Town of York POC:

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Waterfront Facilities Inspection Brief

Presented by:

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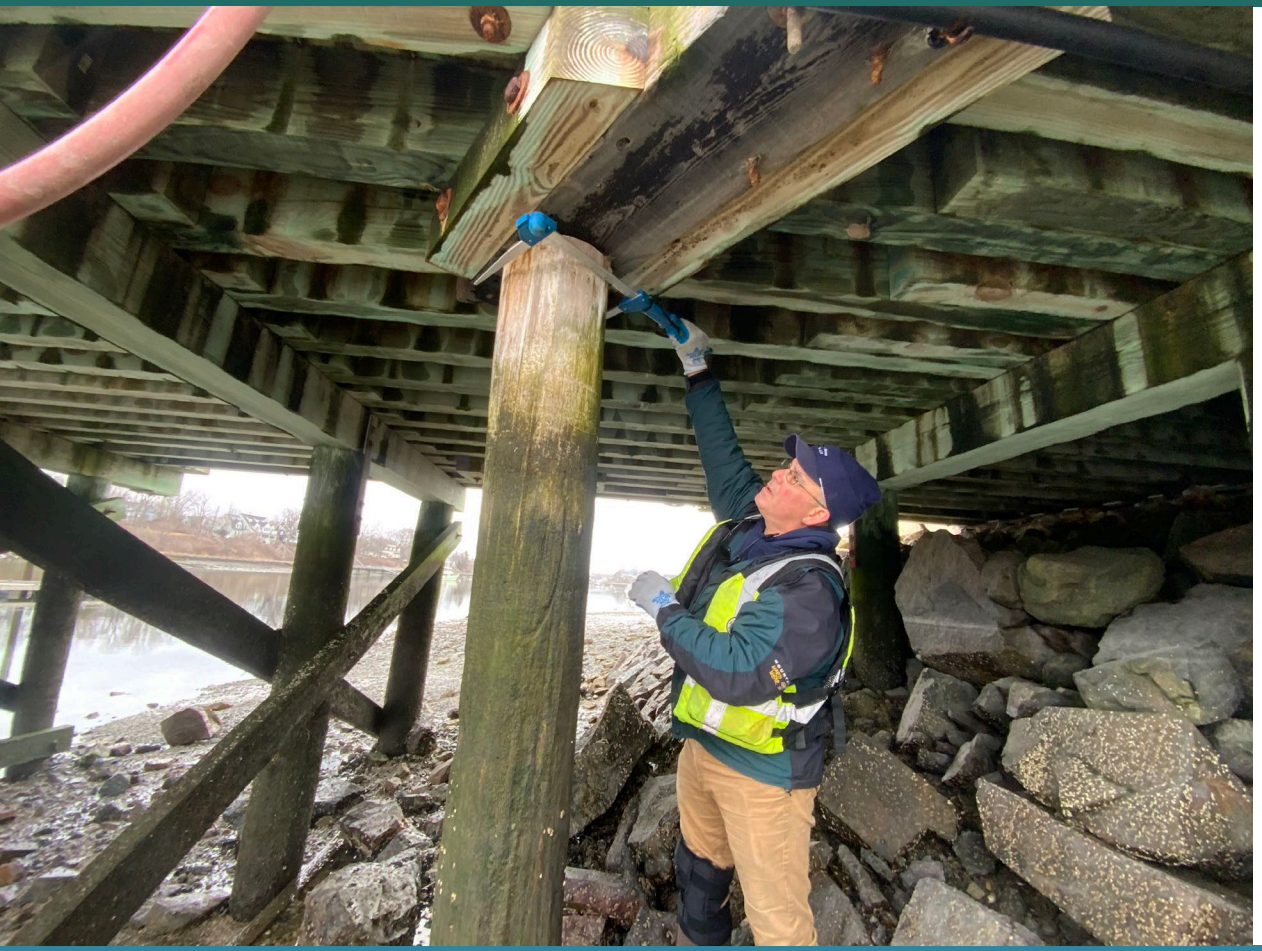
Appledore Marine Engineering, LLC

Agenda



1. Present significant findings
2. Provide repair recommendations based on findings
3. Provide recommended inspection schedule
4. Questions and Answers

Facilities Inspected

1. Town Dock 1 (TD1)
   - Main Pier
   - Floating Docks
   - Town-Owned Bait House
   - Privately-Owned Bait House
2. Town Dock 2 (TD2)
   - Main Pier
   - Floating Docks
3. Floating Docks B & C

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Scope of Routine Inspection

- Provides general opinion of the condition.
- Data collected is intended to make planning decisions and is not suitable for design.
- Inspection of structures from MLLW to the top of the deck.
- Utility inspections are intended to assess the structural condition and identify any gross structural defects.

