

Chapter 1 – Erosion and Sedimentation

_____ is the process by which the land surface is worn away by the action of wind, water, and gravity.

_____ is the settling out of soil particles transported by water and wind.

Soil erosion can be classified as either ____ erosion or ____ erosion, and the sources can be either ____ or ____.

Water erosion can be classified as either _____ erosion or ____ and _____ erosion.

Four processes of overland erosion are:

- 1.
- 2.
- 3.
- 4.

Four principal factors influencing soil erosion are:

- 1.
- 2.
- 3.
- 4.

List three physical effects of erosion and sedimentation:

- 1.
- 2.
- 3.

List three biological effects of erosion and sedimentation:

Plan the development to fit the terrain using the particular:

Apply _____ practices to protect the disturbed area from off-site runoff and to protect off-site areas from sediment damage.

Apply _____ practices to prevent excessive on-site damage.

Keep runoff velocities __and ____ runoff on the site.

It is very important to stabilize disturbed areas _____ after final grading to prevent raindrop impacts from causing erosion.

Implement a thorough _____ and _____ (inspection) program as required in the Construction Generic Permit (CGP).

Chapter 2 – Soils

Soil particles smaller than 0.002 mm are classified as ___ and along with ___ are the two soil types that cause the most erosion/turbidity problems in Florida and the World.

Soils in the Type A hydrologic group have ___ infiltration rates and ___ runoff potential even when thoroughly wetted.

Soils in the Type D hydrologic group have very ___ infiltration rates and ___ runoff potential when thoroughly wetted.

The _____ is the only factor in the Universal Soil Loss Equation which is beyond the developer's control.

Slope _____, and _____ are the factors most easily manipulated by the developer.

The RUSLE is used on our construction sites to predict _____.

Stabilize disturbed lands immediately to save _____.

Who can you contact for a soil survey information? FDOT, FDEP, Water Management District, Mayor's Office, or NRCS.

What are the five soil forming factors?

- 1.
- 2.
- 3.
- 4.
- 5.

Chapter 3 – Temporary BMPs for Erosion and Sedimentation Control

Waste disposal is a problem for the individual workers and some subcontractors, but it's no big deal (True / False).

Truck washing should be done in a designated area, not near the perimeter controls. (True / False).

Storage of paints, solvents, cements, pesticides, acids, or other potentially polluting chemicals is no big deal because they are only stored temporarily and get used up quickly. (True / False).

The public needs to understand that dust is just a normal part of construction. (True / False).

A temporary gravel construction entrance must extend the full width of the entrance. It must be at least __ feet long and at least __ inches thick. Aggregate should be __ in. stone or FDOT No. __ stone. Prior to installing the gravel, a _____ should be placed on the ground to simplify installation and maintenance.

Maintenance of a temporary gravel construction entrance should be performed when void spaces are full of _____.

The maximum drainage area for a silt fence under sheet flow conditions is __ acre per 100 feet of barrier length.

The average usable life of a silt fence is __ months.

For proper installation of a silt fence, a trench __ inches deep and __ inches wide must be excavated. This will allow the __ inches of fabric to extend into the ground for backfilling and compaction.

The maximum drainage area for an inlet protection device is __ acre.

When constructing a silt fence drop inlet sediment filter, a trench __ inches deep and __ inches wide must be excavated to allow __ inches of fabric to extend into the trench.

Stakes shall be __ x __ by __ feet long and a 2" x 4" frame will be constructed _____ for proper stability.

The purpose of a sediment trap is to (filter/detain) turbid water.

The maximum drainage area for a temporary sediment trap is __ acres. The initial storage capacity is ____ cu. yd. per acre. Maximum life should be __ months.

When constructing a pipe outlet sediment trap, the top of the riser pipe must be at least ____ feet below the top of the embankment.

When constructing a storm inlet sediment trap, the trap shall be between ____ feet deep measured from the low point of the outlet.

