

Storm Water 101

Amber McIntyre

OKR10 General Permit

- If an acre or more will be disturbed, you must obtain an authorization to discharge under the OKR10 General Permit from the Oklahoma Department of Environmental Quality.
- A storm water pollution prevention plan must be developed for every project that is required to obtain coverage under the OKR10 General Permit.

Regulatory Changes...

- The OKR10 is re-issued every five years.
- The latest version went into effect on September 13, 2012 and will expire in 2017.
- Some regulatory changes were made...

Hay Bale Barriers are prohibited

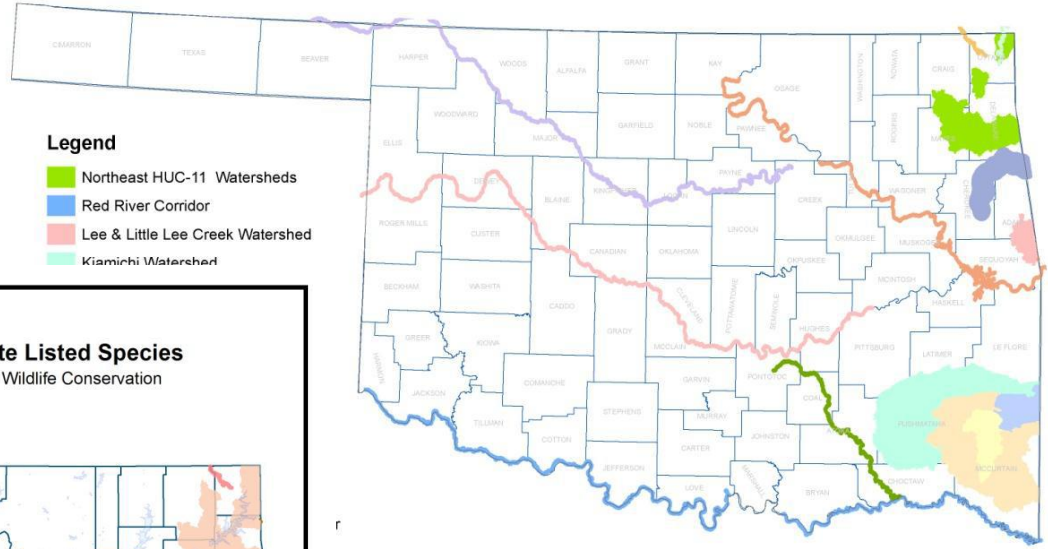


Sensitive Waters have changed

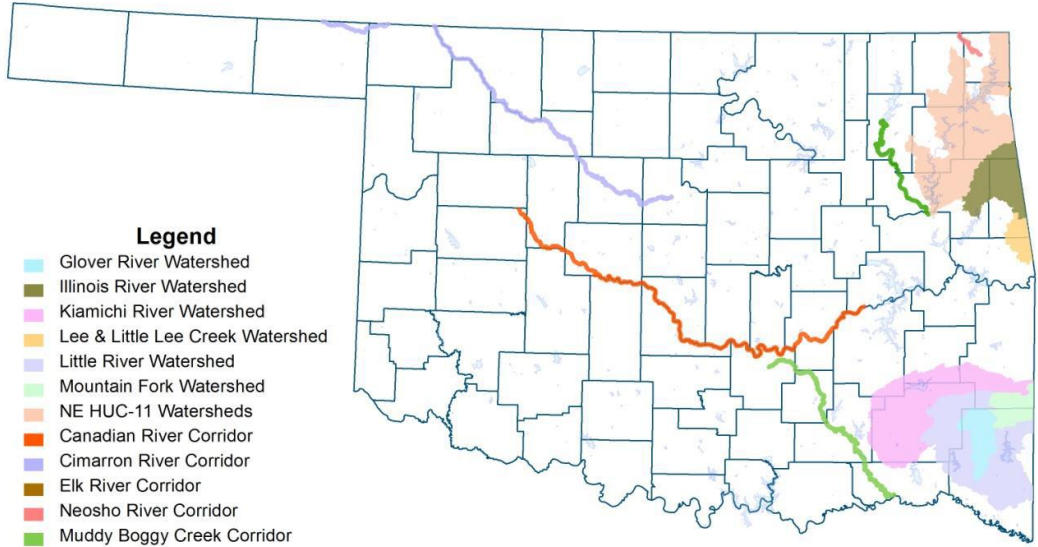
2005



Oklahoma Sensitive Waters and Watersheds for Federal & State listed Species as identified by the U.S. Fish & Wildlife Service and the Oklahoma Department of Wildlife Conservation



Oklahoma Aquatic Resources of Concern for Federal & State Listed Species as identified by the U.S. Fish & Wildlife Service and the Oklahoma Department of Wildlife Conservation



2012

Corrective Actions are now required to be documented in the SWPPP

