting, end sealing, staining, etc. should be done well back from the lake or stream. The wood treatment and finishing should be completely dry before being integrated into the dock structure.

viii) Use of untreated cedar or hemlock timbers for structures below the high water mark. When submerged, such structures will last decades.

ix) Avoidance of projects which require in-water dredging or filling. These activities may be harmful to fish and their habitat; however, if proposed, the applicant must demonstrate that the works are acceptable to the Department of Fisheries and Oceans.

x) Construction activities undertaken at proper time of year. In-water activities should not occur during local fish spawning and nursery periods, since they could disturb spawning behaviour, smother eggs, and kill young-of-the-year and juvenile fish. If any in-water work is proposed, the applicant must contact the local office of the Ministry of Natural Resources or the Department of Fisheries

and Oceans for details on timing.

xi) Use of environmentally friendly materials for boat launches. Avoid constructing boat launches out of cement, as pre-fabricated or poured cement will destroy the fish habitat it is placed on.

xii) Use alternatives such as gravel, or a marine railway. Avoid covering or removing aquatic and shoreline vegetation to construct boat launch.

xiii) Use of silt screens. In-water silt screens should be used where there will be significant disturbance of the lake bottom and/or approved filling or dredging in conjunction with the shoreline structure.

xiv) Maintenance of natural riparian vegetation. Where the shorelands abutting the proposed structures are predominantly covered by natural vegetation for at least 15 metres inland from the normal high water mark:

- The natural integrity of this shoreline buffer, and its features that contribute to wildlife diversity (fallen trees, dead standing trees, solitary conifers, stumps, shoreline conifers, leaf litter, etc.), should be maintained.
- Clearing of vegetation and alteration of the soil mantle within the buffer should be limited to pathways providing necessary access to the shoreline structures, which should be close to perpendicular to the shore and should not be more than 3.5 metres wide.
- Clustering of shoreline structures is encouraged, to increase the length of uninterrupted natural shoreline. Where the shorelands abutting the proposed structures are not predominantly natural, a landscape plan is required showing best efforts that will be undertaken to achieve a naturalized shoreline for approximately 15 metres inland, including landscape linkages to other natural features where possible.

xv) Maintenance of aquatic habitat. Maintain features that contribute to aquatic habitat diversity across the shoreline, (i.e., rocks, logs, coarse woody debris, and emergent and submergent plants).

xvi) Wake and prop wash. Where circumstances warrant, structures should be designed to minimize wake and prop wash impacts.

xvii) Minimization of aesthetic impacts. Locate and design the structures so that when

they are fully occupied by boats, the structures plus boats will have the least intrusive profile to observers in nearby navigation channels and on nearby shorelines. Structures and furnishings that are not essential to boat berthing, aquatic recreation, and public safety should be kept to a minimum and should be as low in profile as possible.

xviii) Lighting. Locate and direct lighting so it is as unobtrusive as possible, and will not interfere with navigational safety, habitat of nocturnal animals, and privacy of neighbouring properties. Lighting shall be subdued, low level, and directed inwards (unless it is for the demarcation of the end of a structure for safety purposes).

f) Applicants are encouraged to submit their plans to the Department of Fisheries and Oceans. Applicants must comply with all requirements of the Department.