

# STORMWATER POLLUTION PREVENTION

# WHAT IS STORMWATER?

- **STORMWATER IS RAINWATER RUNOFF**

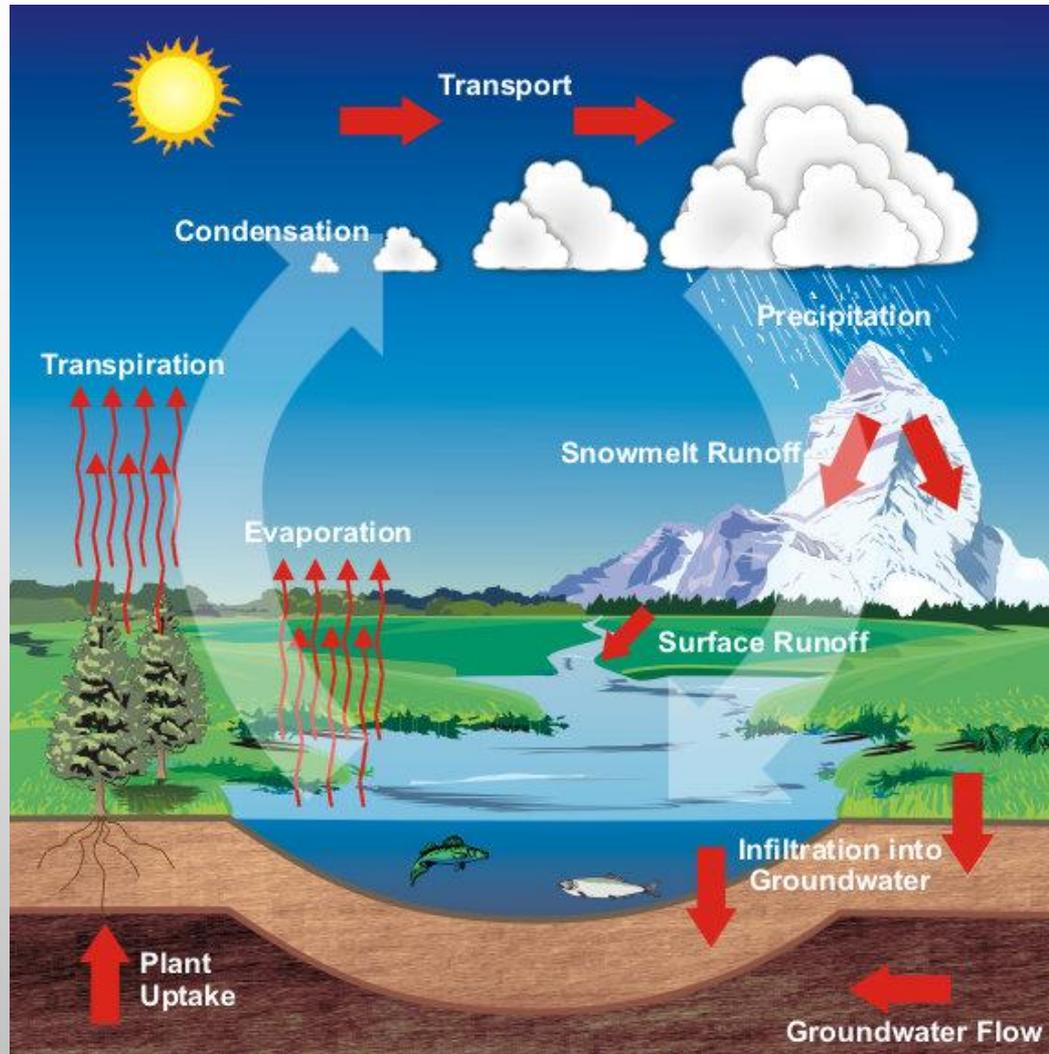
- **STREETS**
- **DRIVEWAYS**
- **SIDEWALKS**
- **PARKING LOTS**
- **ROOFTOPS**

- **STORMWATER IS NOT TREATED BEFORE IT GETS DISCHARGED INTO A LOCAL WATER BODY**

