

The Ann Arbor Wastewater Treatment Plant consists of two plants, East and West, which provide primary and secondary treatment. Common facilities are utilized for preliminary treatment, retention and equalization, solids handling, tertiary treatment, chlorination and de-chlorination. Preliminary treatment is provided by catenary bar screens, a climbing rake bar screen and grit chambers before the flow is diverted to the East or West plants. Primary treatment consists of the settling of biosolids by gravity, which is achieved by ten rectangular tanks (clarifiers) in the West plant and four circular clarifiers in the East plant. Secondary treatment consists of biological removal of dissolved solids by the activated sludge process, followed by the settling of biosolids in secondary clarifiers. The activated sludge process incorporates the anoxic/oxic (A/O) system to increase phosphorous removal, and fine bubble diffusion to enhance the transfer of oxygen needed for secondary treatment. For secondary treatment, two aeration tanks and five circular clarifiers are used in the West plant, and four aeration tanks and four circular clarifiers are used in the East plant. Tertiary treatment is provided by twelve sand filters. Disinfection is achieved by chlorination followed by dechlorination using sulfur dioxide, before the treated water is returned to the Huron River.

Treatment of biosolids removed from the wastewater begins in three gravity thickeners. During non-winter months, biosolids are stabilized by the addition of lime and applied to agricultural land as a fertilizer. During winter months, biosolids are dewatered in three plate and frame presses. The resulting cake, as well as screenings, grit and scum removed from the wastewater, are disposed in a landfill.

A flow retention and equalization facility with a total capacity of approximately seventeen million gallons enables the plant to process a steady flow of wastewater, regardless of how the flows into the plant may vary.

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### BASIS OF DESIGN

Design Year	1995
Design Population	210,700
Annual Average Daily Flow	29.5 MGD
Average Daily Flow of - maximum month	33.6 MGD
Average Daily Flow - maximum week	37.2 MGD
Average Flow of - maximum day	44.9 MGD
Peak Instantaneous Flow	73.73 MGD

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1997 Average Daily Flow 19.1 MGD

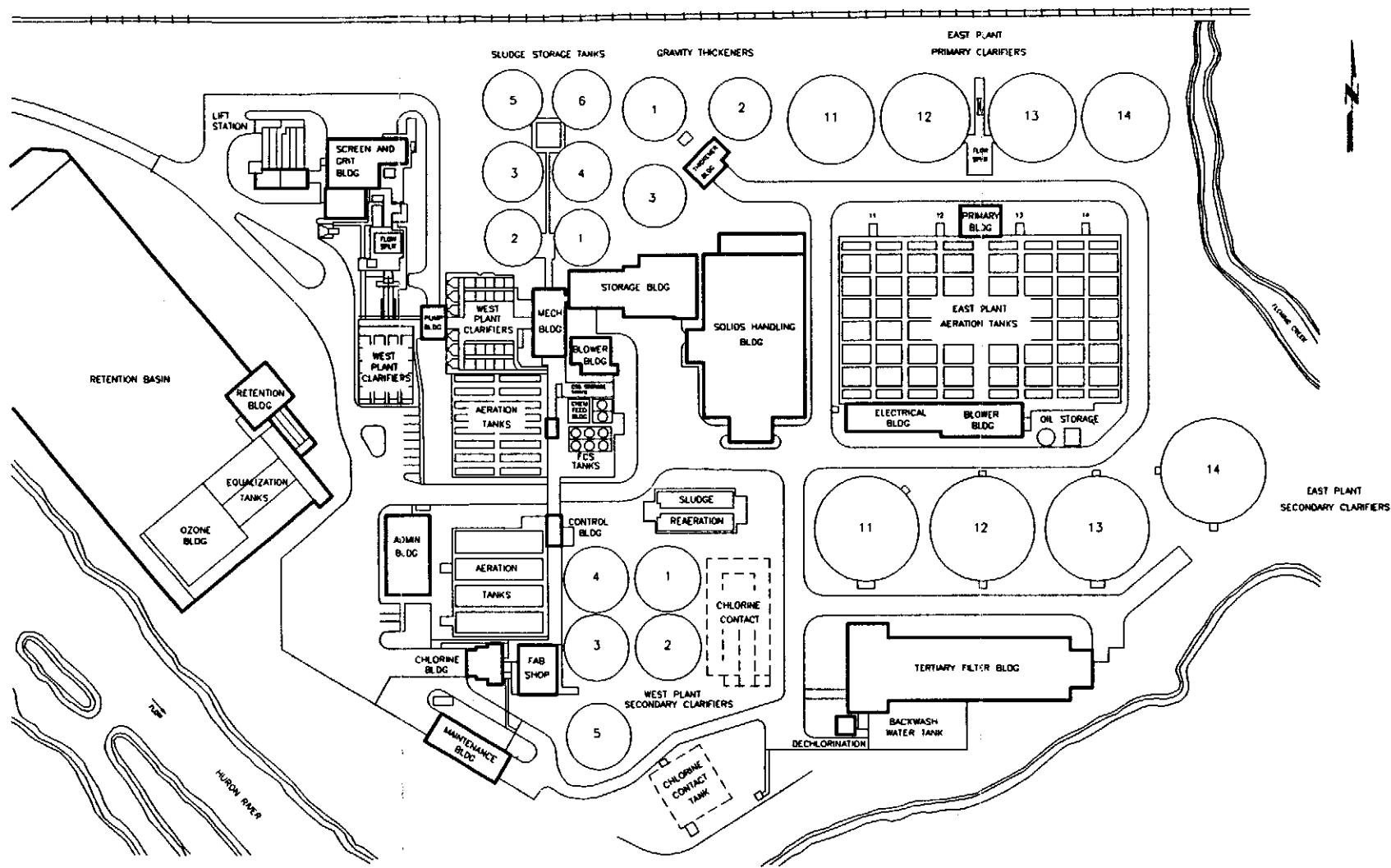
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CITY OF ANN ARBOR  
**WATER**  
UTILITIES

# Ann Arbor Wastewater Treatment Plant

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Ann Arbor Wastewater Treatment Plant — Site Plan