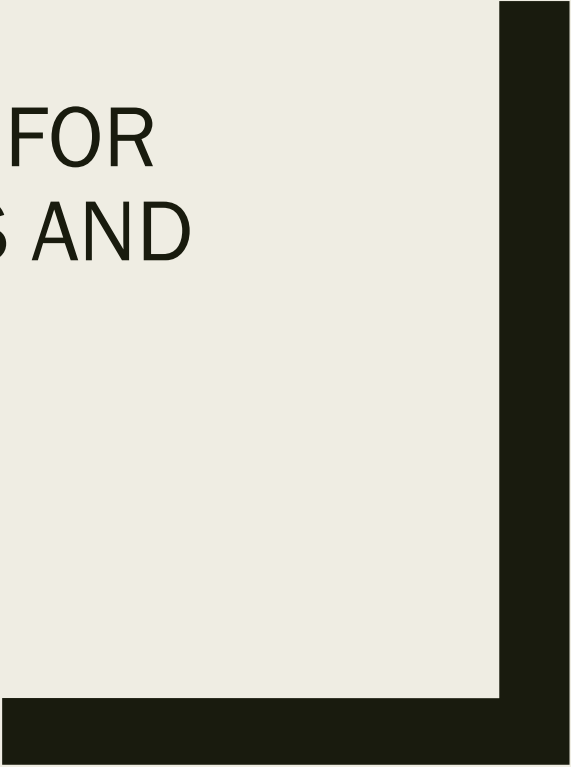


**BE PROACTIVE:
GOOD HOUSEKEEPING FOR
MUNICIPAL OPERATIONS AND
MAINTENANCE**

Ilana Hairston Harris
Environmental Manager
City of Sugar Land



Background: City of Sugar Land

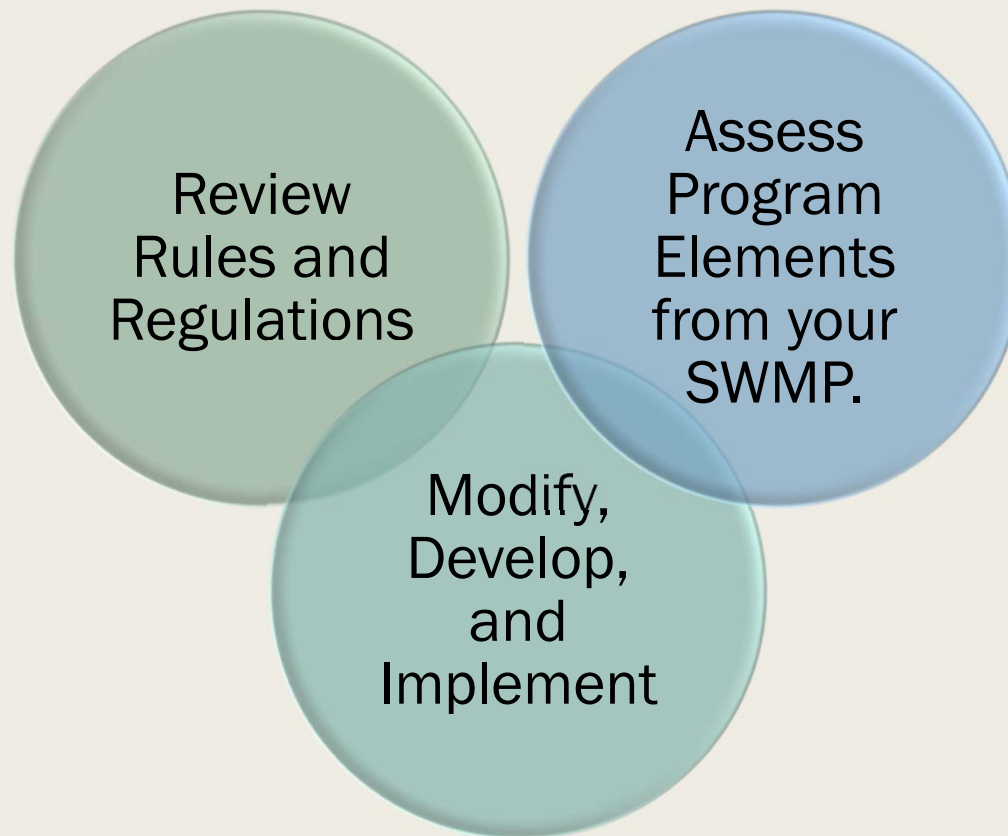
- Located South of Houston on Highway 59
- Population 89,000 as of Census 2010
- Phase II, Level 3 MS4 Operator
- Will be annexing land December 12, 2017
- Upon renewal of the TPDES Permit, the City will be Level 4 MS4 Operators.