The purpose of a sediment basin is to (filter/detain) turbid runoff from disturbed areas.

A sediment basin is required for a drainage area of more than __ acres.

In a sediment basin, baffles are used to increase flow length (True/False).

The maximum allowable drainage area for a temporary slope drain is__ acres.

A diversion or earthen dike shall be used to direct stormwater into the temporary slope drain. (True/False)

The height of the dike at the inlet shall be equal to the _____ plus _inches.

The maximum spacing between check dams should be such that the _____ of the upstream dam is at same elevation as the ____ of the downstream dam.

Sediment should be removed from check dams, when it reaches _____of the original height or before.

A floating turbidity curtain is designed to _____ sediment laden water and allow enough ____ for sediments to settle out of suspension.

A type III floating turbidity curtains may be used in considerable flow conditions, meaning less than _ feet per second or__ knots.

In flowing water turbidity curtains should be placed _____ the direction of flow, not _____.

Anchor lines shall be attached to the _____, not to the _____.

In tidal and/or wind and wave conditions there should be a ____ -foot gap between bottom of the curtain and the floor of the water body at mean low water.

Sediments shall be allowed to settle a minimum of 72 hours prior to removal of the turbidity curtain (True/False).

Chapter 4 – Vegetation

The three purposes of soil roughening are:

- 1.
- 2.
- 3.

The purpose of _____ is to provide a suitable growth medium for final site stabilization with vegetation.

The subgrade should be prepared by _____ or _____ to insure bonding of the topsoil with the subsoil.

Areas that are at rough grade for 7 days or more should receive seeding immediately.

List three soil conditioners:

- 1.
- 2.
- 3.

Name two soil amendments often required prior to permanent seeding:

_____.

A stand of vegetation is considered fully established after ____ year.

When sodding a slope, strips should be laid ____ the contour. Joints should be _____. Start from the _____ and work toward the ____.

List three beneficial functions of mulch:

- 1.
- 2.
- 3.

Straw mulch should be applied at rate of _____ lbs. per 1000 sq. ft.; _____ bales per 1000 sq. ft.; or _____ tons per acre.

When installing erosion control nets or blankets, work from the ____ towards the _____.

Effective tree protection should be installed no closer than _ feet from the trunk or the _____ of the tree.

A good place for material storage, parking, and portable toilets is inside the tree protection zone. (True / False).

Chapter 5 - Dewatering

What types of dewatering systems generally produce clear, non-turbid groundwater? _____.

What kind of water quality does a rim ditch system produce?

_____.

What must a well-point and horizontal pump system have in order to function properly? _____.

What methods are used to manage (treat) nonstormwater discharges & remove sediment from construction pumping?

FDEP General Permit for Dewatering requires that you be how many feet from a "known contamination source?" _____

What tools can be used by the permit applicant to determine the cleanup and restoration status of a known contamination site?

What must the permittee do if the discharge from their dewatering notices the presence of a pollutant or pollutants such as a sheen, or odor?

When using chemical treatment systems, what should you remember?

What two are the most common and approved flocculant chemicals utilized to control turbidity on a job site to reduce turbidity?

Before discharging chemically treated water, what should you test for?

Chapter 6 – Regulatory and Statutory Requirements

The US EPA authorized Florida to implement the NPDES in what year: 1972/ 1999/ 2000/ or 2007?

The NPDES Generic Permit for Florida in the phase II implemented was effective on this year: 1979/2001/2005/2015?

A Large Construction activity results in disturbing ____ acres or more total land area.

What is a construction activity? Building a LEGO city/ clearing pine trees and burning them/ building a garden shed behind your house/ and replacing windows and doors in your home?

A road is a type of linear project? True or False

Obtaining permit coverage is the responsibility of the: engineering firm/FDOT/ subcontractor/ the Operator.

The person, firm, contractor, public organization, or other legal entity responsible for construction is known as the: boss/ operator/ serve party/ improvement board?

