

Phase 2 Stormwater

Construction and Development

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to Coweta Builders Work Group

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Stormwater - Phase II

What is required of cities...



Develop programs to protect water quality

*Reduce / eliminate
Causes of pollution in
local streams*



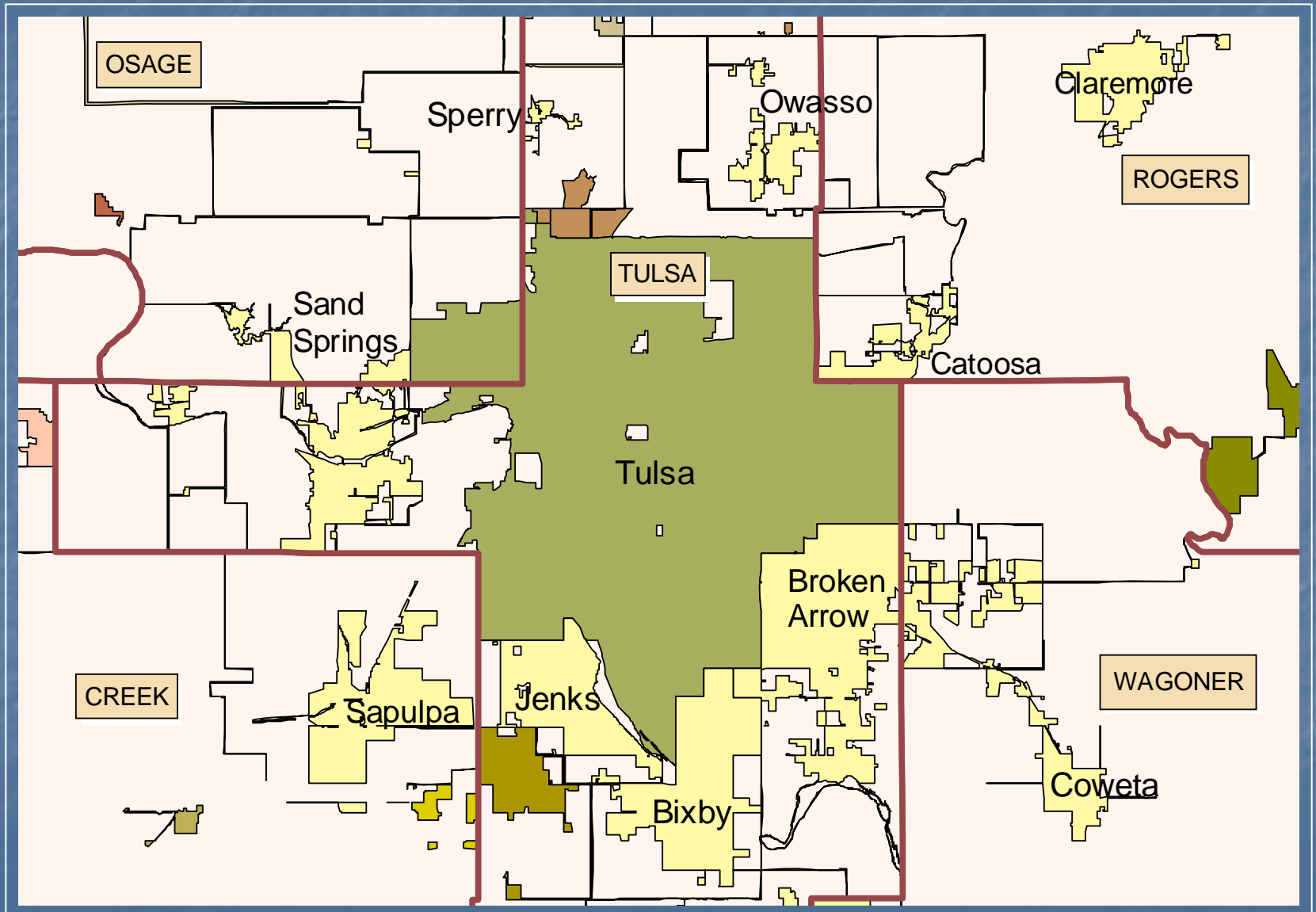
Stormwater Regulation History

(From EPA)

The Need to Regulate Urban Sources:

- **Major source of impairment in rivers, lakes and estuaries.**
- **Introduces sediment, floatables, oil/grease, toxics, metals and pathogens into U.S. waters.**
- **National Water Quality Inventory - 1996 Report to Congress:**
 - *13% of impaired rivers, 21% of impaired lakes, and 45% of impaired estuaries assessed by States are impaired due to urban runoff.*
 - *6% of impaired rivers, 11% of impaired lakes, and 11% of impaired estuaries are impaired due to construction runoff.*
- **63% of the US population live in urbanized areas and most population growth/ new development is occurring in those areas.**
- **Erosion rates from construction sites are typically ten times higher than from other land uses.**

Phase II Cities in Tulsa Area



Illicit Discharge Definition

FROM EPA REGULATIONS:

Part 122.26(b)(2) *Illicit discharge* means any discharge to a *municipal separate storm sewer* that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

Municipal Separate Storm Sewer System (MS4)

According to 40 CFR 122.26(b)(8), “municipal separate storm sewer” means a conveyance or system of *conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains)*:

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States.
- (ii) Designed or used for collecting or conveying storm water;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Overview of Phase II Program

- Stormwater is *a true NPDES program* under 40 CFR Part 122.
- EPA intent is to *regulate* urban stormwater flows (which are nonpoint in nature) as *point sources*.
- Every Phase II city and county must implement a "*Stormwater Management Program*" (SWMP).
- The SWMP must ensure that there are *no violations* of Water Quality Standards due to urban stormwater runoff.
- The burden is on each permittee to *document all actions* in order to demonstrate success.