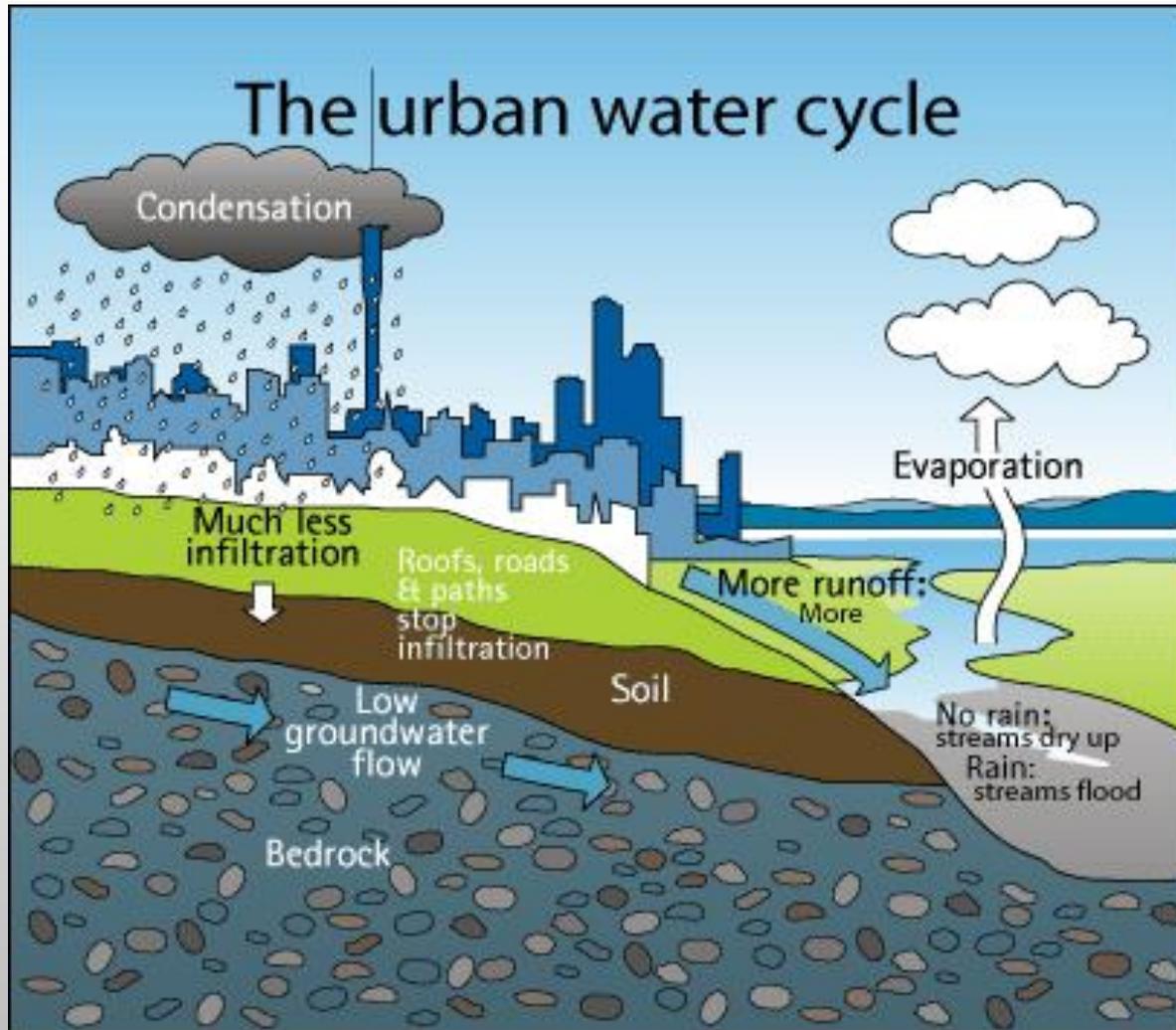
- **THE STORM DRAIN SYSTEM IS SEPARATE FROM THE SANITARY SEWER SYSTEM**



# WHAT IS STORMWATER?



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## WHERE DOES STORMWATER RUNOFF GO?

