**DEPARTMENT OF THE ARMY**
**FORT WORTH DISTRICT, CORPS OF ENGINEERS**
**P. O. BOX 17300**
**FORT WORTH, TEXAS 76102-0300**

**APRIL 22, 2015**

TO INTERESTED PARTIES

The U.S. Army Corps of Engineers, Regional Planning and Environmental Center and the Tulsa District, in coordination with the Waurika Lake Master Conservancy District (WLMCD), have assessed the environmental impacts associated with the proposed maintenance dredging of the WLMCD water intake channel in Waurika Lake, Cotton, Stephens, and Jefferson Counties, Oklahoma. Proposed activities include pumping and storage of dredge material to a confined disposal facility on WLMCD property, replacement of lower gates on the WLMCD intake structure, and installation of an intake pipe extension and floating intake. These proposed alterations/modifications are operation and maintenance responsibilities of the non-Federal sponsor, the WLMCD, and will be implemented at no cost to the federal government.

The WLMCD maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life, these structures have become clogged with sediment. The WLMCD proposes to dredge this material and deposit it outside of the reservoir. The proposed maintenance dredging and associated activities will not affect normal operation of the reservoir. In order to accomplish this goal, permission to temporarily occupy and alter portions of the Waurika Lake Project is being requested from the Tulsa District.

A draft environmental assessment was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, including guidelines in 33 Code of Federal Regulations, Part 230, Policy and Procedures for Implementing NEPA. It has been determined from the referenced environmental assessment that the project will have no significant adverse impact on the natural or human environment.

The Draft Environmental Assessment (EA) for this action has been posted on the Tulsa District website at: http://www.swt.usace.army.mil/ at the NEPA Notices icon midway down the page. By this letter, we are requesting your comments on the Draft EA. In order to be considered, comments must be received no later than 8 May 2015. Comments on the Draft EA should be submitted to Dr. David Gade by mail (1645 S. 101st East Ave., Tulsa, OK 74128), email (David.Gade@usace.army.mil), or phone (918.669.7579).

# Appendix I

# Environmental Assessment

## For

## Waurika Lake Water-Intake Channel Maintenance Project
### Dredging, Gate Extension & Gate Replacement

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## 1.0 PURPOSE, NEED AND SCOPE

Waurika Lake is a regionally important lake in southwestern Oklahoma, serving as the primary raw water supply reservoir for the cities of Duncan, Lawton, Waurika, Walters, Temple, and Comanche. The service areas are located in four counties: Comanche, Cotton, Jefferson, and Stephens. The 10,100 acres lake was constructed and placed into operation by USACE on 1 August 1977 when impoundment began on Beaver Creek, a tributary to the Red River. The conservation pool filled to elevation 951.4 ft.-NGVD on 17 May 1982. Waurika Lake Master Conservancy District (WLMCD), the non-federal sponsor (NFS), is an autonomous quasi-governmental corporation, incorporated in Oklahoma and governed by Oklahoma Statue Title 82, with a mission to develop, defend, and deliver water to these six communities within Comanche, Cotton, Jefferson, and Stephens Counties (see Figure I-1 for pertinent lake facts).

The Waurika Lake Master Conservancy District (WLMCD) has a water conveyance mission to supply and serve up to 40 MGD of raw water to its members (cities and four counties surrounding the lake) with a combined estimated population of 182,440 people for the four main counties, or approximately 4.7% of Oklahoma's population (2013 est., see Table 4-3). WLMCD, the non-federal sponsor at Lake Waurika, owns property adjacent to the USACE operated lake and outside of the federal project boundary. The WLMCD organization operates and maintains activities to support the Waurika Water Supply conveyance system. WLMCD's water withdrawals range from 10 MGD to 40 MGD of raw water from the lake's conservation pool through water rights permits with the OWRB and storage allocation from USACE.

**Figure I-1**
**Waurika Lake Quick Facts**

| | |
|---|---|
| Year Completed | 1977 |
| Year Reach Conservation Pool | 1982 |
| Authority | U.S. Army Corps of Engineers (P.L. 88-253) |
| Stream | Beaver Creek |
| County | Jefferson (Dam), Stephens & Cotton |
| Purpose | FC, WS, WQ, IR, R, FW |
| % Flood Control (FC) | 14.16% |
| % Water Supply, Irrigation & Conveyance (WS, IR) | 56.80% |
| % Recreation (R) | 28.43% |
| % Fish & Wildlife (FW) | 0.61% |
| Service Total | 100% |
| Water Supply Storage (acre-feet) | 151,400 |
| Water Supply Yield (acre-feet) | 40,549 |
| Normal Pool Elevation (ft-NGVD) | 951.40 |
| Normal Pool Area (acres) | 10,100 |
| Normal Pool Capacity (acre-feet) | 203,100 |
| Shoreline (miles) | 80 |
| Flood Pool Elevation (ft-NGVD) | 962.50 |
| Flood Pool Area (acres) | 15,000 |
| Flood Pool Capacity (acre-feet) | 343,500 |

The Waurika Lake drainage basin environment of 562 square miles has created a sediment accumulation problem along the bottom of the channel that moves lake water to the Intake Structure, the beginning of the raw water conveyance system (hereinafter termed 'intake channel'). Excessive sedimentation within the intake channel, combined with the on-going drought, has gradually reduced the dependability and safe water yield from the lake for the WLMCD conveyance system.

The intake structure consists of three rows of vertical gates, and the lowest gate has been taken out of service due to being fully submerged by accumulated sedimentation resulting in decline of raw water quality and intake capacity at this bottom level. At the Intake Structure the sediment has accumulated to approximately elevation 921.5 ft.-NGVD, about 18-inches below the bottom of the middle gate at

elevation 923.0 FT-NGVD, and well above the design channel base elevation of 905.0 FT-NGVD. This represents an accumulation along the bottom gate of almost 18-feet of sediments.

Water supply to member cities of the WLMCD service area has been placed in a serious water conservation policy mode by reducing water withdrawals from Waurika Lake by approximately 75% for August, September and October, when comparing 2013 to 2012. Even with this water conservation policy in place, the lake level continues to decline without significant additional rainfall. As of 19 February 2015, the lake's level has further declined to below 932.5 FT-NGVD which is below drought level 4 with a conservation pool availability of only 29%. The rate of lake level decline is not linear when shore slopes are relatively flatter, thus accelerates with lowering lake level due to less water storage volume with depth as water level recedes.

The result of the sediment accumulation level approaching the middle intake gate has caused both mechanical problems (i.e., significant damage to pipes, pumps, air release valves and other components involved in the flow of water) as well as continuing to degrade raw water quality.

Electrical power consumption increases when pump motors have to overcome a greater water elevation differential and operate farther from the pump optimum operating conditions which occurs as lake water levels continue to recede to very low lake levels below 930.0 FT-NGVD.

WLMCD observes, based on current water level decline trends, that, should the current drought and sediment buildup continue unabated, the WLMCD will be unable to deliver raw water to its member cities by late 2015 or early 2016.

The status of reliable delivery of raw water from Lake Waurika is considered "urgent".

The dependable water yield from the conservation pool has dramatically decreased by the combination of the ever-thickening sediment accumulation within the intake channel plus the lowering lake elevation due to the prolonged drought conditions. This has amounted to a reduction in the lakes dependable water supply yield by reducing the conservation pool volume by approximately 71% thereby giving a total conservation pool volume availability of only about 29% at the current lake elevation of 932.40 FT-NGVD (as of 29 March 2015). The falling elevation of the conservation pool has been affected at the intake from the top surface by high evaporation rates due to the prolonged nature of the recent drought and from the bottom due to increasing sediment accumulation. This has limited the available conservation pool water depth from which to draw water supply as well as slowly increased water turbidity and suspended matter reducing water supply quality to WLMCD customer cities.

The project scope has a dual purpose as follows:

1) To restore the dependable water volume yield of the entire conservation pool which has been dramatically affected by the combination of the sediment accumulation within the intake channel plus the current drought conditions through implementing a channel dredging operation; and

2) To improve the lake raw water quality and water intake withdrawal flexibility by extending the lower gates to the intake structure via pipeline extension down the length of the dredged intake channel (approximately 4,000 ft) and installing a floating intake pumping station near the

confluence of the Beaver Creek thalweg. Replacement/refurbishing of the gates at the intake structure will also be accomplished as part of the maintenance project.

## 2.0 ALTERNATIVES

At least five alternatives were evaluated including the "No Action" alternative as shown in Table 2-1. Each alternative was subsequently evaluated based on equal weighting of the following criteria: (1) project cost (2014 dollars), (2) Ease and frequency of operating and maintenance (O&M) and associated costs, (3) Investment value (long-term capital costs), (4) Life expectancy of action, (5) Technical/ Environmental advantages (+), and (6) Technical/ Environmental disadvantages (-).

### 2.1 No Action Alternative (Alternative 5, Table 2-1)

The no action alternative will not correct or improve the current channel intake condition or improve water quality withdrawals. While this option is not practicable because it does not meet the needs of the project, it is carried forward to meet NEPA analysis requirements.

### 2.2 Action Alternatives (Alternatives 1 through 4, Table 2-1)

Title and description for screening of practical alternatives resulted in the four alternatives:

- **Alternative No. 1 – Dredge Sections A, B and C with Dredge Material Disposal/ Re-use.** ***Description:*** DREDGE ORIGINAL INTAKE CHANNEL plus replace six (6) Intake Gates. Dispose/Reuse of approximately 75,000 cubic yards of dredge material from Sections A, B & C. Construct CDMSA to hold and evaporate or decant water from dredging slurry. Permit reuse of disposed dredged material if testing reaffirms non-toxic and non-hazardous material. ***Discussion:*** Dredge the entire original Lake Waurika raw water intake channel to the raw water intake structure to restore the original design intake channel profile elevations. This option only provides a temporary solution in that the intake channel will progressively silt in again and dredging will be a recurring event every 25 to 35 years. Raw water quality will not be improved. This option does not bear consideration due to recurring costs. Therefore, this option does not truly meet the needs of the project and was eliminated.

- **Alternative No. 2 – Dredge Sections A, B and C plus extend via a 42" OD Flowline Pipe in Center of Dredged Channel lowest gate with 3 Gate Intake (floating intake).**
  ***Description:*** DREDGE ORIGNAL INTAKE CHANNEL PLUS ADD PIPELINE INTAKE by the installation of 4,000 linear feet of 42" O.D. HDPE pipe on the bottom of the dredged channel, connect 42" OD pipe it to a floating intake structure with new valving.
  ***Discussion.*** An addition pipe installed in the channel invert permits long term raw water supply from the lower levels of the conservation pool even with future sediment deposits from channel flows. This alternative is the more expensive but is believed to be the simplest. If this alternative is considered viable, system performance criteria will need to be established and hydraulic modeling should be used to confirm performance at various lake levels.
  ***System Resilience:*** *This replacement intake structure also contributes to system resilience.* Such a redundant replacement intake structure would probably be the conclusion of a *risk assessment*, considering that the sole existing intake structure is the recipient of prevailing winds, an identified *exposure hazard*. A separate redundant intake structure not targeted by prevailing winds will allow system *resilience* should the existing intake structure be compromised. Redundant intake structures are a common feature in large cities along the Great Lakes where oil spills are a threat and in locations where drought conditions occur.

- **Alternative No. 3 – Alternative No. 3 – Offset Direction Drilling for 42" OD Flowline Pipe, Replace 6 Gates Intake and Raw Water Pumps.**
  ***Description:*** OFFSET DIRECTION DRILLING FOR 42" FLOWLINE PIPE is the construction of a 42" O.D. Horizontal Directional Drill (HDD) from an area north of the existing Intake Structure to a point approximately 4,000 west of the existing intake structure to deep water. Flowline would be connected to the Intake Structure to provide water to one or both of the intake areas.
  ***Discussion:*** This Alternate meets the short term goal of this project. The short term goal is for the WLMCD to access the entire conservation pool and is considered Part 'A'[1] of the entire project solution for short and long term improvements. This option eliminates the need for any unnecessary dredging and attendant environmental concerns and restores the original raw water dependable yield of Lake Waurika's conservation pool to elevation 910.0 ft-NGVD. However, this alternate does not address the lower gate repairs and the current operations of the existing intake structure. The existing intake structure would not operate in this capacity but would be transformed into a wet well and pump station only. By performing some dredging in the channel Alternate No. 4 transforms this intake structure into a secondary intake inlet for system redundancy for intake options. This alternative involves directional drilling or tunneling since dredging is not part of the alternative. Besides being the most expensive, additional environmental (impacts to lake-floor) and engineering (stability of roof material for pipeline installation) issues are too prohibitive for this alternative to be considered viable.

- **Alternative No. 4** (KE's original preferred alternative with Part A and B) **– Offset Direction Drilling for 42" Flowline Pipe, 3 Gate Intake, Raw Water Pumps and Dredge Section A.**
  ***Description:*** Includes Alternative 3 PLUS DREDGE that area to the south of the existing intake to expose the bottom of the lowest gates. This would be an add-on to Alternative No. 3 (original Plan 'A' concept) to maintain original Intake Structure.
  ***Discussion:*** This would be Part 'B' to the existing WLMCD intake tower structure where the perimeter is minimally dredged to enable full operation of all three intakes. In lieu of a cofferdam, the west side of the current intake structure will be possibly filled to facilitate construction of the HDPE connection to the existing intake tower. Additionally, construction of large capacity submersible pump is required at the connection to enable continual pumping when water surface elevations falls below EL 925. Once Part 'A' and Part 'B' construction is completed, no recurring future dredging will be necessary.

### 2.3 Final Preferred Alternative

Phase 2 findings eliminated Alternative 4 as explained in Section 1.2 and changed the preferred approach to a modification of Alternatives 1 and 2 as explained more fully in Section 11.5. In addition, as explained in Section 1.4.3, Plans 'A' and 'B' vernacular has been changed as well as the construction sequencing as number-ordered 'Tasks" to better align sequencing and constructability requirements for timely completion of maintenance activities. Alternative 2 as originally proposed with slight modification is the preferred alternative. Other alternatives previously considered (Nos. 1, 3 & 4) were eliminated due to being uneconomical, technically difficult with uncertain outcomes, or environmentally burdensome. The no action alternative will provide no relief of current conditions, eliminate any opportunity to improve

[1] Part 'A' original concept was to start from the existing raw water inlet structure, horizontal directional drilling under the lake bottom (and below all silt and clay in shale) a large diameter (42-in OD) High Density Poly Ethylene (HDPE) pipe 4000 feet to deeper part of the lake. The HDPE will terminate in a replacement floating intake.

operations, and essentially vacant the water supply mission for the lake which is unacceptable per Congressional mandates on the original authorization of the project (PL 88-253).

**Table 2-1 – Alternative Evaluation Matrix (11x 17 folded) goes here as page I-8.**

## Table 2-1
## WAURIKA LAKE WATER INTAKE REPLACEMENT AND CHANNEL MAINTENANCE PROJECT
## Alternatives Evaluation Matrix – PFD-95% Updates from Phase 2 Reports and Studies
## DREDGING INTAKE CHANNEL VERSUS ALTERNATIVE OPTIONS

| Alternative | Description | Project Costs 2014 Dollars | Cost, Ease & Frequency of Operation & Maintenance | Investment Value (Long Term Capital Costs) | Life Expectancy | Technical/Environmental Advantages (+) | Technical/Environmental Disadvantages (-) | Total Weighted Value | Alternative No. Rank | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Alternative No. 1 Dredge Section A, B and C Dredge Material Disposal/ Re-use | **DREDGE ORIGINAL INTAKE CHANNEL plus replace six (6) Intake Gates**. **Dispose/Reuse of approximately 75,000 cubic yards of dredge material** from Sections A, B & C. Construct CDMSA to hold and evaporate or decant water from dredging slurry. Permit reuse of disposal material if testing reaffirms non-toxic and non-hazardous material. | The total estimate of dredging the channel, permitting, disposal of dredged material, engineering and inspection is **approximately $6.0 M (2014 dollars)** | Continued maintenance around intake structure to keep gates clear of silt. Repair to northeast shoreline damage from wave action. Continued wear on seals and impellers from fine sands and clays in lake water. | **$5.1 Million (2014 Dollars)** which include re-dredging Sections A, B & C of the original Intake Channel to Elevation 705. (Project cost in 2047 dollars, would be $13.25 Million) | It is expected the infill of sediment and rate of deposit would not differ from the past. It could be extrapolated that a similar dredging project would be required in another 10 to 15 years to keep access to the lower conservation pool with lower gates. The rates of sediment transport, local erosion and lake hydrodynamics forces (wind, wave action and lake level changes) are not uniform through out the year. | (1+) The District will have 20 to 35 years of available water for the public to today's situation, fill at El. 923.0.<br>(2+) Possible reuse of dredged fill materials if non-toxic and non-hazardous | (1-) With inflation, the cost to dredge the channel could increase by 200% or more from todays estimate.<br>(2-) Only partly feasible since intake structure may not be useable during dredging operations or require bypass pumping.<br>(3-) During dredging, water quality may deteriorate with 75,000 cu yds of fill material to be dredged. | 19 | 3.2 | Dredging may be needed again in 20 to 30 years at a substantial increase in cost. Access to lower conservation pool would be cutoff in 10 years of normal operation with a low lake. |
| Relative Weight | | 2 | 5 | 2 | 4 | 2 | 4 | | | |
| Alternative No. 2 Dredge Section A, B and C plus a 42" OD Flowline Pipe in Center of Dredged Channel with 3 Gate Intake | **DREDGE ORIGNAL INTAKE CHANNEL PLUS ADD PIPELINE INTAKE** by the **installation** of 4,000 linear feet of 42" O.D. HDPE pipe on the bottom of the dredged channel, connect 42" OD pipe it to the a floating intake structure with new valving. | The cost of Alternative No. 2 would include Alternate No. 1 plus the 42" O.D. Pipe and gate valve replacement at current Intake. **Approximately project cost $12.0 M (2014 dollars)** | The 42" OD pipe will eliminate the need to perform major re-dredging in 10 to 30 years pending pool access elevation requirements. Minor maintenance of floating intake structure may be required as a result of continuing sediment transport, wave and current erosion of the islands and shore line. | Channel flowline would maintain value and sediment would not be a become a problem and issues mitigated. | The siltation of the channel maybe the same as Alternative No. 1. The life expectancy would be 50 or more years due to the 42" pipe being in place. Siltation due to transport, wave action will not be of significant concern. | (1+) Increase life expectancy over Alternative No. 1.<br>(2+) Expected higher quality Raw Water by a deeper part of the lake is desirable. (3+) Reduced siltation concerns.<br>(+4) Makes Conveyance facility sustainable during drought<br>(+5) The Mission statement to convey lake water becomes more resilient during climate change | (1-) Greater initial cost.<br>(2-) Same water quality concern during construction as Alternative No. 1.<br>(3-) Pump station maybe required to be shut down for short periods during construction.<br>(4-) High total cost. | 8 | 1.3 | Though more expensive than Alternative No. 1, it will not require the redredging of the channel. Very little interference to daily operation of Intake Structure. Access to higher Quality Water and operational flexibility to have different intake locations. |
| Relative Weight | | 3 | 1 | 1 | 1 | 1 | 1 | | | |
| Alternative No. 3 Offset Direction Drilling for 42" OD Flowline Pipe, Replace 6 Gates Intake and Raw Water Pumps | **OFFSET DIRECTION DRILLING FOR 42" FLOWLINE PIPE** is the construction of a 42" O.D. Horizontal Directional Drill (HDD) from an area north of the existing Intake Structure to a point approximately 4,000 west of the existing intake structure to deep water. Flowline would be connected to the Intake Structure to provide water to one or both of the intake areas. | The cost of Alternative 3, would include the HDD, Disposal of 8,000 cubic yards of drilling waste, new valving and header connection the HDD to the Intake Structure. **Approximately $20.0 M (2014 dollars)** | Additional valving would require some maintenance over 35 years. Pipe Intake would require diver inspection annually. | Channel flowline would maintain value and sediment would not be a become a problem. | The life expectancy of the pipeline will exceed 50 years as it will be protected by the shale formation. | (1+) Less Intake structure down time during construction.<br>(2+) Water quality during construction will not be affected.<br>(3+) It would supply best water quality in lake.<br>(4+) Less material to be dispose. | (1-) Higher cost than Alternative No. 1.<br>(2-) The pump station would require several short periods of shutdown during construction | 19 | 3.2 | This Alternative would not require any dredging and would include the option of better control of incoming water. Like Alternative No. 2, the water should be higher quality. |
| Relative Weight | | 4 | 3 | 3 | 2 | 4 | 3 | | | |
| Alternative No. 4 Offset Direction Drilling for 42" Flowline Pipe, 3 Gate Intake, Raw Water Pumps and Dredge Section A | **INCLUDES ALTERNATIVE 3 PLUS DREDGE** that area to the south of the existing intake to expose the bottom of the lowest gates. This would be an add-on to Alternative No. 3 to maintain original Intake Structure. | This would require a larger decant pond and disposal area for an additional 32,000 Cubic Yards of Waste. **Cost approximately $23.0 Million (2014 dollars)** | Would require bank maintenance around the Intake Structure plus annual diver inspections | The Dredging portion of this Alternative can be scheduled at the time in the future based on a cost/benefit ratio. If not done within five years, it would require a new 408 & 404 Permit.. | Over 50 years for the pipeline intake and 15 years for the lower gates of the traditional Intake Structure if not maintained. | (1+) Should the intake of the pipeline ever need to be maintained, the gates at the Intake Structure would be available.<br>(2+) Second intake capacity is considered an insurance against a one source supply line.<br>(3+) Reuse of Dredged Materials.<br>(4+) It would supply best water quantity in lake. | (1-) 32,000 cubic yards of sediment to be dredged may need disposal if not permitted for Reuse.<br>(2-) Without dredging maintenance, the lower gates could again be covered with sediment in a short time. | 18 | 3.0 | |
| Relative Weight | | 5 | 2 | 4 | 3 | 2 | 2 | | | |
| Alternative No 5 | **NO ACTION ALTERNATIVE.** Little or no action until emergency is declared. | No costs | No costs | Facility value would decline and Mission eliminated. | 2 to 3 years | None | 200,000 people in Southwest Oklahoma could be out of water. Loss of OWRB Permit. | 26 | 4.3 | This Alternative is required to be considered, but is not feasible to carry out mission. |
| Relative Weight | | 1 | 5 | 5 | 5 | 5 | 5 | | | |

**Note: All criteria for each alternative weighted equally. Lowest Number Rank is Best Alternative**

| Additional Alternatives which were considered but did not meet the economic parameters, USACE requirements, or were not feasible |
|---|
| Alternate No. 6 - Construct New Pump Station Downstream of Dam |
| Alternate No. 7 - Construct Floating Intake Structure in Lake |
| Alternate No. 8 - Remove Sediment & Silt in Channel When Lake Becomes Lower |
| Alternate No. 9 - Conventional Dredging, Trucking and Disposal (On Corps Site) |
| Alternate No. 10 - Convert Lake Cove into Sediment Deposal Area |
| Alternate No. 11 - Barrier Island Creation |

| Relative Weight (1 is Highest) |
|---|
| 1 - Best |
| 2 - Good |
| 3 - Average |
| 4 - Fair |
| 5 - Not desirable |

## 3.0 PROPOSED ACTION

The purpose of this project is to restore Lake Waurika's dependable water volume yield of the conservation pool and improve raw water quality which have been dramatically affected by the combination of intake channel sediment accumulation and continuing regional drought conditions on the Waurika Lake drainage basin. In addition, it will provide improved operational flexibility for water intake pumping alternatives not here-to-for possible due to the land-based, static vertical Intake Structure and channel intake configuration.

The shortest duration to implement significant improvements and assist the WLMCD to access the lower depths of the lake is to proceed with **Alternative No. 2** since it is uneconomical and technically uncertain (clay roof stability on tunneling) to construct the Alternate No. 4 project. Dredging the Intake Channel and extending the lowest or lower gate down the dredged channel via pipeline is imperative to significantly increase the dependable water yield to the conveyance system and improve the water quality for the community members serviced by the WLMCD conveyance system while preventing future sedimentation of limiting use of the lowest gate.

The preferred alternative consists of the following combined tasks:

- **TASK 1 – MAINTENANCE PREPARATION, MONITORING AND MANAGEMENT:** Establish test monitoring for task 2, 3 and 4 in accordance with permits. Replace high, mid and low slide gates to control lake water intake of intake structure.

- **TASK 2 – MAINTENANCE DREDGING AND RELATED ACTIVITIES:** Dredge a 4,000 foot long 10 foot wide intake channel with 2(h) to 1(v) slopes located on the east Waurika lake shore downstream of the intake of the WLMCD pump structure. The contractor shall pump 75,000 cubic yards of fill material by pipe from intake channel to the confined dredge material storage area (CDMSA). The CDMSA cell 1 and 2 have a volume capacity of 122,700 cy of slurry with 2 foot of free board. The CDMSA will have an average depth of 3.5 feet down and beams (dikes) 5.0 feet above the ground. The primary function of the CDMSA will be to contain the slurry and evaporate the water from the slurry and/or settle out the suspended solids to the bottom of the CDMSA. If the contractor selects to pump more slurry than the evaporation rate by volume, then the contractor will be required to settle out and treat the slurry with polymers. Decant the clean water from the slurry by the CDMSA outfall. The water may return to the lake if all permit parameters are met.

- **TASK 3 – EXTEND LOWER GATES:** After the dredging is complete in the channel area, the contractor is required to install the intake wye connection assembly, then extend the lower gates by installing a 4,000 foot long HDPE pipe down the center of the channel. Secure and anchor the pipe accordingly; then install a 30 mgd floating intake with a special screen, flex hose, buoys and anchors for a completed lower gate extension to the center of the lake.

- **TASK 4 – POST MAINTENANCE OPERATION:** Perform land rehabilitation of all disturbed areas from construction including the closing of the CDMSA facilities back to their native land status, perform repairs and maintenance on roads and demobilization of the entire construction operations. Complete record plans and close out all applicable permits and documents. All contractor properties shall be removed from all federal and WLMCD land in accordance to the permits.

# 4.0 AFFECTED ENVIRONMENT

## 4.1 Location

Waurika Lake shoreline is geographically located in the 3 counties of Jefferson, Stephens and Cotton Counties in the southwest portion of the State of Oklahoma. See Exhibits 1 and 2 for location maps. Exhibit 3 shows all sampling locations taken during the completions of KE Phases 1 and 2 field work. Exhibit 4 provides the dredging section geometries and amounts. Exhibit 5 shows the existing channel profile and objective dredging elevation for the intake channel. Exhibit 6 provides the WLMCD Maintenance Project Overview. See Figure I-1 for other pertinent lake facts.

The town of Waurika, OK is located just south of the Waurika Lake Dam which formed the lake. The proposed project site lies along the eastern shoreline as shown in Exhibits 1 and 2. Approximately 165 acres of both federal lands & lake water, and non-federal WMCD lands will be utilized in performing the maintenance project.

## 4.2 Climate

Table 4-1 summarizes the pertinent climatological parameters from the Waurika Mesonet Station maintained by the Oklahoma Climatological Survey near Waurika, OK. This is the closest all-weather station to the maintenance project site. For the Waurika Lake watershed average annual precipitation for the period 1994 to 2010 was 29.79 inches (ODEQ, 2013). Since 2010 precipitation has generally been below normal with persist drought conditions lowering lake levels.

