



November 13, 2018

FILE REF: 3300/Ozaukee/Port Washington  
PWSID #24600543

Ms. Susan Westerbeke – City of Port Washington Clerk  
City of Port Washington Water Utility  
100 W Grand Avenue  
Port Washington, WI 53074

Subject: Sanitary Survey Report and Notice of Noncompliance

Dear Ms. Westerbeke:

The purpose of a sanitary survey is to evaluate the system's source, facilities, equipment, operation, maintenance, and management as they relate to providing safe drinking water. The sanitary survey is also an opportunity to update the Department's records, provide technical assistance, and identify potential risks that may adversely affect drinking water quality.

On 10/17/2018, Petwara Tyingtrakoon conducted a sanitary survey of your water system, Port Washington Water Utility. During the sanitary survey Dave Kleckner, Florence Olson and Bradley Seifker were present. At the completion of the survey, you were briefed on the preliminary findings. This report outlines the final findings, discusses problems that need to be addressed, and timelines for corrective action where appropriate.

A plan for corrective action must be completed within 45 days of the receipt of this letter. The plan shall include a work schedule or completion of corrective action for the one significant deficiency and five deficiencies identified below. The one significant deficiency is that the clearwell overflow is not downward-facing at 90-degrees and the overflow pipe outlet is not covered by a 24-mesh screen.

The five deficiencies include: 1) There is no updated distribution map since 2014, 2) The air relief valve discharge piping at Plants 1 and 2 does not terminate 24 inches above the finished floor, 3) The chemical feeder pump does not have required appurtenances, 4) Auxiliary power does not currently meet the standard and 5) The floor of the clearwell is not at least two feet above the water table.

Failure to submit the corrective action plan or complete the corrective action within due date will result in enforcement action. Depending on the type of corrective action you employ, you may need to obtain prior approval and submit plans to the Department.

### **System Summary**

The Port Washington Water Utility is owned and operated by the City of Port Washington and is located in eastern Ozaukee County on the western shore of Lake Michigan.

The Water Treatment Plant is a conventional rapid sand surface water treatment plant similar in configuration to other plants along the west shore of Lake Michigan. The Water Treatment Plant consists of two raw water intakes in Lake Michigan, a water filtration plant, two booster stations, three elevated tanks and over 59 miles of distribution system. The system currently consists of two pressure

zones. The operation of the plant consists of a combination of processes including coagulation, flocculation, sedimentation, filtration, and chemical addition including disinfection.

The water supply system serves a population of approximately 11,762 people in 2018. Based on information from the 2017 report to the Public Service Commission of Wisconsin (PSC), there were 4,950 metered service connections. The average daily pumpage was 1.14 million gallons per day (MGD) and the maximum daily pumpage was 1.53 MGD. The plant design pumping capacity is 4 MGD. A total of 418 million gallons of water was pumped into the distribution system in 2017. Of that total, 356 million gallons was sold through meters. The difference shows 11% unaccountable water. The 11% unaccountable water was higher than the previous survey (in 2015) that showed unaccountable water at 9%.

The Port Washington's Water Treatment Plant is split into two separate treatment plants. Plant 1 was built in 1948. Plant 2 is an addition to the north end of Plant 1 and was built in 1968. The two plants are housed in the same building but operate separately.

### **Evaluation of Existing Facilities**

**Source:** Raw water from Lake Michigan enters the intakes and flows by gravity to shorewells through the two intake pipes. Both intakes are constructed of cast iron. The first intake was installed in 1948, is 18 inches in diameter, 3450 feet long and terminates 38 feet below the lake surface. The second intake was installed in 1969, is 16 inches in diameter, extended out into Lake Michigan a distance of approximately 2500 feet from shore and terminates 30 feet below the lake surface. In 1993, the Utility had installed a bigger cone size and a fiberglass grating because of frazil ice problems. Since then the Utility has not experienced any frazil ice problems.

Chlorine at a dose of 0.75 to 2.0 mg/l is fed continuously at the intake cribs for zebra mussel control. The Utility has hired a diver to inspect the intake cribs 6 times a year for zebra mussel colonization. As of the inspection in 2012, the Zebra mussel control system appears to be providing effective control.