- Corrective Actions are actions you take to
 - repair, modify or replace any storm water control used at the site
 - clean up and dispose of spills, releases or other deposits
 - remedy a permit violation
- Should have always been done. You are now required to document them.

Buffer Requirements

- If any waters of the state are located on or immediately adjacent to your site, you must maintain a natural buffer zone (measured from the top of the bank to disturbed portions of your site) from any named or unnamed receiving streams, creeks, rivers, lakes or other water bodies
 - 50 feet of natural buffer zone **if not located** within a sensitive watershed, aquatic resource of concern, or outstanding resource water
 - 100 feet of natural buffer zone **if located** within a sensitive watershed, aquatic resource of concern, or outstanding resource water
- Unless it is a water crossing, limited water access or stream restoration authorized under a CWA Section 404 permit
- OR no buffer exists due to preexisting development disturbances

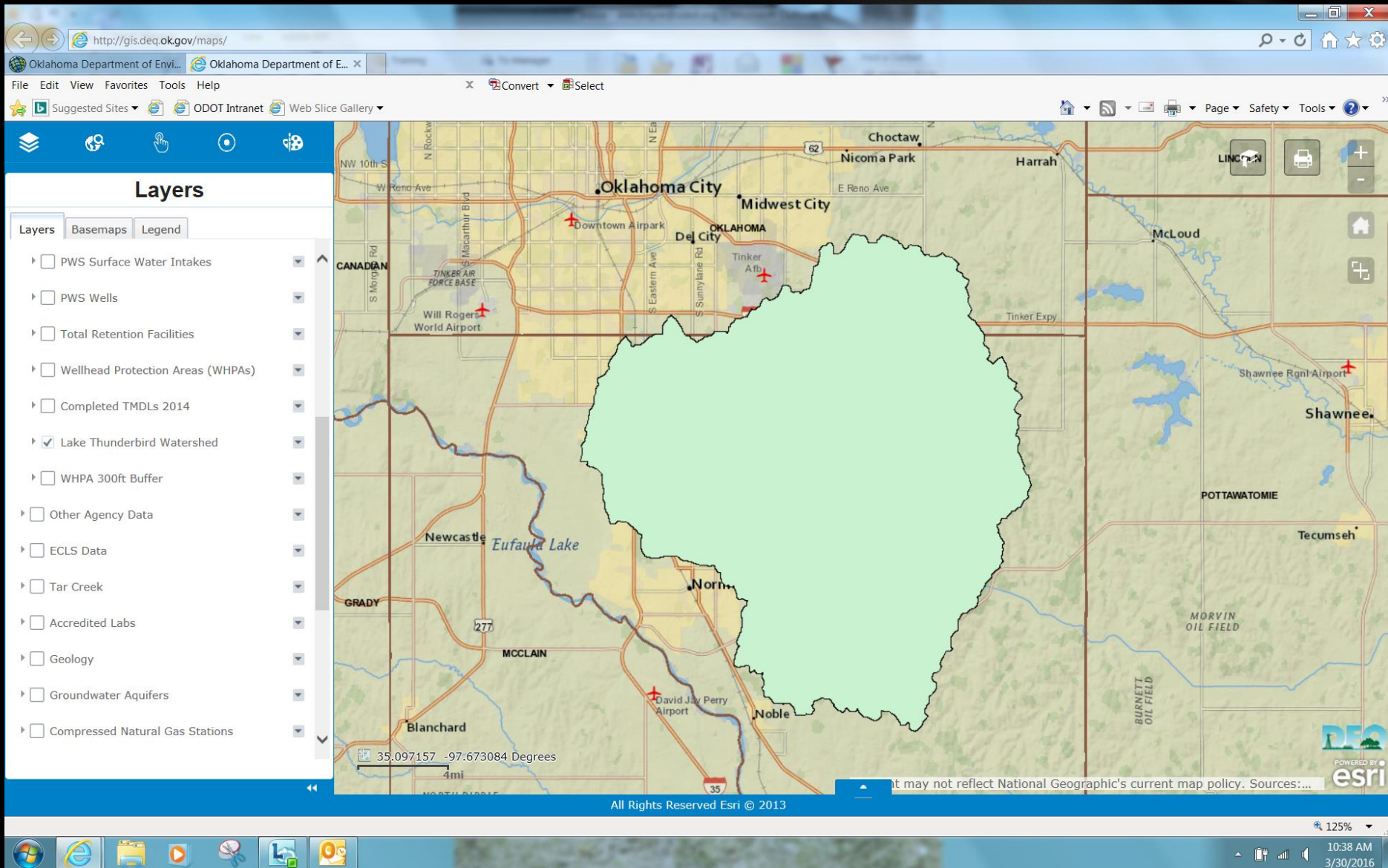
What are waters of the state?