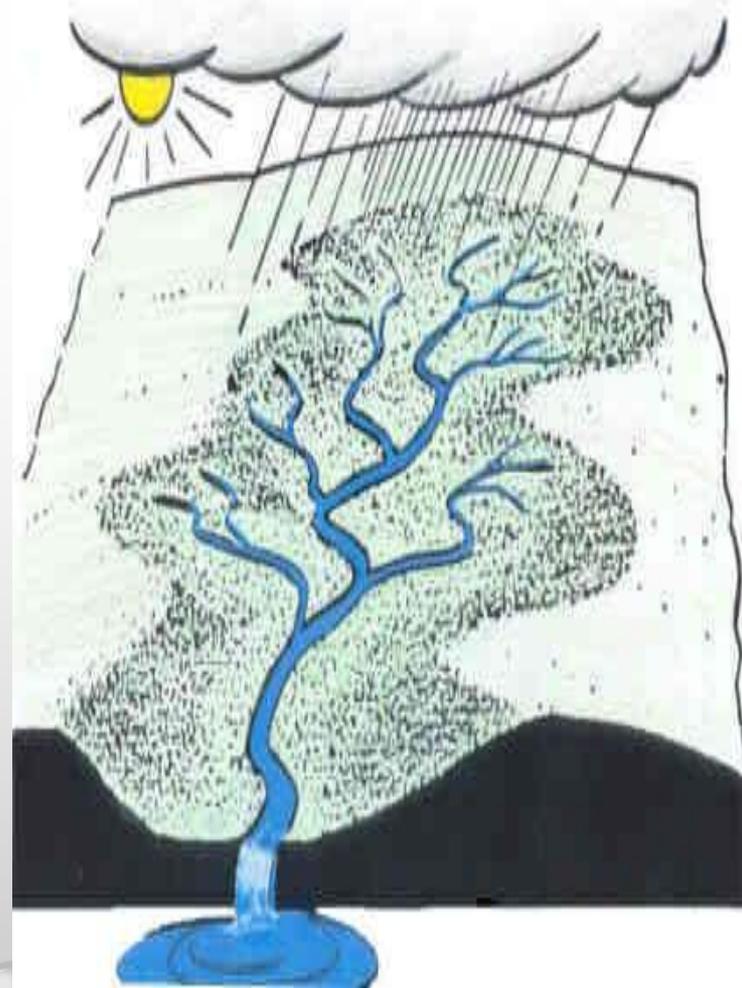
- **STORMWATER FLOWS INTO STORM DRAIN INLETS, AND ENTERS THE STORM DRAINAGE SYSTEM**
  
- **STORMWATER TRAVELS THROUGH THE STORM DRAINAGE SYSTEM, AND DISCHARGES DIRECTLY INTO THE NEAREST CREEK, RIVER OR LAKE**



