Galveston Bay Stormwater....

A Guide to Help Contractors Prevent Construction Pollution

...Keep It Clean!!
Galveston Bay Stormwater...Keep it Clean!!

Stormwater Pollution Prevention for the Construction Industry

A Guide to Help Contractors Prevent Stormwater Runoff At Construction Sites

Prepared by the Galveston Bay Construction Alliance

May 2004
# Table of Contents

I. **Purpose of the Guide**  
- How Contractors Can Help Keep Galveston Bay Clean  
- Famous False Facts  
- Members of the Galveston Bay Construction Alliance  

II. **Texas Commission on Environmental Quality Construction Stormwater Permit Requirements**  

III. **Scheduling Pollution Control Measures**  

IV. **Phases of Construction**  
- Pre-Construction  
- During Construction  
- Post Construction  

V. **General Practices**  

VI. **Inspection & Maintenance of Pollution Control Measures**  

VII. **A Stormwater Dictionary**  

**Appendices**  
- TCEQ Notice of Intent and Instructions  
- Excerpts from Special Specifications 1058, TXDOT  
- Excerpts from Special Specifications 1019, TXDOT  
- Contact Information for Tackifier Suppliers  
- Stormwater Pollution Prevention Plan (SWP3) Checklist  

---

Cover acknowledgments:  
Galveston Bay aerial photograph courtesy of U.S. Geological Survey, National Wetlands Research Center; Texas Natural Resources Information System; University of Texas Center for Space Research
Compost berm & Inlet protection device photograph courtesy of John Jacob, Ph.D.
Brown pelican photograph courtesy of U.S. Fish & Wildlife Service Digital Library
A Guide to Help Contractors Prevent Stormwater Runoff At Construction Sites

I. Purpose of the Guide

This publication is to be used as a guide to the developers, builders, and contractors in the Galveston Bay Area to assist in the prevention of construction runoff that pollutes our bayous, streams and bay. Construction runoff causes severe degradation to Galveston Bay with significant impacts to marine life and recreational activities. The information within this manual provides general guidance. It is not meant to be an all-inclusive list of municipal requirements. To comply with specific municipal ordinances, it is recommended that you contact the specific city in which you are operating.

Table 1 lists the Bay Area municipalities and their representatives which form the Galveston Bay Construction Alliance. The Alliance aims to prevent construction erosion by promoting the most advanced, economical, and effective means of preventing construction pollution and by using similar enforcement methods and processes. We welcome new ideas, new techniques, and new practices and we will promote their effective use. We also welcome the use of this handbook by our sister cities, who are not currently a part of the Alliance, but desire to prevent construction runoff from entering our shared waterways.

Preventing dirt and sediment from entering the storm drain system keeps it out of our Bay. We will accept any legal technique, resource, method or process that effectively meets that goal. While we mention several “best management practices” (BMPs) in this manual, it is not meant to be a complete compendium of erosion control techniques and the contractor is encouraged to continually improve the methods used to control erosion. The Alliance is interested in the results, rather than dictating a specific “best management practice”. We encourage you to aggressively seek the management practice that allows you to balance effectiveness, cost, and maintenance requirements.

While this manual primarily deals with particulate runoff from construction sites, we must also take measures to keep oil and grease, hazardous wastes, trash, and litter out of our storm drains.

How Contractors Can Help Keep Galveston Bay Clean

To a contractor in the Houston region, stormwater erosion control essentially means preventing runoff from the construction site. Because most of our land is nearly at sea level and flat, the construction erosion protection in the
Galveston Bay Area does not need the rigorous steep slope methods used in hilly or mountainous terrain. However, most construction sites are elevated above the street so there is generally gravity flow from the construction site into the street. This flow carries the pollution into the storm drain system and downstream into Galveston Bay.

Once construction activity at your job site disturbs the ground surface, you have a potential construction runoff and pollution problem. This unprotected soil surface can be moved in multiple ways to an unprotected storm drain. In our area, water tends to flow slowly and pond for long periods of time. Most of the difficulty in protecting our storm water system occurs because we move the soils off the site with our vehicles or pump ponding water that is loaded with suspended clay particles into the storm drain system. Your key role as a contractor is to protect the storm drain.

This guide discusses some of the methods you can use to prevent particulates and debris from leaving your construction site and entering Galveston Bay through the storm drain system. Always remember that you can use both physical barriers and vegetation to control the movement of particulates.

A good on-line source for links to general stormwater information and current practices is located at http://www.cicacenter.org/or-stormwater.htm.

Famous False Facts
or---
Common Misconceptions about How a Contractor Should Prevent Construction Runoff

1. I only need one accepted technique to prevent construction erosion, a.k.a., “Silt fencing handles every problem.”
2. Once in place, I do not need to maintain my construction runoff prevention system.
3. Once in place, I do not need to modify my erosion control system as work progresses at my job site.
4. I can scrape off the grass and ground cover and then install my erosion control system.
5. When one contractor leaves a job site, the next contractor will maintain the erosion control system.
6. I don’t have to remove my erosion control system from the job site.
Members of the Galveston Bay Construction Alliance

The Galveston Bay Construction Alliance municipalities listed in Table 1 have joined together to promote similar methods to control and reduce construction site runoff. Generally, we expect the following from contractors, builders, and developers:

- Review a short training film
- Answer some written questions
- Read and be guided by this manual
- Begin construction in the proper manner by filing a NOI and notifying the municipality

As work progresses, the effectiveness of the construction pollution prevention measures and techniques will be monitored by the respective city. If, at any time, there is evidence of construction pollution, enforcement procedures will be taken which could include citations, stop work orders, clean-up of areas impacted by construction pollution, and possible denial of the Certificate of Occupancy. For specific enforcement procedures, you can contact the representative for each of the municipalities listed in Table 1. For a municipality which is not currently participating in the Construction Alliance, you can contact its Public Works or Engineering Department.
# Table 1

