



THE STATE  
of ALASKA

GOVERNOR MICHAEL J. DUNLEAVY

Department of Environmental  
Conservation

DIVISION OF ENVIRONMENTAL HEALTH  
Drinking Water Program

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dec.alaska.gov

November 3, 2023

Alaska Marine Highway System  
Attn: Walter Clayton  
P.O. Box 791  
Haines, AK 99827

Re: Haines Ferry Terminal Public Water System 2023 Sanitary Survey Response Letter  
PWSID #: AK2110855 Class: Transient Non-Community; Source: Surface Water

Dear Mr. Clayton,

This letter is the formal follow-up to the sanitary survey inspection of the Haines Ferry Terminal public water system I conducted on September 19, 2023. My complete report is included with this letter for your reference. Thank you for your assistance and expertise during the survey, and for your dedication to providing safe drinking water to the users of the Haines Ferry Terminal.

The purpose of a sanitary survey is to provide an on-site evaluation of the capacity of the water system to consistently provide safe drinking water to the public according to State and Federal drinking water regulations. Based on the onsite inspection it has been determined that the water system has deficiencies, which are outlined in this letter.

By **December 3, 2023**, please contact the Drinking Water Program to discuss required corrective actions needed to resolve the deficiencies. All deficiencies listed must be corrected by **March 2, 2024**, or according to an approved alternative timeframe. To request an alternative timeframe, please provide a corrective action plan and timeframe for each significant deficiency listed below to the Drinking Water Program for approval. Following completion of corrective action, written verification, including photo documentation where applicable, must be submitted to the Drinking Water Program as verification that the listed deficiencies have been corrected.

Please be aware that if deficiencies are not addressed within the outlined timeline, or according to an approved corrective action schedule, violations will be issued, and the water system will be out of regulatory compliance.

### **Significant Deficiencies**

**(A corrective action plan must be submitted to the Drinking Water Program within 30 days and deficiencies corrected within 120 days)**

1. The water system is currently operating under a Boil Water Notice for not meeting disinfectant contact time requirements (CT). It has been documented in past correspondence that the current configuration of the hydropneumatic pressure tanks does not allow for CT to be met; however, it should also be noted that the chlorination system is extremely volatile. During the survey it was noted that some days it can take 30 or more minutes to obtain a chlorine residual of 0.2 mg/L from the facility, while other days a residual is detectable immediately. Whether this volatility stems from the inability to adjust treatment based on changing source water conditions, the chlorine injection system, distribution pipe conditions, or a combination of items, the system must be able to meet CT and chlorine residual requirements per Surface Water Treatment regulations.

The Drinking Water Program understands that the system plans to modify or upgrade the current treatment system, which will need to go through the engineering plan review process. For questions on that process please contact DEC engineer Charity Bare at 907-262-3400 or [charity.bare@alaska.gov](mailto:charity.bare@alaska.gov).

2. Modifications have been made to the source intake that do not appear to have gone through the engineering plan approval process, including the installation of concrete to the surrounding area. It is estimated this work took place in the last 3 years. The Drinking Water Program understands the intake property and infrastructure is owned by the Haines Borough and not the Alaska Marine Highway System. Please coordinate with the Haines Borough to determine if engineered plans or design drawings are available documenting the modifications. Depending on the documents the Haines Borough has, it may be possible to include these modifications in the approval of the new treatment system or it may have to be handled separately. Either way, intake modifications must be approved by DEC engineering. Please contact Charity Bare at the above contact information with questions on the approval process.
3. Verification of calibration for the Pocket Colorimeter II is not routinely occurring. Calibration should be verified quarterly to ensure the unit is maintaining calibration within acceptable range. HACH sells secondary standards that can be purchased to verify calibration (<https://www.hach.com/p-speccheck-secondary-gel-standards-set-dpd-chlorine-lr/2635300#overview>). It may also be possible to coordinate with other local water systems who already have these standards.

### **Recommendations**

**(These items are not deficiencies; however, we encourage you to implement them if possible)**

1. A spare chlorine pump and/or parts is not located onsite. Once the system is upgraded, it's recommended key spare parts be kept on hand.

2. It's recommended both raw water settling vaults near the source intake be locked to prevent unauthorized users from accessing them.

### **Additional Findings**

**(These items are not deficiencies; however, they are being noted for reference)**

1. At the time of the inspection a bypass existed on the chlorination system. This was an outstanding deficiency from the 2018 sanitary survey. A lock-out valve was ordered, and documentation of its installation provided October 27, 2023. This item is considered addressed, and no further action is required.
2. All three hydropneumatic pressure tanks were replaced in August 2023 following the failure of one in July 2023. These tanks have a liner certified to NSF-Standard 61 and nothing further is required at this time. Hydropneumatic tank function should be evaluated in addressing deficiency #1.

Please be advised that modifications to the drinking water system, other than routine maintenance and emergency repair, may first require approval by the Drinking Water Program. As the public water system owner/operator it is your responsibility to ensure that all replacement parts, piping, and equipment meet drinking water standards and regulations. If in doubt, please contact a Drinking Water Program engineer before making any changes to the system to determine if engineered plans need to be submitted for approval.

Drinking water regulation 18 AAC 80.430 establishes that a transient non-community public water system must have a sanitary survey conducted every five years. **Your next sanitary survey will be due in the 2028 calendar year.**

If you have any questions about this survey or its findings, please contact me at 907-451-3038 or at [teslyn.hakala@alaska.gov](mailto:teslyn.hakala@alaska.gov).

Sincerely,

*Teslyn Hakala*

Teslyn Hakala  
Environmental Program Coordinator  
Drinking Water Program, Fairbanks Office

Enclosure: Sanitary Survey Report

cc: Amanda Millay, EPS, Alaska Marine Highway System  
Ryan Ackerman, Haines Terminal Manager, Alaska Marine Highway System  
Charity Bare, P.E., DEC Drinking Water Program  
Christina Harris, EPS, DEC Drinking Water Program

# Sanitary Survey - Survey Responses

**PWS Number:** AK2110855

**Survey ID:** 508

**Survey Date:** 10/1/2023

**Survey Name:** HAINES FERRY TERMINAL - SS 2023

**User Name:** thakala

Question Number

## General / SDWIS Site Visit Info

- |   |  |   |
|---|--|---|
| 1 | Reason for the visit:                                  | <input checked="" type="checkbox"/> SNSV - Sanitary Survey                              |
| 2 | Date of the survey:                                    | <u>09/19/2023</u>   |
| 3 | Status of the survey:                                  | <input checked="" type="checkbox"/> C - Completed                                       |
| 4 | Last name of inspector:                                | <u>Hakala</u>   |
| 5 | First name of inspector:                               | <u>Teslyn</u>   |
| 6 | Inspector organization:                                | <u>Alaska Department of Environmental Conservation</u><br><u>Drinking Water Program</u> |
| 7 | Name of system representative participating in survey: | <u>Walter Clayton &amp; Amanda Millay, Alaska Marine Highway</u><br><u>System</u>       |
| 8 | Other parties participating:                           | <u>Ryan Ackerman, Alaska Marine Highway System</u>                                      |

## General / SS Organization

### Pre-Inspection:

- |   |   |  |
|---|---|--|
| 1 | Checklist of pre-inspection tasks:  |  |
| 2 | Reviewed records relative to the system to be inspected, including current Boil Water Notices and Public Notifications? | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No |



## Question Number

- 3 Reviewed previous sanitary survey report, including all deficiencies? ☒ Yes  
☐ No
- 4 Reviewed previous Level 1 and Level 2 Assessments since the last sanitary survey (if applicable)? ☐ Yes  
☐ No  
Notes:  ☒ NA
- 5 Obtained a copy of the RTCR sample siting plan from DEC to be used during the site visit for the RTCR special monitoring evaluation? ☒ Yes  
☐ No
- 6 Reviewed approved plans/letters on file? (Note CT (concentration X contact time); operational requirements specified in engineering approval letters; separation distance waivers; number of storage tanks; specifications on well construction, grouting, an approved alternative to grouting, and an impervious surface; etc.) ☒ Yes  
☐ No
- 7 Reviewed the well log(s) on file (if applicable) to field verify that it is for the PWS's current source(s)? ☐ Yes  
☐ No  
Notes:  ☒ NA
- 8 Reviewed delineated protection area? (Use DEC mapping tool.) ☒ Yes  
☐ No
- 9 Verified both the certification level required for the water system and the certification level of the operator(s) online at the DEC Operator Training & Certification Program? ☒ Yes  
☐ No  
<http://dec.alaska.gov/water/opcert/index.htm>
- 10 Obtained data dump to review and provide to the water system for reference? ☒ Yes  
☐ No
- 11 Obtained a copy of the water haul vehicle questions for each vehicle? ☐ Yes  
☐ No  
☒ NA
- 12 Obtained a copy of the chemical storage guidance? ☒ Yes  
☐ No
- 13 Obtained full sanitary survey question set to record items on site that are not covered by this sanitary survey question set? ☒ Yes  
☐ No

