



BEST MANAGEMENT PRACTICES /STANDARD OPERATIONS MANUAL FOR STORM WATER POLLUTION PREVENTION AT COUNTY OPERATIONS

Prepared for
Collin County
Phase II TPDES
Storm Water Management Program

BMP/SO Manual for GH-2 Annual Pollution Prevention Training



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Collin County Best Management Practices / Standard Operations Manual

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LIST OF ACRONYMS

AST	Aboveground Storage Tack
BMP	Best Management Practice
CFR	Code of Federal Regulations
MS4	Municipal Separate Storm Sewer System
SDS	Safety Data Sheet (formerly known as MSDS, Material Safety Data Sheet)
SO	Standard Operations
SPCC	Spill Prevention, Control and Countermeasures
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
UST	Underground Storage Tank

INTRODUCTION

1.1 PURPOSE AND ORGANIZATION OF THIS MANUAL

This manual has been prepared for use by County employees and facility managers of Collin County, Texas. Implementing these standard procedures into the day-to-day operation of County facilities will help to keep the water ways clean and also serve to keep the County in compliance with the Texas Commission for Environmental Quality's (TCEQ) storm water regulations.

This document is intended as a handbook of "standard operations" (SO) to be used in performing day-to-day tasks at County facilities. While many SO manuals are extremely detailed and should be followed precisely, this document allows the users some flexibility in customizing these procedures to their specific situations and needs.

This manual describes both preventative BMPs and response BMPs. The preventative BMPs are first described with the intention of preventing discharges of potential pollutants to waterways. The response controls are then described to provide guidance on how to best manage a variety of discharges when and if they occur and include such BMPs as silt fence, temporary booms and dikes and oil/water separators.

Where practical, we recommend that these measures be incorporated into existing facility procedures and documentation. This allows "one stop shopping" for the employee seeking reference materials, and promotes a holistic approach to employee education, safety, liability management, and environmental protection.

1.2 WHY SHOULD I COMPLY WITH THESE RECOMMENDATIONS?

The procedures and practices outlined in this manual are part of the County's compliance requirements for the Texas Pollution Discharge Elimination System (TPDES). To the maximum extent practicable, County activities that have the potential to affect the municipal separate storm sewer system (MS4) *must* follow these procedures in order to comply with the TCEQ's storm water regulations.

Storm water regulations can be subject to broad and subjective interpretation. Implementation of these measures allows for a defensible position should the County's storm water policies ever fall under TCEQ scrutiny.

Just as importantly, the proper implementation of these measures will have positive impacts on Collin County's water quality and reduce the risks of contamination of local ponds and streams.

1.3 FUTURE REVISIONS TO THIS MANUAL



Processes and procedures at County facilities are certain to change over time. In addition, the technology behind these BMPs will also become more advanced. As these new technologies become available, or as existing technologies become more affordable, this manual will need to be updated accordingly. Digital copies of this manual have been provided to the County to simplify this revision process.



This manual was first produced in April 2011 and was updated in December 2014, December 2016, December 2017, and December 2018, and August 2025 per requirements of the County's SWMP BMP for Storm Water Pollution Prevention Training. This manual along with the accompanying PowerPoint presentation is to be used for annual pollution prevention training for County departments. The GH-2 BMP requires that the County review and update this manual on an annual basis and update the training curriculum accordingly.



Both the BMP/SO manual and training curriculum have been provided in digital format to facilitate the annual review and update of these documents.



The County is currently in its fourth permit cycle which is based on the revised permit that was issued on August 15, 2024.



PREVENTATIVE BMPs

	<h3>GOOD HOUSEKEEPING</h3>	P-1
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>MED Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>MED Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>ALL</p>	<p>DEVELOPING A PROCESS</p> <ul style="list-style-type: none"> • Designate responsible employees for the cleaning and inspection of the facility. Having different employees perform each task allows for a good process of checks and balances. A rotation system can be used to permit a “fresh set of eyes” looking for problem areas and will also promote a sense of stewardship among the entire staff. • Choose a dedicated storage area for all materials. Keep containers covered. • Encourage employees to maintain a clean work environment. Properly discard used paper and trash. • Designate assigned parking spots for employees to help identify leaky vehicles. Encourage employees to fix vehicles which pose a pollution risk. <p>INSPECTION</p> <ul style="list-style-type: none"> • Clearly label all containers. Keep all Safety Data Sheets (SDSs) filed in a common, easy to access location. • Visually check all material storage areas weekly for evidence of leaks. Verify that Materials Storage BMPs are being followed. Document monthly on fire department’s checklist. • Inspect parking lots for evidence of leaky vehicles. Inspect dumpsters weekly. Check the area for oily residue or other evidence of illegal dumping. Keep trash container lids closed. <p>CLEANING</p> <ul style="list-style-type: none"> • Sweep or vacuum pavement areas in lieu of hosing down or washing with detergents. Clean spills immediately. • Control litter by sweeping and picking up litter outside the facility on a regular basis. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Implementation is almost universal. Housekeeping BMPs involve continuous practice of good habits. • Housekeeping is especially important in high traffic and material storage areas. 		

