

## HICKORY-CATAWBA WWTF

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The Hickory-Catawba Wastewater Treatment Facility is located at 104 6<sup>th</sup> Avenue NE, Catawba NC. It is an advanced secondary treatment process that utilizes Oxidation Ditch technology that's capable of removing BOD, nitrogen and phosphorous. The plant is designed to treat 1.5 MGD (million gallons per day) of municipal and industrial wastewater flows from locations in the Town of Catawba and Southeastern Catawba County.



## **PROCESS**

- **Preliminary Treatment**

All plant influent flows through dual bar screens where large and stringy solids are mechanically raked from the screens to help minimize clogging of plant pumps, valves and piping. Following screening, the flow is directed to the vortex grit removal and grit washing system. The grit is removed from the wastewater to help reduce wear on downstream plant units. The screenings and grit are washed to minimize odors before being discharged on a conveyor.





## **Secondary Treatment**

The flow from the grit removal process then flows to the Oxidation Ditch. The system is a staged, activated sludge process which uses BOD of the wastewater to accomplish nitrogen removal and to promote biological phosphorus removal.



- **Secondary Treatment Final Clarifiers**

After biological nutrient removal in the oxidation ditches, the wastewater enters the secondary clarifiers. Floating particles are skimmed from the surface and removed from the treatment process. Solids in the water are allowed to settle and are either removed from the system or recycled back to the first zone of the oxidation ditch. All solids removed from the process are dewatered and thickened before being hauled off to the Regional Compost Facility.



- **Final Treatment**

Final treatment consist of tertiary sand filters, chlorine contact basin and step feed aeration. The biologically treated effluent from the secondary clarifiers go to the sand filters and then the chlorine contact chamber. Hypochlorite is added to remove any pathogenic organisms that may be present. Bisulfite is then used to remove the residual chlorine before the fully treated wastewater is aerated a final time. The entire treatment process is designed to minimize impact on the surrounding areas, and prevent contamination of our lakes, streams and rivers.



**FURTHER INFORMATION**

Thank you for stopping by our website. If we can be of further assistance or to schedule a tour, please feel free to contact us at (828) 322-5075.