**Water Treatment Facilities:** The Water Treatment Plant has a current capacity of 4 MGD. The original plant was built in 1948 with an additional 2 MGD plant constructed in 1969. They still serve as two separate parallel plants. The treatment sequence includes coagulation, flocculation, sedimentation, filtration, and chemical addition including disinfection.

**Shorewell and Low Lift Pumping:** There are two shorewells, one was built in 1937 for the 1948 Plant and the new shorewell was built in 1997 for the 1969 Plant. The 1948 Plant's shorewell is 8 feet in diameter and about 30 feet deep. The 1969 Plant's shorewell is 8 feet in diameter and about 20 feet deep. Water from the 18-inch intake enters the 1948 Plant's shorewell, and water from the 16-inch intake enters the 1969 Plant's shorewell.

There are two low lift pumps (1400 gpm and 800 gpm) serving the 1948 Plant and three low lift pumps (740, 840 and 1130 gpm) serving the 1969 Plant. The low lift pumps located below grade take water from the shorewell then deliver water to the rapid mix basin through the raw water header.

**Rapid Mix:** Both plants have vertical shaft mechanical rapid mixers. The 1948 plant chamber has a volume of 787 cubic feet providing a detention time of 7 minutes with the smallest low lift pump

running, and down to 3 minutes with both pumps running. Installed in 1997, the 7.5 HP rapid mix unit provides a mixing energy  $G$  value of  $402 \text{ sec}^{-1}$ . The typical  $G$  values range from  $300 \text{ sec}^{-1}$  to  $1000 \text{ sec}^{-1}$ . Under the current scenario, it appears that the upgrade rapid mixers provide enough energy for proper mixing.

The 1969 plant chamber has a volume of 600 cubic feet providing a detention time of 6 minutes with one pump running, and two minutes with all three pumps running. The existing 7.5 HP rapid mix unit provides a mixing energy  $G$  value of  $1161 \text{ sec}^{-1}$ . This unit provides more than enough mixing energy. It is not frequently used because the operators believe the mixing is too violent.

### ***Flocculation:***

**1948 Plant:** There are four separate vertical paddle wheel flocculation basins for the 1948 Plant (two parallel trains with two stage flocculation basin configurations). Water from the rapid mix basin splits into two separate flows. Each flow from the rapid mix basin enters the primary flocculation basin adjacent to either side of the rapid mix basin. From the primary flocculation basin, the water flows into the secondary flocculation basin, then into the sedimentation basin. The mixing value for the two primary flocculation basins is  $G = 93 \text{ sec}^{-1}$  and the value for the two secondary flocculation basins is  $G = 81 \text{ sec}^{-1}$ . Typical values for flocculation basins range from  $5 \text{ sec}^{-1}$  and  $120 \text{ sec}^{-1}$ . Detention time is 21 minutes at 2 MGD.

In 2000, the Utility has installed 2 gates to close 2 constant openings between the flocculation basin and the sedimentation basin. This is to prevent a short circuit from occurring in the flocculation basins.

**1969 Plant:** The 1969 Plant contains four separate vertical paddle wheel flocculation basins in a similar configuration as the 1948 Plant. All four basins are powered by a single 4 HP drive motor. The primary basins are operated at a higher speed of mixing compared to the secondary basins. Detention time is 36 minutes at 2 MGD.

### ***Sedimentation:***

**1948 Plant:** The 1948 plant has two independent sedimentation basins. Flow is split before the flocculation basins and rejoined immediately following the sedimentation basins. Each basin is 23 feet wide and 58 feet long and contains 119,500 gallons of water. A collection weir was installed for both basins in 1996 at the outlet for control of water level in the sedimentation basin or control of uplifting forces on the flocked particle. This solved the problem of flocked particle carry over to the filters. The sedimentation basins are taken out of service each year for inspection and cleaning. The basin can be drained by gravity or pumped to the clarifier. Once drained, the sludge is pumped into trucks for land application disposal.