Minimum Control Measures (MCM)

1. Public Education, Outreach, and Involvement
2. Illicit Discharge Detection and Elimination
3. Construction Site Stormwater Runoff Control
4. Post Construction Stormwater Management in New Development and Redevelopment
5. Pollution Prevention and Good Housekeeping for Municipal Operations
6. Industrial Stormwater Sources

MCM 5: Program Development



How to achieve compliance?

- Operation and Maintenance Program that is designed to prevent or reduce stormwater runoff from municipal facilities and operations.
- Develop a training program for municipal employees.
- Establish measurable goals with Best Management Practices (BMPs).



City of Sugar Land Facilities & Control Inventory

- State requires MS4 operator to develop and maintain an inventory of facilities and stormwater controls.
- Consultant to evaluate and develop a list of facilities owned by the City.
- Identified which facilities have the highest potential to impact stormwater quality.
- Maintained the list of facilities and the applicable permits. (Central Registry Query)



Public Works

Before and After Photos



Public Works Car Wash



Public Works Car Wash Covered Storage with Chemicals Stored



Under the Car Wash Bay There Was Leaking Bags



Car Wash area cleaned from all potential pollutants
(2017)

Public Works – Fleet Department

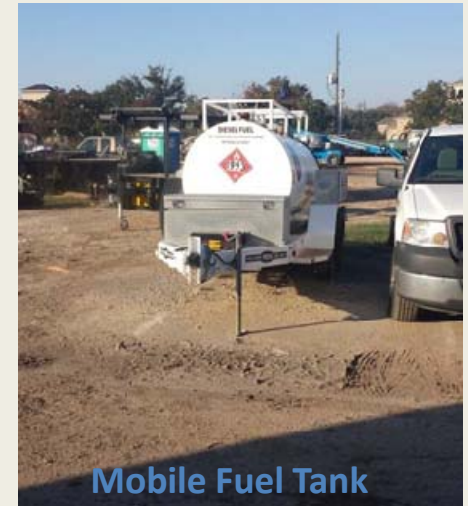
Before and After Photos



Fleet Garage Drain



Batteries located on the Ground.



Mobile Fuel Tank



Abandoned Above Ground Storage Tank



Public Works Fleet Garage (Outside)



New Fire Truck
Fleet Garage



Installed
drainage system
(drains to Oil
Water Separator)

2017 Photos



Removed
batteries



Cleaned area
and installed oil
water separator
drainage
system.

Public Works – Streets Department

Before and After Photos



Outdoor Storage Area Dumpster



Outdoor Storage Area Trash,
Note Flammable Container



2017 View of the Area



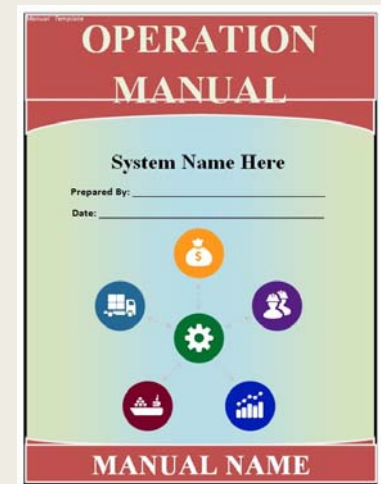
Open-Storage Area Material Piles



2017 Photo, Sweeps Weekly

Storm Sewer Operation and Maintenance

- Operation and Maintenance (O&M) Manual for the following: Discharges of Pollutants from Roads; Lakes, Streams, Rivers, & Bayous; Illegal Dumping; and Right of Way.
- Identify pollutant of concern that could be discharged from the O&M activity.
- Develop a set of pollution prevention measures.
- Conduct visual inspections to ensure it is working properly.



Cleaning Maintenance & Street Sweeping



- We survey the City and look for high volumes of trash, debris, and other stormwater pollutants.
- Streets, road segments, and public parking lots including, but not limited to, high traffic zones, commercial and industrial districts, sport and event venues, and plazas.
- Dewater and dispose of street sweeper waste material.
- Sweep approximately 600 cubic yards of litter annually.

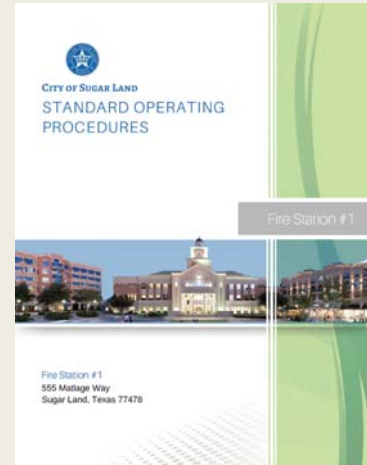
Disposal of Waste

- The City has various ways of removing waste that may enter in the MS4.
- Lake Management Contract
- Encourage Fleet to use the tire recycling program.
- Roll-offs in the Public Works Center
- Encourage Spring Cleaning
- Use hazardous waste disposal for chemicals that are no longer needed.



