

River Hill Homeowners Association
262 NE Mahonia Dr.
Belfair, WA 98528

DIVER INSPECTION REPORT

River Hill HOA

82,000 ON-GRADE CONCRETE



Summary of Contents:

Written Report with Recommendations
Repair Cost Estimates



896 E 400 S #310 | New Harmony, UT 84757 | 1-866-237-3483

INSPECTION REPORT

River Hill HOA 82,000 Gallon On-Grade Concrete

Dimensions: 27' Dia. x 20' H

Inspection Date: 02-17-2026

Section A-1: General

An inspection and cleaning of the ground level water tank was conducted by Advanced Diving Services Inc. on according to contract number 22-226A.

The inspection was conducted by certified dive personnel. An electronic recording is included with this report to provide video documentation of the inspection and cleaning work completed.

Sec. A-1.1 Scope

Every steel water storage tank, standpipe, or reservoir should be carefully inspected prior to repair and/or repainting and at any time when leakage or some other apparent deterioration is observed. In any event, **all water tanks should be thoroughly inspected at intervals of not more than five years** (*American Water Works Association*, M42 1998, p 132).

Sec. A-1.2 Inspection Service

Advanced Diving Services Incorporated (ADS) began commercially inspecting water storage tanks in April 2000. ADS is certified in Commercial Diving, Offshore Safety & Survival, Red Cross CPR and First Aid, Hazardous Materials Incident, Response Operations, YMCA Advanced Scuba, Liquid Penetrant - Levels I & II, Magnetic Particle - Levels I & II, Ultrasonic – Levels I & II, Rope Access Technician - Level I, Chevron Riggers Endorsement and Nuclear Quality Assurance.

ADS adhere to American Water Works Association standards for inspecting and repairing water tanks, AWWA D101-53. All Dive Maintenance Technicians and associated in-tank equipment are fully disinfected according to AWWA Standard C652-92 before entering potable water. All ADS operations pertaining to Diving and Confined Space, conducted on your system follow all applicable OSHA, AWWA, and ADCI standards, procedures, and regulations (including 1910.401 thru 1910.441). All inspection personnel are fully qualified commercial dive maintenance technicians certified in ASNT Non-Destructive testing. All our repair, sealing and coating materials meet or exceed NSF 60 & 61 standards.

Sec. A-1.3 Responsibility

Advanced Diving Services (ADS) is fully licensed and insured to provide commercial diving services. ADS carries property damage and liability insurance with a combined single limit per occurrence of \$2,000,000, aggregate \$2,000,000. ADS reasonably protect the tank/reservoir owner/agent against claims arising out of the inspection or cleaning work we provide.

Sec. A-1.4 Draining of Tank

During inspection and or cleaning, reservoir water levels must be kept at or near full capacity unless noted otherwise. On the date of inspection water level was near full capacity.

Sec. A-1.5 Work Included

Inspections include field examination of the tank exterior, cleaning, and a full color video report of the tank interior conducted by certified dive personnel. Inspection work does not include repairs, except that, if vent screens, cotter pins or nut pins are found to be missing, they may be replaced at once, or reported promptly to the tank/reservoir owner/agent for replacement. No repairs were made immediately after inspection.

Section A-2:

Executive Report Summary

Sec. A-2.1 Condition of Tank

Exterior Concrete

Exterior Concrete is in good condition. There are mineral deposits from past leaks, no active leaks were observed. Bio growth is present on the roof. **It is recommend to pressure wash the roof to remove the plant growth to prevent deterioration of the concrete beneath the growth.** (Image 1-10)

Interior Walls

Interior walls are in good condition. The past epoxy repairs on the course seams are in good condition with no tearing or cracking visible. (Image 25-28)

Tank Floor

The tank floor is in good condition. The past epoxy repair near the drain is in good condition with no tearing or cracking visible. (Image 24, 29-30)

Sec. A-2.2 Pitting

No pitting was observed. Pitting may be found under rust nodules on interior plumbing.

Sec. A-2.3 General Tank Condition

Sanitary/Security Survey

A perimeter fence is present. No vandalism was observed. No locking device was observed on the hatch.

