CITY OF STERLING

WASTEWATER TREATMENT PLANT

STERLING

Shining brightly ... Leading the way

Wastewater Treatment Plant Tour

WASTEWATER TREATMENT PLANT

The purpose of a wastewater treatment plant is to reduce or remove certain pollutants from raw sewage. Laboratory tests are performed on both the influent and effluent to monitor this removal process. The EPA requires each plant to test their water for various parameters, most notably TSS (Total Suspended Solids), BOD (Biochemical Oxygen Demand), P.H., Total Ammonia Nitrogen, and Fecal Coliforms. These reports are sent to the EPA each month. Additionally, the EPA samples and runs tests of their own on the plant effluent periodically.

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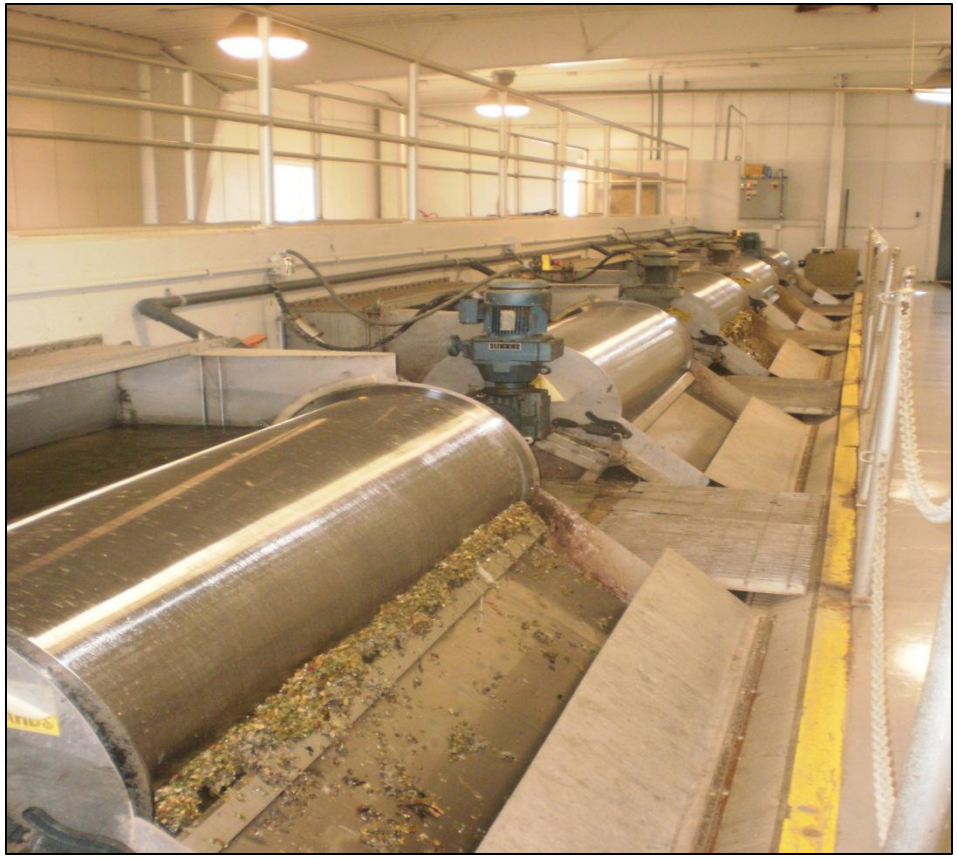
SCREW PUMP

Most raw sewage flows to the plant by gravity. Once at the plant, the sewage must be pumped through the facility. To accomplish this, the screw pumps lift the sewage up so that gravity may again carry the sewage on its way.

Wastewater Treatment Plant Tour



SCREENING

As water comes into the plant, it receives primary treatment in the form of fine screens. These are used to remove solids from the wastewater. Once removed, these solids are classified as a special waste that requires permits and specifically licensed tucks to haul it to a landfill certified for this waste.

