



Wastewater

NAVAL AIR STATION CORPUS CHRISTI, TEXAS

Environmental Division 961-3776

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◆ **What is Wastewater?**

Wastewater is water that has been used in homes, farms, businesses, and industries. Wastewater may contain metals, sediment, organic pollutants, bacteria, and viruses.

Therefore, in the interest of public health, wastewater should be subjected to an appropriate level of treatment before its disposition back into the environment.



◆ **Wastewater Treatment Stages**

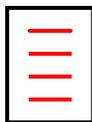
- **Primary:** Process involves screening and settling out large particles.
- **Secondary:** Biological processes are used to further purify wastewater (bacteria break down the pollutants).
- **Disinfection:** The secondary effluent is disinfected with sodium hypochlorite, and then dechlorinated with sodium bisulfate.

◆ **Domestic & Industrial Wastewater at Naval Air Station Corpus Christi (NASCC)**

- NASCC has separate sewers and wastewater treatment systems for domestic and industrial wastewater.
- **Domestic Wastewater Treatment Plant:** processes wastewater from the entire base. The collection system consists primarily of 6" to 24" piping and concrete manholes. **Oil and Grease** is not treatable in any sanitary system and should never be put down any drain!
- **Industrial Wastewater Treatment Plant:** processes wastewater from the Corpus Christi Army Depot. The collection system consists primarily of 4" to 15" piping and concrete manholes.

◆ **NASCC Wastewater Discharge**

- NASCC has a Texas Pollutant Discharge Elimination System (TPDES) Permit, issued by the Texas Commission on Environmental Quality, which authorizes the installation to treat and discharge waste. NASCC must follow conditions set forth in the permit, including effluent limitations and monitoring requirements. Corpus Christi Bay receives the treated discharge.



◆ **Effluent Monitoring**

Effluent monitoring is conducted in accordance with the TPDES Permit.

Domestic Wastewater - Monitored Effluent Characteristics:

- | | |
|-----------|-----------------------------|
| - Flow | - Biochemical Oxygen Demand |
| - Copper | - Total Suspended Solids |
| - Cadmium | - Lead |
| - Cyanide | - Silver |
| - Nickel | - Zinc |

Industrial Wastewater - Monitored Effluent Characteristics:

- | | |
|----------------|---------------------------------|
| - Flow | - Chemical Oxygen Demand |
| - Oil & Grease | - Total Suspended Solids |
| - Cadmium | - Chromium (Total & Hexavalent) |
| - Copper | - Cyanide |
| - Lead | - Nickel |
| - Silver | - Zinc |

◆ **Whole Effluent Toxicity Testing (Biomonitoring):**

Whole Effluent Toxicity (WET) Testing or Biomonitoring is conducted in accordance with the TPDES Permit. Whole Effluent Toxicity is a term that is used to describe the total toxic effect of an aqueous sample that is measured by an organism's response upon exposure to the sample (e.g. lethality, impaired growth or reproduction). WET testing replicates, to a great extent, the total effect and environmental exposure of aquatic life to toxic pollutants in an effluent. There are two basic types of WET tests: Chronic (7 day) & Acute (24 hour). The organisms that are tested are the mysid shrimp and the inland silverside.

◆ **Use Less Water → Treat Less Water**

DO YOUR PART TO CONSERVE WATER!

- Fix leaking faucets (A faucet that drips twice per second wastes 50 gallons of water, & treatment, per week).
- Turn off the water when it's not needed while brushing your teeth, shaving, or washing your car.
- Install low-flush toilets & water-efficient showerheads.

