

# Protecting Waters by Protecting the Plant



The City of Brunswick owns and operates the Academy Creek Water Pollution Control Facility, which consistently removes 97% of the biodegradable pollutants and has won the Georgia Water and Pollution Control Association Gold Award. The main treatment removing pollutants is biological. Microorganisms that convert pollutants to more microorganisms, water and carbon dioxide are given an environment that they can thrive in. The food for these bugs is the organic pollutants in the wastewater.

The three basic steps in the process (called the Activated Sludge Process) are:

1. to mix the bugs with the sewage and let them eat,
2. to separate the bugs from the clear cleaned-up water,
3. to return the right amount of the cultured bugs back to the incoming sewage to start the process over.

It is actually a continuous process as implemented in the Brunswick facility. It is a variation of the Activated Sludge Process assisted by the use of pure oxygen. In order to maintain the process, it is also important to remove excess activated sludge from the process, which then receives further treatment and goes to disposal.

Because the process is biological, it is susceptible to damage from toxic discharges. According to the United States Environmental Protection Agency (EPA), "in 1986, more than one-third of all toxic pollutants entered the nation's waters from publicly owned treatment works (POTWs) through industrial discharges to public sewers." The acronym POTW was created by the 1972 Clean Water Act and applies to both the treatment facility and the sewers and pumping stations transporting the wastewater to the treatment facility. What can happen is that toxic materials entering the treatment plant can interfere with the activity of the bugs. In extreme cases, toxic substances can even kill off all the bugs (also called "biomass", short for biological mass) in the plant, causing pollution in the receiving waters by untreated sewage as well as the toxic substance. In some cases, toxic materials can pass through the plant untreated without upsetting the process and still cause problems downstream. There are also cases where a treatment plant can remove toxic materials from the wastewater stream; however, the toxic materials then can end up in the excess activated sludge and increase disposal restrictions and costs.

In order to reduce this, the EPA created the Industrial Pretreatment Program as part of the National Pollutant Discharge Elimination System (NPDES) program under the authority of the Clean Water Act. The program requires water utilities to function as regulatory agencies for any indirect dischargers, the term used by the EPA to describe facilities that discharge to a wastewater system. This usually applies to industries but also can apply to commercial facilities.

The City of Brunswick Industrial Pretreatment Program has been approved by the Georgia Environmental Protection

Division (EPD) and is administered by Wastewater Treatment staff. There are three industries permitted as Significant Industrial Users. One additional Industrial User is also regulated under the City program. The Industrial Pretreatment staff also administers the Fats, Oil and Grease Control Program.

The regulation of industries and commercial facilities are protecting both the wastewater collection system and the wastewater treatment plant. Toxic materials are addressed by requiring industrial users to limit the discharge of those found to exist in their wastewater, and to monitor for compliance with limits. The City also tests the wastewater streams for compliance with limits.

Since two of the industries with permits to discharge are food-processing facilities, they are required to limit their Fats, Oil and Grease discharges as part of their permit. Restaurants are also required to have adequate grease removal facilities, which are monitored for proper performance, operation and maintenance. Discharges of Fats, Oils and Grease have the potential to clog sewers, both mains and service lines. Prevention of such clogs helps us avoid overflows of raw sewage, which can threaten both our waterways and public health.

The City of Brunswick is fully committed to protection of the Public Health and protecting the waters of the community from pollution. Your help in not disposing of toxic materials or fats oil and grease in sewers is an important part of the effort to protect our environment.

Water and Wastewater offices of the City of Brunswick are back in City Hall at 601 Gloucester Street. Customer Service, for paying bills, opening changing and closing accounts, are on the first floor (street entry level). Telephone numbers will remain the same. Customer Service main number is (912) 267-5511.

Office of the Director is on the second floor. The elevator is on the Reynolds Street side. There are stairs by the elevator and another set of stairs on the Union Street Side. The main telephone for the Office of the Director is (912) 267-5509.

## For more information on the Web:

Environmental Protection Agency Wastewater Management  
Industrial Pretreatment Program  
City of Brunswick Water Department  
Fats, Oil and Grease

<http://www.epa.gov/owm/>  
[http://cfpub.epa.gov/npdes/home.cfm?program\\_id=3](http://cfpub.epa.gov/npdes/home.cfm?program_id=3)  
[http://brunswickga.org/nm/publish/news\\_4.phtml/](http://brunswickga.org/nm/publish/news_4.phtml/)  
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