## **General / SS Organization**

### **Post-Inspection:**

- 1 **Checklist of items needed for a complete survey:**

## Question Number

- |    |   |   |
|----|---|---|
| 2  | Cover letter  | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                |
| 3  | Deficiency Report<br><br>Notes: <span style="border: 1px solid black; padding: 2px;">Please see cover letter for list of deficiencies.</span>   | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                |
| 4  | Completed survey questions  | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                |
| 5  | Photo log (include all system facilities, current deficiencies, outstanding deficiencies and defects that have been resolved, master meter(s), raw water and entry point sample taps)   | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                |
| 6  | System site plan map (include source location and vicinity map)   | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                |
| 7  | System schematic(s) (i.e. treatment, distribution, master meter(s), raw water and entry point sample taps, etc.)  | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> NA |
| 8  | Lat/Long form (only required for all new sources or if the current source is a different source than the one in the last sanitary survey)<br><br>Notes: <span style="border: 1px solid black; padding: 2px;">Same source.</span>  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input checked="" type="checkbox"/> NA |
| 9  | Well log (if applicable). Include a note if either the well log in the file was verified or if the well log is not available.   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input checked="" type="checkbox"/> NA |
| 10 | Please provide observations, recommendations, and comments on any other issues that are not addressed through the questions, that were identified during this survey (i.e. additional findings).<br><br>Notes: <span style="border: 1px solid black; padding: 2px;">System personnel are diligent and operate the system as best they can, but the chlorination system is volatile. AMHS is evaluating engineered modifications or upgrades to the system.</span> |   |

## General / Background Info

### Name / Location:

- |   |                              |  |
|---|------------------------------|--|
| 1 | Name of public water system: | <div style="border-bottom: 1px solid black; padding-bottom: 2px;">HAINES FERRY TERMINAL</div> <div style="border-bottom: 1px solid black; height: 15px; margin-top: 5px;"></div> |
| 2 | PWSID:                       | <div style="border-bottom: 1px solid black; padding-bottom: 2px;">AK2110855</div> <div style="border-bottom: 1px solid black; height: 15px; margin-top: 5px;"></div>             |
| 3 | Physical address:            | <div style="border-bottom: 1px solid black; padding-bottom: 2px;">4 mile Lutak Road</div> <div style="border-bottom: 1px solid black; height: 15px; margin-top: 5px;"></div>     |

**General / Background Info****Classification:**

- 1 SDWIS activity status: ☒ Active
- 2 Primary water source: ☐ GW - Groundwater ☒ SW - Surface Water  
☐ GWP - Groundwater Purchase  
☐ SWP - Surface Water Purchase  
☐ GWUDISW- Ground water unde
- 3 Transient population: 100  
 Notes: Average over the season. Can have upward of 300 people pass through during large events like the Kluane Chilkat Bike Relay, with slower days in the winter.
- 4 Residential population: 0
- 5 Non-transient population (i.e. workers, students, etc.): 4  
 Notes: Not all workers are present each day, currently short-staffed.
- 6 Number of service connections: 1
- 7 How many services are metered? 1
- 8 Is water obtained from another PWS? (If yes, list in notes the name of the water system or business and the PWSID, if applicable.) ☐ Yes ☒ No  
 Notes: Water can be obtained from Haines Borough PWS in an emergency
- 9 Does the system sell/provide water to another water system or business? (If yes, list in notes the name of the water system or business and PWSID, if applicable.) ☐ Yes ☒ No
- 10 Have there been modifications to the system since the last survey? (Provide dates and describe all modifications, including approvals obtained. Include changes to the water system from the source through the distribution and additional water haul vehicles.) ☒ Yes ☐ No  
 Notes: The intake was modified sometime in the last three years. Hydropneumatic pressure tanks were replaced in August 2023 following failure of one in July 2023.
- 11 Have these modifications been approved by DEC? (List modifications that have not been approved.) ☐ Yes ☒ No ☐ NA ☐ Unknown  
 Notes: The intake is owned by the Haines Borough. Modifications do not appear to be approved, but this is being researched. Pressure tank replacement was in response to emergency failure and tanks were replaced with like models.
- 12 Is the system only open on a seasonal basis? (If yes, list the dates of operation in notes.) ☐ Yes ☒ No

## Question Number

- 13 If seasonal system, does the entire distribution system stay pressurized throughout the year? (If no, explain in notes.) ☐ Yes  
☐ No  
☒ NA

- 14 If seasonal system, list off-season point of contact information, including: name(s), address(es), and phone number(s).

NA

## General / Background Info

### Owner:

- 1 Does the owner and administrative contact (AC) for the system match the data dump? (If not, in notes, provide updated names and phone numbers and e-mails.) ☒ Yes  
☐ No

## General / Background Info

### Operator/Contact Info and Certification:

- 1 Does this PWS require a certified operator? (In notes, specify system level for Water Treatment and/or Water Distribution as required by the Operator Certification Program.) ☒ Yes  
☐ No  
Notes: Small-Treated
- 2 Is at least one operator adequately certified for the system classification level? ☒ Yes  
☐ No
- 3 Does this system have a contract operator? If yes, list name and contact information in notes. ☐ Yes  
☒ No

- 4 Name of primary operator:

Walter Clayton

- 5 Primary operator's certification level, phone number and e-mail:

walter.clayton@alaska.gov; 907-766-2111 ext. 3

Notes: Mr. Clayton holds a Small-Treated certificate which expires 12/31/24

- 6 List all backup operators, their certification level, and phone numbers:

Ryan Ackerman, 907-766-2111 ext. 3

Notes: Mr. Ackerman is the Haines Terminal Manager. He plans to work toward obtaining certification. All terminal agents are trained on water system operations.

ryan.ackerman@alaska.gov

- 7 Emergency contacts: Day - name(s) and telephone number(s):

Haines Ferry Terminal, 907-766-2111

Notes: Ryan Ackerman, cell 907-723-5544

- 8 Emergency contacts: Night - name(s) and telephone number(s):

Haines Ferry Terminal, 907-766-2111

Notes: Ryan Ackerman, cell 907-723-5544

## **General / Background Info**

### **Previous Survey Info:**

- 1 Have all deficiencies identified in the previous sanitary survey been corrected? (List, in notes, all those that have not been corrected. Provide photo documentation of all unresolved deficiencies.) ☐ Yes ☒ No ☐ NA  
 Notes: The system is still not meeting disinfection requirements. At the time of the survey, the bypass on the chlorination system was also still present, although this was addressed in October 2023 and is considered addressed.
- 2 Have all defects from Level 1 and Level 2 Assessments conducted since the last sanitary survey, been corrected? (List, in notes, all those that have not been corrected. Provide photo documentation of all unresolved defects.) ☐ Yes ☐ No ☒ NA  
 Notes: No Level 1 or Level 2 Assessments have been triggered.

## **General / Background Info**

### **Current Survey Info:**

- 1 Is operable standby or auxiliary power available? (i.e. well maintained and tested, etc.) ☒ Yes ☐ No ☐ NA  
 Notes: Large generator is onsite and turns on each Saturday.
- 2 What parts of the system does the auxiliary power supply? Entire terminal, including the water system.
- 3 If the system is under a current Boil Water Notice or other Public Notification requirement, is the notice posted on-site as required? (If system is not under a current BWN or PN, answer NA.) ☒ Yes ☐ No ☐ NA  
 Notes: System has been on a boil water notice since July 2023 when pressure tank failed and it was determined system not meeting disinfection contact time. Signage is posted in restrooms and at the drinking water fountain.

## **Management / General**

- 1 Does the management keep financial records reflecting the costs of operating and maintaining this system? ☒ Yes ☐ No
- 2 Are the finances and budget satisfactory to cover costs of operating the water system in a safe manner (i.e. water samples, energy costs, operation maintenance, staff training, etc.)? ☒ Yes ☐ No  
 Notes: All invoicing goes to Amanda Millay.
- 3 Are routine operations and maintenance records being kept? ☒ Yes ☐ No  
 Notes: System personnel have started their own Excel spreadsheet to track daily readings, maintenance activities, weather, and other notable comments related to the water system.
- 4 Are routine maintenance schedules established and adhered to for all components of the water system? ☒ Yes ☐ No
- 5 Are complaints logged in and responded to? (Describe any major complaint received since the last sanitary survey. If no complaints have occurred, answer NA.) ☒ Yes ☐ No ☐ NA

- 6 Does the system have an alternate source of water in the event that the system's primary source of water is contaminated or shut down? (If yes, list the source(s) in the notes field.) ☒ Yes  
☐ No  
☐ NA

Notes: The Haines Borough PWS can fill two emergency plastic water tanks for the terminal, however it is time consuming for the Borough and would only be requested as a short-term solution or in an emergency situation.

