

## For More Information

Seminole County Environmental Services  
(407) 665-2000

City of Longwood Engineering  
(407) 263-2383

City of Longwood Public Works  
(407) 831-6175

Spill Hotline / State Warning Point  
(> 25 gallons)  
(800) 320-0519

Florida Department of Environmental  
Protection  
(407) 894-7555

### Other important contacts

FDEP NPDES Stormwater Program  
2600 Blair Stone Road Mail Station 2500  
Tallahassee, FL, 32399  
Phone (850) 921-9904

SFWMD  
1707 Orlando Central Parkway  
Orlando, Florida 32809  
(407) 858-6100

SJRWMD  
975 Keller Rd  
Altamonte Springs FL 32714  
(407) 659-4800

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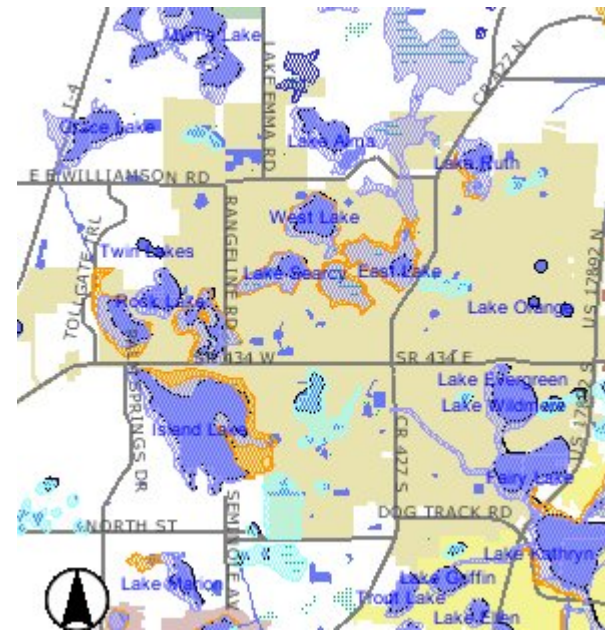
City of Longwood  
Department of Community Services  
174 West Church Ave  
Longwood, FL 32750

Serving the community by protecting the environment through  
education, participation, and conservation

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# Stormwater Compliance in the City of Longwood



Developers, Contractors, and  
Business Owners NPDES  
Information Handbook

# Introduction

Longwood has a variety of lakes, streams, rivers, and wetlands that are used for recreational enjoyment, sustaining ecosystems, filtering, storing, controlling stormwater, and recharging groundwater. These surface waters are part of what makes Central Florida such a unique place to live. Most of the surface waters are replenished by stormwater, which is an excellent solvent that picks up, dissolves, and carries a wide variety of materials including heavy metals, solvents, soaps, sewage, pesticides, herbicides, waste oils, and large amounts of suspended solids commonly called turbidity. These contaminants, along with improperly controlled development, degrade water quality, diminish recreational use, pose risks to human, plant, and animal populations, and cause flooding. The control of pollution in stormwater discharge is critical to protecting the quality of surface waters, and is of growing concern as our developed areas increase. In populated areas, stormwater flows along yards and paved surfaces to a man-made system of ditches, curbs, pipes, and retention ponds eventually discharging into natural surface waters. To protect surface waters within Longwood, the Engineering Division of the Community Services Department has been delegated the responsibility of enforcing requirements of the National Pollutant Discharge Elimination System (NPDES) relating to stormwater within its jurisdiction. Other aspects of NPDES, such as permitting of direct discharges to "waters of the United States" are regulated by the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (USEPA).

Surface waters are part of what makes Central Florida such a unique place to live



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# Reporting an Illicit Discharge

## What is an illicit discharge?

An illicit discharge is any contaminant that is allowed to enter the county's storm sewers. It may be a deliberate discharge, or run-off from a contaminated site. It must be stopped in order to ensure that our stormwater discharges do not pollute the waters of the State.

## What are illicit discharge signs?

- Unusual water color, oily sheen, foam, suds, turbidity
- Smell or fumes
- Discarded drums or other containers and materials
- Brown or dead plants around an outfall
- Sick or dead animals around an outfall
- Personal symptoms (burning eyes, nose or skin, nausea or headache)

## What should I do if I find a suspected illicit discharge?

Contact the City of Longwood Engineering Division at (407) 263-2383. A quick response may prevent serious damages.

