# Stormwater Compliance at the University of West Florida

## Developers, Contractors, and Business Owners NPDES Information Handbook

Revised 4/08

# TABLE OF CONTENTS

Office of the President
11000 University Parkway
Pensacola, FL 32514-5750

March 6, 2006

Mr. Peter Robinson, Interim Director
Environmental Health and Safety
Bldg. 90 / Room 118, UWF
Via Inter-Campus Mail

**Reference: Compliance with Phase II Municipal Separate Storm Sewer System Permit (MS4) Requirements**

Dear Peter:

The University of West Florida (UWF) has a long-standing tradition of excellence regarding good environmental stewardship and compliance with environmental regulations.

As part of the University of West Florida's Phase II Municipal Separate Storm Sewer System Permit (MS4), NPDES Permit No. FLR04E057, we must have a lead Department to ensure the University complies with the permit requirements. I request the Department of Environmental Health and Safety (EH&S) serve as the lead department for the UWF.
A Phase II MS4 is defined as a system of publicly owned conveyance(s) and includes roads, curbs, gutters, swales or ditches that discharges to surface waters of the State (Outfalls), and is designed or used solely for collecting or conveying stormwater.
The MS4 permit requires that we define and prohibit illicit discharge. Illicit discharge is defined as any material entering the storm sewer system that is non-stormwater related including illegal dumping. The UWF prohibits in all cases the illicit discharge to our stormwater system. Your department is authorized to take appropriate measures to prevent such illicit discharges.

The MS4 Permit also requires that we address regulation of stormwater in terms of sediment and erosion control for construction sites. The Building Code section of the EH&S Department will be responsible for plans review for compliance with our MS4 Permit prior to permitting a project and will subsequently be responsible to ensure compliance during actual construction through on-site field inspections. Any non-compliance noted during the site inspections will be noted and corrective actions initiated immediately.

Please indicate your willingness to have the Department of Environmental Health and Safety accept the role as the lead department to ensure compliance with the UWF MS4 Permit requirements via email to presidentsoffice@uwf.edu.
Sincerely,

John C. Cavanaugh
President

## INTRODUCTION

University of West Florida 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 Northwest 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 the University, the Environmental Health and Safety Department (EH&S) 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).

# 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 Orange 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.

The University currently operates under a NPDES MS4 permit, and is responsible for inspecting, identifying, and controlling illicit discharges to the 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, drain field 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.

# DO's and DON'Ts of Disposal

## Used Oil/Petroleum

**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 UWF EH&S and inform then of your waste content

**Don't**

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

## Sump Sludge's

**Do**

- Test sludge prior to having it pumped out
- Know where it is going for disposal and keep a receipt or manifest
- Contain concrete sludge/wash outs appropriately

**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

# WHAT TO DO WITH WASTE?

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 2202,200 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 separately.

For more information on SQGs, CESQGs, or Household hazardous waste contact UWF EH&S at (850) 473-2525.

# PERMITS

Anyone who discharges pollutants into surface waters, a Separate Storm Sewer System (MS4), or other conveyance system may need a permit. There are, however, two entities from FDEP that issue stormwater permits within our area; Northwest Florida Water Management District in Crestview and FDEP in Tallahassee. In some cases, you may require permits from both organizations or you may only be required to have one permit depending on the area of disturbance and the discharges that may involve stormwater runoff (non-point sources), or wastewater/drain discharges (point sources). For construction sites that disturb 1 acre or more will be required to obtain a NPDES permit from Tallahassee FL. Please contact the FDEP NPDES permitting section for more information and refer to FDEP document 62-621.300 (4)(a). For other stormwater permitting issues contact the Northwest Florida Water Management District in Crestview. 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 Tallahassee office at (850) 921-9904 or refer to the FDEP website: www.dep.state.fl.us/water/nonpoint/ and www.dep.state.fl.us/water/stormwater/npdes/construction3.htm

For more NPDES information: http://cfpub.epa.gov/npdes/
For other Storm water permitting and information please see this web site: http://nwfwmd.state.fl.us
For UWF permits please see this web site: http://www.uwf.edu/envhs/BCApages/index.html

**Who is responsible for the permit?**
The Contractor, Owner, and operator will be responsible to ensure that all 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).