EPA's Concerns



From construction sites:

Sediment

Fertilizers

Chemicals (e.g. solvents, paint)

Herbicides / Pesticides

Oil / gasoline

Trash and debris (“floatables”)

Six "Minimum Control Measures"

1. Public Education and Outreach

2. Public Participation and Involvement

3. Illicit Discharge Detection and Elimination

4. Construction Site Runoff Control

5. Post-Construction Runoff Control

6. Pollution Prevention and Good Housekeeping

Construction Related Control Measures

- Phase 1 addressed 5 acres and greater.
- Phase 2 addresses 1 to 5 acres (<1 acre can also be designated).

□ *What cities must do:*

- Develop ordinances or other regulations for erosion and sedimentation.
- Require operators to use sediment control BMPs.
- Require water quality considerations in site plans.
- Develop procedures for site inspection and enforcement.
- Develop program to address stormwater runoff from post-construction activities.

INCOG Regional Stormwater Assistance

- Goal – combine resources to address those Phase II activities that are suited to a regional approach.
 - *Public Education and Participation Materials and Activities*
 - *Regional Mapping and Data Management*
 - *Assistance with MS4 Inspection Programs*
 - *Data Sharing and Coordination*
 - *Assist with Annual Reports and SWMP Amendments*
 - *Employee Training Programs*
- Provide a Forum for continuing Phase II education and information sharing.

What Regulations Apply to Construction Activities ?

- ❑ ODEQ's General Permit for Construction Activities (OKR10)
- ❑ ODEQ's General Permit for Phase II MS4 Discharges for Small Cities (OKR04)
- ❑ Local Codes and Ordinances in Phase I and II cities resulting from ODEQ Stormwater Permit implementation
- ❑ Local Codes and Ordinances regardless of Phase I / II status
- ❑ EPA Effluent Limitation Guidelines for Construction Activities

City of Tulsa's Stormwater Related Permits

Five permits issued under "Watershed Development Permits"

1. Floodway WSDP – when located in the floodway.
2. Flood Plain WSDP – when located in regulatory floodplain.
3. Stormwater Drainage WSDP – for flow >15" dia. conduit.
4. Stormwater Connection WSDP – more than an earth change and not exempted.
5. Earth Change WSDP – for any earth change.

From 1980s, emphasis on quantity.

ODEQ Enforcement

- EPA delegated permitting authority to ODEQ
- ODEQ relies upon “General Permits”:
 - *Phase II Stormwater for Small MS4s (OKR04)*
 - *Construction General Permit (OKR10)*
- ODEQ’s Inspection Program:
 - *Environmental Compliance and Local Services (ECLS)*
 - *“Referral and Discovery” (less formal, still potent)*
 - *“Complaints” (stricter deadlines and enforcement)*
- ODEQ Outreach to Construction Industry:
 - *½ day seminars in Tulsa and OKC*
 - *Last of the outreach training in Jan 2004*
- Will increase Enforcement Program after Jan '04

ODEQ's Complaint-Based Enforcement

- Upon receipt, ODEQ has 90 days to resolve.
- ECLS starts process by inspection / confirmation.
- N.O.V. issued to Responsible Party (RP).
- RP has 15 days to respond / correct deficiencies.
- Consent Order (C.O.) issued if not resolved:
 - *Mutual signed agreement, dates and requirements*
- Administrative Compliance Order (ACO) if C.O. fails:
 - *Usually adversarial*
- EPA can be brought in if necessary:
 - *no negotiations, very serious*

ODEQ's Referral / Discovery Process

- ❑ Referral – request by 3rd party to investigate.
- ❑ Discovery – ECLS or other ODEQ staff inspections.
- ❑ Less formal process.
- ❑ Does not trigger 90 day resolution time.
- ❑ Can be elevated to “complaint” enforcement at any time.
- ❑ ECLS inspects to confirm problems / make recommendations.
- ❑ Still has penalty provisions.