- 7 Is the system secured as appropriate (i.e. locks, lighting, fences, etc.)? ☒ Yes  
☐ No

## Regulations/Monitoring/Data Verification / General

- 1 Are all components and chemicals used in contact with the water certified to ANSI/NSF standards for drinking water; include treatment chemicals, filters/housings, etc.? (List any that are not ANSI/NSF certified, in notes.) ☒ Yes  
☐ No  
☐ Unknown

Notes: To the best of the surveyor's knowledge from what was observed.

- 2 Does the system have a DEC-approved total coliform sample siting plan available for review? (If no, use the sample siting plan obtained from the DV Program to answer the following questions.) ☒ Yes  
☐ No

- 3 Does the sample siting plan accurately represent the entire distribution system's current configuration? (Include addition or removal of distribution lines, pressure zones, system loops, or sample locations, etc. If no, explain in notes.) ☒ Yes  
☐ No

Notes: System switches between ADA, Men's, and Women's restrooms.

- 4 For a seasonal system on quarterly monitoring, do the time periods listed on the sample siting plan match the actual periods of highest demand? (Explain in notes.) ☐ Yes  
☐ No  
☒ NA

- 5 Does the system have a supply of extra total coliform sample bottles available? (Minimum of 4 bottles for systems with a groundwater source and 3 for systems with surface water or GWUDISW sources.) ☒ Yes  
☐ No

- 6 **Does the water system maintain the following records? (Please review these records.)**

Notes: Records are maintained as hard copies onsite and are also sent to Amanda Millay for electronic storage.

- 7 Bacteriological/Microbiological Analysis - 5 years retention. ☒ Yes  
☐ No

- 8 Chemical Analysis - 10 years retention. Lead and Copper (all analyses, reports, surveys, letters, evaluations, schedules, determinations, etc.) - 12 years retention. ☒ Yes  
☐ No

- 9 Turbidity Data (monthly operator reports) - 5 years retention. Turbidity value exceeding 5 NTU - 10 years retention. Conventional or direct systems: ☒ Yes  
☐ No  
continuous, individual (3 or more filters) or combined filter effluent readings ☐ NA  
3 years retention.

- 10 Disinfection Residual Data (monthly operator reports) - 5 years retention. Groundwater systems, if applicable, DEC-specified minimum disinfection residual - 10 years retention. ☒ Yes  
☐ No  
☐ NA

## Question Number

- |    |  |   |
|----|--|---|
| 11 | Records of actions taken to correct violations - 3 years retention.  | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> NA |
|    | Notes: <span style="border: 1px solid black; padding: 2px;">No violations have been issued since 2021. The only violations issued in 2021 were for missed total coliform sample due to shipping delays caused by inclement weather.</span> |   |
| 12 | Groundwater systems: documentation of corrective actions following a source water fecal positive sample result - 10 years retention.   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input checked="" type="checkbox"/> NA |
| 13 | Reports, summaries, communications, and corrective action documentation related to sanitary surveys - 10 years retention.  | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                |
|    | Notes: <span style="border: 1px solid black; padding: 2px;">The 2013 sanitary survey report has been emailed to the system for their records.</span>   |   |
| 14 | Reports, summaries, or communications related to Public Notifications, including CCRs as applicable - 3 years retention.   | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> NA |
| 15 | Variances and/or exemptions - 5 years retention after the expiration date.   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input checked="" type="checkbox"/> NA |
| 16 | Monitoring Plans (as applicable): Microbiological and Turbidity - 5 years retention. Chemical, IDSE, System Specific Study Plan, Stage 2 DBP, etc. 10 years retention.   | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> NA |
| 17 | Disinfection Profile and Benchmark - 10 years retention.   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input checked="" type="checkbox"/> NA |
| 18 | Records of both DEC-specified requirements for membranes and failures in membrane integrity/operations - 5 years retention.  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input checked="" type="checkbox"/> NA |

## Sources / General

### General:

- |   |   |  |
|---|---|--|
| 1 | Are there any abandoned wells that are not properly decommissioned, open holes, or excavations in the area? (If yes, describe in notes and note the location(s) on the system site plan map.) | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No<br><input type="checkbox"/> Unknown |
| 2 | If there are any unused wells in the area, are they maintained in a safe and sanitary condition? (If no, describe and note the location(s) on the system site plan map.)                      | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> Unknown            |
|   | Notes: <span style="border: 1px solid black; padding: 2px;">NA</span>   |  |

## Sources / Surface Water

### IN ARMY PROPERTY DAM RESERVOIR - (Active) / General:

- |   |  |  |
|---|--|--|
| 1 | What is the name of this intake? (List local and DEC name/number.)   | <div style="border-bottom: 1px solid black; padding-bottom: 2px;">Intake - IN001</div> <div style="border-bottom: 1px solid black; height: 15px;"></div> |
| 2 | List latitude and longitude reading in decimal degrees. (Must be in WGS 84 datum. Example +56.234230, -136.23423.) Note proximity of reading to the source, for example, "at the intake" or "5 feet east of the intake". | <div style="border-bottom: 1px solid black; padding-bottom: 2px;">59.28, -135.46</div> <div style="border-bottom: 1px solid black; height: 15px;"></div> |
|   | Notes: <span style="border: 1px solid black; padding: 2px;">Device did not generate accurate reading. Approximate lat/long obtained from Google Earth.</span>  |  |



## Question Number

3	List the available Lat/Long accuracy (in meters) displayed on the device (Example, Accuracy = 13 meters).	NA
<hr/>		
4	Is the intake screened to prevent entry of debris?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Notes: Unknown. Intake area was observed; however, it was unclear where the actual intake pipe is located.	
5	Are the screens maintained?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
	Notes: Haines Borough inspects the intake each spring per AMHS, but they were not visible during the inspection.	
6	Are intake works properly protected against ice buildup and silt?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Notes: Intake flows year round without issue.	
7	How often is the intake inspected by the operator or owner?	Annually
	Notes: The Haines Borough owns the water intake facilities, not the Haines Ferry Terminal, and maintenance is contracted out to AP&T. Per the operator, Borough staff inspect the intake each spring.	
8	Is there a source water sample tap or other means present to sample source water? (Note location here and include it on the system schematic. Describe sampling method if not from a sample tap.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Notes: Where raw water piping enters terminal.	
9	Have operational controls been put in place to deal with conditions that cause fluctuations in water quality? (If no, describe in notes.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
	Notes: The only control operators have is to change filters more frequently during periods of poor source quality.	
10	Have significant changes occurred in the watershed or source that could lead to increased contamination by cryptosporidium? Describe in notes any of the following examples:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
	Industrial, domestic or other types of pollution (i.e. accidental or illegal waste discharge or spills); Unrestricted human activity; Hydrological change; Severe natural event (i.e. flood, forest fire, earthquake, landslide, etc.); Drought conditions allowing waste to accumulate in the watershed that could be washed into source waters when precipitation returns; Change in animal migration paths; Changes resulting in excess standing water in the watershed.	
	Notes: The neighboring hillside has largely been deforested and is used as gravel storage/extraction for a local contractor. This work is across a draw and has not impacted the source to the best of the operator's knowledge.	

## Sources / Surface Water

### IN ARMY PROPERTY DAM RESERVOIR - (Active) / Pumps:

1	Are pumps and pump controls in good operating condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Notes: NA - System is gravity fed.	
2	Is the electrical wiring maintained properly? (If no, describe in notes.)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Notes: NA	

Question Number

- 3 Does the electrical wiring pose an immediate safety hazard? (For example: unprotected, live wires. If yes, describe in notes.) ☐ Yes  
☐ No

Notes: NA

- 4 Are there spare pumps or critical pump parts readily available? ☐ Yes  
☐ No

Notes: NA

## **TP FOR SURFACE SOURCE ARMY PROPERTY - (Active) / General**

### **Monitoring:**

- 1 Are compliance and process monitoring sample taps in the correct location(s) (i.e. entry point to distribution, after filtration, etc.)? (List any missing sample taps and show location of all sample taps on the system schematic.) ☒ Yes  
☐ No

Notes: System does not have tap directly after chlorine addition. Bathroom sink is used as "entry point" for chlorine readings which is representative given the small size of the system.