Access Hatch

Hatch and gasket are in good condition. (Image 8, 11-13)

Exterior Ladder

Ladder and safety cable are in good condition. (Image 3-4)

Vents and Screens

The roof vent is in good condition. (Image 9-10)

Interior Ladder

Ladder is in good condition. (Image 31-32)

Overflow

Internal overflow is in good condition. There is some corrosion present on the cast section of the pipe and the clamp hardware. **Recommend epoxy repair to prevent further deterioration.** (Image 18-20, 32)

Interior Plumbing

The inlet, outlet and drain are in good condition. There is some corrosion present on the drain and the cast section of the inlet as well as the clamp hardware of the inlet. **Recommend epoxy repair to prevent further deterioration.** (Image 21-23, 33)

Sample Tap

No sample tap was observed at inspection. If one is not present, it is recommended to add one to meet the standard.

Float

The float assembly is in good condition and functioning properly. (Image 16-17)

Tank Turnover

The inlet discharge at the top of the tank and outlet on the floor orientation promotes tank turnover.

Sediment

Average loose silt depth was 1/4".

Water Condition

Water visibility was good with no particulates or oil found on the surface.

OSHA Safety

Recommend installing OSHA confined space entry placards at reservoir access/entry locations (1) total.

Sec. A-2.4 Repair Work Performed

Cleaning/removal of sediment and loose floor debris were performed. No other repairs were provided at this time. (Image 34-36)

Sec. A-2.5 Recommendations

See page 16 for a complete list of recommendations.

Section A-3: Inspection Details

INSPECTION AND RESERVOIR DATA

Customer Name:	River Hill HOA	Reservoir Name:	River Hill HOA
Contact Person:	Jessica Hicks	Location:	Belfair, WA
Contact Phone:	360-801-9881	Type:	On-Grade
Job Number:	25-254	Material:	Concrete
Inspection Date:	02-17-2026	Capacity:	82,000
Dive Supervisor:	Dillon Martinez	Diameter:	27'
Diver:	Ethan Taylor	Height:	20'
Tender:	Tony Urbaez	Floor S.F.:	572
Last Inspection:	n/a	Built By:	MT Baker Silo
Last Cleaned By:	n/a	Built Date:	
Weather Condition:		Courses	4

A-3a. Reservoir Condition, Safety and Sanitary Review**Applicable Industry Standard Design Criteria:****Sanitary Survey, AWWA, OSHA, and Washington State Administrative Code**

1. WAC 246-291-210 Finished water storage facilities – Distribution Systems.
2. AWWA Standard D-115-20 Tendon Prestressed Concrete Water Tanks
3. NFPA 22
4. OSHA

	Standard	Pass	Fail	Notes
	1. WAC 246-291-210			Recommendation
1. Site 2. Roof 3. Hatch 4. Vent	1. All distribution reservoirs shall have suitable watertight roofs or covers preventing entry by birds, animals, insects, and dust and shall include appropriate provisions to safeguard against trespass, vandalism, and sabotage.	PASS		
Roof	(i) A weathertight roof	PASS		
Hatch	(ii) A lockable Access Hatch	PASS		No lock observed
Vent Screen	(iii) screened roof vent	PASS		
Overflow	(iv) overflow pipe with atmospheric discharge	PASS		
Sample Tap	(v) A sample tap			None observed
	(vi) a drain to daylight	PASS		3.5"
Isolation	(vii) Tank isolation capability	PASS		
Circulation	(viii) Maintain water circulation, prevent water stagnation, and provide adequate disinfection contact time	PASS		
	2. AWWA D-115-20 Standards			
Watertight	3.8.3.2 Watertightness. Roof	PASS		
Screens	5.7.2 Screens. Vent and overflow screens satisfactory condition to prevent birds, rodents, insects, other contaminants from entering tank.	PASS		
	3.13.2.5 Vent screens protected from vandalism and accessible for inspection and cleaning	PASS		
Watertight	6.1.1 Watertight walls. Seepage that produces moisture that can be picked up on a dry hand (wet spot) is not acceptable.	PASS		
Watertight	6.1.2 Watertight Wall-floor joint. Visible flow of water is not acceptable.	PASS		
Piping	3.13.1 Inlet and Outlet Piping promote circulation. (Directional inlets, baffles, separate inlet/outlet extra care w/ large tank	PASS		
Outlet	3.13.1.2 4" Min Removable Silt Stop	PASS		
Overflow	3.13.2.1 Overflow system capacity to meet maximum inflow rate	PASS		
Overflow Screen	3.13.2.1 Overflow Screen or Flap Valve	PASS		
Water Level	3.13.2.4 Water level gage or sensor	PASS		
Ladder	3.13.4 OSHA Compliant Ladder	PASS		
Ladder	3.13.4 Outside Ladder security provision	PASS		
Roof Opening	3.13.3.1 Prevent leakage, atop curb at least 4", Cover downturn at least 2", padlock	PASS		
Roof Hatch	3.13.3.1 Roof hatch at least 30" square	PASS		
Hatch Railing	3.13.3.1 Protective handrail near hatch to meet OSHA standards	PASS		

