

City of Daphne
Standard Operating Guidance
(SOGs)
For Storm Drain System
Management
Phase II MS4



Daphne
ALABAMA

The Jubilee City

Creating a Clean Water Future....

City of Daphne Standard Operating Guidance (SOGs) For Storm Drain System Management

The City of Daphne is located along the eastern shore of Mobile Bay. Storm water runoff from the City's MS4 flows to its main streams; D'Olive Creek, Tiawasee Creek, Joe's Branch, Yancey Branch, Fish River, Rock Creek, Red Gully and their tributaries. What we do Daphne has the ability to affect water quality downstream in Mobile and Weeks Bay. Many of the City's day to day operations have potential to pollute storm water. That is why it is important for us to observe some Standard Operating Guidance (SOGs) which help minimize to the maximum extent practical our impact on water quality. The purpose of this manual is to set out the standard operating guidance.

**City of Daphne
Standard Operating Guidance (SOGs)
For Storm Drain System Management**

List of Standard Operating Guidance for Stormwater Management

SOG-1 Street, Curb, Gutter and Storm Drain Replacement and Construction

SOG-2 Street, Curb & Gutter Maintenance

SOG-3 Spill Prevention & Response

SOG-4 Catch Basin-Inlet & Outfall Maintenance

SOG-5 Street Sweeping

SOG-6 Landscaping & Mowing

SOG-7 Waste Collections

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Standard Operating Guidance for Storm Drain System Management

SOG-1 Street, Curb, Gutter and Storm Drain Replacement & Construction

Description

Construction of streets, curbs, and gutters has the potential to impact stormwater quality. The City of Daphne has an extensive amount of streets, curbs, gutters and storm drains. Replacement of these structures is normally contracted. Contractors, as well as City employees, must follow the standard operating guidance below in order to minimize to the maximum extent practical the potential for stormwater pollution.

General Guidance

- Obtain all applicable federal, state, and local permits for construction projects. The City's Environmental Programs will assist with obtaining permits.
 - The Alabama Department of Environmental Management's General permit applies to construction sites disturbing one acre or more, or less than one acre but part of a larger common plan of development. A larger common plan of development is defined as a contiguous area where multiple separate and distinct construction activities may be taking place at different time on different schedules under one plan.
 - A U.S. Army Corp of Engineers (USACE) Section 404 Permit may be needed if the work will be conducted in or impact water of the United States, including wetlands, washes, drainages, ditches, creeks, streams, and rivers.
 - Applicable sediment and erosion controls (Best Management Practices) shall be installed, such as inlet protection, silt fence, sediment traps, erosion control logs, check dams, and vehicle tracking control. Sediment and erosion controls will be installed and maintained in accordance with approved design criteria in the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*.
 - When saw cutting, ensure that no slurry enters the storm drain. Let the slurry dry, sweep it up, and properly dispose of the sweepings or vacuum while saw cutting.
 - Do not perform concrete or asphalt paving work during wet conditions whenever possible.
 - Monitor construction equipment for leaks and use drip pans as necessary.
 - Leaking material containers should be properly discarded and replaced.
 - Store materials in containers under cover when not in use and away from any storm drain inlet.
 - Wash out mixers, delivery trucks, or other equipment in the designated concrete washout area only.
 - Locate concrete washout, portable toilets, and material storage away from storm drain inlets.
 - Material stockpiles will not be stored in stormwater flow lines. Temporary sediment control will be used during temporary, short-term placement while work is actively occurring.

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SOG-1 Street, Curb, Gutter and Storm Drain Replacement & Construction

- Sweep or vacuum the roadway as needed, during construction and once construction is complete.
- Best management practices will be periodically inspected and maintained as necessary.
- Where practicable, non-structural controls will be used, such as phased construction, dust control, good housekeeping practices, and spill prevention and response guidance.

Concrete Work

- Ensure there is a concrete truck washout area available or require the contractor to wash out at the batch plant.
- Whenever possible, recycle concrete rubble; otherwise, dispose of it as solid waste.

Asphalt Work

- Control the placement of road base or asphalt used in embankments or shoulder backing; do not allow these materials to fall into any storm drain or watercourses.
- Whenever possible, recycle asphalt. If recycling is not possible, dispose of as solid waste.

Painting and Striping

- If possible, schedule painting and striping projects during dry weather.
- Use care to prevent splashing or spilling of any liquid material. Follow the Spill Prevention and Response guidance should a spill occur.

Emergency Repair and Replacement

Emergency Discharges are defined as situations in which it is not possible to implement all of the available BMPs due to the uncontrolled nature of the discharge. The primary focus during these events is to identify and discontinue the cause as soon as possible. Clean up of resulting sediment or other pollutants will be performed as soon as practicable following the emergency. Refer to the Spill Prevention and Response procedure for reporting requirements.

Sources

Colorado State University-Pueblo SOP: Stormwater

USEPA Menu of BMP: *Materials Management*,

cfpub.epa.gov/npdes/stormwater/menuofbmps/, accessed July 1, 2009.