## What information should I report?

Report any wastewater or other polluting material that you see being discharged into a street, alley or storm drain. If you see a violation occurring, call us and provide the following information:

- Location of the discharge (physical address or directions to the location)
- What you observed and the date and time
- Identifying names, marks or numbers on the vehicle or facility
- License tag number

Violations that are reported while they are in progress can often be corrected quickly and may result in little or no pollution entering a lake or other surface waters.

Help protect our water  
Help protect our future

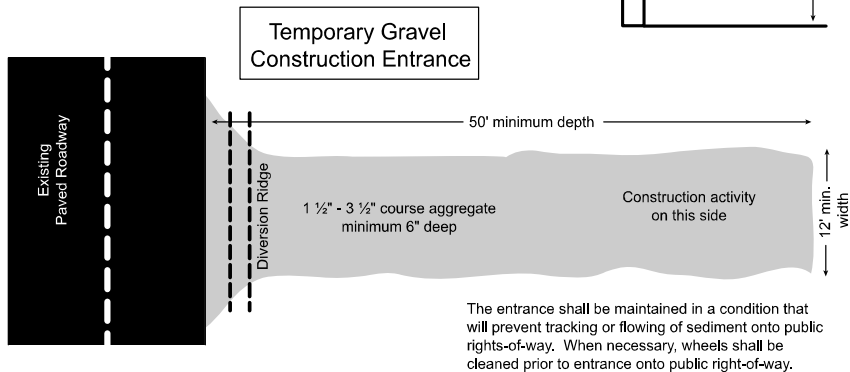
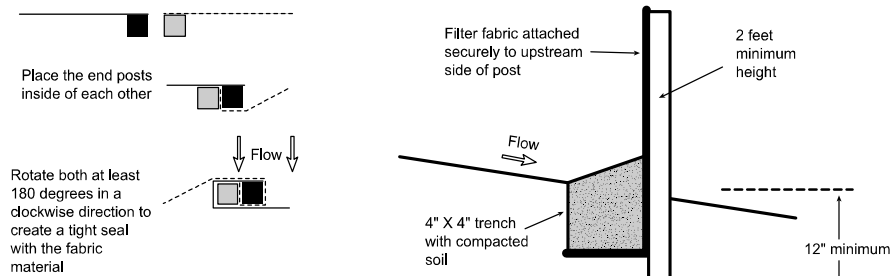


Special thanks to the South Florida Water Management District for the photos in this document.

## Construction Issues: Best Management Practices

All erosion protection devices must be maintained and remain in place until proper vegetation has been established!

Silt Fence  
Connecting Sections & Trenching Detail



Typical Construction Site Entrance and Silt Fence Installation

(Source: City of Orlando)

Check BMPs weekly and after major storm events (1/2" or more of rain), and keep a log tracking the BMP maintenance schedule and rainfall.

(The Longwood Engineering Division recommends the use of double silt fence barriers instead of hay balls to protect our city from nuisance vegetation such as Soda Apple!)

## The Clean Water Act

Congress enacted the Clean Water Act (CWA) in 1972 to ensure minimum water quality standards for the waters of the United States. An important part of the CWA has become the National Pollutant Discharge Elimination Systems (NPDES), which became effective in Seminole County in 1996. The purpose of the NPDES program is to reduce stormwater pollutant discharges to the maximum extent practicable in order to minimize the **eutrophication** of receiving waters.

The CWA prohibits anyone from discharging **pollutants** into **waters of the United States** without the authorization of an NPDES permit. Facilities which discharge pollutants from point sources (discharge pipes from a manufacturing plant) and non point sources (sheet flow over construction sites), are required to obtain an NPDES permit from the Florida Department of Environmental Protection (FDEP). The NPDES permit contains monitoring and reporting requirements, limits on discharges, and other provisions. The permit criteria ensure that the State of Florida's standards and the Federal Government's criteria for clean water are being met.

