

Environmental Compliance

Presented by:

Kyle Hill, *Environmental Quality Coordinator*
Texas Department of Transportation (TxDOT)

Eric Huff, *Environmental Manager*
VRX Inc.



Environmental Compliance in PS&E

Environmental Permits, Issues and
Commitments (EPIC)

and

Storm Water Pollution
Prevention Plans (SW3P)

Environmental Compliance

Why worry about it?

- Plan revisions take **time and money**.
- The area engineer is subject to **fin**es.
- Problems in plans result in **change orders** in the field.
- Impacts to **project schedule**.

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 13, 2009

TXDOT
DENTON AREA OFFICE
MAR 16 2009
DENTON, TEXAS
RECEIVED

{CERTIFIED MAIL 91 3408 2133 3931 7860 2681}
RETURN RECEIPT REQUESTED

Mr. Mark L. Ross
Texas Department of Transportation
2624 W Prairie St.
Denton, TX 76201

RE: Notice of Violation for Stormwater Investigation at:
FM 2499, located between FM 407 to FM 2181, in Highland Village, (Denton County),
Texas
RN Number: RN105697791, TCEQ Additional ID No.: TXR15NO98, Investigation No.
738011

Dear Mr. Ross:

On February 23, 2009 Mr. Bismark Otorino of the Texas Commission on Environmental Quality (TCEQ) Dallas/Fort Worth (DFW) Region Office conducted an investigation of the above-referenced site to evaluate compliance with applicable requirements for storm water. Enclosed is a summary which lists the investigation findings. During the investigation, a certain outstanding alleged violation was identified for which compliance documentation is required. Please submit to this office by April 13, 2009, a written description of corrective action taken and the required documentation demonstrating that compliance has been achieved for the outstanding alleged violation.

In the listing of alleged violations, we have cited applicable requirements, including TCEQ rules. If you would like to obtain a copy of the applicable TCEQ rules, you may contact any of the sources listed in the enclosed brochure entitled "Obtaining TCEQ Rules."

REPLY TO: REGION 4-DALLAS/FORT WORTH • 2309 GRAVEL DR. • FORT WORTH, TEXAS 76118-6951 • 817-588-5800 • FAX 817-588-5700

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • Internet address: www.tceq.state.tx.us

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environmental compliance and performance at all Road Construction Projects undertaken by Respondent or Respondent's contractor.

22. Respondent shall begin development and implementation of the SEP upon the effective date of the Final Order. The Respondent shall develop and implement all requirements of the SEP within two thousand two hundred fifty (2,250) days of the effective date of the Final Order.

23. The Respondent's total expenditure for the SEP shall not be less than One Million (\$1,000,000) Dollars. No part of this expenditure shall include federal funds, including low interest federal loans, federal contracts, or federal grants. The money will fund Respondent's development and implementation of the long-term, statewide construction oversight program (COP) described in this CAFO, and will benefit the environment by aiding Respondent in its continued commitment to environmental compliance.

Environmental Compliance

Goals of this presentation:

1. Increase knowledge
2. Improved document = improved compliance
3. Reduce review times

EPIC

1. EPIC sheet must be completed for all projects.
2. Must list all commitments, issues and requirements affecting the contractor on a specific project.
3. EPIC sheet is the engineer's opportunity to provide the contractor all environmental constraints for a project.

EPIC

EPIC preparation requires:

- Knowledge of project-specific environmental document
- Comprehension of environmental regulations

National Environmental Policy Act of 1969
CEQ Regulations 40 Code of Federal Regulations (CFR) 1500-1508
FHWA Regulations Implementing NEPA (23 CFR 771
Clean Water Act (CWA) of 1972
Rivers and Harbors Act (RHA) of 1899
National Flood Insurance Act (NFIA) of 1968
Executive Order (EO) 11988 – Floodplain Management
EO 11990 – Protection of Wetlands
Wild and Scenic Rivers Act of 1986
TxDOT/TCEQ Memorandum of Understanding (MOU) of 2001
Endangered Species Act (ESA) of 1973
Migratory Bird Treaty Act (MBTA) of 1918
EO 13112 - Invasive Species
Executive Memorandum - Beneficial Landscaping
TxDOT/TPWD Memorandum of Understanding of 1998
National Historic Preservation Act (NHPA) of 1966
Archeological Resources Protection Act (ARPA) of 1979
Antiquities Code of Texas (ACT)
Clean Air Act (CAA) of 1963
Noise Control Act of 1972
Resource Conservation and Recovery Act (RCRA) of 1976
Texas Solid Waste Disposal Act of 1969
Texas Hazardous Substances Spill Prevention and Control Act of 1996
Farmland Protection Policy Act (FPPA) of 1981
Title VI of the Civil Rights Act of 1964

