

Marina Visual Inspection Report

July 23 – 24, 2024

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Scope of work

Ian and Travis inspected the Nakusp Marina on July 23 and 24, 2024. It was a visual inspection of all infrastructure above the water line except the HDPE wave attenuator and the boat launch. As the Director of Interior Marine (previously Queensboro Marine) Ian has considerable experience in assessing, repairing, and building marine structures. He gave a verbal condition assessment and recommendations to Travis who then compiled those into the tables herein. Interior Marine reviewed the tables. This report summarizes the condition and recommends follow up for the access walkway, the marina docks, and the south breakwater. Each table is followed by representative images of that section.

Infrastructure summary

The marina includes access walkways, marina docks, a wave attenuator and a breakwater structure, as well as portions of the public boat launch ramp. A 60 m walkway extends from shore to provide access to an inverted L-shaped floating concrete dock. The walkway is constructed primarily of floating cement sections anchored to wooden pilings and is joined to the main dock by an aluminum gangway. The main run of the dock measures 230m with an L portion extending to the east measures 64m. 21 mooring spaces are located along the west side of the main dock and 23 mooring spaces are located along the east side of the main dock.

The L portion features 8 wooden fingers on the shore side and 10 wooden fingers on the lake side, creating 38 mooring spaces. Lights are located along the main dock although the electrical line is severed in multiple sections and power has been disabled. More lights and power outlets are located on the L portion of the dock.

A 300' long composite pipe wave attenuator is located on the western side of the main dock. It is anchored to the lake bottom. A floating concrete breakwater approximately 92 m by 10 m is located immediately south of the L portion of the dock.

Access walkway

Overall fair condition of concrete with significant repairs required.

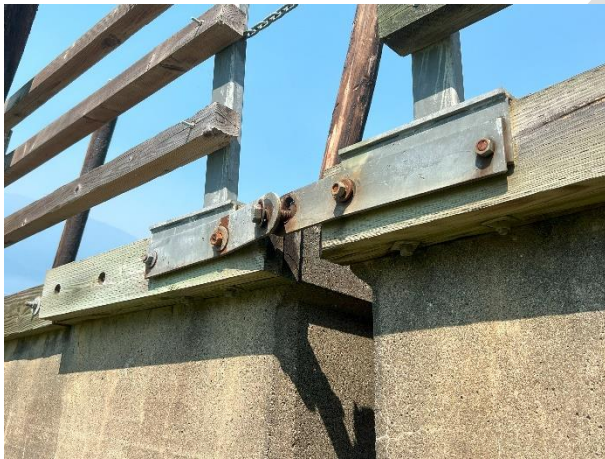
Item	Condition notes	Follow up
Creosote piles	Decent shape but should be replaced with environmentally friendly piles. Some holes in piles from birds nesting, some rot starting in dolphins at beginning of floating walkway	Remove and replace when possible.
Connection from the parking lot to the first ramp	Pulling apart because ramped dock section pulling on wooden walkway due to improper anchor.	Install a new anchor system and realign the ramped dock.
Pivot points between sections of concrete ramp	Failing	Possible to get two 3 ton come Along's and pull the sections back together and tighten up the pivot points on each section. Will require new hinges to be fabricated, or new holes cut where old ones oblanged
4 th section of access ramp	Damaged concrete	
Electrical lines	Wires are failed	Remove or replace
Ramp decking, cleats, and railings	Poor condition	Repair or replace
Fourth piling walking down	Concrete cracking between the sections	
Entire walkway	Design note	The marina walkway and ramps should be in the water at all times, never be touching dry ground. Need to take a look at low water.
Last three concrete pontoons before aluminum ramp	Do not float causing aluminum ramp misalignment and damage	Find and repair the holes if possible. May need to be replaced, further investigation required.



Aluminum ramp from walkway to marina



4th section of access ramp



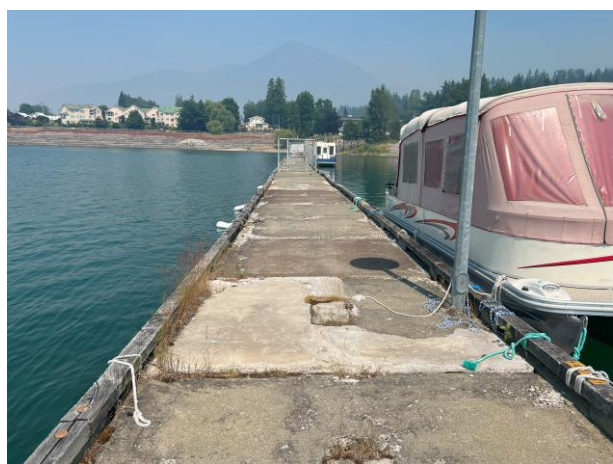
Pivot points between sections of ramps



Creosote pile



Connection from parking lot to first ramp



Looking north along floating docks



Ramp from parking lot to first marina dock



Looking up towards parking lot



Looking down from parking lot



Concrete cracking between fourth piling



Electrical lines

Marina floating docks

Unevenness along the marina suggests that water is getting in, or uneven weight distribution.