**May 2004**

**Members of the Galveston Bay Construction Alliance**

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Representative</th>
<th>Business Telephone</th>
<th>Address</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Baytown</td>
<td>Tony Gray</td>
<td>281-420-5384</td>
<td>220 W. Defee</td>
<td><a href="mailto:rgray@baytown.org">rgray@baytown.org</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Baytown, TX 77522</td>
<td></td>
</tr>
<tr>
<td>City of Dickinson</td>
<td>Keith Kiplinger</td>
<td>281-337-6259</td>
<td>2716 FM 517 E</td>
<td><a href="mailto:kkiplinger@ci.dickinson.tx.us">kkiplinger@ci.dickinson.tx.us</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dickinson, TX 77539</td>
<td></td>
</tr>
<tr>
<td>City of Friendswood</td>
<td>Kaz Hamidian</td>
<td>281-996-3383</td>
<td>1306 Deepwood</td>
<td><a href="mailto:khamidian@ci.friendswood.tx.us">khamidian@ci.friendswood.tx.us</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Friendswood, TX 77546</td>
<td></td>
</tr>
<tr>
<td>City of LaMarque</td>
<td>Gary Rose</td>
<td>409-938-9287</td>
<td>4635 FM 1765</td>
<td><a href="mailto:utildirlmtx@aol.com">utildirlmtx@aol.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LaMarque, TX 77568</td>
<td></td>
</tr>
<tr>
<td>City of Nassau Bay</td>
<td>Peter Marx</td>
<td>281-333-4211</td>
<td>1800 Nasa Parkway</td>
<td><a href="mailto:Peter.marx@nassaubay.com">Peter.marx@nassaubay.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nassau Bay, TX 77058</td>
<td></td>
</tr>
<tr>
<td>City of Pasadena</td>
<td>Sam Metzger</td>
<td>713-475-7835</td>
<td>PO Box 672</td>
<td><a href="mailto:smetzger@ci.pasadena.tx.us">smetzger@ci.pasadena.tx.us</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pasadena, TX 77501</td>
<td></td>
</tr>
<tr>
<td>City of Santa Fe</td>
<td>Jamie Fielding</td>
<td>409-925-6412</td>
<td>PO Box 950</td>
<td><a href="mailto:jamie@santa-fe.tx.us">jamie@santa-fe.tx.us</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Santa Fe, TX 77510</td>
<td></td>
</tr>
<tr>
<td>City of Seabrook</td>
<td>Gary Jones</td>
<td>281-474-3286</td>
<td>1700 First St.</td>
<td><a href="mailto:jonesg@seabrook-tx.com">jonesg@seabrook-tx.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Seabrook, TX 77586</td>
<td></td>
</tr>
<tr>
<td>City of Texas City</td>
<td>Ron Dysart</td>
<td>409-643-5886</td>
<td>3402 Loop 197 N</td>
<td><a href="mailto:rdyart@texas-city-tx.org">rdyart@texas-city-tx.org</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Texas City, TX 77590</td>
<td></td>
</tr>
<tr>
<td>City of Webster</td>
<td>Art Ayala</td>
<td>281-316-4193</td>
<td>101 Pennsylvania</td>
<td><a href="mailto:aayala@cityofwebster.com">aayala@cityofwebster.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Webster, TX, 77598</td>
<td></td>
</tr>
</tbody>
</table>
II. Texas Commission on Environmental Quality
Construction Stormwater Permit Requirements

TCEQ Information

The Texas Commission on Environmental Quality (TCEQ) has become the state permitting authority for all storm water discharges from construction sites. TCEQ began regulating Construction Sites of one acre or more in March 2003. Previously, these requirements applied only to developments of five acres or more. The following are TCEQ requirements to obtain a Construction Storm Water Permit.

All the forms are downloadable from the TCEQ web site. The following information is provided directly from the TCEQ web site at http://www.tnrcc.state.tx.us/permitting/waterperm/wwperm/construct.html

5 or More Acres Disturbed

Work Begun On or Before 3/4/2003 - For construction projects that began before the issuance of the TPDES general permit and that will disturb 5 or more acres, including the larger plan of development:

Operators of large construction activities continuing to operate after the issuance date of this permit, and authorized under NPDES general permit TXR100000 (issued July 6, 1998, FR 36490), must submit a Notice of Intent (NOI) to obtain authorization under this general permit within 90 days of the issuance date of this general permit. During this interim period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the federal NPDES permit. If the construction project is completed and is finally stabilized before the end of the 90 day time-frame, then written notification must be submitted to the TCEQ within 30 days of that condition.

Web addresses:
NOI: http://www.tnrcc.state.tx.us/permitting/forms/20022.pdf
NOI Instructions: http://www.tnrcc.state.tx.us/permitting/forms/20022ins.pdf

Work Begun On or After 3/5/2003 - For construction projects that started after the issuance of the TPDES general permit and that will disturb 5 or more acres:

1. Obtain a copy of the TCEQ CGP (TPDES Permit No. TXR150000).

2. Develop and implement a storm water pollution prevention plan (SWP3).

3. Complete and submit a Notice of Intent (NOI) to the TCEQ (using the TCEQ form) to the address listed on the form prior to the commencement of the construction.
4. Submit an Notice of Termination (NOT) once the site has reached final stabilization.

**Web addresses:**
TPDES Permit No. TXR150000:
http://www.tnrcc.state.tx.us/permitting/waterperm/wwperm/txr150000.pdf
NOI: http://www.tnrcc.state.tx.us/permitting/forms/20022.pdf
NOI Instructions: http://www.tnrcc.state.tx.us/permitting/forms/20022ins.pdf
NOT: http://www.tnrcc.state.tx.us/permitting/forms/20023.pdf
NOT Instructions: http://www.tnrcc.state.tx.us/permitting/forms/20023ins.pdf

**1 to Less Than 5 Acres Disturbed**
For construction projects that will disturb 1 or more acres, but less than 5 acres, including the larger common plan of development:

1. Obtain a copy of the TCEQ CGP (TPDES Permit No. TXR150000).
2. Develop and implement a storm water pollution prevention plan (SWP3).
3. Complete and post a site notice.
4. Before construction begins,
   a. If the site qualifies, complete and submit a Low Rainfall Erosivity Waiver Form.
   b. Or complete and post a site notice. (Template at the end of TPDES Permit No. TXR150000)

For construction projects that will disturb 1 or more acres, but less than 5 acres, and are part of a larger common plan of development or sale that will disturb 5 or more acres, refer to the 5 or More Acres Disturbed form.

**Web addresses:**
TPDES Permit No. TXR150000:
http://www.tnrcc.state.tx.us/permitting/waterperm/wwperm/txr150000.pdf
Low Rainfall Erosivity Waiver Form:
http://www.tnrcc.state.tx.us/permitting/forms/20064.pdf
Low Rainfall Erosivity Waiver Form Instructions:
http://www.tnrcc.state.tx.us/permitting/forms/20064ins.pdf
5 or More Acres Disturbed Form:
http://www.tnrcc.state.tx.us/permitting/waterperm/wwperm/#5more

**Smaller Sites**
For construction projects that will disturb less than one acre and are not part of a larger common plan of development, coverage under this permit is not required.
If the construction activity develops into a larger project, then permit coverage
may be required at that time based on the total number of acres that will be disturbed: Use the 5 or More Acres or 1 to Less Than 5 Acres form.

**Web addresses:**

- **5 or More Acres Disturbed Form:**
  http://www.tnrcc.state.tx.us/permitting/waterperm/wwperm/#5more

- **1 to Less Than 5 Acres Form:**
  http://www.tnrcc.state.tx.us/permitting/waterperm/wwperm/#1toless5

In our area, there is no period of time that would allow an erosivity waiver to be granted; therefore all construction that disturbs natural ground will require a permit.

**What is required by the Galveston Bay Construction Alliance Cities?**

The minimum requirements are:

- Documentation of compliance with the above TCEQ requirements.
- Implementation of erosion control measures to prevent construction runoff.
- Minimizing pollution from construction waste, as stated in the Storm Water Pollution Prevention Plan (SWP3).

To comply with specific municipal ordinances, it is recommended that you contact the specific city in which you are operating.
III. Scheduling Pollution Control Measures

Pollution control measures must be implemented in a sequence that provides maximum storm water pollution control.