**UWF Stormwater Requirements**
UWF requires land development projects to comply with the minimum standards established by the State of Florida. Besides a UWF permit, 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. For more information please contact the Northwest Florida Water Management District in Crestview, FDEP in Tallahassee, or UWF EH&S (see back of pamphlet).

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

- Obtain permit coverage under the ERP from the appropriate FDEP organization
- 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 the UWF EH&S
- Apply for your UWF permits
- File a Notice Of Termination (NOT) upon completion of work

This process may be changed or updated by the FDEP or UWF as required so check the web sites to ensure you follow the correct process.

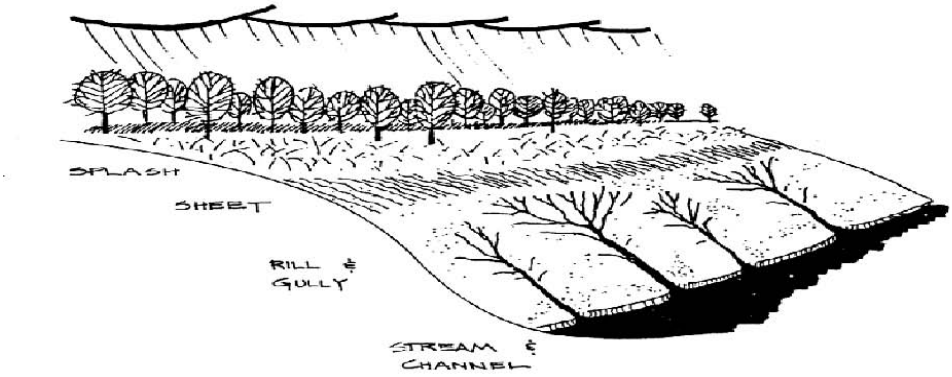
# Construction and other Industrial Issues

**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 UWF EH&S 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 copies to the UWF EH&S. after April 2, 2003 the NOIs will no longer have to be filed with the Federal Government).**
- **EPA: http://www.epa.gov/npdes/pubs/connoi.pdf**
- **FDEP (NPDES): http://www.dep.state.fl.us/water/stormwater/docs /npdes/ Phase_1_cgp.pdf**
- **NWFWMD: http://www.nwfwmd.state.fl.us**

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 at UWF 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 UWF and the FDEP.**

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

# CONSTRUCTION ISSUES: BEST MANAGEMENT PRACTICES

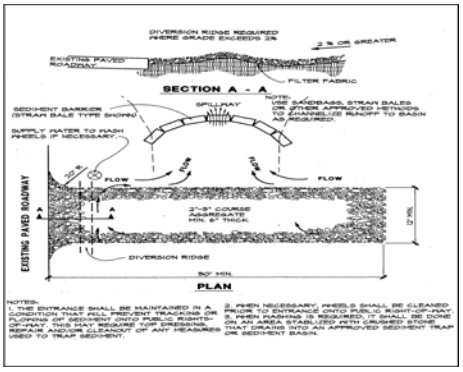
There are a number of standard Best Management Practices (BMPs) that can be used to prevent erosion and sedimentation to avoid water quality violations during construction. The following is an abbreviated list of practices that should be addressed by the contractor or engineer involved with the construction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

**Construction Phases –**

- 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

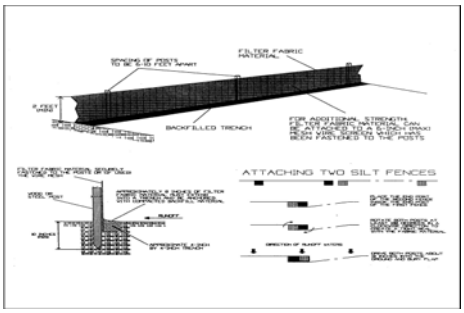
**Temporary Gravel Construction Entrance and Construction Road stabilization** -Use a 6" thick layer of 2" rock (For entrances use Geotextile or cow fencing under the rock for added stabilization).

