

# 2022 Annual Summary

## Fond du Lac Regional Wastewater Treatment & Resource Recovery Facility



Fond du Lac WTRRF is committed to protecting the crucial resource we all know as water. Access to clean water and reliable wastewater services are critical to our everyday lives. We are also mindful of the importance of providing affordable services in an environmentally responsible way. Our goal is to protect public health and the environment through cost-effective water resource management.

### 2022 Highlights

- Selected as Facility of the Year by the Wisconsin Department of Natural Resources
- Continued to meet and/or exceed our DNR permit requirements
- No increase in user rates since 2009
- One of our Wastewater Operators was named Operator of the Year for the Southern District of the Wisconsin Wastewater Operators Association

As a resource recovery facility, WTRRF would like to share our successes in nutrient removal, energy production, and beneficial reuse in turning waste into energy, biosolids used as fertilizer, and water that is reused. We do this all while protecting the health of our community and reducing environmental impacts. We harness the value of waste and return it to productive use.

- 2.3 billion gallons of wastewater was treated
- 11.2 million gallons of High Strength Waste was received into the digesters.

### Biosolids

- Produced 10,500 wet tons.
- 66% of our biosolids were of beneficial reuse for farmers to augment their fertilizer expense and reduce our disposal costs.

### Water Reuse

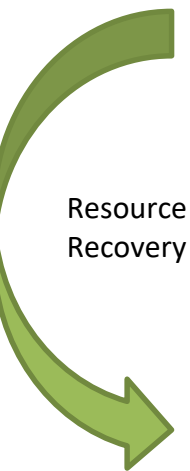
- We reused over 63 million gallons of treated water in various processes throughout the plant.

### Phosphorus Removal

- We are removing phosphorus biologically using microorganisms to complete treatment nearly 90% of the time. Phosphorus removal from wastewater is essential to ensure the safety and health of the public and protect the environment. Elevated levels of phosphorus can be hazardous to local aquatic life. Removing phosphorus from water can prevent eutrophication, which causes algae blooms.

### Energy Production

- Produced 84 million ft<sup>3</sup> of biogas.
- Our biogas engine generator produced 3.125 million kWh of clean renewable energy using the biogas as fuel, enough to power 280 homes for one year.

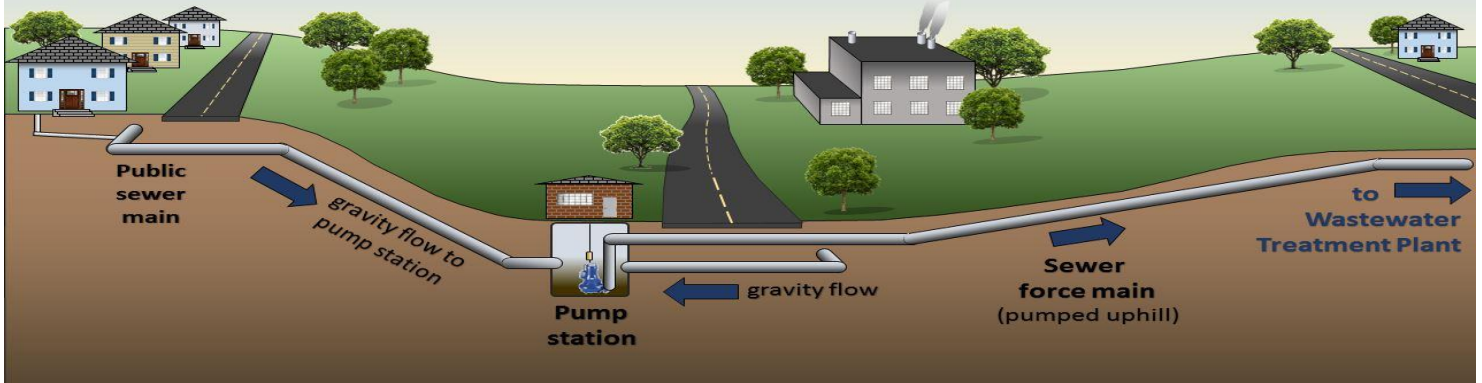


Take A Virtual Drone Tour of Our Facility  
[www.fdl.wi.gov/wastewater](http://www.fdl.wi.gov/wastewater)