EPIC

During the planning phase of project development the following environmental permits, issues and commitments have been developed during coordination with resource agencies, local governmental entities and the general public. Any change orders and/or deviations from the final design must be reported to the Engineer prior to the commencement of construction activities, as additional environmental clearances may be required.

I. Clean Water Act, Section 402 National Pollutant Discharge Elimination System
(Addresses MS4 requirements for project)

No Action Required Required Action

Action No. Station # of Certificate Commitment

1. Plans reflect construction and post construction efforts to reduce silt and sediment from running off project and into adjacent jurisdictional waters. (See SWPPP Sheet)
2. General Construction permit for construction activity of large project over 5 acres, required.
- 3.
- 4.
- 5.

II. Clean Water Act, Section 401 and 404 Compliance

No Permit Required 404 Permit Required

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

Permit	Required Action	Waters of the US	Application Plan Sheet No.
1.	No action necessary above those required by the 2004 Texas Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges.		
2.			
3.			
4.			
5.			

III. Cultural Resources

No Action Required Required Action

Action No. Station # of Certificate Commitment

1. No action necessary above those required by the 2004 Texas Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges.
- 2.
- 3.
- 4.
- 5.

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

IV. Hazardous Materials or Contamination Issues

No Action Required Required Action

Action No. Station # of Certificate Commitment

1. No action necessary above those required by the 2004 Texas Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges.
- 2.
- 3.
- 4.
- 5.

If potentially hazardous material and/or contaminated media (i.e. soil, groundwater, surface water, sediment, building materials) are unexpectedly encountered during construction, cease work in the immediate area and contact the Engineer immediately.

V. Federal Listed and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species

No Action Required Required Action

Action No. Station # of Certificate Commitment

1. No action necessary above those required by the 2004 Texas Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges.
- 2.
- 3.
- 4.
- 5.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately.

VI. Resources

No Action Required Required Action

Action No. Station # of Certificate Commitment

1. Only remove trees and undergrowth that are directly within the construction area or safety zone.
1. Follow beneficial landscape practices. Use only native plants for landscaping and use construction practices that minimize harmful effects to the environment.
- 3.
- 4.
- 5.

VII. Other Environmental Issues

No Action Required Required Action

Action No. Station # of Certificate Commitment

1. No action necessary above those required by the 2004 Texas Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges.
- 2.
- 3.
- 4.
- 5.

This is what not to do; by the time we are done you will know how to be sure you have a complete EPIC.

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

FED ID:	FEDERAL AID PROJECT NO.	PROGRAM NO.
6		
STATE:	DISTRICT:	COUNTY:
TEXAS		
CONTRACT:	SECTION:	JOB:
SHEET NO.		REV. OF SHEET

1. Review Design for EPIC, size as noted - match last schedule.
 2. If additional work is needed for a numbered section, issue and adjust sections up or down as needed for proportioning and readability but do not relocate from FC's vertical position.

Revised 6-26-03

EPIC

Section I — Clean Water Act Section 402 Texas Pollutant Discharge Elimination System (TPDES)

Always a required action:

- **Action:** Defines TPDES permitting requirement
- **Waters:** Define receiving water name and location
- **Commitment :** Determined by acreage of disturbance

Contact **Kyle Hill**, 214-320-6181.