Table 4-2 provides average monthly lake evaporation, and precipitation at Waurika Dam and for the basin from the USACE-SWT Water Control Data System. Evaporation maxima is in July-August and minima is in December-January. Average monthly evaporation for the period shown in Table 4-2 is 6.68 inches with maximum (Jul 1980) and minimum (Jan 1984) of 16.03 and 1.01 inches, respectively. High evaporation rates have persisted since 2007 particularly since 2010 which has led to the loss of water in Lake Waurika.

Average monthly rainfall near the dam is 2.59 inches, and in the basin is 2.51 inches for the period shown in Table 4-2. Maximum monthly rainfall was 15.49 inches near the dam and 14.77 inches in the basin (both in May 1982). The last large rainfall was in Jul 2007 when 13.48 inches fell near the dam and 13.03 inches fell on the basin. From 2007 through 2014 there has been only 8 of 84 (9.5%) monthly rainfall events over 4.0 inches at the dam and 14 of 84 (16.6%) monthly rainfall events in the basin. Dry conditions will persist through the summer 2015 with indication that wetter conditions may begin to appear in autumn 2015.

**Table 4-1**
**Climate Extremes and Norms, Waurika Mesonet Station, Oklahoma**
**Annual Averages for Period 2000-2014 (Full Year)***

| Parameter | Minimum Average | Average | Maximum Average |
|---|---|---|---|
| Average Air Temperature (˚F) | 51˚F | 63˚F | 76˚F |
| Average Dew Point Temperature (˚F) | 43˚F | 49˚F | 55˚F |
| Average Relative Humidity (%) | 39% | 65% | 88% |
| Average Heating Degree Days | | 8 | |
| Average Cooling Degree Days | | 7 | |
| Percent Sunshine | 68% | | |
| Daily Average of Total Solar Radiation (mega joules/meter$^2$) | 17.3 MJ/m$^2$ | | |
| Average Maximum Solar Radiation (Watts/ meter$^2$) | | | 804 W/m$^2$ |
| Average Wind Speed (mph, at 30-meters) | 2 mph | 8 mph | 16 mph |
| Average Max Wind Speed Gust (mph) | | | 24 mph |
| 6.5-foot Wind Speed | 1 mph | 6 mph | 12 mph |
| Average Station Pressure (in-Hg) | 28.91 in-Hg | 29.01 in-Hg | 29.11 in-Hg |
| Total Annual Rainfall (in) | | 30.49 in | |
| Total Annual Evaporation (in) | | 78.1 in | |
| Total Potential Evaporation Short Crop (in) | | 59.7 in | |
| Total Potential Evaporation Long Crop (in) | | 80.7 in | |
| | | | |

* Source: Oklahoma Climatological Survey. The Mesonet long-term averages utilize 15 years of daily data (e.g. daily average, daily maximum/minimum, or daily total) for every current and past Oklahoma Mesonet station. For a station's data to be used in one of the maps, at least 90% of the data must be valid during the respective period. Data from moved locations (e.g. "Norman - retired 2002" and "Norman") are not combined into a single station record. This method of calculating 15-year averages of weather data is also used by the U.S. Climate Prediction Center and has been found to be the best alternative to the World Meteorological Organization's 30-year averages (Wilks and Livezey 2013, Journal of Applied Meteorology and Climatology). For more information on each of the variables, please view the Mesonet Long-Term Averages Variables page.

# Table 4-2

## Waurika Lake Evaporation and Precipitation Statistical Data, Oct 1979 to Feb 2015

### A. Waurika Lake Monthly Evaporation (inches/mo) Statistics

| Statistic | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 36 | 36 | 36 |
| Mean (Ave) | 2.88 | 3.27 | 5.65 | 7.57 | 8.47 | 9.72 | 11.61 | 10.71 | 8.07 | 6.00 | 3.84 | 2.81 |
| Std Deviation | 1.07 | 1.01 | 1.09 | 1.14 | 1.46 | 1.96 | 1.90 | 1.82 | 1.51 | 1.26 | 0.96 | 0.82 |
| CV% | 37% | 31% | 19% | 15% | 17% | 20% | 16% | 17% | 19% | 21% | 25% | 29% |
| Median | 2.65 | 3.08 | 5.50 | 7.41 | 8.13 | 9.66 | 11.39 | 10.65 | 8.02 | 6.12 | 3.83 | 2.68 |
| Mode | 1.87 | 3.05 | 4.65 | 6.43 | 8.12 | #N/A | #N/A | 9.50 | 8.20 | 6.12 | 4.12 | 2.50 |
| Max | 5.62 | 5.85 | 7.56 | 11.00 | 11.62 | 15.67 | 16.03 | 15.32 | 11.27 | 8.96 | 5.84 | 4.44 |
| Min | 1.01 | 1.31 | 3.06 | 6.05 | 5.69 | 6.67 | 8.04 | 7.62 | 5.05 | 3.56 | 1.71 | 1.36 |
| Range | 4.61 | 4.54 | 4.50 | 4.95 | 5.93 | 9.00 | 7.99 | 7.70 | 6.22 | 5.40 | 4.13 | 3.08 |
| Skewness | 0.68 | 0.55 | -0.13 | 0.83 | 0.45 | 0.78 | 0.50 | 0.55 | 0.23 | -0.08 | 0.14 | 0.31 |
| Kurtosis | 0.13 | -0.07 | -0.30 | 0.73 | -0.14 | 0.99 | 0.35 | 0.03 | 0.03 | -0.25 | -0.43 | -0.64 |

### B. Waurika Lake Monthly Precipitation (inches/mo) at Dam Statistics

| Statistic | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 36 | 36 | 36 |
| Mean (Ave) | 1.39 | 1.77 | 2.63 | 2.72 | 4.15 | 3.89 | 2.25 | 2.15 | 3.01 | 3.23 | 2.02 | 1.89 |
| Std Deviation | 0.98 | 1.48 | 1.75 | 2.07 | 3.19 | 2.70 | 2.21 | 1.74 | 2.40 | 2.74 | 1.94 | 1.59 |
| CV% | 71% | 84% | 66% | 76% | 77% | 69% | 98% | 81% | 79% | 85% | 96% | 84% |
| Median | 1.44 | 1.35 | 2.27 | 2.20 | 3.94 | 3.31 | 1.69 | 1.77 | 2.49 | 1.93 | 1.36 | 1.57 |
| Mode | 0.00 | 0.46 | #N/A | 2.17 | 1.10 | #N/A | 0.08 | #N/A | #N/A | 1.32 | 1.16 | 0.43 |
| Max | 3.79 | 6.04 | 6.91 | 9.41 | 15.49 | 13.48 | 8.03 | 7.21 | 9.57 | 11.15 | 8.92 | 6.49 |
| Min | 0.00 | 0.00 | 0.04 | 0.25 | 0.25 | 0.85 | 0.08 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 |
| Range | 3.79 | 6.04 | 6.87 | 9.16 | 15.24 | 12.63 | 7.95 | 7.21 | 9.49 | 11.15 | 8.92 | 6.49 |
| Skewness | 0.33 | 1.14 | 0.74 | 1.57 | 1.43 | 1.98 | 1.08 | 1.52 | 0.95 | 0.93 | 1.76 | 1.32 |
| Kurtosis | -0.46 | 0.90 | -0.09 | 2.72 | 3.31 | 4.66 | 0.46 | 2.74 | 0.26 | 0.27 | 3.59 | 1.60 |
| Normal Monthly PPT | 1.28 | 1.53 | 2.10 | 2.72 | 5.19 | 3.74 | 2.26 | 2.35 | 3.37 | 3.15 | 1.76 | 1.42 |

### C. Waurika Lake Monthly Precipitation (inches/mo) in Basin Statistics

| Statistic | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 36 | 36 | 36 |
| Mean (Ave) | 1.26 | 1.46 | 2.30 | 2.76 | 4.18 | 3.80 | 2.31 | 2.44 | 2.97 | 3.22 | 1.93 | 1.58 |
| Std Deviation | 1.03 | 1.26 | 1.57 | 1.95 | 2.95 | 2.54 | 1.92 | 1.87 | 2.22 | 2.43 | 1.69 | 1.42 |
| CV% | 81% | 86% | 68% | 71% | 70% | 67% | 83% | 77% | 75% | 75% | 87% | 90% |
| Median | 1.10 | 1.01 | 2.27 | 2.71 | 4.23 | 3.32 | 2.17 | 1.82 | 2.46 | 2.45 | 1.43 | 1.34 |
| Mode | 0.00 | 0.14 | 2.68 | 3.00 | #N/A | #N/A | 0.10 | 0.97 | 3.51 | #N/A | 0.04 | 0.09 |
| Max | 4.43 | 4.30 | 6.35 | 9.25 | 14.77 | 13.03 | 6.05 | 7.25 | 8.24 | 11.83 | 7.46 | 6.15 |
| Min | 0.00 | 0.02 | 0.03 | 0.18 | 0.05 | 0.21 | 0.03 | 0.00 | 0.29 | 0.24 | 0.04 | 0.09 |
| Range | 4.43 | 4.28 | 6.32 | 9.07 | 14.72 | 12.82 | 6.02 | 7.25 | 7.95 | 11.59 | 7.42 | 6.06 |
| Skewness | 0.90 | 0.80 | 0.89 | 1.55 | 1.41 | 1.75 | 0.51 | 1.41 | 1.07 | 1.49 | 1.34 | 1.55 |
| Kurtosis | 1.06 | -0.53 | 0.74 | 3.30 | 3.78 | 4.41 | -1.04 | 1.39 | 0.39 | 3.10 | 2.11 | 2.54 |

*Source: USACE-SWT Water Control Data System, 2015*
*#N/A - no one value predominates to determine mode.*

## 4.3 Social and Economic Conditions

### 4.3.1 Population

Table 4-3 provides population and ethnic distribution statistics for the six cities and the four main counties served by Lake Waurika via the WLMCD conveyance system and Figure I-2 provides population distribution by age for the cities served by WLMCD. Most city and county populations are declining except Comanche County and the city of Lawton. Nevertheless, drought conditions have placed continued water demand on Lake Waurika which will stay steady as long as drought conditions persist. This puts constant economic pressure on making viable water resources of adequate quantity and quality available for all users. Economic downturn in the oil and gas sector nationally as well as budget constraints on national defense spending as well as state and local spending has increased concerns in the region to properly fund infrastructure needs. The WLMCD maintenance project's objects to improve water quantity availability to the WLMCD conveyance system and improve quality to service cities both meet current and future water supply requirements needed by the region. In addition, the preferred alternative achieves resilience and management flexibility for WLMCD in times of drought conditions which is most needed now and in the future.

### 4.3.2 Employment and Education

Table 4-4 provides the latest U.S. Census demographics on employment and education for the counties and cities served by the WLMCD conveyance system. The following city comparisons to the Oklahoma state average characterize the various demographic information:

Lawton compared to Oklahoma state average:

- Black race population percentage significantly above state average.
- Percentage of population with a bachelor's degree or higher below state average.
- Median age below state average.
- Renting percentage above state average.
- Length of stay since moving in above state average.
- Institutionalized population percentage above state average.
- Poverty rate (2012) of 17.7% above state average of 17.2%.
- 6.1% unemployed (Jun 2014) above state average of 4.8%.

Duncan compared to Oklahoma state average:

- Black race population percentage below state average.
- Percentage of population with a bachelor's degree or higher below state average.
- Poverty rate (2012) of 14.9% below state average of 17.2%.
- 4.2% unemployed (Jun 2014) below state average of 4.8%.

Comanche compared to Oklahoma state averages:

- Median house value below state average.
- Black race population percentage significantly below state average.
- Hispanic race population percentage below state average.
- Foreign-born population percentage significantly below state average.
- House age above state average.
- Number of college students below state average.

- Percentage of population with a bachelor's degree or higher below state average.
- Poverty rate (2012) of 20.0% above state average of 17.2%.
- 4.2% unemployed (Jun 2014) below state average of 4.8%.

Temple compared to Oklahoma state average:

- Median house value significantly below state average.
- Median age above state average.
- Foreign-born population percentage significantly below state average.
- Length of stay since moving in significantly below state average.
- House age above state average.
- Institutionalized population percentage above state average.
- Percentage of population with a bachelor's degree or higher below state average.
- Poverty rate (2012) of 35.8% above state average of 17.2%.
- 4.5% unemployed (Jun 2014) below state average of 4.8%.

Walters compared to Oklahoma state average:

- Median house value below state average.
- Black race population percentage significantly below state average.
- Foreign-born population percentage significantly below state average.
- Length of stay since moving in significantly above state average.
- House age above state average.
- Percentage of population with a bachelor's degree or higher below state average.
- Poverty rate (2012) of 15.0% below state average of 17.2%.
- 4.5% unemployed (Jun 2014) below state average of 4.8%.

Waurika compared to Oklahoma state averages:

- Median house value below state average.
- Black race population percentage significantly below state average.
- Foreign-born population percentage below state average.
- Length of stay since moving in above state average.
- House age above state average.
- Institutionalized population percentage above state average.
- Number of college students significantly below state average.
- Poverty rate (2012) of 23.1% above state average of 17.2%.
- 5.5% unemployed (Jun 2014) above state average of 4.8%.

### 4.3.3 Income

Table 4-5 provides pertinent statistics on nature and magnitude of income for the cities and counties served by the WLMCD conveyance system. Weaker economic conditions are primarily due more recently to the adjustments in the oil and gas sector internationally to lower crude oil prices. Other factors include U.S. Defense Department force reductions and attendant reduction in associated activity by support and service support sectors. Economic data changes monthly and quarterly giving rise to difficulty in providing comparable published data. Such is the case here, as comparison is usually made of older data which has been compiled for all economic parameters and is usually one to two years old.

# Table 4-3

## A. Population of WLMCD Customer Cities (2010 U.S. Census Data & 2013 U.S. Census Estimated)

| City | Total Popl 2013 est. | Total Popl 2010 | White | Black or African American Alone | American Indian Alone | Asian Alone | Native HI or Pacific Islander Alone | Other Race Alone | Two or More Races | Hispanic or Latino | Total Population (Check) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lawton** | **97,151** | **96,867** | 52,540 | 19,848 | 4,031 | 2,423 | 564 | 128 | 5,173 | 12,160 | 96,867 |
| Lawton % | | | 54.2% | 20.5% | 4.2% | 2.5% | 0.6% | 0.1% | 5.3% | 12.6% | 100% |
| **Duncan** | **23,400** | **23,423** | 18,434 | 773 | 1,101 | 187 | 0 | 0 | 843 | 2,085 | 23,423 |
| Duncan % | | | 78.7% | 3.3% | 4.7% | 0.8% | 0.0% | 0.0% | 3.6% | 8.9% | 100% |
| **Comanche** | **1,649** | **1,663** | 1,416 | 4 | 122 | 1 | 4 | 0 | 69 | 47 | 1,663 |
| Comanche % | | | 85.1% | 0.2% | 7.3% | 0.1% | 0.2% | 0.0% | 4.1% | 2.8% | 100% |
| **Temple** | **993** | **1,002** | 738 | 76 | 63 | 0 | 6 | 0 | 44 | 75 | 1,002 |
| Temple % | | | 73.7% | 7.6% | 6.3% | 0.0% | 0.6% | 0.0% | 4.4% | 7.5% | 100% |
| **Walters** | **2,574** | **2,551** | 1,918 | 21 | 303 | 3 | 4 | 1 | 167 | 134 | 2,551 |
| Walters % | | | 75.2% | 0.8% | 11.9% | 0.1% | 0.2% | 0.0% | 6.5% | 5.3% | 100% |
| **Waurika** | **2,043** | **2,064** | 1,687 | 29 | 103 | 6 | 0 | 0 | 71 | 168 | 2,064 |
| Waurika % | | | 81.7% | 1.4% | 5.0% | 0.3% | 0.0% | 0.0% | 3.4% | 8.1% | 100% |
| **Totals** | **127,810** | **127,570** | **76,733** | **20,751** | **5,723** | **2,620** | **578** | **129** | **6,367** | **14,669** | 127,570 |
| **% Total** | **N/A** | **100%** | **60.1%** | **16.3%** | **4.5%** | **2.1%** | **0.5%** | **0.1%** | **5.0%** | **11.5%** | 100% |
| **Oklahoma 2010 Popl** | **3,853,118** | **3,751,351** | | | | | | | | | |
| **% OK Population** | **3.3%** | **3.4%** | | | | | | | | | |

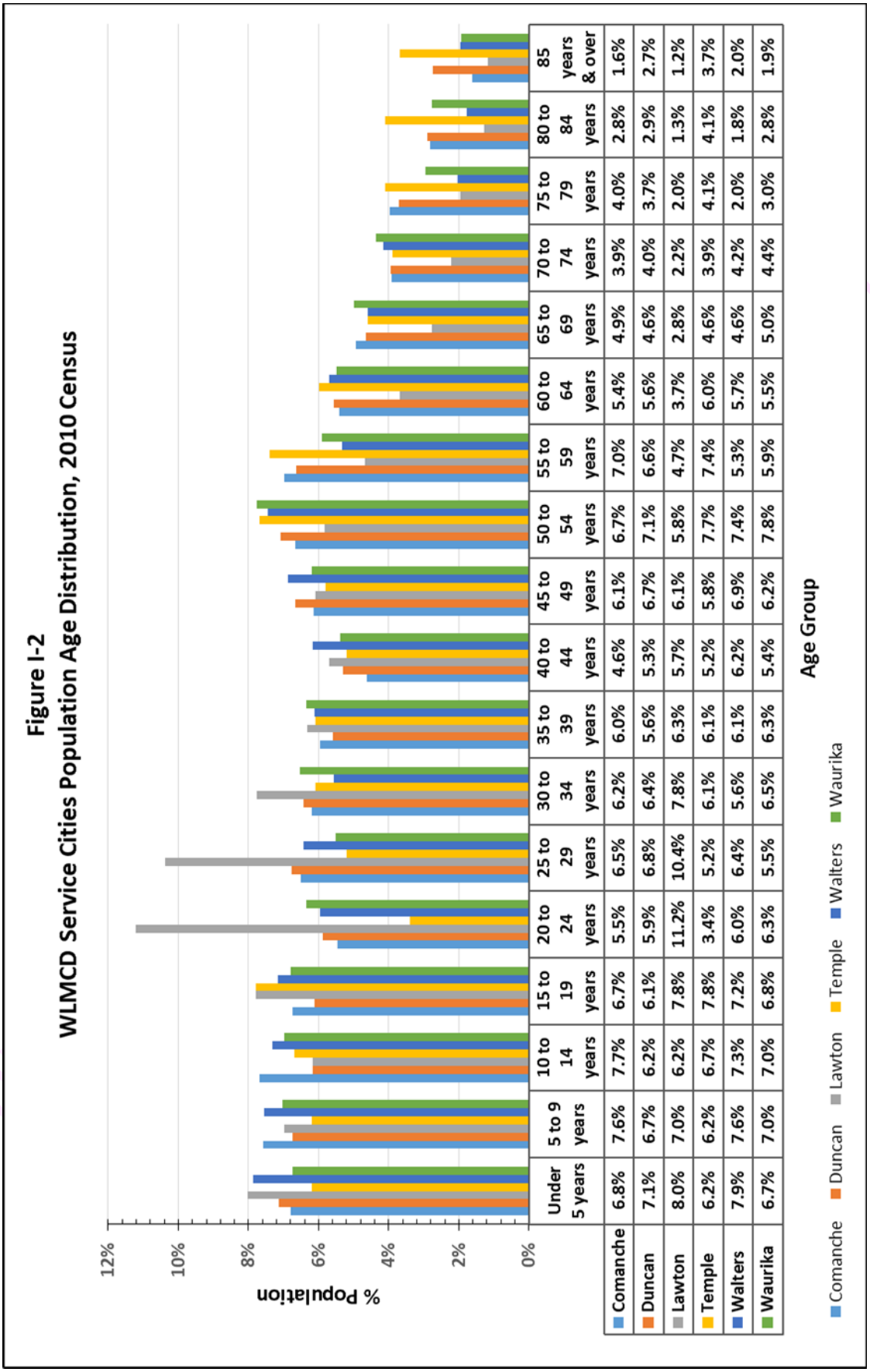
***Source: U.S. Census Bureau, American Fact Finder, 2010 Demographic Profile data***
http://quickfacts.census.gov/qfd/states/40000.html

## B. Population of Counties around Waurika Lake & WLMCD Provides Water Supply (2010 U.S. Census Data & 2013 U.S. Census Estimated)

| County | Total Popl 2013 est. | Total Popl 2010 | White Alone | Black or African American Alone | American Indian Alone | Asian Alone | Native HI or Pacific Islander Alone | Other Race Alone | Two or More Races | Hispanic or Latino | Total Population (Check) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Comanche** | **124,937** | **124,098** | 72,089 | 21,989 | 7,746 | 3,123 | 875 | 0 | 7,746 | 11,369 | 124,937 |
| % Comanche | | | 57.70% | 17.60% | 6.20% | 2.50% | 0.70% | 0.00% | 6.20% | 9.10% | 100.0% |
| Persons/mi$^2$ | 116.84 | 116.06 | | | | | | | | | |
| Land Area (mi$^2$) | 1,069.29 | | | | | | | | | | |
| **Cotton** | **6,152** | **6,193** | 4,774 | 148 | 634 | 18 | 12 | 0 | 332 | 234 | 6,152 |
| % Cotton | | | 77.60% | 2.40% | 10.30% | 0.30% | 0.20% | 0.00% | 5.40% | 3.80% | 100.0% |
| Persons/mi$^2$ | 9.72 | 9.79 | | | | | | | | | |
| Land Area (mi$^2$) | 632.65 | | | | | | | | | | |
| **Jefferson** | **6,432** | **6,472** | 5,120 | 58 | 431 | 26 | 6 | 0 | 277 | 515 | 6,432 |
| % Jefferson | | | 79.60% | 0.90% | 6.70% | 0.40% | 0.10% | 0.00% | 4.30% | 8.00% | 100.0% |
| Persons/mi$^2$ | 8.48 | 8.53 | | | | | | | | | |
| Land Area (mi$^2$) | 758.83 | | | | | | | | | | |
| **Stephens** | **44,919** | **45,048** | 34,857 | 1,078 | 4,627 | 135 | 90 | 0 | 2,426 | 1,707 | 44,919 |
| % Stephens | | | 77.60% | 2.40% | 10.30% | 0.30% | 0.20% | 0.00% | 5.40% | 3.80% | 100.0% |
| Persons/mi$^2$ | 51.62 | 51.77 | | | | | | | | | |
| Land Area (mi$^2$) | 870.24 | | | | | | | | | | |
| **Totals** | **182,440** | **181,811** | **116,840** | **23,273** | **13,437** | **3,302** | **983** | **0** | **10,781** | **13,825** | 182,440 |
| **% Total** | **100%** | **N/A** | **64.04%** | **12.76%** | **7.37%** | **1.81%** | **0.54%** | **0.00%** | **5.91%** | **7.58%** | 100.0% |
| **Persons/mi$^2$** | **54.8** | **54.6** | | | | | | | | | |
| **Land Area (mi$^2$)** | **3,331.01** | **3,331.01** | | | | | | | | | |

***Source: U.S. Census Bureau, American Fact Finder, 2010 Demographic Profile data***
http://quickfacts.census.gov/qfd/states/40/40137.html ***City Web Sources:*** http://www.city-data.com/city/Comanche-Oklahoma.html http://www.city-data.com/city/Temple-Oklahoma.html http://www.city-data.com/city/Walters-Oklahoma.html http://www.city-data.com/city/Waurika-Oklahoma.html

**Figure I-2**
**WLMCD Service Cities Population Age Distribution, 2010 Census**




| | Under 5 years | 5 to 9 years | 10 to 14 years | 15 to 19 years | 20 to 24 years | 25 to 29 years | 30 to 34 years | 35 to 39 years | 40 to 44 years | 45 to 49 years | 50 to 54 years | 55 to 59 years | 60 to 64 years | 65 to 69 years | 70 to 74 years | 75 to 79 years | 80 to 84 years | 85 years & over |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comanche | 6.8% | 7.6% | 7.7% | 6.7% | 5.5% | 6.5% | 6.2% | 6.0% | 4.6% | 6.1% | 6.7% | 7.0% | 5.4% | 4.9% | 3.9% | 4.0% | 2.8% | 1.6% |
| Duncan | 7.1% | 6.7% | 6.2% | 6.1% | 5.9% | 6.8% | 6.4% | 5.6% | 5.3% | 6.7% | 7.1% | 6.6% | 5.6% | 4.6% | 4.0% | 3.7% | 2.9% | 2.7% |
| Lawton | 8.0% | 7.0% | 6.2% | 7.8% | 11.2% | 10.4% | 7.8% | 6.3% | 5.7% | 6.1% | 5.8% | 4.7% | 3.7% | 2.8% | 2.2% | 2.0% | 1.3% | 1.2% |
| Temple | 6.2% | 6.2% | 6.7% | 7.8% | 3.4% | 5.2% | 6.1% | 6.1% | 5.2% | 5.8% | 7.7% | 7.4% | 6.0% | 4.6% | 3.9% | 4.1% | 4.1% | 3.7% |
| Walters | 7.9% | 7.6% | 7.3% | 7.2% | 6.0% | 6.4% | 5.6% | 6.1% | 6.2% | 6.9% | 7.4% | 5.3% | 5.7% | 4.6% | 4.2% | 2.0% | 1.8% | 2.0% |
| Waurika | 6.7% | 7.0% | 7.0% | 6.8% | 6.3% | 5.5% | 6.5% | 6.3% | 5.4% | 6.2% | 7.8% | 5.9% | 5.5% | 5.0% | 4.4% | 3.0% | 2.8% | 1.9% |