	LOG BOOKS	P-2														
<p>POLLUTANT CONTROL</p> <p>N/A Sediment</p> <p>N/A Oil & Grease</p> <p>N/A Nutrients/Toxics</p> <p>N/A Floatables</p> <p>N/A Other Wastes</p>																
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center</p> <p>Farmersville Facility</p>	<p>It is important to keep records of the various activities that have the potential to impact the municipal storm sewer system. These can be an important resource when trying to track the source of a contaminant that has been discovered downstream of a municipal facility.</p> <ul style="list-style-type: none"> • Manuals that already exist for these activities should be amended to include the information listed in the respective BMP. Any additional information that may help track stormwater quality may also be added. • For all activities, note whether or not any structural BMPs have been deployed so that future maintenance needs can be identified. • Periodically remove old pages and file in a secure location for safe keeping. • Keep in a designated, accessible place. Don't file away or keep in a location that is out of sight. <p>Logbooks are recommended for the following activities:</p> <table border="0" style="width: 100%;"> <tr> <td>Roadway Cleaning</td> <td>Oil/Water Separator Maintenance</td> </tr> <tr> <td>Chemical Storage and Transfer</td> <td>Hazardous Materials Storage</td> </tr> <tr> <td>Channel Maintenance (Daily Logs)</td> <td>Pesticide / Herbicide Application</td> </tr> <tr> <td>Materials Handling and Storage</td> <td>Detention Facility Maintenance</td> </tr> <tr> <td>Vehicle Maintenance</td> <td>Fuel Tank Spill Control</td> </tr> <tr> <td>Vehicle Fueling</td> <td>Catch Basin Cleaning</td> </tr> <tr> <td>Fire Fighting Foam Training</td> <td>Discharge of Water</td> </tr> </table>		Roadway Cleaning	Oil/Water Separator Maintenance	Chemical Storage and Transfer	Hazardous Materials Storage	Channel Maintenance (Daily Logs)	Pesticide / Herbicide Application	Materials Handling and Storage	Detention Facility Maintenance	Vehicle Maintenance	Fuel Tank Spill Control	Vehicle Fueling	Catch Basin Cleaning	Fire Fighting Foam Training	Discharge of Water
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Fire Fighting Foam Training	Discharge of Water															
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Refer to table at right 																

	<h2>CHEMICAL STORAGE</h2>		P-3
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>HI Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>	<div style="display: flex; justify-content: space-around;">   </div> <p>Hazardous materials such as fertilizers, pesticides, cleaning solutions, paint/paint products, and automotive products, all require proper storage and handling. The following recommendations, in conjunction with Good Housekeeping will help minimize pollutant risks:</p>		
<p>APPLICABLE FACILITIES</p> <p>All</p>	<p>PROCESS</p> <ul style="list-style-type: none"> • Identify and remove chemicals that will not be used or are out of date and dispose of properly. • Routinely inspect containers for leaks. • Place permanent identifiers on any unlabeled chemical containers. • Keep chemical inventory at a minimum. Ordering from sources with fast delivery times will allow a smaller amount of chemicals to be stored on site at any given time. 		
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Storage of chemicals such as automotive oil, adhesives, solvents, batteries, fungicides, herbicides, and paint thinner 	<p>STORAGE OF CHEMICALS</p> <ul style="list-style-type: none"> • Choose a designated storage area for bulk chemicals. Ideally, the area should be paved with concrete and secured to prevent vandalism or unauthorized access. Concrete should be smooth, free of cracks and drain to an area that can be controlled in the event of a spill. • Storage drums should be elevated on pallets to prevent corrosion, allow inspection for leaks and allow runoff to pass underneath without contacting the drums. • Place drums and pallets in secondary containment devices. • Place drums under shed or lean-to when possible. At a minimum, cover exposed drums with a tarp and tie down securely. If drums must be left uncovered, store them at an angle to reduce ponding of water and corrosion. • Note any leaks and report to a supervisor. • Ensure adequate spill response materials (i.e. absorbent; booms; personal protective gear) are available at all times. 		

	TRANSFERRING CHEMICALS	P-4
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>HI Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>ALL</p>	<p>GENERAL</p> <ul style="list-style-type: none"> • Before transferring any chemicals that might be considered hazardous to the environment or the storm sewer system, be sure that you are properly trained in the normal operation, safety precautions, and emergency procedures when moving chemicals. • Review SDS for chemical being transferred taking note any hazards or protective equipment required. • Transfer chemicals within an impoundment area when possible. • Verify that you have proper spill response equipment (i.e. absorbent, booms, personal protective gear) available at all times. • Use drip pans. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Prior to transferring chemicals by hand or with equipment. • Prior to operating valves on closed systems. 	<p>FOR CLOSED SYSTEMS</p> <ul style="list-style-type: none"> • Make yourself aware whether or not the system you are using has any overflow protection such as automatic pump shutoffs or alarms. • Prior to making the transfer, conduct a brief inspection to check for pipe corrosion, leaks, or damage to the system. Pay special attention to areas of vehicular traffic. • Do not operate any valves that are not clearly labeled. 	

	SOILS AND AGGREGATE STOCKPILING	P-5
<p>POLLUTANT CONTROL</p> <p>HI Sediment MED Oil & Grease MED Nutrients/Toxics LO Floatables MED Other Wastes</p>	 <ul style="list-style-type: none"> • Before storing or transferring any earthwork or aggregates, ensure that you have been properly trained on the equipment and material you will be handling. • When choosing a stockpile location, allow for room to access the stockpile from the upslope side, so that erosion measures may be placed to enclose the pile on the downhill side. • For stockpiles that cannot be impounded, covered, or placed on paved areas, choose a location from which the runoff is concentrated to a single point. Deploy appropriate erosion control BMPs such as check dams or silt fence between this concentration point and the nearest storm drain or drainage feature. • When possible, place materials under a shed, lean-to or other covered area. • When possible for medium sized stockpiles or short-term storage, cover the stockpiles with heavy tarps. • Note in the logbook the date, location and material delivered, transferred, or removed. • Never stockpile material that is considered hazardous. • Install erosion control socks around stockpiles areas to minimize off-site migration of material. • Inspect stockpile areas quarterly. • Replace damaged or degraded socks as necessary. 	
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center Farmersville Facility Weston Facility Copeville Facility</p>		
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • These measures should be implemented anytime stockpiles of earthwork or aggregate must be stored. • Storage measures should also be considered when determining new locations for stockpiles. 		



HAZARDOUS MATERIALS DISPOSAL

P-6

POLLUTANT CONTROL

LO	Sediment
HI	Oil & Grease
HI	Nutrients/Toxics
LO	Floatables
MED	Other Wastes

APPLICABLE FACILITIES



Public Works Service Center
Farmersville Facility

WHEN TO IMPLEMENT


- All hazardous material sources (that cannot be disposed of in a landfill) must have a collection procedure or dropoff location.







- Waste materials such as fertilizers, pesticides, cleaning solutions, paint/paint products, automotive products, and pool chemicals require proper disposal. Keep in protected area until a regularly scheduled pick-up.
- Leave used oil at the designated drop off or pick-up location. Ensure that the area is covered and protected by secondary spill containment.
- Do not allow waste oil to accumulate in work areas. Label waste containers properly and place in a designated covered storage area for disposal.