What if you cannot maintain the required buffer zone?

- Provide and maintain a buffer that is less than the required 50 or 100 feet and supplement with additional erosion and sediment controls
- Provide no buffer zone of any size and implement erosion and sediment controls that achieve the sediment load reduction equivalent to the required 50 or 100 foot buffer
- There is guidance included in the OKR10 General Permit to help you determine what controls or combination of controls will provide the equivalent sediment reduction of a buffer zone

Lake Thunderbird TMDL



Lake Thunderbird TMDL

- Must comply with any additional requirements established by the local MS₄ Municipalities.
- Submit SWP₃ to DEQ for review for sites that disturb 5 acres or more.
- Vegetated buffer of at least 100 feet between the disturbed area and all receiving streams or equivalent.
- A sediment basin is required for all drainage locations serving 5 or more acres disturbed at one time. (Traps can also be used.)
- Stabilization measures for areas where earth-disturbing activities have permanently or temporarily ceased on any portion of the site and will not resume for 14 days must be completed within 7 days.
- You are required to conduct a soil nutrient test to determine actual nutrient needs before applying fertilizer on your site.

Common errors found on the plans...

- Wrong receiving waters
- Incorrect sensitive waters and impaired waters information
- Lack of site specific erosion and sediment control devices
- Calculation of area disturbed
- SWMP sheet is project specific. Don't copy/paste from previous job

ODEQ Data Viewer

The screenshot shows a web browser window displaying the Oklahoma Department of Environmental Quality (ODEQ) GIS Maps and Data website. The browser's address bar shows the URL <http://deq.maps.arcgis.com/home/index.html>. The website features a navigation menu with links for Home, Gallery, Map, Scene, and Groups, along with a Sign In button and a search box. The main content area is titled "Oklahoma DEQ GIS Maps and Data" and includes the ODEQ logo. Below the title, there are four featured galleries: DEQ Data Viewer, Land Protection Gallery, Air Quality Division Map Gallery, and Water Quality Gallery. A larger DEQ Data Viewer tile is also present, with a link to visit the new viewer and a link to the DEQ Main Website. A disclaimer at the bottom states that the data is provided as-is and does not constitute a warranty.

http://deq.maps.arcgis.com/home/index.html

File Edit View Favorites Tools Help

Home Gallery Map Scene Groups

Sign In

Oklahoma DEQ GIS Maps and Data

DEQ
OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

DEQ Data Viewer

Land Protection Gallery

Air Quality Division Map Gallery

Water Quality Gallery

DEQ Data Viewer

[Click here to visit the new DEQ Data Viewer.](#)

[DEQ Main Website](#)

Let us know what you think! Please provide [feedback here](#).