**Table 4-4**
**WLMCD Served Cities and Counties Education and Employment Data**

| Education or Employment Category | WLMCD Cities Served | | | | | | Counties Served by WLMCD | | | | State of Oklahoma |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lawton | Duncan | Comanche | Temple | Walters | Waurika | Comanche | Cotton | Jefferson | Stephens | |
| Foreign Born Persons (2009-2013) | 6.6% | 3.3% | 2.0% | 2.0% | 2.2% | 2.8% | 5.8% | 1.8% | 2.6% | 2.1% | 5.5% |
| Language Other than English spoken at home, % age 5+ (2009-2013) | 12.8% | 9.6% | | | | | 11.5% | 5.1% | 6.2% | 5.7% | 9.4% |
| High School Graduate or higher, % age 25+ (2009-2013) | 88.0% | 84.6% | 81.7% | 83.0% | 85.2% | 79.2% | 89.0% | 85.8% | 81.5% | 85.5% | 86.4% |
| Bachelor's degree or higher, % age 25+ (2009-2013) | 18.6% | 20.0% | 9.8% | 7.8% | 14.4% | 10.6% | 19.9% | 14.7% | 11.2% | 17.4% | 23.5% |
| Veterans (2009-2013) | 11,998 | 2,057 | | | | | 15,672 | 637 | 470 | 4,352 | 312,492 |
| Private Nonfarm Establishments, 2012 | *NA* | *NA* | | | | | 2,175 | 79 | 106 | 1,073 | 90,541 |
| Private Nonfarm Employment, 2012 | *NA* | *NA* | | | | | 32,153 | 1,102 | 738 | 13,380 | 1,305,183 |
| Nonemployer Establishments, 2012 | *NA* | *NA* | | | | | 4,653 | 349 | 423 | 3,135 | 266,586 |
| Total Number of Firms, 2007 | 5,308 | 2,469 | | | | | 6,799 | *S* | 534 | 3,992 | 333,797 |
| % Black-owned Firms, 2007 | 9.4% | *S* | | | | | 8.4% | *S* | *F* | *S* | 3.1% |
| % American Indian and Alaska Native-owned Firms, 2007 | 2.0% | 4.6% | | | | | 2.5% | *S* | *F* | 4.0% | 6.3% |
| % Asian-owned Firms, 2007 | 5.3% | *S* | | | | | 4.4% | *S* | *F* | *S* | 2.0% |
| % Native Hawaiian & Other Pacific Islander-owned Firms , 2007 | *F* | *F* | | | | | *F* | *S* | *F* | *F* | 0.0% |
| % Hispanic-owned Firms, 2007 | *S* | *S* | | | | | *S* | *S* | *S* | *S* | 2.3% |
| % Women-owned Firms, 2007 | 26.9% | 27.9% | | | | | 26.6% | *S* | *S* | 25.6% | 25.3% |
| % Residents living in Poverty, 2012 | 17.7% | 14.9% | 20.0% | 35.8% | 15.0% | 23.1% | | | | | 17.2% |
| Most Common Industries 2008-2012 (Total %) | 54.0% | 70.0% | 72.0% | 88.0% | 68.0% | 74.0% | | | | | 80.0% |
| Manufacturing | | 18.0% | 17.0% | | 10.0% | 13.0% | | | | | 14.0% |
| Construction | 11.0% | 11.0% | 14.0% | 22.0% | 14.0% | 13.0% | | | | | 13.0% |
| Public Administration | 11.0% | 5.0% | 11.0% | 15.0% | 11.0% | | | | | | 7.0% |
| Mining, Quarrying, and O&G Extraction | | 16.0% | 10.0% | 9.0% | 5.0% | 17.0% | | | | | 5.0% |
| Wholesale Trade | | 5.0% | 8.0% | 20.0% | | | | | | | 3.0% |
| Plastics & Rubber Products | 8.0% | | | | | | | | | | 1.5% |
| Administrative & Support & Waste Mgmt. Services | 4.0% | 4.0% | | | | | | | | | 3.0% |
| Other Services except Public Administration | 7.0% | | 6.0% | 9.0% | 9.0% | | | | | | 4.5% |
| Retail Trade | | 11.0% | 6.0% | | 14.0% | 10.0% | | | | | 11.0% |
| Arts, Entertainment & Recreation | | | | 9.0% | | | | | | | 2.0% |
| Health care & Social assistance | 6.0% | | | | | 6.0% | | | | | 4.5% |
| Educational Services | 7.0% | | | | | 7.0% | | | | | 5.5% |
| Transportation & Warehousing | | | | 4.0% | 5.0% | 8.0% | | | | | 6.0% |
| % Unemployed, Jun 2014 | 6.1% | 4.2% | 4.2% | 4.5% | 4.5% | 5.5% | | | | | 4.8% |

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.
Last Revised: Tuesday, 24-Mar-2015 08:54:25 EDT

Notes:
Includes data not distributed by County
*D: Suppressed to avoid disclosure of confidential information*
*F: Fewer than 25 firms*
*FN: Footnote on this item for this area in place of data*
*NA: Not available*
*S: Suppressed; does not meet publication standards*
*Oklahoma poverty rate for 2012:* http://okpolicy.org/wp-content/uploads/2013/10/Oklahoma-Poverty-Profile-2012.pdf

*City Web Sources:* http://www.city-data.com/city/Comanche-Oklahoma.html
http://www.city-data.com/city/Temple-Oklahoma.html
http://www.city-data.com/city/Walters-Oklahoma.html
http://www.city-data.com/city/Waurika-Oklahoma.html
http://www.city-data.com/city/Duncan-Oklahoma.html
http://www.city-data.com/city/Lawton-Oklahoma.html



### 4.3.4 Social Ecology

The WLMCD conveyance system serves a mix of industries through its member cities and spans two Oklahoma Department of Commerce's economic regions or ecosystems: the Southern Ecosystem (ODC, 2014a, 2nd quarter 2014 EMSI economic data) and Southwestern Ecosystem (ODC, 2014b, 3rd quarter 2014 EMSI economic data). Associated counties and top industries in each ecosystem along with associated wages compared to the average statewide Oklahoma average wage is shown in Table 4-6. This table shows the relative economic gap comparison between cities and across the two economic ecosystems. WLMCD serves the largest and smallest average wage counties (Stephens & Jefferson) in the ODC Southern economic ecosystem and the largest and mid-range average wage counties (Comanche and Cotton) in the

**Table 4-5**
**WLMCD Served Cities and Counties Income Data**

| Income Category | WLMCD Cities Served | | | | | | Counties Served by WLMCD | | | | State of |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lawton | Duncan | Comanche | Temple | Walters | Waurika | Comanche | Cotton | Jefferson | Stephens | Oklahoma |
| Housing Units, 2013 | 39,409 | 11,084 | 746 | 606 | 1,243 | 924 | 51,414 | 3,000 | 3,372 | 20,613 | 1,682,256 |
| % Homeownership rate, 2009-2013 | 49.5% | 64.6% | 60.2% | 61.7% | 60.2% | 56.7% | 56.6% | 74.4% | 75.2% | 70.8% | 67.1% |
| % Housing units in multi-unit structures, 2009-2013 | 25.4% | 10.1% | 24.3% | 20.3% | 26.1% | 24.1% | 20.5% | 3.2% | 6.9% | 7.6% | 15.2% |
| Median value of owner-occupied housing units, 2009-2013 | $103,600 | $98,700 | $52,095[2] | $43,843[2] | $75,925[2] | $58,904[2] | $111,700 | $74,600 | $59,500 | $89,300 | $112,800 |
| Households, 2009-2013 | 34,473 | 9,535 | 1,513 | 1,111 | 2,644 | 1,689 | 44,251 | 2,345 | 2,456 | 17,690 | 1,444,081 |
| Persons per household, 2009-2013 | 2.57 | 2.41 | 2.40 | 2.40 | 2.50 | 2.40 | 2.59 | 2.58 | 2.56 | 2.51 | 2.55 |
| Per capita money income in past 12-mos (2013 dollars), 2009-2013 | $21,146 | $22,230 | $17,408[2] | $16,985[2] | $18,828[2] | $18,497[2] | $22,363 | $21,452 | $19,042 | $23,038 | $24,208 |
| Median household income, 2009-2013 | $43,269 | $39,683 | $37,795[2] | $32,610[2] | $49,483[2] | $31,482[2] | $46,036 | $46,317 | $34,701 | $43,885 | $45,339 |
| % Person below poverty level, 2009-2013 | 18.6% | 16.0% | 20.0% | 35.8% | 15.0% | 23.1% | 17.3% | 14.7% | 20.7% | 14.6% | 16.9% |
| Manufacturing shipments, 2007 ($1,000) | *D* | *D* | *NA* | *NA* | *NA* | *NA* | 1,232,438 | 0[1] | 0[1] | 1,084,940 | 60,681,358 |
| Merchant wholesalers sales, 2007 ($1,000) | 117,151 | 81,806 | *NA* | *NA* | *NA* | *NA* | *D* | *D* | *D* | *D* | 48,074,682 |
| Retail sales, 2007 ($1,000) | 1,152,176 | 402,978 | *NA* | *NA* | *NA* | *NA* | 1,206,757 | 33,465 | 34,815 | 495,092 | 43,095,353 |
| Retail sales per capita, 2007 | $12,500 | $17,992 | *NA* | *NA* | *NA* | *NA* | $10,539 | $5,256 | $5,590 | $11,474 | $11,931 |
| Accommodation & food service sales, 2007 ($1,000) | 131,413 | 32,739 | *NA* | *NA* | *NA* | *NA* | 154,462 | *D* | *D* | 38,788 | 5,106,585 |
| Building permits, 2013[2] | 139 | 27 | 3 | *NA* | 2 | *NA* | 169 | 2 | 9 | 34 | 13,583 |

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

Last Revised: Tuesday, 24-Mar-2015 08:54:25 EDT

Notes:

Includes data not distributed by County

[1] Counties with 500 employees or less are excluded

[2] Cities building permits for 2011 (red) or 2012, per capita, values and income in 2012 dollars

*D: Suppressed to avoid disclosure of confidential information*

*F: Fewer than 25 firms*

*FN: Footnote on this item for this area in place of data*

*NA: Not available*

*S: Suppressed; does not meet publication standards*

*Oklahoma poverty rate for 2012:* http://okpolicy.org/wp-content/uploads/2013/10/Oklahoma-Poverty-Profile-2012.pdf

*City Web Sources:*
http://www.city-data.com/city/Comanche-Oklahoma.html
http://www.city-data.com/city/Temple-Oklahoma.html
http://www.city-data.com/city/Walters-Oklahoma.html
http://www.city-data.com/city/Waurika-Oklahoma.html
http://www.city-data.com/city/Duncan-Oklahoma.html
http://www.city-data.com/city/Lawton-Oklahoma.html

Southwestern economic ecosystem. However, in either case, wages are below the state average indicating the need for environmental justice. Tables 4-4 and 4-5 provide additional insight to the city and county differences across the regions. Lawton by far is the largest city in the region and hosts the oldest military installation in Oklahoma, Ft Sill Military Reservation. Duncan hosts one of the world's largest oil field services companies, Halliburton. At the other extreme, Jefferson County is the least densely populated County in the region. The WLMCD conveyance system services this wide range of economic and sized city-service base.

**Table 4-6**
**Top Industries in Southern and Southwestern Oklahoma Ecosystems**
**Oklahoma Department of Commerce, October 2014**

| Top Industries in Southwestern Oklahoma | Wage[1] Rank of Counties in Southwestern Region (ODC) | Annual Wage ($) | Top Industries in Southern Oklahoma | Wage[2] Rank of Counties in Southern Region (ODC) | Annual Wage ($) |
|---|---|---|---|---|---|
| Government (Military) | State Average | $49,300 | Health Care and Social Assistance | State Average | $49,550 |
| Accommodation and Food Services | Comanche | $46,400 | Manufacturing | Stephens | $47,000 |
| Health Care and Social Assistance | SW Oklahoma Average | $44,500 | Accommodation and Food Services | Carter | |
| Manufacturing | Jackson | | Mining, Quarrying, and Oil and Gas Extraction | Garvin | |
| Construction | Caddo | | Construction | Pontonoc | |
| Admin & Support and Waste Mgmt & Remediation Svcs | Harmon | | Transportation and Warehousing | Southern OK Average | $41,280 |
| Finance and Insurance | Cotton | $39,000 | Professional, Scientific, and Technical Services | Murray | |
| Professional, Scientific, and Technical Services | Kiowa | | Wholesale Trade | Marshall | |
| Transportation and Warehousing | Greer | | Finance and Insurance | Love | |
| Crop and Animal Production | Tillman | $36,400 | Real Estate and Rental and Leasing | Johnston | |
| | | | | Jefferson | $34,100 |

| Southwestern OK Wages by Industry Summary | Southern OK Wages by Industry Summary |
|---|---|
| • The Southwestern Oklahoma average wage is $44,500; this is less than the state average of $49,300 by $4,800. The gap between the Southwestern Oklahoma counties and the state average ranges from $2,900 less in Comanche County to $12,900 less in Tillman County. | • The Southern Oklahoma average wage is $41,280; this is less than the state average of $49,550 by $8,270. The gap between the Southern Oklahoma counties and the state average ranges from $2,550 less in Stephens County to $15,450 less in Jefferson County. |
| • As a region, the average wages are below the state average. | • As a region, the average wages are below the state average. |
| • Comanche County is the most populous counties in the region, and has average wages higher than the regional average, but below the state average. | • Stephens and Carter counties are the most populous counties in the region, and have the highest average wage. |
| • Comanche County has the largest workforce in the region, and the highest average wage. | • Jefferson County is the least populous county in the region, and has the lowest average |

*Sources: ODC, Oct 2014a & 2014b.*
[1] *3rd Qtr 2014 Data*
[2] *2nd Qtr 2014 Data*

### 4.3.5 Executive Order 12898, Environmental Justice

Executive Order 12989 requires each Federal agency to make environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

Under NEPA, the identification of a disproportionately high and adverse human health or environmental effect on a low-income population, minority population, or Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect serves to heighten agency attention to alternatives (including alternative sites), mitigation strategies, monitoring needs, and preferences expressed by the affected community or population.

Low-income populations in an affected area are identified with the annual statistical poverty thresholds from the Bureau of the Census Reports on Income and Poverty. In identifying low income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.

Minorities are comprised of individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Minority populations are identified where either: (a) the minority populations of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In identifying minority communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically

dispersed/transient set of individuals (such as migrant workers or Native American), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as to not artificially dilute or inflate the affected minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds. Population & race, education and employment, and income statistics are presented in Table 4-3, Table 4-4, and Table 4-5, respectively.

Disproportionately high and adverse human health effects: When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable: (a) Whether the health effects, which may be measured in risks and rates, are significant or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death; and (b) whether the risk or rate of hazard exposure by a minority population, low-income population, or Indian tribe to an environmental hazard is significant and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and (c) Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

Disproportionately high and adverse environmental effects: When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable: (a) whether there is or will be an impact on the natural or physical environment that significantly and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelate to impacts on the natural or physical environment; and (b) Whether environmental effects are significant and are or may be having an adverse impact on minority populations, low-income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and (c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposure from environmental hazards.

### 4.3.6 Executive Order 13045, Protection of Children from Environmental Health and Safety Risks

On 21 April 1997, President Clinton issued Executive Order 13045 (EO 13045), Protection of Children From Environmental Health Risks and Safety Risks, which notes that children often suffer disproportionately from environmental health and safety risks, due in part to a child's size and maturing bodily systems. The executive order defines environmental health and safety risks as risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreations, the soil we live on, and the products we use or are exposed to). Executive Order 13045 requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that may affect children disproportionately. The Order further requires Federal agencies to ensure that its policies, programs, activities, and standards address these disproportionate risks. Executive Order 13045 is addressed in this EA document to examine the effects this action will have on children.

## 4.4 Natural Resources

### 4.4.1 Topography and Drainage

The proposed project on the east shoreline of Waurika Lake, Jefferson County is located in south-central Oklahoma. Jefferson County is bounded on the south and southwest by Red River which forms the OK-TX state boundary between this county and Clay and Montague counties, Texas. It is adjoined by Love and Carter counties, Oklahoma on the east, by Stephens County on the north and by Cotton County on the west.

The project lies in the Central Redbed Plains Physiographic Province (*Hart, 1974*). Jefferson County is typical of the red beds plains region of Oklahoma, with a gentle rolling topography. The relief between stream valleys and divides is seldom in excess of 200 feet. Most of the county consists of rolling prairie land ideal for grazing purposes. The timbered areas are confined entirely to the stream valleys and certain sandstone outcrops (*Bunn, 1930*).

The drainage of the entire area is south or southeast into Red River which is the master stream of the area. The minor streams are East, West, and North Mud Creeks, Red Creek and Beaver Creek with its lesser tributaries. Waurika Lake submerges the lower portions of these creeks. The surface elevation of the county ranges from 1,100 to 750 feet-NGVD. The highest elevation is a point on Monument Hill, a few miles east of Addington, approximately 1, 110 feet. The lowest point is in the extreme southeast corner of the county along Red River, with an elevation of approximately 720 feet.

The project site topography (see Appendix A – Sheet-2) various from a low (at declining lake level on the south and west shoreline) of 933.33 ft-NGVD to the high of 984 ft-NGVD along the eastern ridge forming the CDMSA area on WLMCD property to the east and northeast of the Intake Structure. Drainage at the project site is south and east for those portions being used for the project. The western portion of the site (west of the main WLMCD office building) drains southwest and west.

### 4.4.2 Hydrology

Waurika Lake is located in the Upper Red River subbasin (hydrologic Unit code (HUC) 1113]. It is designated Oklahoma Waterbody ID (OK WBID) number OK311210000020_00. It is a 10,100-acre lake with conservation pool storage of 203,100 acre-feet. Beaver Creek (46.9 miles long) and Little Beaver Creek (39.5 miles long) are the primary tributaries flowing into Waurika Lake.

Waurika Lake pool characteristics are provided in Table 4-7. Current conditions of the lake as of April 3, 2015 are:

- Pool elevation is 932.28 feet on Friday 03 Apr15 Time: 1100 hours.
- At this elevation the total amount of water stored in Waurika Lake is 55,142 acre-feet.
- Reservoir release is 0 cubic feet per second on Friday 03 Apr 15 Time: 1100 hours.
- Conservation pool is 28.19% full.
- Conservation storage filled is 52,466 acre-feet which is equivalent to 1.75 inches of runoff over the entire drainage basin.
- Conservation storage empty is 133,618 acre-feet which is equivalent to 4.46 inches of runoff over the entire drainage basin.

**Table 4-7**
**Waurika Lake Pool Characteristics**

| Lake (Reservoir) Feature | Elevation | Incremental Storage | | Cumulative Storage | |
|---|---|---|---|---|---|
| | (feet) | (inches) | (acre-feet) | (inches) | (acre-feet) |
| Surcharge Pool: | ---- | ---- | ---- | ---- | ---- |
| Flood Control Pool: | 962.50 | 4.54 | 136,041 | 10.84 | 324,802 |
| Conservation Pool: | 951.40 | 6.21 | 186,085 | 6.30 | 188,761 |
| Inactive Pool: | 910.00 | 0.09 | 2,676 | 0.09 | 2,676 |

Streambed Elevation: 889.00 feet. Top of Dam Elevation: 995.00 feet.
All storages based on a contributing drainage area of 562 square miles.
Total drainage area for the lake is 562 square miles (including upstream projects).
Longitude: 98° 2' 51" Latitude: 34° 13' 57"

***Source: USACE-SWT Water Control Data System***

### 4.4.2 Geology and Soils (Terrestrial Resources)

The geology (in descending order) underlying and forming the hills, shorelines and supporting the lake proper within the project vicinity consists of the Quaternary alluvial and terrace deposits in drainages adjacent to higher relief terrain composed of Lower Permian Post Oak Conglomerate (mainly to the northwest in Comanche County), Hennessey Group (just east of the Post Oak unit also to the northwest, north of Walters, OK) and Garber Sandstone which is underlain by the Wellington Formation (within the lake area proper) and older Oscar Group mainly to the south and west of the project site (*Hart, 1974; Havens, 1977*). Ongoing and past physical and chemical weathering of these generally Permian aged sediments contributes much of the sediment found accumulated in the lake. Soil erosion also contributes to the accumulating detritus in the lake and is discussed below.

Table 4-8 provides descriptive geology for these units arranged in descending order (surface to depth). The Garber Sandstone and Wellington Formation were the primary geologic units encountered at the project site (CDMSA geotech) and Phase 2 drilling into the lake bottom sediments below the sediment and organic detritus accumulation zone at the lake floor. Aeolian and riverine geomorphic deposits of gravels, sand, silts and clays are found in lower lying areas as well as are found along the now submerged Beaver Creek thalweg to which the lowest gates of the intake structure will be extended to. Uncertainty and concern for Wellington Formation stability, continuity and structural integrity, circumference strength, and roof-supporting ability when horizontally drilling for sub-lake-floor pipeline-intake placement were all concerns when evaluating project Alternatives 3 and 4. The drought conditions at the lake exposed mainly fine-grained sands, silts and clays along shoreline and near shore areas of newly exposed portions of the lake to the north and west of the project site as well as rendered more shallow waters adjacent to the intake and island areas outward from the intake channel. Facies changes in redeposited materials makes shallow horizontal drilling problematic for the investment expense.

Geology and soil conditions within the CDMSA site were verified through additional geotechnical drilling. Results are found in Appendix H.

**Table 4-8**
**Waurika Lake Area Project Geology**

| Symbol | Geologic Description | Age |
|---|---|---|
| Qal | **Alluvium (Qal):** To west, sand, clay and gravel, as much as 50 feet (15 m) thick; shown only along major streams and tributaries. To east, gravel, sand, silt, and clay, including low terraces; thickness, 25 to 100 feet (8 to 33 meters). Yield moderate to large amounts of water of poor to good quality along major rivers. | QUATERNARY |
| ……<br>…Qds…<br>…… | **Dune Sands (Qds):** Wind-laid or aeolian sand; maximum thickness about 50 feet (15 m). Occurs mainly to south and west of Waurika Lake. Derived from the fine-grained nature of surface soils. | |
| Qt | **Terrace Deposits (Qt)**: To west, sand, clay, and gravel; thickness as much as 75 feet (23 m) in Tillman County (west of Waurika), ranging from 5 to 50 feet (2 to 15 m) elsewhere. To east, gravel, sand, silt, clay and volcanic ash; thickness about 5 to 50 feet (2 to 15 m); at various levels, as high as 160 feet (49 m) above present floodplains. Yields moderate to large amounts of water of poor quality. These deposits lie uncomfortably onto older Permian formations or units. | |
| Ppo | **Post Oak Conglomerate (Ppo)**: Limestone conglomerate near limestone outcrops; contains zeolite-opal (*Tepee Creek Formation*) locally, near gabbro and anorthosite outcrops; arkosic gravel and cobbles near igneous outcrops. These rock types are interbedded with sand, silt, clay, and shale, as much as 500 ft (150 m) thick at surface but several thousand feet thick in subsurface, extending down section into Pennsylvanian rocks to west. Not found to east. | PERMIAN |
| Phy | **Hennessey Group (Phy)**: To west, reddish-brown to gray shale with some tan sandstone, 130 to 200 feet (40 to 60 m) thick (locally unconformable on Cambrian igneous rocks). To east, composed of *Bison Shale* (top) underlain by *Purcell Sandstone* which in turn is underlain by *Fairmont Shale*.<br>• **Bison Shale (Pbi):** Shale, gray to red-brown, calcareous, blocky; thickness 50 to 90 feet, decreasing southward. Yields only small amounts of water of poor quality.<br>• **Purcell Sandstone (Pp)**: Sandstone, red-brown to maroon and greenish-gray, fine-to-coarse- grained, with some shale and mudstone conglomerate; thickness, 90 to 150 feet, decreasing southward. Yields small to moderate amounts of water of fair quality.<br>• **Fairmont Shale (Pfa):** Shale, red-brown, blocky; thickness 40 to 80 feet, decreasing southward. Yields only limited amounts of water of poor quality.<br>***Hennessey Group*** is Lower Permian but younger than (overlaying) *Garber Sandstone*. Merges with *Garber Sandstone* to NE and east of Waurika Lake. | |
| Pg | **Garber Sandstone (Pg):** Reddish-brown, fine-grained sandstone and mudstone conglomerate, in west: 160 to 210 feet (49 to 64 meters) thick, containing basal sandstone, the *Asphaltum Sandstone Bed*, about 10 to 60 feet (3 to 18 m) thick in east. To west, reddish-brown sandstone, fine-to-coarse grained sandstone, about 110 to 150 feet (33 to 46 m) thick, including Fairmont Shale west of Elmore City, Garvin County (NE of Waurika Lake). Yields small to moderate amounts of water of fair quality. Lower Permian age. | |
| Pw | **Wellington Formation (Pw):** In west, maroon shale, about 130 ft (40 m) thick, with greenish-gray and black sandstone of the *Ryan Sandstone Bed* at base. To east, red-brown shale with several 20-to 30-foot bituminous sandstones at base (Ryan); thickness, about 100 to 200 feet decreasing southeastward. Yields small to moderate amounts of water of fair quality. Upper Pennsylvania age. **Garber Sandstone – Wellington Fm** is part of Sumner Group to west. | |
| IPo | **Oscar Group (IPo):** In west, shale, sandstone, and arkose, 300 to 500 feet (90 to 150 m) thick, base covered. To east, Shale, red-brown to gray, with arkosic sandstone and limestone conglomerates near Arbuckle Mountains. *Hart Limestone* at base; thickness, 300 to 500 feet, decreasing southeastward. Yields small to moderate amounts of water of fair to poor quality. | PENNSYL-VANIAN |

**Compiled from *Hart Jr., 1974, Sheet 1 – Geology* and *Havens, 1977, Sheet 1 – Geology...***

Soils were determined by utilizing the USDA-NRCS web soil survey found online (USDA-NRCS, *Sep 2014*). Appendix H, item H.1 provides the project soils report which details soil descriptions, distribution, ecological site assessment, and special soil reports on the following: 1) soils use for construction materials, soils use for sanitary facilities, soil chemical properties, soil erosion characteristics, soil physical properties, soil qualities, engineering properties and features, and suitability for ponds and embankments.

## 4.5 Aquatic Resources

### 4.5.1 Limnology

As part of the Federal Clean Lakes Program, OWRB began conducting a lake sampling program during the summer months since 1990. This historical lake sampling program was funded through federal dollars with the express purpose of determining lake trophic status. The trophic status of a lake (reservoir) can range from oligotrophic (low biological productivity) to hyper-eutrophic (excessive biological productivity). In general, the more productive a lake (reservoir), the more water quality problems it is likely to experience. The OWRB subsequently initiated a quarterly lake sampling program in the spring of 1998 and was establish the lake sampling program into what is now called the Beneficial Use Monitoring Program (BUMP) conducted in Oklahoma. Trophic states are defined in Table 4-9.

**Table 4-9**
**OWRB Lake Trophic State Categories Used in Oklahoma**

| Carlson TSI No.* | Trophic State | Definition |
|---|---|---|
| ≤ 40 | Oligotrophic | Low primary productivity and/or low nutrient levels |
| 41 – 50 | Mesotrophic | Moderate primary productivity with moderate nutrient levels |
| 51 – 60 | Eutrophic | High primary productivity and nutrient rich |
| ≥ 61 | Hypereutrophic | Excessive primary productivity and excessive nutrients |

* Carlson, Robert E., 1977, *A Trophic State Index for Lakes*, Limnology and Oceanography, v. 22, no. 2, p. 361-369.

In order to maintain consistency throughout the state in lake sampling and reporting, the OWRB has developed the "Use Support Assessment Protocols", commonly referred to as USAP, for lakes and streams in Oklahoma. The USAP developed are essential if the state is to be consistent in identifying waters that are not meeting their assigned beneficial uses or are threatened. The Water Resources Board has incorporated the USAP into Oklahoma Administrative Code (OAC) as OAC 785:46 to ensure that consistent determinations for impairments are made by all of the monitoring agencies. For Waurika Lake, OWRB BUMP results started in 1999 (OWRB, 2001 BUMP Report). Since that time the OWRB has maintained sampling and reporting for Lake Waurika in 2002, 2003, 2004, 2006, 2007, 2008, and 2013.

Waurika Lake was last assessed by the Oklahoma Water Resources Board (OWRB) during Dec 2012 to Jul 2013 Beneficial Use Monitoring Program (BUMP) assessment which is shown in Figure I-3a. The 2007-08 assessment is shown in Figure I-3b. A comparison table of these two sampling periods is compiled in Table 4-10. Designated beneficial uses evaluated in these reports by OWRB include: fish and wildlife propagation, aesthetics, agriculture, primary body contact recreation, and public & private water supply.