Longwood currently operates under the NPDES MS4 permit FLS000038, and is responsible for inspecting, identifying, and controlling illicit discharges to the municipal separate storm sewer system (**MS4**). Under these rules and guidelines the following general criteria can be used:

*No person shall deposit, or cause to be deposited by draining, dumping, spilling, leaking, pumping, pouring, emitting, discharging, leaching, disposing, or otherwise introducing any of the following substances into receiving waters or into a MS4.*

- Any industrial waste
- Any domestic or industrial sewage from a septic tank, drainfield or other source;
- Used motor oil or any other petroleum product or waste;
- Garbage;
- Any untreated wash-water. Wash facilities must provide a recycle system, or have a recapture system to collect and treat the soapy water;
- Substances in concentrations that injure, are chronically toxic to, or produce adverse physiological or behavioral response in humans, plants, or animals;
- Substances that will affect the oxygen levels of the receiving waters by Biological Oxygen Demand, Chemical Oxygen Demand and dissolved oxygen;
- Any discharge which will affect the transparency or turbidity of the receiving waters. The turbidity of discharge water may not exceed 29 NTUs above the background levels of the receiving waters.

**Eutrophication** is the decrease in water quality. It occurs naturally but is sped up by land development and the release of nutrients and wastes into the environment.

The **MS4** is the entire stormwater control system, from the street curb or swale all the way to the natural pond.

**Pollutant** includes any uncontrolled discharge product that has deleterious effects to plant or animal life.

**Waters of the United States** are defined as navigable waters, tributaries to navigable waters, interstate waters, the oceans out to 200 miles, and intrastate waters which are used by interstate travelers for recreation or other purposes, as a source of fish or shellfish sold in interstate commerce, or for industrial purposes by industries engaged in interstate commerce.

**NTU** is a Nephelometric Turbidity Unit. A measure of water clarity.

For further information please refer to the Code of Federal Regulations (CFR), 40 CFR Part 122, the Florida Administrative Code (FAC) Chapter 62, Florida Statutes (FS) section 403 parts I and V, and the Orange County Code section 9, 15, 30, 32, 34, 37 and other related regulations as applicable.

## Dos and Don'ts of Disposal

### Used Oil, Petroleum Products, Antifreeze

#### Do

- Label all waste containers
- Use approved waste haulers
- Clean up spills immediately
- Store containers on impervious surfaces
- Drain or crush oil filters to remove free oil
- Recycle antifreeze and store in closed containers protected from the elements
- To prevent cross contamination, only use dedicated equipment for antifreeze

#### Don't

- Do not mix used oil with even small amounts of solvents (brake cleaners)
- Do not use gasoline or oil to kill weeds and ants, or to keep dust down
- Do not mix used oil with other solid waste going to a landfill
- Do not mix antifreeze with used oil or other wastes
- Do not dispose of antifreeze on the ground, into storm drains or septic systems

### Parts Cleaners/Washers

#### Do

- Use mineral spirits as long as possible before exchanging
- Use the minimum number of parts washers necessary
- Use high flash mineral spirits
- Determine by testing whether wastewater sludges are hazardous waste

#### Don't

- Do not mix dirty mineral spirits with any other waste (e.g. used oil)
- Do not evaporate dirty mineral spirits or pour into drains
- Do not dispose of wash water to the ground, septic system or storm drain
- Do not place sludge in dumpster

### Vehicle/Floor Cleaning

#### Do

- Catch leaks before they reach the floor and manage properly
- Verify drains go to sanitary sewer
- Use an oil/water separator and maintain it regularly
- Contact Longwood Utilities and inform them of your waste content

#### Don't

- Do not discharge oil containing substances to the ground, septic system, or storm sewer.
- Do not discharge soapy water to the storm sewer

### Sump Sludges

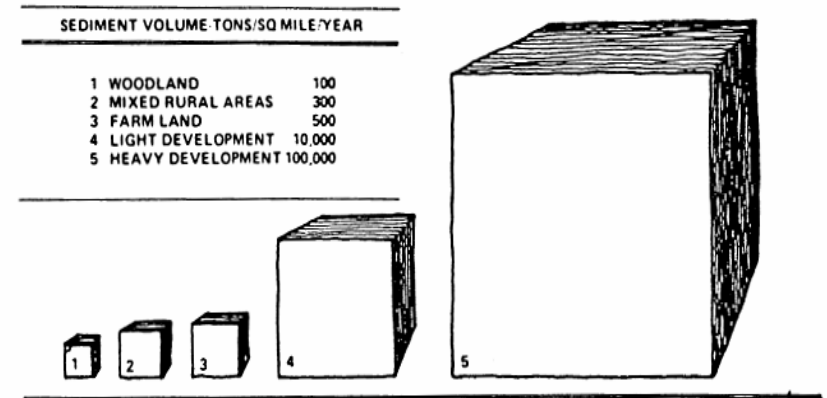
#### Do

- Have sludge tested prior to having it pumped out
- Know where it is going for disposal and keep a receipt or manifest