Although these data have been processed successfully on a computer system at the Department of Environmental Quality, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distributing constitute any such warranty. It is also strongly recommended that careful attention be paid to the contents of the metadata file.

12:51 PM
10/14/2016

<http://www.deq.state.ok.us/>

Pre-Construction

Notice of Intent

- The Notice of Intent is the application form that is submitted to DEQ.
- ODOT provides a partially completed NOI with the contract.
- The contractor completes the NOI and submits it to DEQ with payment.

SWPPP

- A storm water pollution prevention plan (SWPPP) must be developed for every project that is required to obtain coverage under the OKR10 General Permit.
- ODOT develops the Storm Water Management Plan (SWMP) that consists of ...
 - SWMP Information Sheet
 - Site Specific Erosion and Sediment Control Plan Sheets
 - Contract Pay Items with Plan Notes
 - Summary of Temporary and Permanent Erosion and Sediment Controls
 - Site Drainage Map
- The contractor develops the SWPPP for the site by incorporating the SWMP provided by ODOT.

Authorization to Discharge

- Also known as the storm water permit.
- Must be obtained and a copy provided to the Residency before work can begin.

Construction

Have a copy of the Authorization posted at the job site.



Keep the SWPPP on site or close by



Inspection Reports

- Do them. Always. No Excuses.
- The inspection report must be completed within 24 hours of the inspection.
- The report must be signed.
- Keep copies in the SWPPP.
- Be honest.
- Do not back-date or falsify any information on the report.
- Do not pre-fill the reports.



Areas to inspect:

- all areas that have been cleared, graded or excavated and that have not been stabilized
- all storm water controls
- material, waste, borrow, storage and maintenance areas
- discharge points
- areas where stabilization has been implemented
- areas where storm water typically flows within the site

What are you looking for?

- Are your controls properly installed?
Operational? Effective?
- Does anything need to be replaced? Repaired?
Maintained?
- Do you see any conditions that could lead to a
spill or leak?
- Look for signs of erosion and sedimentation.

What information is required on the inspection report?

- The inspection date
- Names and titles of personnel making the inspection
- A summary of your inspection findings and observations
- Rain gauge or weather station readings if a rainfall measuring 0.5 inches or greater triggered the inspection
- If you have determined it is unsafe to inspect the site, document why
- Signed with required certification included

**Don't Forget about Corrective
Actions...**

When to take a corrective action...

- A required control was never installed, was installed incorrectly or not in accordance with the OKR10 General Permit.
- You discover that controls you have installed and are maintaining are not effective.
- An illegal discharge has occurred.
- If required to conduct numeric effluent monitoring (Asphalt Batch Plants) and samples indicate you have exceeded applicable effluent limitations.

Additional Requirements of Corrective Actions

- Corrective actions must be completed no later than 7 days from the time of discovery.
- If they cannot be completed within 7 days, you have to document why and provide a schedule for when they will be completed in the SWP₃.
- If the actions result in changes to any storm water controls or procedures, you must modify your SWP₃ accordingly within 7 days of completing the corrective action work.

Corrective Action Report

Within 24 hours of discovery, complete a record of:

- Which condition was identified at your site
- The nature of the condition identified
- The date and time of the condition identified and how it was identified

Within 7 days of discovery, complete a record of:

- Any follow-up actions taken to review the design the design, installation and maintenance of storm water controls; including the dates such actions occurred.
- A summary of modifications taken or to be taken, including a schedule to implement changes and dates the modifications were completed or are expected to be completed.
- A notice of whether SWP₃ modifications are required.