	Standard	Pass	Fail	Notes
				Recommendations
	NFPA Standards			
	Tank ventilation shall have a capacity of at least 1.5 times the area of the larger of the inlet or outlet.	PASS		
	EPA Region 8 Standards			
Roof Vent(s)	Downturned vent opening shall be at least 24" above the horizontal roof surface.			N/A
	Not having a #24 mesh vent screen triggers a significant deficiency.	PASS		
	Buried or Semi-buried tanks must have downturned vents.			N/A
	Elevated tank vent screens must be a minimum of 8" above roof surface	PASS		
	Chimney vents must have a hood to cover that extends down to cover the screen.	PASS		

Other Considerations

Item	Standard	Pass	Fail	Notes
Documentation	Photos or video taken If no, why not?	PASS		Photo and Video Documentation
Contamination	Contamination in the tank (e.g., floating debris, insects, other animal contamination, roots etc.)?	PASS		
Water	Water turbid, discolored, stale or foul?	PASS		
	Is stored water routinely turned over (standpipe with valves or mechanical mixer), even in times of low demand?	PASS		
Interior Coating	Interior coating: blistering, peeling, scaling, rusting, any irregularities or other failure?	PASS		
Exterior coating	Exterior coating: blistering, peeling, scaling, rusting, any irregularities, or other failure?	PASS		
Sidewalls	Structural deficiencies, any irregularities or other failure?	PASS		
Interior roof	Structural deficiencies, any irregularities or other failure?	PASS		
Interior roof hatch	Structural deficiencies, any irregularities or other failure?	PASS		
Tank Floor	Floor corrosion or any structural deficiencies or irregularities?	PASS		
Floor Sediment	Type and depth of floor sediment Was sediment before cleaning over ¼" (effective depth of chlorine penetration)?	PASS		1/4" removed with cleaning
Tank Penetrations	Tank penetrations (joints, gaskets), as seen from interior, adequately sealed?	PASS		
Watertight roof	When viewed from inside the tank, is there visible daylight around the hatches, vents, joints, or other fixtures? If yes, document location where light can be observed.	PASS		
	2. Standard NFPA 22			
Ventilation	Is there adequate ventilation as defined by NFPA with ventilation 1 ½ times the greater capacity of the inlet or outlet.	PASS		
Inlet Size	Inlet pipe diameter			4.5"
Outlet Size	Outlet pipe diameter			3.5"
Roof Vent Size	Roof Vent diameter			12"
	3. Misc. OSHA Standards			
Confined Space	Are confined space entry placards in place on or near reservoir access points?		FAIL	Need to install (1) placard
Ladder Cage	Are ladder cage(s) present?	PASS		
Fall arrest	Are personal fall arrest systems in place?	PASS		Rail
Access	Are locking ladder gate(s) present?	PASS		
Other	Any other concerns?			