EXAMPLE

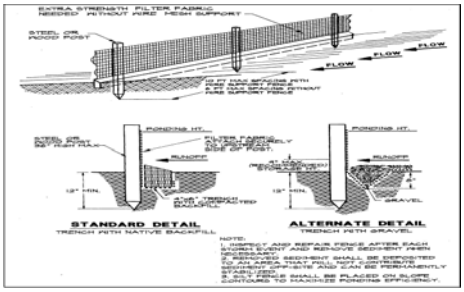



**Silt fence barriers** -to control sheet flow (backfill the lip to a minimum of 4" depth with a 4" lip)

EXAMPLE

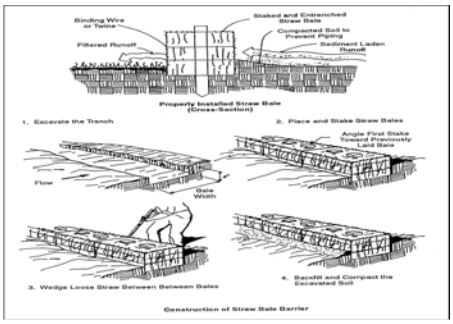


EXAMPLE

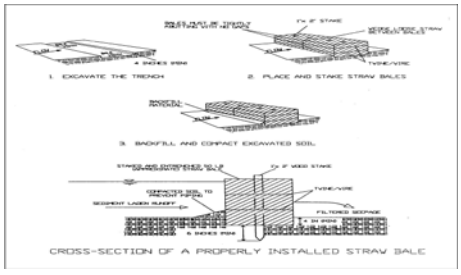



**Hay bale barriers** -to control sheet flow (backfill the lip to a minimum of 4" depth)

EXAMPLE

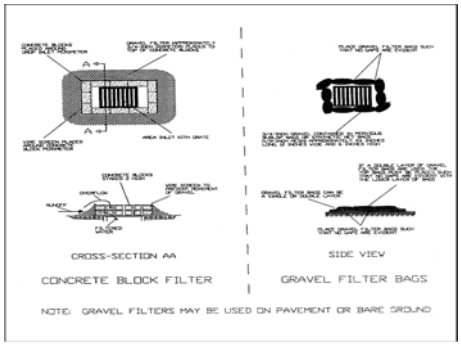



EXAMPLE



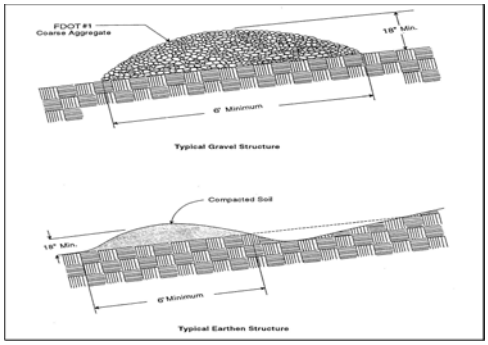

**Storm drain inlet protection** -on and off site

EXAMPLE



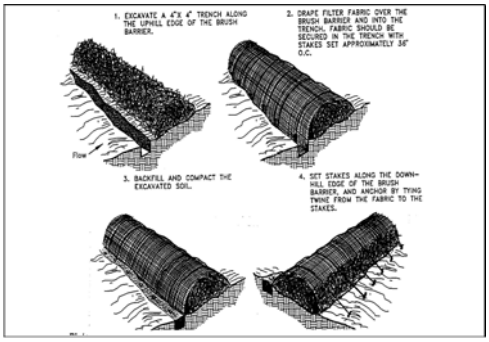
**Temporary Diversion Dikes -**to minimize and direct sheet flow over disturbed areas

EXAMPLE



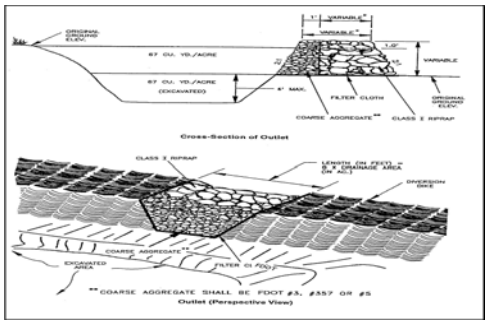

**Brush Barrier** – To intercept and retain sediment from disturbed area of limited extent, preventing sediment from leaving the site.