## Figure I-3a. OWRB BUMP Assessment – Waurika Lake, Water Year 2013.

# Waurika

| Sample Period | Times Visited | Sampling Sites |
|---|---|---|
| December 2012 - July 2013 | 4 | 5 |


**General**

| | |
|---|---|
| Location | Jefferson County |
| Impoundment | 1977 |
| Area | 10,100 acres |
| Capacity | 203,100 acre feet |
| Purposes | Flood Control, Irrigation, Water Supply, Water Quality Control, Fish and Wildlife, and Recreation |

Click map for site data

**Parameters**

| | Parameter (Descriptions) | Result | Notes/Comments |
|---|---|---|---|
| In Situ | Average Turbidity | 57 NTU | 56% of values > 25 NTU |
| | Average Secchi Disk Depth | 31 cm | |
| | Water Clarity Rating | Fair | |
| | Chlorophyll-a | 22 mg/m3 | |
| | Trophic State Index | 61 | Previous value = 54 |
| | Trophic Class | Hypereutrophic | |
| Profile | Salinity | 0.30 – 0.35 ppt | |
| | Specific Conductivity | 621 – 722 µS/cm | |
| | pH | 8.10 – 8.63 pH units | |
| | Oxidation-Reduction Potential | 11 to 380 mV | |
| | Dissolved Oxygen | | All data for this sample year below the screening level of 2 mg/L |
| Nutrients | Surface Total Nitrogen | 0.90 mg/L to 1.89 mg/L | |
| | Surface Total Phosphorus | 0.028 mg/L to 0.281 mg/L | |
| | Nitrogen to Phosphorus Ratio | 13:1 | Phosphorus limited |

**Beneficial Uses**

| Click to learn more about Beneficial Uses | Turbidity | pH | Dissolved Oxygen | Metals | TSI | True Color | Sulfates | Chlorides | Total Dissolved Solids | Enterro. & E. coli | Chlor-a |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fish & Wildlife Propagation | NS | S | S | S | | | | | | | |
| Aesthetics | | | | | * | S | | | | | |
| Agriculture | | | | | | | S | S | S | | |
| Primary Body Contact Recreation | | | | | | | | | | S | |
| Public & Private Water Supply | | | | | | | | | | | NS |

*S = Fully Supporting*
*NS = Not Supporting*
*NEI = Not Enough Information*

Notes: *No longer collect for this parameter

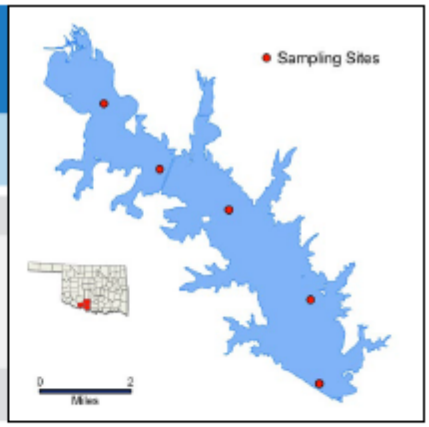
*NTU = nephelometric turbidity units*
*µS/cm = microsiemens per centimeter*
*E. coli = Escherichia coli*
*OWQS = Oklahoma Water Quality Standards*
*mV = millivolts*
*Chlor-a = Chlorophyll-a*
*mg/L = milligrams per liter*
*µS/cm = microsiemens/cm*
*ppt = parts per thousand*
*En = Enterococci*

Sampling and Assessment by the Oklahoma Water Resources Board – 3800 Classen Blvd, Oklahoma City, OK, 73118 – 405.530.8800 – http://www.owrb.ok.gov

## Figure I-3b. OWRB BUMP Assessment – Waurika Lake, Water Year 2008.

# Waurika

| Sample Period | Times Visited | Sampling Sites |
|---|---|---|
| October 2007 – July 2008 | 4 | 5 |




**Lake Data**

| | |
|---|---|
| Location | Jefferson County |
| Impoundment | 1977 |
| Area | 10,100 acres |
| Capacity | 203,100 acre feet |
| Purposes | Flood Control, Irrigation, Water Supply, Water Quality Control, Fish and Wildlife, and Recreation |

**Parameters**

| | Parameter | Result | Notes/Comments |
|---|---|---|---|
| | Average Turbidity | 34 NTU | 45% of values > 25 NTU |
| | Average True Color | 63 units | 10% of values > OWQS of 70 |
| | Average Secchi Disk Depth | 51 cm | |
| | Water Clarity Rating | average | |
| | Trophic State Index | 54 | Previous value = 60 |
| | Trophic Class | eutrophic | |
| Profile | Salinity | 0.19 – 0.35 ppt | |
| Profile | Specific Conductivity | 389.3 – 353 µS/cm | |
| Profile | pH | 7.57 – 8.59 pH units | Neutral to slightly alkaline |
| Profile | Oxidation-Reduction Potential | 228 to 507 mV | |
| Profile | Dissolved Oxygen | Up to 27% of water column , 2 mg/L in July | Occurred at site 1, the dam |
| Nutrients | Surface Total Nitrogen | 0.53 mg/L to 1.09 mg/L | |
| Nutrients | Surface Total Phosphorus | 0.063 mg/L to 0.154 mg/L | |
| Nutrients | Nitrogen to Phosphorus Ratio | 8:1 | Phosphorus limited |

**Beneficial Uses**

| | Turbidity | pH | Dissolved Oxygen | Metals | TSI | True Color | Sulfates, Chlorides & TDS | En.,ecal coli, & E. coli | Chlor-a |
|---|---|---|---|---|---|---|---|---|---|
| Fish & Wildlife Propagation | NS | S | S | S | | | | | |
| Aesthetics | | | | | S | NS | | | |
| Agriculture | | | | | | | S | | |
| Primary Body Contact Recreation | | | | | | | | S | |
| Public & Private Water Supply | | | | | | | | | |

*S = Fully Supporting*
*NS = Not Supporting*
*NEI = Not Enough Information*

**Notes**

*NTU = nephelometric turbidity units*
*µS/cm = microsiemens per centimeter*
*E. coli = Escherichia coli*
*OWQS = Oklahoma Water Quality Standards*
*mV = millivolts*
*Chlor-a = Chlorophyll-a*
*mg/L = milligrams per liter*
*µS/cm = microsiemens/cm*
*ppt = parts per thousand*
*En = Enterococci*

# Table 4-10

## OWRB BUMP Assessment & Beneficial Use Trends 2001 to 2013 for Waurika Lake

### A. OWRB BUMP Assessment Results for Waurika Lake, 2001 to 2013

| Year Sampled | OWRB Rpt Year | Insitu | | | | | | Profile | | | | | Nutrients | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TSI Carlson | Trophic Class OWRB | Ave Turbidity (NTU) | Ave Sechi Disk Depth (cm) | Water Clarity Rating | Chlorophyll-a ($mg/m^3$) | Salinity (ppt) | Spec Cond. (µS/cm) | pH (pH units) | ORP (mV) | Dissolved Oxygen (mg/L) | Surface Total N /Bot (mg/L) | Surface Total P /Bot (mg/L) | Nitrogen to Phosphorous Ratio ** (N:P) |
| 1999-2000 | 2001 | 59 | Eutrophic | | | | | | | | | | | | |
| 2000 | 2002 | 61* | | | | | | | | | | | | | |
| 2002-03 | 2003 | 56 | Eutrophic | 30 NS | 48 | Average | | 0.26 - 0.34 | 518.7-596.2 | 7.14 - 8.47 | 214 - 664 | <2.0 - 6.9 PS | 0.75/ 0.87 | 0.072 / 0.135 | 10 to 1 |
| 2002-03 | 2004 | | | | | | | | | | | | | | |
| 2004-05 | 2005 | 60 | Eutrophic | PS | Hyper Eutorphic (67) | | Eutrophic (60) | | | | | | | Hyper Eutorphic (68) | |
| 2004-05 | 2006 | | | 22 | 59 | Average | | 0.22 - 0.35 | 443.3 - 684.9 | 7.24 - 8.75 | 86 -451 | 7.0 - 9.0 | 0.78 | 0.085 | 9 to 1 |
| 2004-05 | 2007 | 60 | Eutrophic | 22 | 59 | | | | | | | | | | |
| 2007-08 | 2008 | 54 | Eutrophic | 34 | 51 | Average | | 0.19 - 0.35 | 353 - 389.3 | 7.57 - 8.59 | 228 - 507 | ~ 2 | 0.53 - 1.09 | 0.063 - 1.154 | 8 to 1 |
| 2012-13 | 2013 | 61 | Hypereutrophic | 57 | 31 | Fair | 22 | 0.30 - 0.35 | 621 - 722 | 8.10 - 8.63 | 11 - 380 | All data < 2 | 0.90 - 1.89 | 0.028 - 0.281 | 13 to 1 |

NOTES:

Threats or Impairments Color code

NLW - Nutrient Limited Water

PS - Partially Supporting

PL - Provisionally Listed

NS - Not Supporting

D.O. - Dissolve Oxygen

* Value calculated for growing season only rather than year around.

** Nitrogen to Phosphorous Ratio

> 7 to1,Phosphorous limited

< 7 to 1, Nitrogen limited

### B. Comparison of Waurika Lake's 2008 and 2013 OWRB BUMP Assessment Reports

| Beneficial Uses | Turbidity | pH | D.O. | Metals | TSI | True Color | Sulfates, Chlorides & TDS | E-Coli & En, ecalcoli | Chlor-a |
|---|---|---|---|---|---|---|---|---|---|
| Fish & Wildlife Propagation | NS / NS | S /S | S /S | S /S | | | | | |
| Aesthetics | | | | | S / * | NS / S | | | |
| Agriculture | | | | | | | S /S | | |
| Primary Body Contact Recreation | | | | | | | | S /S | |
| Public & Private Water Supply | | | | | | | | | ** / NS |

Notes

S - Supporting

NS - Not Supporting

NEI - Not Enough Information

2008 / 2013 Listing

* No longer collect for this parameter

** Not sampled for in 2008

ODEQ (*2013*) recent report concerning TMDL determination for chlorophyll-*a* focuses on Lake Waurika that ODEQ placed in Category 5 of the *Water Quality in Oklahoma 2010 Integrated Report* (*ODEQ, 2010*) for nonsupport of the Public Private Water Supply use. Elevated levels of chlorophyll-*a* in lakes reflect excessive algae growth, which can have deleterious effects on the quality and treatment costs of drinking water. Excessive algae growth can also negatively affect the aquatic biological communities of lakes. Elevated chlorophyll-*a* levels typically indicate excessive loading of the primary growth-limiting algal nutrients such as nitrogen and phosphorus to the waterbody, a process known as eutrophication.

Two water quality parameters were determined to be the cause of impairment to Lake Waurika: (1) impairment by chlorophyll-*a* to not support the designated use for public and private water supplies, and (2) impairment by turbidity to not support the designated use for a warm water aquatic community (*ODEQ, 2013*).

Sensitive Public and Private Water Supply (SWS) lakes are defined in the Oklahoma Water Quality Standards - Oklahoma Administrative Code (OAC) Title 785, Chapter 45:785:45-5-25(c)(4)(A). In Appendix A.3 of the WQS, Waurika Lake is listed as a SWS lake.

> The numeric criterion set for chlorophyll-*a* for SWS lakes is also found in the WQS [785:45-5-10(7)] which states, "*The long-term average concentration of chlorophyll-a at a depth of 0.5 meters below the surface shall not exceed 0.010 milligrams per liter in Wister Lake, Tenkiller Ferry Reservoir, nor any waterbody designated SWS in Appendix A of this Chapter. Wherever such criterion is exceeded, numerical phosphorus or nitrogen criteria or both may be promulgated.*

Surface level sampling data, collected from the lakes' Water Quality Monitoring (WQM) stations, was used to support the decision to place Waurika Lake's watershed on the DEQ 2010 §303(d) list for non-support of the Public and Private Water Supply Use in an SWS lake:

- Between 2002 and 2008, Waurika Lake chlorophyll-*a* samples averaged 13.4 µg/L (TSI = 56).

Between 1998 and 2011, total nitrogen levels (TN) and total phosphorus (TP) levels were as follows for the Waurika Lake. In addition, thermal stratification was not observed during the 2005-2006 assessment period, likely due to the shallow nature of the lake (*OWRB, 2010*). Thus, nutrient fluxes from sediments were available year-round in the photic zone where light permits algal photosynthesis.

- Waurika Lake TN levels averaged approximately 0.81 mg/L, and TP levels averaged 0.09 mg/L

The Code of Federal Regulations [40 CFR §130.7(c)(1)] states that "TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical water quality standards." The water quality target established for Waurika Lake must demonstrate compliance with the numeric criterion prescribed for SWS lakes in the Oklahoma WQS (*OWRB, 2013*). Therefore, the water quality target established for Waurika Lake is to achieve a long-term average in-lake concentration of 10 µg/L for chlorophyll-*a*.

Waurika Lake is also included in the 303(d) list for turbidity. No TMDL has yet been set for turbidity.

### 4.5.2 Fisheries

Waurika Lake offers a variety of fishing opportunities for hybrid striped bass, black bass, saugeye (walleye-sauger hybrid), crappie (also spelled croppie or crappé), and catfish species. The Oklahoma Department of Wildlife Conservation (ODWC) has a fish stocking program for Waurika with reported size and numbers of fish species stocked since 2006. Table 4-11 summarizes the ODWC fish stocking program for Waurika Lake. There is not an ODWC Lake Management Plan for Waurika Lake.

**Table 4-11**
**ODWC Fisheries Division Public Stocking Report**
**Statistics for Waurika Lake, Jefferson County, 2006-2013**

| Year | Fish Species | Number | Size (inches) | OK Total for Rpt Yr | Waurika % OK Total |
|---|---|---|---|---|---|
| 2006 | Hybrid Stripped Bass | 67,850 | 2.00 | $Q_R$ | $Q_R$ |
| 2007 | Hybrid Stripped Bass | 107,864 | 2.00 | $Q_R$ | $Q_R$ |
| 2008 | Hybrid Stripped Bass | 107,352 | 1.00 | $Q_R$ | $Q_R$ |
| 2009 | Hybrid Stripped Bass | 110,690 | 2.00 | $Q_R$ | $Q_R$ |
| 2010 | Hybrid Stripped Bass | 100,284 | 2.00 | $Q_R$ | $Q_R$ |
| | Saugeye | 101,032 | 2.00 | $Q_R$ | $Q_R$ |
| 2011 | Hybrid Stripped Bass | 101,119 | 1.70 | 671,909 | 15.0% |
| 2012 | Hybrid Stripped Bass | 106,024 | 1.50 | 515,938 | 20.5% |
| 2013 | Hybrid Stripped Bass | 105,930 | 1.50 | 615,625 | 17.2% |
| | Saugeye | 121,258 | 1.25 | 722,636 | 16.8% |
| 8-yr Total | Hybrid Stripped Bass | 807,113 | 3-yr Total | 1,803,472 | |
| 2-yr Total | Saugeye | 222,290 | | | |

**Notes:** **$Q_R$ - Quantities compiled by ODWC Regions-only for year shown.**

***Source: Oklahma Department of Wildlife Conservation, Fisheries Division, Public Stocking Reports, 2006 to 2013***

Falling lake levels have made fishing more difficult especially in the riverine (northern) portion of Waurika Lake where water depths increasingly recede forcing smaller areas for fish to migrate. Example report is as follows:

> *Waurika Fish Report for March 29, 2015.* Elevation below normal, water 53˚F. Blue catfish fair on cut bait and stink bait along shorelines and the main lake. Striped bass hybrids slow on crawfish along shorelines. Report submitted by Chris Stover, game warden stationed in Stephens County (http://www.wildlifedepartment.com/fishing/fishsw.htm#Waurika:)

Dredging activities should be planned to minimize shoreline area impacts through prudent operations in the shortest possible time and confined to the intake-channel's original design dimensions as much as possible. Any water craft, dredging equipment most also be utilized, pre-cleaned so as not to introduce aquatic nuisance species as defined by the Oklahoma Department of Wildlife Conservation (ODWC).

#### 4.5.2.1 ODWC Aquatic Nuisance Species (ANS) Program (Aquatic lifeforms)

The Aquatic Nuisance Species (ANS) Program was developed by the ODWC in 2008 with the creation of the ANS Management Plan. This ODWC document is the reference guide for the program and also

enables ODWC to seek federal funding for projects related to aquatic nuisance species. The program is geared toward outreach and education but also focuses on early detection and rapid response of aquatic invasions.

***Definition of Aquatic Nuisance Species:*** ANS are nonindigenous aquatic species that pose significant ecological and economic threats to aquatic ecosystems. This can include fish, aquatic plants, algae, invertebrates, mussels, viruses, and other aquatic pathogens.

ODWC's guidance to help prevent the spread of aquatic nuisance species includes:

- When leaving a body of water, be sure to remove any visible plants or mud from your boat and gear, drain all water including bilges, bait buckets, and live wells, and clean anything that came in contact with the water.
- Also never release any plants or animals into a body of water unless they originated there.
- Please contact the wildlife department if you think you have discovered any invasive species.

Aquatic Nuisance Species in Oklahoma

- Asian Carp
- Didymo
- Golden Alga
- Harris Mud Crab
- White Perch
- Zebra Mussels
- List of Noxious Aquatic Plants (discussed below)

The following is discussion and citation of the ODWC noxious aquatic plant administrative rulemaking.

ODWC's "noxious aquatic plants" rule will establish a list of declared noxious aquatic plants and a list of plant species classified as "species to watch" which will not be declared noxious at this time. By law, the ODWC is given the authority (29 6-601) to designate and declare any aquatic plants as "noxious", if they "may cause injury to the environment of the state". This proposal would reduce the risk and prevent the spread of noxious aquatic plants which are being sold and distributed through the backyard water gardening trade. Some of these plants could have a detrimental impact if accidentally or intentionally released into Oklahoma's aquatic environment.

**OAC 800:20-3 Department of Wildlife Conservation**

**SUBCHAPTER 3. NOXIOUS AQUATIC PLANTS**
**Section**
**800:20-3-1. Purpose**
**800:20-3-2. List of restricted noxious aquatic plant species**
**800:20-3-3. Penalties**
[Authority: 29 O.S., Sections 3-103, 6-601]
[Source: Codified 3-5-91]

**800:20-3-1. Purpose**
The purpose of this chapter is to describe rules pertaining to noxious aquatic plants and/or their seeds, stems or parts in Oklahoma pursuant to 29 O.S., Section 6-601.

**800:20-3-2. List of declared noxious aquatic plant species**

(a) Pursuant to 29 O.S. Section 6-601, the following plants, seeds or plant parts are hereby declared to be noxious:

| Name | Common Name |
|---|---|
| *Azolla pinnata* | Mosquito Fern (Water Velvet, Water Fern) |
| *Caulerpa taxifolia* | Caulerpa (Mediterranean Clone of Caulerpa) |
| *Eichhornia azure* | Anchored Water Hyacinth (Rooted Water Hyacinth, Blue Water Hyacinth, Saw-petal Water Hyacinth) |
| *Hydrilla verticillata* | Hydrilla (Florida Elodea, Star Vine, Oxygen Plant, Oxygen Weed) |
| *Hygrophila polysperma* | Hygro (Miramar Weed, Green Hygro, Oriental Ludwigia, East India Hygrophila) |
| *Ipomoea aquatica* | Water Spinach (Swamp Morning Glory, Chinese Water Spinach, Water Bindweed, Aquatic Morning Glory) |
| *Lagarosiphon major* | African Elodea (Oxygen Weed) |
| *Limnophila spp.* | Ambulila (Asian Marshweed, Limno, Red Ambulia, Indian Ambulia) |
| *Lythrum salicaria* | Purple Loosestrife (Loosestrife) |
| *Marsilea quadrifolia* | Marsilea (European Waterclover, Four-Leaf Clover Fern, Water Fern, Water Clover, Hairy Pepperwort) |
| *Marsilea mutica* | Australian Waterclover (Varigated Water-Clover, Nardoo) |
| *Marsilea minuta* | Waterclover |
| *Melaleuca quinquenervia* | Paperbark Tree (Melaleuca, Cajeput, Punk) |
| *Monochoria hastata* | Cat's Claw (Monochoria) |
| *Ottellia alismoides* | Duck Lettuce |
| *Sagittaria sagittifolia* | Japanese Arrowhead (Hawaiian Arrowhead, Common Arrowhead, Chinese Arrowhead) |
| *Salvinia spp.* | All giant and common Salvinia species (Salvinia, Butterfly Fern, Water Fern, Water Moss, Water Velvet, Karibaweed, Water Spangles, Floating Fern, Koi Kandy and South American Pond Fern) |
| *Solanum tampicense* | Wetland Nightshade |
| *Sparganium erectum* | Exotic Bur-reed |
| *Glossostigma diandrum* | Mud Mat |
| *Alternanthera spp.* | Alligatorweed and congeneric species (Alligator-Weed, Chaff Flower, Lilacina |

(b) The following species are classified as "Species to Watch" and are not currently listed as noxious aquatic plants. However, they are aquatic plants whose impact on the Oklahoma environment is presently unknown, and therefore, may be considered for inclusion on the noxious aquatic plant list (above) as additional information becomes available to, and as deemed necessary by, the Department of Wildlife Conservation:

| Scientific Name | Common Name |
|---|---|
| *Colocasia esculenta* | Wild Taro (Green Taro, Elephant Ear, Taro, Dasheen) |
| *Egeria densa* | Brazillian Waterweed (Common Water Weed, Brazillian Elodea, Anacharis, Oxygen Weed, Elodea) |
| *Eichhornia crassipes* | Floating Water Hyacinth (Water-hyacinth) |
| *Hydrocleys nymphoides* | Water-poppy (Hydrocleys, Hydrocleis) |
| *Iris pseudacorus* | Yellow Iris (Yellow Flag, Yellow Flag Iris) |
| *Ludwigia hexapetala* | Uruguay Seedbox (Water Primrose) |
| *Myriophyllum spicatum* | Eurasian Watermilfoil (European Watermilfoil, Watermilfoil, Fox Tail) |
| *Myriophyllum aquaticum* | Parrotfeather (Parrot's Feather, Watermilfoil, Golden Myriophyllum |
| *Najas minor* | Brittle Naiad (Slender Naiad, Spiny Leaf Naiad) |
| *Nymphoides peltata* | Yellow Floating Heart (Floating Heart) |
| *Panicum repens* | Torpedo Grass (Torpedograss) |
| *Pistia stratiotes* | Water Lettuce |
| *Spirodela punctata* | Dotted Duckweed, Spotted Duckweed, Giant Duckweed) |
| *Trapa natans* | Water Chestnut (European Water Chestnut) |

[Source: Added at 18 Ok Reg 2918, eff 7-1-01; Amended at 19 Ok Reg 1525, eff 7-1-02; Amended at 23 Ok Reg 1582, eff 7-1-06]

**800:20-3-3. Penalties**
Any person violating these Chapter provisions shall be subject to the penalties provided in 29 O.S., Section 6-601.
[Source: Added at 18 Ok Regulation 2919, effective 7-1-01]

ODWC brochure on invasive species prevention found at
http://www.wildlifedepartment.com/fishing/ans/HACCPbrochure.pdf

### 4.5.3 Wetlands

No wetlands are found within the area of potential effect (APE) according to USF&WS Wetlands Inventory (Figure I-4). Main feature type was identified was freshwater ponds and Waurika Lake. No wetlands impacts are expected for the proposed project. However, ephemeral pond and drainage integrity for site drainage will be maintained and re-established once maintenance project activities are concluded.

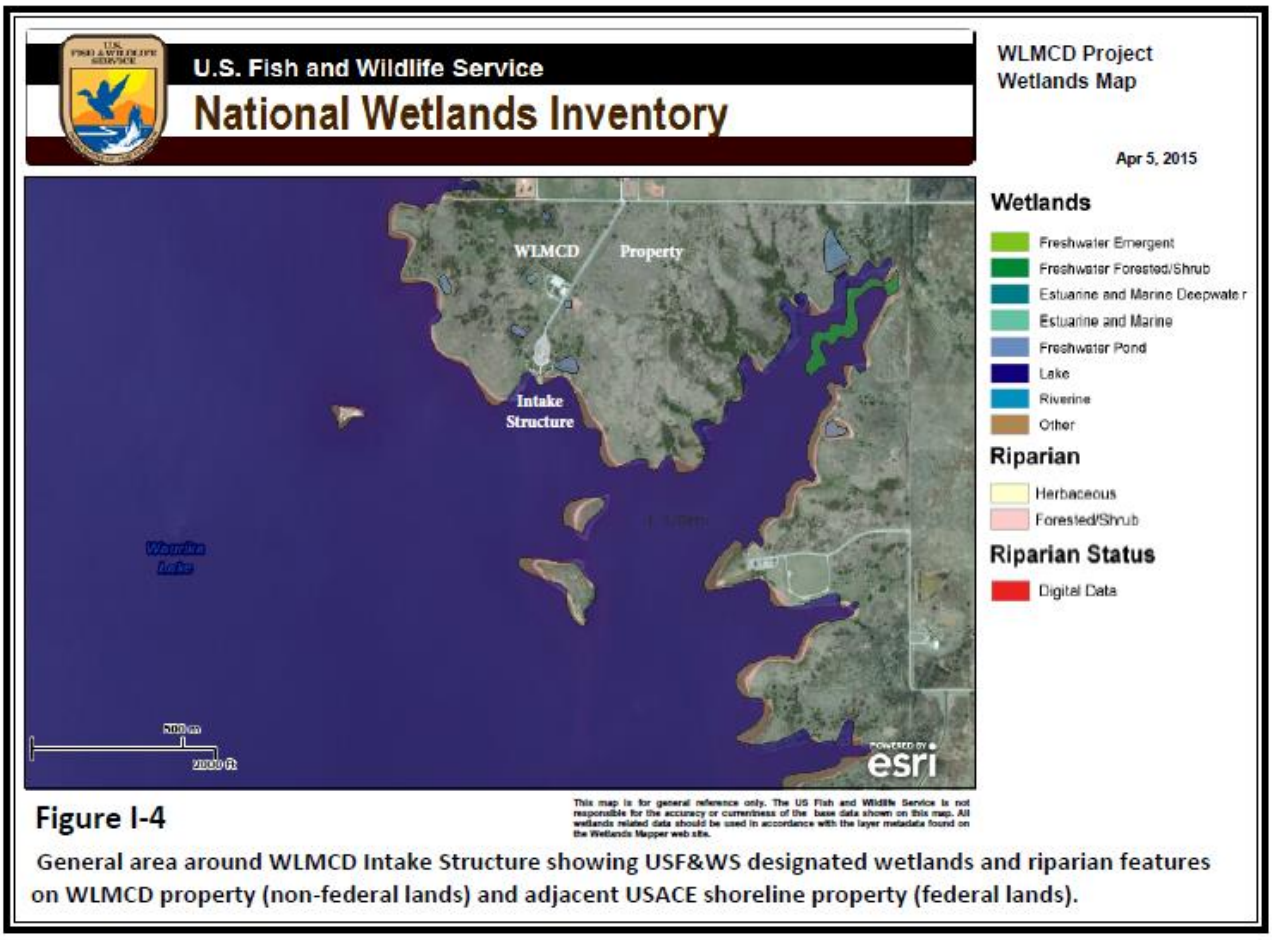



**Figure I-4**
General area around WLMCD Intake Structure showing USF&WS designated wetlands and riparian features on WLMCD property (non-federal lands) and adjacent USACE shoreline property (federal lands).