(#1) Exterior/Foundation



(#4) Exterior Ladder



(#2) Exterior/Foundation



(#5) Roof with Bio Growth



(#3) Exterior/Exterior Ladder



(#6) Roof with Bio Growth



(#7) Roof with Bio Growth



(#10) Roof Vent



(#8) Access Hatch



(#11) Access Hatch/Safety Railing



(#9) Roof Vent



(#12) Access Hatch Gasket



(#13) Interior Access Hatch



(#16) Roof/Float



(#14) Roof/Inlet/Float Wiring



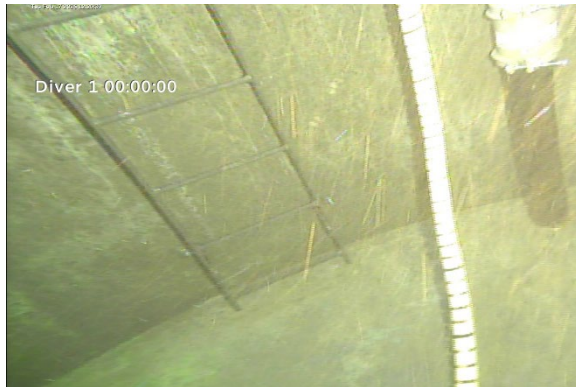
(#17) Wall Course Seam/Float



(#15) Roof



(#18) Overflow



(#19) Overflow/Interior Ladder



(#22) Floor/Drain



(#20) Overflow



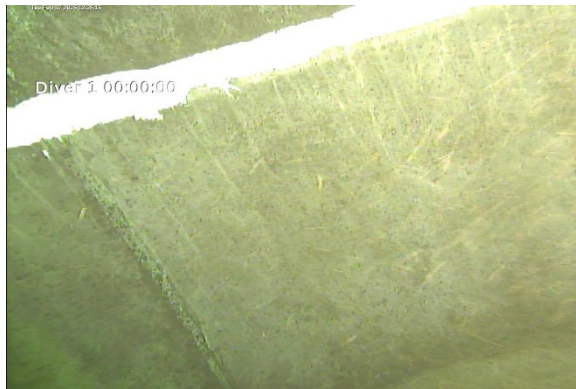
(#23) Drain with Rust Nodules



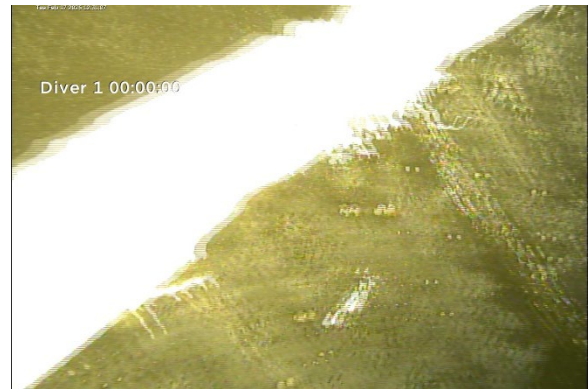
(#21) Inlet Pipe with Rust Nodules



(#24) Previous Epoxy Floor Repair



(#25) Wall/Course Repair



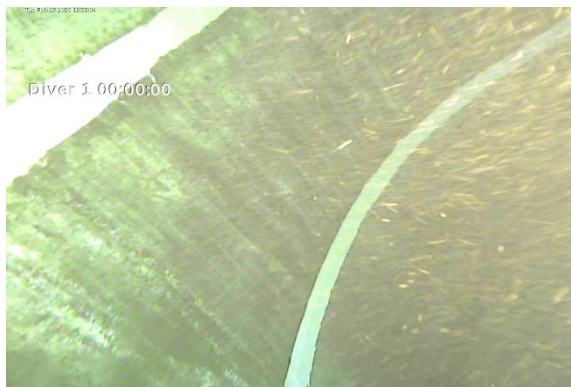
(#28) Course Repair



(#26) Wall/Course Repair



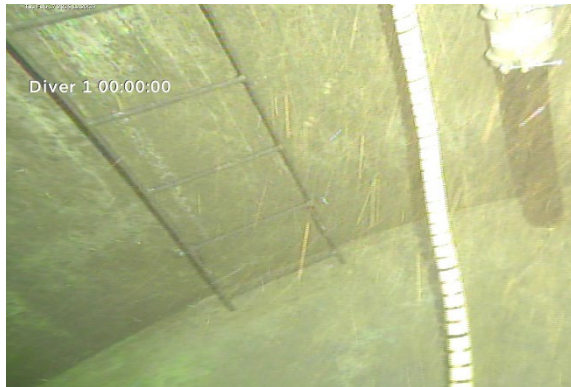
(#29) Floor



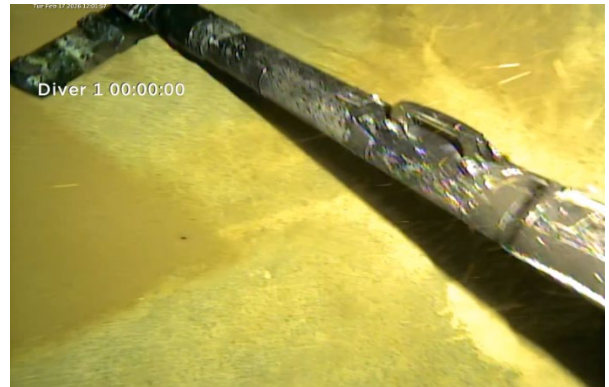
(#27) Wall/Course Repair