1. Install controls before starting land-disturbing activity.
2. Do not disturb the site until time for start of construction.
3. Provide the street/inlet, ditch, and waterway protection immediately at construction start.
4. Provide coverage or start stabilization (vegetation) of disturbed areas as soon as possible.

Do not remove the temporary controls until the area is at least 70% vegetated. Do not leave the temporary controls in place when the work is completed.

IV. Phases of Construction

There are distinct phases in the construction process and each contractor should be prepared to perform the necessary process during each of these phases. In this manual we will limit the phases to three for the purpose of storm water pollution prevention.

Preconstruction

In this phase, the contractor should walk the site, note slope and grade; decide on construction vehicle incoming driveway (entrance) and outgoing driveway (exit). At this time, the contractor should become familiar with those areas of the proposed construction site that have high potential risk for runoff contamination. All swales, ditches, storm drain inlets, nearby water bodies should be physically located. In addition, the contractor will decide what particular BMPs are most likely to be effective to prevent runoff and thus construction pollution. The contractor should also determine the best method for properly removing ponding water that could overflow into the storm drain and delay construction progress. See the following section entitled “During Construction” for a simple field method to monitor whether suspended sediment concentrations of pumped ponding water exceed the standard of 200 ppm.

We prefer, of course, that the minimum amount of ground should be disturbed so there is lower risk for massive amounts of soil migrating off site over a long period of construction. If at all possible, the work should be planned to immediately re-vegetate the site after the construction grade is obtained. This area has large amounts of rainfall that come in massive
quantities, sometimes for many days. It is always best to vegetate immediately to prevent the constant risk of soil flowing off site. Other practices to hold soil in place are available and can be used.

The contractor will be submitting the NOI and notifying the local municipality just prior to actual soil disturbance. By becoming intimately familiar with the site, the SWP3 can be updated at this time to reflect actual on-site conditions.

**During Construction**

Once the site has been disturbed, the contractor should act as quickly as possible to minimize the risk of rain runoff. It is imperative that all the BMPs designed and installed to prevent pollution are in place and well maintained. This is the time to ensure the NOI and Construction Permit are posted visibly on the site. Be sure you are operating with an accurate and updated SWP3.

Certain practices can be very helpful if they are used in threatening rain conditions. Spend the time to double-check the high-risk areas of swales, inlets, and ditches, especially near open waterways. Be sure that all the BMPs are in place and can operate effectively.

After the rain, inspect the site again to see any breaches or evidence of soil migration. Repair those and immediately mitigate the soil runoff either with brooms, blades, shovels or vacuuming. Be sure that the runoff from your site does not impact the adjacent neighbors or get into the municipal storm drain system.

If the site is ponding water and disrupting the work schedule, use the proper method of pumping the nuisance water into the storm drain system. The pumped water must be filtered so that the suspended sediment is prevented from flowing into the storm drain system.

Generally, the level of suspended sediment flowing into the storm drain must not exceed 200 ppm. A simple field test method to determine whether or not construction runoff exceeds the 200 ppm standard requires only a white 5-gallon plastic bucket. Mark an “X” on the bottom with black non-soluble ink or paint. Position the bucket so it captures runoff or pumped water from the construction site just before it enters the storm drain. When the level in the bucket reaches six inches in depth, check to see if the “X” is visible through the water. If the “X” is visible, then the water can be pumped into the storm drain. If you cannot see the “X”, the water is not being properly filtered. Remember to monitor the pumping by repeating your field test to make sure the suspended sediment concentration does not rise above 200 ppm.
The most visible evidence of poor construction runoff prevention is the tell-tale drift of sand/mud tracked off-site into the nearby street or washing into the ditch. Drive by your site and be sure you are not offending.

**Post Construction**

Once construction is complete, you must remove all the pollution prevention measures that were temporary. It is not acceptable to walk away leaving silt fence, sandbags, or piles of construction debris. Many contractors have several different vendors, contractors, and work crews during the construction. Be sure that each one removes the temporary measures that he installed or turns over responsibility for removal to the next work crew.

If a contractor uses compost/mulch berms, they can be raked back onto the site to provide a good seed bed for the vegetation at the end of construction. This is a distinct advantage of using compost/mulch berms to prevent construction runoff.
V. General Practices

Every contractor should be familiar with these general practices, review them at the start of each new construction project and take action on those that apply.

THE BEST POLLUTION CONTROL MEASURES ARE THOSE THAT WORK!

The control measures described in this section are not the only ways to keep pollution out of our storm water. These are just a few of the possible ways. Each situation is different and may require different control measures. A comprehensive list of BMPs can be found in the Joint Task Force Construction Handbook and Guidance Manual. It is available for download at http://www.cleanwaterclearchoice.org/downloads.html

Some other useful websites with links to general stormwater information, stormwater pollution prevention plans, Stormwater Phase II rule requirements, and BMP design are located at

http://www.cicacenter.org/or-stormwater.htm
http://www.metrocouncil.org/environment/watershed/bmp/manual.htm
http://www.urban-nature.org/storm/links/bmpmanuals.htm

In addition, the contractor is urged to use the “Erosion Control” periodical (the official journal of the International Erosion Control Association) as well as the “Stormwater” periodical (the journal for the Surface Water Quality Professional) to stay well informed of the most current BMPs.

Classes, seminars, and conferences regarding erosion prevention regularly occur in the Houston area. Contractors are encouraged to attend.

1. Locate all nearby storm water inlets, ditches, swales, and bayous and make sure no pollutants can enter them from the construction site. Street protection, inlet protection, or ditch protection may be necessary.

These are examples of temporary measures that are effective -- IF they are well maintained:

- **Vegetated buffer strips** – Seeding or sodding the soil adjacent to the curb or ditch allows the runoff water to filter through the strip before entering the storm drain system. It is better to use species that are less invasive and do not out-compete native species.

- **Mulch filter berms or socks & Compost filter berms** – (See Figure 1 for an example of a compost berm and inlet protection barrier.) Piling
mulch or compost into berms or placing mulch filled socks parallel to and inside the curb allows runoff water to filter through the berm or sock before entering the storm drain system while trapping the silt behind the berm or the sock. The berms are easier to maintain than silt fencing; remove the accumulated silt when it reaches one-third of the height of the berm.

A mulch filter berm is composed of wood chips only and should be used in areas not intended to be vegetated.

A compost filter berm is a 50%/50% by volume mix of compost and wood chips and is best used in areas that will be vegetated. Depending upon the project design, the compost berm can be knocked down and graded before seeding or the berm can be seeded as a landscape feature.

Assuming dimensions of 1.5 feet high and 3 feet wide at the base, one cubic yard of mulch/compost equals 7.6 linear feet of berm. If the berm is 1.0 foot high and 2.5 feet wide at the base, one cubic yard of mulch/compost equals 18.76 linear feet of berm. When dealing with steep slopes, use a trapezoidal berm that is 2.0 to 3.0 feet wide at the top, at least 4.0 feet wide at the base, and 1.5 to 2.0 feet high.