The two floor drains from the chemical storage room were designed to drain directly into the sedimentation basins, but were eliminated in 1996. The surface setting rate in the basin is  $0.69 \text{ gpm/ft}^2$  at 2.65 GPM. Typical values for turbidity removal are as high as  $0.83 \text{ gpm/ft}^2$ . Current setting rates are adequate for maximum plant operation, also meeting the 4 hours detention time requirement in sedimentation basins.

**1969 Plant:** The 1969 plant has a similar configuration. Each basin is 29.5 feet wide and 59 feet long and contains 163,500 gallons of water. The sedimentation basins are taken out of service each year for

inspection and cleaning. The basin can be drained by gravity to the clarifier, and the remaining is pumped to the clarifier. Once drained, the sludge is pumped into trucks for land application disposal. The surface setting rate in the basin is  $0.47 \text{ gpm/ft}^2$  (below the typical values of  $0.83 \text{ gpm/ft}^2$ ) at 2.34 GPM. 1969 Plant has 3.4 hours of detention at a maximum operation of 2.34 MGD and 3.9 hours of detention at a design flow rate of 2.0 MGD.

### **Filtration:**

**1948 Plant:** There are four filter cells in the 1948 Plant chamber. Three of the cells were constructed in 1948. The four filters were constructed with new filter bottoms and media in 1996, along with the new filter controls. All four filter cells contain dual media (30" of silica sand and 6" anthracite coal) with support gravel and U.S. filter underdrains. The filtration area for each filter is about  $180 \text{ ft}^2$  of surface area. The total filtration area for all cells total  $720 \text{ ft}^2$ . The design hydraulic capacity of each filter cell is 0.50 MGD at nominal flow rates and 0.66 MGD at peak flow rates. The design filtration rates are  $1.93 \text{ gpm/ft}^2$  of filter media at nominal flows and  $2.56 \text{ gpm/ft}^2$  at peak flows. These filtration rates are acceptable.

**1969 Plant:** There are four filter cells in the 1969 Plant chamber. Three of the cells were constructed in 1968. All four filter cells contain dual media (30" of silica sand and 6" anthracite coal) with support gravel and Leopold brand clay block underdrains. The dual media were replaced in 1996. The filtration area for each filter is about  $185 \text{ ft}^2$  of surface area. The total filtration area for all cells total  $741 \text{ ft}^2$ . The design hydraulic capacity of each filter cell is 0.50 MGD at nominal flow rates and 0.58 MGD at peak flow rates. The design filtration rates are  $1.87 \text{ gpm/ft}^2$  of filter media at nominal flows and  $2.19 \text{ gpm/ft}^2$  at peak flows. These filtration rates are adequate.

The filters are backwashed after a head loss of 8 feet is achieved or after a maximum run time of about 85-90 hours. Backwash pumps are provided to pump water from the clearwells at a backwash rate of  $15 \text{ gpm/ft}^2$  for 6 to 15 minutes. The filter backwash water is discharged to a clarifier in the garage area. Decant from the clarifier flows over a V-notched weir and into the storm sewer.

**Clearwells:** After filtration, water is discharged to a 175,000-gallon clearwell under the 1948 Plant, and a 500,000-gallon clearwell under the 1969 Plant.

**High Lift Pumps:** A total of five high lift pumps serve the main system. The 1948 Plant has 3 pumps (one at 1050 GPM and two at 700 GPM) in the pump room. The 1969 Plant has one 900 GPM and one 1200 GPM pump. All pumps are horizontal centrifugal design and are manually operated from the pump control panel.

**Auxiliary Power:** The plant is fed by three separate electrical substations and has a standby engine/generator at the Thomas Port high lift pump. The utility needs to purchase a standby or portable generator that could provide power to the whole plant in case of a power failure.

**Plant Operation:** The two plants are not running at the same time, the two plants run alternately daily. Only a few times each year does the plant operate at maximum capacity. The plants are clean and very well maintained. The operators are commended for their excellent work.