EXAMPLE



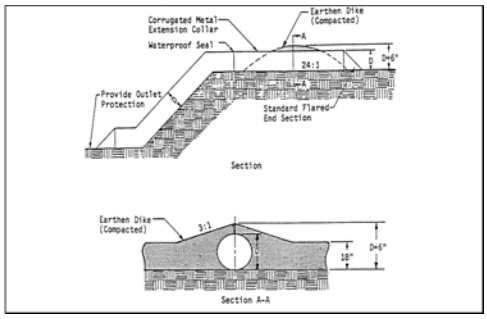

**Temporary Sediment Traps and Basins -**to allow time for silt to settle out of the water column

EXAMPLE



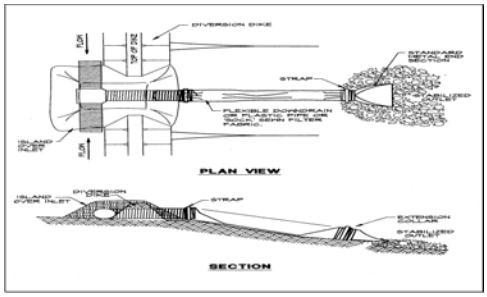
**Temporary Slope Drains -**to control stormwater stream flows over a slope

EXAMPLE



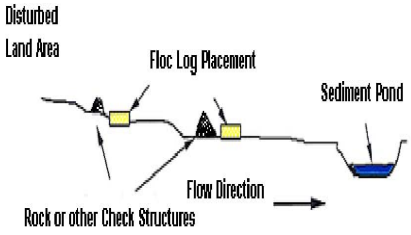

**Temporary Check Dams -**to decrease water flow velocity through swales or canals

EXAMPLE




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

EXAMPLE




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

## Polyacrylamide "FLOC" Logs

**University of West Florida 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.**

**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)

# REPORTING ILLICIT DISCHARGE

**What is an illicit discharge?**

An illicit discharge is any contaminant that is allowed to enter the University's storm systems. 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 Environmental Safety and Health at 4-2525 (for an after hours emergency contact UWF Police Dept at 4-2415). 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.

## For More Information

**University of West Florida**
**Environmental Health and Safety**
**11000 University Parkway, Bldg 90**
**Pensacola Florida, 32514**
**(850) 474-2525**

## Other Important Contacts

**NPDES Stormwater Program**
**2600 Blair Stone Road Mail Station 2500**
**Tallahassee, FL, 32399**
**Phone (850) 245-7522**

**Northwest Florida Water Management District**
**800 Hospital Drive**
**Crestview, FL, 32539**
**Phone (850) 683-5044**

**Florida Department of Environmental Protection**
**Stormwater Division**
**160 Governmental Center Chappie James Bldg**
**Pensacola, FL, 32514**
**(850) 595-8300**

## Past UWF Stormwater Projects

### Thompson's Bayou Boat Dock

New Dock

New Dock

### Outfall #17 Drainage Project

Construction Beginning

Grassy Swell

Outlet with Rip Rap

### Bldg 100-New Construction

Retention Pond Area

### Bldg 223-New Construction

Grassy Swell

## Pelican Park Drainage Project

10” drainage pipe area

Drainage pipe area with new inlet

New Drain Inlet

New Drain Inlet

## Outfall #19 Drainage Project

Construction Beginning

Construction Beginning

New Outfall

New Street Inlet

## HLS Drainage Project

Construction Beginning

Construction Beginning

Construction Beginning

## North Parking Lot-New Construction

New Drainage, inlets, and retention area