2019 Level 2 Assessment Response Form

RI1592023 - Prudence Island Water District

Required System Operator Classification: D-1

Sanitary Defects

The Sanitary Defects below were identified as part of the September 11, 2019L2A for RI1592023 - Prudence Island Water District. To protect your public water supply, the following sanitary defects must be corrected by the Due Date below. You are required to Notify RIDOH when each sanitary defect has been corrected. The written response requires, when applicable, photographic evidence of the repairs to the PWS and/or a contractor's invoice. **Authority: 216-RICR-50-05-1 Rules and Regulations Pertaining to Public Drinking Water.** The Administrative Contact (AC) or Designated Operator (DO), if applicable, must initial the column on the column below once the repairs are made submit a copy this form with the written response and/or photographic evidence.

This office must be notified of any modifications to your system as per 216-RIRC-50-05-1, Sec.1.5. An **Application for Approval** form must be submitted for any planned significant modifications including equipment upgrades and design improvements to your system. Routine maintenance on a water system, such as pipe and valve replacement or repair does not need to be reported.
An **In-Kind Replacement** form must be submitted for replacement of pumps, storage/pressure tanks or treatment components that are functionally equivalent to the original components

Attach an additional sheet if more room is required.

Compliance Schedule and Corrective Action Table

The Level 2 Assessment (7) conducted by Will Capron did not uncover any new findings since the assessment conducted by Rob Ferrari (6) on August 21, 2019. Since no additional sanitary defects have been uncovered, the PWS must continue with the current plan of action and incorporating the correction of sanitary defects outlined in the RIDOH report based on Mr. Ferrari's assessment. All defects must be corrected by the assigned due dates.

I certify that the above information is accurate.

Name of PWS Owner/Representative: _____

(Please Type or Print) Date

PWS Owner/Representative: _____

(Signature)

If this form is not signed, the Level 2 Assessment will not be considered complete

SYSTEM OVERVIEW
System Operator Classification: D-1
William Capron, System Operator

GENERAL:
The Prudence Island Water District (PIWD) community water system is located on Prudence Island and is serving approximately 350 service connections. As many homes on the island are vacation/weekend homes, and there is no census data available, it is determined that the average number of people served by PIWD is 608 persons.
Total water produced by the PIWD for the year 2017 is 6.7 million gallons with an average of 17,956 gallons per day (gpd). PIWD is an un-metered system so it is not possible to determine if there are leaks. During the off season, at least 240 service connection are "winterized".

SOURCES:
Army Well (AKA Harris Well) is located on Army Road. This 6-inch (in.) diameter well is drilled to a depth of 291-feet (ft.) and extends 30-in. above grade. This well has a Goulds submersible 2 hp pump with a rated capacity of 3-11 gpm (varies depending on the time of year). This well is presently used as the primary source.

Indian Springs Wells #1 & 4, and the Bristol Colony Well are considered the backup sources of water supply for the system.

Indian Springs Well # 1 (summer use) is located off Homestead Avenue east of Mill Creek. This 6-in. diameter well drilled to a depth of 467-ft extends about 3 ft above grade and is located in a wooden box with a slanted roof wooden cover. This well has a Goulds Model # 10GS15-412C 2 hp submersible pump with a rated capacity of 22 gallons per minute (gpm) placed approximately 140 ft below ground surface (bgs). This well was taken out of service and surged to increase production in 2013.

Indian Springs Well # 4 (summer use) is located off Homestead Avenue 15 ft east of Mill Creek. This 6 in diameter well is drilled to a depth of 438 ft, extends 15 in above grade and is located in a wooden box with a slanted wooden cover. The pump for this well was replaced in 2019 with a Goulds 35-GS20.

Bristol Colony Well (aka Broadway-DeWitt) (back-up) is a 6-in. diameter, 105 ft deep well extends 18 in. above the 5 ft deep cement vault with a cement metal-rimmed cover. This well is equipped with a submersible pump, a new flow totalizer with a restrictor capacity of 3 gpm. This well was to be placed on inactive status and testing would be discontinued but it was not to be abandoned.