	<h2>FUEL TANK SPILL CONTROL</h2>	P-7
<p>POLLUTANT CONTROL</p> <p>LO Sediment HI Oil & Grease HI Nutrients/Toxics LO Floatables MED Other Wastes</p>	<div style="display: flex; justify-content: space-around;">   </div>	
<p>APPLICABLE FACILITIES Public Works Service Center Farmersville Facility</p>	<ul style="list-style-type: none"> • Periodically inspect the perimeter of storage tanks for evidence of spillage or leaks. Strong odors or stained soil should be reported to management. • Be familiar with the facility’s Spill Prevention, Control and Countermeasures (SPCC) plan, if applicable. • Any employee working around spillable materials, or having responsibilities during a spill event should be familiar with the SPCC plan • First, assess the spill volume, and the hazard level of the material(s) involved. • Attempt to contain the spill without creating a dangerous or unsafe situation. • If the spill is determined to be large or hazardous: <ul style="list-style-type: none"> - The contact in Collin County is: 911 - Evacuate the area if appropriate. • If the spill is determined by a qualified individual not to be hazardous: <ul style="list-style-type: none"> - For a dry spill during wet weather, cover the material with plastic sheeting until it can be removed. Use dry cleanup methods as much as possible. Minimize the use of water during the final cleanup phase. - If the spill is a liquid, observe the slope of the ground that the spill has occurred on and determine the direction(s) of flow. - Deploy spill containment booms at the most effective locations. Refer to “Temporary Booms and Dikes” BMP. - Follow the recommended cleanup and disposal instructions as set forth in the Safety Data Sheet and facility SPCC. In general, use absorbent material to clean up liquid spills of a few gallons or less. - Properly dispose of absorbent material. • Document the spill and all clean up and disposal activities. If the facility has a SWPPP or SPCC Plan, file the documents in these plan binders. 	
<p>WHEN TO IMPLEMENT</p> <p>Spill control should be a constant practice. Additional caution should be observed when filling tanks or transferring chemicals (also refer to “Transferring Chemicals”).</p>		


	VEHICLE AND EQUIPMENT MAINTENANCE	P-8
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>HI Oil & Grease</p> <p>LO Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center Farmersville Facility</p>	<p>GENERAL</p> <ul style="list-style-type: none"> • Conduct maintenance work indoors when possible and only at designated County facilities. • Before beginning, place a drip pan under the part being worked on. • Do not store mechanical parts where they can be exposed to precipitation. • Pre-trip/post-trip vehicle and equipment inspection logs shall be maintained and reviewed to determine maintenance needs. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Routine fluid checks and refills. • Any repairs that involve fluids. • Testing of engines or machinery after repair. 	<p>BATTERY CHANGING</p> <ul style="list-style-type: none"> • Store used batteries in a covered, acid-proof pan deep enough to hold the contents of at least one battery. <p>OIL CHANGING / FLUID CHANGE</p> <ul style="list-style-type: none"> • Before beginning, verify that the used oil storage container is not too full to accommodate the oil which will be disposed of. Check the designated storage area to see if there is adequate spill-absorbing material in the event of an uncontrolled spill. • Place a drip pan under the part being worked on. • Properly package and dispose of oil, oil filter and used absorbent material. • Inspect the vehicle within 1 hour for evidence of leaks. <p>PARTS CLEANING AND DEGREASING</p> <ul style="list-style-type: none"> • Dispose of used cleaning fluids properly. • Use detergent based or water-based cleaning systems instead of petroleum hydrocarbon-based solvents and degreasers, if possible. <p>If the facility is equipped with an oil/grit separator, use pressure washing or steam cleaning as an alternative to solvents.</p>	



	<h2>VEHICLE AND EQUIPMENT WASHING</h2>	<p>P-9</p>
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>HI Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center</p>	<ul style="list-style-type: none"> • If vehicle washing cannot occur at the County wash facility at the Public Works Service Center, car washing should be conducted in any available wash center with pretreatment of the discharged wash water prior to discharge to the sanitary sewer. • Use only the designated areas for washing of vehicles. • Choose a detergent that is low in phosphates and is advertised as “biodegradable”. • Wash waters should be captured and disposed of in the municipal sanitary sewer system after pretreatment, which may be a sand trap or an oil water separator. • Choose low-humidity days to conduct washing activities. • Maintain sand/grit trap. • Record sand trap maintenance on log sheet. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • These BMPs should be implemented whenever vehicles or equipment are washed, whether or not detergents or degreasers are used. • Also refer to “Vehicle Maintenance”. 		

	VEHICLE AND EQUIPMENT FUELING	P-10
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>HI Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center</p> <p>Farmersville Facility</p>		<ul style="list-style-type: none"> • Be aware of proper spill control procedures. Refer to the facility’s Spill Prevention Control and Countermeasures plan for complete spill management procedures. • Prior to refilling the vehicle or dispensing fuel to vehicles, verify that spill response materials are available for immediate access such as absorbent booms and dry rags or shop towels. • Have adequate communication or a second person nearby when fueling. In the event of an uncontrolled spill, one person can manage the source of the spill while another deploys containment devices and/or requests assistance. • Fuel overflows are the largest source of spills. Minimize distractions while fueling. Monitor fuel levels carefully during the entire fill process. • Don’t “top off” fuel tanks--This will often result in spillage. • When cleaning up spills, use a rag, mop or disposable towel. Don’t hose down or wash the fueling area. • Inspect fueling area for spillage and report or clean up any spills. If outside, inspect the path of storm water for any sheen or petroleum odors. • Before and after operating the equipment, make a note in the equipment inspection log. • Maintain leak detection system.
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Fueling of County vehicles, earthmoving equipment, lawn and maintenance equipment. • Guidelines should also be followed for stationary generators and storage tanks. • Any time engine fluids are topped off. 		