Feeling overwhelmed?





**CONSTRUCTION SITE
STORM WATER INSPECTION FORM**

Project Number: _____ Job Piece Number: _____
 Construction Start Date: _____ Inspection Date: _____
 Inspector for Contractor: _____ Resident Engineer: _____

Was there a qualifying rain event (0.5 inches) during the inspection period? _____
 If yes, what were the rain gauge or weather station readings? _____

I. Site Observations:

1.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are all erosion and sediment control to soil disturbing activities?
2.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are all the practices specified in the Prevention Plan (SWPPP) in the pre accordance with the minimum requi General Permit?
3.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are all sediment and erosion contro properly?
4.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Do any practices require repair or cl
5.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are there any bare areas that require stabilization?
6.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are cut-and-fill slopes stable and ad erosion?
7.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are channels and outlets protected f
8.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are storm inlets protected from sedi
9.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Is there evidence of sediment leavin
10.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Is dust control needed?

ODOT - Construction Site Storm Water Inspection Form

11.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are proper measures being taken to eliminate offsite tracking of soils by vehicles leaving the site?
12.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are all material handling and storage areas reasonably clean and free of spills, leaks, or any other harmful materials?
13.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are materials subject to erosion/storm water contamination properly covered?
14.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Are all outfalls free of any noticeable pollutant discharges?
15.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Is the site free of indications of a hazardous material release?
16.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Is there an adequate buffer zone between the construction site and any water resource?
17.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Is the SWPPP on site and up to date?

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

Contractor Inspector:
 Name: _____ Title: _____

Signature: _____ Date: _____ Time: _____

Inspection Report Reviewed By:

ODOT Representative: _____ Title: _____

Signature: _____ Date: _____

For each item checked "No", fill out a Storm Water Detail Report. Describe the problem(s) and the corrective actions taken. All items checked "No", including repairs and/or temporary or permanent stabilization are to be completed within 7 days.

ODOT - Construction Site Storm Water Inspection Form

II. Storm Water Detail Report:

PROJECT NUMBER: _____ JOB PIECE NUMBER: _____

ORIGINAL INSPECTION DATE & TIME: _____

Description of problem(s) found during inspection:

Actions taken to correct problem(s) including any storm water control modifications:

Completed or are scheduled to be completed: _____

SWPPP required as a result of the corrective action? _____

taken during this report period: _____

 Title: _____

 Date: _____ Time: _____

Inspected By:

 Title: _____

 Date: _____

Update the SWPPP

- Take time to do this, it is something the regulator will **ALWAYS** check.
- It doesn't have to be formal. Simple pen and ink changes are fine. Just initial and date all changes.

The SWPPP should be updated when:

- conditions at the site change
- when inspections indicate that a BMP or control is not operating effectively



Construction
Entrance to large
repair Truck Asphalt/Asphalt
4/12/11

Removal Area
to grade new site
work 11/11

2nd Street
11/11

Removal Area
to grade new site
work 11/11

2nd Street
11/11

Removal Area
to grade new site
work 11/11

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Removal Area
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Removal Area
to grade new site
work 11/11

All other
done 3/26/12
Estimate
side

All check
done 3/26/12
Estimate
side

09/26/2012

NOTE:
REFERENCE SHEET C15.00 FOR
STORMWATER POLLUTION
PREVENTION PLAN NOTES AND
LEGEND

4-2002
SHEET C15.15
SHEET C15.16
SHEET C15.17
SHEET C15.18
SHEET C15.19
SHEET C15.20
SHEET C15.21
SHEET C15.22
SHEET C15.23
SHEET C15.24
SHEET C15.25

CONTINUE TO OTHER
SHEETS BY BEARING
OR THROUGH

GRAPHIC

Common Violations

- Paperwork
- Improperly installed controls
- Maintenance of erosion controls
- Controls not operating effectively
- Concrete wash-outs
- Stabilization

Paperwork

- SWPPP not updated.
- Inspection Reports missing or not accurate.
- Corrective actions not addressed.
- Failure to implement what the SWPPP outlines.

