Qualified Professional Checklist for Foreshore Works - Okanagan LLFP

Project Name: **New Dock at Horseshoe Bay (P.I.D. 003-000-583) near Peachland, BC** Date: **Mar. 22, 2016**
Water Body: **Okanagan Lake** Proponent**: Rick Mervyn**

Project Description: Install 45 m long new dock with 27 m long aluminum bridge, light penetrating decking on entire dock,(including over potential shore spawning habitat), 16 small-diameter (15 cm) steel dock piles and 4 small-diameter boat lift piles (refer to attached Figure – Nexus Drawing FC12).

NOTE: The items in this checklist apply to the site of works and the surrounding area.

Have you …		**Yes**	**No**	**N/A**	**Explain**
1.0 SITE SURVEY					
1.1 reviewed existing fish, emergent vegetation, SAR & habitat mapping data, including:	a) Conservation Data Centre (CDC)?	X			one mapped occurrence of SAR within 3 km radius[1], scalepod (*Idahoa scapigera*), blue-listed vascular plant near Scoggins Creek 1 km east of proposed dock site
	b) local MOE (Ecosystem Staff)?		X		used OLLP
	c) Foreshore Inventory Mapping?	X			OLLP black zone, FIM[2] Segment 29 on Mapsheet 12 – low impact rating (<10%); very high habitat index rating; no staging/migration/salmon spawning stream/mussels; moderate for juvenile rearing; mainly black and red kokanee spawning zones
	d) Sensitive Ecosystem Inventory?	X			Okanagan SEI Map 82E072 – mapped ecosystem is Coniferous Woodland (Photo 1)
1.2 conducted any inventories to confirm presence/absence of fish, emergent vegetation and SAR or their habitats on site?		X			site visit conducted August 19/15; substrate has shore spawning potential; no aquatic vegetation; riparian vegetation had scattered Ponderosa pine to 35 cm (Photo 1), with reed canary grass, cottonwood saplings, and rose at proposed dock origin (Photo 2)
1.3 confirmed environmentally sensitive features or ecosystems on the site? (*only if the upland is within an environmental development permit area*)		X			Coniferous Woodland ecosystem; no sensitive features

[1] BC Conservation Data Centre: CDC iMap (web application). 2016. Victoria, BC, Canada. Available http://maps.gov.bc.ca/ess/sv/cdc/ Accessed on February 5, 2016.
[2] J. Schleppe, Okanagan Lake Foreshore Inventory and Mapping, 2011. Prepared by Ecoscape Environmental Consultants Ltd for Okanagan Collaborative Conservation Program. File No. 10-596. February.

Have you …		Yes	No	N/A	Explain
1.4 evaluated and described local soil and foreshore substrate?		X			beach substrate 2-3 cm gravel (Photo 2), becoming subangular 4-5 cm toward low water mark, then varied mix of 2-30 cm cobble, boulder, subangular rock, and bedrock (Photo 3)
1.5 assessed potential changes to local shoreline and stream mouth accretion/erosion dynamics? (*only required for marina, infill and erosion protection works*)				X	not a marina, infill, or erosion protection works
2.0 SITE DESIGN & RECOMMENDATIONS					
2.1 applied DFO's principal of 'no net loss'?	a) Redesign?	X			full-spanning structure will have only two mid-span piles (15 cm steel) in potential spawning habitat (refer to attached Figure – Nexus Drawing FC12)
	b) Relocate?	X			entire property shoreline is black zone; acceptable site for dock selected by MFLNRO staff; design will result in negligible loss (0.04 m^2) of fish habitat
	c) Mitigation?	X			follow BMPs for working in and around water
	d) Compensation?			X	not required
2.2 followed the Habitat Officer's Terms and Conditions?		X			except for 2 mid-span piles in potential spawning habitat; construct in timing window of June 1-September 30; dock 0.5 m above high water level, light-penetrating decking, portion beyond walkway ≤24 m^2
2.3 followed all BMPs? If not, have you described in the EIA alternatives to BMPs that are being used (pg #)		X			BMPs followed except for 2 mid-span piles in potential spawning habitat
2.4 included measures to avoid or minimize impacts to aquatic and riparian habitat? (*in relation to existing or potential fish and SAR use*)		X			follow BMPs; all construction access from water; the 16 piles will be 15 cm diameter steel with individual footprint areas of 0.02 m^2
2.5 included measures to avoid or minimize impacts to any fish, emergent vegetation or SAR identified on the site?		X			follow BMPs
2.6 applied the least risk timing windows?		X			June 1-September 30
2.7 minimized the footprint of the works?		X			16 steel dock piles (15 cm diameter), only 2 in potential spawning substrate; 4 steel boat lift piles; each pile footprint 177 cm^2 or 0.02 m^2