Facility Specific SOPs

- “For each high priority facility identified, the permittee shall develop a SOP that identifies BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater from each facility.”
- We conducted SOPs during PY 3 for 12 sites.
- We have implemented the SOPs starting January 1, 2017.
- Review the monthly inspections records quarterly from the appropriate department.
- The inspection results in quarterly trainings with management of the appropriate department.



Standard Operating Procedure for:
Oil/Water Separator and/or Grease Trap

Purpose of SOP	To prevent releases from oil/water separators and/or grease traps to stormwater
Pollutants	Petroleum Hydrocarbons, Oil, Grease, Heavy Metals, Total Suspended Solids
Activity Description	Oil/water separators and grease traps are installed to remove certain pollutants from stormwater discharge. The improper maintenance and/or service of oil/water separators and grease traps can contribute contaminants to stormwater runoff.
Pollution Prevention	<ul style="list-style-type: none"> Do not directly discharge known contaminants, such as fuels, paints, oil, etc., to oil/water separators and/or grease traps Clear out oil/water separators and/or grease traps regularly, especially after heavy storms.
Training	<ul style="list-style-type: none"> Train employees on how to identify when oil/water separators and/or grease traps require service Train employees on proper spill containment and cleanup
Spill Response and Prevention	<ul style="list-style-type: none"> Have spill cleanup materials readily available and in a known location Clean up spills immediately using dry absorbents rather than hosing down the area Properly dispose of spill cleanup materials Report spills promptly to Public Works Service Center (281) 275-2420
Maintenance	<ul style="list-style-type: none"> Have oil/water separators and/or grease traps inspected by a service removal service as needed after a storm event or every six (6) months to ensure no contaminant overflows to stormwater discharge Regularly inspect the oil/water separators and/or grease traps and make repairs as necessary
Recordkeeping	<ul style="list-style-type: none"> Facility should keep records on-site for the duration of the permit term Inspection Checklist should be completed monthly



Spill Response and Prevention Inspection Checklist
Fire Station #1

Activities	Maintenance/ Repairs Necessary		Action Taken
	Yes	No	
Vehicle and Equipment Repair	Yes	No	
Diesel/Natural Gas Powered Generator	Yes	No	
Outdoor Waste Handling and Storage	Yes	No	
Oil/Water Separator and/or Grease Trap	Yes	No	

Date of Inspection: _____ Name of Inspector (Print): _____

Frequency: Once/Month

Training & Education

- Conduct annual training for illicit discharges, construction site inspections, and good housekeeping and pollution prevention.
- The employees that are required to attend are employees that have a direct relationship to an activity that could have a potential impact to the MS4.

Examples:

- Parks and Recreation Department
- Public Works Department
- Fleet Department
- Facility Department
- Fire Department



Tips to Improve Good Housekeeping & Maintenance?

- Implement Inlet Protectors
- Designed to prevent non-point source pollutants, such as trash, grass clippings, and sediment from entering curb inlets.
- Helps Reduce Storm Sewer Maintenance.
- Effectively utilize Street Sweeping BMP's.
- Helps to meet EPA and TCEQ Requirements.
- Control flood water flows.



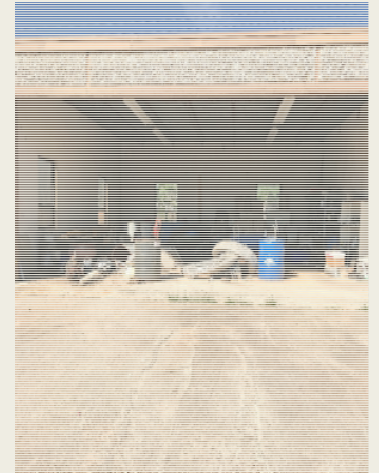
Tips to Improve Good Housekeeping: Spring Cleaning Projects



Sandblasting
Rust and
Painting Water
Tank



The drinking
water plants
have ordered a
roll-off for trash
management,
items for
auction, and to
recycle scrap
metals.



Sweeping the
inside of the
water plant,
making sure the
chemicals are
not leaking.



Checked the
tanks and
valves for leaks.



Potential Future Fire Training Site

- Fire Training site will prevent discharge of foam or other runoff into the storm drain.
- Easier to divert flow to the sewer with the permission of the City's Publicly Owned Treatment Works (POTW).



The Central Unit was a Texas Department of Criminal Justice

Questions



THANK YOU

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