## 4.6 Threatened and Endangered Species

No critical habitat was found for Jefferson County using the USFWS Critical Habitat Portal. For Jefferson County, OK there are no State-listed Threatened and Endangered Species. Federal-listed Threatened and Endangered Species are maintained by the U.S. Fish and Wildlife Service, the federal agency that

administers the Endangered Species Act in Oklahoma. Federally listed endangered and threatened species in Jefferson County may include:

- Whooping Crane (*Grus americana*) – endangered
- Interior Least Tern (*Sterna antillarum*) - endangered
- Piping Plover (*Charadrius melodus*) - threatened

Further project area specific screening was completed using the USFWS's Information, Planning and Conservation (IPaC) System. The USFWS IPaC report for the project APE (Attachment I-C.1) and Migratory Bird mitigation guidance measures (Attachment I-C.2) indicate five birds (including those listed above) may be found in the project vicinity as follows:

- Interior Least tern – endangered
- Piping Plover – threatened
- Red Knot (*Calidris canutus rufa)* – threatened
- Sprague's Pipit *(Anthus spragueii)* – candidate
- Whooping crane - endangered

There is no critical habitats within the project area. There are no refuges found within the vicinity of the project. There are 23 migratory birds that may be affected by project activities which ae listed in the project's IPaC report (Attachment I-C.1, p. 5).

### 4.7 Cultural Resources

Archaeologists have concentrated on the Plains Village period (A.D. 1000 to 1500), reporting forty-two sites in Jefferson County at the beginning of the twenty-first century.

A cultural resources survey on the land-portions of the project site (federal and non-federal lands) was conducted in February 2015 by Bison Archeological Consulting Services, Inc. Their report is provided in Attachment I-D.1. No archeological sites were found, nor were any isolated finds or standing structures of significance indicated from the survey.

### 4.8 Air Quality

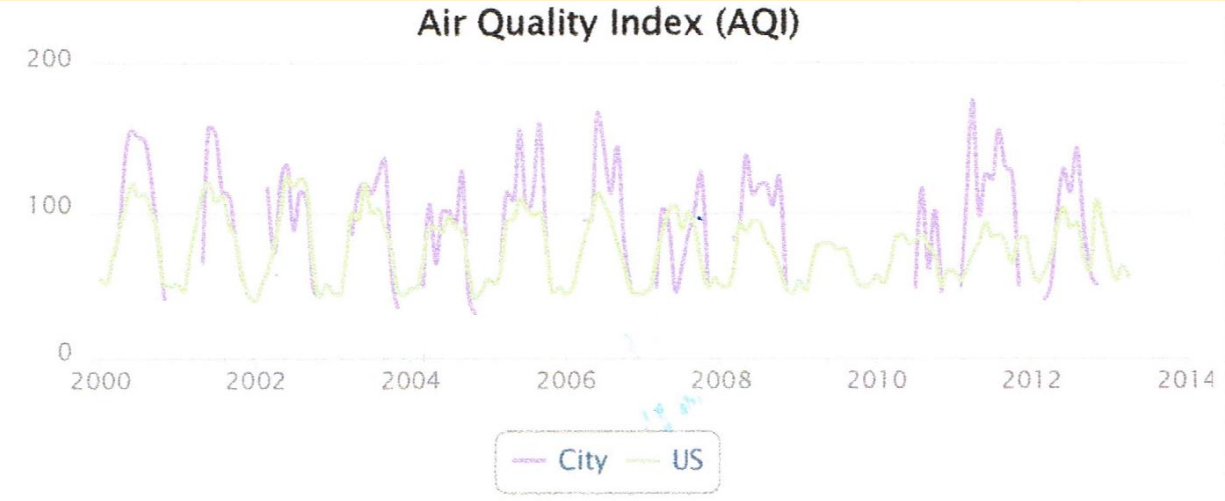
The Clean Air Act establishes standards to protect the public and the environment from adverse health and welfare effects of air pollution. These standards, National Ambient Air Quality Standards (NAAQS), define the maximum permissible concentrations for certain pollutants, known as criteria pollutants.

NAAQS currently exist for six criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO2), ozone (O3), sulfur dioxide (SO2), and particulate matter (PM). There are two categories of PM, particulate matter less than 10 micrometers (PM-10) and particulate matter less than 2.5 micrometers (PM-2.5). A network of air quality monitoring stations routinely measures concentrations of the criteria air pollutants in the ambient air.

The town of Walters, OK is the nearest ODEQ air monitoring location (Ozone Monitoring). The city of Waurika, OK is the nearest air quality monitoring location to the project site. Figures I-5 and I-6 show air quality index (AQI) and ozone concentration as compared to the U.S average for Waurika for the period 2000 to 2012. Table I-7 provides descriptive information regarding the AQI. For both AQI and ozone, air quality in the vicinity of the project is comparable to the U.S. average and considered moderate. Higher values at Waurika as indicated in the trend graph are due to incidences of wildfire smoke plumes, dust

## Figure I-5

**City of Waurika, OK Air Quality Index (AQI) Value and Trend, 2000-2012**



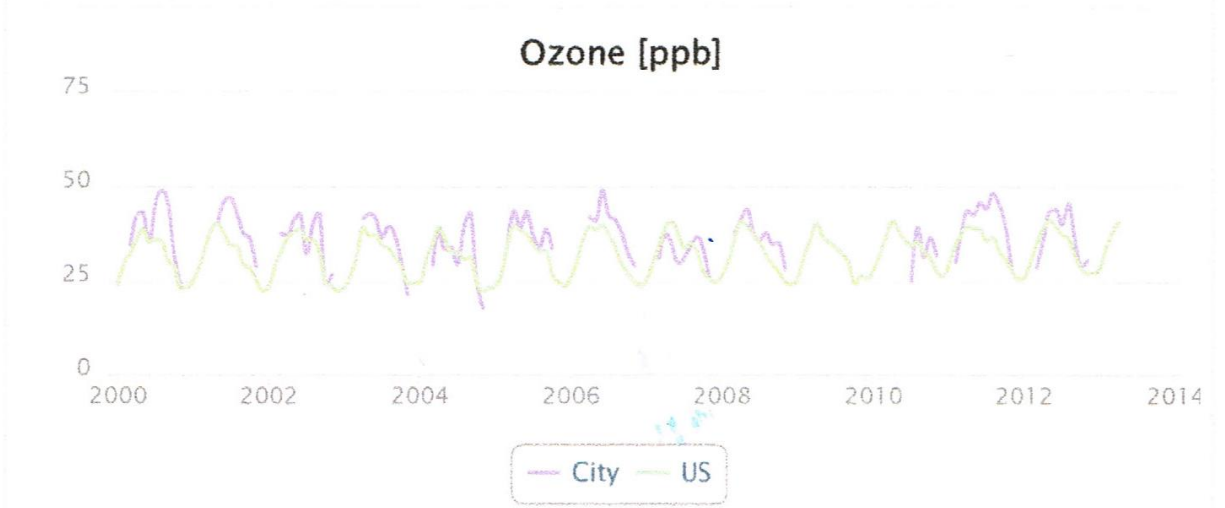

Air Quality Index (AQI) level in 2012 was **85.9**. This is about average.

City: 85.9
U.S.: 74.2

http://www.city-data.com/city/Waurika-Oklahoma.html

## Figure I-6.

**City of Waurika, OK Ozone Value and Trend, 2000-2012**




Ozone [ppb] level in 2012 was **37.0**. This is about average. Closest monitor was 4.4 miles away from the city center.

City: 37.0
U.S.: 32.0

http://www.city-data.com/city/Waurika-Oklahoma.html

**Table I-7**
**POLLUTANT-SPECIFIC CAUTIONARY STATEMENTS FOR THE AIR QUALITY INDEX**

| AQI | Descriptor | Ozone | Particulate Matter | Carbon Monoxide |
|---|---|---|---|---|
| **0 – 50** | **Good** | None | None | None |
| **51 - 100** | **Moderate** | Unusually sensitive people should consider limiting prolonged outdoor exertion. | None | None |
| **101 - 150** | **Unhealthy for Sensitive Groups** | Active children and adults, and people with respiratory disease such as asthma, should limit prolonged outdoor exertion. | People with respiratory or heart disease, the elderly and children should limit prolonged exertion. | People with cardiovascular disease, such as angina, should limit heavy exertion and avoid sources of CO, such as heavy traffic. |
| **151 - 200** | **Unhealthy** | Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion. | People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion. | People with cardiovascular disease, such as angina, should limit moderate exertion and avoid sources of CO, such as heavy traffic. |
| **201 - 300** | **Very Unhealthy** | Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children should limit outdoor exertion. | People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion. | People with cardiovascular disease, such as angina, should avoid exertion and sources of CO, such as heavy traffic. |
| **301 - 500** | **Hazardous** | Everyone should avoid all outdoor exertion | Everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly and children should remain indoors | People with cardiovascular disease, such as angina, should avoid exertion and sources of CO, such as heavy traffic; everyone else should limit heavy exertion. |

***Source:*** http://www.deq.state.ok.us/factsheets/air/aqichart.pdf

plumes from high wind effects, high summer temperatures during temperature-high years (2003-2005, 2011-2013) and poor air quality that may drift from southern and western locations outside the Lake Waurika area. Average wind speed in the proposed project area based on the Mesonet station near Waurika is 8 mph with prominent direction from the SSW to SSE. Hence, air quality is most often affected by south to north drift of air quality changes.

### 4.9 Hazardous, Toxic, and Radiological Waste (HTRW)

There is no hazardous or toxic character to the dredged material based on sampling during Phases I and 2 studies. The CDMSA is considered a non-hazardous and non-toxic storage area for the purposes of drying and possibly reutilizing the dredged material which is removed from the intake channel alignment. Any construction waste or other maintenance activity generating small quantities of any material considered hazardous or toxic will be handled so as not to distribute the material into the environment or area of potential affect (APE) for the project. In addition and as a contingently for possible encounter with potentially unexpected material while dredging, or for separation of non-sediment materials, an emergency containment cell is planned north of cell 1 within the CDMSA (see Appendix A, Sheet 2 of 22).

# 5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTIONS

## 5.1 Social and Economic Impacts

The proposed alternative would enhance employment temporarily by affording opportunities immediately associated with the maintenance contracting activities. Once drought conditions improve, the completed maintenance should improve the quantity and quality of the water supply to enable growth and development to improvement economic conditions.

## 5.2 Natural Resource Impacts

Topography and drainage will be impacted immediately in the vicinity of the CDMSA. However, this should be a temporary impact with restoration of the CDMSA site within a two year period of the maintenance action. Soils being impacted within the CDMSA are prime farmland soils, however, the dredged material is equivalent in fine-grain characteristics and organic content to replace any perceived losses that might accrue. In fact, the dredging action should provide and enrichment of clay loam soils for local community and citizen uses.

The most severe impacts will be directly along the intake channel during dredging operations which will completely remove any benthic or fish habitat created by the sediment deposition over time. The total channel length/area to be dredged is less than 5 acres and should not account for a major impact to the lake environment. Dredging will remove any nutrient load immediately along the channel way allowing for a decrease in productivity which should improve water quality conditions after dredging has been completed and re-establishment of nature processes within the channel.

In addition, fisheries availability for recreational purposes will be temporarily interrupted during the dredging operations and some diminution in fish numbers will likely occur. However, historical stocking of the lake (Table 4-11) will more than likely compensate for any fisheries losses.

## 5.3 Wetlands and Water Quality Permits

There are no wetlands or critical habitat impacts expected from enacting the preferred alternative. There is no prime or unique farmland located within the project site that would be impacted negatively. There ae so streams within the project area that ae classified as wild and scenic pursuant to the Federal Wild and Scenic Rivers Act, (Public Law 542).**5.3.1 NPDES CWA Sec 404 Permit**

There is an existing OPDES permit (Authorization No. OKR1020158) for storm water construction which is provided in Attachment I-B.1 along with ODEQ's general permit provisions. This permit will be used in conjunction with construction activities by the contractor east and north of the intake structure when building the CDMSA facilities (dikes and storage cell soil excavation).

### 5.3.2 NWP-12 and NWP-16 Permits

In order to perform Tasks 2 (CDMSA operations) and Task 3 (lowest gate extension by pipeline construction) two additional permits will be needed to control these activities. Provisions for these permits are summarized in Attachment I-B.2. Only emergency overflow discharge will be allowed when operating the CDMSA during dredging operations (NWP-16). Requirements that apply to each NWP are indicated on their descriptions in Attachment I-B.2.

### 5.4 Threatened and Endangered Species

No impact is expected to threatened or endangered species by performing the proposed alternative. However, precaution must be taken for evasive species as discussed in Section 4.5.2.1 (Aquatic Nuisance Species Program) and migratory bird conservation/precautions discussed in Section 4.6 (see Attachment I-C.2 for guidance). This is in keeping with the provisions of Executive Order 13112, Invasive Species in addition to ODWC requirements and Executive Order 13186, Responsibility of Federal Agencies to Protect Migratory Birds. While many birds ae cited in the IPaC report for the project (see Attachment I-C.1), no significant habitat loss or impact would occur to these migratory bird populations with the Area of Potential Effect (APE) (see Appendix A, Sheet 2 and 22).

### 5.5 Cultural Resources

No impacts ae expected to cultural resources by enacting the preferred alternative. However, in the event artifacts or other significant cultural items are encounter during construction or maintenance activities, the contractor shall follow the procedure set out in the Cultural Survey Report by Bison (see Attachment I-D.1 report Appendix 3 entitled *Emergency Protocols for Construction Crews*.

### 5.6 Water Quality

Water quality In the vicinity of the dredging operations will produce short term water quality changes within the intake channel and for a construction zone of operations 500 ft to the west of the channel and 200-t east of the channel where dredging equipment will use as maneuver space (see Appendix A, Sheet 22). Water quality changes expected will be increased turbidity as dredged material stirred, mixed and removed, dissolved oxygen changes, temperature changes and degassing of ammonium found within the sediments as determined in Phase 2 studies, particularly close to the intake. These will be temporary changes until dredging operations are completed.

### 5.7 Air Quality

Air quality within the area would not be negatively impacted as a result of this project. There would be minor temporary air emissions during the construction phase of the project; this would not likely adversely affect the air quality. This area is currently in attainment with the Clean Air Act (as amended).

### 5.8 Noise

For Migratory Birds & Wildlife: Impacts of noise on wildlife during construction is not anticipated to be significant and when it does occur will be of short duration and in most cases a deterrent to migratory bird interference with construction activities. However, in cases where a prolong noise issue begins to adversely affect migratory birds in the vicinity of the construction area, a noise safety plan will be enacted.

For Personnel: Hearing Protection and Noise Control will comply with USACE Safety & Health Requirements Manual EM 385-1-1, 30 Nov 2014, Section 05.C. The general contractor shall evaluate the workspace for noise hazards initially and regularly during the course of work. When noise hazards are known or expected, the general contractor shall develop a Hearing Conservation Program that includes identification and assessment of noise hazards and the measures to be taken to protect personnel against them.

1) USACE workplace hearing conservation programs shall comply with the requirements of ER 385-1-89.
2) Contractors programs shall comply with American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) and EM 385-1-1 dated 30 Nov 2014 manual at a minimum.

### 5.9 Hazardous, Toxic, and Radiological Waste

Based on the findings of the sediment and water testing during Phase 1 and 2 of the project as discussed in Section 4.9, the potential for discovery and significant problems related to HTRW during project construction or maintenance operation is believed to be low for the proposed alternative.

During construction activities associated with these WLMCD maintenance actions, a Spill Prevention Plan will be prepared prior to the start of construction detailing the handling and storage of all fuels, waste oils, and solvents. All personnel briefed on the implementation and responsibilities of this plan to reduce any potential adverse impacts to surface water resources during all phases of construction and maintenance activities.

### 5.10 Cumulative Impacts

Table 5-1 provides a compilation of the various impacts anticipated for the maintenance preferred alternative. The following benefits accrue from the preferred alternative.

1) Improvement in flow and water quality conditions within the dredged intake channel should reduce the amount of treatment required by receiving city water systems. Better flow efficiency from repaired gates.
2) Improved intake performance and operational flexibility in low lake conditions and future drought conditions. System resilience is improved.
3) Beneficial use of dredged material for community uses (farming, soil amendment, top soil improvement, etc.)
4) Temporary increase in local employment and positive economic impact on local businesses activity to complete maintenance project.
5) Completed project will inspire future growth by continuing to provide reliable source of water supply to counties and cities in southwestern Oklahoma.

## 6.0 MITIGATION PLAN

A Mitigation Plan is required for concerns when dealing with the following issues for the preferred alternative:

1) Possible adverse impacts of noise or other construction activities on Migratory Birds identified from the USFWS IPaC Report (Attachment I-C.1),
2) Temporary loss of recreational lake use in vicinity of dredging and gate extension construction activities for the duration of the activities.
3) Short-term loss of aquatic habitat immediately in the vicinity of the channel dredging operations.
4) Short-term loss of availability of non-federal property for CDMSA and dredging operations.

5) Contingency plans have been developed for encountering material unsuitable for normal dredge cell disposal by having an emergency cell available to separate such finds as well as to treat discharged dredged water if required in a polishing cell due to high rainfall or other emergency discharge requirement situation.

6) Precautions by contractor to control invasive species, aquatic nuisance species, and noxious aquatic plants.

7) Control of western extent of dredging required so as not to over-dredge softer and less defined sections of the intake channel.



**Table 5-1**
**Waurika Lake Master Conservancy District**
**Waurika Lake Water-Intake Channel Maintenance Project**
**Impact Assessment Matrix For Proposed Alternative**

| Name of Parameter | Magnitude of Probable Impact | | | | | | |
|---|---|---|---|---|---|---|---|
| | Increasing Beneficial Impact | | | No Appreciable Impact | Increasing Adverse Impact | | |
| | Significant | Substantial | Minor | | Minor | Substantial | Significant |
| **A. Social Effects** | | | | | | | |
| 1. Noise Levels | | | | XX | | | |
| 2. Aesthetic Values | | | | XX | | | |
| 3. Recreational Opportunities | | | | | St* | | |
| 4. Transportation | | | | XX | | | |
| 5. Public Health & Safety | | | | | St* | | |
| 6. Community Cohesion (sense of unity) | | | | XX | | | |
| 7. Community Growth and Development | | | Lt** | | | | |
| 8. Business and Home Relocations | | | | XX | | | |
| 9. Existing/Potential Land Use | | | | XX | | | |
| 10. Controversy | | | | | | | |
| **B. Economic Effects** | | | | | | | |
| 1. Property Values | | | | XX | | | |
| 2. Tax Revenues | | | | XX | | | |
| 3. Public Facilities and Services | | | St* | | | | |
| 4. Regional Growth | | | St* | | | | |
| 5. Employment | | | St* | | | | |
| 6. Business Activity | | | St* | | | | |
| 7. Farmland / Food Supply | | | | XX | | | |
| 8. Flooding Effects | | | | XX | | | |
| **C. Natural Resources Effects** | | | | | | | |
| 1. Air Quality | | | | XX | | | |
| 2. Terrestrial Habitat | | | | | St* | | |
| 3. Wetlands | | | | XX | | | |
| 4. Aquatic Habitat | | | | | St* | | |
| 5. Habitat Diversity and Interspersion | | | | XX | | | |
| 6. Biological Productivity | | | | XX | | | |
| 7. Surface Water Quality | | | Lt** | | | | |
| 8. Water Supply | | Lt** | | | | | |
| 9. Groundwater | | | | XX | | | |
| 10. Soils | | | Up[1] | | | | |
| 11. Threatened and Endagered Species | | | | MM | | | |
| **D. Cultural Resources** | | | | | | | |
| 1. Historic Architectual Values | | | | XX | | | |
| 2. Pre-Historic & Historic Archeological Values | | | | XX | | | |
| 3. Native American Reserve Rights | | | | XX | | | |

Explanatory Notes:

XX - No net impact expected

MM - Mitigation practices for migratory bird populations in maintenance/ construction zone may be necessary to avoid impacts

*St - temporary or short term impact during maintenance contruction period only including dredging & CDMSA operations

**Lt - long term impact improvement in quantity and/or quality of resource

Up[1] - Gain of temporary beneficial soil reuse of CDMSA dried material in local community

## 7.0 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

The Environmental Assessment (EA) was coordinated with the following agencies having legislative and administrative responsibilities for environmental protection. A copy of the correspondence or electronic screening reports from the agencies that provided comments and planning assistance for preparation of the EA are in the attachments to this appendix. The mailing list for the 15-day public review period for this EA is in Attachment I-A.

**State Agencies**

- Oklahoma Natural Resources Conservation Service
- Oklahoma Department of Environmental Quality
- Oklahoma Department of Wildlife Conservation
- Oklahoma Conservation Commission
- Oklahoma Department of Commerce
- Oklahoma Employment Security Commission
- Oklahoma Tourism and Recreation Department
- Oklahoma Water Resources Board
- Oklahoma State Historic Preservation Officer
- Oklahoma State Archeologist, Oklahoma Archeological Survey
- Oklahoma Geological Survey

**Tribal Historic Preservation or Environmental Officer:**

- Comanche Nation, Oklahoma
- Kiowa Indian Tribe of Oklahoma
- Apache Tribe of Oklahoma
- Ft Sill Apache Tribe of Oklahoma
- Wichita and Affiliated Tribes of Oklahoma
- Chickasaw Nation, Oklahoma

**Federal Agencies**

- U. S. Fish and Wildlife Service
- Natural Resources Conservation Office
- Oklahoma Field Office US EPA
  U.S. Army Corps of Engineers – Tulsa District Regulatory Affairs Office
- U.S. Census

**County Commissioners**

- Jefferson County Commissioners
- Stephens County Commissioners
- Cotton County Commissioners
- Comanche County Commissioners

**Relevant City Governments' Environmental Officer**

- Comanche
- Duncan
- Lawton

- Temple
- Walters
- Waurika
- *Others as necessary*

**Federal and State Elected Officials:**
State Representatives and Senators: Jefferson, Stephens, Cotton and Comanche Counties
Federal Representative and Senators

## 8.0 REFERENCES

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## 9.0 APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS

**Table 9-1**
**Relationship of Plans to Federal Environmental Protection Statutes and Other Environmental Requirements**

| Laws and Policies | Compliance of Alternatives |
|---|---|
| Archeological and Historic Preservation Act, 1974, as amended, 16 U.S.C. 469, et seq. | All plans in partial compliance |
| Clean Air Act, as amended, 42 U.S.C. 7609, et seq. | All plans in full compliance |
| Clean Water Act, 1977, as amended (Federal Water Pollution Control Act, 33 U.S.C. 1251, et seq. | Pending USACE/ODEQ Review |
| Endangered Species Act, 1973, as amended, 16 U.S.C. 1531, et seq. | All plans in full compliance |
| Federal Water Project Recreation Act, as amended, 16 U.S.C. 460-1-12, et seq. | All plans in full compliance |
| Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661, et seq. | All plans in full compliance |
| Land and Water Conservation Fund Act, 1965, as amended, 16 U.S.C. 4601, et seq. | All plans in full compliance |
| National Historic Preservation Act, 1966, as amended, 16 U.S.C. 470a, et seq. | All plans in full compliance |
| National Environmental Policy Act, as amended, 42 U.S.C. 4321, et seq. | Pending USACE Review |
| Native American Graves Protection and Repatriation Act, 1990, 25 U.S.C. 3001-13, et seq. | All plans in partial compliance |
| Rivers and Harbors Act, 33 U.S.C. 401, et seq. | Not Applicable |
| Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq. | Not Applicable |
| Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271, et seq. | Not Applicable |
| Water Resources Planning Act, 1965 | Not Applicable |
| Floodplain Management (E.O. 11988) | All plans in full compliance |
| Protection of Wetlands (E.O. 11990) | All plans in full compliance |
| Environmental Justice (E.O. 12898) | All plans in full compliance |
| Protection of Children (E.O. 13045) | All plans in full compliance |
| Invasive Species (E.O. 13112) | All plans in full compliance |
| Protection of Migratory Birds (E.O. 13186) | All plans in full compliance |
| Farmland Protection Policy Act, 7 U.S.C. 4201, et seq. | All plans in full compliance |
| | |

Note: Full compliance – Having met all requirements of the statutes, Executive Orders, or other environmental requirements for the current stage of planning.

## 10.0 LIST OF PREPARERS

The following personnel and affiliation participated in the preparation of this Environmental Assessment.

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Daniel Ashbaugh, E.I. – Engineer Intern, CAD/GIS Technician
Adam Karleskint – CAD/GIS Specialist

**Bison Archeological Consultant Services, Inc.**
Heather Szarka – Principal Investigator, Archeologist (Project Archeologist)
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# ATTACHMENT I-A
# Coordination/Correspondence

# Attachment I-A
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Jack Tipton – District 2
Johnny Dale – District 3

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County Courthouse
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Lonnie Estes – District 2
Dee Bowen – District 3

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Gail Turner – District 1
Johnny Owens – District 2
Don Hawthorne – District 3

**Relevant City Governments' Environmental Officer**
Comanche
Duncan
Lawton

Temple
Walters
Waurika
*Others as necessary*

**Tribal Historic Preservation or Environmental Officer:**

Mr. Wallace Coffey,
Chairman
**Comanche Nation Tribe**
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Lawton, OK 73502
(580) 492-3240
(877) 492-4988

Mr. Ronald "Dawes"
Twohatchet, Chairman
**Kiowa Indian Tribe of Oklahoma**
P.O. Box 369
Carnegie, OK 73015-0369
(580) 654-2300

Mr. Ernest Redbird
Tribal EPA Officer
**Apache Tribe of Oklahoma**
P.O. Box 1330
Anadarko, OK 73005
(405) 247-9493
(800) 246-2942

**Federal and State Elected Officials:**
State Representatives and Senators
Federal Representative and Senators

# ATTACHMENT I-B.1
# Section 404 Permit (Existing Storm Water)

**Oklahoma Department of Environmental Quality**
**Authorization to Discharge under the OPDES Storm Water Construction General Permit OKR10**

AUTHORIZATION NO. **OKR1020158**

In compliance with the Oklahoma Pollution Discharge Elimination System (OPDES) Act 27A O.S. §2-6-201, the Rules of the Department of Environmental Quality (DEQ), and in reliance on the certified statements and representations heretofore made in its application,

**Waurika Lake Master Conservancy District**

**5404 East 1890 Rd**

**Waurika, OK 73573**

Is authorized to discharge storm water from a construction site located in **Jefferson** County at

**Silt Removal**

**5404 East 1890 Rd**

**Waurika, OK 73573**

The receiving body of water is Waurika Lake.
This facility discharges into a 303(d) listed stream.

The OPDES requires permittee's to have a Storm Water Pollution Plan (SWP3) which includes a description of appropriate sediment control measures. These are applicable to your construction site, which is subject to inspection. Proof of this authorization must be available at the construction site.

The Authorization shall become effective **March 3, 2013** and will expire at midnight September 12, 2017.