	<p>VEHICLE AND EQUIPMENT STORAGE</p>	<p>P-11</p>
<p>POLLUTANT CONTROL</p> <p>LO Sediment HI Oil & Grease HI Nutrients/Toxics LO Floatables MED Other Wastes</p>		
<p>APPLICABLE FACILITIES Public Works Service Center Farmersville Facility</p>	<ul style="list-style-type: none"> • Inspect drain pans and area under cars periodically to identify large leaks. Frequently drain collected liquids in drain pans and dispose of properly. • Keep hoods down or otherwise cover exposed mechanical parts to avoid exposure to precipitation. • Keep adequate supplies of spill absorbing material and disposable towels to clean up after spills. • Inspect vehicles daily and report in log only when leaking. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Should be followed for all vehicles that are stored for more than 24 hours. 		


	<h2>MOWING AND TRIMMING</h2>	<p>P-12</p>
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>LO Oil & Grease</p> <p>MED Nutrients/Toxics</p> <p>MED Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>ALL</p>	<p>PROCESS IMPLEMENTATION</p> <ul style="list-style-type: none"> • Avoid areas such as steep embankments, channels, or unimproved areas. • Blow clippings onto grassed areas. • Develop a schedule for routine mowing. The goal is to mow an area as frequently as possible or not at all. Establish an efficient mowing schedule based on historical data. • Avoid mowing prior to large storm events. • Always fuel equipment under a covered area when practical. Fueling of lawn mowers, edgers and string trimmers is a common source of spillage. • Use proper containers with spill spouts installed, and do not overfill. • Does not apply to mowing/landscape maintenance contractors. <p>MOWING</p> <ul style="list-style-type: none"> • Before mowing any area, inspect for trash such as paper cups or plastic bags. Remove any pollutants which might fall in the path of the mower. • As a general rule, mulch in flat areas and collect clippings on steep slopes or in channels. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Most aspects can be implemented every time a vegetated area is mowed either by hand or using tractors. 		

	PESTICIDE / HERBICIDE APPLICATION	P-13
POLLUTANT CONTROL LO Sediment LO Oil & Grease HI Nutrients/Toxics LO Floatables MED Other Wastes	<div data-bbox="846 300 1276 617" data-label="Image"> </div> <ul style="list-style-type: none"> • Prior to beginning, ensure that you have proper training for all the equipment and chemicals that you will be using. Review the products packaging, instructions, and Safety Data Sheet (SDS), if applicable. • Ensure all SDSs are accessible and can be easily reviewed. • Select a herbicide or pesticide to use. Experiment with different types, beginning with the minimum amount of potency that is effective. • Note the existing moisture levels on the ground or foliage to be treated and compare to any manufacturer's recommendations. Apply only when the correct moisture levels exist. • Check the local weather forecast. Apply only during calm conditions when no precipitation is expected. • Follow manufacturer recommendations regarding any mixing, diluting and application. Don't mix more than is necessary for the immediate job. • Check manufacturer recommendations regarding plant or insect life-cycles. When possible, apply only at prescribed times of maximum effectiveness. • Before filling the applicator, adjust it to dispense the proper amount of material. • When applying, avoid throwing material within close proximity (100' or less) of streams or drainage structures. • When application is complete, store unused chemicals properly. • Follow package guidelines for disposal of excess material, if necessary. • Capture all water used to clean the equipment for re-use in diluting the next batch. Ensure the container is properly labeled and stored. • Record in the logbook the date and time of application, chemical used, area of application, current weather conditions, and expected weather conditions. • Maintain certified applicator licensed staff. • Not applicable to contracted activities. 	
APPLICABLE FACILITIES ALL		
WHEN TO IMPLEMENT <ul style="list-style-type: none"> • Can be implemented to some degree for all application activities. • In most cases, pesticide or herbicide effectiveness can be increased by following this BMP. 		



	FERTILIZER APPLICATION	P-14
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>LO Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>ALL</p>		
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Can be implemented to some degree for all application activities. • In most cases, effectiveness can be increased by following this BMP. 		




	MULCHING	P-15
<p>POLLUTANT CONTROL</p> <p>HI Sediment</p> <p>HI Oil & Grease</p> <p>MED Nutrients/Toxics</p> <p>LO Floatables</p> <p>LO Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>ALL</p>		
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> Flat areas and depressions. 	<p>APPLICATION</p> <ul style="list-style-type: none"> Mulch can be placed in areas of exposed soil as an alternative to temporary vegetation or environmental mats. Mulch can be placed in low flat areas or retention ponds as a method of removing storm water pollutants (bioretention). This organic layer provides an environment conducive to the microorganisms which degrade petroleum-based products. Do not utilize mulch for bioretention or erosion control in areas with slopes, unstable soil, or shallow water tables. Mulch should be aged for 6 months and applied uniformly over the site. Apply immediately after trees and shrubs are planted, as the final step. Depth should be 3" or less to allow proper aeration of the underlying soil. <p>MAINTENANCE</p> <ul style="list-style-type: none"> Prune and weed the mulched area as necessary to maintain the treatment areas appearance. Replace mulch in areas where erosion is evident. Mulch replacement may be necessary every two to three years to maintain treatment effectiveness. This should be done during the spring. Periodically test the pH of the organic layer and underlying soils. To control acidity resulting from precipitation and runoff, the addition of crushed limestone may be necessary. Aerate the organic layer periodically. 	

	DISCHARGE OF WATER	P-16
<p>POLLUTANT CONTROL</p> <p>MED Sediment</p> <p>LO Oil & Grease</p> <p>HI Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center Farmersville Facility Weston Facility Copeville Facility</p>	<ul style="list-style-type: none"> • Be aware of the drainage path and underground piping that will carry or could carry the water away after discharging. • Do not discharge water that has been treated with algaecides such as copper or silver. Instead, discharge to the municipal sanitary sewer system. • Avoid discharging chlorinated water directly to a drainage feature or storm sewer. • If large amounts of water must be discharged directly to a natural or man-made channel, dam up the channel far enough downstream to contain the entire discharge. Provide a small, valved pipe to allow a slow, measured discharge from the dammed area. • Dechlorinate hyper-chlorinated water prior to discharging into any storm sewer or drainage feature. Hyper-chlorinated (> 50 mg/L) water is commonly used to sanitize potable water lines prior to use. Hyper-chlorinated flush water must be dechlorinated to a level that will not adversely affect aquatic life. TCEQ recommends a Total Residual Chlorine of less than 4 mg/L. • When available, discharge water into low spots in open areas that do not drain to any surface waters or drainage structures. • During the draining process, periodically inspect the area of discharge for evidence of soil erosion. If erosion is observed, install check dams, hay bales, and/or silt fence, as necessary. 	
<p>WHEN TO IMPLEMENT</p> <p>Implement this BMP prior to any discharge of water, including:</p> <ul style="list-style-type: none"> • Hyper-chlorinated flush water • Treated or potable water 		