EPIC

Section II — Clean Water Act

- **Required Action:** Nationwide permit (NWP) or individual permit (IP)
- **Permit:** List applicable permit
- **Required Action:** Comply with general conditions, PCN required, etc.
- **Waters of the U.S.:** List name of water, station number and plan sheet.
- **Temporary Impacts associated with means and methods:** Contractor's responsibility but must comply with USACE permitting program (e.g., temporary crossing non-erodible).



Contact **Jay McCurley**, 214-320-6207.

EPIC

Section III — Cultural Resources

- Archaeological
- Historic sites
- More than just the standardized language we are all used to ...
- Know environmental document's cultural resource section

Contact **John Debner**, 214-320-6282.

EPIC

Section IV — Vegetation Resources

Special circumstances associated with vegetation

- Large trees to be avoided
- Riparian woodland mitigation
- Vegetation preservation areas within right-of-way (ROW)



Environmental document's vegetation section

Contact **Robert Hall**, 214-320-6157.

EPIC

Section V — Threatened & Endangered Species Act (ESA) and Migratory Bird Treaty Act (MBTA)

1. ESA

- Special habitat to be avoided
- Listed species where habitat was observed
- Environmental document for project-specific requirements

2. MBTA — International Treaty

- Standardized language to address compliance
- Environmental document for project-specific requirements

Contact **Robert Hall**, 214-320-6157.



EPIC

Section VI — Hazardous Material or Contamination Issues

- High-risk sites
- Asbestos
- Lead-based paint



Contact **John Debner**, 214-320-6282.

EPIC

Section VII — Other Environmental Issues

- Noise walls
- Section 208 (maintenance and operation)
- Non-mow areas

Contact **Jay McCurley**, 214-320-6207.

EPIC

- Standards are updated as necessary to improve project compliance.
- Don't copy previous project's EPIC.
- Always get current standard from your design team manager.



EPIC

Conclusion

- Environmental Regulations
- + Environmental Documents
- + TxDOT Resources

Use Your Environmental Staff

EPIC

Don't Forget

- Specific and complete
- Attention to detail
- FAIL SAFE



EPIC

During the planning phase of project development the following environmental permits, issues and commitments have been developed during coordination with resource agencies, local governmental entities and the general public. Any change orders and/or deviations from the final design must be reported to the Engineer prior to the commencement of construction activities, as additional environmental clearances may be required.

I. Clean Water Act, Section 402 Texas Pollutant Discharge Elimination System

(Addresses MS4 requirements for project)

Action No.	Station # R/L of Centerline	Commitment
<input type="checkbox"/> No Action Required	<input checked="" type="checkbox"/> Required Action	
1. Project disturbs more than 5 acres surface area TxDOT must file MS4 permit conditions with TCEQ for CSP.	West Fork Trinity River Johnson Creek, Emerald Wetland, Bear Creek	Comply with TPDES CSP, Contractor must implement and maintain a SWSP. See SWSP Plan Sheet, BMPs, and detail.
2. TxDOT must file MS4.		Contractor must stabilize project site as stated in SWSP.

II. Clean Water Act, Section 401 and 404 Compliance

Filling, dredging or excavating in any water bodies, rivers, creeks, streams, wetlands or wet area is prohibited unless specified in the USACE permit and approved by the Engineer.

When temporary fill is implemented, only stated USACE standards will be used unless written authorization for an alternative is obtained from the Engineer. No equipment is allowed in any stream channel below the Ordinary High Water Mark except on temporary stream crossings or drill pads.

Permit	Required Action	404 Permit and 401 Certification Required	Applicable Plan Sheet Number
<input type="checkbox"/> No Permit Required	<input checked="" type="checkbox"/> 404 Permit and 401 Certification Required		
NWP 14	Comply with Conditions of the Individual Permit USACE coordination not required.	Johnson Creek	Sheet B7
NWP 14	Comply with Conditions of the coordination not required.	West Fork of Trinity River	Sheet D1
IP #20040002	Comply with Conditions of the Individual Permit USACE coordination required.	Emerald Wetland	Sheet J1, J2
NWP 14	Comply with Conditions of the Individual Permit USACE coordination required.	Bear Creek	

Although his construction require NWP 14, the impacts will be addressed under the IP. The IP will trigger a TIER II TCEQ water Quality Permit. Certification. Numerous BMPs will be implemented per the IP process.