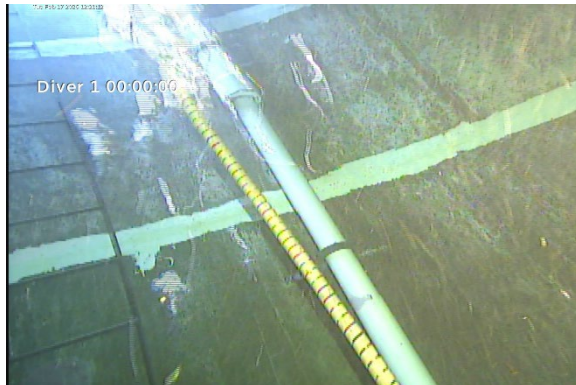
(#30) Floor



(#31) Interior Ladder



(#34) Sediment Removal



(#32) Interior Ladder



(#35) Sediment Removal



(#33) Inlet Pipe



(#36) Sediment Removal

Corrosion Evaluation

The ASTM rating chart is not applicable to concrete structures except for areas of exposed rebar, metal ladders and plumbing.

There was light corrosion noted on the interior plumbing and ladder. These areas are not represented on the ASTM rating chart.

The depth of corrosion was not measured.

STANDARD RATING CHART FOR PITS			
	A	B	C
	Density	Size	Depth
1			
	$2.5 \times 10^3/\text{m}^2$	0.5 mm^2	0.4 mm
2			
	$1 \times 10^4/\text{m}^2$	2.0 mm^2	0.8 mm
3			
	$5 \times 10^4/\text{m}^2$	8.0 mm^2	1.6 mm
4			
	$1 \times 10^5/\text{m}^2$	12.5 mm^2	3.2 mm
5			
	$5 \times 10^5/\text{m}^2$	24.5 mm^2	6.4 mm

Source: ASTM, G 46, Fig. 2 (2000 Edition). Reprinted, with permission, copyright ASTM.

Tank Interior Sketch**Tank Diagram**Tank Name: River HillTank Diameter: 27Tank Height: 20Tank Volume 82,000