**Chemical Addition**

The Utility adds five different chemicals (NSF approved) at various points in the water treatment process stream. The chemicals are listed below:

**Polyaluminum Chloride:** Polyaluminum Chloride (PACL) is fed as coagulant prior to the rapid mix basins in each plant. Two LMI B731-75S chemical metering pumps, each with capacity of 108 GPD, are provided to feed PACL at doses between 4 to 40 ppm. A 1300-gallon polyethylene bulk storage tank is located in the garage area. The PACL is transferred to and fed from two 25-gallon polyethylene day tanks that rest on digital scales. The operators manually control chemical feeders and dosages.

**Carbon:** Powdered activated carbon (PAC) is fed seasonally at the rapid mix tanks for taste and odor control. PAC is fed to the rapid mix basins in each plant. Doses average about 0.6 ppm. A feed system includes a bag hopper, 150-gallon polyethylene slurry tank, impeller mixer and Wallace and Tiernan Encore 700 diaphragm metering pump. The operators manually control dosages but the feeders are flow paced.

**Fluoride:** Fluorisilicic acid ( $\text{H}_2\text{SiF}_6$ ) is added to the filter effluent line using two Wallace and Tiernan Premia 75 ME M4 metering pumps, each with a capacity of 24 GPD. The feeders are flow paced through SCADA system based on signals from the raw water flow meters. Secondary control is provided by signals from the low lift pump motor starters. Each feeder has a 5-function anti siphon valve.

**Phosphate:** The blended phosphates are fed to the finished water for corrosion control in the distribution system. The injection point is after the finished water turbidity meter and the finished water chlorine meter. The feeder includes two LMI A731-75S electronic metering pumps, each with 10 GPD, and a 30-gallon drum resting on a scale. Control is manual.

**Chlorine:** Chlorine is fed for disinfection at different locations. Each intake receives chlorine on a continuous basis whenever either treatment plants are in operation for zebra mussel control. The second dosage of chlorine is fed into the raw water line prior to the rapid mix basins as needed. The third injection point is at the finished water prior to the phosphate injection. The Advance 200 gas chlorinator with 25 pounds per day rotameter and one spare is used for the injection of chlorine gas. The chlorine cylinders and chlorinator are housed in a room adjacent to the garage. The room is accessible from both the outside and from the inside of the plant and is ventilated.

**Storage Facilities**

The system has a total storage capacity of 2,525,000 gallon. Of this total, 675,000-gallon capacity is boosted underground storage (clearwell) and 1,850,000-gallon capacity is gravity elevated storage.

West Side Elevated Tank: The West Side elevated storage is located near the intersection of STH 33 and CTH LL. It is a fluted column elevated storage with a capacity of 500,000 gallons. The reservoir was built in 1976 and was inspected in 2018.

Thomas Port Elevated Tank: The Thomas Port elevated storage is located at the intersection of Holden St. and Thomas Dr. It is a spheroid elevated storage with a capacity of 600,000 gallons. The reservoir was built in 1987 and was inspected in 2018.

Mineral Springs Elevated Tank: The Mineral Springs elevated storage is located south of Sunset Dr. and east of Mineral Springs Dr. It is a fluted column elevated storage with a capacity of 750,000 gallons. The reservoir was built in 1997. It was inspected during the summer 2018.

### **Significant Deficiencies**

During the course of the sanitary survey, one significant deficiency was identified. Significant deficiencies indicate noncompliance with one or more Wisconsin Administrative Codes and/or represent an immediate health risk to consumers. As such, the significant deficiency listed below should be corrected as soon as possible.

<b>Significant Deficiency</b>	<b>Compliance Due Date</b>	<b>Code Citation</b>
The clearwell overflow is not downward-facing at 90-degrees and the overflow pipe outlet is not covered by a 24 mesh screen.	12/31/2021	811.64

### **Discussion and Schedule for Correction of Significant Deficiencies:**

Please install a 90-degree fitting that is at least 12-inches above the splash pad or rip rap. A compact fitting can be used in situations where it is hard to get 12 inches of clearance and add a second flange plate with a 24-mesh screen between the bolted flange plates. The overflow should be angled downward and terminate 12 to 24 inches above the splash pad.