Best Management Practices for applicable 401 General Conditions

General Condition 12 - Categories I and II BMPs required

Category I (Erosion Control)

<input type="checkbox"/> Temporary Vegetation	<input type="checkbox"/> Blankets, Matting
<input type="checkbox"/> Mulch	<input type="checkbox"/> Sod
<input type="checkbox"/> Interceptor Swale	<input type="checkbox"/> Diversions Dike
<input type="checkbox"/> Erosion Control Compound	<input type="checkbox"/> Mulch Filter Berms and Socks
<input type="checkbox"/> Compast Filter Berms and Socks	<input type="checkbox"/> Compast Blankets

Category II (Sedimentation Control)

<input type="checkbox"/> Sand Bag Berms	<input type="checkbox"/> Rock Berms
<input type="checkbox"/> Silt Fence	<input type="checkbox"/> Straw Bale Dike
<input type="checkbox"/> Triangular Filter Dike	<input type="checkbox"/> Brush Berms
<input type="checkbox"/> Stone Outlet Sediment Trap	<input type="checkbox"/> Sediment Basins
<input type="checkbox"/> Erosion Control Compound	<input type="checkbox"/> Mulch Filter Berms and Socks
<input type="checkbox"/> Compast Filter Berms and Socks	<input type="checkbox"/> Compast Blankets

General Condition 21 - Category III BMPs required

Category III (Best-Construction TSS Control)

<input type="checkbox"/> Retention/Irrigation	<input type="checkbox"/> Constructed Wetlands
<input type="checkbox"/> Extended Detention Basin	<input type="checkbox"/> Wet Basins
<input type="checkbox"/> Vegetative Filter Strips	<input type="checkbox"/> Vegetation-Lined Ditches
<input type="checkbox"/> Grassy Swales	<input type="checkbox"/> Sand Filter Systems
<input type="checkbox"/> Erosion Control Compound	<input type="checkbox"/> Mulch Filter Berms and Socks
<input type="checkbox"/> Compast Filter Berms and Socks	<input type="checkbox"/> Sedimentation Chambers

III. Cultural Resources

Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

No Action Required Required Action

Action No.	Station # R/L of Centerline	Commitment

IV. Vegetation Resources

No Action Required Required Action

Action No.	Station # R/L of Centerline	Commitment

Less than 0.01 acre of herbaceous vegetation would be impacted.

25.4 acre of riparian woodlands would be impacted.

Use any native plants for landscaping and in seeding mixtures where practicable.

Permanent soil erosion features would be constructed as soon as feasible during the early stage of construction through erosion seeding and seeding mixtures.

Temporary seeding would be considered where long areas of disturbed permits. Temporary seeding would be left bare for a considerable length of time.

Vegetative impacts for the B1 project will be mitigated by a natural CS-008-01-01. The mitigation will occur at Cedar Hill State Park.

V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Condolite Species and Migratory Birds

No Action Required Required Action

Species Potentially within Project Area w/ Description	Habitat Description
Timber/ Condolite Burrows/ Blind or dark brown crabs/holes down the back, breast and sides present behind the eye. Flaps fall above the crotch up to 2/3 of the body length.	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmlands prior to state ground cover.
Wood Stork- Adult wood storks stand about three feet tall, are tall and make no noise except to call. Their heavy dark bills. The bills are white with a burgundy stripe to some of their wing feathers and a purple glistening sheen to their small tail. Their long thin legs are black, but their feet are blue.	Forged in grassy ponds, flooded pastures, or fields, shores, and later shallow standing water. Including soil water usually rapidly commonly in tall grasses, herbaceous mud flats and other wetlands.

Special Notes

- The work may not remove active nests from bridges or other structures during the nesting season of the birds with associated nests.
- Prior to construction activities, birds would be surveyed for active nests to ensure protection of such species as barn swallow, cliff swallow, and roughwinged swallow.

Action

1. If the listed species is observed in the immediate area, do not disturb the species or habitat and contact the engineer and District Environmental Coordinator at 846-320-8527 immediately.