You may find the information produced by the Texas Department of Transportation regarding the specifications for compost and for mulch/compost filter berms to be useful. This information is contained in the 1993 Special Specification #1058 for “Compost” and the 1995 Special Specification #1019 entitled “Mulch/Compost Filter Berm for Erosion and Sedimentation Control”. Excerpts from these special specifications are included in the appendix to this guide. Contractors using compost for construction erosion should be using Seal of Texas (STA) compost with the stipulation that no manure based materials be used in the compost.

- Inlet protection barriers – These barriers can be bought commercially, or made on-site. The most effective are mulch socks that are held off the inlet with light wire grid. (See Figure 1.) Note the orientation of the mulch sock with respect to the curb, i.e., the long axis is perpendicular to the curb. Also, mulch socks are particularly useful if they are placed against the curb at the base of a driveway. Eroded silt tends to run down the driveway into the street and thence into a storm drain. Trapping the sediment immediately at the base of the driveway can simplify its removal from the street. The effectiveness depends on removing the silt/sediment after it has piled up against the barrier.
• **Street sweeping** – This can be done with vehicular or individual sweepers. The objective is to remove any dirt and sediment in the street and place it back onto the ground behind the protective erosion control measure so that it does not wash into the storm drain.

• **Silt fencing** – This is commercially obtained material (plastic fabric), usually backed by a wire grid installed so that it prevents dirt and sediment from washing off the site. *(See Figure 2.*) Proper installation and maintenance are critical for the effectiveness of the technique. If the bottom edge of the fabric is resting on the top of the ground or is suspended above the ground, it is IMPROPERLY installed. Figure 3 illustrates an example of this common installation error. Note that the silt is simply washed underneath the unanchored bottom, allowing the soil on the slope behind the silt fence to erode away. Figure 4 shows another example of poor design and maintenance of silt fencing where a compost filter berm would have been much more effective.

Remember to always cover the bottom edge of a silt fence with earth to weight down the edge. Silt fencing must be removed when the site is about 70% vegetated.

• **Geotextile slope protection** – This is commercially obtained material that is placed on top of the exposed dirt and sediment and staked or stapled to hold it on the ground. Many are biodegradable. It can be used just to hold the dirt and sediment in place temporarily, or embedded with seed to grow vegetation. Care must be taken in the type of material used so that future vegetation maintenance equipment does not disturb the geotextile mat.

• **Tackifier spraying** – This can be used to stabilize soils. The technique has been used in agriculture to stabilize furrows in irrigated fields, but it is also suitable for construction. Tackifiers can be purchased in powder, tablet, or water-based solution. The Harris County Flood Control District (HCFCD) recommends an application rate to last for six months. Several possibilities (current as of May 2004) have been suggested by the HCFCD for consideration and are listed in the appendix under “Contact Information for Tackifier Suppliers”.

2. Provide a properly constructed and well-maintained construction access/driveway into the construction site. Keep it well maintained to prevent soil migrating from the site into the adjacent street.

The properly constructed and well maintained construction driveway must be the first and foremost measure of protection. One entrance and/or one exit limit access to the site and let the builder concentrate his erosion protection
Several techniques are useful and more are coming to the forefront every day.

Large rock (3-5 in) can be placed for at least 50’ in the driveway directly adjacent to the street. It is important to dig out this driveway and place the rock at a lower elevation than the street or curb, so that no run off can flow on top of the rock and enter the street. After the rock interstices have filled with soil, the rock needs to be removed and replaced so that it serves to shake and hold the dirt and sediment from the vehicle tires. This same task can be accomplished with wood or composite mats, but the principle is the same. Anytime the construction driveway is no longer effective at removing the dirt and sediment from the tires, it must be replaced to achieve the purpose.

Currently, there are mulch filled socks of 8-12” in diameter that can be placed at the construction exit. The construction vehicles can roll over these socks. These socks are effective at filtering the dirt and sediment from the runoff water. They must be maintained by shoveling/removing the dirt and sediment built up around the sock regularly.

If the driveway will be in use for a long period of time (more than a year), it might be cost effective to install a concrete tire rinse with grated guard. Tires roll through the rinse and then roll across the metal grated guard completely removing any soil as they enter the street.

Whatever the responsible party chooses to use, the technique must be effective to keep dirt and sediment out of the street/curb flowing into the storm drain inlet or ditch.

3. When pumping ponded water off the site into a nearby storm drain inlet, swale or ditch, be sure that the suspended solids are filtered out of the pumped water so that the soil does not enter the storm drain system. Do not pump muddy water into the street or inlet.

4. Provide a specific area for concrete wash out. Never wash the concrete truck into any storm drain inlet or curb.

It is imperative that absolutely no concrete product or leachate should drift into the storm drain system. The responsible party must provide an on-site concrete wash pit for the concrete trucks delivering to the construction site. The pit should be 3-4’ deep and 6-12’ square so that the water can readily evaporate. It must be bermed to contain not only the concrete, but the wash water as well. Periodically, the wash pit must be emptied and restored or moved so that there is always an available wash pit for the incoming concrete trucks. As one pit is filled, it should be broken up and the dried concrete product hauled to a recycle facility. It is never acceptable to wash out or empty a concrete truck into the storm drain system, in fact, every
effort must be made to ensure no concrete products or leachates migrate into the storm drain system. Precautions should also be taken with brick/stone and mortar once above-ground construction commences.

5. Clean up spills and leaks immediately upon discovery.

6. When cleaning up spills, use dry clean methods rather than washing down the area.

7. If vehicles are fueled on site, do it in one place where spills can be cleaned up quickly and easily.

8. Take vehicles and equipment off site for washing. If washing on-site is necessary, do not use cleaning chemicals and make sure wash water does not enter the storm drain system.

9. Keep building materials out of the rain, or covered.

10. Cover exposed piles of dirt and sediment and sand or berm the raw materials to prevent runoff.

It is necessary to protect the streets and inlets from raw materials stored on the construction site. Compost socks/berms or even loose piles of compost are effective if they are well maintained. It is not acceptable to pile the sand or raw material into the curb or driveway since any rain will immediately wash that raw material into the street and then into the storm drain inlets. Covering the raw material is helpful, but care must be taken that rain water does not disturb the edge of the pile and carry particulates onto the street or curb.

11. When rain threatens, remove materials and sweep surfaces in areas where runoff might go into the storm drain system.

12. Provide a protected collection area for floatable trash and debris, so that wind and/or water will not carry it into the storm drain system.
Figure 1. Compost filter berm above the curb and inlet protection barriers bracing a wire grid across a stormwater inlet. Using both practices is very effective immediately adjacent to a storm drain. However, construction site areas further from the storm drain typically use only one management practice. (Photo courtesy John Jacob, Ph.D.)

Figure 2. Silt fencing properly installed with wire grid backing and compost berm
(Photo courtesy John Jacob, Ph.D.)
Figure 3. Improperly installed silt fencing. Unanchored bottom allows eroded soil to wash out underneath. *(Photo courtesy John Jacob, Ph.D.)*

Figure 4. Improperly designed and installed silt fencing on a large scale. Compost berms would have been more effective and easier to maintain. *(Photo courtesy John Jacob, Ph.D.)*
VI. Inspection & Maintenance of Pollution Control Measures

Inspection of Pollution Control Measures

The responsible party is required to inspect all pollution control measures every seven days, and within 24 hours following every rainfall of ½ “ or more at the site. It is wise to review the pollution control measures in threatening rain conditions. A record of each inspection must be kept and be available for inspection by City Inspectors.

