

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.

The average daily use of water in 2019 was 20,167 gallons with a max daily use of 49,620 gallons (July 5th). 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:

WL007 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 and runs 24-hours/day.

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

WL008 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.

WL009 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.

Both Indian Spring wells are turned on and off manually.

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.

WL001 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 is no longer connected to the PWS and is now used strictly as a monitoring well.

Source ID	Facility Name	Local Name	Type	Availability
WL007	W1-Army Well	RI-0085	WL	P
WL008	W1-Indian Spring #1	RI-0086	WL	S
WL009	W1-Indian Spring #4	RI-0087	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 (ST001). 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 (ST002). 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. WSA: 3 DAYS
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 (PF001) 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.

PWS ID: RI1592023

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.