# WHAT IS A WATERSHED?

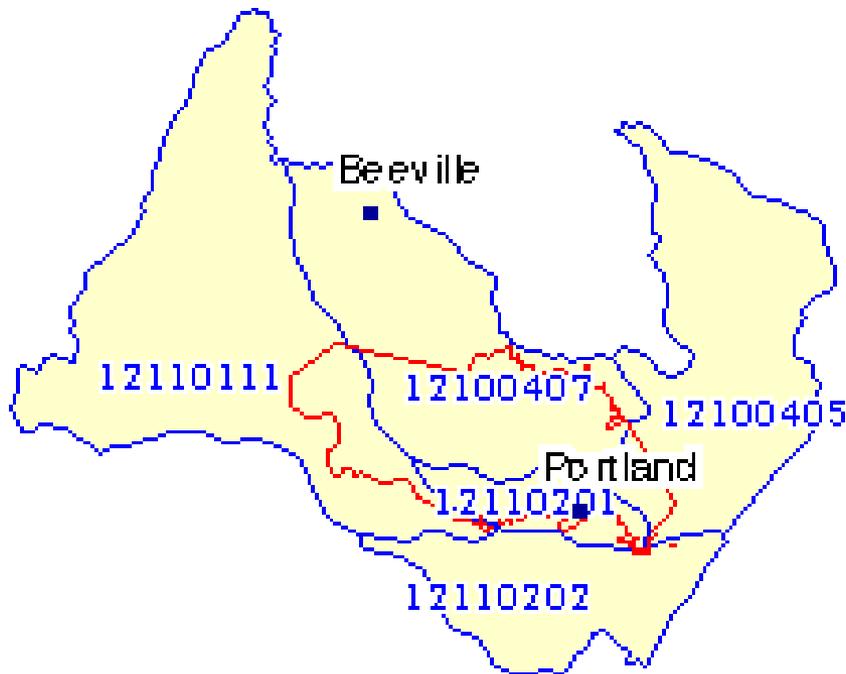
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- **A WATERSHED IS THE LAND AREA THAT SURROUNDS AND DRAINS INTO A CREEK, RIVER, OR LAKE**
- **INCLUDES NATURAL AND ARTIFICIAL DRAINAGE SYSTEMS, SUCH AS DITCHES AND STORM DRAINS**
- **EVERYONE LIVES IN A WATERSHED**



# WHAT IS A WATERSHED?

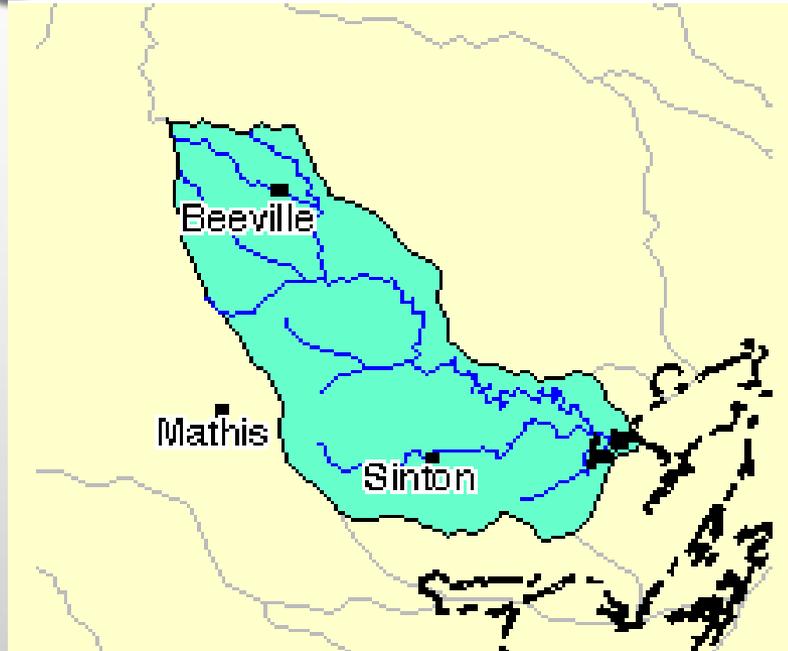
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**SAN PATRICIO COUNTY  
CROSSES 5 DIFFERENT  
WATERSHEDS; PORTLAND IS  
PART OF THE NORTH CORPUS  
CHRISTI BAY AND ARANSAS  
WATERSHEDS. THIS MEANS  
THE AREA CREEKS AND ANY  
POLLUTANTS FOUND IN  
THEM EVENTUALLY FLOW  
INTO THE BAY**