Excluded Items

- Underwater inspection of facilities
- Safety OSHA compliance inspection
- Utility code compliance, flow test, and capacity of utilities
- Buried or hidden elements
- Deck equipment such as lifting and hoisting equipment

Condition Assessment Rating Definitions

Rating	Description
Good	No visible damage or only minor deterioration noted. Structural elements may show very minor deterioration, but no overstressing observed. No repairs are required.
Satisfactory	Limited minor to moderate defects or deterioration observed but no overstressing observed.
Fair	All primary structural elements are sound but minor to moderate defects or deterioration observed. Localized areas of moderate to advanced deterioration may be present but do not significantly reduce the load-bearing capacity of the structure. Repairs are recommended, but the priority of the recommended repairs is low.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure but does not significantly reduce the load-bearing capacity of the structure. Repairs may need to be carried out with moderate urgency.
Serious	Advanced deterioration, overstressing, or breakage may have significantly affected the load-bearing capacity of primary structural components. Local failures are possible, and loading restrictions may be necessary. Repairs may need to be carried out on a high-priority basis with urgency.
Critical	Very advanced deterioration, overstressing, or breakage has resulted in localized failure(s) of primary structural components. More widespread failures are possible or likely to occur, and load restrictions should be implemented, as necessary. Repairs may need to be carried out on a very high-priority basis with strong urgency.

Repair Recommendation Priority Levels

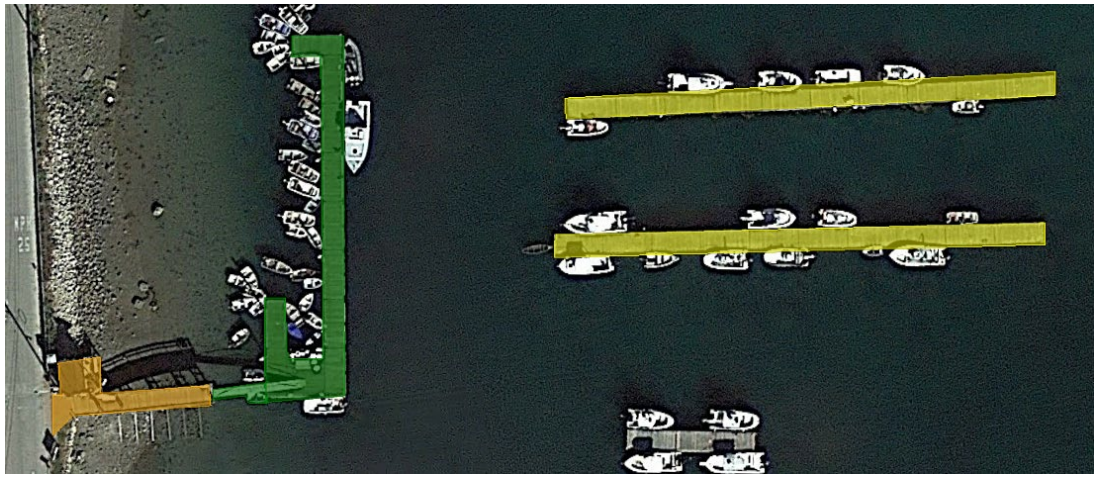
Repair recommendations are provided with the following priority levels:

Priority Level	Description
Immediate	System or element is recommended to be repaired immediately due to potential failure that could occur within the next year and could impact the facility's operations.
0-3 years	System or element is currently functional but has a higher probability of failing before the next scheduled inspection or deterioration will progress such that it may result in a condition that will make it impractical to repair in the future.
3+ years	System or element is expected to remain functional until the next scheduled inspection and defects are not anticipated to progress in a manner that will make future maintenance impractical.

Facility Condition Assessment Ratings

Facility	Condition Assessment Rating	Recommended Inspection Cycle*
TD1 – Main Pier	Satisfactory	2027
TD1 – Floating Docks	Poor	2026
TD1 – Town-Owned Bait House	Satisfactory	2027
TD1 – Privately-Owned Bait House	Poor	2026
TD2 – Main Pier	Poor	2026
TD2 – Floating Docks	Satisfactory	2027
Floating Dock B	Fair	2026
Floating Dock C	Fair	2026

*Recommended inspection interval based on guidelines from ASCE MOP No. 130. Table 2-2.



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Town Dock 1 – Main Pier

Overall Condition Assessment Rating	Next Recommended Inspection
Satisfactory	2027

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Town Dock 1 – Main Pier

Observed Conditions

Element	Observed Conditions
Piles	The timber piles supporting the pier have no significant defects.
Bracing	The diagonal, longitudinal, and transverse timber bracing elements have no significant defects.
Pile Caps	The pile caps have no significant defects.
Stringers	The timber stringers have no significant defects.
Deck	The timber deck generally has moderate abrasion and minor to moderate fungal decay.
Curb	The timber curbs have minor weathering and abrasion. The interior curb has isolated locations where the nut pocket sealant is missing. The curb connection hardware has minor to moderate corrosion.
Fender System	The fender system consists of timber chocks, wales, and composite piles. The chocks and wales have no significant defects, and the fender piles have minor abrasion.
Mooring Hardware	The mooring hardware consists of five cleats located along the outboard section of the pier. The fittings and connection hardware have minor to moderate corrosion.
Utilities	The electrical conduits have isolated areas of corrosion and missing or heavily corroded hangers. One junction box is missing a cover and the remaining junction box covers are typically missing hardware.
Miscellaneous	The ladders have minor corrosion within the tidal and low water zones and the guardrail is missing one bolt.