#### Don't

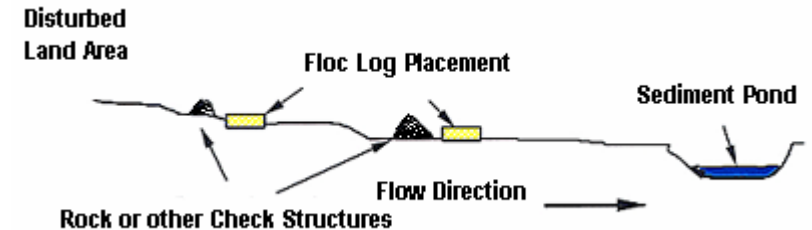
- Do not use septic tank pumping service to remove the sludge if it is hazardous or industrial waste
- Do not place sludge on the ground or in the dumpster

## Construction Issues: Best Management Practices



Typical volumes of sediment eroded from different uses. Note: heavy development may cause significant sedimentation effects offsite. Special Best Management Practices must be applied in development sites with large disturbed areas.

(Source: Guidelines for Sediment Control Practices in the Insular Caribbean)



Typical sites of Floc Log Placement. Should be used in conjunction with Rip-Rap, Silt Fence, or other BMPs.

### Polyacrylamide "Floc" Logs

Longwood encourages the use of Flocculation Logs (also known as Pam Logs) to reduce turbidity before it leaves a construction site. Floc logs assist in the reduction of turbidity by causing small floating particles to clump together and fall out of the water column. They are formulated for the soil and water chemistry of the usage area. Soil and water samples are required for geographical areas not previously tested. They may be staked in place in a location close to active earth moving activities and may also be used in drop inlets, storm drains, retrofits, and slope drains. Some logs may be mixed with water and sprayed directly onto affected water bodies.

Flocculation describes the process of mixing small particles so they contact each other and form larger particles called floc.

## Construction Issues: Best Management Practices

There are a number of standard Best Management Practices (BMPs) that can be used to prevent erosion and sedimentation to avoid water quality violations during construction. The following is an abbreviated list of practices that should be addressed by the contractor or engineer involved with the construction planning and process.

**Phase construction** - Phase 1. Install perimeter erosion controls before land clearing begins. Phase 2. Install interim stormwater management to be maintained during major portions of the construction process, and only clear land that is to be developed immediately. Phase 3. Install and finalize stormwater system at the end of the construction process

**Temporary Gravel Construction Entrance and Construction Road stabilization** - Use a 6" thick layer of 2" rock (For entrances use Geotextile or cow fencing under the rock for added stabilization).

**Silt fence barriers** - to control sheet flow (backfill the lip to a minimum of 4" depth with a 4" lip)

**Storm drain inlet protection** - on and off site

**Temporary Diversion Dikes** - to minimize and direct sheet flow over disturbed areas

**Temporary Sediment Traps and Basins** - to allow time for silt to settle out of the water column

**Temporary Slope Drains** - to control stormwater stream flows over a slope

**Temporary Check Dams** - to decrease water flow velocity through swales or canals

**Dewatering** - to lower the ground water table (Turbid water must remain on site)

**Floating Turbidity Barriers** - run along the shore in the water to control sediment flow adjacent to water bodies

**Regular street sweeping** - to control offsite flows of sediment

**Regular watering schedule** - to prevent wind erosion on large denuded areas

**Other helpful suggestions:**

- During the planning stage prepare for management of stormwater on site
- Inspect and maintain erosion and sediment controls in a timely and effective manner
- Temporarily seed or mulch areas that will not be worked for 30 days or more
- Check BMP's Weekly and after major storm events (1/2" or more of rain), (keep a log tracking the BMP checks, maintenance schedule, and rain gauge readings)

### Turbidity

All discharges leaving a construction site must be no more than 29 NTU's (Nephelometric Turbidity Unites) above the receiving waters.