	CONCRETE WASTE MANAGEMENT	P-17
<p>POLLUTANT CONTROL</p> <p>MED Sediment</p> <p>LO Oil & Grease</p> <p>MED Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center Farmersville Facility Weston Facility Copeville Facility</p>	<p>Prior to cutting or placing concrete, install berms, bales, or other appropriate BMPs to control runoff which might otherwise flow into a stream or drainage structure.</p> <p>FRESH CONCRETE</p> <ul style="list-style-type: none"> • Don't mix more concrete than will be necessary to complete the job. • Concrete truck chutes, pumps, and hand tools should be washed out in specified washout areas or into formed areas awaiting installation of concrete or asphalt. Cement washwater can be recycled by pumping it back into cement mixers for reuse. • Unused concrete remaining in the truck and pump should be returned to the originating batch plant. • When no formed areas are available for rinsing, washwater and leftover concrete should be captured and placed in a lined container. Dispose of contained concrete in a manner that does not cause contamination. • Containers should be checked daily for holes in the liner during concrete pours and repaired when leaks are discovered. • Cut concrete using a dry method. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Placing fresh concrete. • Sawing, coring, grinding or roughening cured concrete. 	<p>CURED CONCRETE</p> <ul style="list-style-type: none"> • Slurry and cuttings should be vacuumed or swept up during cutting and surfacing operations and disposed of properly. • Large pieces of demolished concrete should be recycled at a crushing company. Small amounts can be disposed of in the trash. • Slurry or process water should not drain to any natural or constructed drainage conveyance and should be disposed of properly. Never hose down pavement to clean up slurry or cuttings. • Cleaning waste material and demolition debris should be handled and disposed of in a manner that does not cause contamination of water. If the area is swept with a pick-up sweeper, the material must be disposed of properly. 	



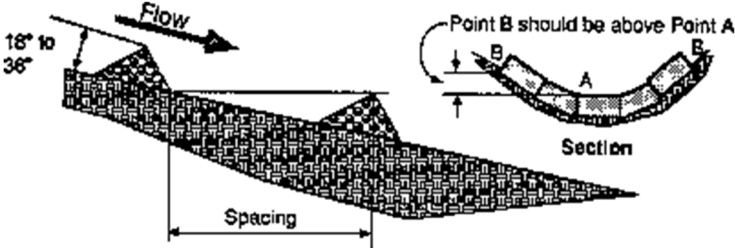
RESPONSE BMPs

	TEMPORARY BOOMS AND DIKES	R-1
<p>POLLUTANT CONTROL</p> <p>LO Sediment HI Oil & Grease MED Nutrients/Toxics LO Floatables LO Other Wastes</p>		
<p>APPLICABLE FACILITIES</p> <p>Public Works Service Center Farmersville Facility Weston Facility Copeville Facility</p>	<p>When a high-concentration spill occurs from a container, a portable boom/dike should be deployed to contain the spill or keep it from entering the municipal storm sewer system. Refer to the facility SPCC manual for general spill control procedures.</p> <ul style="list-style-type: none"> • If the liquid is spilling onto high ground and flow is escaping in several directions or toward multiple inlets, deploy the booms around the source of the leak. • If the spill volume is too large for the number of booms available, or if the spillage is draining to a single inlet, deploy the booms around the inlet. • If the material is still leaking from the source, shut off or reduce the spillage as much as possible. • Bag or barrel the materials and label with the pollutant or suspected source. Store in a designated waste management area and dispose of properly. • Also refer to “Fuel Tank Spill Control” on page 11. • In the event of an uncontrolled discharge of oil or fuel, install a water-filled diversion dike (see New Pig Catalog # PLR225) in all ditches inside the facility to retain fuel/oil in the facility. Refer to site specific SPCC plans for locations of ditches. • Once spill have been contained with dike, use absorbent materials in spill kits to absorb spilled materials. • Clean concrete ditches with absorbent cleaners designed for such tasks. • For earthen ditches, remove affected soils and place in spill containment barrels for disposal by authorized disposal company. • Alternately, the contaminated soil and concrete ditches may be remediated with bioactive solutions designed to remediate spills such as Liquid Remediate™ Cleaning Agent by New Pig, Catalog #CLN352. 	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Any spill that is flowing, especially over pavement or smooth impervious surfaces. • Any spill into water that is not flowing. • In the event of an uncontrolled spill when filling ASTs or USTs to comply with SPCC provisions of 40CFR112.8(b)(4). 		


	SPILL KIT	R-2	
<p>POLLUTANT CONTROL</p> <p>LO Sediment</p> <p>HI Oil & Grease</p> <p>MED Nutrients/Toxics</p> <p>LO Floatables</p> <p>LO Other Wastes</p>	<div style="text-align: center;">   </div>		
<p>APPLICABLE FACILITIES</p> <p>ALL</p>		<p>Have spill kits on hand in areas where hazardous materials are used. Preparation of a spill kit consolidates spill control materials and personal protective equipment (PPE) in one location. Tailor each spill kit to meet the needs of each work area. PPE must be selected based on the hazardous materials used. Store kits in a location where individuals can quickly gain access to items needed in the event of a spill.</p>	
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> To clean up any chemical spill particularly hazardous materials 		<p>Basic Spill Kit Supplies</p> <p>Container - Obtain a chemical-resistant container to hold the kit contents such as a 5-gallon plastic bucket or Rubbermaid™ tub.</p> <p><u>Personal Protective Equipment (minimum)</u></p> <ul style="list-style-type: none"> 2 pairs of chemical splash goggles 2 pairs of chemical-resistant gloves <p><u>Absorption Materials</u></p> <p>Include universal absorbents such as commercial spill pads, pillows, spill socks, and loose absorbents.</p> <p><u>Cleanup Tools and Materials</u></p> <ul style="list-style-type: none"> Plastic scoop, dustpan, or shovel Plastic broom or brush for solids 3-5 thick, heavy duty waste bags Sealing tape Detergent or general cleaner for final cleanup. 	