Town Dock 1 – Main Pier

Piles, Bracing, and Pile Caps

Typical condition of piles, bracing, and pile caps with no significant defects under the pier.

Exterior Curb

Outboard timber curb with minor abrasion damage.

Deck

Typical condition of timber deck with localized areas of moderate fungal decay.

Mooring Hardware

Mooring cleat with moderate corrosion.

Piles, Bracing, and Pile Caps

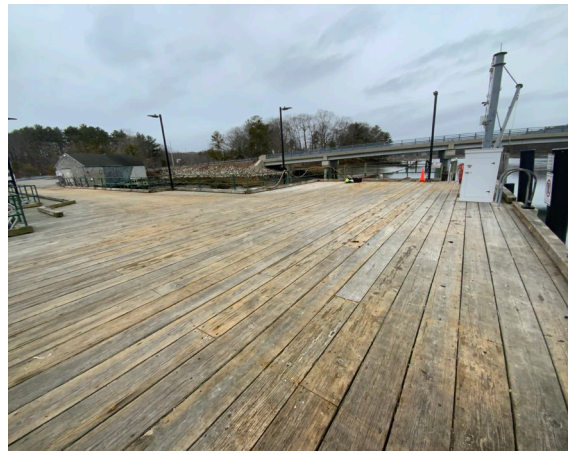
Typical condition of piles, bracing, and pile caps with no significant defects under the access trestle.

Interior Curb

Interior timber curb with missing nut pocket sealant.

Access Trestle Deck

Typical condition of access trestle's timber deck with moderate abrasion and fungal decay.



Pier Deck

Typical condition of the pier's timber deck with moderate abrasion.

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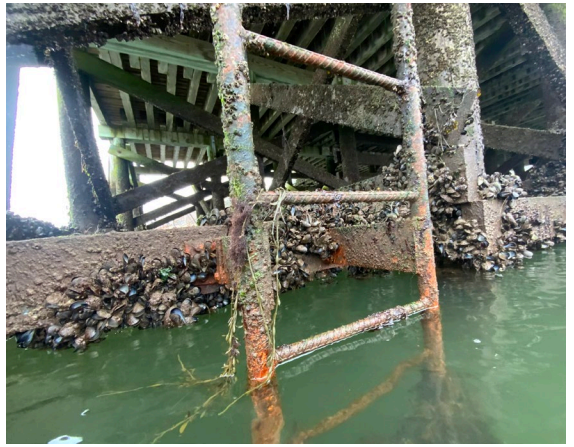
Town Dock 1 – Main Pier

Junction Box

Missing junction box cover.

Electrical Conduit

Electrical conduit with moderate corrosion.



Ladder

Typical condition of ladder with minor corrosion within the low water and tidal zones.

Guardrail

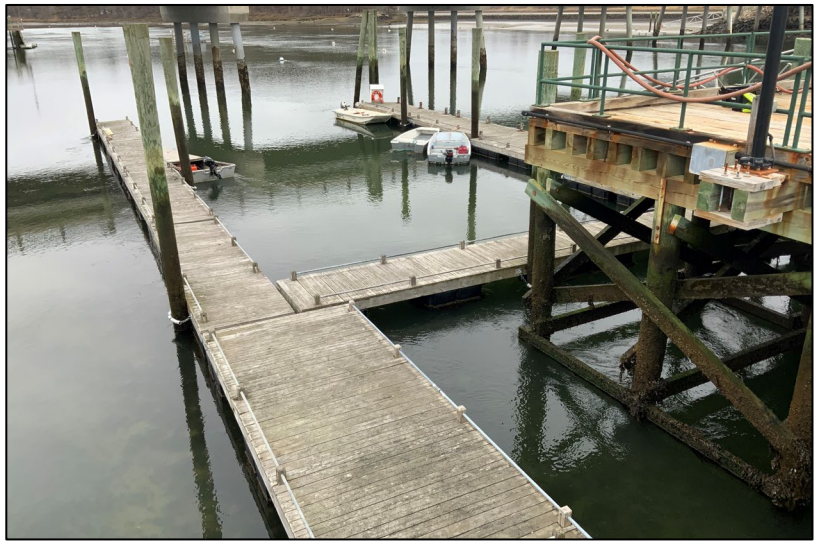
Guardrail with a missing bolt.