All terms and conditions of the modified OPDES Storm Water Construction General Permit OKR10, as published on September 13, 2012, shall apply to the recipient of this authorization.

*tu-J~~ M~D~j)*

Richard McDaniel, Environmental Programs Manager

Environmental Complaints and Local Services Division

# GENERAL PERMIT
# OKR10

## FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA

## OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

## WATER QUALITY DIVISION

**September 13, 2012**

OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

## Storm Water General Permit for Construction Activities within the State of Oklahoma

## Permit No. OKR10

Authorization to Discharge Under the Oklahoma Pollutant Discharge Elimination System Act (OPDES)

In compliance with the provisions under the OPDES, 27A O.S. 2-6-201 et seq., as amended, except as provided in Part 1.3.2 of this permit, operators of storm water discharges from construction activities, located in an area specified in Part 1.2, are authorized to discharge in accordance with the conditions and requirements set forth herein. Only those operators of storm water discharges from construction activities in the general permit area who submit a Notice of Intent (NOI) and receive an authorization to discharge in accordance with Part 2 of this permit are authorized under this general permit.

This permit is a reissuance by the Department of Environmental Quality (DEQ) and shall become effective on September 13, 2012. This permit replaces the permit issued on September 13, 2007. This permit and the authorization shall expire at midnight, September 12, 2017.

Signed and issued this 13th day of August, 2012

for

Shellie Chard-McClary, Director
Water Quality Division

Mark Derichsweiler, P.E, Engineering Manager
Water Quality Division

**GENERAL PERMIT OKR10 FOR STORM WATER DISCHARGES**

**FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA**

**Table of Contents**

# Part 1 Coverage Under This Permit

## *1.1 Introduction*

Under the authority of the Oklahoma Pollutant Discharge Elimination System Act (OPDES), the Oklahoma Department of Environmental Quality (DEQ) is issuing the general permit OKR10, which authorizes discharges of storm water associated with construction activity. This is a reissuance of the general permit for large and small construction activities and replaces the current permit issued on September 13, 2007.

## *1.2 Permit Area*

Under the Environmental Protection Agency (EPA)'s approval of the OPDES program, the DEQ has had storm water permitting and enforcement responsibility for large and small construction activities since November 19, 1996, except for construction activities associated with oil & gas extraction and agricultural activity, or those construction activities located on Indian Country Lands[1].

**Table 1-1 Areas of Coverage Where the EPA is the Permitting Authority Within the State of Oklahoma**

| Any Construction Activity on Indian Country Lands[1] in Oklahoma |
|---|
| Construction activity associated with Oil and gas extraction under SIC Group 13 (Note: The DEQ does have authority over the natural gas liquid extraction plants identified under SIC code 1321, and service company base operating stations identified under SIC 1389); Pipelines under SIC Group 46, except pipelines within certain facilities regulated by the DEQ; Natural gas transmission under SIC Group 492, except that the DEQ has jurisdiction over natural gas liquid extraction plants [2] |
| Construction activities associated with Agricultural production and services under SIC Groups 01, 02 and 07; Forestry under SIC Group 08; Fishing, hunting and trapping under SIC Group 09, except the DEQ shall have jurisdiction over industry group number 092 (fish hatcheries and preserves). |

If you desire an authorization to discharge storm water from a construction activity listed in Table 1-1 above, you must apply to the EPA at the following addresses:

For an electronic Notice of Intent (eNOI): www.epa.gov/npdes/eNOI

Or For regular U.S. mail delivery: U.S. EPARegion 6

Stormwater Coordinator Compliance Assurance and Enforcement Division (6EN-WC)
EPA SWMGP
P.O. Box 50625
Dallas, TX 75205

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[1] Under EPA's 1996 approval of the State of Oklahoma's permitting program, the State was not authorized to issue NPDES permits under the federal Clean Water Act in areas of Indian country, as defined in 18 U.S.C. § 1151, within the State. 61 Fed. Reg. 65047, 65049 (December 10, 1996). Therefore, this permit does not apply to discharges of storm water in Indian country. However, section 10211(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 ("SAFETEA"), Public Law 109-59, 119 Stat. 1144 (August 10, 2005), provides the State the opportunity to request approval from EPA to administer federal environmental regulatory programs, including the Clean Water Act NPDES program, in Indian country areas of the State. The submission, by the State, and review, by EPA, of this permit is without prejudice to the State's right to request such approval at any time.

[2] On May 23, 2008, the Ninth Circuit Court of Appeals issued an opinion in *National Resources Defense Council v. United States Environmental Protection Agency*, 526 F. 3d 591 (9th Cir. 2008), vacating EPA's 2006 oil and gas construction storm water regulation. Now the effective requirements are the regulations in place prior to the 2006 rule plus the additional Energy Policy Act clarification of the activities included in the CWA 402(*l*)(2) exemption..

## *1.3 Eligibility*

### 1.3.1 Authorized Discharges

A. Permittees are authorized to discharge pollutants in storm water runoff associated with construction activities as defined in 40 CFR (Code of Federal Regulations) 122.26 (b)(14)(x) for construction sites of five or more acres, and 40 CFR 122.26 (b)(15)(i) for construction sites of more than one acre but less than five acres**,** including the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb land equal to or greater than one acre, and those construction site discharges designated by the Director as needing a storm water permit under 40 CFR 122.26 (a)(1)(v), or under 122.26 (a)(9) and 122.26 (g)(1)(i). Discharges identified under Part 1.3.2 are excluded from coverage. Any discharge authorized by a different OPDES permit may be commingled with discharges authorized by this permit.

B. This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants[3], equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) provided:

1. The support activity is directly related to a construction site that is required to have OPDES permit coverage for discharges of storm water associated with construction activity;
2. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports; and
3. Appropriate controls and measures are identified in a Storm Water Pollution Prevention Plan (SWP3) covering the discharges from the support activity areas.
4. The support activity is not located within the watershed of an Outstanding Resource Water (see Part 9 Definition and Addendum F Outstanding Resource Waters)

C. The following allowable non- stormwater discharges are authorized by this permit:

1. Fire hydrant flushings;
2. Waters used to wash vehicles where detergents are not used;
3. Water used to control dust;
4. Potable water, including uncontaminated waterline flushing;
5. Routine external building wash down which does not use detergents;
6. Pavement wash waters provided spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
7. Uncontaminated air conditioning or compressor condensate;
8. Uncontaminated ground water or spring water;
9. Foundation or footing drains where flows are not contaminated with process materials such as solvents;
10. Landscape irrigation;
11. Discharge or flows from emergency firefighting activities;

[3] Discharges subject to a numeric effluent limitation guideline in Part 3.4 Numeric Limitation and Sampling Requirements and Addendum G Additional Requirements for Concrete and Asphalt Batch Plants

12. Uncontaminated flows from excavation dewatering activities will be allowed if operational and structural controls are used to reduce any pollutant releases in order to avoid or minimize the impacts on water quality (See Part 3.3.1.L). These controls must be included in your SWP3.

### 1.3.2 Limitations on Coverage

A. *Post Construction Discharges*: This permit does not authorize storm water discharges that originate from the site after construction activities have been completed and the site, including any temporary support activity site, has undergone final stabilization. Industrial post-construction storm water discharges may need to be covered by a separate OPDES permit.

B. *Discharges Mixed With Non-Storm Water*: This permit does not authorize discharges that are mixed with sources of non-storm water, other than those discharges that are identified in Part 1.3.1.C (Exceptions to prohibition on non-storm water discharges) and are in compliance with Part 4.5.16. (non-storm water discharges).

C. *Discharges Covered by Another Permit*: This permit does not authorize storm water discharges associated with construction/support activity that have been covered under an individual permit or which require coverage under an alternative general permit in accordance with Part 6.12,except storm water discharges from concrete and asphalt batch plants specified in Part 1.3.1.B.

D. *Discharges Threatening Water Quality*: This permit does not authorize storm water discharges from construction sites that the Director determines will cause, or have reasonable potential to cause or contribute to violations of water quality standards, including anti-degradation policy. Where such determinations have been made, the Director may notify the operator(s) that an individual permit application is necessary in accordance with Part 6.12. However, the Director may authorize coverage under this permit after appropriate controls and implementation procedures designed to bring the discharges into compliance with water quality standards have been included in the SWP3.

E. *Discharges Not Protective of Listed Endangered Species*: This permit does not authorize storm water discharges, allowable non-storm water discharges, and storm water discharge-related activities that are not protective of Federal and State listed endangered and threatened species or designated critical habitat. See Part 11 for more information.

1. For the purposes of complying with Part 1.3 eligibility requirements, storm water discharge-related activities include:

   a. Activities that cause, contribute to, or result in point source storm water pollutant discharges, including but not limited to excavation, site development, grading, and other land disturbing activities; and

   b. Measures to control storm water including the siting, construction, and operation of best management practices (BMPs) to control, reduce, or prevent storm water pollution.

2. Coverage under this permit is available only if the applicant certifies that it meets at least one of the criteria in paragraphs a, b, c, d, or e below. Failure to continue to meet one of these criteria during the term of the permit will render an applicant ineligible for coverage under this permit.

   a. The proposed construction site or land disturbing activity is not located within any of the corridors of the Federal or State identified Aquatic Resources of Concern, and further investigation is not required.

   b. The proposed construction site or land disturbing activity is located within a corridor of a Federal or State identified Aquatic Resources of Concern . The SWP3 describes this area in relation to the identified water or watershed and specifies the measures to be employed to protect the endangered or threatened species or their critical habitat (see Part 3.5.2 and Addendum A).

c. If one of those eligibility criteria under part 1.3.2.E.2.a, b, d, or e cannot be met, applicants may use Addendum I Buffer Guidance to evaluate alternatives of buffer requirements and select equivalent sediment controls or contact DEQ for further consultation; or

d. The applicant's federally approved construction activities are authorized by the appropriate Federal or State agency and that authorization addresses the Endangered Species Act Section 7 consultation for the applicant's storm water discharge or storm water discharge-related activities. Applicants selecting option d must include documentation from USFWS (U.S. Fish and Wildlife Service) or a qualified biologist that demonstrates Section 7 consultation has been completed. The SWP3 must comply with any conditions resulting from that consultation.

e. The applicant's storm water discharges and storm water discharge-related activities were already addressed in another operator's certification of eligibility under Part 1.3.2.E.2.a, b, c, or d. that included the applicant's project area. By certifying eligibility under Part 1.3.2.E.2.e, the applicant agrees to comply with applicable measures or controls upon which the other operator's certification under Part 1.3.2.E.2.a, b, c. or d. was based.

3. The applicant must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility requirements of Part 1.3.2.E.2.a, b, c, d, or e above to remain eligible for coverage under this permit. Such terms and conditions must be incorporated in the applicant's SWP3.

4. This permit does not authorize any storm water discharges where the discharges or storm water discharge-related activities cause a prohibited "take" (as defined in Part 9) of endangered or threatened species.

5. This permit does not authorize any storm water discharges where the discharges or storm water discharge-related activities are likely to jeopardize the continued existence of any species that are listed or proposed to be listed as endangered or threatened or result in the adverse modification or destruction of habitat that is designated or proposed to be designated as critical.

F. *Construction on Indian Country Land*: This permit does not authorize storm water discharges that originate from construction activities on Indian Country Lands. Such discharges are regulated by the EPA Region 6 offices located in Dallas, Texas (see Part 1.2).

G. *Construction Activities for Oil and Gas Operations and Pipelines*: The Energy Policy Act of 2005 amends the Clean Water Act (CWA) with regard to oil and gas exploration, production, processing, and treatment activities. The June 12, 2006 final rule exempts oil and gas exploration, production, processing, or treatment operations or transmission facility construction activities, from NPDES storm water permits for discharges of stormwater runoff composed entirely of flows from activities which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, by product or waste products located on the site[4]. Therefore, Facilities that are currently regulated under the DEQ's permit, such as Natural Gas Liquid Extraction Plants (NAICS 211112, SIC 1321) and Oil and Gas Field Services for Company Base Operating Stations (NAICS 213112, SIC 1389), are not required to obtain permit coverage. However, Facilities that have a discharge of a reportable quantity release or that contribute pollutants (other than non-contaminated sediment) to a violation of a water quality standard are required to obtain and maintain OPDES permit coverage for storm water for the entire operating life of the facility. The Director may authorize coverage under this permit for any construction activities within those facilities after appropriate controls and implementation procedures designed to bring

[4] See 40 CFR 122.26(b)(14)(iii) for purposed of defining "contaminated stormwater" at facilities considered to be engaging in industrial activity.

the discharge into compliance with water quality standards unless and/or until termination requirements are met.

H. *Construction Activities Related to Agriculture*: This permit does not authorize storm water discharges that originate from construction activities related to Agriculture, that are under the jurisdiction of the Oklahoma Department of Agriculture, Food, and Forestry. Such discharges are regulated by the EPA Region 6 offices located in Dallas, Texas.

I. *New Sources or New Discharges*: New sources or new discharges of constituents of concern to impaired waters are not authorized by this permit unless otherwise allowable under OAC 252:606 and applicable state law. Impaired waters are those that do not meet applicable water quality standards and are listed on the Clean Water Act Section 303(d) list. Pollutants of concern are those constituents for which the water body is listed as impaired. The 303(d) list of Impaired Waters can be found in Appendix C of Oklahoma's Integrated Report on the DEQ web site at http://www.deq.state.ok.us/WQDnew/305b_303d/index.html, or the DEQ GIS Map and Data Viewer at http://maps.deq.ok.gov/deq_wq/.

Discharges of pollutants of concern to impaired water bodies for which there is an approved total maximum daily load (TMDL) or a watershed plan incorporated in Oklahoma's Water Quality Management Plan in lieu of a TMDL are not eligible for coverage under this permit unless they are consistent with the approved TMDL or watershed plan. Approved TMDL reports or watershed plans can be downloaded from the DEQ website at http://www.deq.state.ok.us/WQDnew/tmdl/index.html. Permittees must incorporate any limitations, conditions, or requirements applicable to their discharges necessary for compliance with the TMDL or watershed plan, including any monitoring or reporting required by the TMDL or watershed plan, into their SWP3 within the time specified in the TMDL or watershed plan in order to be eligible for coverage under this general permit

## *1.4 Obtaining Authorization*

**1.4.1.** In order for storm water discharges from construction activities to be authorized under this general permit, an operator must:

A. Meet the Part 1.3 Eligibility requirements;

B. Except as provided in Part 2.1.4, develop a Storm Water Pollution Prevention Plan (SWP3) covering either the entire site or all portions of the site where they are operators (see definition in Part 9) according to the requirements in this permit. A "joint" SWP3 may be developed and implemented as a cooperative effort where there is more than one operator at a site; and

C. Submit a Notice of Intent (NOI) in accordance with the requirements of Part 2, using an NOI form provided by the Director in Addendum B (or a photocopy thereof) and also available athttp://www.deq.state.ok.us/eclsnew/sitestrm.htm. Only one NOI need be submitted to cover all of the operator's activities on a common plan of development or sale (e.g., you do not need to submit a separate NOI for each separate lot in a residential subdivision or for two separate buildings being constructed at a manufacturing facility, provided the SWP3 covers each area for which you are an operator). The SWP3 must be implemented upon commencement of construction activities.

D. Develop and implement a storm water pollution prevention plan (SWP3) according to the requirements in this permit. You are required to submit a copy of your complete SWP3 to the DEQ for review if your discharges meet the special conditions listed in Part 2.5 of the permit. If your discharges do not meet the special conditions listed in Part 2.5 of the permit, you are not required to submit a copy of the SWP3 when you submit your NOI. However, you may be required to submit an SWP3 for review upon request by DEQ.

E. Pay the applicable application fee and annual permit fee established in OAC 252:606-3-4(d)(1) and Appendix D (located on http://www.deq.state.ok.us/rules/606.pdf ). If not included with the NOI, a statement of the fee due will be sent to the applicant. The fee must be received before the authorization will be issued.

F. Receive an authorization from the DEQ.

**1.4.2.** Any new operator on site, including those who replace an operator who has previously obtained permit coverage, must submit an NOI to obtain permit coverage.

**1.4.3.** Once authorization is issued by the DEQ, dischargers who submit an NOI in accordance with the requirements of this permit are authorized to discharge storm water from construction activities under the terms and conditions of this permit. The DEQ may deny coverage under this permit and require submittal of an application for an individual OPDES permit based on a review of the NOI or other information (see Part 6.12 of this permit).

## *1.5 Terminating Coverage*

**1.5.1.** Permittees wishing to terminate coverage under this permit must submit a Notice of Termination (NOT) in accordance with Part 8 of this permit., using an NOT form provided by the Director and found in Addendum C of the permit (or a photocopy thereof), and available at http://www.deq.state.ok.us/WQDnew/stormwater/index.html. Compliance with this permit is required until an NOT is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT is signed.

**1.5.2.** All permittees must submit an NOT within thirty (30) days after one or more of the following conditions have been met:

A. Final stabilization (see definition Part 9) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);

B. For residential construction only: temporary stabilization has been completed and the residence has been transferred to the homeowner;

C. When another operator has assumed control according to Part 6.7.3. over all areas of the site that have not been finally stabilized. The NOT must be submitted with the new operator's NOI;

**1.5.3.** The DEQ will review NOTs for completeness and accuracy and inspect the site for which the NOT was submitted within 30 days of receipt of the NOT. Permittees can submit an Inspection Request Form (see Addendum E of the permit) to the DEQ for an inspection prior to submitting an NOT. The DEQ will schedule an inspection and provide any assistance necessary within 30 days of receipt of the written request. Upon completing the inspection, the DEQ will notify the permittee of any needed changes to the site conditions, or that the site has met the termination requirements under this permit. Only one Inspection Request Form can be submitted to the DEQ within a ninety (90) day period. Additional compliance inspections may occur within this 90 day period at the discretion of the DEQ. Enforcement actions may be taken if a permittee submits an NOT without meeting one or more of the conditions in Part 1.5.2.

# Part 2 Notice of Intent Requirements

## *2.1 Deadlines for Notification*

**2.1.1.** Parties defined as operators (see definition in Part 9) due to their operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications and/or operators with day-to-day operational control over construction activities at a project, which are necessary to ensure compliance with a storm water pollution prevention plan or other permit conditions must receive authorization from the DEQ (after submitting an NOI in accordance with the requirements) prior to the commencement of construction activities (i.e., the initial disturbance of soils associated with clearing, grading, excavation activities, or other construction activities).

**2.1.2.** For storm water discharges from construction projects where the operator changes, including, instances where an operator is added after an NOI has been submitted under Part 2.1.1, the new operator must submit an NOI at least two (2) days before assuming operational control over site specifications or commencing work on-site.

**2.1.3.** Operators are not prohibited from submitting late NOIs. When a late NOI is submitted, authorization is only for discharges that occur after permit coverage is granted. The Department reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization of future discharges is granted.

**2.1.4.** Operators of on-going construction projects as of the effective date of this permit that received authorization for storm water discharges under the DEQ General Permit OKR10 For Storm Water Discharges From Construction Activities Within the State of Oklahoma, issued September 13, 2007, must:

A. Submit an NOI within 90 days of the effective date of this permit. If the permittee is eligible to submit an NOT (e.g., construction is finished and final stabilization has been achieved) before the 90th day, a new NOI is not required to be submitted. Operators must remain in compliance with existing requirements of General Permit OKR10, issued September 13, 2007, until a new authorization is received or an NOT is submitted.

B. Update the SWP3 to comply with the requirements of this permit within 90 days after the effective date of this permit.

C. Pay the applicable application fee and annual permit fee established in OAC 252:606 (located on DEQ's website at http://www.deq.state.ok.us/rules/606.pdf ).

**2.1.5.** Operators of on-going construction projects as of the effective date of this permit that did not receive authorization to discharge under the DEQ General Permit OKR10 issued September 13, 2007, who wish to discharge under this permit, must submit an NOI and obtain authorization under this permit. An SWP3 must be developed to comply with the requirements of this permit.

## *2.2 Contents of Notice of Intent (NOI)*

The NOI form shall include the following information:

**2.2.1.** Indication of whether you are modifying or renewing your NOI;

**2.2.2.** The name, address, E-mail address, and telephone number of the operator filing the NOI for permit coverage;

**2.2.3**. The name (or other identifier), address, county, and latitude/longitude of the construction project or site;

**2.2.4.** The name of the receiving water(s);

**2.2.5.** Indication of whether your receiving water is included on the DEQ's 303(d) list of impaired waters;

**2.2.6.** Indication of whether your discharge will be consistent with the conditions and requirements of EPA approved or established TMDLs or watershed plans;

**2.2.7.** Brief description of the purpose of the project (i.e. residential subdivision, commercial building, road and/or bridges, wind farm, etc.).

**2.2.8.** Indication of whether your site is a part of a larger common plan of development or sale?

**2.2.9**. Estimates the number of acres of the site on which soil will be disturbed;

**2.2.10**. Based on the instructions in Part 11 and Addendum A, determination of whether the proposed construction site or land disturbing activity is within the specified corridor of a Federal or State Aquatic Resources of Concern. The applicant shall certify permit eligibility, in Endangered Species areas, by selecting a, b, c, d, or e of Part 1.3.2.E.2; and

**2.2.11**. The applicant shall certify if this company/corporation is registered with the Secretary of State of Oklahoma, and if an SWP3 has been prepared for this facility.

## *2.3 Where To Submit*

NOIs must be signed in accordance with Part 6.7., and sent to the following address: Department of Environmental Quality, Environmental Complaints and Local Services, Storm Water Unit,707 North Robinson, P.O. Box 1677, Oklahoma City, OK 73101-1677, or Fax to (405) 702-6226.

## *2.4 Modification of an NOI*

After issuance of an authorization, an amended NOI may be submitted by a permittee if circumstances change (e.g. the area to be disturbed has changed from 5 acres to 7 acres). The amended NOI shall include the facility's assigned permit number and request a change. The original authorization number will be retained. The DEQ will provide an acknowledgement by mail or e-mail that the amended NOI has been received. Permittees must update their SWP3s to reflect the modification.

## *2.5 SWP3 Submittal*

You must submit a copy of your SWP3 along with your signed NOI if any of these conditions apply:

**2.5.1.** Any area of your construction site or support activity is located within the watershed of an Outstanding Resource Water (see definition in Part 9 and Addendum F Outstanding Resource Waters);

**2.5.2.** Any area of your construction site or support activity is located within an Aquatic Resources of Concern identified in Addendum A;

**2.5.3.** The area to be disturbed on your construction site is forty (40) acres or more.

# Part 3 Special Conditions and Effluent Limitations

## *3.1 Prohibition on Non-Storm Water Discharges*

**3.1.1.** Except as provided in Parts 1.3.1.B or 1.3.2 and 3.1.2 or 3.1.3, all discharges covered by this permit shall be composed entirely of storm water associated with construction activity;

**3.1.2.** Discharges of material other than storm water that are in compliance with an OPDES permit (other than this permit) issued for that discharge may be discharged or mixed with discharges authorized by this permit.

**3.1.3.** The non-storm water discharges listed in Part 1.3.1.C. of the permit are authorized by this permit provided the non-storm water component of the discharge is in compliance with Part 4.5.16 (non-storm water discharges).

**3.1.4.** This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

## *3.2 Releases in Excess of Reportable Quantities*

The discharge of hazardous substances or oil in the storm water discharge(s) from a facility shall be prevented or minimized in accordance with the applicable SWP3 for the facility. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302.

Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302, occurs during a 24 hour period:

**3.2.1.** *Reporting a Reportable Spill:* The permittee is required to notify the National Response Center (NRC) (800-424-8802 in Washington, DC) in accordance with the requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302, and the DEQ Hotline (800-522-0206 statewide) as soon as the discharge is discovered.

**3.2.2.** *Storm Water Pollution Prevention Plan Requirements*: The SWP3 required under this permit must be modified within 14 calendar days of knowledge of the release to provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

## *3.3 Non Numeric Technology Based Effluent Limitations*

The storm water control requirements in this part are the technology-based effluent limitations that apply to all discharges from construction sites eligible for coverage under this permit. These requirements apply the national effluent limitations guidelines and new source performance standards found at 40 CFR Part 450.

### 3.3.1. Erosion and Sediment Control Requirements

You must design, install and maintain erosion and sediment that minimize the discharge of pollutants from earth-disturbing activities. To meet this requirement, you must comply with the requirements in this Part.

- Area of Disturbance. You are required to minimize the amount of soil exposed during construction activities. You are also subject to the deadlines for temporarily and/or permanently stabilizing exposed portions of your site pursuant to Part 3.3.2.

- Design Requirements. You must account for the following factors in designing your stormwater controls:

  i. The expected amount, frequency, intensity, and duration of precipitation;

  ii. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. If any stormwater flow will be channelized at your site, you must design stormwater controls to control both peak flowrates and total stormwater volume to minimize erosion at outlets and to minimize downstream channel and streambank erosion; and

  iii. The range of soil particle sizes expected to be present on the site.

You must direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers established under Parts 1.3.2.E and 3.3.1.A, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.

A. *Protection of Surface Water*: Natural Buffers and Equivalent Sediment Controls.

In order to minimize sediment discharges, if any waters of the State are located on or immediately adjacent to your site, you must maintain at least fifty (50) feet of natural buffer zone, as 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 unless 100 feet of natural buffer is required by Part 1.3.2.E. There are exceptions from this requirement for water crossings, limited water access, and stream restoration authorized under a CWA Section 404 permit. Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in this part, unless you will remove portions of the preexisting development.

Where some natural buffer exists but portions of the area within 50 feet of the surface water are occupied by preexisting development disturbances, you may refer to Addendum I (Buffer Guidance) for sediment control alternatives. Additionally, this requirement is not intended to interfere with any other ordinance, or regulation, statute or other provision of law.

B. *Install Perimeter Controls as following*:

1. Installation Requirements: You must install sediment controls along those perimeter areas of your site that will receive stormwater from earth-disturbing activities. For linear projects with rights-of- way that restrict or prevent the use of such perimeter controls, you must maximize the use of these controls where practicable and document in your SWP3 why it is impracticable in other areas of the project.

2. Maintenance Requirements: You must remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.

C. *Minimize Sediment Track-Out*. You must minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles exiting your construction site. To comply with this requirement, you must:

1. Restrict vehicle use to properly designated exit points;

2. Use appropriate stabilization techniques at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit;

3. Where necessary, use additional controls to remove sediment from vehicle tires prior to exit; and

4. Where sediment has been tracked-out from your site onto the surface of off-site streets, other paved areas, and sidewalks, you must remove the deposited sediment by the end of the same work day in which the trackout occurs or by the end of the next work day if track-out occurs on a non-work day. You must remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping trackedout sediment into any stormwater conveyance (unless it is connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water.

D. *Control Discharges from Stockpiled Sediment or Soil*. For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

1. Locate the piles outside of any natural buffers established under Parts 1.3.2.E or 3.3.1.A and physically separated from other stormwater controls implemented in accordance with Part 3.3.1;

2. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier;

3. Where practicable, provide cover or appropriate temporary stabilization to avoid direct contact with precipitation or to minimize sediment discharge;

4. Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water; and

5. Unless infeasible, contain and securely protect from wind.

E. *Minimize Dust*. In order to avoid pollutants from being discharged into surface waters, to the extent feasible, you must minimize the generation of dust through the appropriate application of water or other dust suppression techniques.