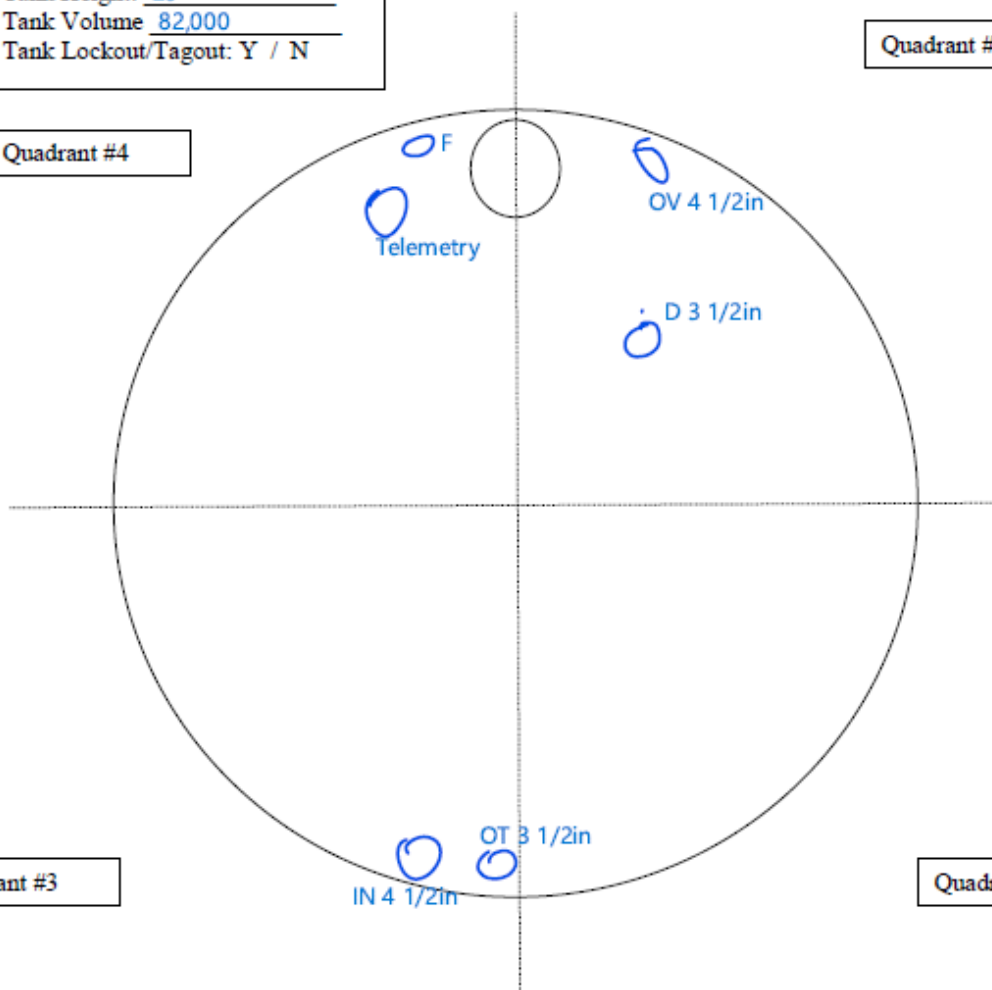
Tank Lockout/Tagout: Y / N

Quadrant #4

Quadrant #1

Quadrant #3

Quadrant #2

**Mark the location and size of:**

- | | |
|---|---|
| 1. V = Roof Vents <u>DIAMETER NEEDED</u> | 10. ST = Sampling Tap |
| 2. IN = Inlet (s) <u>DIAMETER NEEDED</u> | 11. MW = Manway Access Hatch (s) |
| 3. OT = Outlet (s) <u>DIAMETER NEEDED</u> | 12. OP = Other pipe penetrations |
| 4. D = Drain <u>DIAMETER NEEDED</u> | 13. Z = Vandalism |
| 5. C = Support Columns | 14. CF = Exterior Coating Failure Area(s) |
| 6. OV = Overflow Pipe | 15. IF = Interior Coating Failure Area(s) |
| 7. F = Float | 16. RN = Significant Rust Nodules |
| 8. CP = Cathodic Protection | 17. H = Second Roof Access Hatch <u>DIA. NEEDED</u> |
| 9. D = Tank Debris | 18. L = Leak in tank |

Conclusion and Recommendations

Tank Condition

EXTERIOR: GOOD

INTERIOR: GOOD

Recommendations

Immediate

1. Epoxy repair to the inlet and overflow to prevent deterioration of the cast section of pipe.
 2. Pressure wash the roof to remove bio growth from the roof to prevent deterioration of the concrete beneath those areas.
 3. Install (1) OSHA confined space entry placard to be placed on the roof access hatch.
- Special notes:

Ongoing Maintenance

- Inspection and cleaning every 3-4 years.

ESTIMATED COST OF REPAIRS					
#	RECOMMENDATION(S)	Time Estimate	Count	Unit Cost	Total
<i>IMMEDIATE REPAIR</i>					
1	Interior spot epoxy repairs	1 day	1	\$4,320.00	\$4,320.00
2	Bio growth Removal	1 day	1	\$5,760.00	\$5,760.00
3	Install OSHA confined space placards	1 day	1	\$48.00	\$48.00

All surface and underwater repairs and recommendations, except sandblasting, can be performed by Advanced Diving Services, Inc. with the reservoir remaining in service.

ADVANCED DIVING SERVICES, INC. ®



James M. Nilsson, Director