The following wells are no longer being utilized:

Broadway Well # 1 is not in use. Survey 1996 response stated that this well had been disconnected from the system and further correspondence dated 3/12/97 stated that the Broadway Well was to be placed on inactive status and testing would be discontinued but it was not to be abandoned.

Indian Springs Dug Well has been physically disconnected from the system.

Goulet Well is not in use and is physically disconnected. Correspondence dated 3/12/97 stated that this well has been deactivated with all equipment and structures removed. Ownership of this well has been transferred to the Prudence Island Water District.

Navy Well is owned by RIDEM and was at one time leased on a 20-year basis to Prudence Island Utility Corporation (owner of the PWS prior to the creation of the PIWD in 2004). The lease had expired prior to PIWD purchase of the PWS and the PIWD has no intention to renew the lease.

Source ID	Facility Name	Local Name	Type	Availability
WL001	Wl-Bristol Colony	BC WELL	WL	E
WL007	Wl-Army Well	ARMY WELL	WL	P
WL008	Wl-Indian Spring #1	IS#1	WL	S
WL009	Wl-Indian Spring #4	IS#4	WL	S

Type: WL=Well CC=Consecutive Connection
Availability: P=Permanent E=Emergency S=Seasonal I=Interim O=Other

TREATMENT:
This PWS currently has no treatment.

STORAGE:

In 2003 a 100,000 gallon vertical, cylindrical atmospheric tank was constructed. The overflow for this tank is at 149 ft. mean sea level elevation and the tank discharges via a below grade valve vault (also constructed in 2003). Also, located within the Broadway Booster Station are two Well-X-Trol WX-350 pressurized storage tank. These tanks operate in conjunction with the Army Well.

Storage ID	Facility Name	Local Name	Storage Type	Construction Material	Comments
ST001	St-Storage Tank 1	BIG BLUE	Reservoir	Steel	100,000 GAL RESERVOIR STORAGE TANK, LOCATED ON ROGER WILLIAMS LN BETWEEN SUNSET HILL AVE AND ALLENS LN. OVERFLOW ELEVATION IS 149 FT ABOVE MEAN SEA LEVEL. BOLTED CARBON STEEL PLATES AND GLASS FUSED.
ST002	St-Storage Tank 2	AMTROL WELL XTROL WX-350 (2)	Hydro pneumatic	Steel	TWO WELL XTROL WX-350 TANKS LOCATED ON BROADWAY

PUMPS/PUMP FACILITIES:
Broadway Booster Station houses an Aeromotor 1 hp centrifugal pump with a 5 gpm capacity and a Burkes 1 hp centrifugal pump with a 5 gpm capacity. These pumps operate in a lead/lag operation; the lead pump comes on at 41 psi and off at 52 psi 2nd pump comes on at 38 psi and off at 52 psi.

DISTRIBUTION:

PIWD distribution system is located on the eastern side of the island. It extends as far south as the Broadway vicinity and as far north as Warner and Raphael Ave.

OTHER:

A new 40 kW, 440 volt, 3 phase propane generator is in place at the Indian Spring Well Site. A new 13 kW, 210 volt, single phase propane generator is in place at the Army Camp Well Site.

Inspector: Garth Hoxsie-Quinn

PWS Name: Prudence Island Water District

Sources

BRISTOL COLONY

1	How is the well used (5.j).	✓
	Primary	✓
	Backup	✓
	Emergency	✓
	Not a PWS	✓
	Not Drinking Water	✓
2	Note the height of the well in the Comments Section (5.k).	✓
3	The sanitary seal/well cover are intact with gasket and tight bolts. (6.a)	✓
4	The electrical conduit is secured (5.b).	✓
5	The exposed portion of the well is structurally sound, shows no signs of deterioration (5.l). Note findings in Comments Section.	✓
6	The well cap is vented and screened with the screen facing downward (5.c).	✓
7	The well cover was removed to inspect the gasket and ensure no insects. Describe findings in the comments section (5.g).	✓
8	The well was disinfected following the Well/System Disinfection Procedure provided by RIDOH after well cover removed (5.h). If not, note when disinfection will occur in the comments section.	✓
9	There are no unprotected cross-connections at the well head (5.l).	✓
10	There is no evidence of standing/ponding water around or near the well (5.n).	✓
11	The well head area is secured to prevent unauthorized access (5.o).	✓
12	There have been no spills in the vicinity of the well that may contaminate the source (5.p).	✓