VI. Hazardous Materials or Contamination Issues

Comply with the Hazardous Communication Act for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and asking workers aware of the potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project which may be not limited to, the following categories: solvents, oils, greases, pigments, asphalt products, chemical additives, fuels and concrete curing compounds or admixtures. Provide protective storage off site around the concrete, for products which may be hazardous. Maintain product labeling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS. In cooperation with safe work areas, and control the spill. Coordinate immediately. The contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected

- Dead or distressed vegetation (not identified as normal)
- Trash piles, drums, containers, barrels, etc.
- Unexplained smells (odor)
- Poisoning of birds or fish
- Evidence of leaching or seepage of substances
- Any other evidence indicating possible hazardous materials or contamination discovered on-site

Does the project involve any bridge abut structure rehabilitation or replacements bridge close structures not including box culverts?

Yes No

If "Yes", then TxDOT is responsible for completing an asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

Yes No

If "Yes", then TxDOT must retain a Texas Department of State Health Services (DHS) licensed asbestos consultant to assist with the notification, abatement, and disposal procedures, and perform management activities as necessary. The notification form to DHS must be postmarked at least 10 working days prior to scheduled abatement activities and/or demolition.

If "No", then TxDOT is still required to notify DHS to working days prior to any scheduled rehabilitation or demolition of the project.

In either case, the Contractor is responsible for providing the details for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

A closed landfill is present between the north bank of the Trinity River and south side of Outside Road. Subsurface environmental investigations conducted earlier during this project reveal that solid waste is present between approximately Sta. 255+00 to the south and Sta. 248+00 to the north. TxDOT has previously received permission from TCEQ to disturb the area over this closed landfill. Comply with the direction of the SO, Superintendent and Trash Management Plan provided by TxDOT. Contact the local office of the TCEQ as a professional courtesy prior to commencing work in the area of the closed landfill.

VII. Other Environmental Issues

No Action Required Required Action

Action No.	Station # R/L of Centerline	Commitment
Noise Wall 3	Wagoner Park along the SR 40, north bound main lane (NB ML Sta. 464+00 to 470+24)	624 ft. long & 8 ft. High
Noise Wall 4	R/W Old and Sunnyside, along the south bound (SR 40) (SR 40 ML Sta. 452+00 to 458+50)	3,030 ft. long & 8-ft. High

List of Abbreviations

- BMP: Best Management Practice
- CSP: Construction General Permit
- FEMA: Federal Emergency Management Agency
- FHWA: Federal Highway Administration
- MOA: Memorandum of Agreement
- MS4: Municipal Separate Stormwater Sewer System
- NOI: Notice of Intent
- NOT: Notice of Termination
- NSP: Notice to Proceed
- PNR: Pre-Construction Notification
- SRSP: Storm Water Pollution Prevention Plan
- TCEQ: Texas Commission on Environmental Quality
- TPDES: Texas Pollutant Discharge Elimination System
- TRM: Texas Parks and Wildlife Department
- MDHS: Texas Department of Transportation
- TEI: Threatened and Endangered Species
- USFWS: U.S. Fish and Wildlife Service
- USACE: U.S. Army Corp of Engineers

Texas Department of Transportation

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

TEC NO.	FEDERAL AID PROJECT NO.	ROADWAY NO.
01	NH	
STATE	DISTRICT	COUNTY
TEXAS		
CONTROL	SECTION	JOB
2964	01	031 etc.
SHEET NO.	SHEET NO.	
450	450	

1. Do not alter Sheet Design or Font style - size or weight - match text attributes.
 2. If additional space is needed for a 1. listed section, fence and adjust sections up or down as needed for proportioning and readability but do not relocate from its relative position.
 3. All text and graphics are to be addressed thoroughly and verify the necessary pay items are set up to support the 1911020 support.
 Revised: July 26, 2007
 Prepared by: Michael Long of Civit Associates, Inc. on 1911020

SW3P

Clean Water Act — TPDES

What is it?

A regulatory program to control discharges of pollutants to surface waters.