Town Dock 1 – Main Pier

Repair Recommendations

Priority Level	Element	Recommendations
0-3 years	Curb	Install nut pocket sealant on the interior curb.
	Mooring Hardware	Clean and recoat cleats.
	Utilities	Replace conduits with heavy corrosion.
		Replace hangers that are missing or have heavy corrosion.
		Install new gaskets at all junction boxes.
		Install missing junction box cover.
		Install missing junction box hardware.
	Miscellaneous	Install missing bolt on guardrail.
3+ years	Deck	Replace approximately 5% of the deck planks.

Town Dock 1 – Floating Docks



Overall Condition Assessment Rating	Next Recommended Inspection
Poor	2026

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Town Dock 1 – Floating Docks

Observed Conditions

Element	Observed Conditions
Float Modules	The float modules generally have moderate corrosion to their connection brackets and severe corrosion to the hardware connecting the plastic floats to the float modules. The pins connecting the float modules generally have minor corrosion and abrasion damage with one, located on the northwest floating dock, that has severe section loss due to abrasion damage. Additionally, one of the cotter pins for the pin connections has been replaced with a screw on the southeast floating dock. The western floating docks have a maximum east-west list of 2 inches and a maximum north-south list of 6 inches. The eastern floating docks have a maximum east-west list of 1.5 inches and a maximum north-south list of 2 inches.
Guide Piles	The timber guide piles have minor to moderate abrasion damage. It also appears that there is a missing guide pile at the end of the southeast floating dock.
Guide Pile Assemblies	There are two guide pile assemblies that are misaligned causing abrasion damage to their associated guide piles. One guide pile assembly is broken.
Deck	The timber decking has moderate weathering and fungal decay.

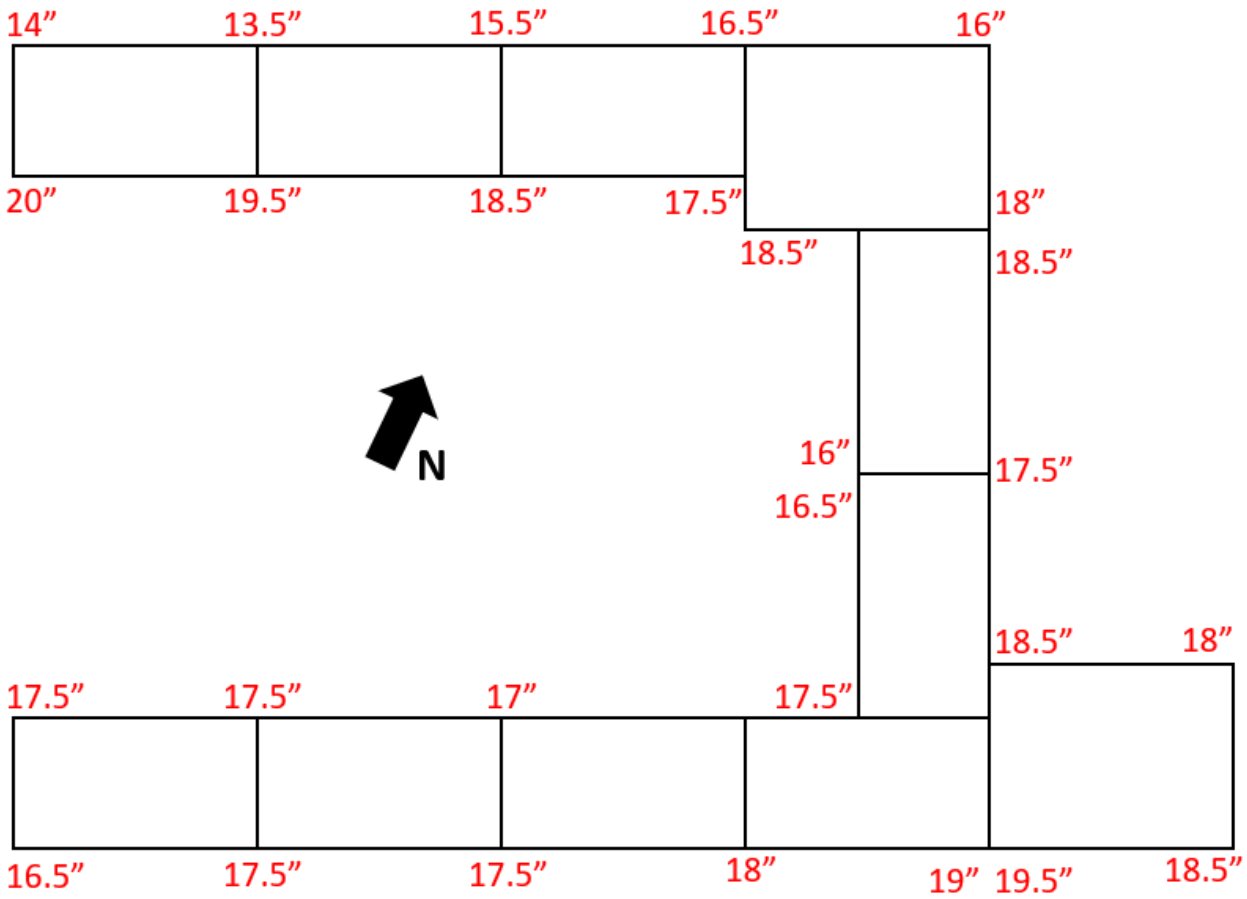
Town Dock 1 – Floating Docks

Observed Conditions Cont.