F. *Minimize the Disturbance of Steep Slopes*. You must minimize the disturbance of steep slopes (i.e., slopes of 40% or greater). If it is not feasible to avoid disturbance of steep slopes, you must:

1. Divert concentrated or channelized flows of stormwater away from and around areas of disturbance on steep slopes;

2. Use specialized erosion and sediment controls for steep slopes, such as temporary and permanent seeding with soil binders, erosion control blankets, surface roughening, reducing the continuous slope length with terracing or diversions, gradient terraces, interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, level spreaders, check dams, seep berms, and triangular silt dikes; and

3. Use stabilization practices designed to be used on steep slopes. You must comply with the stabilization requirements as required in Part 3.3.2.

G. *Preserve Topsoil*. You must preserve native topsoil on your site, unless infeasible; you should stockpile and reuse it in areas that will be stabilized with vegetation if applicable.

H. *Minimize Soil Compaction*. In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed, you must either:

1. Restrict vehicle/equipment use. Restrict vehicle and equipment use in these locations to avoid soil compaction; or

2. Use soil conditioning techniques. Prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary.

I. *Protect Storm Drain Inlets*. If you discharge to any storm drain inlet that carries stormwater flow from your site directly to surface water (and it is not first directed to a sediment basin, sediment trap, or similarly effective control), and you have the authority to access the storm drain inlet, you must comply with the following requirements:

1. Installation Requirements. Install inlet protection measures that remove sediment from your discharge prior to entry into the storm drain inlet.

2. Maintenance Requirements. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, you must remove the deposited sediment by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

J. *Constructed Stormwater Conveyance Channels*: Design channels to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. Minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

K. *Sediment Basins*. If you install a sediment basin, you must comply with the following:

1. Design requirements. Provide storage for either the calculated volume of runoff from a 2-year, 24-hour storm, or 3,600 cubic feet per acre drained;

2. When discharging from the sediment basin, utilize outlet structures that withdraw water from the surface in order to minimize the discharge of pollutants, unless infeasible;

3. Prevent erosion of the sediment basin using stabilization controls (e.g., erosion control blankets), and the inlet/outlet using erosion controls and velocity dissipation devices; and

4. Sediment basins must be situated outside of surface waters and any natural buffers established under Parts 1.3.2.E and 3.3.1.A.

L. *Dewatering Practices*. You are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation associated with a construction activity, unless such waters are first effectively managed by appropriate controls. Uncontaminated dewatering water can be discharged without being routed to a control. You must also meet the following requirements for dewatering activities:

1. Do not discharge visible floating solids or foam;

2. Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering wastewater is found to contain these materials;

3. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area;

4. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part3.3.1.J;

5. With backwash water, either haul away for disposal or return it to the beginning of the treatment process; and

6. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer’s specifications.

### 3.3.2. Stabilization Requirements

You are required to stabilize exposed portions of your site in accordance with the requirements of this Part.

*A. Deadlines for Initiating and Completing Stabilization.*

1. Deadline to initiate stabilization. You must initiate stabilization measures immediately whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.

   The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this provision, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

2. Deadline to complete stabilization activities. As soon as practicable, but no later than 14 calendar days after the initiation of soil stabilization measures consistent with Part 3.3.2.A.1, you are required to have completed:

   a. For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or

   b. For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

   If you discharge to an impaired water, or Outstanding Resource Water (ORW), or Aquatic Resource of Concern (ARC), you are required to complete the stabilization activities specified in Part 3.3.2.A.2.a and b. within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

B. *Criteria for Stabilization*. To be considered adequately stabilized, you must meet the criteria below depending on the type of cover you are using, either vegetative or non-vegetative.

1. Vegetative Stabilization. For both temporary and final stabilization, if you are using vegetative cover to stabilize an exposed portion of your site, you must comply with one of the following criteria:

   a. Provide an established uniform perennial vegetative cover (e.g., evenly distributed without large bare areas), which covers 70% or more of the density of coverage that was provided by vegetation prior to commencing earth-disturbing activities. When background vegetation covered less than 100% of the ground prior to commencing earth-disturbing activities, the 70% coverage criteria is adjusted as in following example: if vegetation covered 50% of the ground prior to construction, then the requirement would be to provide a total vegetative cover at final stabilization of 70% of 50% (0.70 X 0.50 = 0.35), or 35% of the site.

   b. Immediately after seeding or planting the area to be vegetative stabilized, to the extent necessary to prevent erosion on the seeded or planted area, you must select, design, and install non-vegetative erosion controls that provide cover (e.g., mulch, rolled erosion control products) to the area while vegetation is becoming established.

2. If you are using non-vegetative controls (e.g., hydromulch, erosion control blankets, riprap, geotextiles, and gabions) to stabilize exposed portions of your site, or if you are using such controls to temporarily protect areas that are being vegetatively stabilized, you must provide effective non-vegetative cover to stabilize any such exposed portions of your site.

### 3.3.3. Pollution Prevention Requirements

You are required to design, install, implement and maintain effective pollution prevention measures in order to minimize or prevent the discharge of pollutants. To meet this requirement, you are required to:

- Eliminate certain pollutant discharges from your site (see Part 3.3.3.A);
- Properly maintain all pollution prevention controls (see Part 3.3.3.B); and
- Comply with pollution prevention standards for pollutant-generating activities that occur at your site (see Part 3.3.3.B).

A. *Prohibited Discharges*. You are prohibited from discharging the following from your construction site:

1. Wastewater from the washout of concrete, unless managed by an appropriate control as described in Part 3.3.3.B.4;
2. Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, unless managed by an appropriate control as described in Part 3.3.3.B.4;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps, detergents or solvents used in vehicle and equipment washing;
5. Toxic or hazardous substances from a spill or other release.

B. *Maintenance Requirements.* You must ensure that all pollution prevention controls installed in accordance with this Part remain in effective operating condition and are protected from activities that would reduce their effectiveness. You must inspect all pollutant-generating activities and pollution prevention controls in accordance with your inspection frequency requirements in Part 4.5.13.B. and document your findings in accordance with Part 4.5.13.E. if you find that controls need to be replaced, repaired, or maintained, you must make the necessary repairs or modifications in accordance with the following:

*1. General Maintenance Requirements.* You must initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

*2. Washing of Equipment or Vehicles*

a. You must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of washing;

b. To comply with the prohibition in Part 3.3.3.A.4 for storage of soaps, detergents, or solvents, you must provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these detergents from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas.

*3. Storage, Handling, and Disposal of Construction Products, Materials and Wastes.* You must minimize the exposure to stormwater of any of the products, materials, or wastes specified below that are present at your site by complying with the requirements in this Part. To ensure you meet this requirement, you must:

a. For building products: In storage areas, provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these products from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas.

b. For pesticides, herbicides, insecticides, fertilizers, and landscape materials:

(1). In storage areas, provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these chemicals from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas; and

(2). Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.

c. For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:

(1) To comply with the prohibition in Part 3.3.3.A.3 store chemicals in water-tight containers, and provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these containers from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., spill kits), or provide secondary containment (e.g., spill berms, decks, spill containment pallets); and

(2) Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

d. For hazardous or toxic waste (e.g., paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids):

(1). Separate hazardous or toxic waste from construction and domestic waste;

(2). Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, or local requirements;

(3). Store all containers that will be stored outside within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in covered areas or having a spill kit available on site);

(4). Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended methods of disposal and in compliance with federal, state, and local requirements; and

(5). Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.

e. For construction and domestic waste (e.g., packaging materials, scrap construction materials , masonry products, timber, pipe and electrical cuttings, plastics, Styrofoam, concrete, and other trash or building materials): Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes. In addition, you must:

(1). On work days, clean up and dispose of waste in designated waste containers; and

(2). Clean up immediately if containers overflow.

f. For sanitary waste: Position portable toilets so that they are secure and will not be tipped or knocked over.

*4. Washing of Applicators and Containers Used for Paint, Concrete, or Other Materials.*

To comply with the prohibition in Parts 3.3.3.A.1 and 2, you must provide an effective means of eliminating the discharge of water from the washout and cleanout of stucco, paint, concrete, form release oils, curing compounds, and other construction materials. To comply with this requirement, you must:

a. Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation;

b. Handle washout or cleanout wastes as follows:

(1). Do not dump liquid wastes in storm sewers:

(2). Dispose of liquid wastes in accordance with applicable requirements in Part 3.3.3.B.3; and

(3). Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 3.3.3.B.3; and

c. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and, to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.

C. Emergency Spill Notification. You are prohibited from discharging toxic or hazardous substances from a spill or other release, consistent with Part 3.3.3.A.5. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the areas of Oklahoma, call (800)522-0206 as soon as you have knowledge of the discharge. You must also, within seven calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. Local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

D. Fertilizer Discharge Restrictions. You are required to minimize discharges of fertilizers containing nitrogen or phosphorus. To meet this requirement, you must comply with the following requirements:

1. Apply at a rate and in amounts consistent with manufacturer's specifications, or document departures from the manufacturer specifications;

2. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;

3. Avoid applying before heavy rains that could cause excess nutrients to be discharged;

4. Never apply to frozen ground;

5. Never apply to stormwater conveyance channels with flowing water; and

6. Follow all other federal, state, tribal and local requirements regarding fertilizer application.

## *3.4 Numeric Limitation and Sampling requirements*

### 3.4.1. Numeric Effluent Limitation and Monitoring Requirements for Asphalt Batch Plants

If you have discharges of stormwater from asphalt batch plants, you must comply with the limitations and monitoring requirement of the following Table 3.1. The numeric effluent limitations in Table 3.1 apply to storm water discharges associated with any activities for asphalt batch plants, not for concrete batch plants.

**TABLE 3.1 NUMERIC EFFLUENT LIMITATIONS FOR ASPHALT BATCH PLANTS**

| Parameter | Limitation | Monitoring Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids | 23 mg/l, daily max.<br>15 mg/l, 30-day avg. | 1/year | Grab |

| | | | |
|---|---|---|---|
| Oil and Grease | 15 mg/l, daily max.<br>10 mg/l, 30-day avg. | 1/year | Grab |
| pH | 6.5-9.0, min. and max. | 1/year | Grab |

If the project is less than one year, you shall collect at least one sample. Also you must comply with quarterly visual monitoring and annual numeric effluent limitation monitoring and document those results as specified in your SWP3 (see Addendum G Additional Requirements for Concrete and Asphalt Batch Plant).

## *3.5 Water Quality Based Effluent Limitations*

Your stormwater discharges must be controlled as necessary to meet applicable water quality standards. Operators seeking coverage under this permit shall not be causing or have the reasonable potential to cause or contribute to a violation of a water quality standard. Where a discharge is already authorized under this permit and is later determined to cause or have the reasonable potential to cause or contribute to the violation of an applicable water quality standard, the Director will notify the operator of such violation(s). The permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and document these actions in the SWP3. If violations remain or re-occur, then coverage under this permit may be terminated by the Director, and an alternative general permit or individual permit may be issued. Compliance with this requirement does not preclude any enforcement activity as provided by the Clean Water Act (CWA) for the underlying violation. If such violation is determined, the Director may require you to:

- Develop a supplemental BMP action plan describing SWP3 modifications in accordance with Part 4.4 to address adequately the identified water quality concerns;
- Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
- Cease discharges of pollutants from construction activity and submit an alternative general permit or individual permit application.

### 3.5.1. Discharges to Waters Identified as Impaired Waters

If you discharge to an impaired water that is impaired for sediment within one (1) stream mile, you are required to comply with the additional requirement in this part.

A. Identify if you discharge to impaired waters. If you discharge to impaired waters, you must indicate so in your NOI and comply with the following requirements in Part 3.5.1.B, C. and D. If you indicate in your NOI that you do not discharge to an impaired water, DEQ may determine, based on additional information, that you are considered to be discharging to an impaired water. If this is the case, you will be notified of DEQ's determination, and be provided with an opportunity to comply with additional requirements as a condition of your permit coverage, consistent with Part 3.5.1.

B. Site inspection requirements. You are required to comply with the following modified inspection requirements:

You must conduct site inspections once every 7 calendar days at a minimum, and within 24 hours of a storm event of 0.5 inches or greater or within 24 hours of a discharge caused by snowmelt,

C. Corrective actions. If the inspection or visual examination results indicate any permit violations, you must implement the corrective actions required in Part 4.5.15. However, a violation would result if you fail to implement the required corrective actions. If you are subject to the numeric limit in Part 3.4 (Table 3.1 for asphalt batch plant) you must implement the monitoring requirement according to Addendum G of this permit. If your sample results indicate that you have exceeded the numeric limit, you must implement the corrective actions according to Part 4.5.15.

D. Stabilization requirements. You are required to comply with the following modified stabilization requirements:

You are required to comply with the stabilization requirements as specified in Part 3.3.2.A.1 and 2 within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

### 3.5.2. Discharges to waters identified as an Outstanding Resource Water (ORW) or Aquatic Resource of Concern (ARC)

If you discharge to waters identified as outstanding resource water (see Addendum F of this permit) or your sites are located within areas identified as an aquatic resource of concern and you are relying on option b in Part 1.3.2.E.2 (see Part 11 and Addendum A of this permit), you must implement inspection, corrective actions and stabilization requirements provided in Part 3.5.1. Also you must comply with the following additional requirements:

A. In order to minimize sediment discharges, if any ORW or ARC is located on or immediately adjacent to your site, you must ensure that a vegetated buffer zone of at least 100 feet is retained or successfully established/planted between the area disturbed and all perennial or intermittent streams. A vegetated buffer zone of at least 50 feet must be retained or successfully established/planted between the areas disturbed during construction and all ephemeral streams or drainages. If the nature of the construction activity or the construction site makes a buffer impossible, you must provide equivalent controls. Use Addendum I (Buffer Guidance) for information to assist you in developing equivalent controls. There are exceptions from this requirement for water crossings, limited water access, and stream restoration authorized under a CWA Section 404 permit.

B. For drainage locations serving five (5) or more acres disturbed at one time, a temporary (or permanent) sediment basin and/or sediment traps shall be used to minimize sediment discharges within the areas of the Outstanding Resource Waters or Aquatic Resources of Concern. You may use the information in Part 3.3.1.K and 4.5.11.A.3 to assist you in complying with this requirement.

For common drainage locations that serve an area with five (5) or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from a 2 year, 24 hour storm from each disturbed acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin.

In determining whether installing a sediment basin is attainable, you may consider factors such as site soils, slope, available area on site, etc. In any event, you must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. For drainage locations that serve five (5) or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not attainable, smaller sediment basins and/or sediment traps should be used. Where neither the sediment basin nor equivalent controls are attainable due to site limitations, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area and for those side slope boundaries deemed appropriate as dictated by individual site conditions. DEQ encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

C. For any portion of the site that discharges to an ORW or ARC, instead of the inspection frequency specified in Part 4.5.13.B, you must conduct inspections within 7 calendar days and within 24 hours of the occurrence of a storm event of 0.5 inches or greater.

D. For initiating and completing stabilization, you are required to complete the stabilization activities within seven (7) calendar days after the temporary or permanent cessation of earth-disturbing activities.

## *3.6 Responsibilities of Operators*

Permittees may meet one or both of the operational control components in the definition of "operator" found in Part 9. Either Parts 3.6.1 or 3.6.2 or both will apply depending on the type of operational control exerted by an individual permittee.

3.6.1. Operational Control over Construction Plans and Specifications

If you have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g., developer, owner, or operator), you must ensure that:

A. The project specifications meet the minimum requirements of Part 4 (Storm Water Pollution Prevention Plans), and all other applicable permit conditions;

B. The SWP3 indicates the areas of the project where you have operational control over project specifications (including the ability to make modifications in specifications), and ensure all other permittees implementing portions of the SWP3 who may be impacted by any changes to the plan are notified of such modifications in a timely manner; and

C. The SWP3 for portions of the project where you are the operator indicates the name and DEQ permit number for parties with day-to-day operational control of those activities necessary to ensure compliance with the SWP3 or other permit conditions. If these parties have not been identified at the time the SWP3 is initially developed, the permittee with operational control over project specifications shall be considered to be the responsible party until such time as the authority is transferred to another party (e.g., general contractor) and the plan updated.

3.6.2. Operational Control over Day-to-Day Activities

If you have operational control over day-to-day activities, you must ensure that:

A. The SWP3 for portions of the project where you are the operator meets the minimum requirements of Part 4 (SWP3) and identifies the parties responsible for implementation of control measures identified in the plan;

B. The SWP3 indicates areas of the project where you have operational control over day-to-day activities; and.

C. The SWP3 for portions of the project where you are the operator indicates the name and OPDES permit number of the party(ies) with operational control over project specifications (including the ability to make modifications in specifications).

3.6.3. Responsibilities of Operators at a Larger Common Plan of Development

The criteria within the definition of "Operator" allow for more than one entity to be active at a construction site that is considered a larger common plan of development. For example, the developer and one or more builders may be engaged in construction activity within a residential subdivision at the same time, and any or all may be considered operators as defined by this permit. Where it is determined to be more efficient or desirable, this permit allows for all construction activities at a larger common

plan of development to be covered by a single permit and the SWP3 held by a Primary Operator, usually the developer.

For the purposes of this provision, "Primary Operator" for a construction project that has more than one operator means an operator who has chosen to obtain coverage under this permit for all discharges from all earth-disturbing activities at a construction site that is considered to be a larger common plan of development even if such discharges originate from portions of the site operated by another entity, such as a builder or utility contractor.

For the purposes of this provision, "Secondary Operator" for a construction project that has more than one operator means an operator who has elected to have the discharges from earth-disturbing activities on a portion of a larger common plan of development to which he/she has operational control covered by the permit and SWP3 held by the Primary Operator rather than obtaining separate permit coverage for those discharges. If an operator who may be considered a Secondary Operator under this provision elects not to have their discharges from earth-disturbing activities covered by the Primary Operator's permit, this operator must obtain separate permit coverage.

A. Responsibilities of the Primary Operator

The Primary Operator is ultimately responsible for the runoff from the perimeter of the development. Regardless of the reason for the runoff, the Primary Operator is responsible for ensuring sufficient overall controls for the development. The Primary Operator is responsible for obtaining permit coverage for the development and for developing and maintaining an SWP3 for the development. The Primary Operator shall identify all Secondary Operators in the SWP3 and identify the specific areas of the development where they will be active. The Primary Operator shall ensure that Secondary Operators are aware of all SWP3 requirements, BMPs and other control measures that apply to their operations. Contractor Certifications (Part 4.6) or similar written instruments should be used to document this notification.

The Primary Operator shall not terminate permit coverage until at least one of the following conditions has been met:

1. All construction, including landscaping and lot development, has been completed, and final stabilization has been achieved.
2. All lots are sold and developed, and there are no temporary common controls for subdivision outfalls, i.e. sediment basins, large sediment traps, check dams, etc.
3. All construction activity by the Primary Operator is completed, final stabilization has been achieved on all areas under the control of the Primary Operator, and the remaining undeveloped lots have been sold to another operator or operators that have obtained separate permit coverage. Copies of the new NOIs for all remaining operators must be submitted with the NOT of the Primary Operator.

B. Responsibilities of Secondary Operators

Secondary Operators must be thoroughly familiar with and adhere to provisions of the permit, the NOI, the SWP3 and all BMPs and control measures which apply to their areas of activity. Secondary Operators must notify the Primary Operator prior to beginning any earth-disturbing activity and execute any written notification required by the Primary Operator. Secondary Operators must avoid damaging or interfering with the effectiveness of any control measure on the construction site or notify the Primary Operator if such occurs.

3.6.4 Responsibilities of the Operator of Utility Installation

If you have operational control over utility installation (e.g., telephone, electric, gas, cable TV, etc.), your activities must be covered under an SWP3, either a "joint SWP3" for the larger common plan of development or sale, or your own SWP3. You are responsible for maintenance of the SWP3 on the areas disturbed by your activities. You must ensure the protection of endangered species, implementation of BMPs, and final stabilization requirements. This applies to utility companies and their subcontractors. If you are a contractor and do not meet the definition of "operator" (see Part 9.16), you are not required to submit an NOI for the permit coverage. You may be covered as a secondary operator, by a "contractor certification" or similar arrangement (see Addendum D of the permit).

# Part 4 Storm Water Pollution Prevention Plans (SWP3)

## *4.1 Storm Water Pollution Prevention Plan (SWP3)*

4.1.1. An SWP3 must be prepared prior to submission of an NOI as required in Part 2 of the permit. At least one SWP3 must be developed for each construction project or site covered by this permit. For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWP3 is encouraged. Individual operators at a site may, but are not required to, develop separate SWP3s that cover only their portion of the project provided reference is made to other operators at the site. In instances where there is more than one SWP3 for a site, coordination must be conducted between the permittees to ensure the storm water discharge controls and other measures are consistent with one another (e.g., provisions to protect listed species and critical habitat).

4.1.2. SWP3s shall be prepared in accordance with good engineering practices. Use of a licensed professional engineer (PE) for SWP3 preparation is not required by the permit. However, if any part of the SWP3 involves the practice of engineering[5], then those engineering practices and designs are required to be prepared by a licensed professional engineer. The SWP3 shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the construction site. The SWP3 shall describe and ensure the implementation of practices that will be used to reduce the pollutants in storm water discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of this permit.

4.1.3. When developing SWP3s, applicants must follow the procedures in Part 11 of this permit to determine whether listed endangered or threatened species or critical habitat would be affected by the applicant's storm water discharges or storm water discharge-related activities. Any information on whether listed species or critical habitats are found in proximity to the construction site must be included in the SWP3. Any terms or conditions that are imposed under the eligibility requirements of Parts 1.3.2.E, 3.5.2. and 11 of this permit to protect listed species or critical habitat from storm water discharges or storm water discharge-related activity must be incorporated into the SWP3. Permittees must implement the applicable provisions of the SWP3 required under this part as a condition of this permit.

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[5] Statutes and Rules of Oklahoma State Board of Licensure for Professional Engineers & Land Surveyors, Section 472.2 "Definitions" states "practice of engineering means any service or creative work, the adequate performance of which requires engineering education, training and experience in the application of special knowledge of the mathematical, physical and engineering sciences to such services or creative work as consultation, investigation, evaluation, planning and design of engineering works and systems, planning the engineering use of land and water, teaching of advanced engineering subjects or courses related thereto, engineering research, engineering surveys, engineering studies, and the inspection or review of construction for the purposes of assuring compliance with drawings and specifications; any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, and industrial or consumer products or equipment of a mechanical, electrical, chemical, environmental, hydraulic, pneumatic or thermal nature, insofar as they involve safeguarding life, health or property, and including such other professional services as may be necessary to the design review and integration of a multidiscipline work, planning, progress and completion of any engineering services."

4.1.4. If your construction site discharges into a receiving water which has been listed on the Clean Water Act 303(d) list of impaired waters, and your discharges contain the pollutant(s) for which the waterbody is impaired, you must document in your SWP3 how the best management practices (BMPs) and other controls selected for your site will control the discharge of the pollutant(s) of concern. If Part 3.5.1 applies to your discharge you must include in your SWP3 the additional requirements specified in that part.

If a TMDL or watershed plan has been approved for the waterbody, you must also describe how your SWP3 is consistent with any TMDL or watershed plan requirements applicable to your discharge. If a TMDL has not yet been approved and the proposed discharge meets the eligibility requirements of Part 1.3, you must describe how the BMPs and other controls selected for your SWP3 will reduce the discharge of the pollutant(s) of concern.

The 303(d) list of Impaired Waters in Oklhoma can be found in Appendix C of the Integrated Report on the DEQ webpage at http://www.deq.state.ok.us/WQDnew/305b_303d/index.html, or the DEQ GIS Map and Data Viewer at http://maps.scigis.com/deq_wq/.

Approved TMDL reports or watershed plans can be downloaded from the DEQ website at http://www.deq.state.ok.us/wqdnew/tmdl/index.html

4.1.5. If the industrial activities associated with a concrete or asphalt batch plant are directly related to your construction site and are covered under this permit, you must develop the SWP3 for such industrial activities according to Addendum G (Additional Requirements for Concrete and Asphalt Batch Plants) of this permit.

## *4.2 Deadlines for Plan Preparation and Compliance*

The SWP3 shall:

4.2.1. Be completed prior to submitting your NOI. If necessary, you must update the SWP3 as appropriate during construction.

4.2.2. Provide for compliance with the terms and schedule of the SWP3 beginning with the initiation of construction activities.

## *4.3 Signature, Plan Review and Making Plans Available*

4.3.1. The SWP3 shall be signed in accordance with Part 6.7, and be retained on-site at the facility that generates the storm water discharge in accordance with Part 5 (Retention of Records) of this permit.

4.3.2. The permittee shall post a notice near the main entrance of the construction site with the following information:

A. The OPDES permit number for the project or a copy of the NOI if a permit number has not yet been assigned;

B. The name and telephone number of a local contact person;

C. A brief description of the project; and

D. The location of the SWP3 if the site is inactive or does not have an on-site location to store the plan.

If posting this information near a main entrance is infeasible due to safety concerns, the notice shall be posted in a local public building. If the construction project is a linear construction project (e.g., pipeline, highway, etc.), the notice must be placed in a publicly accessible location near where construction is actively underway and moved as necessary. This permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that permittees allow members of the public access to a construction site.

4.3.3. The permittee shall make SWP3s available upon request to**:** the Director of the DEQ and/or any State, Federal, or local agency approving sediment and erosion plans, grading plans, or storm water management plans; the U.S. Fish and Wildlife Service or the Oklahoma Department of Wildlife Conservation; local government officials; or the operator of a municipal separate storm sewer receiving discharges from the site. The copy of the SWP3 that is required to be kept on-site or locally available must be made available to the Director for review at the time of an on-site inspection. Also, in the interest of public involvement, the DEQ encourages permittees to make their SWP3s available to the public for viewing during normal business hours.

4.3.4. The Director may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of this permit that are not being met by the SWP3 as well as those requiring modification in order to meet the minimum requirements of this Part. Within seven (7) calendar days of receipt of such notification from the Director (or as otherwise provided by the Director), the permittee shall make the required changes to the SWP3 and shall submit to the Director a written certification that the requested changes have been made. The Director may take appropriate enforcement action for the period of time the permittee was operating under a plan that did not meet the minimum requirements of this permit.

## *4.4 Keeping Plans Current*

The permittee must amend the SWP3 whenever:

4.4.1. There is a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to the waters of the State that has not been addressed in the SWP3; or

4.4.2. Inspections or investigations by site operators, local, State or Federal officials indicate the SWP3 is proving ineffective in eliminating or significantly minimizing pollutants from sources identified under Part 4.5.6.B of this permit, or is otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity.

## *4.5 Contents of Plan*

The SWP3 shall include the following information, at a minimum.

### 4.5.1. Stormwater Team

Each operator, or group of multiple operators, must assemble a "stormwater team," which is responsible for overseeing the development of the SWP3, any later modifications to it, and for compliance with the requirements in this permit. The SWP3 must identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities. Each member of the stormwater team must have ready access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWP3, and other relevant documents or information that must be kept with the SWP3.

### 4.5.2. Nature of Construction Activities

The SWP3 must describe the nature of the construction activity, including the size of the property (in acres), the total area expected to be disturbed by the construction activities (in acres), construction support activity covered by this permit, and the maximum area expected to be disturbed at any one time.

