


# PRECIPITATION SHOULDN'T POLLUTE THE NATION

AN OVERVIEW OF THE WTCMUD 1 STORM WATER MANAGEMENT PROGRAM

1



## TOPICS AND KEY CONCEPTS

- WHAT IS AN MS4?
- STORMWATER – WHAT IS IT? HOW DOES IT POSE A PROBLEM FOR OUR COMMUNITY?
- HOW IS OUR DISTRICT MANAGING STORM WATER? WHERE DOES IT GO?
- PUBLIC OUTREACH IDEAS
- CLEAN WATER ACT OF 1948
- POINT SOURCE AND NONPOINT SOURCE
- HOW ARE WE DOING OUR PART?
- MS4 BENEFITS
- COMMUNITY INVOLVEMENT

2

# WHAT IS AN MS4?



## Municipal

A system owned by a public agency, such as a city, town, county, flood control district, state, or federal agency.



## Separate

It does not connect to the sanitary sewer and does not lead to a wastewater treatment plant.



## Storm Sewer System

The system is comprised of drains, ditches, curbs, and gutters that move stormwater from one place to another.

FOR MORE INFORMATION ON STORMWATER PERMITS WITHIN THE STATE OF TEXAS VISIT:

[HTTPS://WWW.TCEQ.TEXAS.GOV/PERMITTING/STORMWATER/MS4/WQ\\_MS4\\_SMALL\\_TXRO4.HTML](https://www.tceq.texas.gov/permitting/stormwater/ms4/wq_ms4_small_txro4.html)

3

DID YOU KNOW THAT EVERY TIME YOU BLOW YOUR LAWN CLIPPINGS INTO THE STREET, THAT IS AN ILICIT DISCHARGE INTO THE DISTRICT'S STORMWATER SYSTEM, AS THEY WILL EVENTUALLY MAKE THEIR WAY TO THE STORM DRAINS?

TO THE LEFT IS A DEPICTION OF HOW THE STORMWATER SYSTEM RUNS WITHIN A COMMUNITY.

4

## STORMWATER, WHAT IS THAT?

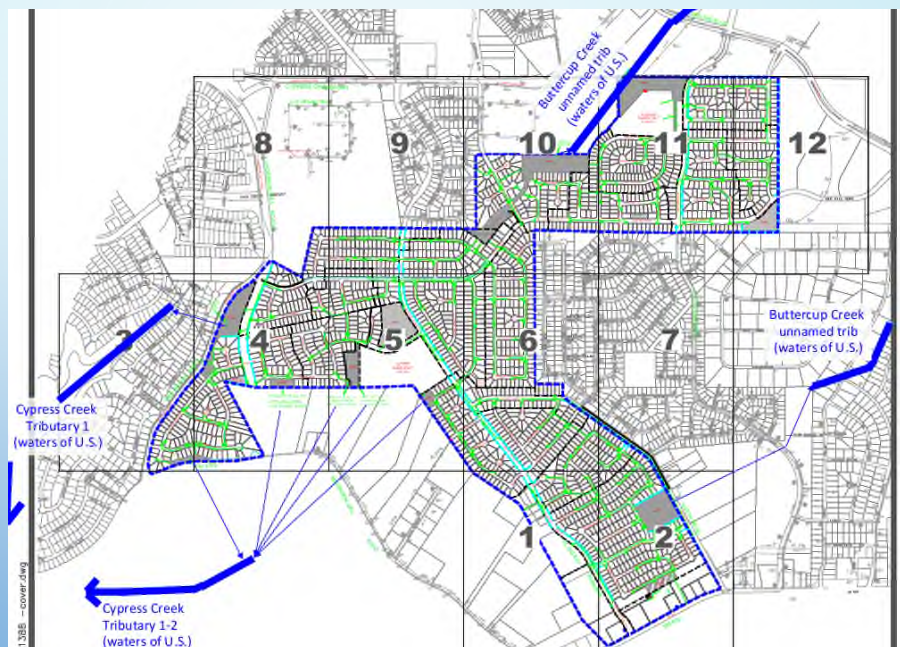
- WATER FOLLOWING, FROM RAIN OR SNOWSTORM, THAT DOES NOT INFILTRATE THE SURFACE IS CALLED STORMWATER
- STORMWATER HAS THE POTENTIAL TO INTRODUCE NEW POLLUTANTS INTO SURFACE WATER – THIS IS BECAUSE ALL STORMWATER SYSTEMS ROUTE TO BODIES OF WATER
- STORMWATER RUNOFF FROM CONSTRUCTION SITES CAN CAUSE SOIL EROSION TO OCCUR AT A RATE 20 TIMES GREATER THAN NORMAL LAND USE – THIS IS DUE TO HIGH AMOUNTS OF SEDIMENTATION/METALS/ETC.
- U.S. ENVIRONMENTAL PROTECTION AGENCY REGULATES CONSTRUCTION ACTIVITY TO REDUCE POLLUTANT AMOUNTS AND ISSUES FINES FOR THOSE WHO POLLUTE OUTSIDE OF THE PARAMETERS FOR THEIR GIVEN PROJECTS