### **Deficiencies**

During the course of the sanitary survey, five deficiencies were identified. Deficiency is a problem in the drinking water system that have the potential to cause serious health risks or represent long-term health risks to consumers. These deficiencies may indicate noncompliance with one or more Wisconsin Administrative Codes. Corrective action should be completed for these deficiencies as soon as possible. If there were any significant deficiencies identified above, those should undergo corrective action first.

<b>Deficiencies</b>	<b>Compliance Due Date</b>	<b>Code Citation</b>
1. No updated distribution map since 2014	12/31/2019	810.26(2)
2. The air relief valve discharge piping at Plants 1 and 2 does not terminate 24 inches above the finished floor.	12/31/2019	811.72(2)(a)
3. The chemical feeder pump does not have required appurtenances.	12/31/2019	811.39(2)
4. Auxiliary Power does not currently meet the standard.	12/31/2021	811.27
5. The floor of the clearwell is not at least two feet above the water table.	12/31/2021	811.63(4)

### **Discussion and Schedule for Correction of Deficiencies:**

Please update your distribution map as soon as possible and provide two hard copies to the Department attention: Petwara Toyingtrakoon.

Please correct the air relief valve discharge piping to terminate 24 inches above the finished floor.

Please install an anti-siphon on the discharge piping of the chemical pump where applicable (such as carbon feed).

The utility does not have a standby generator that could provide power to the plant in case of a power failure. The utility needs to purchase a standby or portable generator.

The floor of clearwell is required to be at least 2 feet above groundwater level per s. NR 811.63(4), Wis. Adm. Code. The clearwell floor is not 2 feet above the water table. Therefore, the Department is requiring the floor of the clearwell be brought up to be at least 2 feet above groundwater level or provide 4-log inactivation for viruses after the clearwell.

The Utility should have an engineering evaluation done and come up with a master plan to provide a road map for how to make all the needed improvements. The department can certainly be involved by providing comments along the way.

### **Non-conforming Features**

During the course of the sanitary survey, five non-conforming features were discovered that met code requirements at the time of your public water system's construction, but would not be allowed under the current code. These are referred to as "non-conforming features." Though you are not required to correct these non-conforming features at this time, they will need to be corrected when any major work is done in the future.

<b>Non-conforming Deficiencies</b>
1. Clearwell hatches at Plant 1 are not 24" above grade.
2. There is no overflow at Plant 1 clearwell.
3. The clearwell high lift pumps and motors are not above grade.
4. The low lift pumps and motors, discharge piping, pump facilities and/or controls are below grade.
5. Chemical feed line injectors at Plants 1 and 2 are not installed in the vertical pipe or bottom half of the horizontal pipe

### **Discussion and Schedule for Correction of Nonconforming Features:**

If there are any improvements at the Plant 1 clearwell, the clearwell hatches need to be at least 24" above grade and the utility should install an overflow.

The low lift and high lift pumps are below grade and could flood. NR 811.30 requires pump motors to be located above grade, Larry Landsness have granted a waiver on January 18, 1998 because both pumps floors have never been flooded during the flooding events. (But this could and likely will happen, a wet fall higher than average lake levels and heavy spring precipitation events could flood the facility. The antecedent conditions could result in abnormally high groundwater, flooding is only a matter of time.) Please consider moving the low lift and high lift pumps and motors at least 2 feet above the regional flood elevation, or if feasible install a gravity drain system at each facility. The pump rooms are equipped with flood alarms.

When improvements occur at Plants 1 and 2, chemical feed line injectors should be installed directly up into the bottom half of the horizontal pipe.



### **Recommendations**

During the course of the sanitary survey, six recommendations were identified. Recommendations are problems in the water system that hinder your public water system from consistently providing safe drinking water to consumers.

#### **Recommendations**

1. The Department recommends that the Utility should make sure that the overflow splash pad drains water away from the water tower base.
2. The Department recommends that the Utility seal the fluoride door.
3. The Department recommends that the Utility continue to optimize the water usage record keeping. In addition, conduct leak detection because past years unaccountable water was more than 10%.
4. The Department recommends that all anti-siphon devices for chemical feeds be periodically checked to make sure that they are working properly and continue to work properly.
5. The Department recommends that the Utility continue to keep all operator safety equipment (e.g., eye washing facilities, emergency showers, and leak detection) up-to-date and tested regularly for proper operation.
6. The Department recommends that the Utility should make sure that the half of the valves exercised each year.