SW3P

All projects must comply with TPDES

Less than 1 acre

- SW3P plan sheet
- BMPs



SW3P

All projects must comply with TPDES

Greater than 1 acre but less than 5 acres

- SW3P plan sheet
- BMPs
- Site notice
- Inspection reports



SW3P

All projects must comply with TPDES

Greater than 5 acres

- TxDOT must file NOI and coordinate with the Texas Commission on Environmental Quality (TCEQ) for construction general permit (CGP).
- Contractor to implement and maintain SW3P.
- TxDOT must file NOT.
- Contractor must stabilize the site.



SW3P

Before you ask ...

- **BMPs:** Best management practices
- **NOI:** Notice of intent
- **SW3P:** Storm Water Pollution Prevention Plan
- **NOT:** Notice of termination



SW3P

TPDES compliance is not rocket science, but like any regulation compliance requires attention to detail and execution.

The goal today is to provide a foundation to assist design engineers in proper completion of the TxDOT SW3P plan sheets.



SW3P

TXDOT SW3P Plan Sheet

- Three sections
- Standard has detailed instructions
- Completed sheet required for TPDES compliance



SW3P

Section A — General Site Data

1. Project limits: Project coordinates in longitude and latitude
2. Project site maps: Reference sheets by title and sheet number
3. Project description: Description from title sheet
4. Major soil disturbing activities: Sequence of construction
5. Existing condition of soil and vegetative cover and percent of existing vegetative cover: Provide description of soil types, condition, vegetative cover and percentage

SW3P

Section A — General Site Data

6. Total project area
7. Total area to be disturbed: Multiple sites more than $\frac{1}{4}$ mile apart should be listed separately, not totaled
8. Weighted runoff coefficient
9. Name of receiving waters: Provide stream name and segment numbers
10. Project SW3P file: Language provided in standard

SW3P

Section B — Erosion and Sediment Controls

1. Soil stabilization practices



2. Structural practices



Select temporary or permanent, as applicable, for practices provided in plans and specifications.

3. Storm water management: Description of how storm water will be managed within the project

4. Storm water management activities: Describe activities by phases, including retention basins

5. Non-storm water discharges: Language provided

SW3P

Section C — Other Requirements and Practices

Language provided.

Use it!

C. OTHER REQUIREMENTS & PRACTICES

1. MAINTENANCE:
Maintain all erosion and sediment controls in good working order. Perform any necessary repairs at the earliest date possible but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. Stabilize disturbed areas on which construction activities have ceased, temporarily or permanently, within 14 calendar days unless they are scheduled to and do resume within 21 calendar days. The areas adjacent to creeks and drainageways have priority followed by devices protecting storm sewer inlets.

2. INSPECTION:
A TxDOT inspector will perform a regularly scheduled SW3P inspection every 7 calendar days. An Inspection and Maintenance Report, signed by the TxDOT inspector and the Contractor, will be filed for each inspection. Repair and/or replace each SW3P control device in accordance with the current Inspection and Maintenance Report and Item 11.1 above.

3. WASTE MATERIALS:
On a daily basis, or as may be directed, collect all waste materials, trash and debris from the construction site and deposit into a metal dumpster having a secure cover and which meets all state and local city solid waste management requirements. Empty the dumpster as required by regulation, or as may be directed, at a local approved landfill site. Do not bury construction waste on the construction project site.

4. HAZARDOUS WASTE & SPILL REPORTING:
As a minimum, any products in the following categories are considered to be hazardous: Paints, Acids, Solvents, Fuels, Asphalt Products, Chemical Additives for Soil Stabilization, and Concrete Curing Compounds or Additives. When storing hazardous material on the project site, or at a Project Specific Location, take all practicable precaution to prevent and/or contain any spillage of these materials. In the event of a spill, contact the spill coordinator immediately.

5. SANITARY WASTE:
Use a licensed sanitary waste management contractor to collect all sanitary waste from portable units as may be required by local regulation, or as directed.

6. CONSTRUCTION VEHICLE TRACKING:
On a regular basis, or as may be directed, dampen haul roads for dust control and stabilize construction entrances/exits. Provide for a motorized broom or vacuum type sweeper to be available on a daily basis, or as may be directed, to remove sediment from paved roadways abutting or transverseing the project site.