CONSTRUCTION BMPs



	ROADWORK AND PAVING	C-1
POLLUTANT CONTROL MED Sediment LO Oil & Grease MED Nutrients/Toxics LO Floatables MED Other Wastes		
APPLICABLE FACILITIES All County Roads particularly on bridges and near waterways.	<p><u>General Practices:</u></p> <ol style="list-style-type: none"> 1. Schedule roadwork and paving during dry weather. 2. Keep materials out of the rain. Store them under cover with temporary roofs or plastic sheets, protected from rainfall, runoff and wind. 3. Develop and implement erosion and sediment control plans for embankments. 4. Use as little water as possible for dust control to avoid excess runoff of sediment. 	
WHEN TO IMPLEMENT <ul style="list-style-type: none"> • Performing roadwork and paving 	<p><u>Vehicle & Equipment Maintenance:</u></p> <ol style="list-style-type: none"> 1. Maintain all vehicles and heavy equipment. Inspect frequently for leaks. 2. Conduct all vehicle/equipment maintenance and refueling at locations away from storm drains. 3. Perform major maintenance, repair jobs and vehicle/equipment washing off- site. 4. Use gravel approaches where truck traffic is frequent to reduce soil compaction and limit the tracking of sediment into streets. 5. Use drip pans or drop cloths to catch drips and spills. 6. Do not use diesel oil to lubricate equipment or parts. <p><u>During Construction:</u></p> <ol style="list-style-type: none"> 1. Avoid paving and seal coating in wet weather, or when rain is forecast before fresh pavement will have time to cure. 2. Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal etc. 3. Use check dams, ditches or berms to divert runoff around excavations. 4. Never wash excess material from exposed aggregate concrete or similar treatments into a street or storm drain. Collect and recycle or dispose to designated wash out. 5. Cover stockpiles and other construction materials with plastic tarps. Protect from rainfall and runoff. 	


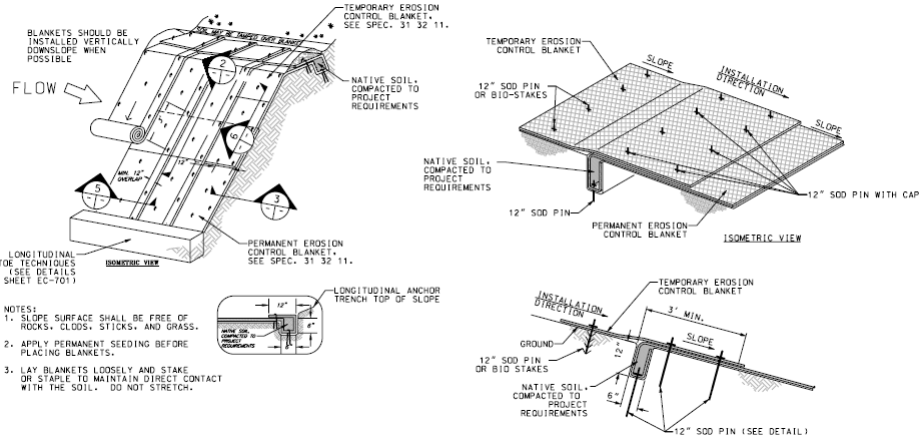
	CHECK DAMS	C-2
<p>POLLUTANT CONTROL</p> <p>HI Sediment</p> <p>LO Oil & Grease</p> <p>LO Nutrients/Toxics</p> <p>LO Floatables</p> <p>MED Other Wastes</p>	 	
<p>APPLICABLE FACILITIES</p> <p>Any location requiring temporary erosion control</p>	<p>DESCRIPTION</p> <p>A check dam is a small temporary or permanent barrier constructed across a drainage ditch, swale, or channel to reduce the velocity of concentrated flows. Check dams are constructed of straw bales, logs, stone, pea gravel-filled sandbags, or earth berms. Reduced velocity reduces the potential for erosion in the channel and allows time for some deposition of sediment.</p> <p>INSTALLATION</p> <ul style="list-style-type: none"> • Check dams shall be placed at a distance and height to allow small pools to form between each one. • Typically, the dam height should be between 18 and 36 inches. On steep slopes, the dams should be spaced such that the top of the downstream dam should be at the same elevation as the toe of the upstream dam. • Major flows must pass the check dam without causing excessive upstream flooding. • Check dams should be used in conjunction with other sediment reduction techniques prior to releasing the flow offsite. <p>MAINTENANCE</p> <p>The check dams should be inspected weekly and following any significant storm events (greater than 0.5 inches) for damage and excessive clogging. Repairs should be undertaken in a timely manner to prevent the potential for upstream flooding.</p>	



	INTERCEPTOR SWALES	C-3
POLLUTANT CONTROL MED Sediment LO Oil & Grease LO Nutrients/Toxics MED Floatables MED Other Wastes	<p style="text-align: right;">Cross Section</p>	
APPLICABLE FACILITIES Any location requiring temporary or permanent erosion control	<p>DESCRIPTION</p> <p>An interceptor swale is a trapezoidal or rounded channel that collects water and directs it to a desired location. The interceptor swale can be lined with native vegetation or a protective lining, depending upon the slope and design velocities.</p> <p>INSTALLATION</p> <ul style="list-style-type: none"> • Install temporary swales along tops of slopes prior to major soil disturbing activities. • Install along tops to reduce erosion or stability problems. Install along toes to trap any sediments picked up. Check dams or hay bales can then be used to trap sediment. • Interceptor swales are commonly installed prior to commencement of major soil disturbing activities. Temporary swales are useful in protecting specific areas, such as staging, storage or fueling areas, and smaller disturbed areas. • Vegetated interceptor swales are also effective as permanent storm water controls. To remain in place as permanent controls, the swales must be designed to handle post-construction runoff, must be permanently stabilized, and should be routinely inspected and maintained. 	
<p>WHEN TO IMPLEMENT:</p> <ul style="list-style-type: none"> • Interceptor swales are used to reduce the amount and speed of flow and guide it to a stabilized outfall • Install temporary swales prior to major soil disturbing activities. 		