ARMY WELL

1	How is the well used (5.j).	✓
	Primary	✓
	Backup	✓
	Emergency	✓
	Not a PWS	✓
	Not Drinking Water	✓
2	Note the height of the well in the Comments Section (5.k).	✓
	No positives when Army Well is the exclusive source of water.	
3	The sanitary seal/well cover are intact with gasket and tight bolts. (6.a)	✓
4	The electrical conduit is secured (5.b).	✓
5	The exposed portion of the well is structurally sound, shows no signs of deterioration (5.l). Note findings in Comments Section.	✓
6	The well cap is vented and screened with the screen facing downward (5.c).	✓
7	The well cover was removed to inspect the gasket and ensure no insects. Describe findings in the comments section (5.g).	✓
8	The well was disinfected following the Well/System Disinfection Procedure provided by RIDOH after well cover removed (5.h). If not, note when disinfection will occur in the comments section.	✓
9	There are no unprotected cross-connections at the well head (5.l).	✓
10	There is no evidence of standing/ponding water around or near the well (5.n).	✓
11	The well head area is secured to prevent unauthorized access (5.o).	✓
12	There have been no spills in the vicinity of the well that may contaminate the source (5.p).	✓

INDIAN SPRING #1

1	How is the well used (5.j).	✓
	Primary	✓

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	Backup	✓
	Emergency	✓
	Not a PWS	✓
	Not Drinking Water	✓
2	**Note the height of the well in the Comments Section (5.k).**	✓
3	**The sanitary seal/well cover are intact with gasket and tight bolts. (6.a)**	✓
4	**The electrical conduit is secured (5.b).**	✓
5	**The exposed portion of the well is structurally sound, shows no signs of deterioration (5.l). Note findings in Comments Section.**	✓
6	**The well cap is vented and screened with the screen facing downward (5.c).**	✓
7	**The well cover was removed to inspect the gasket and ensure no insects. Describe findings in the comments section (5.g).**	✓
8	**The well was disinfected following the Well/System Disinfection Procedure provided by RIDOH after well cover removed (5.h). If not, note when disinfection will occur in the comments section.**	✓
9	**There are no unprotected cross-connections at the well head (5.l).**	✓
10	**There is no evidence of standing/ponding water around or near the well (5.n).**	✓
11	**The well head area is secured to prevent unauthorized access (5.o).**	✓
12	**There have been no spills in the vicinity of the well that may contaminate the source (5.p).**	✓

INDIAN SPRING #4

1	**How is the well used (5.j).**	✓
	Primary	✓
	Backup	✓
	Emergency	✓
	Not a PWS	✓
	Not Drinking Water	✓
2	**Note the height of the well in the Comments Section (5.k).**	✓
3	**The sanitary seal/well cover are intact with gasket and tight bolts. (6.a)**	✓
4	**The electrical conduit is secured (5.b).**	✓
5	**The exposed portion of the well is structurally sound, shows no signs of deterioration (5.l). Note findings in Comments Section.**	✓
6	**The well cap is vented and screened with the screen facing downward (5.c).**	✓
7	**The well cover was removed to inspect the gasket and ensure no insects. Describe findings in the comments section (5.g).**	✓
8	**The well was disinfected following the Well/System Disinfection Procedure provided by RIDOH after well cover removed (5.h). If not, note when disinfection will occur in the comments section.**	✓
9	**There are no unprotected cross-connections at the well head (5.i).**	✓
10	**There is no evidence of standing/ponding water around or near the well (5.n).**	✓
11	**The well head area is secured to prevent unauthorized access (5.o).**	✓
12	**There have been no spills in the vicinity of the well that may contaminate the source (5.p).**	✓

Distribution

DISTRIBUTION SYSTEM

1	**Water system pressure is being maintained above 20 psi (1.a)?**	✓
	Installed Valve bypass April 30, 2019	
	The water system has not experienced pressure fluctuations outside of the regular operating range. If it has, state when and why in comments.	
2	**There been no fire fighting events, flushing operations or sheared hydrants (1.c) If yes, state when in comments.**	✓
	Partial System flushing September 5, 2019.	
	Does the system have a current flushing program ? If yes, when was it last updated.	