Any discharge to Outstanding Florida Waters (OFW's) must not be greater than the NTU's of the receiving waters (OFW's in Seminole County are the Butler Chain of Lakes, the Big and Little Econlockhatchee River, the Saint Johns River, the Wekiva River and Rock Springs Run, and all connected wetlands). Special protection of these surface waters are mandatory. Please see FAC 62-307.700(9) for further information.

If all BMP's are used and a significant rain event occurs, inspectors may take into account acts of God if turbidity violations occur (A consistent rain gauge log must be maintained at all times and presented in a timely manner upon request).

## What to do with Waste?

Be part of the solution  
Practice Good  
Housekeeping

Label all containers

Keep containers  
closed when not in  
use

Use drip pans

Examine for leaks and  
spills daily

Clean up spills  
immediately

Do not mix unknown  
materials together

Keep your receipts for  
all hazardous waste  
disposal

Hazardous waste is identified in one of two ways. It can be found on lists published in the Code of Federal Regulations (40CFR Part 261), or it might exhibit one or more characteristics of **ignitability, corrosivity, reactivity or toxicity**.

**Conditionally Exempt Small Quantity Generators** (CESQGs) generate less than 220 pounds of hazardous waste per month and less than 2.2 pounds of acute hazardous waste such as some pesticides, toxins or arsenic and cyanide compounds) per month.

**Small Quantity Generators** (SQGs) generate 220-2,200 pounds of hazardous waste per month.

**Large Quantity Generators** (LQGs) generate 2,200 pounds or more of hazardous waste per month or 2.2 pounds or more of acute hazardous waste per month. For more information on LQGs, contact the Florida Department of Environmental Protection Office (407) 894-7555.

**Household Hazardous Waste (HHW)** Many homeowners have some form of hazardous material that they wish to discard. Generally if a container has any of the following words: Pesticide, Caustic, Poison, Danger, Acid, Warning, or Flammable it is probably a hazardous material and should be disposed of at the Household Hazardous Waste Center. For more information on HHW, call Seminole County Environmental Services at (407) 665-2000.

### Common Hazardous Wastes

- Pesticides
- Oil based paint
- Paint thinner/stripper
- Varnishes and stains
- Cleaning fluids
- Chemical drain cleaners
- Auto and furniture polish
- Household, vehicle, and boat batteries
- Solvents
- Flammable liquids
- Pool Chemicals
- Brake Fluid and Antifreeze
- Used oil and oil filters
- Photographic waste
- Fluorescent lamps
- Computers and Cell Phones

## Permits?

Anyone who discharges pollutants into surface waters, a Municipal Separate Storm Sewer System (MS4), or other conveyance system may need a permit. Remember, discharges may involve stormwater runoff (non-point sources), or wastewater/drain discharges (point sources). Construction sites that disturb 1 acre or more are required to obtain a permit. Please contact the FDEP NPDES permitting section for more information and refer to FDEP document 62-621.300 (4)(a). It is the business owner, manager, and landowner's responsibility to ensure that work is properly permitted. Failure to comply with these rules may result in fines and stop work orders.

### Where do I apply for an NPDES permit, or get more information?

To obtain an NPDES Point Source Permit, please contact the FDEP Central District in Orlando at (407) 894-7555. For information on Non-Point Source (Construction) Permits, please contact the FDEP Tallahassee office at (850) 921-9904 or refer to the FDEP website:

[www.dep.state.fl.us/water/nonpoint/](http://www.dep.state.fl.us/water/nonpoint/) and

[www.dep.state.fl.us/water/stormwater/npdes/construction3.htm](http://www.dep.state.fl.us/water/stormwater/npdes/construction3.htm)

For more NPDES information: <http://cfpub.epa.gov/npdes/>.

For other permits please see this web site: <http://lthor6.dep.state.fl.us/oraosprey/>

### Who is responsible for the permit?

The Contractor, Owner, and operator will be responsible to ensure that proper permits are obtained for the business, industry, or construction practice that will be occurring. The liability for following permit criteria may be split between each involved party, but primarily rests upon the party who has direct authority over the construction site and Best Management Practices (BMPs).