Have you …	Yes	No	N/A	Explain
2.8 considered one common lakeshore access on multiple lot sites?			X	site is single lot
2.9 maintained a 50 m lakeshore frontage between moorage structures on single lots?	X			no other existing docks in sight (Photo 4, Photo 5)
2.10 minimized access related disturbance from machinery/equipment?	X			access by boat or barge
2.11 included measures to ensure no erosion or sediment releases result from proposed works?		X		minimal substrate disturbance will result from construction
3.0 MONITORING AND REPORTING				
3.1 included provisions to ensure protective measures & BMPs are followed?	X			full-time monitoring at startup
3.2 included provisions for monitoring to ensure the completed works function as expected over time?		X		not deemed necessary
3.3 provided recommendations for any impacts from future maintenance?		X		none anticipated
3.4 considered long term water quality issues?		X		none anticipated
3.5 reported new SAR occurrences to MOE Ecosystem Staff and CDC using CDC Field Observation Forms			X	no new SAR occurrences
3.6 reported null data for rare plant species to MOE Ecosystem Staff (**Osoyoos Lake Only)**			X	not Osoyoos Lake
4.0 LEGISLATIVE REQUIREMENTS				
4.1 avoided a HADD/serious harm to fish?	X			only 2 small diameter (15 cm) piles in potential spawning habitat; light penetrating decking on entire dock
4.2 received a letter of advice or authorization from DFO if the works do cause a HADD/serious harm to fish?			X	no HADD/serious harm to fish
4.3 conducted a RAR assessment for upland works? If yes, list RAR assessment # and indicate if the RAR assessment included provisions for foreshore access		X		no upland works at this time

Applicable Best Management Practices (BMPs):

Timing Windows (least risk work windows) – Okanagan Region
http://www.env.gov.bc.ca/wsd/regions/okr/wateract/workwindows.html

Ministry of Forests, Lands and Natural Resource Operations Private Moorage Site
http://www.for.gov.bc.ca/land_tenures/tenure_programs/programs/privatemoorage/

Ministry of Agriculture and Lands
Requirements and Best Management Practices – Designing Your Dock or Boat Launch
http://www.for.gov.bc.ca/land_tenures/tenure_programs/programs/privatemoorage/regs_best_mgmt_practices_updated.pdf

Ministry of Environment – Okanagan Region
Best Management Practices for Small Boat Moorage on Lakes (July 26, 2006)
http://www.env.gov.bc.ca/okanagan/documents/BMPSmallBoatMoorage_WorkingDraft.pdf

BC Standards and Best Practices for Instream Works (March 2004)
http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf

Habitat Officer's Terms and Conditions – Okanagan Region (April 2011)
http://www.env.gov.bc.ca/wsd/regions/okr/wateract/terms_and_conditions_april-2011.pdf

This development activity is in the following zone: Black Red Yellow No Colour

The development activity risk is Very High High Moderate Low

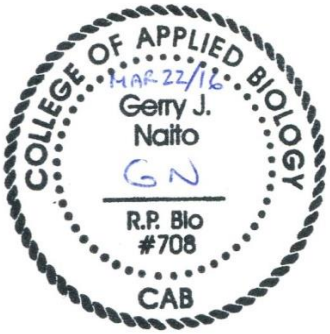
I confirm that all information provided in this checklist is to the best of my professional knowledge true and complete.

