# Digester Sludge Heating System Upgrades and Boiler Removal, CWRP

**Project Number:** 18-277-3M

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** $28,500,000.00

**Contract Award Date:** December 2019*

**Substantial Completion Date:** November 2022*

**Project Description:** The scope of work under this project includes: Removal of six (6) existing hot water boilers (2 boilers per cluster, total of 3 clusters) and its associated digester and natural gas piping, and its hot water supply and return piping; Removal of all electrical components and controls associated with these boilers; Replacement of sludge heat exchangers (total of 12) in Clusters 1, 2 and 3; Re-purposing of old compressor building for electrical equipment; Cleaning of 11 digester tanks (Tank 7 does not require cleaning); Replacement of internal digester gas draw-off and gas mixing piping, sandblasting and coating underside of covers in all 12 digester tanks.

The new work will provide: Two (2) steam-to-hot water converters per cluster (total of 6) and associated hot water recirculation pumps, variable frequency drives, valves, and piping to supply hot water to the sludge heat exchangers and air handling units; Installation of steam and condensate lines from the main headers to each cluster with supports.

**Project Justification:** The boilers for the Digester Complex are between 20 to over 30 years old. Due to their condition, the increased risk of failure necessitates their replacement to ensure an appropriate level of service for the digestion process and space heating. With the completion of the Central Boiler Facility (under Contract 03-296-3M), the six boilers in the Digester Complex currently used to heat sludge are no longer needed, as heat will be provided by the Central Boiler Facility. The new steam-to-hot water converters will provide the heat for the Digester Complex and are less operation and maintenance intensive than boilers. The existing sludge heat exchangers are between 20 and 30 years old. It is economically justified to replace or rehabilitate them due to the increased level of maintenance costs.

**Project Status:** The project is being designed.

*Information shown is estimated.