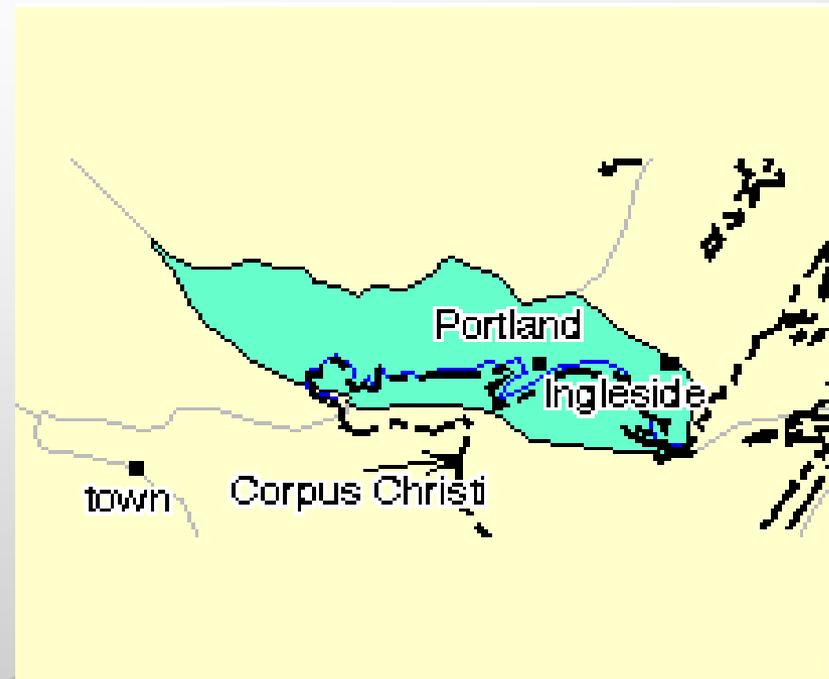
# WHAT IS A WATERSHED?

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**ARANSAS WATERSHED**

**NORTH CORPUS CHRISTI  
BAY WATERSHED**



# COMMON STORMWATER POLLUTANTS

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- **SEDIMENT**
- **HERBICIDES, PESTICIDES, FERTILIZERS**
- **YARD WASTE**
- **SOAP & DETERGENTS**
- **PET WASTE**
- **USED OIL**
- **TRASH & LITTER**
- **HOUSEHOLD TOXIC CHEMICALS**



# SEDIMENT

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- **SEDIMENT IS THE #1 STORMWATER POLLUTANT**
  
- **SEDIMENT CAN:**
  - **CLOG PIPES**
  - **CLOG FISH GILLS**
  - **MAKE WATER BODIES UNSIGHTLY**
  - **TAKE UP HABITAT SPACE**

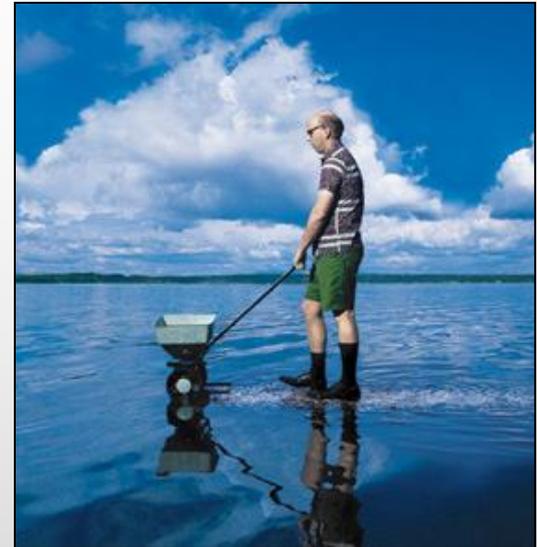
# SEDIMENT



# HERBICIDES, PESTICIDES, FERTILIZERS

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- **USE CHEMICALS PROPERLY:**
  - **FOLLOW MANUFACTURER'S DIRECTIONS**
  - **USE SPARINGLY**
- **CHECK THE WEATHER FORECAST, **AVOID:****
  - **RAINY DAYS**
  - **WINDY DAYS**
- **RULES APPLY EVEN FOR ORGANIC PRODUCTS**