- 2 Are proper test kits available and well stocked? ☒ Yes  
☐ No  
☐ NA

- 3 List test equipment in the treatment plant. (List make, model, and use; include on-line and hand held testing equipment.) Hach Pocket Colorimeter II & Hach 2100Q Turbidimeter

- 4 Are testing facilities and equipment orderly and well maintained? ☒ Yes  
☐ No  
☐ NA

- 5 Are testing equipment (including turbidimeters) calibrated with primary standards following manufacturer's recommendations as to frequency and method? (List frequency and/or schedule.) ☐ Yes  
☒ No  
☐ NA

Notes: Colorimeter is not calibrated, however the 2100Q is calibrated (last calibrated September 4, 2023).

- 6 Are proper calibration standards and reagents used for analyses? ☒ Yes  
☐ No  
☐ NA

Notes: DPD free chlorine reagent used for chlorine testing. StablCal for 2100Q calibration.

- 7 Are the reagents used in testing past the expiration date? ☐ Yes  
☒ No  
☐ NA

Notes: DPD chlorine reagent expires August 2027. StablCal calibration standards expire Nov/Dec 2023.

- 8 **Did the operator demonstrate competence with standard testing methods for the following: (Operator must demonstrate all control tests applicable to the system.)**

- 9 Turbidity: (In the notes section, document results and units of operator's readings taken at the time of the sanitary survey.) ☒ Yes  
☐ No  
☐ NA

Notes: 1.05 NTU, collected post filtration/pre chlorination at turbidity monitoring tap. System fills 5-gallon bucket each day prior to collecting sample to gauge overall water color.

- 10 pH/Temperature: (In the notes section, document results and units of operator's readings taken at the time of the sanitary survey.) ☐ Yes  
☐ No  
☒ NA

## Question Number

- 11 Fluoride: (In the notes section, document results and units of operator's readings taken at the time of the sanitary survey.) ☐ Yes  
☐ No  
☒ NA
- 12 Disinfection Residual: (In the notes section, document results and units of operator's readings taken at the time of the sanitary survey.) ☒ Yes  
☐ No  
☐ NA  
Notes:
- 13 Other (i.e. orthophosphate, hardness, jar testing, etc.): (In the notes section document results and units of operator's readings taken at the time of the sanitary survey.) ☐ Yes  
☐ No  
☒ NA
- 14 If the system has treatment to address an MCL exceedance, is the treatment operated according to the engineering plan approval specifications? ☐ Yes  
☐ No  
☒ NA
- 15 Does the system have a master meter? (Describe the master meter or system of meters used to comply with the master meter requirement: meter measuring treated, wasted, and distributed water. Provide photos with locational labels of these meter(s). If the system is a TNC PWS, mark NA if there is no master meter.) ☐ Yes  
☐ No  
☒ NA  
Notes:  ☐ Unknown
- 16 Is the master meter operable? (Explain, i.e. flow through meter, etc.) ☒ Yes  
☐ No  
☐ NA  
Notes:

## **TP FOR SURFACE SOURCE ARMY PROPERTY - (Active) / General**

### **Cross Connections:**

- 1 Are there any unprotected cross-connections in the treatment system that pose an immediate health risk? (Describe in detail and provide well labeled photo(s).) ☐ Yes  
☒ No
- 2 Does the system have any high hazard cross-connections with inadequate protection (i.e. check valve on the filter supply line, solo valve, chemical main up water feed, etc.)? (Describe in detail and provide well labeled photo(s).) ☐ Yes  
☒ No  
Notes:
- 3 Are there any other cross-connections in the system with inadequate protection? (i.e. air gaps or backflow prevention not installed at all appropriate locations, such as treatment drain lines, backwash lines, instrument waste lines, etc.) (Describe in detail and provide well labeled photo(s).) ☐ Yes  
☒ No
- 4 If system has air gaps, are there any less than 2 times the diameter of the drain or waste line? (Describe in detail and provide well labeled photo(s).) ☐ Yes  
☒ No  
☐ NA
- 5 If backflow preventers are installed, are there any problems that may hinder operation or testing? (i.e. leaking, improper installation, etc.) (Describe in detail and provide well labeled photos.) ☐ Yes  
☐ No  
☒ NA  
Notes:
- 6 If backflow preventers are installed and can be tested, are they tested annually? (Describe testing schedule or frequency. Include the date they were last tested and the name of the tester.) ☐ Yes  
☐ No  
☒ NA

- 7 Are any backflow prevention devices installed in a pit? (If yes, describe in detail and provide well labeled photo(s).) ☐ Yes  
☐ No  
☒ NA
- 8 Are backflow prevention device drains provided with a suitable air gap? ☐ Yes  
☐ No  
☒ NA

## **TP FOR SURFACE SOURCE ARMY PROPERTY - (Active) / General**

### **Other Treatment Chemicals:**

- 1 Does the system have treatment that you do not have questions for? (If yes answer the appropriate section from the complete question set.) ☐ Yes  
☒ No

## **TP FOR SURFACE SOURCE ARMY PROPERTY - (Active) / Chlorination**

### **Hypochlorination:**

- 1 List the manufacturer, product name, and NSF certification information for the disinfectant being used.) Hasa Multi-Chlor, NSF-60  
 Notes: 12.5% concentration
- 2 Is the disinfection equipment operated and maintained properly? ☒ Yes  
☐ No
- 3 Are the solutions being made to the proper concentration and in a safe manner? (Describe in notes.) ☒ Yes  
☐ No  
☐ NA  
 Notes: Makes up 5-gallon batch every 2-3 weeks as needed. Refill if bucket drops below half because they typically have a lower chlorine residual when this occurs.
- 4 Is there adequate chlorine residual at the entry point to the distribution system? (0.2 mg/L or level required to meet CT, whichever is higher. Record the entry point chlorine residual reading taken at the time of the sanitary survey.) ☒ Yes  
☐ No  
☐ NA  
 Notes: 0.23 mg/L free chlorine residual
- 5 Are disinfectant residual measurements being made and recorded at the same time and location in the distribution system as the total coliform bacteria sample is collected? ☒ Yes  
☐ No  
☐ NA
- 6 Is there a detectable disinfectant residual being maintained throughout the distribution system? (Record the distribution chlorine residual reading taken at the time of the sanitary survey.) ☒ Yes  
☐ No  
☐ NA  
 Notes: On the day of inspection a 0.23 mg/L chlorine residual was detected
- 7 If the system is required to meet CT, is the system operated such that CT is being met (i.e. according to designated flow rates, disinfection residual levels, temperature, pH, tank volume/level, etc.)? (From system's operator monitoring records record the readings of the parameters necessary to calculate CT for one day that is representative of normal operation: pH, disinfection residual, peak flow rate, tank volume/level, etc. If monitoring data is not available, answer question as "No" with a note regarding this.) ☐ Yes  
☒ No  
☐ NA  
 Notes: On BWN for not meeting CT due to current tank size/configuration. System is volatile. Some days chlorine residual is adequate immediately, other days bathroom taps must be ran for 30+ minutes before a 0.2 mg/L residual can be detected.

Question Number

- 8 List readings taken at the time of the sanitary survey for parameters require to calculate CT: Chlorine: 0.23 mg/L  
Notes: pH, water temperature, and flow through filters is not monitored.
- 9 Is there a back-up disinfection unit? (Describe in notes if it is on-line and operational. Filtration avoidance systems cannot have an NA answer; all other types of systems that do not have back-up disinfection should be NA.) ☐ Yes ☐ No ☒ NA
- 10 Is there an auto switch-over for disinfection units to prevent a break in disinfection? (Filtration avoidance systems cannot have an NA answer; all other types of systems that do not have auto switch-over should be NA.) ☐ Yes ☐ No ☒ NA
- 11 If there is not a back-up disinfection unit, are critical spare parts for disinfection equipment readily available? ☐ Yes ☒ No ☐ NA  
Notes: The pump was replaced in 2019. Recommend having a spare pump or parts on hand once system is upgraded.
- 12 Are disinfection units hooked up to flow switches that prevent the addition of disinfectant when no water is flowing? (If yes, note how often they are checked.) ☒ Yes ☐ No
- 13 Is disinfectant feed proportional to water flow? ☒ Yes ☐ No ☐ NA  
Notes: To the best of the surveyor's knowledge.
- 14 Is there an adequate quantity of disinfectant readily available? ☒ Yes ☐ No  
Notes: System has multi-year supply. Chlorine has to be barged in.
- 15 Is the disinfectant properly stored? ☒ Yes ☐ No ☐ NA

## **TP FOR SURFACE SOURCE ARMY PROPERTY - (Active) / Filtration**

### **General:**

- 1 Is filtration equipment maintained and in operable condition? (Describe in notes.) ☒ Yes ☐ No

## **TP FOR SURFACE SOURCE ARMY PROPERTY - (Active) / Filtration**

### **Cartridge:**

- 1 How many stages of filtration are there? 3
- 2 List the filter and housing make, model, and micron size of each stage. Filters: HPM97-A-2SS, HPM99-CC-2SR, HPM99-CCX-2S9  
Housings: AQ2-2BHD, AQ2-2, AQ2-2  
Notes: Strainrite filtration system.
- 3 Is the rate of flow through the filters adequately controlled to meet filtration objectives/requirements? ☒ Yes ☐ No  
Notes: The system does not actively control rate of flow through the filters; however, the filters appear to be performing. Occasional breakthrough is reported to occur during heavy rain events.