OKR10 Penalties for Non-Compliance

PENALTY TYPE	PROVISION	AMOUNT	PERIOD	PROVISION	MAX.	PRISON
Civil	Not to exceed	\$10,000	Per day	For each violation	--	--
Admin	Not to exceed	\$10,000	--	Per violation	\$125,000	--
Criminal Negligence	Not less than	\$2,500 - \$25,000	Per day	Of violation	\$25,000	1 year
Criminal Knowing	Not less than	\$5,000 - \$50,000	Per day	Of violation	\$50,000	3 years
Criminal Endanger.	Not more than	\$250,000	--	--	\$250,000	15 years
Criminal False State.	Not more than	\$10,000	--	For first conviction	\$10,000	2 years
Criminal False State.	Not more than	\$20,000	Per day	After first conviction	\$20,000	4 years

EPA Effluent Limitation Guidelines for Construction and Development

- ❑ Still in draft form – will be signed March 31, 2004.
- ❑ NRDC lawsuit forced EPA to address for C&D.
- ❑ ELGs are national standards for classes of dischargers.
- ❑ Incorporated into EPA's NPDES permit program.
- ❑ Three options being considered:
 1. >5 acres – ELGs would apply to.
 2. >1 acre – ELGs plus inspection and certification requirements.
 3. effectively implement existing regulations.
- ❑ ELGs are based upon EPA's Construction General Permit, so States' permits may already address most or all requirements.

OKR04 Construction Requirements

(still Draft)

- Closely follows provisions in *EPA's model MS4 permit*
- [must]... "Develop, implement and enforce a *program to reduce pollutants* in any stormwater runoff to your MS4 from construction activities greater than or equal to *1 acre*."
- [must]... "Develop and implement requirements for... operators to implement... *erosion and sediment BMPs*"
- [must]... "Develop and implement requirements for... operators to *control waste* such as...discarded materials, ...litter, concrete truck washout..."
- [must] "Develop procedures for...*site plan review*, [and] for site *inspection and enforcement* of control measures."

OKR04 Post-Construction Requirements

(still Draft)

- [must]...“Develop, implement and enforce a *program to address stormwater runoff* from new development and redevelopment projects that disturb greater than or equal to one acre...”
- [must]...“Develop and implement strategies which include a combination of *structural and/or non-structural...BMPs ...*”
- [must]...“Use an *ordinance...to address post-construction runoff...*”
- [must]...“Ensure adequate long-term *operation and maintenance of BMPs.*”

Definitions for Post-Construction

- Post-construction – *after construction activities have been completed*
- New development – *construction in areas that previously have had no constructed development, including pipelines and other utilities.*
- Re-development – *“...refers to alterations of a property that change the “footprint” of a site or building in such a way that there is a disturbance of equal to or greater than 1 acre of land. The term does not include such activities as exterior remodeling.”*

Post-Construction Under OKR10 and ELGs

- Deal mainly with active construction, not “post-construction”
- Nonetheless, require “final stabilization” of site
- Rely upon local codes to address “long term” stormwater management

*“...the Agency [EPA] examined the merit of excluding sites less than **5 acres** at this time. EPA estimates that while only 30 percent of sites developed each year are 5 acres or more, these sites represent over 80 percent of the disturbed acreage.”*

*“EPA is proposing **not** to establish effluent limitation guidelines for sites smaller than 5 acres...”*

“Final Stabilization” in ELGs

“...means that either: (1) All soil-disturbing activities at the site have been completed and a uniform (e.g, evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geo-textiles) have been employed; **or** (2) For individual lots in residential construction by either: The homebuilder completing final stabilization as specified above; or the homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization...”

“Stabilization” in OKR10

“*Stabilization* means covering or maintaining an existing cover over soil. Cover can be vegetative (e.g., grass, trees, seed and mulch, shrubs, or turf) or non-vegetative (e.g., geo-textiles, riprap, or gabions).”

“Stabilization practices may include:

- (1) Establishment of temporary or permanent vegetation;
- (2) Mulching, geo-textiles, or sod stabilization;
- (3) Vegetative buffer strips;
- (4) Protection of trees and preservation of mature vegetation.”

Post-Construction in OKR04

[must]...“Develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre...”

Implies “cradle to grave” program:

- *Comprehensive*
- *Local control*
- *City-specific problems / solutions*
- *Local control = flexibility*
- *Many program options*

Post-Construction in OKR04

[must]...“Develop and implement strategies which include a combination of structural and/or non-structural...BMPs ...”

Examples of “Structural BMPs” cited in OKR04:

- *Wet ponds*
- *Extended-detention outlet structures*
- *Grassed swales*
- *Bio-retention cells*
- *Sand filters*
- *Filter strips*
- *Infiltration basins and trenches*

Examples of "Non-Structural BMPs" in OKR04

[must]..."Develop and implement strategies which include a combination of structural and/or non-structural...BMPs ..."

Policies and ordinances that:

1. Direct growth to identified areas
2. Protect sensitive areas (e.g. wetlands, riparian areas)
3. Maintain or increase open space
4. Provide buffers along sensitive water bodies
5. Minimize impervious surfaces
6. Minimize disturbance of soils and vegetation
7. Encourage infill development in higher density urban areas

More Non-Structural BMPs in OKR04

[must]...“Develop and implement strategies which include a combination of structural and/or non-structural...BMPs ...”

- Education Programs for developers and the public
- “Other Measures such as...”
 - Minimization of the percentage of impervious area after development
 - Minimize directly connected impervious areas
 - Source control measures...(good housekeeping)