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SOG-2 Street, Curb and Gutter Maintenance

Description

Street, curb, and gutter activities including concrete and asphalt installation, maintenance, repair, replacement, striping, and painting. All of the above have the potential to impact stormwater quality. The following standard operating guidance can be used to minimize this potential hazard.

General Guidance

- Protect storm drain inlets and drains with curb socks, rock berms, inlet protection, or drain covers prior to any maintenance activity.
- When saw cutting ensure that no slurry enters the storm drain. Allow the slurry to dry and sweep it up.
- DO NOT perform asphalt or concrete patching in wet conditions.
- Leaking material containers should either be repaired or discarded properly.
- Store materials in containers under cover when not in use, and away from storm drains.
- Monitor equipment for leaks and use drip pans as necessary.
- Sweep or vacuum the roadway when maintenance activities are complete.

Concrete Maintenance

- Ensure there is a concrete truck washout area available or require the contractor to wash out at the batch plant.
- Whenever possible, recycle concrete rubble; otherwise, dispose of it as solid waste.

Asphalt Maintenance

- Sweep to minimize sand and gravel from new asphalt from getting into storm drains, streets, and creeks.
- Do not allow asphaltic concrete grindings, pieces, or chunks used in embankments or shoulder backing to enter any storm drain or watercourses. Apply temporary perimeter controls. Install silt fence until the structure is stabilized or permanent controls are in place.
- Whenever possible, recycle broken asphalt. If impossible, dispose of as solid waste.
- Drainage inlet structures shall be covered with inlet protection during application of seal coat, tack coat, slurry seal, and/or fog seal.

Painting and Striping

- If possible, schedule painting and striping projects during dry weather.

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SOG-3 Spill Prevention & Response

Description

Due to the type of work and the materials involved, many activities carried out by the City of Daphne have the potential for accidental spills. The following standard operating guidance applies to spill prevention and response. **Contact the Fire Department at the City's police dispatch at (251)621-9100 and Environmental Programs at (251)621-3080, anytime a spill occurs**

General Guidance

Spill Prevention

- Keep work areas neat and well organized.
- Maintain Material Safety Data Sheet (MSDS) for each hazardous chemical.
- Provide tight fitting lids for all containers.
- Keep containers clearly labeled.
- Store containers, drums, and bags away from major traffic routes.
- Inspect storage containers regularly for signs of leaking or deterioration.
- IMMEDIATELY replace or repair leaking storage containers.
- Use care when transferring from one container to another.
- Use powered equipment or get assistance when moving materials to and from a storage area. Use care to prevent puncturing containers with the equipment.
- Do not wash down or hose down any outdoor work areas or trash/waste container storage areas except where wash water is captured and discharged into the sanitary sewer (if approved).
- Conduct periodic inspections to ensure that materials and equipment are being handled, disposed/recycled, and stored correctly.
- Provide adequate spill kits with sufficient equipment and supplies necessary for each work area where the potential for spills or leaks exists.
- Inspect each spill kit regularly and after each spill response. Replace any spent supplies or repair any equipment that is worn or not suitable for service.
- Stock adequate personal protective equipment.

Spill Response

In the event of a spill contact the Fire Department at (251) 621-9100 and Environmental Programs at (251) 621-3080, immediately.

Safety

Consider safety at all times. Anticipate and avoid all likely hazards. Never approach, contact, or sample an unknown substance. If a highly toxic or flammable substance is discovered, employees should leave the immediate area and contact the Fire Department. If there is any question about a substance, contact the appropriate identified response authority or other designated representative.

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SOG-3 Spill Prevention & Response

General Guidance for Spill Response

- Identify the material and volume spilled. Contact the appropriate identified response authority or other designated representative if you cannot identify the material and its properties.
- Refer to the MSDS to determine appropriate personal protective equipment, such as gloves and safety glasses and appropriate cleanup methods.
- Stop the leading edge of the spill. Block or divert the spill to avoid discharge to the storm sewer system and to minimize the area requiring cleanup.
- Determine the source of the spill and stop the spill at its source by closing a valve, plugging a leak, or setting a container upright. Transfer material from a damaged container.
- Clean up spills immediately to prevent spreading of wastes by wind, rain, and vehicle traffic and potential safety hazards.
- Use sand absorbents, socks, pillows, or pads to quickly capture spilled liquid and properly dispose of all clean-up materials. Use dry clean-up methods only.
- Complete all necessary reports.

Spill Reporting

- A spill of any chemical, oil, petroleum product, or sewage that enters waters of the state (that include surface water, ground water, and dry gullies and storm sewers leading to surface water) must be reported immediately to the National Response Center (NRC) at 1-(800)-424-8802 and the Alabama Department of Environmental Management (ADEM) (251) 450-3400.
- Release of a substance into a storm drain, or onto a parking lot or roadway as part of a storm sewer leading to surface water, is reportable. However, if the material can be contained and cleaned within the storm sewer system to the degree that a subsequent flow in the storm sewer will not flush the substance to waters of the State, it may not need to be reported.
- Contact the Fire Department and/or Environmental Programs who will handle the reporting.