Element	Observed Conditions
Curbs	The curb is composed of galvanized pipe and timber supports. The timber supports have moderate splitting and fungal decay. Impact damage to the curb was identified at two locations.
Gangways	The western gangway has moderate wheel corrosion and four overstressed deck grates. Additionally, the linchpins for the gangway connection have moderate corrosion. The eastern gangways have minor to moderate corrosion of their linchpins.
Abrasion Plates	The timber abrasion plates, located on the floating dock's deck at the end of each gangway, typically have moderate to severe abrasion damage.
Mooring Hardware	The mooring cleats located along the floating docks are typically loose.

Town Dock 1 – Floating Docks

Observed Conditions – West Floating Dock's Freeboard Measurements



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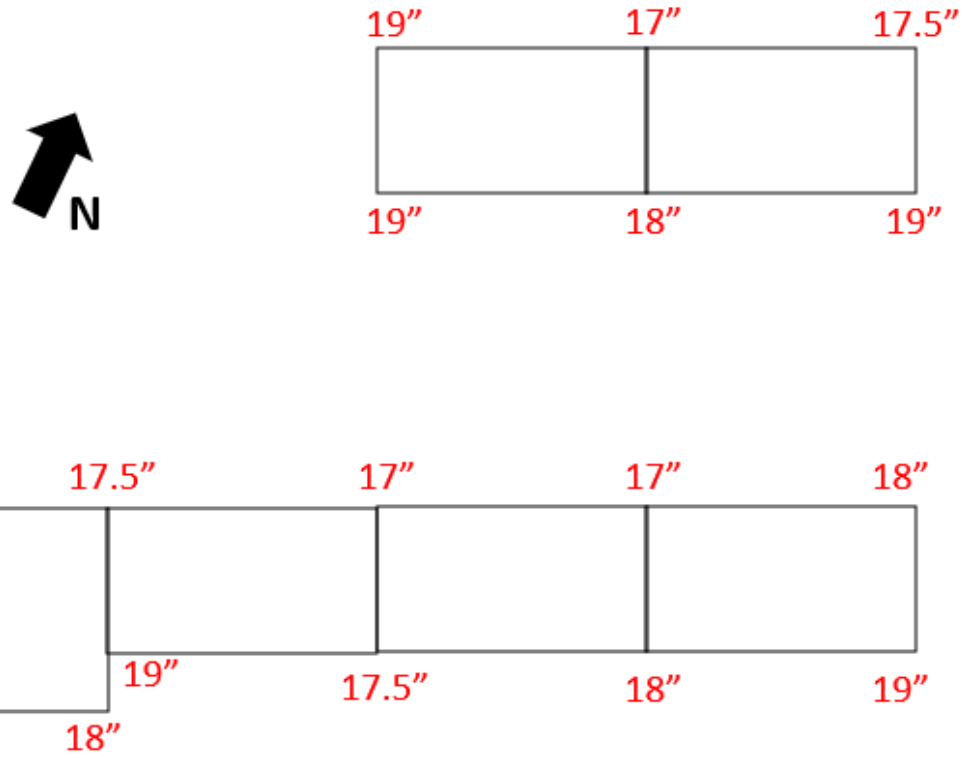
Town Dock 1 – Floating Docks

Observed Conditions – East Floating Dock's Freeboard Measurements



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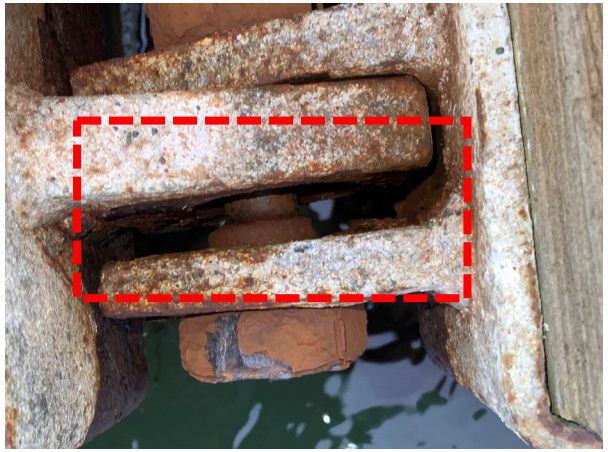
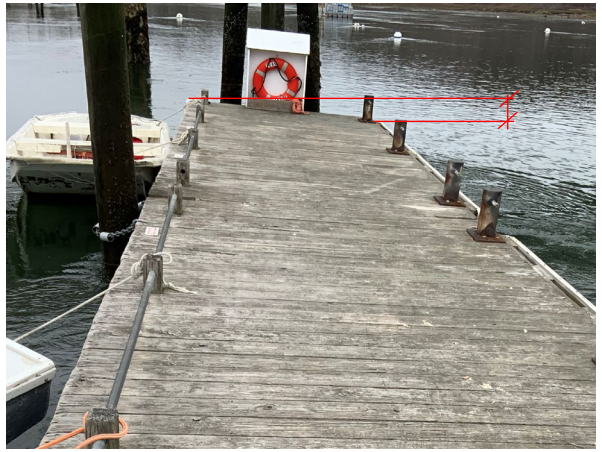
Town Dock 1 – Floating Docks