**Know what you are
committed to in the
SWPPP**

Improperly installed controls

- Silt Dikes/Check Dams need to be installed bank-to-bank
- Silt Fence needs to be trenched in, back filled and compacted



Maintenance of Erosion Controls







Controls not operating effectively



Concrete Wash-Outs







Stabilization

- When earth disturbing activities have ceased on any portion of the site and will not resume for 14 or more days, you must initiate stabilization.
- Stabilization doesn't have to be permanent. It can be temporary stabilization.




**Storm Water Violation =
404 Violation = Increased
regulatory inspections**


Post-Construction

Notice of Termination vs. Inspection Request

NOTICE OF TERMINATION

DEQ FORM 606-003 Sept. 13, 2012		OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY NOTICE OF TERMINATION (NOT) FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL OR CONSTRUCTION ACTIVITY UNDER AN OPDES GENERAL PERMIT
Submission of this Notice of Termination constitutes notice that the party identified in Section I of this form is no longer authorized to discharge storm water associated with industrial or construction activities under the OPDES program. All Requested Information <u>Must</u> Be Provided on This Form. See Instructions On The Back Of Form.		
I. Permit Information: OPDES Storm Water General Permit Authorization Number: _____		
		Check here if you are no longer the operator of the facility/site: <input type="checkbox"/>
		Check here if the storm water construction or industrial discharge is being terminated: <input type="checkbox"/>
II. Facility/Site Operator Information: Name: _____ Phone: _____ Address: _____ City: _____ State: _____ Zip Code: _____		
III. Facility/Site Location: Name: _____ Address: _____ City: _____ State: _____ Zip Code: _____ Latitude: _____ Longitude: _____		
IV. New Facility/Site Information: If you are no longer the operator of the facility/site, provide the following information pertaining to the new operator at the facility/site: Name: _____ Address: _____ City: _____ County: _____ Zip Code: _____		
V. Certification: I certify under penalty of law that all storm water discharges associated with industrial/construction activity from the identified facility/site that were authorized by a general permit have been eliminated or that I am no longer the operator of the facility/site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with industrial or construction activity under this general permit, and that discharging pollutants in storm water associated with industrial or construction activity to waters of the State is unlawful under the Clean Water Act and OAC 252:606-1-3(b)(3)(L) where the discharge is not authorized by an OPDES permit. I also understand that the submittal of this Notice of Termination does not release me as an operator from liability for any violations of this permit or the Clean Water Act. Print Name: _____ Date: _____ Signature: _____ Title: _____		

INSPECTION REQUEST

DEQ FORM 606-009 Sept. 13, 2012		OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY INSPECTION REQUEST FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER AN OPDES GENERAL PERMIT
All Requested Information <u>Must</u> Be Provided on This Form. See Instructions on the Back of Form.		
I. Permit Information: OPDES Storm Water General Permit Authorization Number: _____		
II. Facility/Site Operator Information: Name: _____ Phone: _____ Address: _____ City: _____ State: _____ Zip Code: _____		
III. Facility/Site Location: Name: _____ Address: _____ City: _____ County: _____ Zip Code: _____ Latitude: _____ Longitude: _____		
IV. New Facility/Site Information: If you are no longer the operator of the facility/site, provide the following information pertaining to the new operator at the facility/site if any: Name: _____ Address: _____ City: _____ State: _____ Zip Code: _____		
V. Operator's Signature: Print Name: _____ Date: _____ Signature: _____ Title: _____		

Questions?