Maintenance of Pollution Control Measures

All temporary and permanent pollution control measures must be kept in working order so that they are effective. If any pollution control measure fails to keep soil, sediment or debris on the construction site, remedial action must be taken.

Clean streets, sidewalks, and inlets. Note that if dirt and sediment from the construction site has entered the storm drain system or adjacent property, the builder/developer will be required to remove it to the satisfaction of the City inspector.

Collect and dispose of all debris. Again, if construction trash or debris has entered the storm drain system or adjacent property, the responsible party will be required to remove it to the satisfaction of the City inspector.

At all times of construction, the responsibility for erosion control remains in the hands of the responsible party until the construction is complete and the City has accepted the site.

The following is a checklist of pollution control measures:

- **Erosion Control** – provide and maintain the temporary measures to effectively prevent any construction runoff from entering the storm drain system.

- **Inlet Protection** – provide and maintain the temporary measures to protect the storm drain inlets from construction erosion.

- **Construction access driveways** – provide and maintain the driveways to prevent tracking dirt and sediment from the site onto adjacent streets.
• **Waste disposal** – provide the waste facilities and work procedures that will prevent waste materials from blowing or washing off site.

• **Dust Control** – provide control by using water trucks or stabilization in order to minimize the nuisance from dust blowing off site.

• **Toxic Materials Storage** – provide for appropriate storage of toxic materials so that runoff from the site is not contaminated.

• **Concrete Truck Wash Down** – ensure that concrete trucks wash down on site into the properly installed and well-maintained concrete wash pit.

• **Soil Stabilization** – stabilize any unpaved area that is final grade or will remain unpaved for the next two weeks. Permanent stabilization may consist of sodding, seeding, or mulching that must be maintained to prevent erosion from the site until re-vegetation has achieved 70% coverage.

**THE BEST POLLUTION CONTROL MEASURES ARE THOSE THAT WORK!**
VII. A Stormwater Dictionary

Best Management Practices - (BMPs) Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction - The exposure of soils resulting from activities such as clearing, grading, and excavating.

Common Plan of Development - A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities.

Facility or Activity - Any TPDES “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the TPDES program.

Final Stabilization - A construction site status where either of the following conditions are met:
(a) All soil-disturbing activities at the site have been completed and all unpaved areas and areas not covered by a permanent structures have a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover equal to a minimum of 70% density of the native background vegetative cover or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
(b) For individual lots in a residential construction site by either:
   (1) the homebuilder completing final stabilization as specified in condition (a) above; or
   (2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization.
(c) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or rangeland), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as
buffer strips immediately adjacent to a surface water and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

**Large Construction Activity** - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of a ditch, channel, or other similar storm water conveyance. Large construction activity does not include the routine grading of existing dirt and sediment roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.

**Municipal Separate Storm Sewer System (MS4)** - A separate storm sewer system owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization. May also be called “storm drain system”.

**Notice of Intent (NOI)** - A written submission to the executive director of TCEQ from an applicant requesting coverage under a general permit.

**Notice of Termination (NOT)** - A written submission to the executive director of TCEQ from a permittee authorized under a general permit requesting termination of coverage.

**NPDES** – National Pollution Discharge Elimination System

**Operator** - The person or persons associated with a large or small construction activity that meets either of the following two criteria: (a) the person or persons have operational control over construction plans and specifications to the extent necessary to meet the requirements and conditions of this general permit; or (b) the person or persons have day-to-day operational control of those activities at a construction site which are necessary to ensure compliance with a storm water pollution prevention plan for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out
activities required by the Storm Water Pollution Prevention Plan or comply with other permit conditions).

**Permittee** - An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge storm water runoff and certain non-storm water discharges.

**Point Source** - Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**Pollutant** - (from the Texas Water Code, Chapter 26) Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and sediment, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland.

**Pollution** - (from the Texas Water Code, Chapter 26) The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

**Runoff Coefficient** - The fraction of total rainfall that will appear at the conveyance as runoff.

**Receiving Waters** – any of the bayous, ditches, streams or open water bodies that storm water flows into.

**Responsible Party** – the builder, developer, excavator, or any construction/work crew, contractor or vendor that is working on or delivering to the construction site.

**Storm Drain System** - A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) designed or used for collecting or
conveying storm water; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

**Small Construction Activity** - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of a ditch, channel, or other similar storm water conveyance. Small construction activity does not include the routine grading of existing dirt and sediment roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.

**Storm Water** - Storm water runoff, snow melt runoff, and surface runoff and drainage.

**Storm Water Associated with Construction Activity** - Storm water runoff from a construction activity where soil disturbing activities (including clearing, grading, excavating) result in the disturbance of one (1) or more acres of total land area, or are part of a larger common plan of development or sale that will result in disturbance of one (1) or more acres of total land area.

**Structural Control (or Practice)** - A pollution prevention practice that requires the construction of a device, or the use of a device, to capture or prevent pollution in storm water runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

**TCEQ** – Texas Commission on Environmental Quality, formerly known as the Texas Natural Resource Conservation Commission (TNRCC).

**Temporary Stabilization** - A condition where exposed soils or disturbed areas are provided a protective cover, which may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place.

**TPDES** - Texas Pollution Discharge Elimination System
Notice of Intent (NOI) for Storm Water Discharges
Associated with Construction Activity under the TPDES Construction General Permit (TXR150000)

For help completing this application, read the TXR150000 NOI Instructions (TCEQ-20022-Instructions)

A. Construction Site Operator
   - New [ ] No Change [ ]
   - Customer Reference Number: CN________________________

   - Name: ____________________________
   - Mailing Address: ________________________
   - City: ________________________
   - State: ________________________
   - Zip Code: ________________________
   - Country Mailing Information (if outside USA) Territory: ____________
   - Country Code: ____________
   - Postal Code: ____________
   - Phone Number: ____________ Extension: ____________ Fax Number: ____________
   - E-Mail Address: ____________________________

   - Type of Operator: [ ] Individual [ ] Sole Proprietorship - D.B.A. [ ] Partnership [ ] Corporation [ ] Federal Government
   - State Government [ ] County Government [ ] City Government [ ] Other: ____________________________
   - Independent Operator? [ ] Yes [ ] No
   - Number of Employees: [ ] 0-20 [ ] 21-100 [ ] 101-250 [ ] 251-500 [ ] 501 or higher
   - Federal Tax ID: ____________________________ State Franchise Tax ID Number: ____________________________
   - DUNS Number: ____________________________

B. Billing Address
   - Name: ____________________________
   - Mailing Address: ________________________
   - City: ________________________
   - State: ________________________
   - Zip Code: ________________________
   - Country Mailing Information (if outside USA) Territory: ____________
   - Country Code: ____________
   - Postal Code: ____________