# HERBICIDES, PESTICIDES, FERTILIZERS

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## ALTERNATIVES:

- **CHOOSE A LICENSED PROFESSIONAL APPLICATOR**
- **EARTH KIND: [HTTP://EARTHKIND.TAMU.EDU](http://earthkind.tamu.edu)**



# Earth Kind:

**Environmental Stewardship Programs for the Urban Landscape**

Department of Horticultural Sciences  
Texas A&M University  
College Station, Texas



# HERBICIDES

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- **CAN KILL AQUATIC PLANTS THAT ARE NEEDED TO PROVIDE FOOD, SHELTER, AND OXYGEN FOR AQUATIC ANIMALS**
- **ATRAZINE HAS BEEN LINKED TO STERILIZATION, FEMINIZATION, AND DEFORMITIES IN AMPHIBIANS. ATRAZINE CAN BE FOUND IN COMMON HERBICIDES**



# PESTICIDES

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- **PERSIST IN THE SEDIMENT OF WATER BODIES, HARMING AQUATIC INSECTS**
- **CAN DAMAGE THE ENTIRE HABITAT**



# FERTILIZERS

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- **EXCESS NUTRIENTS CAUSE ALGAL BLOOMS (RED TIDE)**
- **LESS OXYGEN, SPACE, AND LIGHT FOR AQUATIC PLANTS AND ANIMALS**
- **CAN POISON WATER BODIES**



# YARD WASTE

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## **NATURAL PRODUCTS CAN BE POLLUTANTS:**

- **GRASS CLIPPINGS & LEAVES: CAUSE ALGAL BLOOMS**
- **SEDIMENT: DECREASE HABITAT SPACE, CAN CLOG AND CUT THE GILLS OF FISH**



# YARD WASTE

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- **PREVENT YARD WASTE FROM LEAVING LAWNS:**
  - **SWEEPING**
  - **MULCHING**
  - **COMPOSTING**
- **IT IS AGAINST CITY CODE TO DISCHARGE YARD WASTE INTO THE STORM DRAINAGE SYSTEM, MAX. FINE \$2000 (ARTICLE VII; SECTION 23-239)**



# SOAPS & DETERGENTS

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**CARRIED TO LOCAL WATER BODIES AFTER ENTERING STORM DRAINS, SOAPS AND DETERGENTS CAUSE EXCESSIVE ALGAE TO GROW, ULTIMATELY STARVING THE WATER OF OXYGEN WHEN THE ALGAE BEGINS TO DECOMPOSE**

**ADDITIONALLY, SOAPS DESTROY THE MUCUS LAYER IN FISH, WHICH PROTECTS THEM FROM HARMFUL PARASITES, AND ALTERS THE AQUATIC ENVIRONMENT**

# SOAPS & DETERGENTS

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**WASH YOUR  
VEHICLE AT A  
COMMERCIAL CAR  
WASH.**



**CAR WASHES EITHER RECYCLE THE  
SOAPY WATER OR SEND IT TO THE  
WASTEWATER TREATMENT PLANT  
WHERE THE WATER IS CLEANED  
AND TREATED.**

# PET WASTE

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## **DISPOSE OF PET WASTE PROPERLY:**

- **DISPOSE OF WASTE IN THE TRASH**
- **HAVE PET WASTE PICKED UP FROM YOUR PROPERTY'S YARD SEVERAL TIMES PER WEEK**



# USED OIL

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- **CHECK YOUR VEHICLE FOR LEAKS**
- **NEVER POUR OIL ON YOUR YARD, STREET, OR DOWN AN INLET**
- **DISPOSAL LOCATIONS:**
  - **RECYCLED OIL FACILITY**
  - **HAZARDOUS MATERIALS DISPOSAL FACILITY**



# TRASH & LITTER

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- **LITTER CAN CLOG STORM DRAIN INLETS**
- **THE COST IS APPROXIMATELY \$45 TO CLEAN EACH INLET**
- **THE CITY SPENDS APPROXIMATELY \$10,000 PER YEAR CLEANING INLETS**
- **LITTER CREATES SEVERE HEALTH HAZARD IN CREEKS, RIVERS, AND THE BAY**