Question Number

- 4 Are there means for measuring the differential pressure of each stage (i.e. pressure gauges before and after each stage)? ☒ Yes  
☐ No
- 5 Does the system have a supply of replacement filters? ☒ Yes  
☐ No
- 6 On what basis and frequency are filters replaced (i.e. differential pressure, gallons, days, etc.)? Every 3 months  
 Notes: Filters are changed more frequently if needed based on turbidity monitoring and water color post filtration. It has only been 6 weeks but going to replace shortly given current color of water (slight yellow tinge).
- 7 Is the replacement of the filters done in a sanitary manner? ☒ Yes  
☐ No  
 Notes: System has a set of written, posted instructions they adhere to. All filters and valves are labeled for reference.

**Storage / ST SURFACE SOURCE ARMY PROPERTY - (Active)**

- 1 What is the name of this storage facility? (List local and DEC name/number Also list the number of storage tanks that make up this storage facility.) SF001  
 Notes: Storage facility is a set of three hydropneumatic pressure tanks. Multiple questions in this section are therefore not applicable and will be marked as such. All tanks were replaced in August 2023 following failure of one of the tanks.
- 2 What does this storage tank hold? ☐ Raw Water  
☐ Filtered Water  
☐ Disinfected Water  
☒ Filtered and Disinfected Water
- 3 Is treated water storage covered? ☒ Yes  
☐ No  
☐ NA  
 Notes: Housed in covered water treatment room.
- 4 Does the system operate the tank according to established parameters necessary to meet demand? (Note the volume or water level in tank, if possible.) ☒ Yes  
☐ No  
☐ NA
- 5 Is this storage facility used to meet disinfectant contact time? ☒ Yes  
☐ No
- 6 If the tank is used to meet CT, does the system operate it according to established parameters necessary to meet disinfection contact time; such as water volume/level and chlorine residual of 0.2 mg/L or level required to meet CT, whichever is higher? (In notes, list the volume or water level and the chlorine residual of the water in the storage tank at the time of the inspection. Answer NA if system does not disinfect or tank is not used for CT.) ☐ Yes  
☒ No  
☐ NA  
 Notes: System is on a BWN for not meeting CT. Engineer has calculated in the past CT is not being achieved with current configuration. ☐ Unknown
- 7 Does surface run-off drain away from the storage tank(s)? ☐ Yes  
☐ No  
 Notes: NA

Question Number

- 8 Are overflow and drain lines screened or covered, and do the lines terminate a minimum of 2 times the diameter of the water outlet pipe above the ground or storage? (If no, describe in notes.) ☐ Yes ☐ No  
Notes:
- 9 Are vents screened or covered, and turned downward; and do the lines terminate a minimum of 2 times the diameter of the water outlet pipe above the ground or storage? (If no, describe in notes.) ☐ Yes ☐ No  
Notes:
- 10 Is the hatch watertight? (If no, describe in notes.) ☐ Yes ☐ No ☐ NA  
Notes:
- 11 Is the hatch locked? ☐ Yes ☐ No ☐ NA  
Notes:
- 12 Has the tank been inspected within the last year? If not, note when it was last inspected. ☐ Yes ☐ No ☐ Unknown  
Notes:
- 13 Has the tank been cleaned within the last 3 years? If not, note when it was last inspected. ☐ Yes ☐ No ☐ Unknown  
Notes:
- 14 Is the storage tank(s) clean and free from contamination? (If no, describe in notes.) ☐ Yes ☐ No ☒ Unknown  
Notes:
- 15 Is the storage tank(s) structurally sound (e.g., leaking, rust, holes, etc.)? (If no, describe in notes.) ☒ Yes ☐ No
- 16 Can the storage tank(s) be isolated from the system? ☒ Yes ☐ No  
Notes:
- 17 Are leaks evident at the time of inspection? ☐ Yes ☒ No
- 18 Is the storage tank(s) lined or coated? (If yes, describe in notes.) ☒ Yes ☐ No ☐ Unknown  
Notes:
- 19 Is the storage tank(s) interior coating or liner peeling or cracking? (If yes, describe in notes.) ☐ Yes ☐ No ☐ NA ☒ Unknown  
Notes:
- 20 Is storage tank(s) safely accessible to inspector? ☒ Yes ☐ No



- 21 Were you able to physically inspect the storage tank hatch, vent, roof, and overflow outlet? If no, select the method you discussed with the system owner/operator to document their condition (Describe in notes.):
- a. Reviewed and discussed maintenance records and recent photos (include copy of photos with inspection report).
- b. Photos will be taken and submitted by the owner/operator; additional follow-up required by DEC.
- c. Owner/operator unable or unwilling to document; additional follow-up required by DEC.

Notes: NA

## **DS SURFACE SOURCE ARMY PROPERTY - (Active) / General**

- 1 Describe any problems that have occurred in the distribution system since the last sanitary survey. Ongoing chlorine system volatility and hydropneumatic tank failure July 2023.
- 2 If there are fire hydrants connected to the distribution system have there been any problems related to the hydrants? Describe and note if they are used for flushing.) ☐ Yes  
☐ No  
☒ NA
- 3 Is there any portion of the distribution system that has a pressure less than 20 psi? ☐ Yes  
☒ No
- 4 Are there any leaks evident at the time of the sanitary survey? (If yes, explain.) ☐ Yes  
☒ No
- 5 Is there a routine main and dead-end water flushing program? (If yes, describe in notes.) ☒ Yes  
☐ No  
☐ NA  
Notes: System is flushed regularly while trying to maintain adequate chlorine residual.
- 6 Are the check valves, water meters, etc., maintained and operating properly? (If no, explain in notes.) ☒ Yes  
☐ No  
☐ NA  
Notes: Valves and meters appear to be functional.
- 7 Is system adequately protected from freezing? (If no, explain in notes.) ☒ Yes  
☐ No  
Notes: One branch of raw water line drains to waste continually year-round to prevent freezing.
- 8 Are heat exchangers used in conjunction with the water system? ☐ Yes  
☒ No  
Notes: System has one electric hot water heater for domestic hot water.
- 9 If yes, are there any single walled heat exchangers? (If yes, note make/model.) ☐ Yes  
☒ No  
☐ NA
- 10 Is ethylene glycol used anywhere in the system? ☐ Yes  
☒ No

**DS SURFACE SOURCE ARMY PROPERTY - (Active) / Cross Connections**

- 1 Are there any unprotected cross-connections anywhere in the system that pose an immediate health risk? (Describe in detail and provide well labeled photo(s).) ☐ Yes ☒ No
- 2 Does the system have any high hazard cross-connections with inadequate protection? (Describe in detail and provide well labeled photo(s) of all high hazard connections to industry, wastewater treatment plants, clinics, etc., that are not adequately protected.) ☐ Yes ☒ No
- 3 Are there any other cross-connections in the system with inadequate protection? (i.e. air gaps or backflow prevention not installed at all appropriate locations, such as boiler make-up water, hose bibbs where backflow prevention is required, etc.) (Describe in detail and provide well labeled photo(s).) ☐ Yes ☒ No
- 4 If system has air gaps, are there any less than 2 times the diameter of the drain or waste line? (Describe in detail and provide well labeled photo(s).) ☐ Yes ☐ No ☒ NA
- 5 If backflow preventers are installed, are there any problems that may hinder operation or testing? (i.e. leaking, improper installation, etc. Describe in detail and provide well labeled photo(s).) ☐ Yes ☐ No ☒ NA  
Notes:
- 6 If backflow preventers are installed and can be tested, are they tested annually? (Describe testing schedule or frequency. Include the date they were last tested and the name of the tester.) ☐ Yes ☐ No ☒ NA
- 7 Are any backflow preventers installed in a pit? (If yes, describe in detail and provide well labeled photo(s).) ☐ Yes ☐ No ☒ NA
- 8 Are backflow preventer drains provided with a suitable air gap? ☐ Yes ☐ No ☒ NA
- 9 If the water system has a water haul fill point, do the water supply lines have appropriate backflow prevention? (List backflow prevention type in notes.) ☐ Yes ☐ No ☒ NA

**DS SURFACE SOURCE ARMY PROPERTY - (Active) / Pumps**

- 1 Are pumps and pump controls in good operating condition? ☐ Yes ☐ No ☒ NA  
Notes:
- 2 Are there spare pumps or critical spare pump parts readily available? ☐ Yes ☐ No ☒ NA
- 3 Is the electrical wiring maintained properly? (If no, describe in notes.) ☐ Yes ☐ No ☒ NA

- 4 Does the electrical wiring pose an immediate safety hazard? (For example: unprotected, live wires. If yes, describe in notes.) ☐ Yes  
☐ No  
☒ NA

## **DS SURFACE SOURCE ARMY PROPERTY - (Active) / Hydropneumatic tanks**

- 1 Does the system have a hydropneumatic tank(s)? ☒ Yes  
☐ No

Notes: All 3 tanks were replaced in August 2023 with Quick Tanks, Inc. Q82V 82-gallon galvanized vertical tanks with NSF standard 61 certified lining.