What should be the Operator's first step? Submit the NOI/ develop the perimeter fencing around the area to be disturbed/ develop the SWPPP?

You can now complete and submit the NOI application and fee electronically? True or False.

After getting the NOI and the acknowledgement letter you can start clearing land? True or False

What do you do with the NOI once you receive it? You can file it/ send a copy to the inspector/ put it in the garbage can DEP has a copy/post on the job board.

The CGP permit will allow you to do the following: Fill a wetland area/ dump construction debris/ cause a water quality violation / perform construction activity.

Chapter 7 - SWPPP

The Qualified Inspector is anyone who has: Read the CGP/ writes a SWPPP/ paid the fee for the permit/ passed the FSESCI class.

Once your site has achieved final stabilization of 70% or greater you have how many calendar days to submit an NOI? 7, 10, 14, 21

You can you transfer your NOI to a new contractor. True or False

If a BMP is not performing what should you do? Replace the BMP with an alternate BMP/ wait for the engineer or superintendent to fix / call DEP and ask for help.

You must keep all your field inspections, SWPPP, photos, and updated SWPPP for potential review for how long? Five years, 10 years, one year, three years.

Chapter 8 – BMPs for Stormwater Management

When clearing a site and preparing for fill, tree and root debris should be (burned and buried under fill / removed from the fill area)

Pipes and structures can be damaged by heavy compactors and should be backfilled and compacted in small lifts with small compactors (T / F)

A _____ is designed to retain stormwater on site and allow time for percolation into the ground.

When constructing a retention basin with heavy equipment, special care must be taken to avoid excessive _____ of surface soils, especially in the basin floor.

Storage volume must be recovered within _____.

The purpose of a _____ is to temporarily store runoff and release it at a controlled rate.

All inlets, outlets, and other control structures should be inspected when?

By definition a swale should have side slopes no steeper _____.

A swale is a good place to recycle yard debris since it's organic. (True / False).

A _____ is a permanent, designed waterway; shaped and lined with appropriate material (erosion resistant): to safely conduct (convey) runoff away from a developing area.

The purpose of a paved flume is to safely conduct runoff down the face of a slope. (T / F)

The purpose of a diversion is to direct stormwater to a stabilized area. (T / F)

The maximum spacing between check dams should be such that the _____ of the upstream dam is at _____ elevation as the top of the downstream dam.

Sediments should be removed before they reach _____ of the original height of the dam.

An _____ is designed to prevent scour at outlets and minimize erosion downstream by reducing the velocity of concentrated stormwater flows.

The three purposes for riprap are:

- 1.
- 2.
- 3.

When placing _____ over geotextile great care must be taken to avoid damaging the geotextile while placing the stone.

Chapter 9 – Inspection and Enforcement

In addition to technical knowledge, the inspector must be able to effectively deal with _____.

In dealing with the public it is most important to follow proper procedures, and to always be _____.

The erosion and sediment control rules are _____. This means that the BMPs must be _____ in controlling erosion and preventing off-site sedimentation for the site to be in compliance.

Off-site sedimentation is excusable only if all BMPs have been installed per an approved plan (True/ False).

Inspector's job is to:

Additional Information:

If I pass this exam today, my certificate of qualification as a “Qualified Inspector” does it require CEUs every three years to stay qualified? (Yes / **No**)

The certificate of qualification as a “Qualified Inspector” does it ever expire? (Yes / **No**)

This certificate is only good as a “Qualified Inspector” in which southeast states? (Mississippi, Alabama, Georgia, Tennessee, South Carolina, **Florida**)

If you pass this exam you can go and start doing inspections immediately. (**True**/ False)

Generally, it may take up to six weeks if not sooner to receive your certificate in the mail if you provided a reliable mailing address including any apartment numbers or suite numbers. (**True**/ False)

Thank you all for attending our class. We hope this will only be the start of your interest in learning more about sediment and erosion control and water pollution control in general. We appreciate your help in properly applying your knowledge to preventing water pollution.