5

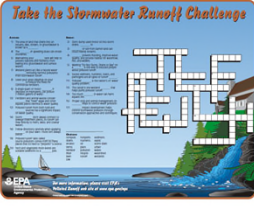
### STORMWATER NAVIGATION IN WTC MUD 1

THIS IS THE DISTRICT MAP FOR THE FLOW OF OUR STORMWATER IN WTC MUD 1



6

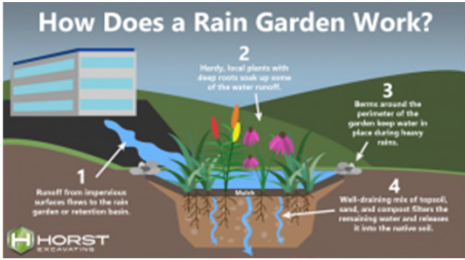




## PUBLIC OUTREACH IDEAS

AS THE STORMWATER COMMITTEE HAS MET A FEW TIMES THIS YEAR – THEY HAVE PRODUCED SEVERAL GREAT PUBLIC OUTREACH IDEAS TO BE POTENTIALLY EXECUTED IN THE COMING YEARS:

- STORMWATER CROSSWORD AS A BILLING INSERT
- INLET PLAQUES TO BE UPDATED TO A MORE DURABLE PLAQUE WITH LONGER HOLD CAPACITY
- INLET NUMBERING THROUGHOUT THE ENTIRE DISTRICT
- HOSTING A RAIN GARDEN CLASS WITH A SPECIALIST
- HOST A COMMUNITY CLEAN-UP EVENT




**How Does a Rain Garden Work?**

- 1 Runoff from impervious surfaces flows to the rain garden or retention basin.
- 2 Hardy, local plants with deep roots soak up some of the water runoff.
- 3 Berms around the perimeter of the garden keep water in place during heavy rains.
- 4 Well-draining mix of topsoil, sand, and compost filters the remaining water and releases it into the native soil.

7

## CLEAN WATER ACT

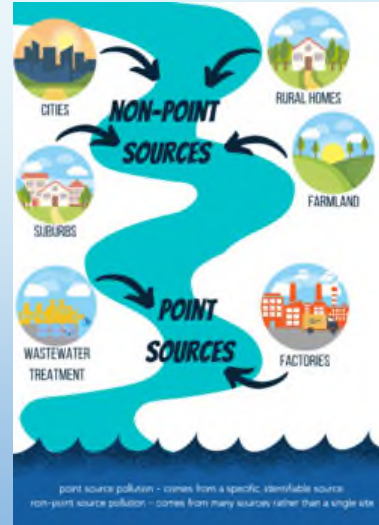
- THE CLEAN WATER ACT (CWA) ESTABLISHES THE BASIC STRUCTURE FOR REGULATING DISCHARGES OF POLLUTANTS INTO THE WATERS OF THE UNITED STATES AND REGULATING QUALITY STANDARDS FOR SURFACE WATERS. THE BASIS OF THE CWA WAS ENACTED IN 1948 AND WAS CALLED THE FEDERAL WATER POLLUTION CONTROL ACT, BUT THE ACT WAS SIGNIFICANTLY REORGANIZED AND EXPANDED IN 1972. "CLEAN WATER ACT" BECAME THE ACT'S COMMON NAME WITH AMENDMENTS IN 1972.



8

## POLLUTION AND WHERE IT COMES FROM

- POINT SOURCE
  - POINT SOURCE IS POLLUTION ORIGINATING FROM A SINGLE, IDENTIFIABLE SOURCE, SUCH AS A DISCHARGE PIPE OR A SEWAGE PLANT.
  - THE MOST COMMON SOURCE POINTS IN A MUNICIPAL SYSTEM ARE WASTEWATER TREATMENT PLANTS, LANDFILLS, UTILITY STATIONS, MOTOR POOLS, AND FLEET MAINTENANCE FACILITIES.
- NONPOINT SOURCE
  - NONPOINT SOURCE IS POLLUTION THAT DOES NOT ORIGINATE FROM A SINGLE SOURCE, OR POINT.
  - THE MOST COMMON NONPOINT SOURCE ARE SEDIMENT, NUTRIENTS, MICROORGANISMS, AND TOXICS.