Sources

Colorado State University-Pueblo SOP: Stormwater

USEPA Menu of BMP: *Materials Management*,

cfpub.epa.gov/npdes/stormwater/menuofbmps/, accessed July 1, 2009.

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SOG-4 Stormwater Catch Basin/Inlet and Outfall Maintenance

Description

The City of Daphne storm drainage system functions to collect and convey stormwater to receiving streams during storm events to prevent flooding. The system consists of improved and unimproved drainage channels, culverts, bridges, gutters, ditches, swales, storm drain inlets and outfalls. Maintenance of the system is necessary to ensure proper function. Daphne maintains its extensive stormwater conveyance (drainage) system. Many storm drain inlets and outfalls collect sediments and other debris transported by the stormwater system. These storm drain structures are cleaned on an as need basis. The City has a work order system which tracks the activities.

General Guidance

- Prioritize drainage structures for routine maintenance on a specified frequency based on need.
- Access the inlet or outfall and visually evaluate the condition.
- If the catch basin/inlet or outfall is not a permitted confined space proceed with cleaning debris using a shovel.
- Put all debris into a bag or truck bed and properly dispose of at Public Works facility. Trash will go to the landfill. Sediment will be stored at the Public Works Facility. Any potential hazardous waste will be handled in accordance with the Spill Prevention and Response SOG-3.
- Replace the storm drain lid and note any problems that need further maintenance.
- Report additional problems to supervisor.

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SOG-5 Street Sweeping

Description

City streets and parking lots can be a significant source of stormwater pollutants. The City of Daphne has a full time street sweeping program. The street sweeper removes sediment, leaves and trash from City streets. If not handled properly, operation and maintenance of the street sweeping program can become a source of pollution. This SOG has best management practices intended to control sweeping, collection and disposal of street sweeping wastes and to help keep them out of stormwater.

General Guidance

- Operate sweeper according to manufactures' guidance.
- Use only clean and properly maintained equipment.
- Use minimal water before sweeping.
- Any spill should be immediately contained and treated. Refer to the Spill Prevention and Response SOG-3 for potential hazardous spills.
- Decanted liquid wastes with very little solids or oil sheen can be disposed of in the sanitary sewer.
- Solids can be transported to the Public Works Facility where they can be discharged in the proper location for waste to dry out and liquid to evaporate or infiltrate.

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SOG-6 Landscaping & Mowing

Description

City streets and properties can be a significant source of stormwater pollutants. The City of Daphne has full time mowing and landscaping personnel. If not handled properly, operation and maintenance of the mowing and landscaping departments can become a source of pollution. This SOG has best management practices intended to minimize potential for pollutants entering the storm drainage system from City mowing, and landscaping. The purpose of this SOG is to prevent contamination of stormwater by minimizing potential through our mowing and landscaping programs.

General Guidance

- Plant vegetation that needs minimal amounts of care (native species)
- Implement landscaping design and techniques that minimize water usage
- Water at a minimum to supplement rain fall
- If feasible, use drip irrigation
- Minimize fertilizers application, use slow release fertilizers
- Mow with blades set high, leave grass clipping on lawn
- Use compost or natural (organic) fertilizers

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SOG-7 Waste Collections

Description

The City of Daphne performs waste collections for its residents. The City owns a fleet of trash and recycling trucks. If not handled properly, operation and maintenance of the waste collection department can become a source of pollution. This SOG has best management practices intended to minimize potential for pollutants entering the storm drainage system from City's waste collections program. The purpose of this SOG is to prevent contamination of stormwater by minimizing potential through our waste collection program.

- Municipal waste: all City facilities are required by ordinance to recycle all applicable waste; all facilities are provided with dumpsters and are emptied weekly.
- White goods are picked up or delivered to the City's Public Works Facility
- Electronics are not picked up by City personnel; drop off by citizens at Public Work's Main Facility only.
- Used motor or cooking oil not picked up by City personnel; motor oil dropped off at Public Works Barn during working hours and cooking oil dropped off at Public Works Main Facility or Daphne Utilities drop off stations.

General Guidance

Potential for stormwater pollution from waste collections is minimized through the following measures:

- Trash trucks should be cleaned, and maintained as needed. Wash water from trucks should be disposed of through the sanitary sewer system.
- During weekly trash pickup; proper care should be taken to ensure that trash does not blow from trash receptacles.
- No hazardous waste (paints, pesticides, herbicides, etc.) shall be collected at any time.
- No tires shall be collected at any time.
- Dropped-off electronic equipment and white goods should be stored inside a building.
- Recyclables should be kept in a building and picked up on an as need basis.
- Used motor oil storage tanks should be inspected and emptied regularly.