Sun Prairie's New

Wastewater Treatment Plant

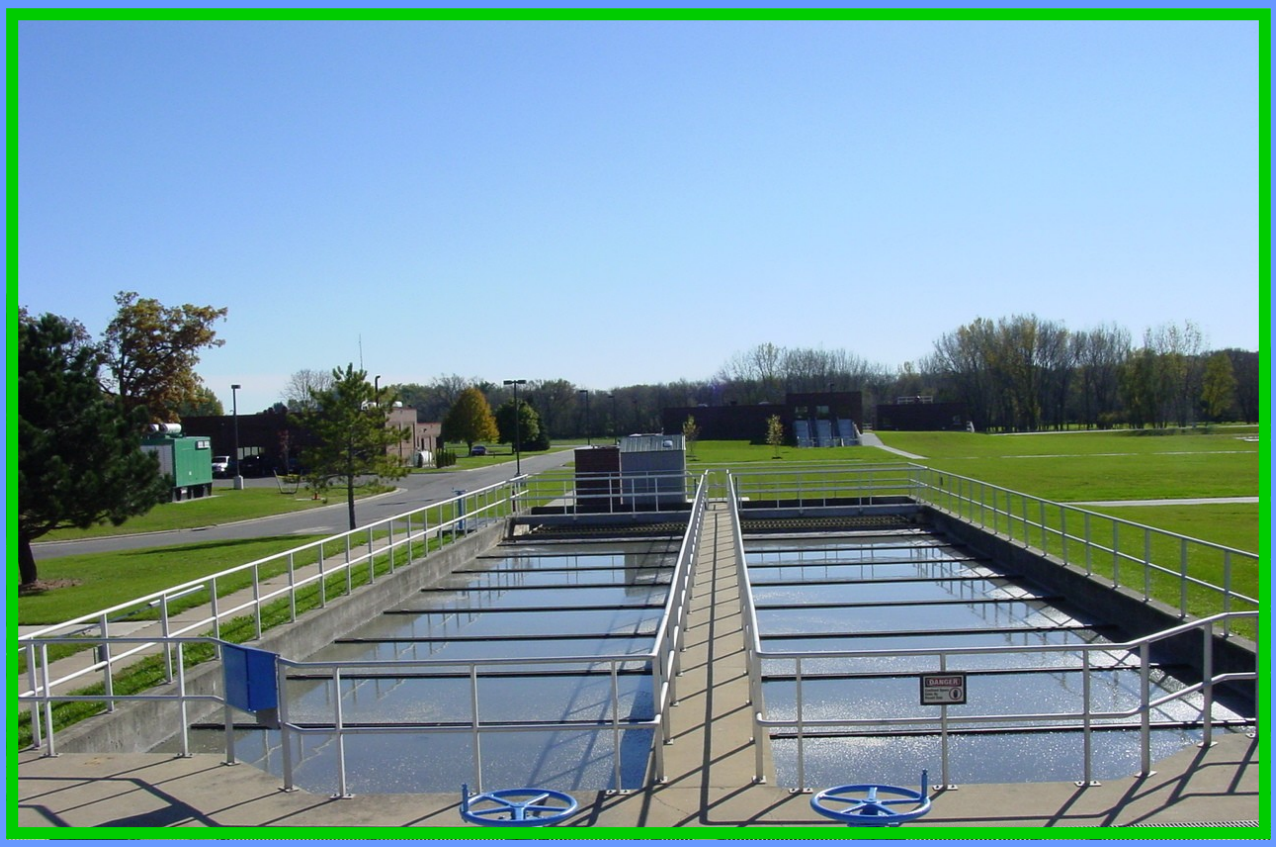
Protecting the Community and the Environment

Influent Pumps

Wastewater flows to the treatment plant through a series of pipes ranging in size from 8-42 inches. The influent pumps pump the wastewater up 35 feet to begin the treatment process.

Step Screen

The step screen removes rags, plastics, and other debris larger than ¼” from the wastewater. This then helps to reduce problems with this material plugging pumps and getting into the biosolids that are applied onto agricultural sites.



Primary Clarifiers

Solids or sludge, settles to the bottom of the tank where a scraper arm pushes the sludge to the end of the tank. The sludge is then pumped to the anaerobic digesters for further treatment.

Activated Sludge Basin

Wastewater from the primary clarifiers enters the activated sludge basins. The basins use varying levels of oxygen and microbial growth to remove phosphorus and other nutrients from the wastewater.

Final Clarifiers

The solids from the activated sludge basins settle to the bottom of the final clarifiers. Some of the solids removed are pumped back to the activated sludge basins to maintain an appropriate microbial population to treat the wastewater and some of the solids are pumped to the anaerobic digesters for further treatment.

Sand Filters

Wastewater from the final clarifiers flows to three large sand filters that remove fine particles from the wastewater.

Ultra-Violet (UV) Disinfection System

Wastewater from the sand filters passes through the UV system. This system uses ultra violet light to kill harmful bacteria that passed through the treatment process.

Step Aerator

Wastewater from the UV system cascades down the step aerator before being discharged to Koshkonong Creek. The turbulence caused by the steps adds oxygen to the wastewater.

Koshkonong Creek

The wastewater that has passed through all the treatment processes, is discharged to Koshkonong Creek. This water must meet strict Department of Natural Resources treatment requirements.

Anaerobic Digesters

Solids that are removed from the primary and secondary clarifiers are treated in the anaerobic digesters. End product of treatment is methane gas that is used to operate plant equipment. The solids, now called biosolids, are land applied on Department of Natural Resources approved agricultural sites.

Belt Filter Press

Treated bisolids from the anaerobic digesters are pumped to the belt filter press that removes excess water and enables the biosolids to be hauled to the biosolids storage building.

Biosolids Storage Building

Biosolids from the belt filter press are hauled to the storage building until it can be applied to approved Department of Natural Resources agricultural sites.