Other ODEQ Regulations

Amber McIntyre

Debris Burial

*"Uncontaminated dirt, rock, concrete, bricks, and solidified asphalt may be disposed of at locations that do not have a permit issued by DEQ IF the material is composed of ONLY uncontaminated dirt, rock, concrete, bricks, or solidified asphalt, the landowner consents to the disposal, and **the disposal does not violate any other state or local laws or regulations.**"*

Debris Burial

- Material that can be buried...
 - Bricks
 - Solidified concrete
 - Solidified asphalt
- Material that cannot be buried...
 - Rebar
 - Hazardous or contaminated material
- Where you can bury...
 - Within the ROW if approved by the ODOT Resident Engineer for the project
 - In the floodplain? Maybe. Have to get the proper permits.
- Where you cannot bury...
 - In critical habitat for endangered or threatened species (this includes the riparian corridors)
 - Below the ordinary high water mark

Debris Burial

- Always check to make sure that you will not be in violation of any local, state or federal regulations **BEFORE** you bury any material.

Air Curtain Incinerators

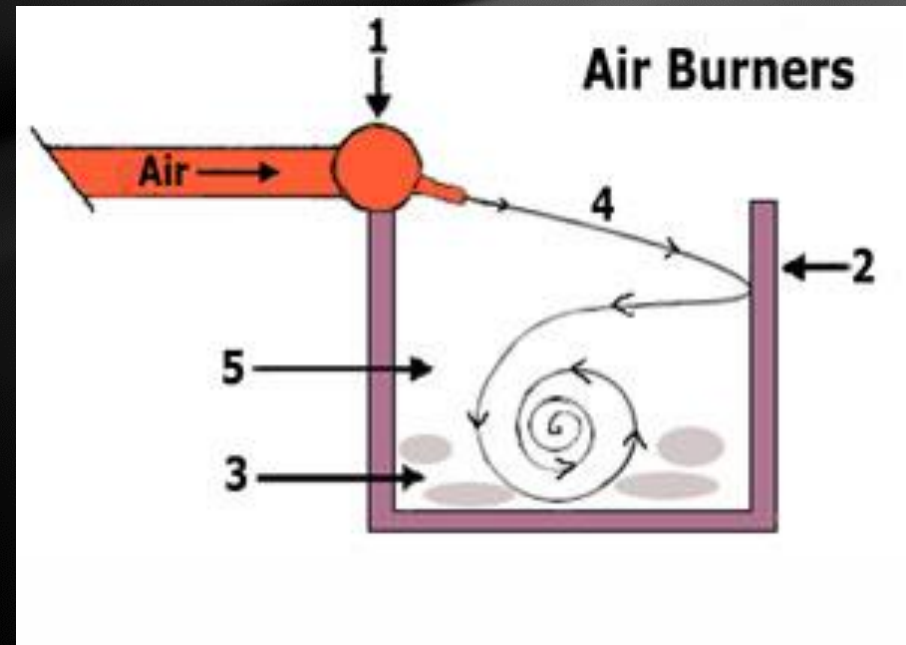
- Required for land clearing operations in the Oklahoma City and Tulsa Metropolitan Statistical Areas.
- This includes the following counties:

Canadian	Oklahoma
Cleveland	Okmulgee
Creek	Osage
Grady	Pawnee
Lincoln	Rogers
Logan	Tulsa
McClain	Wagoner

- The rule applies to the entire county. No distinction between urban and rural areas.

What is an ACI?

- An incineration unit operating by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench in which combustion occurs.
- In the figure:
 1. The nozzle blowing air into the trench.
 2. The back wall of the trench.
 3. Materials to be burned.
 4. The air curtain.
 5. The increased air flow that improves combustion.



What can be burned in an ACI?

- Wood waste such as untreated wood or untreated wood products like tree stumps, trees, tree limbs, bark, sawdust, chips, scraps, slabs, millings, and shavings.
- Clean lumber such as wood or wood products that have been cut or shaped and include wet, air-dried and kiln-dried wood products.