Some listing of the walkway may be caused by surface repairs of concrete. Blocks need to be inspected for breaks or cracks from underside to determine corrective action.

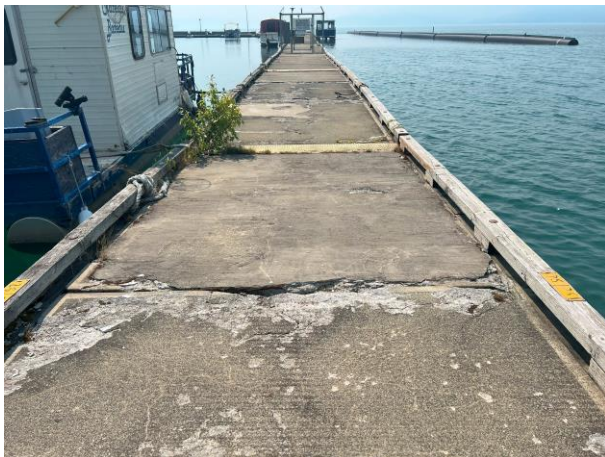
Item	Condition notes	Follow up
Fascia boards	Broken sections	Replace
Bull rails	Most broken	Replace
Concrete attachment of pontoons to fascia	Broken sections, concrete sections starting to shift individually	Needs attention ASAP. Replace broken bolts and replace wood with metal channel
Southern sections	Exposed foam floats	Repair concrete
Concrete surface	Some sections of broken concrete	Chip out and repour if no damage to remesh or deterioration of rebar.
Anchor chains	Visual inspection shows good condition, all shims and locker plates intact	Check anchor layout for any alignment issues
Section from slip 60-61	damage underneath causing water to get in and sink	Repair
Slip 82-83	sinking due to water getting in the float	Repair
Slip 53-54	sloping towards east side	Pump and repair
Slip 55-56	sinking due to water getting in float, concrete in bad shape	Repair
Slip 56-57	Concrete in rough shape	Repair
Slip 58-59	Sunk down due to water in float	Pump and repair
Slip 71	Unattached and broken concrete	Priority repair
Slip 45-46	Popping up and moving	Reconnect to fascia
From the slip 47 to the gate	The walkway bows suggesting the anchors aren't tight enough	Check anchor layout for any alignment issues
All fingers on the south end of marina	Poor condition	Replace
4 th slip on the south end	There is an innertube holding it up	Repair flotation



Fascia and Bull Rails



Concrete attachment of pontoons



Looking south along marina floating docks,
Notice the lean and sinking of floats.



Anchor Chains



Exposed foam floats on south sections



concrete surface on floating docks



Bend in floating dock walkway



Fingers on south end of marina floating dock



Slip 71 unattached and broken concrete



Concrete walkway showing damage

South Breakwater

Without the south breakwater we would not be able to have a boat launch wharf or marina because of strong south to north waves.

It is in poor condition with multiple sections listing due to systemic failures, and the overall integrity at risk because of broken attachment points.

Condition of concrete is deteriorating due to allowed free movement of the blocks, and contact being made on the mating surfaces. If a repair to the blocks and new post tension system is installed, mating surfaces may need to be repaired.

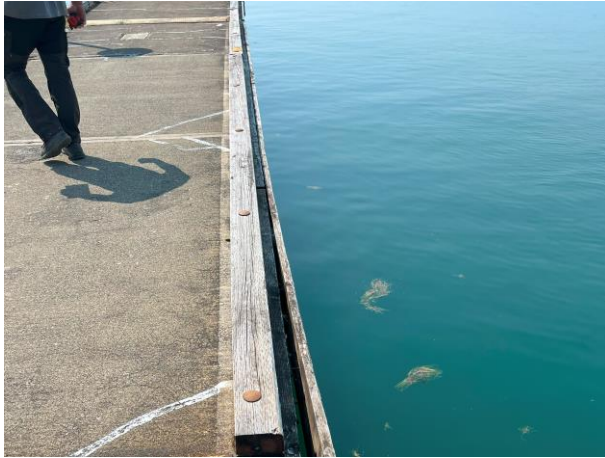
Item	Condition notes	Follow up
Post tensioning pockets	Smashed	Replace
Access hole plugs	Missing	Replace
Cables between sections	Broken	Repair or replace
Concrete faces (vertical exterior)	Poor surface condition	Seal or patch
Breakwater section 2	Water or air pressure causing heaving	Pump out and check for holes
Mid vertical sections	Poor concrete condition	Repair or remove
Electrical system	Non-functional	Replace
Facia boards	Broken	Replace



Post tensioning pockets



South breakwater



Fascia boards



South breakwater mid vertical sections



South breakwater heaving



Missing access hole plugs



Access hole filled with water



South breakwater looking north