7. MANAGEMENT PRACTICES:

- A. Construct disposal areas, stockpiles, haul roads and PSC's in a manner that will minimize and control the amount of sediment that may enter receiving waters. Do not locate disposal areas in any wetland, waterbody or streambed.
- B. Locate construction staging areas, vehicle maintenance and PSC's areas in a manner to minimize the runoff of pollutants.
- C. When working in or near a wetland, install and maintain operating soil erosion and sediment controls at all times during construction and isolate the work from the wetland.
- D. Clear all waterways as soon as practicable of temporary embankment, temporary bridges, matting, falsework, piling, debris or other obstructions placed during construction operations that are not a part of the finished work.
- E. Procedures and/or practices should be taken to control dust.
- F. Sediment to be removed from roadways daily or when work begins after weather events if construction activities have ceased due to weather events.


SW3P

Site Maps

- Required for every project that disturbs 1 acre or more.
- Required if you anticipate or if there is a possibility of disturbing 1 acre or more.
 - If a project-specific location, field office site, hot mix plant, concrete plant, storage area, etc. is anticipated, this will prevent a change order.

SW3P

Site Maps

- Required to show the project layout and any outfalls on the project.
 - Need water flow directional arrows.
(Only a few to identify flow direction.)
 - Show the location and placement of the BMPs.
 - There must be a specific identifier for each measure identifying the type of measure.
- 

SW3P

Site Maps

Example

- Silt fence, first location
S-1, Installed Date _____
Removed Date _____
- Silt fence, next location
S-S-2, Installed Date _____
Removed Date _____
- Erosion control compost logs, first location
EC-1, Installed Date _____
Removed Date _____
- Erosion control compost logs, next location
EC-2, Installed Date _____
Removed Date _____

SW3P

Site Maps

Legend

S	Silt fence
EC	Erosion control compost berm
RFDII	Rock filter dam type II
RFDIII	Rock filter dam type III
CE	Construction exit
→	Water flow direction



SW3P

Site Maps

Grading Activities

Disturbed Date _____

Stabilized Date _____

This must be placed on each sheet or each phase. Carefully coordinate with traffic control plan (TCP) phasing. A TCP and/or construction phase can change, and the SW3P for that phase may not be 70% stabilized yet, requiring it to stay active.

These dates are required to show the dates of our grading activities. Rather than have the inspectors determine when we have disturbed an acre, we implement the SW3P when the initial disturbance begins.

SW3P

Large Complex Projects

A chart can be added to the site maps to save plan sheets and space on the maps. The date locations can be placed on the chart and added as needed.



Grading Activities			BMP Install and Removal Dates		
Phase	Disturbed Date	Stabilized Date	BMP	Installed Date	Removed Date
1	4/22/10	8/21/10	S-1	4/22/10	8/21/10
			S-2	4/22/10	8/21/10
			EC-1	6/4/10	8/21/10
			RFDII-1	5/1/10	8/21/10
			RFDIII-1	5/2/10	8/21/10
2	8/21/10	10/30/10	S-3	8/21/10	10/30/10
			S-4	8/21/10	10/30/10
			RFDII-2	9/1/10	10/30/10
			EC-3	9/28/10	10/30/10

SW3P

Additional Considerations

Life of BMPs and quantities:

- Sediment fence = 6 months
- Rock filter dams = normally have to be replaced during the project
- Stabilized construction exits = Maintenance only works so long

Quantities are often grossly underestimated.

Nobody likes change orders!

The quantities are determined by the size and the scope of the project. Several factors will play a part in estimating quantities. The number of days allowed to complete the project along with any phasing also must be considered.

SW3P

Additional Considerations

- Tracking onto roadways is the most commonly reported violation.
- Site-specific: Field visit, cross sections, construction sequencing.
- Less is more: Be creative, but the plan must be implementable.



SW3P

Additional Considerations

- Less is more: True except when it is time for stabilization.
 - Ensure the contractor has quantity to seed disturbed project area. It is OK to seed under some bridges.
- A good plan will ensure compliance and save money in the long run.

Questions

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Don't Let Environmental Issues Sneak Up and Bite You!