	<h2 style="margin: 0;">EROSION CONTROL LOGS</h2>	<h2 style="margin: 0;">C-4</h2>										
<p>POLLUTANT CONTROL</p> <table border="0"> <tr> <td style="padding-right: 20px;">HI</td> <td>Sediment</td> </tr> <tr> <td>MED</td> <td>Oil & Grease</td> </tr> <tr> <td>MED</td> <td>Nutrients/Toxics</td> </tr> <tr> <td>MED</td> <td>Floatables</td> </tr> <tr> <td>MED</td> <td>Other Wastes</td> </tr> </table>	HI	Sediment	MED	Oil & Grease	MED	Nutrients/Toxics	MED	Floatables	MED	Other Wastes		
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MED	Oil & Grease											
MED	Nutrients/Toxics											
MED	Floatables											
MED	Other Wastes											
<p>APPLICABLE FACILITIES</p> <p>Any location requiring temporary erosion control</p>	<p>DESCRIPTION</p> <p>Erosion Control Logs, commonly called wattles, are temporary barriers constructed of organic material encased in a biodegradable netting. These logs are commercially available in a variety of sizes ranging from 9 inches to 24 inches. The logs are flexible and can be configured to the desired application and secured in place using wooden or metal stakes. Effective in filtering sediment and controlling sheet and rill erosion. May be used for slope protection or as an energy dissipater in channels. Also may be used for curb and drop inlet protection and concrete washout areas. Common organic materials used in erosion control logs consists of straw, wood chips, mulch or coconut coir.</p>											
<p>WHEN TO IMPLEMENT:</p> <ul style="list-style-type: none"> In channel and along slopes to control erosion and facilitate vegetative stabilization Along perimeter of construction sites as an alternative to silt fence 	<p>INSTALLATION</p> <p>Logs should be placed along the contours, perpendicular to the flow path and staked in place using wooded or metal stakes. For in-channel use, the logs should be staked along the downstream edge at approximately 1 to 4 ft intervals depending on the flow rate. Recommended spacing between logs is dependent on the log diameter and channel gradient. Spacing ranges from 1 ft for channel gradients of 50% up to 250 ft for channel gradients of 0.5%. For slope protection, log spacing ranges from 5 ft to 80 ft depending on slope and soil type.</p> <p>Depending on the application, different organic materials can be selected for durability and longevity. Coconut Coir Logs have extended longevity and can be scattered as mulch when no longer needed.</p> <p>MAINTENANCE</p> <p>Erosion control logs should be inspected weekly. Sediment should be removed from behind the logs when it reaches a depth of approximately 1/2 the height of the log. Depending on the organic material, the logs may become clogged and will need to be replaced.</p>											

	STABILIZED CONSTRUCTION ENTRANCE	C-5										
<p>POLLUTANT CONTROL</p> <table border="0"> <tr> <td style="padding-right: 20px;">HI</td> <td>Sediment</td> </tr> <tr> <td>MED</td> <td>Oil & Grease</td> </tr> <tr> <td>MED</td> <td>Nutrients/Toxics</td> </tr> <tr> <td>LO</td> <td>Floatables</td> </tr> <tr> <td>MED</td> <td>Other Wastes</td> </tr> </table>	HI	Sediment	MED	Oil & Grease	MED	Nutrients/Toxics	LO	Floatables	MED	Other Wastes		
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MED	Oil & Grease											
MED	Nutrients/Toxics											
LO	Floatables											
MED	Other Wastes											
<p>APPLICABLE FACILITIES</p> <p>Any location requiring temporary erosion control</p>	<p>DESCRIPTION</p> <p>A stabilized construction entrance is used to facilitate the wash down and removal of sediment and other debris from construction equipment prior to exiting the construction site. The entrance typically consists of a gravel, crushed stone, recycled concrete or other rock material pad underlain by a filter fabric. For improved effectiveness, a washdown rack can be incorporated into the design. A stabilized construction entrance specifically addresses the problem of silt and mud deposition in roadways used for construction site access.</p> <p>INSTALLATION</p> <ul style="list-style-type: none"> • Stabilized construction entrances are to be constructed such that drainage across the entrance is directed to a controlled, stabilized outlet on site with provisions for storage, proper filtration and removal of wash water. • The entrance must be properly graded so that storm water is not allowed to leave the site and enter roadways. • The minimum width of the entrance shall be 12 feet, but in no case shall the width be less than that of the entry way to be used. • The minimum depth of the entrance shall be 6 inches for the entire length of the control. <p>MAINTENANCE</p> <p>Construction entrances should be inspected daily or weekly depending on traffic loads. Sediment should be removed by grading, raking or re-topping when the entrance becomes 50% covered with sediment.</p>											
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Install in unpaved areas that experience regular traffic. • Choose a location which can direct the majority of traffic to a single location. 												