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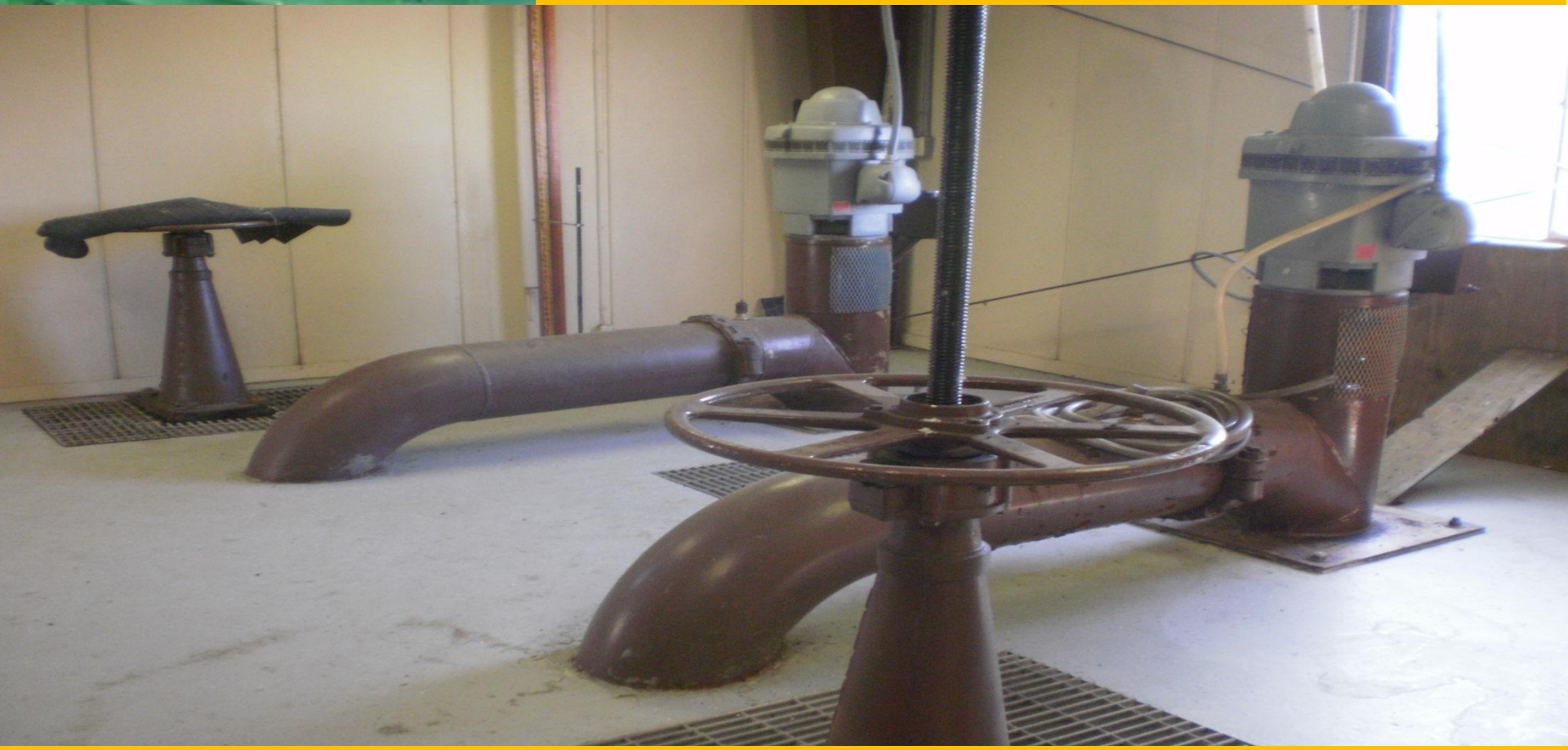
THE LAGOON

Not exactly the Blue Lagoon, this wastewater 32 acre lagoon provides secondary treatment after the fine screening. In the lagoon, the organics are dissolved and suspended matter is converted by bacteria into stable end products. The lagoon is aerated to aid these bacteria and to prevent the sewage from becoming septic.

Wastewater Treatment Plant Tour



LAGOON TO PLANT PUMPS

After the water makes the month long journey from the west end of the lagoon to the east end, pumps bring the water back into the plant. Once in the plant, flocculants (polymers) are added to the water to help settle the remaining solids.

Wastewater Treatment Plant Tour

CLARIFIERS

These large clarifier tanks provide the tertiary treatment. Here, the remaining solids settle to the bottom with the aid of the flocculants. While the treated water flows over weirs and onto the next stage of treatment.