Gerry Naito
_____
Original signature of Qualified Professional

__Gerry Naito_____
Printed Name of Qualified Professional

RPBio #708 (BC College of Applied Biology)
Professional Association #

March 22, 2016
Date



Attachments: Photographs (2 pages, 5 photos total)
Figure 1 – Plan and Section Views of Proposed New Dock: Nexus Drawing FC12

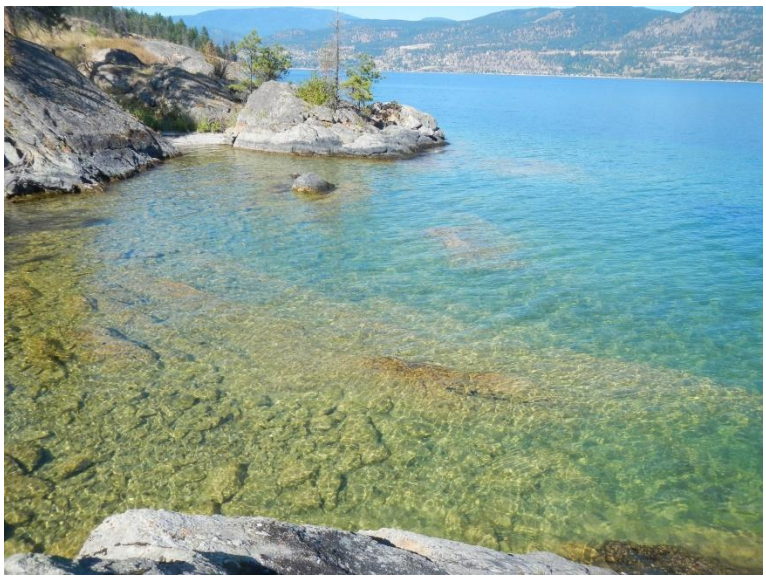
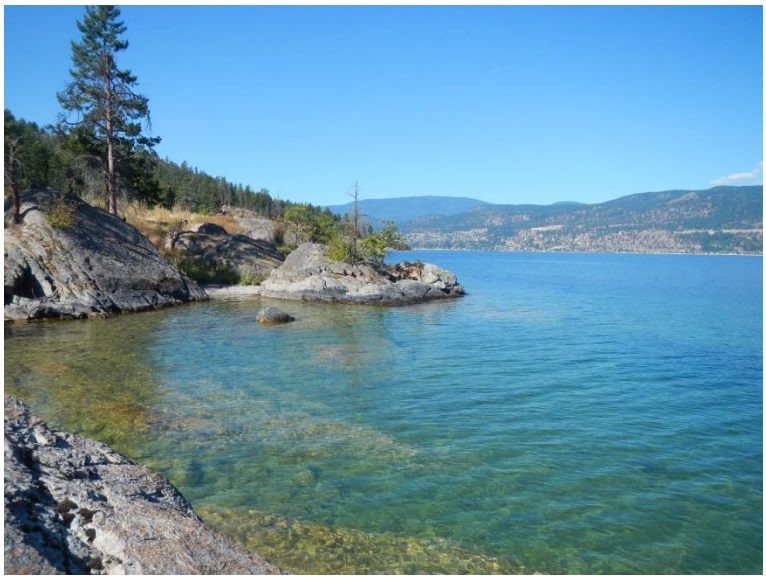
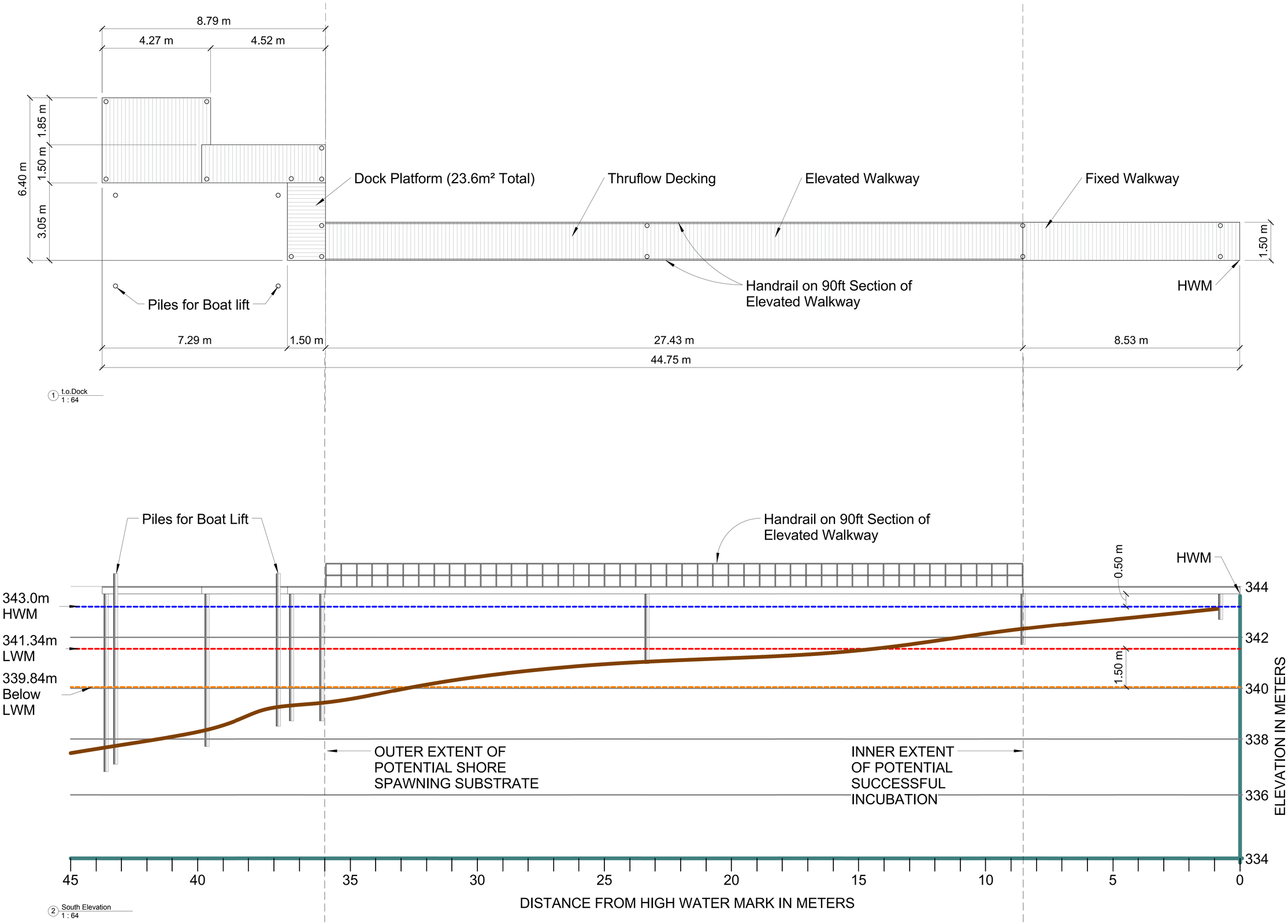
	Photo 1. Looking toward shore along proposed dock alignment, showing riparian conditions and Coniferous Woodland forest. Aug 19/15
	Photo 2. Looking in at proposed dock origin, showing beach substrate, bedrock outcrop, and vegetation. Aug 19/15
	Photo 3. Looking across east to west at proposed dock location, showing nearshore conditions including varied substrate of cobble, boulder, subangular rock, and bedrock. Aug 19/15

	Photo 4. Looking east from proposed dock location, showing absence of existing shoreline development. Aug 19/15
	Photo 5. Looking west at absence of existing shoreline development. Aug 19/15



NEXUS DOCK & MARINA

For Approval

DOCK TYPE:

Developer's Approval:

Name:

Date:

Signature:

No.	Description	Date

Rick Mervyn

Mervyn Fixed Dock

Dock, Water Levels & Potential Spawning Areas

Project number	#03/Nex/2016
Date	Mar 22/2016
Drawn by	Perry.K
Checked by	Rod, Lorna, Craig

FC12

Scale 1 : 64

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