Pin Connections

Severe section loss of pin on northwest floating dock.



Deck

Typical condition of timber decking with moderate weathering. Note the listing of the float.

Dock Connection Hardware

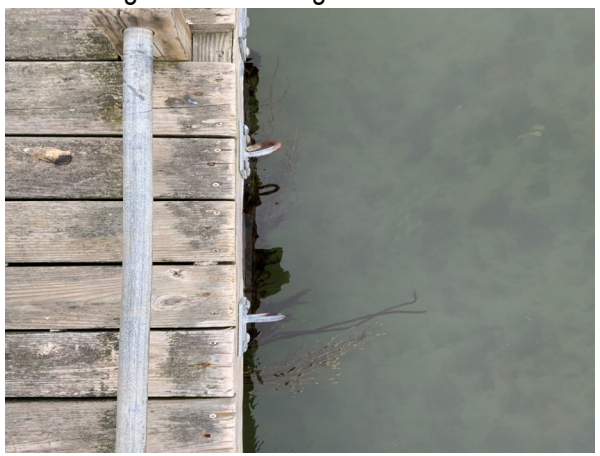
Typical severe corrosion of the connection hardware of plastic float and float module.

Connection Plates

Moderate corrosion of connection plates.

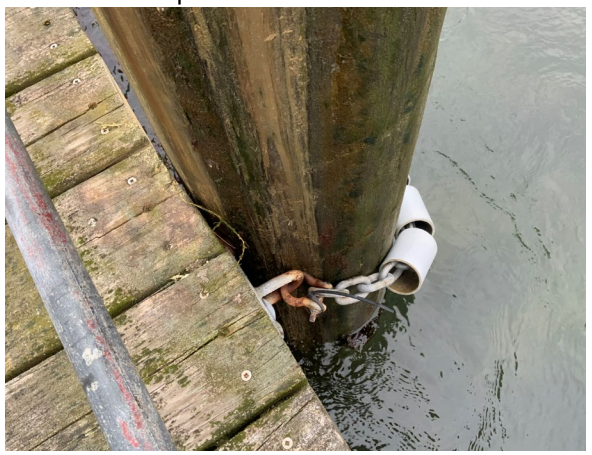
Pin Connections

Screw in pin connection in lieu of cotter pin.



Guide Piles

Guide pile missing at end of the southeast floating dock.



Guide Pile Assembly

Abrasion damage of guide pile from misaligned guide pile assembly.

Guide Pile Assembly

Broken guide pile assembly connection on northeast floating dock.

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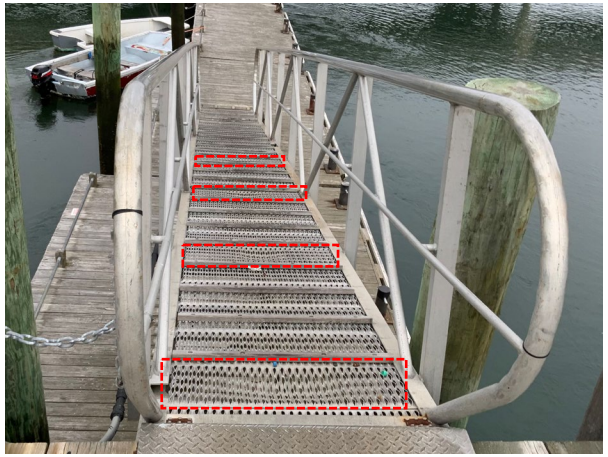
Town Dock 1 – Floating Docks

Curbs

Typical timber curb support with moderate splitting and fungal decay.



Gangways

Western gangway with overstressed deck grates.

Gangways

Moderate corrosion of the western gangway wheel.

Abrasion Plates

Severe abrasion to the timber abrasion plate.

Curbs

Impact damage to steel curb.

Gangways

Moderate corrosion of gangway linchpin.

Bollards

Typical moderate corrosion of bollard.

Cleats

Typical loose cleat.