Wastewater Treatment Plant Tour

DISINFECTION

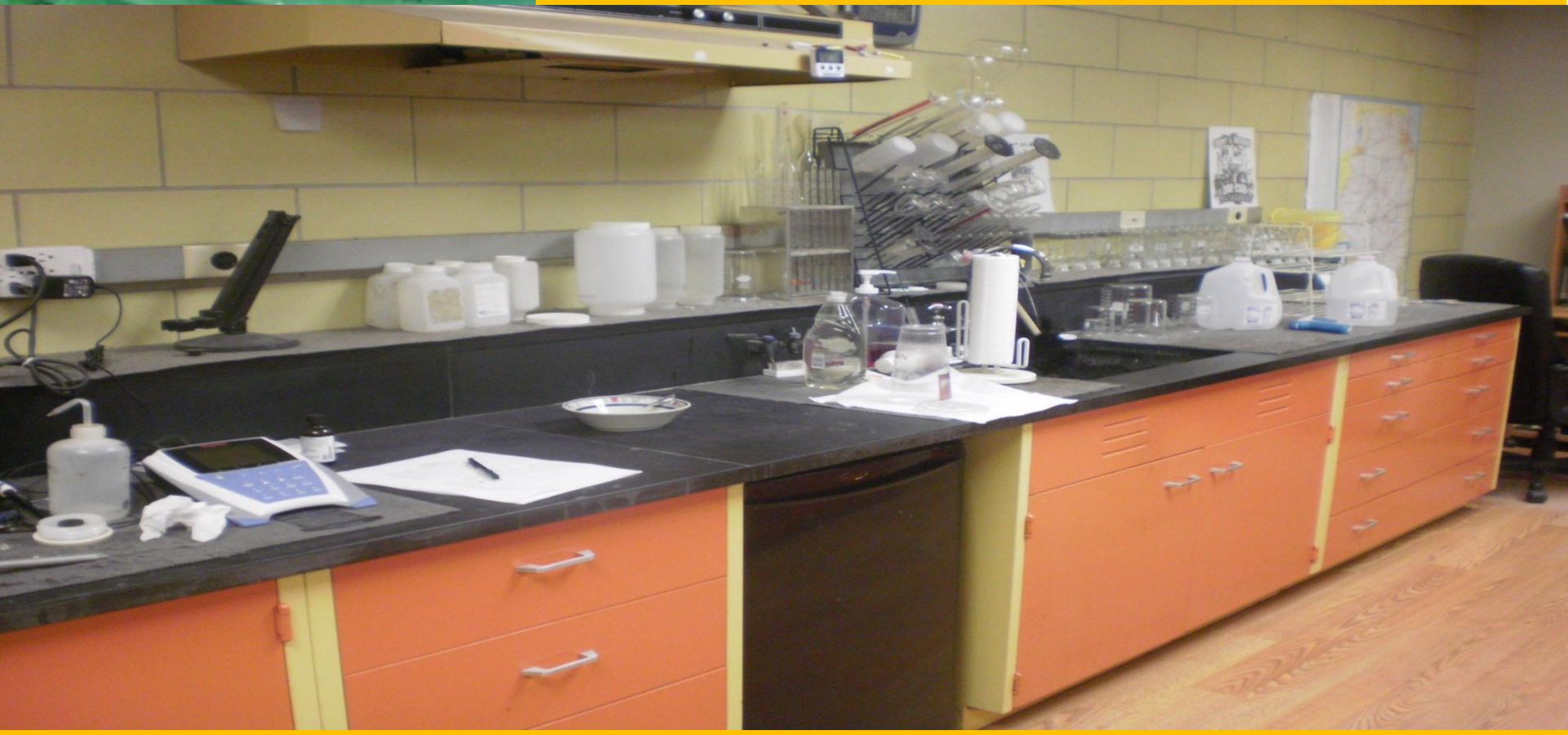
Once the water clears the clarifiers, chlorine is injected into the water to reduce fecal coliforms as well as other potentially harmful bacteria. Once the water is disinfected, the chlorine is then neutralized by adding sodium bisulfate.

Wastewater Treatment Plant Tour

DISCHARGE PUMPS

Now that the sewage has been cleared of solid matter, bacteria and other pollutants, then again, further disinfected, the cleaned water is then discharged.

Wastewater Treatment Plant Tour



LABORATORY

The Wastewater Treatment Plant maintains a laboratory on-site to constantly monitor both the influent and effluent to assure that the water that leave the plant is safe and conforms to EPA requirements.