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3	There have been no pipe or main breaks (1.d). If there have, when and where.	✓
	Installed curb stops March/April 2019	
4	Recent plumbing/fixture repairs or additions have been installed properly to avoid introducing total coliforms into the system. List any improvements in the comments section (1.e)	✓
5	There has been no vandalism and/or unauthorized access to the system (1.f).	✓
6	The critical components of the PWS are secured to deter unauthorized access (1.g)?	✓
7	There is no evidence of intentional contamination within the distribution system (1.h).	✓
8	There are no visible indicators of unsanitary conditions or potential sources of contamination (1.i).	✓
9	There are no signs of sanitary defects in the pump house. If there are defects, list them in the comments section (1.j)	✓
10	Pump maintenance/replacement is being recorded (1.k)	✓
	Replaced "wet end" of submersible pump in IS #4 on 6/10/2019.	
	Was the Pump replaced?	
	An In-Kind replacement form was not submitted to RIDOH?	
11	New/inactive/back up wells have not been put into service without notifying RIDOH (1.l).	✓
12	There are no hydrants, meters or blow offs located in an area with a high water table/where they may become submerged (1.m)	✓
13	The Public Water System has a current, enforceable cross connection control policy with list of high risk connections (1.n).	✓
	B*Every single connection will have backflow device by 8/1/2020	
14	The Public Water System has high risk sites certify that backflow is tested on an annual basis (1.o).	✓
16	There have been no total coliform or e.coli present analytical results or additional samples collected (not for compliance), including those at the source samples (1.q).	✓
17	There were no other water quality parameters measured that were out of the ordinary. If there were, please list in the comments section (1.r).	✓
18	There have been no community illness outbreaks suspected of being waterborne (1.s).	✓
19	The PWS has completed all requirements of previous Level 1 Assessments and/or Level 2 Assessments that were triggered in the past 12 months (1.t)	✓
20	The PWS has been required to perform disinfection after correcting deficiencies that introduced Total Coliforms in the past 12 months (1.u).	✓
	August 2019	
21	Provide the date of the most recent TC absent sample collected (1.v).	✓
	Date — August 20, 2019	
23	The PWS monitors the seasonal shutdown process of individual service connections. (for systems with multiple seasonal service connections)	✓
15	The Public Water System has no trouble achieving a chlorine residual at the ends of the distribution system on a daily basis, or while performing a system wide disinfection procedure. (1.p).	
22	Provide additional comments in the Comment Box.	

Finished Water Storage

STORAGE TANK 1

1	The vents are turned downed with an appropriate air gap and/or are screened and in good condition (4.a).	✓
2	The tank overflow is screened with an appropriate air gap (minimum of 12 inches), and is in good condition (4.g).	✓
3	The access opening for the finished water storage tank has a proper gasket and seal (4.c). (N/A for small pressurized maintenance storage tanks)	✓
5	The facility is secured to prevent unauthorized access of finished water storage (4.b).	✓
6	The storage facility is sealed with screened vents, locked doors etc (4.p). List any unsealed openings in the comments section.	✓
7	There were no observed leaks (4.e.)	✓
8	There were no observed physical deterioration of the tank that could contribute to the source of contamination (4.d).	✓
12	The tank can be isolated from the water system (4.n).	✓

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13	**There has been no facility maintenance that could have introduced contamination. If so, note when in the comments (4.j)**	✓
	Is maintenance documented	✓
14	**There is no evidence of intentional contamination at the storage tank (4.m).**	✓
15	**Comments on storage tank. (4q) (if comment negatively impacts the PWS, this is a sanitary defect)**	✓
	Chlorine residual of 0.0 mg/l	