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Town Dock 1 – Floating Docks

Repair Recommendations

Priority Level	Element	Recommendations
0-3 years	Float Modules	Replace pin connection with severe section loss.
		Replace the screw at the southeast floating dock pin connection with a cotter pin.
	Guide Pile Assemblies	Relocate guide pile assemblies that are causing abrasion damage to the guide piles.
	Gangways	Replace linchpins with moderate corrosion.
		Replace heavily corroded gangway wheels.
		Replace overstressed deck grates.
	Mooring Hardware	Tighten cleats.
3+ years	Floating Dock System	The floating dock system is near the end of its service life and therefore it is recommended that the entire system be replaced.
	Abrasion Plates	Replace timber abrasion plates with Ultra High Molecular Weight Polyethylene (UHMW) plates.

Town Dock 1 – Town-Owned Bait House

Overall Condition Assessment Rating	Next Recommended Inspection
Satisfactory	2027

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Town Dock 1 – Town-Owned Bait House

Observed Conditions

Element	Observed Conditions
Piles	The timber piles supporting the town-owned bait shed have no significant defects.
Bracing	The timber diagonal bracing has no significant defects.
Pile Caps	The timber pile caps have no significant defects.
Stringers	The timber stringers have no significant defects.
Deck	The timber deck and the concrete deck overlay have no significant defects.

Town Dock 1 – Town-Owned Bait House

Piles, Bracing, and Pile Caps

Typical condition of piles, bracing, and pile caps.

Stringers

Typical condition of timber stringers.

Town Dock 1 – Privately-Owned Bait House

Overall Condition Assessment Rating	Next Recommended Inspection
Poor	2026

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Town Dock 1 – Privately-Owned Bait House

Observed Conditions

Element	Observed Conditions
Piles	The timber piles have major section loss due to marine borer and fungal decay.
Pile Caps	The pile caps have minor weathering.
Stringers	The timber stringers have minor weathering.
Deck	Most of the timber deck is covered by a concrete overlay making it generally inaccessible from the topside. However, the underside portions of the deck have no significant defects, but the perimeter portion of the deck, adjacent to the pavement, has severe fungal decay and section loss.
Deck Overlay	A section of the concrete deck overlay appears to have been intentionally chipped out to promote drainage.
Utilities	The utility hangers located under the facility have severe corrosion.
Building	The building elements have moderate to severe fungal decay. The north-facing portion of the roof is covered in moss and fungus.

Town Dock 1 – Privately-Owned Bait House

Piles

Fungal decay of inshore timber pile.

Piles

Pile with moderate section loss due to marine borer.

Piles

Offshore pile with major section loss.

Timber Deck

Severe fungal decay of exterior portions of the timber deck.

Concrete Overlay

Concrete overlay with chipped-out portions to promote drainage.

Building

Timber building with severe fungal decay.

Building

Building roof with moss and fungal growth.

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Town Dock 1 – Privately-Owned Bait House

Repair Recommendations

Priority Level	Element	Recommendations
0-3 years	General	Due to the deterioration of the piles and building the facility is near the end of its service life and therefore it is recommended that the structure be replaced entirely.

Town Dock 2 – Main Pier

Overall Condition Assessment Rating	Next Recommended Inspection
Poor	2026

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Town Dock 2 – Main Pier

Observed Conditions

Element	Observed Conditions
Piles	The timber piles have major to severe section loss due to marine borer and fungal decay.
Pile Caps	The pile caps have no significant defects.
Stringers	The timber stringers have no significant defects.
Deck	The timber deck has minor weathering.
Curb	The timber curbs have minor weathering.
Utilities	The waterline, which runs the length of the pier, has no significant defects, but the utility hangers to support the waterline are missing.
Miscellaneous	There is no fall protection located on the eastern side of the pier. The guardrail along the western side of the pier has minor weathering.

Town Dock 2 – Main Pier

Piles

Typical condition of timber piles supporting the harbor master building with major section loss.

Piles

Timber pile with severe section loss due to marine borer deterioration.

Piles

Typical pile head with fungal decay.

Stringers

Typical condition of timber stringers.

Deck

Typical condition of timber deck with minor weathering.

Guardrail

The eastern side of the pier with no fall protection.

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Town Dock 2 – Main Pier

Repair Recommendations

Priority Level	Element	Recommendations
Immediate	Guardrail	Install guardrail along the eastern side of the pier.
0-3 years	Utilities	Install missing utility hangers.
3+ years	Piles	Replace piles.