	SILT FENCE	C-6	
<p>POLLUTANT CONTROL</p> <p>HI Sediment</p> <p>MED Oil & Grease</p> <p>MED Nutrients/Toxics</p> <p>HI Floatables</p> <p>MED Other Wastes</p>	<div style="text-align: center;">  </div> <p>DESCRIPTION</p> <p>Silt fencing consists of filter fabric stretched between support posts to catch sheet flow drainage from disturbed areas. The filter fabric is supported by poultry netting or other backing material and is toed in with an anchor trench at the base. Properly designed and installed silt fence can be very effective and economical because it can be not only re-located on the current construction site but also re-used at other construction sites.</p> <p>INSTALLATION</p> <ul style="list-style-type: none"> • Silt fences should be located along a line of constant elevation (such as a contour line) where possible. • The maximum slope permissible adjacent to the fence is 1:1. • If 50% or less of the soil to be contained, by weight, passes the U.S. Standard Sieve No. 200, select the equivalent opening size (EOS) to retain 85% of the soil. • The maximum opening size shall be 70 (#70 sieve) and the minimum opening size shall be 100 (#100 sieve). When gradation information is available, select an opening size that traps 85% of the upslope soil. • If 85% or more of the soil to be contained, by weight, passes the U.S. #200 sieve, silt fences shall not be used due to potential clogging. • Provide sufficient room between the silt fence and other obstructions for the operation of the sediment removal equipment to properly maintain the fence. • The ends of the fence should be turned uphill to prevent bypass of sediment-laden flow. <p>MAINTENANCE</p> <p>Silt fencing runs must be inspected once each week and following a significant storm event of 0.5 inches or greater. Routine removal of sediment must be performed to ensure continued successful operation of the fencing. The sediment should be removed when it reaches a depth of approximately one-third the height of the fence. If the fabric becomes clogged, either clean or replace the filter fabric.</p>		
<p>APPLICABLE FACILITIES</p> <p>Any location requiring temporary erosion control</p>			
<p>WHEN TO IMPLEMENT:</p> <ul style="list-style-type: none"> • Install in areas of sheet flow over non-vegetated areas • Use hay bales or rock check dams for concentrated flows in swales. • Used most often as perimeter control. • Most effective with coarse to silty soil types; silt fences are subject to clogging when used with clay soil types. 			

	<h2>EROSION CONTROL MATS</h2>	<h2>C-7</h2>										
<p>POLLUTANT CONTROL</p> <table border="0"> <tr> <td style="padding-right: 20px;">HI</td> <td>Sediment</td> </tr> <tr> <td>LO</td> <td>Oil & Grease</td> </tr> <tr> <td>LO</td> <td>Nutrients/Toxics</td> </tr> <tr> <td>LO</td> <td>Floatables</td> </tr> <tr> <td>LO</td> <td>Other Wastes</td> </tr> </table>	HI	Sediment	LO	Oil & Grease	LO	Nutrients/Toxics	LO	Floatables	LO	Other Wastes	 <p>NOTES:</p> <ol style="list-style-type: none"> SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH. 	
HI	Sediment											
LO	Oil & Grease											
LO	Nutrients/Toxics											
LO	Floatables											
LO	Other Wastes											
<p>APPLICABLE FACILITIES</p> <p>Any location requiring temporary erosion control or reestablishing vegetation, especially seed</p>	<p>DESCRIPTION</p> <p>Erosion control mats are manufactured geomembranes or biodegradable fabrics which are placed over disturbed areas to provide protection from erosion. A wide variety of vendors produce erosion control mats to meet every need such as vegetation establishment or protection from high velocity flows.</p> <p>INSTALLATION</p> <ul style="list-style-type: none"> Erosion control mats should be installed in accordance with manufacturer's instructions. After installation, the matting should be checked to ensure that the matting is in uniform contact with the soil, that lap joints are well secured, and that anchor staples are flush with the ground. 											
<p>WHEN TO IMPLEMENT:</p> <ul style="list-style-type: none"> Temporary or permanent stabilization protection to barren or disturbed areas. Permanent stabilization for areas being seeded. Particularly helpful in areas which are difficult to stabilize such as steep slopes, drainage swales, embankments, or high pedestrian traffic areas. 	<p>MAINTENANCE</p> <ul style="list-style-type: none"> Installations of erosion control matting must be inspected weekly and following significant storm events (0.5 inches or greater). Missing or loose mats must be replaced or re-anchored promptly to ensure continued protection of the site. When inspecting, look for depressions or other signs of concentrated flow under the blankets. If necessary, install the upstream edge of the mat in a trench to keep surface flows from passing underneath. 											

	VEGETATION ESTABLISHMENT	C-8										
<p>POLLUTANT CONTROL</p> <table border="0"> <tr> <td style="padding-right: 20px;">HI</td> <td>Sediment</td> </tr> <tr> <td>LO</td> <td>Oil & Grease</td> </tr> <tr> <td>MED</td> <td>Nutrients/Toxics</td> </tr> <tr> <td>LO</td> <td>Floatables</td> </tr> <tr> <td>MED</td> <td>Other Wastes</td> </tr> </table>	HI	Sediment	LO	Oil & Grease	MED	Nutrients/Toxics	LO	Floatables	MED	Other Wastes		
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<p>APPLICABLE FACILITIES</p> <p>Any location with low traffic areas of unvegetated or bare soil</p>	<p>DESCRIPTION</p> <p>The use of vegetation consists of establishing grasses or groundcovers to prevent erosion of topsoil. Vegetation can be used alone or as a protective lining for other BMPs.</p>											
<p>WHEN TO IMPLEMENT</p> <ul style="list-style-type: none"> • Almost any earthen surface with minimal foot and vehicular traffic. • Can be used for both temporary and permanent erosion control. • Not ideal in areas subject to heavy pedestrian or vehicular traffic. 	<p>INSTALLATION</p> <ul style="list-style-type: none"> • Interim or final grading must be completed prior to seeding. Other erosion control structures, such as dikes, swales, diversions, etc., should be installed prior to seeding. • For slopes steeper than 3:1, groove or furrow slopes on the contour line or place erosion blankets before seeding. • Provide 4-6 inches of topsoil over rock, gravel or otherwise unsuitable soils. The seed-bed should be well pulverized, loose and uniform. • Use only high quality, USDA certified seed. • Water newly seeded or sodded areas frequently as directed by the supplier. • Use native, drought tolerant grasses such as Green Sprangletop, Sideoats Grama, Bermudagrass, Bluestem, and Buffalograss to reduce maintenance. • Exact seed mix will depend on soil type and season. Refer to Appendix 1 for examples of a recommended seed mix. 											

APPENDIX 1: NATIVE SEED MIXES FOR REVEGETATION

Grass Seed	Tight or Clayey Soils (lbs./acre)	Sandy Soils (lbs./acre)
Green Sprangletop	0.9	0.7
Bermudagrass	0.9	0.9
Sideoats Grama	2.8	2.2
K-R Bluestem	1.0	0.8
Buffalograss	8.0	--
Sand Dropseed	--	0.2

Taken from TXDOT Standard Specification for Construction of Highways, Streets and Bridges, Item 164.

APPENDIX 3: COUNTY FACILITY LOCATIONS