C. Project / Site Information
   - New [ ] No Change [ ]
   - Regulated Entity Reference Number: RN________________________

   - Name: ____________________________
   - Mailing Address: ________________________
   - City: ________________________
   - State: ________________________
   - Zip Code: ________________________
   - Physical Address: ____________________________
   - City: ________________________
   - County: ________________________
   - Zip Code: ________________________

   - Location Access Description: ____________________________

   - Latitude: _______° ______’ ______” N
   - Longitude: _______° ______’ ______” W
   - Degrees (°), Minutes (’), and Seconds (")
   - Decimal Form: _______° ______’ ______”

   - Standard Industrial Classification (SIC) code: ____________

   - Also, describe the construction activity at this site (do not repeat the SIC code):

   ____________________________

   - Has a storm water pollution prevention plan been prepared as specified in the general permit (TXR150000)? [ ] Yes [ ] No
   - Estimated area of land disturbed (to the nearest acre): ____________
   - Is the project / site located on Indian Country Lands? [ ] Yes [ ] No
   - Does this project / site discharge storm water into a municipal separate storm sewer system (MS4)? [ ] Yes [ ] No
   - If yes, provide the name of the MS4 operator: ____________________________
   - Provide the name or segment number of the water body that receives storm water from this project / site: ____________________________

D. Contact - If the TCEQ needs additional information regarding this application, who should be contacted?
   - Name: ____________________________
   - Title: ____________________________
   - Phone Number: ____________ Extension: ____________ Fax Number: ____________
   - E-Mail Address: ____________________________

E. Payment Information - Check / Money Order Number: ____________ Name on Check / Money Order: ____________________________

F. Certification
   - I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

   - Construction Site Operator:
   - Prefix: ____________________________
   - First: ____________________________
   - Middle: ____________________________
   - Last: ____________________________
   - Suffix: ____________________________
   - Title: ____________________________

   - Signature: ____________________________ Date: ____________________________

   - If you have questions on how to fill out this form or about the storm water program, please contact us at (512) 239-4671.

   - Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at (512) 239-3282.

   - The completed NOI must be mailed to the following address. Use the attached document to submit the $100 application fee. Please note that the NOI and application fee are submitted separately to different addresses.

   - Texas Commission on Environmental Quality
   - Storm Water & General Permits Team; MG - 228
   - P.O. Box 13987
   - Austin, Texas 78711-3987

   TCEQ-20022 [05/03]
Texas Commission on Environmental Quality
Payment Submittal Form

The storm water application fee shall be sent under separate cover to the Texas Commission on Environmental Quality.

This form must be used to submit your Storm Water Application Fee. Please complete the following information, staple your check in the space provided at the bottom of this document, and mail it to:

**BY REGULAR U.S. MAIL**
Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier’s Office, MC-214  
P.O. Box 13088  
Austin, TX 78711-3088

**BY OVERNIGHT/EXPRESS MAIL**
Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier’s Office, MC-214  
12100 Park 35 Circle  
Austin, TX 78753

Fee Code: GPA  
Storm Water General Permit: TXR150000

Check / Money Order No: __________________________  Amount of Check/Money Order: __________________________

Date of Check or Money Order: __________________________

Name on Check or Money Order: __________________________

Facility / Site Name: __________________________

Facility / Site Physical Address: __________________________

City: __________________________  Zip Code: __________________________

Staple Check In This Space
Completing the Notice of Intent for Storm Water Discharges
Associated with Construction Activity
under the TPDES Construction General Permit (TXR160000)

A. Construction Site Operator Information

Check boxes and Customer Reference Number

These boxes designate the operator's status as a "TCEQ "custom"er"—in other words, an individual or business that is involved in an activity that we regulate. We assign each customer a number that begins with "CN," followed by nine digits. This is not a permit number, registration number, or license number. In the remainder of this section, we will use "this customer" to mean the operator for Part A of the form.

- If this customer has not been assigned a Customer Reference Number or if this number is unknown, check "New" and leave the space for the Customer Reference Number blank.
- If this customer has already been assigned this number, enter the operator's Customer Reference Number and:
  - Check "No Change" if all the remaining customer information is the same as previously reported. However, you must still complete most blanks in this form for this notice of intent to be valid.
  - If this customer's information has changed since the last time it was reported to the TCEQ, check neither box and complete the remainder of this notice of intent.

Do not enter a permit number, registration number, or license number in place of the Customer Reference Number.

Name
Enter the legal name of this customer as authorized to do business in Texas. Include any abbreviations (LLC, Inc., etc.).

Mailing Address
Enter a central and general mailing address for this customer to receive mail from the TCEQ. For example, if this customer is a large company, this address might be the corporate or regional headquarters. On the other hand, for a smaller business, this address could be the same as the street address.

If this is a street address, please follow US Postal Service standards. In brief, these standards require this information in the order:
- the "house" number—for example, the 1401 in 1401 Main St.
- If there is a direction before the street name, the one- or two-letter abbreviation of that direction (N, S, E, W, NE, SE, SW, or NW)
- the street name (if a numbered street, do not spell out the number—for example, 1st St, not Sixth St)
- an appropriate abbreviation of the type of street—for example, St, Ave, Blvd, Fwy, Expy, Hwy, Cr, Cl, Ln
- If there is a direction after the street name, the one- or two-letter abbreviation of that direction (N, S, E, W, NE, SE, SW, or NW)
- If there is a room number, suite number, or company mail code

City, State, and ZIP Code
Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

Country Mailing Information
If this address is outside the United States, enter the territory name, country code, and any non-ZIP mailing codes or other non-U.S. Postal Service features here. If this address is inside the United States, leave these blanks blank.

Phone Number and Extension
This number should correspond to this customer's mailing address given earlier. Enter the area code and phone number here. Leave "Extension" blank if this customer's phone system lacks this feature.

Fax Number
This number should correspond to this customer's mailing address given earlier. Enter the area code and fax number here.

E-Mail Address
As with the mailing address, this should be a general address that is appropriate for e-mail to this customer's central or regional headquarters, if applicable.

If "No Charge" was checked for this customer, you may skip the rest of the fields in this part of the form and continue to the next part of the NOI.

Type of Operator
Check only one box

Check ... | if this customer ...
--- | ---
Individual | is a person and has not established a business to do whatever causes them to be regulated by us.
Sale | is a business that is owned by only one person and has not been incorporated. This business may:
Proprietorship—D.B.A. | own its own name (doing business as...), or d.b.a.
Partner | have any number of employees
Partnership | is a business that is established as a partnership as defined by the Texas Secretary of State's Office.
Corporation | meets all of the following conditions:
Federal, state, county, or city government (as appropriate) | is an entity that is not an individual, but is treated as an entity for tax purposes.
Other | is the name of the above descriptions. Enter a short description of the type of customer in this blank.

Independent Operator?
Check "No" if this customer is a subsidiary or part of a larger company. Otherwise, check "Yes."

Number of Employees
Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in this NOI.

Federal Tax ID
All businesses, except for some small sole proprietorships, should have a federal tax identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Individuals and sole proprietors do not need to provide a federal tax ID.