# TRASH & LITTER

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- **DISPOSE OF LITTER IN THE TRASH CAN.**
- **RECYCLE AS MUCH AS POSSIBLE**
  - **RESIDENTIAL GREEN LID ROLL CARTS**
  - **RECYCLE BOXES AT LOCAL STORES**
  - **SAN PATRICIO COUNTY RECYCLING FACILITY**

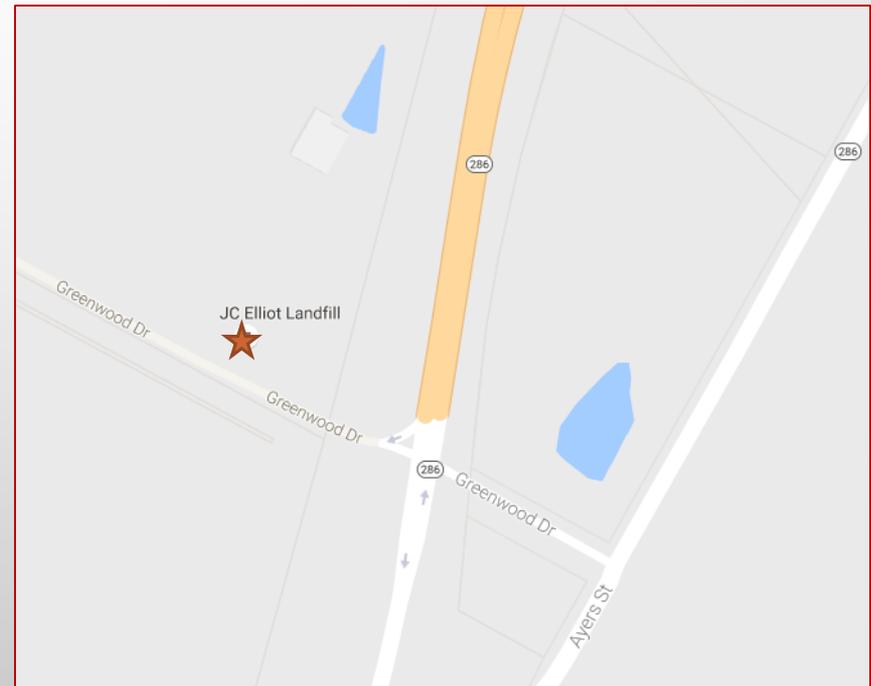


# HOUSEHOLD TOXIC CHEMICALS

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## JC ELLIOTT LANDFILL IN CORPUS CHRISTI

- **DISPOSAL SITE FOR CITY OF PORTLAND RESIDENTS THROUGH INTERLOCAL COOPERATION WASTE DISPOSAL AGREEMENT**
- **CALL FOR FEE INFORMATION**
- **361-826-2489**
- **HWY 286 AT AYERS  
CORPUS CHRISTI**



# REPORTING VIOLATORS

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## **PUBLIC WORKS (361-777-4601)**

- **CONSTRUCTION/INDUSTRIAL SITES INSPECTION**
- **WATER QUALITY MONITORING**
- **STORM DRAIN INLETS CLEANING**
- **DAMAGED INLET REPAIR**
- **STREET SWEEPING**



## **CODE ENFORCEMENT (361-777-4447)**

- **ILLEGAL DUMPING INVESTIGATION**
- **STORMWATER POLLUTION REPORTING**



# DID YOU KNOW

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- **WE CANNOT MAKE MORE WATER**
- **ONLY 1% OF ALL THE EARTH'S WATER IS AVAILABLE FOR HUMAN CONSUMPTION**
- **IT IS EASIER AND CHEAPER TO PREVENT STORMWATER POLLUTION, THAN TO CLEAN IT UP**

*Keep* **portland** *Beautiful*  
the  
of possibilities