### **Requirements**

During the course of the sanitary survey, six requirements were identified. Requirements in the water system helps your public water system to provide consistent safe drinking water to consumers.

#### **Requirements**

1. Continue to implement your private well abandonment program. (NR 810.16)
2. Continue to implement your cross connection control program. (NR 810.15)
3. Cross connection control inspection report is due every year on March 1st.
4. CCR report and certification are due every year on July 1<sup>st</sup> and must include all public notices for any MCL and M/R violations occurred from previous year. The CCR report and certification should be sent to Petwara.
5. Continue to inspect water storage structures at least every 5 years in accordance with NR 810.14. If cleaning is necessary, the storage structures shall be cleaned
6. The top of reservoir and the elevated tank should be checked every spring and fall to ensure that all manhole covers are secured, sanitary sealed, expansion joint gaps are sealed and the vents are properly screened.

### **Water Quality Monitoring and Reporting**

Based upon a review of the Department's Sample History for samples taken from January 1, 2015 through October 17, 2018 (See Water System Summary Information starting from Page 12), the water quality at Port Washington Water Utility complies with all state and federal primary drinking water standards.



**Bacteriological Testing (Coliform Bacteria):**

Port Washington Water Utility presently collects ten samples per month from designated sampling taps located throughout the distribution system. The samples are routinely analyzed for total coliform bacteria. The number of bacteriological samples required per month by the Utility is based upon the population of the community served. Since the population of the City of Port Washington was about 11,439 in 2015, ten bacteriological samples per month were required (ten samples per month for population between 8,501-12,900 people). With an increase in the City of Port Washington's population to 11,762 the Utility will maintain the same routine bacteriological monitoring frequency of ten samples per month.

The Utility is also required to report free chlorine residual at each bacteriological sample taken from the approved site. Since 2013, the Utility has one unsafe bacteriological result reported, but the check and repeat sample results were reported safe. Since the Utility disinfects, the disinfection by-product (DBP) samples from the distribution system are also required. The DBP samples must be collected quarterly from the designated DBP sites approved by the Department.

**Industrial Chemicals & Pesticides (Synthetic Organic Compounds):**

In 2017, entry point 100 was sampled and tested for an array of synthetic organic compounds. All entry points reported no detection results for the chemicals specified.

**Inorganic Compounds:**

In 2017, entry point 100 was sampled and tested for a variety of inorganic parameters, including nitrates and nitrites. The test results showed that no entry points exceeded the primary or secondary standards. Primary MCLs are established for compounds with minimum public health standards, while secondary MCLs are for inorganic parameters affecting the aesthetic quality of the water. Some compounds have both primary and secondary standards. In 2014, entry point 100 reported detectable amounts for inorganic chemicals significantly below the MCLs.

**Volatile Organic Compounds:**

In 2017, entry point 100 was sampled for Volatile Organic Compounds. The test results reported a few detectable amounts that were well below MCLs.

**Lead & Copper:**

In 2018 the water in the distribution system was sampled for both Lead and Copper. The 90th percentiles for Lead and Copper were 5.8 ug/l and 50 ug/l, respectively. Thirty two sampling site locations were used. The action level for Lead in Chapter NR 809, Wis. Adm. Code, is 15 ug/l at the 90th percentile, while the action level for Copper is 1300 ug/l at the 90th percentile. The Lead and Copper results for the system are well below these action levels.

**Radionuclides (Gross Alpha, Radium 226, Radium 228 and Uranium):**

Entry point 100 was sampled for radioactivity in 2009. The results were reported below MCLs.