- 2 At the time of inspection, are all tanks water tight? (i.e. not leaking) ☒ Yes  
☐ No  
☐ NA

- 3 Are the exterior surfaces and tank supports in good condition? (If no, explain condition in notes and include photo.) ☒ Yes  
☐ No  
☐ NA

- 4 Are the hydropneumatic tanks in a condition that represents an immediate threat to health or safety, or are in danger of failure? (Describe in notes.) ☐ Yes  
☒ No  
☐ NA

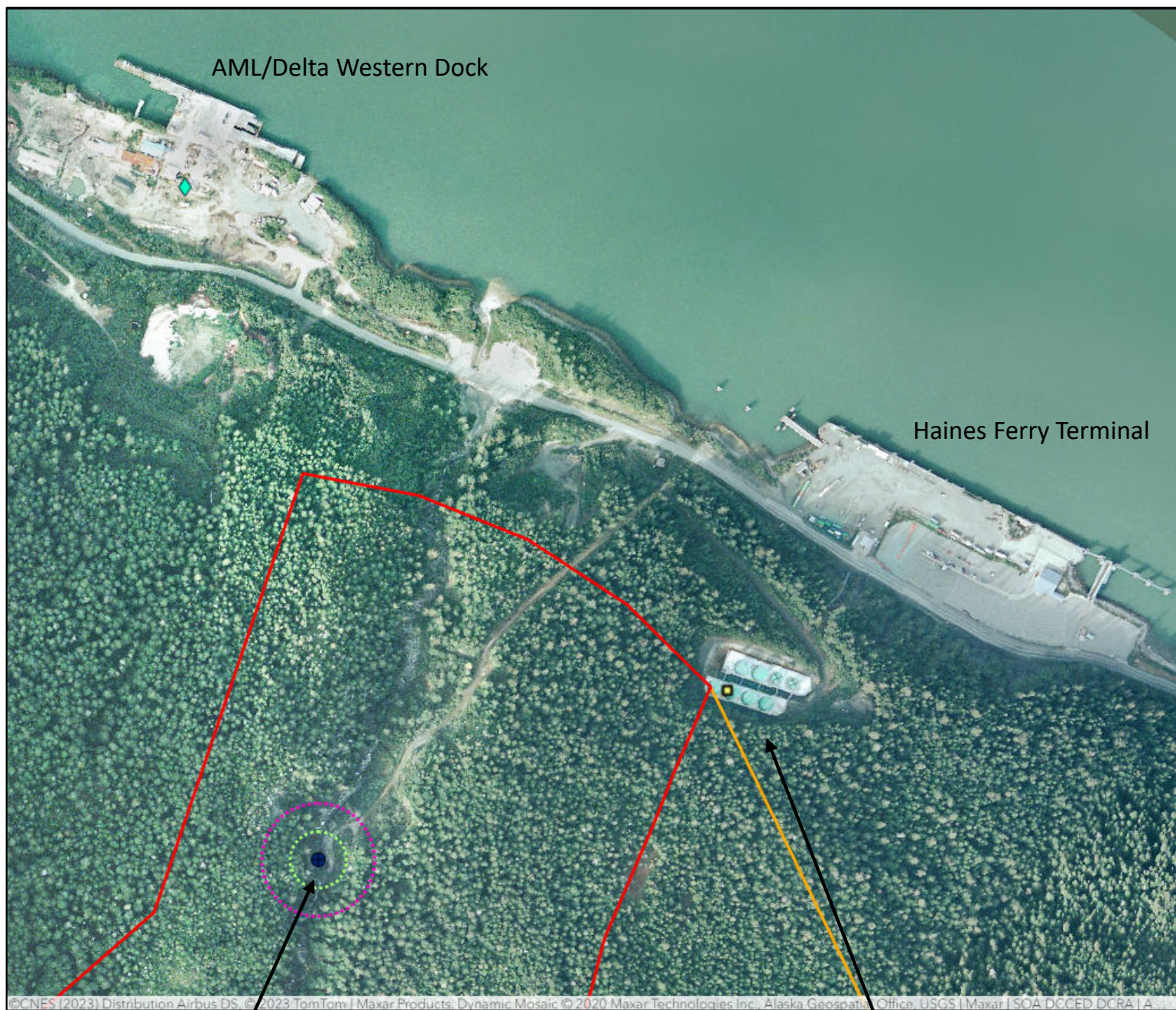
# Haines Ferry Terminal Public Water System PWSID: AK2110855

Sanitary Survey Inspection  
September 19, 2023



Survey performed by  
Teslyn Hakala  
Drinking Water Program  
Alaska Department of Environmental Conservation





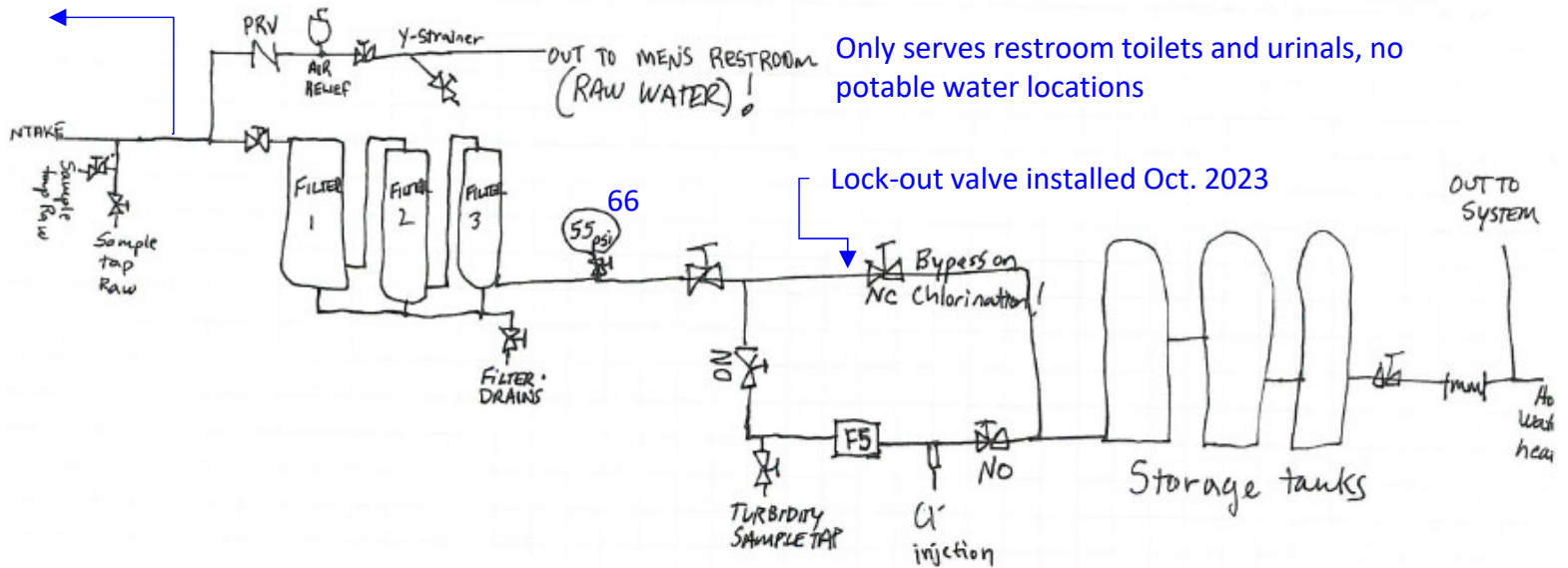
Intake

Delta Western Tank Farm

No known sources of contamination within 100 and 200-foot protective radii.