### Longwood Stormwater Requirements

The City of Longwood requires land development projects to comply with the minimum standards established by the Longwood Development Code. Subdivision construction plans and supporting data, including the disposition and treatment of stormwater, are required for approval, must be prepared according to City Code, and must be submitted to the City Engineer. For more information regarding the City's Stormwater requirements, contact: City of Longwood Engineering Division: (407) 263-2383.

### State Requirements

There are multiple permits and requirements for projects controlled by the state. The aforementioned websites should provide assistance to comply with state requirements. The FDEP has a Generic Permit for Stormwater Discharges from Construction Activities (CGP). There are also Environmental Resource Permits (ERPs) and Dewatering Permits which are given by the FDEP and the Water Management Districts (South Florida Water Management District, SFWMD, and the Saint John's River Water Management District, SJRWMD). For more information please contact the individual Water Management Districts and the FDEP (see back of pamphlet).

### The Process

The following process should occur for compliance with stormwater permit coverage:

- Obtain permit coverage under the ERP and the local municipal construction program
- Obtain copies of the CGP and the NOI from the FDEP web site, carefully read and complete them, and develop a Stormwater Pollution Prevention Plan (SWPPP)
- Complete and submit a Notice of intent (NOI) to the FDEP and send a copy to Longwood Engineering
- Reapply for permit coverage every five years as needed, or file a Notice Of Termination (NOT) upon completion of work

This process may be changed or updated by the FDEP

## Construction and other Industrial Issues

### NOIs

Notice of Intents (NOIs) for Stormwater Discharges Associated with Construction or Industrial Activity General Permits and Stormwater Pollution Prevention Plans (SWPPPs) must be filled out and filed with the FDEP. The Longwood Engineering Division must receive a copy of the NOIs (Please contact the FDEP or review their website for more information), and the SWPPPs must be available on site for review.

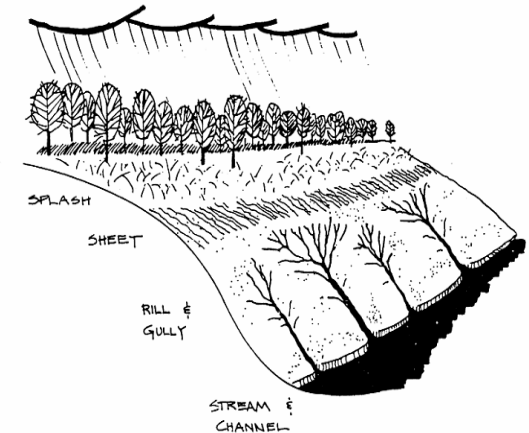
(The FDEP NOI must be copied to the Longwood Engineering Division, after April 2, 2003 the NOIs will no longer have to be filed with the Federal Government).

EPA: <http://www.epa.gov/npdes/pubs/connol.pdf>

FDEP: [http://www.dep.state.fl.us/water/stormwater/docs/npdes/Phase\\_1\\_cgp.pdf](http://www.dep.state.fl.us/water/stormwater/docs/npdes/Phase_1_cgp.pdf)

### Erosion and Sedimentation

Soil erosion is the process by which the land surface is worn away by the action of wind, water, ice, and gravity. Sedimentation is the settling out of the soil particles transported by water and wind. Accelerated erosion is caused primarily by disturbance and removal of vegetative ground cover. This type of erosion accounts for a large percentage of the sediment generated in this country. Overland erosion can occur in many ways: splash, sheet, rill, and stream. There are various Best Management Practices (BMP's) which can be used to stop such erosion, and contractors must be aware of and use such methods to avoid water quality violations and clogging of the Municipal Separate Storm Sewer System (MS4).



Types of Soil Erosion

(Source: Guidelines for Sediment Control Practices in the Insular Caribbean)

### SWPPPs

All Stormwater Pollution Prevention Plans (SWPPPs) for construction sites in Longwood **must be on site\***, and available for review. All construction sites that fall under NPDES Stormwater regulations must have a SWPPP. The SWPPP will contain specific erosion control measures that apply to your work site, please refer to your approved erosion control plan and SWPPP as required by Longwood, the FDEP and the Water Management Districts.

Discharge of silt and construction debris from your construction site is a violation of federal, state, and city codes.

\*Due to NPDES MS4 Permit FLS000038