State Franchise Tax ID
Corporations and limited liability companies that operate in Texas are required to issue a franchise tax identification number. If this customer is a corporation or limited liability company, enter this number here.

DUNS Number
Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

B. Billing Address

We will mail the annual fee invoice for this site to the address entered in this section.

Name
Enter the legal name of the person or business to which we should mail this site's fee invoice each year.

Mailing Address
Enter the specific mailing address to which we should mail this site's fee invoice each year. If this is a street address, please follow the US Postal Service standards as described under "A. Construction Site Operator Information" on page 1 of these instructions.

City, State, and ZIP Code
Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

Country Mailing Information
If this address is outside the United States, enter the territory name, country code, and any non-ZIP mailing codes or other non-U.S. Postal Service features here.
C. Project / Site Information
Check boxes and Regulated Entity Reference Number
These boxes designate this site's status as a TCEQ "regulated entity"—in other words, a location where an activity that we regulate occurs. We assign each regulated entity a number that begins with "RN", followed by three digits. This is not a permit number, registration number, or license number.
- If this site has not been assigned a Regulated Entity Reference Number or if this number is unknown, check "New" and leave the space for the Regulated Entity Reference Number blank.
- If this site has already been assigned this number, enter the Regulated Entity Reference Number and:
  - Check "Change" if all the remaining information is the same as previously reported. However, even if there has been no change, you must complete this section at least through "E-mail Address" for this NOI to be valid.
  - If the site's information has changed since the last time it was reported to the TCEQ, check neither box and complete the remainder of this notice of intent.
- Do not enter a permit number, registration number, or license number in place of the Regulated Entity Reference Number.

Name
Enter the name by which you want this site to be known to the TCEQ.

Mailing Address
Enter the specific mailing address for this site. If this is a street address, please follow the US Postal Service standards as described under "A Construction Site Operator Information" on page 1 of these instructions. If the project/site's mailing address is the same as what is provided in Section A, you may enter "Same as Section A".

City, State, and ZIP Code
Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

Physical Address
Enter the physical address of the site itself. TCEQ staff should be able to use this address to visit the site. Please follow the US Postal Service standards as described under "A Construction Site Operator Information" on page 1 of these instructions. If the project/site does not have a physical address, enter "No Address".

Location Access Description
Enter a physical description of the location of the site based on highway intersections and/or permanent landmarks.

Latitude and Longitude
Enter the latitude and longitude of the site in either degrees, minutes, and seconds or decimal form.

For help obtaining the latitude and longitude, go to:
http://www.tnroce.state.tx.us/gis/digview.html

Standard Industrial Classification (SIC) Code and Activity Description
Provide the SIC code that best describes the construction activity being conducted at the site.
For help with SIC codes, go to:
http://www.cohe.gov/shostatistics/cuser.html

In addition to the SIC code, you must also provide a description of the construction activity being conducted at the site. This may include such descriptions as "Apartment Building Construction" or "Shopping Center Construction."

Storm Water Pollution Prevention Plan
This plan identifies the areas and activities that could produce contaminated runoff at your site and then tells you how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter storm water, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan before you complete this NOI. This plan must be available for a TCEQ investigator to review on request. Specific requirements for the development of the plan can be found in the Texas Pollutant Discharge Elimination System Construction General Permit (TXR158000).

Estimated Area of Land Disturbed
Provide the approximate number of acres that the construction site will disturb. It is appropriate to enter a value less than 5, only if the project is part of a larger common plan that disturbs five or more acres. If the acreage is less than 5, enter "0." "Disturb" means any clearing, grading, excavating, or other similar activities.

Is the site located on Indian Country lands?
Check "Yes" only if the site is on a reservation or other area designated by the federal government as Indian Country lands. If not, check "No."

Destination of Storm Water Discharge
The storm water from your site eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. The discharge may initially be into a municipal separate storm sewer system (MS4). Check the appropriate boxes for whether storm water is discharged into an MS4. If you checked "Yes" to an MS4, then enter the name of the entity that operates the storm sewer—often a city, town, or utility district, but possibly another form of government.

You must also provide the name of the water body that receives the discharge from the construction site (a local stream or lake). Storm water may be discharged directly to a receiving stream or via a storm sewer system. If known, please include the segment number if the discharge is to a classified water body.

For a map that includes segment numbers, go to:
http://www.tnroce.state.tx.us/water/quality/data/index.html

D. Contact
Give all the relevant information for the person whom TCEQ can contact if there are questions about any of the information on this form—perhaps the same person who completed the form.

E. Payment Information
Provide the number and account holder name from the check or money order used to pay the $100 application fee.

F. Certification
The operator must sign and date this statement to validate this NOI. Be sure to enter the full legal name of the person signing the form and the relevant title—for example, "Operator," "Vice-President," or "Partner." Use the "PREFIX" blank for such designations as Dr., Mr., Ms., or Mrs., as desired. Use the "SURNAME" blank for such designations as D'Pro., Jr., Sr., Ill, or J.D., if applicable.

For a corporation, the application shall be signed by a responsible corporate officer. A responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy and decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million in second-quarter (1990 dollars). If authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures, Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to appropriate corporate positions rather than to individual managers.

For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this application, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the United States Environmental Protection Agency).

Questions?
If you have questions about any of the information on this form, contact our Storm Water Program at 512-383-4671 or look for "Storm Water" on our Web site:
www.tnroce.state.tx.us

TCEQ-20022-Instructions (05/03)
SPECIAL SPECIFICATION
1058
Compost

1. Description. Furnish and place compost as shown on the plans.

2. Materials. Furnish compost that has been produced by aerobic (biological) decomposition of organic matter and meets the requirements set forth by the United States Department of Agriculture and the United States Composting Council (USCC), “Test Methods for the Examination of Composting and Compost” (TMECC), shown in Table 1. Compost feedstock may include, but is not limited to, leaves and yard trimmings, biosolids, food scraps, food-processing residuals, manure or other agricultural residuals, forest residues, bark, and paper. Ensure compost and wood chips do not contain any visible refuse, other physical contaminants, or any substance considered to be harmful to plant growth. Do not use materials that have been treated with chemical preservatives as a compost feedstock or as wood chips. Do not use mixed municipal solid waste compost. Provide compost meeting all applicable United States Code of Federal Regulations (CFR), Title 40, Part 503 standards for Class A biosolids and Texas Commission on Environmental Quality (TCEQ) health and safety regulations as defined in the Texas Administrative Code (TAC), Chapter 332, including the time and temperature standards in Subchapter B, Part 23. Meet the requirements of the USCC Seal of Testing Assurance (STA) program.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Physical Requirements for Compost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle Size: 95% passing 5/8 in, 70% passing 3/8 in. in accordance with TMECC 02.02-B, “Sample Sieving for Aggregate Size Classification”</td>
<td></td>
</tr>
<tr>
<td>Heavy Metals: Pass in accordance with TMECC 04.06, “Heavy Metals and Hazardous Elements”</td>
<td></td>
</tr>
<tr>
<td>04.06-As, Arsenic</td>
<td>04.06-Hg, Mercury</td>
</tr>
<tr>
<td>04.06-Be, Beryllium</td>
<td>04.06-Mo, Molybdenum</td>
</tr>
<tr>
<td>04.06-Cd, Cadmium</td>
<td>04.06-Ni, Nickel</td>
</tr>
<tr>
<td>04.06-Cu, Copper</td>
<td>04.06-Se, Selenium</td>
</tr>
<tr>
<td>04.06-Pb, Lead</td>
<td>04.06-Zn, Zinc</td>
</tr>
<tr>
<td>Soluble Salts: 5.0 max * dS/m in accordance with TMECC 04.10-A, “1:5 Slurry Method, Mass Basis”</td>
<td></td>
</tr>
<tr>
<td>pH: 5.5 – 8.5 in accordance with TMECC 04.11-A, “1:5 Slurry pH”</td>
<td></td>
</tr>
<tr>
<td>Maturity: greater than 80% in accordance with TMECC 05.05-A, “Germination and Root Elongation”</td>
<td></td>
</tr>
<tr>
<td>Stability: 8 or below in accordance with TMECC 05.08-B, “Carbon Dioxide Evolution Rate”</td>
<td></td>
</tr>
<tr>
<td>Fecal Coliform: Pass in accordance with TMECC 07.01-B, “Fecal Coliforms”</td>
<td></td>
</tr>
</tbody>
</table>