Historic contaminated site, cleanup complete per ADEC Contaminated Sites.

Raw water branches and discharges outdoors year-round to prevent freezing



HAINES AMH 2110855  
PROCESS SCHEMATIC  
7/11/18

*Sarah Haines*

FS = Flow switch  
V = valve  
PRV = Pressure Reducer Valve

Additions in blue, verified 9/19/23.  
-T. Hakala





Gated road leading uphill to intake. Vehicles are not typically used for access due to steep grade.



View of intake area; area has been modified, including installation of concrete within the last 3 years.





More views of intake area. Area has been modified and concreted installed within the last 3 years, per system operator. It was unclear where the intake piping is located, possibly buried or not visible in the stream. Ferry terminal personnel rarely come to the intake. It is owned by the Haines Borough, not AMHS.





Valve and settling vault #1,  
down road from intake on  
hillside; lock was broken.

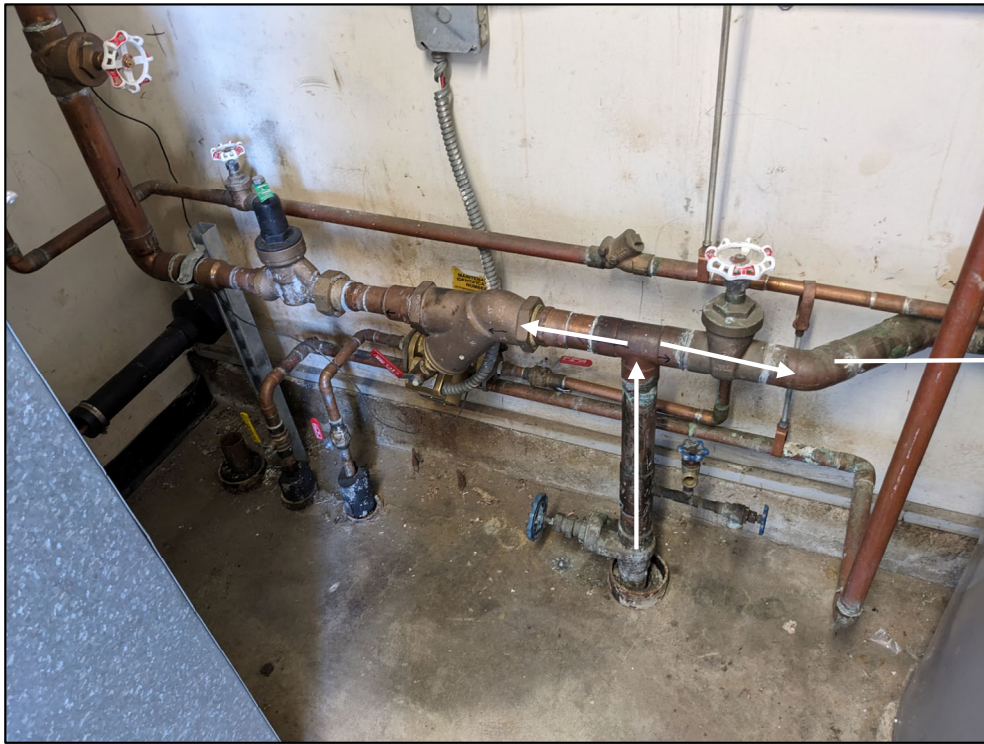


Valve and settling vault #2,  
close to #1; unlocked.



Inside of vault #2, water was  
7 ½ feet deep, vault is 14 feet  
deep.





Raw water enters terminal, tees, right pipe runs outside and discharges year-round for freeze protection.



Non-potable sign has been added following 2018 survey.



Pipe runs to breakwater wall and discharges. Discharge point is located above high tide line.







Raw water to bathrooms. Only serves urinals and toilets, not sinks.

Raw water to treatment.



Reliance hot water heater.



Strainrite filtration system, 3 stages of filtration.

Replacement instructions are posted on the wall, see page 12.

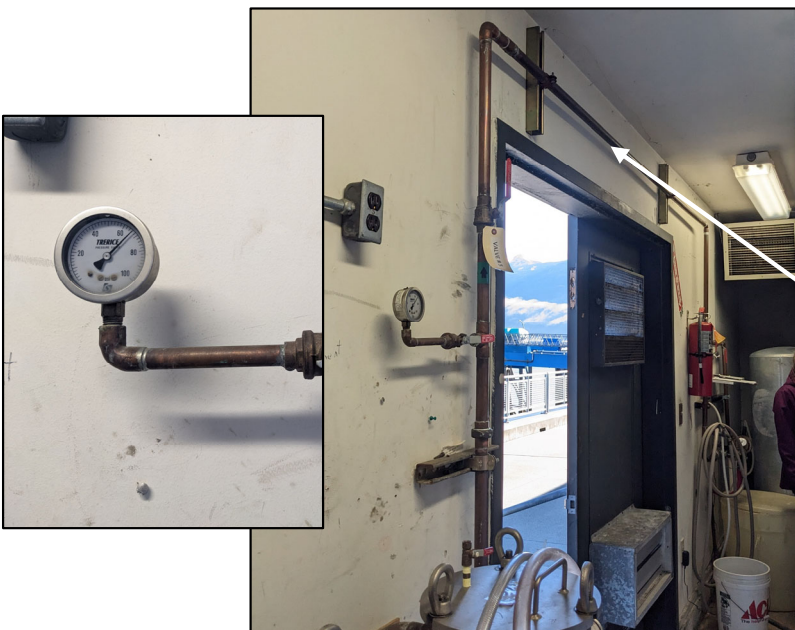




Filter drain capped following 2018 sanitary survey.



Pressure gauges for filters 1, 2, and 3.



Line running from filters to chlorination and pressure tanks; pressure reading 66 psi.



Tap and hose  
used to  
monitor  
turbidity.

H.E. Anderson chlorine ratio feeder.

Chlorine  
injection.



Turbidity monitoring tap followed by chlorine injection  
system; inside vat is 5-gallon bucket of solution, new  
batch made every 2-3 weeks as needed.



Bypass of chlorination system;  
system ordered a lock-out tag-out  
valve that was installed after the  
inspection (see page 15).





All 3 tanks were replaced in August 2023 with Quick Tanks, Inc. Q82V 82-gallon galvanized vertical tanks with NSF standard 61 lining.

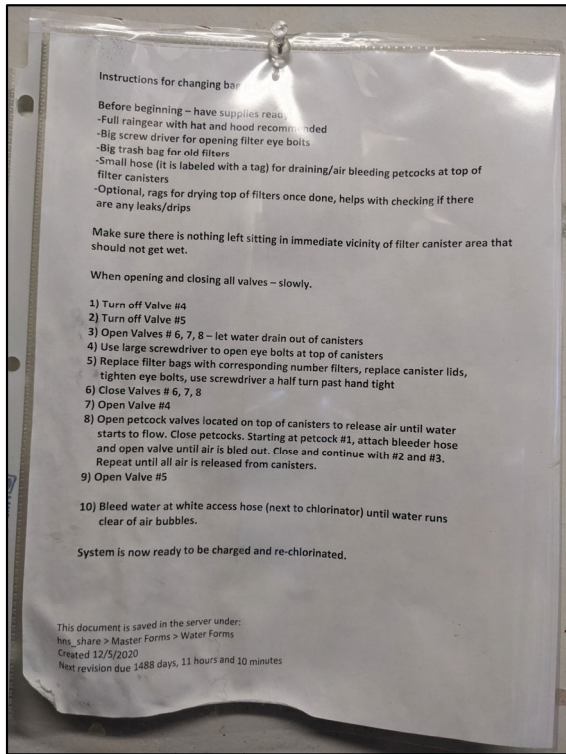


Chlorine pump drain.



Water meter post pressure tanks going to distribution.





Filter replacement instructions posted on wall by filters. Written so inexperienced personnel can follow.