9


## HOW CAN STORMWATER BE A PROBLEM?





- STORMWATER RUNOFF CAN CAUSE SEVERAL PROBLEMS:
- EROSION TO STREAM BANKS, DAMAGING AQUATIC HABITATS
- IT CAN PUSH EXCESS NUTRIENTS FROM FERTILIZERS, PET WASTE, AND OTHER SOURCES INTO RIVERS AND STREAMS FUELING ALGAE GROWTH.
- IT CAN PUSH EXCESS SEDIMENT INTO RIVERS AND STREAMS. SEDIMENT CAN BLOCK SUNLIGHT FROM PENETRATING THE UNDERWATER GRASSES AND CAUSE HARM TO AQUATIC.
- IT CAN ALSO PUSH PESTICIDES, LEAKING FUEL, OR MOTOR OIL AND OTHER CHEMICAL CONTAMINANTS INTO RIVERS AND STREAMS.


10

## HOW ARE WE DOING OUR PART IN PROTECTING THE COMMUNITY?

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The MS4 permit obtained by the district is issued by TCEQ (Texas Commission on Environmental Quality) and it requires specific regulations be met – communicating this information to the public being one of them.
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We track all pond work performed in the district, annually, and submit an annual report to TCEQ with details of what work was done and when.
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We plan to host workshops and events that will invite the public to participate allowing for great learning opportunities and involvement.
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We hold an annual meeting every year to present this presentation to the public to help keep the information flowing and it is always readily available on the districts website.

11

## RULES ENFORCED BY THE BOARD REGARDING THE WATER, WASTEWATER, AND DRAINAGE SYSTEM

WTC MUD 1 Houses information regarding the protection of the drainage system in the district rules and regulations which can be found at the below link on the district website:

[https://www.wtcmud1.org/static/623b15b2d68595cf35c58b89c162b3cb/rulesgoverningwaterwastewaterdrainageservices\\_bac56a544a.pdf](https://www.wtcmud1.org/static/623b15b2d68595cf35c58b89c162b3cb/rulesgoverningwaterwastewaterdrainageservices_bac56a544a.pdf)



7.03 Protection of Drainage Systems.

1. The District's drainage systems, including all drainage easements, channels, storm sewer facilities, detention ponds and all other facilities owned, maintained or controlled by the District for the purpose of collecting, controlling, storing, managing or distributing storm and flood waters or run-off, must be protected from abuse, in order to assure the proper functioning of all such facilities for the benefit of all property owners and residents of the District.
2. No foreign materials or debris, including motor oil, grass, leaves or tree clippings, trash, construction debris or silt, may be placed, thrown, disposed of, deposited, discharged or allowed to migrate into the District's drainage systems. A violation of this rule will render the violator subject to fine as well as to the requirement that any resulting damage to the District's systems be repaired at the expense of the violator.

Page 21, Section 7.03  
of the District's Rules Governing Water,  
Wastewater, and Drainage Systems

12



## EXPECTED BENEFITS OF OUR MS4

- DISTRICT WATER QUALITY – FOR ALL
- LESSER CHANCE OF HAVING FLASH FLOOD DAMAGE WITH PROPER WATER MITIGATION (PONDS, TRICKLE CHANNELS, DEPOSITING BODIES OF WATER, ETC.)
- DRINKING WATER QUALITY
- HUMAN HEALTH (AGAINST ILLNESS)
- COMMUNITY VALUE

13

## HOW CAN YOU GET INVOLVED?

Report all stormwater related issues to Inframark. Under the “Contact Us” drop down on the district webpage, you will find a link to email Inframark regarding “Illicit Discharge Reporting”

Relay the information you have heard her in this presentation to others in the community. This presentation can be found on the MS4 page of the district webpage.

14



FOR  
ADDITIONAL  
INFORMATION  
AND  
QUESTIONS

LOCATE ADDITIONAL INFORMATION HERE:

- [TCEQ MS4 INFORMATION](#)
- [EPA CLEAN WATER ACT INFORMATION.](#)
- [EPA MS4 INFORMATION](#)
- [WTC MUD 1 MS4 PAGE](#)

EMAIL INFRAMARK:

- [CSAUS@INFRAMARK.COM](mailto:CSAUS@INFRAMARK.COM)