* A soluble salt content up to 10.0 dS/m for compost used in CMT will be acceptable.
SPECIAL SPECIFICATION

1019

Mulch/Compost Filter Berm for Erosion and Sedimentation Control

1. Description. This work shall consist of furnishing, installing, maintaining and dispersing (if necessary) a water permeable windrow berm of a compost or mulch to contain soil erosion by removing suspended soil particles from water moving off the site and into adjacent waterways or storm water drainage systems.

2. Materials. Filter Berm Mulch or Filter Berm Compost.

Filter Berm Mulch. Where used without seeding or planting, use material derived from weed free bark/wood mulch that conforms to the following:

a. pH - 5.0 to 8.5.
b. Particle size - 98 percent passing 25 millimeter sieve, 90 percent passing 19 millimeter sieve and not more than 30 percent passing the nine (9) millimeter sieve. Material shall not exceed 100 millimeters in length.
c. Moisture content less than 60 percent.
d. No less than 70 percent organic matter.
e. Material shall be reasonably free (<1 percent by dry weight) of man-made foreign matter.
f. A sample shall be submitted to the Engineer/landscape architect for approval prior to being used and must comply with local city, county or state regulations.

Filter Berm Compost. Where seeding or planting is planned or where biological filtration may be desired, use compost material derived from well decomposed organic matter source, or in combination with filter berm mulch (maximum of 50 percent). The compost material shall be an organic substance produced by the aerobic (biological) decomposition of organic matter. The compost material shall not contain any visible admixture of refuse and other physical contaminants nor any material toxic to plant growth. Composted matter may include, but are not limited to, leaves and yard trimmings, biosolids, food scraps, food processing residues, manure and/or other agricultural residuals, forest residues and bark, and soiled and/or recyclable paper. The use of mixed municipal solid waste compost or Class B Biosolids (as defined in 40 CFR part 503) will not be allowed. Compost materials furnished shall meet all applicable Federal (40 CFR part 503 Standards for Class A Biosolids) and Texas Natural Resources Conservation Commission (TNRCC) health and safety regulations (TAC Chapter 332). All compost material supplied shall be processed to meet the time and temperature standards in TAC Chapter 332 Subchapter B Part 23 to control noxious weeds, pathogen and vector attraction.

Filter berm compost shall conform to the following:

a. pH - 5.5 to 8.5.
b. Particle size - 98 percent passing 25 millimeter sieve, 90 percent passing 19 millimeter sieve and not more than 40 percent passing the nine (9) millimeter sieve. Material shall not exceed 100 millimeters in length.
c. Moisture content less than 60 percent.
d. No less than 70 percent organic matter.
e. The compost portion shall be reasonably free (<1 percent by dry weight) of man-made foreign matter.
f. The compost portion shall not resemble the raw material from which it was derived.
g. A sample shall be submitted to the Engineer/landscape architect for approval prior to being used and must comply with local city, county and state regulations.
Contact Information for Tackifier Suppliers
(Current as of May 2004)

LESCO, Inc. (polyacrylamide (PAM) product)
  11320 FM 529 Rd 1
  Houston, TX  77041
  281-821-7083
  Profile Products’s Tacking Agent III

SILTSTOP (co-polymer)
  Applied Polymer Systems, Inc.
  519 Industrial Drive
  Woodstock, GA  30189
  678-494-5998
  www.siltstop.com

EC 3000 Tackifier (co-polyacrylamide)
  Erosion Control Technologies, Inc.
  P.O. Box 5383
  North Branch, NJ  08876
  800-437-6746

SOIL SEMENT (liquid polymer emulsion)
  Midwest Industrial Supply, Inc.
  P.O. Box 8431
  Canton, OH  44711
  800-321-0699
  330-456-3247 FAX
  www.midwest.com
  custserv@midwestind.com

SOILMASTER-WR (liquid co-polymer emulsion)
  Environmental Soil Systems, Inc.
  16161 Ventura Blvd. #703
  Encino, CA  91436-2522
  888-368-9664
  Usage rate is found at www.revex.com/smstr_htm.htm
  soilmaster_2000@yahoo.com
Stormwater Pollution Prevention Plan (SWP3) Checklist

Site Description
- Nature and type of construction activity
- Total area of site to be disturbed
- Calculation of runoff coefficients
- Percent resulting impervious/pervious area
- Soil data
- Prior land uses

Implementation Schedule – sequence of events

Receiving water bodies

Special aquatic sites or wetlands

Erosion Controls/placement

Copy of Stormwater permit

Site Map
- Limits of earth disturbing activities
- Soil types
- Drainage basins during earth disturbing activities
- Current surface water locations
- Existing/planned buildings, roads, parking lots, utilities
- Location/type erosion and sediment control
- Excavation, utility construction, building, landscaping
- Storage/disposal of solid/liquid waste
- Construction driveways/entrances/exits

Sediment/Erosion Controls
- Non-Structural – every effort made to preserve riparian setbacks adjacent to streams/surface water bodies
- Phases of activities to minimize land disturbance
- Tree Preservation areas?
- Structural – control practices to restabilize
- Types of stabilization measures (time of year)
- Temporary and permanent stabilization measures
- Runoff control practices – flow of water
- Sediment control practices – soil control
- Timing – grubbing/construction
- Sediment settling ponds – adequate filtration for pumping?
- Inlet protection
- End of pipe device interfacing with City drainage system

Post Construction
- Structural post-construction BMP after construction complete?
- Long Term Maintenance

Non-Sediment Pollutant Controls
- Toxic/hazardous materials
- Recycling
- Containers
- Construction/demolition debris waste/disposal
- Chemical compounds
- Equipment fueling/washing/maintenance
- Concrete wash pits
- Dust controls
- Housekeeping Practices