STORAGE TANK 2

3	**The access opening for the finished water storage tank has a proper gasket and seal (4.c). (N/A for small pressurized maintenance storage tanks)**	✓
5	**The facility is secured to prevent unauthorized access of finished water storage (4.b).**	✓
6	**The storage facility is sealed with screened vents, locked doors etc (4.p). List any unsealed openings in the comments section.**	✓
7	**There were no observed leaks (4.e.)**	✓
8	**There were no observed physical deterioration of the tank that could contribute to the source of contamination (4.d).**	✓
9	**The pressure tank is maintaining a minimum pressure of greater than 20 psi (4.h).**	✓
	Pressure range	✓
10	**The pump control switch does not immediately activate when there is demand on the system (4.i)**	✓
11	**The tank drain has an appropriate air gap (minimum of 12 inches), and is in good condition (4.r).**	✓
12	**The tank can be isolated from the water system (4.n).**	✓
13	**There has been no facility maintenance that could have introduced contamination. If so, note when in the comments (4.j)**	✓
	Is maintenance documented	✓
14	**There is no evidence of intentional contamination at the storage tank (4.m).**	✓
15	**Comments on storage tank. (4q) (if comment negatively impacts the PWS, this is a sanitary defect)**	✓

MR Data Verification

1	**The PWS has a standard operating procedure that is used in conjunction with the RIDOH Well Disinfection Procedure for disinfecting the well and distribution system.**	✓

Environmental Events

1	**There was no heavy rainfall prior to the sample being collected (2.a)**	✓
2	**There has been no flooding/pooling of water, or, no rapid snow melt in the vicinity of the well (2.b).**	✓
3	**There have been no observed changes in availability of source water (2.c).**	✓
4	**There has been no interruption in power (2.d).**	✓
5	**There have been no periods of extreme heat or extreme cold (2.e).**	✓

Sample Site Evaluation

1	**The PWS has an approved Coliform Sampling Site Plan (3.c).**	✓
2	**The sample tap is in good condition (3.a).**	✓
	The primary distribution tap, upstream/downstream taps are dedicated with locked enclosures at POE for residencies.	
	Tap Location	
	What is the primary use?	
3	**The sample tap is properly identified on the Coliform Sampling Plan (3.d).**	✓
	POE to residencies	
	Primary (RTOR) Sample	
	Repeat Original (RPOR)	
	Repeat Other (RPOT)	

Survey Simplified Questions

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4	**There have been no plumbing changes at the site of the Total Coliform presence sample. If yes, not what work was done and when in the comments section (3.f).**	✓
5	**There are no observed cross-connections after the survey connections. If there are, list in the comments field (3.h).**	✓
7	**There have been no low pressure events at the service connection of the Total Coliform presence (3.j).**	✓
9	**The PWS is using an adequate sample site. If the boxes below are check, then consider this as a Sanitary Defect. (3m-n)**	✓
	Sample tap swivels (swings side to side).	
	Sample tap does not have separate hot/cold valves.	
	The sample tap has a sprayer attachment.	
10	**The sampler followed the proper sample protocol(3.o- s)**	✓
	Aerator was not removed.	
	Sample tap was not properly sanitized.	
	Sample tap was not properly flushed (3-5 mins).	
	Sample containers were not properly sanitized when acquired from the lab.	
	Sample containers were not properly stored, packed and transported.	
11	**The PWS has adequate raw water sample taps. (3t)**	✓
6	**All back-flows present are working, have been tested and tagged (3.i).**	
8	**There are no treatment devices after this service connection (3.k).**	

Treatment

TREATMENT PLANT INDIAN SPRING WELLS

1	**There have been no interruptions in the treatment process (5.a). If so, note when in the comments section.**
2	**The treatment devices are online and being maintained (5.b).**
3	**There has been no installation of treatment without approval from RIDOH (5.c).**
4	**There have been no recent repairs made to treatment system (5.k).**
5	**There have been no changes made to the treatment process (addition of a process, changes in chemical or dosage). Note all observed changes in the comments field.(5.d).**
6	**There were no observed cross-connections at the treatment process. If there were, list them in the comments field (5.f).**
7	**Maintenance is occurring and being properly documented. Note the last time system was maintained in the comments field (5.h).**
8	**Th treatment is Point of Entry (POE) or Point of Use (POU). Please note in comments.**