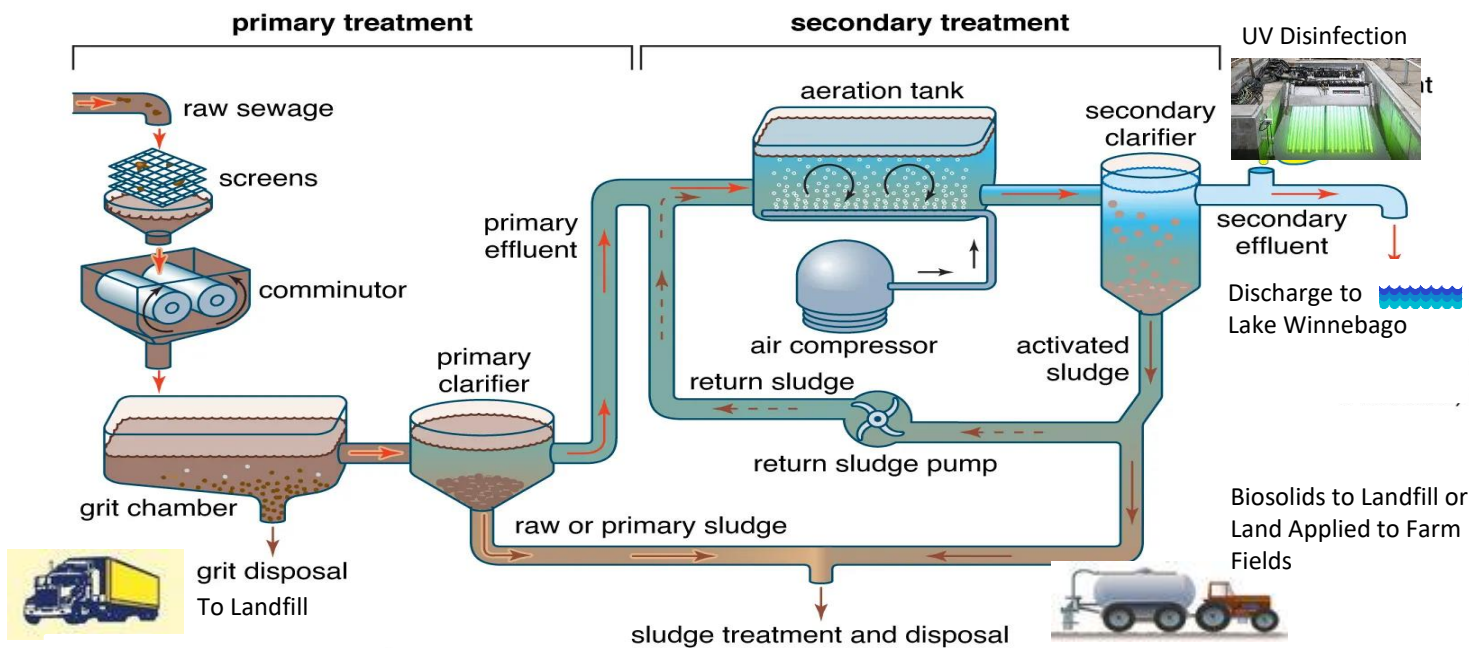


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# How the Sewer Works



Sanitary sewers, or wastewater pipelines, transport wastewater from homes and businesses to a centralized treatment plant. Along the way, some extraneous water may enter pipelines either from stormwater or groundwater, a problem commonly known as infiltration and inflow (I/I). Once the wastewater reaches the plant, it is treated and returned to the environment. Wastewater conveyance and treatment are important because they help to prevent waterborne illnesses and promote general sanitation.



1. Preliminary treatment is the removal of inorganic material such as trash and other large materials often found in raw wastewater. Removal of these materials is necessary to enhance the operation and maintenance of subsequent treatment processes and equipment. Preliminary treatment operations include screening and grit (sand, stones and small plastic) removal.

2. Primary treatment is the removal of settleable organic and inorganic solids by sedimentation and the removal of materials that will float (scum) by skimming. Approximately 25 to 50% of the incoming biochemical oxygen demand (BOD<sub>5</sub>), 50 to 70% of the total suspended solids (SS), and 65% of the oil and grease are removed during primary treatment.

3. Secondary treatment is the further treatment of the effluent from primary treatment to remove the residual organics and suspended solids. Secondary treatment follows primary treatment and involves the removal of biodegradable dissolved and organic matter using aerobic and anaerobic biological treatment processes.

4. Wastewater disinfection takes place after primary and secondary treatment. It is the final step to remove organisms from the treated water before it is released into Lake Winnebago. Disinfection prevents the spread of waterborne diseases by reducing microbes and bacterial numbers to a regulated level.