DATE	WATER RUN TIME (MINUTES)	CHLORINE READING	TURBIDITY READING	OUTSIDE AIR TEMP (FAHRENHEIT)	WEATHER CONDITIONS	NOTES
1-Sep	8	0.25	0.41			
2-Sep	7	0.33	0.45	52	overcast, SE wind 20k	
3-Sep	28	0.23	0.49	55	overcast, SE wind 15k	
4-Sep	30	0.2	1.12	48	partly sunny, SE wind 10k	
5-Sep	20	0.21	0.78	47	light rain, SE wind 15k	T1, A8 T2, A5 T3, T9
6-Sep	5	0.22	0.86	50	highovercast, SE wind 20k	3 outlet ADA room - fill Spallon bucket for turbidity
7-Sep	7	0.3	0.98	55	cloudy, calm	
8-Sep	10	0.28	0.52	54	cloudy, SE wind 15k	
9-Sep	3	0.24	0.75	56	rain, calm	
10-Sep	13	0.2	0.98	55	cloudy, calm	
11-Sep	12	0.31	0.9	57	heavy fog, calm	
12-Sep	75	0.29	1.02	58	light rain, SE wind 10k	Monthly TC due
13-Sep	17	0.2	0.51	53	overcast, some light rain	
14-Sep	53	0.2	1	49	cloudy, calm	Mens Room Testing
15-Sep	58	0.26	0.89	47	Heavy Rain, calm	Changed Chlorine 32 to 32 pump stay at 5
16-Sep	37	0.33	1.09	51	cloudy, calm	
17-Sep	5	0.35	0.88	50	overcast, light rain, calm	
18-Sep				51	overcast, light rain, calm	pump to 6, tank 3.03 chlorine reading, 9 outlets/1hr. 54 after 1 hr settling. 84 at distribution
19-Sep					rain, calm	
20-Sep						
21-Sep						
22-Sep						
23-Sep						
24-Sep						
25-Sep						
26-Sep						

Excel spreadsheet Haines AMHS personnel have created to track daily readings, maintenance activities, weather, and other notable comments related to the water system.

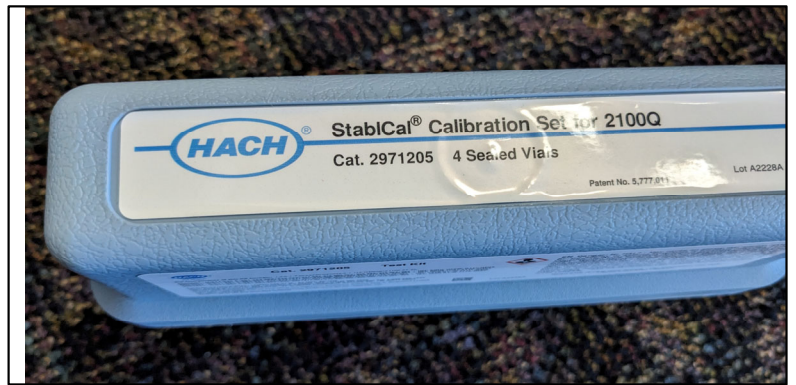


Chlorine, NSF-60.

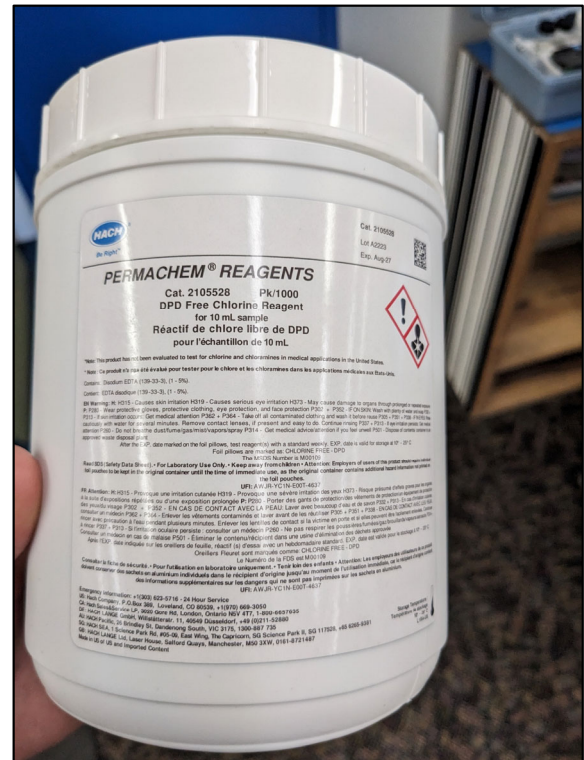
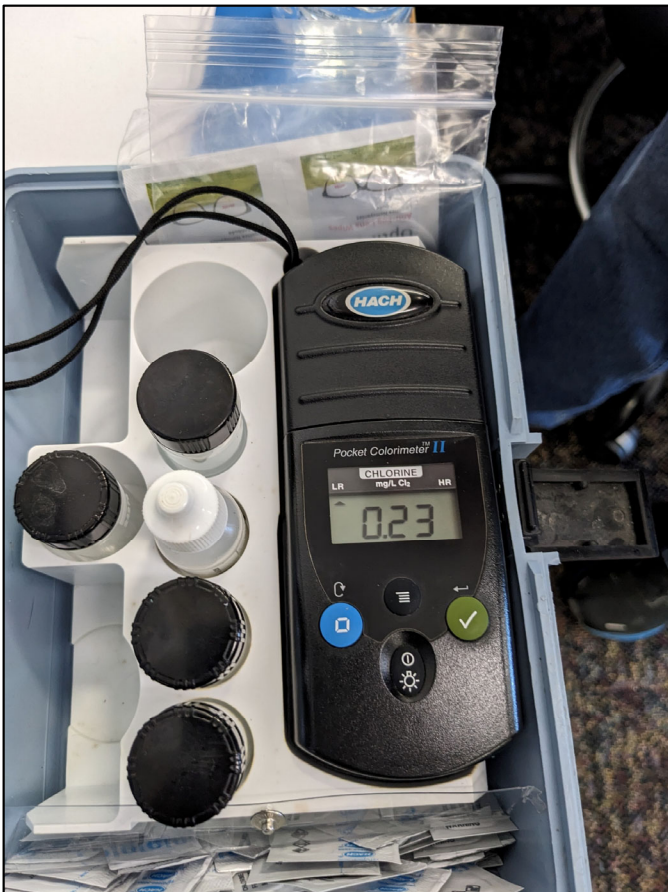


Spare filters onsite.



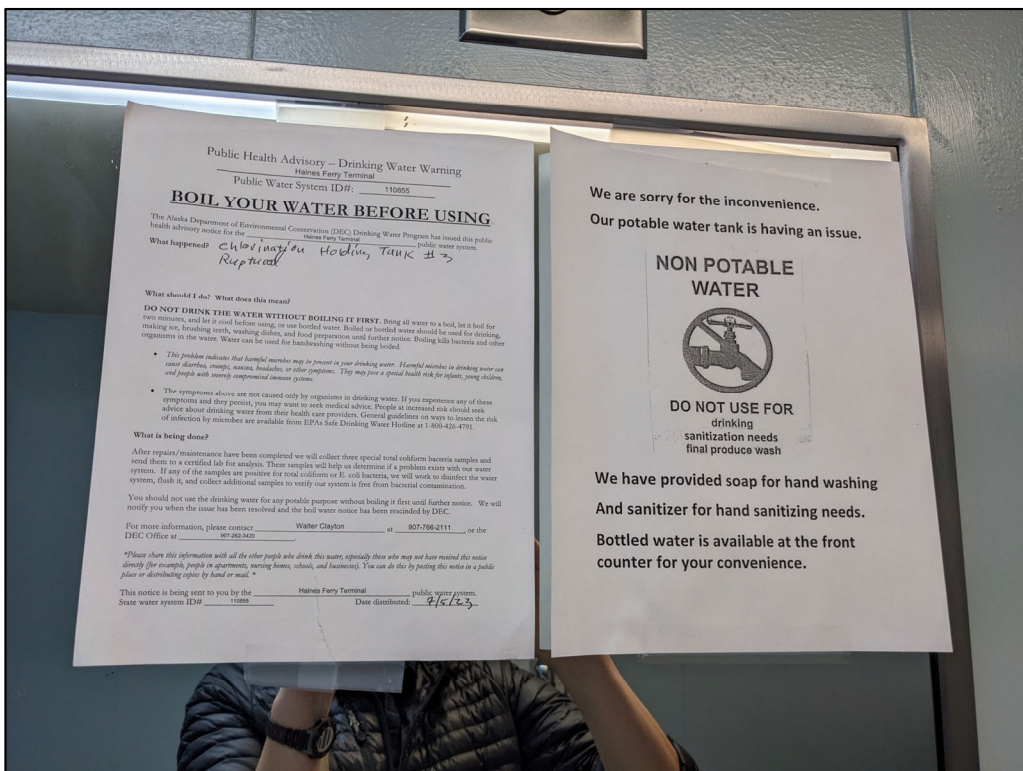


Monitoring equipment includes Hach 2100Q turbidimeter with StablCal calibration standards, and Hach Pocket Colorimeter II with unexpired DPD free chlorine reagent packets.





Men's bathroom, used left tap to measure chlorine residual during the inspection.



Boil water notice posted in bathrooms and water fountain.



A lock-out valve was installed on the chlorine bypass following the inspection. System provided photo documentation on 10/27/2023, which resolves related deficiency.