Town Dock 2 – Floating Docks

Overall Condition Assessment Rating	Next Recommended Inspection
Satisfactory	2027

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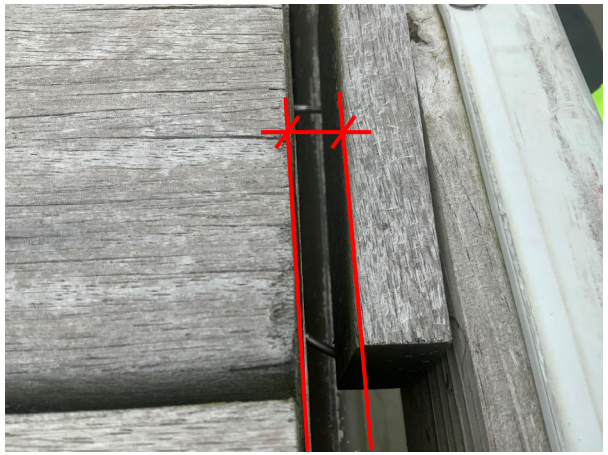
Town Dock 2 – Floating Docks

Observed Conditions

Element	Observed Conditions
Float Modules	The float modules have no significant defects.
Guide Piles	The timber guide piles have minor abrasion.
Guide Pile Assemblies	The guide pile assemblies have no significant defects.
Deck	The timber decks have no significant defects.
Curbs	The timber curbs have no significant defects.
Gangway	The gangway has no significant defects.
Fender System	A section of the fender system is disconnected.
Mooring Hardware	The mooring cleats have no significant defects.

Town Dock 2 – Floating Docks



Fendering

Disconnected section of fender element on offshore face of floating dock.

Guide Piles and Assemblies

Typical condition of the guide pile and guide pile assemblies.

Deck

Typical condition of timber decking.

Gangway

Gangway that provides access to the floating docks.

Town Dock 2 – Floating Docks

Repair Recommendations

Priority Level	Element	Recommendations
0-3 years	Fender System	Reconnect the loose fender element.

Floating Docks B & C

Overall Condition Assessment Rating	Next Recommended Inspection
Fair	2026

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Floating Docks B & C

Observed Conditions

Element	Observed Conditions
Float Modules	The freeboard of Floating Dock B varies throughout the float system with a minimum freeboard of 8 inches and a maximum of 17.5 inches. The freeboard of Floating Dock C varies throughout the float system with a minimum freeboard of 6.5 inches and a maximum freeboard of 15 inches. On Floating Dock B one pin connecting the float modules is loose and another has moderate corrosion of the linchpin.
Deck	The timber deck on both floating docks has minor weathering and fungal decay.
Mooring Hardware	The mooring cleats are typically loose on both floating docks.

Floating Docks B & C

Floating Dock B

Floating Dock B with loss of floatation.

Floating Dock C

Floating Dock C with loss of floatation.

Deck

Typical condition of timber deck with minor weathering and fungal decay.

Floating Docks B & C

Repair Recommendations

Priority Level	Element	Recommendations
0-3 years	Floating Dock B	Tighten loose pin connection.
		Replace one linchpin with moderate corrosion.
		Tighten cleats.
	Floating Dock C	Tighten cleats.
3+ years	Floating Dock B	Due to the loss of floatation of the floating dock, it is recommended that it be replaced.
	Floating Dock C	Due to the loss of floatation of the floating dock, it is recommended that it be replaced.

Summary of Recommended Repairs

Priority Level	Facility	Recommendations
Immediate	Town Dock 2	Install guardrail along the eastern side of the pier.
0-3 years	Town Dock 1 – Main Pier	Install nut pocket sealant on the interior curb.
		Clean and recoat cleats.
		Replace conduits with heavy corrosion.
		Replace hangers that are missing or have heavy corrosion.
		Install new gaskets at all junction boxes.
		Install missing junction box cover.
		Install missing junction box hardware.
		Install missing bolt on guardrail.
	Town Dock 1 – Floating Docks	Replace pin with severe section loss.
		Replace screw at the southeast floating dock pin connection with appropriate cotter pin.
		Relocate guide pile assemblies that are causing abrasion damage to the guide piles.
		Replace linchpins with moderate corrosion.
		Replace heavily corroded gangway wheels.
		Replace overstressed gangway deck grates.
		Tighten cleats.
	Town Dock 1 – Privately-Owned Bait House	Due to the deterioration of the piles and building the facility is near the end of its service life and therefore it is recommended that the structure be replaced entirely.
	Town Dock 2	Install missing utility hangers.

Summary of Recommended Repairs

Priority Level	Facility	Recommendations
0-3 years	Town Dock 2 – Floating Docks	Reconnect the loose fender element.
	Floating Dock B	Tighten loose pin connection.
		Replace one linchpin with moderate corrosion.
		Tighten cleats.
	Floating Dock C	Tighten cleats.
3+ years	Town Dock 1 – Main Pier	Replace approximately 5% of the deck planks.
	Town Dock1 – Floating Docks	The floating docks are near the end of their service life and therefore it is recommended that the entire system be replaced.
		Replace timber abrasion plates with UHMW plates.
	Town Dock 2	Replace piles.
	Floating Docks B & C	Due to loss of floatation of the floating docks, it is recommended that the floating docks be replaced.

Questions and Comments

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