**Additional Testing (Residual Chlorine):**

Because the Utility chlorinates the water entering the distribution system, the Utility is required to test the residual chlorine level of every bacteriological sample collected from the distribution system. In addition, the Utility is required to sample the chlorine residual, and orthophosphate level in the

distribution system at least twice every week. According to the Department's records (pumpage reports) the Utility has consistently measured and recorded residual chlorine and orthophosphate levels in the system on a weekly basis.

### **Required Reports, Records, and Utility Programs**

Various records are maintained by the Utility and reported to the Department. At the beginning of each year, the Department provides the Utility with a list of their monitoring requirements for the upcoming year. The specific monitoring requirements can vary depending upon earlier test results. Changes made to the system, and to the susceptibility of the system involved may also affect specific monitoring requirements. In 2015, 2016, 2017 & 2018, the Utility was required to monitor its distribution system for Coliform Bacteria, Gross Alpha (2009) and Lead & Copper, and its entry points for selective Inorganic Compounds, Synthetic Organic Compounds (Pesticides) and Volatile Organic Compounds. The Department's records show the Utility has routinely satisfied all monitoring requirements. The results are submitted to the Department in a timely manner.

The Utility utilizes Eurofins Eaton Analytical, LLC for analytical testing. The Port Washington lab is certified to conduct the bacteriological testing. The test results are electronically sent to the Department. In addition to the above monitoring requirements, municipal water systems, as applicable, are required to monitor the daily output of water pumped, the daily quantities of any chemicals added to the water (i.e., polyaluminum chloride, chlorine), the daily operation of any treatment processes, the results of any chemical, physical or other tests performed for plant control, and the calculated theoretical residuals and residual test results (i.e., fluoride, orthophosphate). The turbidity, alkalinity, pH and the temperature measurements are reported daily, in addition to the calculation of the totals and averages of the above data. This information is reported by the Utility to the Department on a monthly basis in its monthly pumpage reports. The Utility reports this information to the Department in the timely manner.

### **Certified Operator**

The Utility employs nine certified operators (Joseph Below, Leo Duffrin, Thomas Gruber, Todd Hayes, Michael Kapp, David Kleckner, Randall Schreiner, Allison Sigwart, and Gerald Weiss.) Dave Kleckner is assigned as operator-in-charge. Operators are certified with appropriate grade (S & D & I) of certification and have fulfilled their continuing education requirements.

### **Water System Security**

We recommend that you conduct a daily security check of your entire drinking water system to insure doors are locked and windows secured.

### **System Summary Information**

A water system summary is attached. Please review it for accuracy. If there are changes that need to be made, contact Petwara Toyingtrakoon at 920-893-8534.

### **Capacity Development Evaluation**

This sanitary survey serves as an evaluation of the capabilities of your water system. Your system has been determined to have adequate technical, managerial and financial capacity to provide safe drinking water. The ability to plan for, achieve, and maintain compliance with applicable drinking water standards has been demonstrated.

**Required Action**

Please respond by January 10, 2019 with notification that all deficiencies have been corrected, or that you agree to correct the deficiencies identified in this letter by the due dates, or with alternative dates for correcting these deficiencies. Failure to respond to this letter by January 10, 2019 may result in enforcement action.

Within 30 days of correcting each deficiency, please provide written notification to Petwara Toyingtrakoon of the date each correction was completed. This notification can be sent via email, or regular mail. If using regular mail, the postmarked date will serve as the date of your notification. Failure to provide this notification within 30 days of correcting each deficiency will result in a violation. Please also consider completing the recommendations discussed in this letter

The next sanitary survey of your system is scheduled to take place in 2021. You will be contacted prior to the survey to schedule a date that is convenient for you.

Thank you for your assistance during the sanitary survey. If you have any questions, you can reach me by phone at 920-893-8534, by fax at 920-892-6638, by e-mail at [petwara.toyingtrakoon@wisconsin.gov](mailto:petwara.toyingtrakoon@wisconsin.gov), or by postal mail at the address on this letterhead.

Sincerely,



Petwara Toyingtrakoon, P.E. - Municipal Water Supply Engineer

cc: Bureau of Drinking Water/Groundwater - DG/5 Madison  
Plymouth DG file  
Dave Kleckner – Water Superintendent (by email)