### 4.5.3. Identification of Other Site Operators

The SWP3 must include a list of all other operators who will be engaged in construction activities at your site, and the areas of the site over which each operator has control.

### 4.5.4. Sequence and Estimated Dates of Construction Activities

The SWP3 must include a description of the intended sequence of major construction activities, including a schedule of the estimated start dates and the duration of the activity, for the following activities:

A. Installation of stormwater control measures, and when they will be made operational, including an explanation of how the sequence and schedule for installation of stormwater control measures complies with Part 3.3.1 and of any departures from manufacturer specifications;

B. Commencement and duration of earth-disturbing activities, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization;

C. Cessation, temporarily or permanently, of construction activities on the site, or in designated portions of the site;

D. Final or temporary stabilization of areas of exposed soil. The dates for stabilization must reflect the applicable deadlines to which you are subject in Parts 3.3.2 and 3.5.2.C; and

E. Removal of temporary stormwater conveyances/channels and other stormwater control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities.

### 4.5.5. Site Map

The SWP3 must contain a legible site map or series of maps showing the following features of your project:

A. Boundaries of the property and of the locations where construction activities will occur, including:

1. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;

2. Approximate slopes before and after major grading activities. Note areas of steep slopes (i.e., greater than 40%);

3. Locations where sediment, soil, or other construction materials will be stockpiled;

4. Locations of any crossings of surface waters;

5. Designated points on the site where vehicles will exit onto paved roads;

6. Locations of structures and other impervious surfaces upon completion of construction; and

7. Locations of construction support activity areas covered by this permit.

B. Locations of all waters of the state within one mile of the site, including wetlands that exist within or in the immediate vicinity of your site. Indicate which waterbodies are listed as impaired for sediment, and which are identified by the state as Aquatic Resources of Concern or Outstanding Resource Water;

C. The boundary lines of any natural buffers (i.e., either the 100 foot or 50-foot buffer or other buffer areas retained on site) consistent with Parts 1.3.2.E, 3.3.1.A.and 3.5.2.A;

D. Topography of the site, existing vegetative cover (e.g., forest, pasture, pavement, structures)**,** and drainage pattern(s) of stormwater and authorized non-stormwater flow onto, over, and from the site property before and after major grading activities;

E. Stormwater and allowable non-stormwater discharge locations, including:

1. Locations of any storm drain inlets on the site and in the immediate vicinity of the site; and

2. Locations where stormwater or allowable non-stormwater will be discharged to waters of the state on or near the site.

F. Locations of all potential pollutant-generating activities identified in Part 4.5.6.A below;

G. Locations of stormwater control measures; and

H. If applicable, sampling locations if the project is subject to the Part 3.4.1 numeric limitation (for asphalt batch plant). Also indicate the sampling location(s) and all discharge points, and indicate which discharge points are considered "substantially identical".

### 4.5.6. Construction Site Pollutants

The SWP3 must identify all pollutants that you expect to be found at your site and that could be discharged from the site. The SWP3 must also list and describe the activities that are expected to generate these pollutants (or "pollutant-generating activities"). You must provide the following documentation in order to demonstrate your compliance with the permit requirements:

A. Pollutant-generating activities at the site. The SWP3 must include a list and description of all the pollutant-generating activities on your site. Examples of pollutant-generating activities include, but are not limited to; paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations.

B. Pollutants. For each pollutant-generating activity, an inventory of pollutants or pollutant constituents (e.g., sediment, paints, solvents, fuels) associated with that activity, which could be exposed to rainfall, snowmelt, and could be discharged from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges. You must also document any departures form the manufacturer's specifications for applying fertilizers containing nitrogen and phosphorus as required in Part 3.3.3.D.1..

### 4.5.7. A Copy of the Permit Requirements

A copy of this permit and of the signed NOI must be included in your SWP3. You may keep this permit copy electronically and do not submit it to DEQ if you are required to submit your SWP3 for DEQ review (see Part 2.5 SWP3 submittal).

### 4.5.8. Documentation of Measures to Protect Endangered or Threatened Species

The SWP3 must include information on whether listed endangered or threatened species or critical habitat are found in proximity to the construction activity, and whether such species may be affected by the applicant's storm water discharges or storm water discharge-related activities. You must describe and implement the measures necessary to protect these endangered species and threatened habitat in the SWP3, including any equivalent sediment controls specified in Addendum I (Buffer Guidance) or others (see Part 11).

### 4.5.9. Documentation of Federal, State or local historic preservation laws

The SWP3 must include information on whether storm water discharges or storm water discharge-related activities would have an effect on a property that is protected by Federal, State, or local historic preservation laws along with any written agreements reached with the State services (see Part 10) to mitigate those effects.

### 4.5.10. Documentation of Water Quality Impaired Waters

The SWP3 must include information on whether storm water discharges or storm water discharge-related activities would have an effect on water quality impaired receiving waters. The permittee must describe how the BMPs and other controls selected for the site will reduce and avoid the discharges of pollutants of concern into any 303(d) impaired waters, including requirements of Part 4.1.4. The permittee must describe and implement any measures necessary to meet the requirements of an

approved TMDL or watershed plan and/or associated implementation schedule established in the TMDL or watershed plan. Monitoring and reporting of discharge quality may also be required if necessary to ensure compliance with an approved TMDL or watershed plan.

### 4.5.11. Controls to Reduce Pollutants

Each SWP3 shall include a description of all control measures (i.e., structural and non-structural BMPs) that will be implemented as part of the construction activity to control pollutants in storm water discharges. The SWP3 must clearly describe for each major activity identified in Part 4.5.2: appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and which permittee is responsible for implementation (e.g., perimeter controls for one portion of the site will be installed by Contractor A after the clearing and grubbing necessary for installation of the pollution prevention measure, but before the clearing and grubbing for the remaining portions of the site; and perimeter controls will be actively maintained by Contractor B until final stabilization of those portions of the site up-gradient of the perimeter control; and temporary perimeter controls will be removed by the permittee after final stabilization). The description and implementation of control measures shall address the following minimum components.

**A. Stormwater Control Measures.**

1. *Stormwater control measures to be used during construction activity.* You may utilize a national BMP menu to select appropriate control measures for your site. The national menu of Stormwater Best Management Practices can be found on EPA's website at http://cfpub.epa.gov/npdes/stormwater/menuofbmps

   a. The construction-phase erosion and sediment controls should be designed to retain sediment on site to the extent practicable.

   b. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee must replace or modify the control for site situations.

   c. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impact (e.g., fugitive sediment in street could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).

   d. Sediment must be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%.

   e. Litter, construction debris, and construction chemicals (e.g., fuel, hydraulic fluids, etc.) exposed to storm water shall be prevented from becoming a pollutant source for storm water discharges (e.g. screening outfalls or picked up daily).

   f. Offsite material storage areas (also including overburden and stockpiles of dirt, borrow areas, etc.) used solely by the permitted project are considered a part of the project and shall be addressed in the SWP3.

   g. Many applications of straw and hay bales for erosion and sediment control are proving ineffective, maintenance-intensive and expensive. Therefore, straw or hay bales as BMP controls within the State are not allowed. Alternatives to straw or hay bales can be found on EPA's website at http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=122&minmeasure=4

2. *Stabilization Practices:* The SWP3 must describe the specific vegetative and/or non-vegetative stabilization practices that will be used to achieve temporary and final stabilization on the exposed portions of your site as required in Part 3.3.2.

3. *Structural Practices:* The SWP3 must include a description of structural practices to divert flows from exposed soils, retain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Structural practices may include but are not limited to: silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Placement of structural practices in floodplains should be avoided to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

   a. For common drainage locations that serve an area with ten (10) or more acres disturbed at one time (or 5 acres if required by Part 3.5.2), a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from a 2 year, 24 hour storm from each disturbed acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin.

      In determining whether installing a sediment basin is attainable, the permittee may consider factors such as site soils, slope, available area on site, etc. In any event, the permittee must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. For drainage locations that serve ten (10) or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not attainable, smaller sediment basins and/or sediment traps should be used. Where neither the sediment basin nor equivalent controls are attainable due to site limitations, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area and for those side slope boundaries deemed appropriate as dictated by individual site conditions. The DEQ encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

   b. For drainage locations serving less than 10 acres, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless a sediment basin providing storage for a calculated volume of runoff from a 2 year, 24 hour storm or 3,600 cubic feet of storage per acre drained is provided. The DEQ encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

   c. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel when necessary to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. no significant changes in the hydrological regime of the receiving water).

**B. Pollution Prevention**

1. *Spill Prevention and Response*. The SWP3 must describe procedures that you will follow to prevent and respond to spills and leaks, including:

   a. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for the detection and response to spills or leaks; and

   b. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 3.2 and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available.

      You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an OPDES permit for the construction activity, provided that you keep a copy of that other plan onsite.

2. *Waste Management*

   The SWP3 must describe procedures for how you will handle and dispose of all wastes generated at your site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

**C. Inspection, Maintenance, Corrective Action**

The SWP3 must describe the procedures you will follow for maintaining your stormwater control measures, conducting site inspections, where necessary, taking corrective actions, in accordance with Part 4.5.15 and the maintenance requirements in Part 4.5.12 of this permit. The following information must also be included in your SWP3:

1. Personnel responsible for conducting inspections;
2. The inspection schedules you will be following, which is based on whether your site is subject to Parts 4.5.13, including any higher frequency inspections for any discharges to impaired waters;
3. Any inspection or maintenance checklists or other forms that will be used; and
4. Specific procedures for taking corrective action in accordance with Part 4.5.15.

**D. Monitoring (if applicable)**

If the discharges from the project are subject to the numeric limitations in Part 3.4.1 (for asphalt batch plant) or Addendum G quarterly visual monitoring requirements, the SWP3 must document the procedures you will follow for taking samples or observation consistent with Addendum G, including:

1. Locations where samples will be collected. For linear projects, document which locations are considered substantially identical and why they are substantially identical;
2. Personnel responsible for taking and handling samples, analyzing samples, and recording the results;
3. The normal working hours associated with the project (see Addendum G);
4. Equipment to be used for taking samples and for analysis;
5. Procedures to be followed for ensuring that samples are taken (see Addendum G); and

6. Procedures for notifying and activating your sampling team when a discharge is occurring or is expected to occur.

**E. ApprovedLocal Plans**

Permittees which discharge storm water associated with construction activities must ensure their SWP3 is consistent with requirements specified in applicable sediment and erosion site plans of site permits, or storm water management site plans, or site permits approved by local officials. The SWP3 must be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or storm water management site plans or site permits approved by local officials for which the permittee receives written notice.

### 4.5.12. Maintenance

All erosion and sediment control measures and other protective measures identified in the SWP3 must be maintained in effective operating condition. If site inspections required by Part 4.5.13 identify BMPs that are not operating effectively, maintenance shall be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls. If existing BMPs need to be modified or if additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If maintenance prior to the next anticipated storm event is impracticable, the situation must be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as possible.

### 4.5.13. Inspections

**A. Person(s) Responsible for Inspecting Site**

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person." A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit. An inspection form shall be developed and included in your SWP3.

**B. Frequency of Inspections**

At a minimum, you must conduct a site inspection once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater and within 24 hours of a discharge generated by snowmelt, unless you are subject to Parts 3.5.1.B or 3.5.2.C. If a storm event of 0.5 inches or greater, or snowmelt, causes your site to discharge, within 24 hours of the end of the storm event or the beginning of the snowmelt discharge you must conduct a site inspection when the discharge is occurring and comply with the requirements of Part 4.5.13.D.

**C. Reductions in Inspection Frequency.**

You may reduce the frequency of inspections to once per month in areas of your site where you have initiated vegetative stabilization that meets the criteria in Part 3.3.2.A, once you have completed the initial seeding or planting, and provided protection with non-vegetative cover pursuant to Part 3.3.2.B.2, or you have installed temporary, non-vegetative stabilization that meet the criteria in Part 3.3.2.B.2. If construction activity resumes at a later date, the inspection frequency shall immediately increase to that is required in Part 4.5.13.B.

**D. Requirements for Inspections.**

*1. Areas that need to be inspected.* During your site inspection, you must at a minimum inspect the following areas of your site:

a. All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 3.3.2;

b. All stormwater controls (including pollution prevention measures) installed at the site to comply with this permit;

c. Material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit;

d. All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or treat stormwater;

e. All points of discharge from the site; and

f. All locations where stabilization measures have been implemented.

*2. Inspection Requirements*

During your site inspection, you must at a minimum:

a. Check whether all erosion and sediment controls and pollution prevention controls are installed, appear to be operational, and are working as intended to minimize pollutants discharges. Determine if any controls need to be replaced, repaired, or maintained in accordance with Part 4.5.15.B;

b. Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;

c. Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 3.3, and/or 3.4;

d. At point of discharge and, if applicable, the banks of any surface waters flowing within your property boundaries or immediately adjacent to your property, check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to your discharge. If not accessible, nearby downstream locations must be inspected to the extent practicable; and

e. Identify any incidents of noncompliance observed.

f. If a discharge is occurring during your inspection, you are required, in addition to Part 4.5.13.D.1 and 2 above, to:

(1). Identify all points of the property from which there is a discharge;

(2). Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants; and

(3). Document whether your stormwater controls are operating effectively, and describe any such controls that are clearly not operating as intended or are in need of maintenance.

g. Based on the results of your inspection, initiate corrective action under Part 4.5.15.

**E. Inspection Report**

*1. Requirement to Complete Inspection Report.* You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report must include the following:

a. The inspection date;

b. Names and titles of personnel making the inspection;

c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.5.13.D;

d. If you are inspecting your site at the frequency specified in Parts 4.5.13.B and 3.5.1.B and conducted an inspection because of rainfall measuring 0.5 inches or greater, you must include the applicable rain gauge or weather station readings that triggered the inspection; and

e. If you have determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations that this condition applied to.

*2. Signature Requirements.* Each inspection record must be signed in accordance with Part 6.7 of this permit.

*3. Recordkeeping Requirements.* You are required to keep a current, copy of all inspection reports at the site or at an easily accessible location, so that it can be made available at the time of an onsite inspection or upon request by DEQ.

### 4.5.14. Staff Training Requirements

Prior to the commencement of earth-disturbing activities or pollutant-generating activities, whichever occurs first, you must ensure that the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls, including pollution prevention measures;
- Personnel responsible for the application and storage of chemicals (if applicable);
- Personnel who are responsible for taking corrective actions as required in Part 4.5.15.

At a minimum, personnel must be trained to understand the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspection):

- The location of all stormwater controls on the site required by this permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions

### 4.5.15. Corrective Actions

#### A. "Corrective Actions" Defined

Corrective actions are actions you take in compliance with this Part to:

1. Repair, modify, or replace any stormwater control used at the site;
2. Clean up and dispose of spills, releases, or other deposits; or
3. Remedy a permit violation.

#### B. Requirements for Taking Corrective Action

You must complete the following corrective actions in accordance with the deadlines specified in this Part. In all circumstances, you must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events.

1. For any of the following conditions on your site, you must install a new or modified control and make it operational, or complete the repair, by no later than seven (7) calendar days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) calendar days, you must document in your records why it is infeasible to complete the installation or repair within the seven (7) calendar day timeframe and document your schedule for installing the stormwater controls and making it operational as soon as practicable after the 7-day timeframe.

   a. A required stormwater control was never installed, was installed incorrectly or not in accordance with the requirements in Parts 3 and/or 4; or

   b. You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.5;

   c. One of the prohibited discharges in Parts 3.1 and 3.3.3.A is occurring or has occurred;

   d. If you are subject to the monitoring requirements in Addendum G, samples indicate that you have a discharge that exceeds the applicable effluent limitation.

2. Where your corrective actions result in changes to any of the stormwater controls or procedures documented in your SWP3, you must modify your SWP3 accordingly within seven calendar days of completing corrective action work.

**C. Corrective Action Records.**

For each corrective action taken in accordance with this Part, you must complete a corrective action report, which includes the applicable information in this Part.

1. Within 24 hours of discovering the occurrence of one of the triggering conditions in Part 4.5.15.B.1 at your site, you must provide a record of the following:

   a. Which condition was identified at your site;

   b. The nature of the condition identified; and

   c. The date and time of the condition identified and how it was identified.

2. Within 7 days of discovering the occurrence of one of the triggering conditions in Part 4.5.15.B.1 at your site, you must complete a record of the following:

   a. Any follow-up actions taken to review the design, installation, and maintenance of stormwater controls, including the dates such actions occurred;

   b. A summary of stormwater control modifications taken or to be taken, including a schedule of activities necessary to implement changes, and the date the modifications are completed or expected to be completed; and

   c. Notice of whether SWP3 modifications are required as a result of the condition identified or corrective action.

**D. Recordkeeping Requirements**

You are required to keep a current copy of all corrective action reports at the site or at an easily accessible location, so that it can be made available at the time of an onsite inspection or upon request by DEQ.

### 4.5.16. Non-Storm Water Discharges

Non-storm waters listed in Part 1.3.1.C of this permit that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 shall identify and

ensure the implementation of appropriate pollution prevention measures to reduce and/or eliminate the non-storm water component(s) of the discharge.

### *4.6 Contractor Certifications*

This procedure is initiated only at the discretion of the permittee with the cooperation and agreement of the contractor. The Contractor Certification form, Addendum D should be rewritten by the permittee to fit their specific objectives. Contractor Certification is recommended but is not a requirement of the DEQ.

4.6.1. Contractors, subcontractors, builders, installers, regular suppliers, support service companies or others who are not the permittee (hereinafter referredas "contractor") but are involved in construction activity, and have not been issued a construction general permit authorization, should execute a Contractor Certification, at the discretion of the permittee, which places the responsibility of complying with and abiding by the intent and purpose of the permit with the contractor for work performed under the authority and direction of the contractor. Contractors must ensure that activities regulated by the Construction General Permit (Permit) are protective of endangered and threatened species and critical habitat according to Part 11.

4.6.2. Contractors must be thoroughly familiar with and adhere to the NOI, the SWP3, and BMPs. The SWP3 should clearly identify, for each control measure identified in the plan, the party which will implement the measure. The Permittee(s) should ensure that all contractors or others involved in construction activity are identified in the plan as being responsible for implementing storm water control measures, and sign a copy of the contractor certification, before performing any work in the area covered by the SWP3. All contractor certifications should be included with the SWP3.

4.6.3. The Contractor Certification should include the name and title of the person providing the signature, the name, address, and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made. An example of certification can be found in Addendum D of the permit.

## Part 5 Retention of Records

### *5.1 Documents*

The permittee shall retain copies of the SWP3 and all reports required by this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by request of the Director at any time.

### *5.2 Accessibility*

The permittee shall retain a copy of the SWP3 required by this permit (including a copy of the permit language) at the construction site (or other local location accessible to the Director; a State or local agency approving sediment and erosion plans, grading plans, or storm water management plans; local government officials; or the operator of a municipal separate storm sewer receiving discharges from the site) from the date of project initiation to the date of final stabilization. Permittees with day-to-day operational control over SWP3 implementation shall have a copy of the SWP3 available at a central location on-site for the use of all operators and those identified as having responsibilities under the SWP3 whenever they are on the construction site.

### *5.3 Addresses*

All written correspondence concerning this permit, including the submittal of NOIs and NOTs, shall be sent to the following address: Department of Environmental Quality, Environmental Complaints and Local Services, Storm Water Unit, 707 North Robinson, P.O. Box 1677, Oklahoma City, OK 73101-1677.

## Part 6 Standard Permit Conditions

### *6.1 Duty to Comply*

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissue, or modification, or for denial of a permit renewal application. Penalties for violations of permit conditions are provided below:

**6.1.1. Criminal Penalties**

A. *Negligent Violations*: The OPDES Act provides that any person who negligently violates permit conditions is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both (27A O.S. § 2-6-206 (G) (1)).

B. *Knowing Violations*: The OPDES Act provides that any person who knowingly violates permit conditions is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both (27A O.S. § 2-6-206 (G) (2)).

C. *Knowing Endangerment:* The OPDES Act provides that any person who knowingly violates permit conditions, and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury, is subject to a fine of not more than $250,000, or by imprisonment for not more than 15 years, or both (27A O.S. § 2-6-206 (G) (3)).

D. *False Statement:* The OPDES Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the OPDES, or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the OPDES, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or by both (27A O.S. § 2-6-206 (G) (4)).

**6.1.2. Civil Penalties**: The OPDES Act provides that any person who violates a permit condition is subject to a civil penalty not to exceed $10,000 per day for each violation (27A O.S. § 2-6-206 (F)).

**6.1.3. Administrative Penalties**: The OPDES Act provides that any person who violates a permit condition is subject to an administrative penalty, not to exceed $10,000 per violation nor shall the maximum amount exceed $125,000 (27A O.S. § 2-6-206 (E)).

### *6.2 Continuation of the Expired General Permit*

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued and remain in full force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

6.2.1. Reissue or replacement of this permit, at which time the permittee must comply with the Notice of Intent conditions of the new permit to maintain the authorization to discharge; or

6.2.2. The permittee's submittal of a Notice of Termination; or

6.2.3. Issuance of an individual permit for the permittee's discharges; or

6.2.4. A formal permit decision by the Director not to reissue this general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

## *6.3 Need to Halt or Reduce Activity Not a Defense*

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

## *6.4 Duty to Mitigate*

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

## *6.5 Duty to Provide Information*

The permittee shall furnish to the Director, or an authorized representative of the Director, any information that is requested to determine compliance with this permit or other information.

## *6.6 Other Information*

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to the Director, he or she shall promptly submit such facts or information.

## *6.7 Signatory Requirements*

All Notices of Intent, Notices of Termination, reports, certifications (except the Contractor Certification under Part 4.6.) or information either submitted to the Director or the operator of an MS4, or that this permit requires be maintained by the permittee, shall be signed as follows:

6.7.1. All Notices of Intent and Notices of Termination shall be signed as follows:

A. For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or their designee, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this Section, a principal executive officer of a Federal agency includes (i) The chief executive officer of the agency, or (ii) a senior executive officer

having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrator of the EPA).

6.7.2. All reports required by this permit and other information requested by the Director or authorized representative of the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

A. The authorization is made in writing by a person described above and submitted to the Director;

B. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

C. The signed and dated written authorization must be included in the SWP3.

6.7.3. Changes to Authorization: If an authorization under Part 2.2 is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI satisfying the requirements of Part 2.2 must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative. The change in authorization must be submitted within the time frame specified in Part 2.1.2 and sent to the address specified in Part 2.3.

6.7.4. Any person signing documents under Part 6.7 shall make the following certification:

*"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."*

## *6.8 Penalties for Falsification of Reports*

Section 27A O.S. § 2-6-206 G. 4. provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or by both.

## *6.9 Oil and Hazardous Substance Liability*

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act (CWA) or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") of 1980, 42 USC § 9601 et. seq.

## *6.10 Property Rights*

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

## *6.11 Severability*

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

## *6.12 Requiring an Individual Permit or an Alternative General Permit*

A. The Director may require any person authorized by this permit to apply for and/or obtain either an individual OPDES permit or an alternative OPDES general permit. Any interested person may petition the Director to take action under this paragraph. Where the Director requires a permittee authorized to discharge under this permit to apply for an individual OPDES permit, the Director shall notify the permittee in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the permittee to file the application, and a statement that on the effective date of issuance or denial of the individual OPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the address in Part 2.3 of this permit. The Director may grant additional time to submit the application upon request of the applicant. If a permittee fails to submit in a timely manner an individual OPDES permit application as required by the Director under this paragraph, then the applicability of this permit to the individual OPDES permittee is automatically terminated at the end of the day specified by the Director for application submittal.

B. Any permittee authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26 (c) (1) (ii), with reasons supporting the request, to the Director at the address in Part 2.3 of this permit. The request may be granted by issuance of any individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

C. When an individual OPDES permit is issued to a permittee otherwise subject to this permit, or the permittee is authorized to discharge under an alternative OPDES general permit, the applicability of this permit to the individual OPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual OPDES permit is denied to an operator otherwise subject to this permit, or the operator is denied coverage under an alternative OPDES general permit, the applicability of this permit to the individual OPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Director.

## *6.13 State/Tribal Environmental Laws*

6.13.1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

6.13.2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

6.13.3. Construction activities on Indian Country lands are regulated by the EPA Region 6 office located in Dallas, Texas. Applicants seeking coverage for construction or surface disturbing activities located on Indian Country land should contact the EPA Region 6 office.

### *6.14 Proper Operation and Maintenance*

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions and requirements of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of this permit.

### *6.15 Inspection and Entry*

The permittee shall allow the Director or an authorized representative of DEQ, or in the case of a construction site that discharges through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

6.15.1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

6.15.2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

6.15.3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

### *6.16 Permit Actions*

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

## Part 7 Re-opener Clause

### *7.1 Potential to Cause or Contribute to a Violation*

If there is evidence indicating that the storm water discharges authorized by this permit cause, or have the reasonable potential to cause, or contribute to, a violation of a water quality standard, the permittee may be required to obtain an individual permit or an alternative general permit in accordance with Part 6.12 of this permit, or the permit may be modified to include different limitations and/or requirements.

### *7.2 Permit Modification or Revocation*

Permit modification will be conducted according to the Oklahoma Uniform Environmental Permitting Act at Oklahoma Statutes, Title 27A, Section 2-14-101 et. seq., the Oklahoma Administrative Code (OAC), 252:4-7 and 252:606 incorporating by reference Federal Regulations at 40 CFR 122.62, 122.63, 122.64, and 124.5.

The DEQ may propose a modification to this permit after further discussions between the Department and the Oklahoma Historical Society for the protection of historic properties.

# Part 8 Termination of Coverage

## *8.1 Notice of Termination (NOT)*

Permittees must submit a completed NOT that is signed in accordance with Part 6.7 of this permit when one or more of the conditions contained in Part 1.5.2. (Terminating Coverage) have been met at a construction project. The NOT form found in Addendum C will be used unless it has been replaced with a revised version by the Director.

**8.1.1. The Notice of Termination shall include the following information:**

A. The OPDES permit number for the storm water discharge identified by the NOT;

B. An indication of whether the storm water discharges associated with construction activity have been eliminated (i.e., regulated discharges of storm water are being terminated) or the permittee is no longer an operator at the site;

C. The name, address, and telephone number of the permittee submitting the NOT;

D. The name of the project and street address (or a description of the location if no street address is available) of the construction site for which the notification is submitted;

E. The latitude and longitude of the construction site.

F. The information pertaining to the new operator if you are no longer an operator of the site, including the name, address, and phone number, and

G. The following certification, signed in accordance with Part 6.7 (signatory requirements) of this permit. For construction projects with more than one permittee and/or operator, the permittee need only make this certification for those portions of the construction site where the permittee was authorized under this permit and not for areas where the permittee was not an operator:

*"I certify under penalty of law that all storm water discharges associated with industrial/construction activity from the identified facility/site that was 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/construction activity under this general permit, and that discharging pollutants in storm water associated with industrial/construction activity to waters of the State of Oklahoma 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."*

**8.1.2 Elimination of Storm Water Discharged**

For the purposes of this certification, elimination of storm water discharges associated with construction activity means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized (as defined in Part 9) and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time to ensure final stabilization is maintained, or that all storm water discharges associated with construction activities from the identified site that are authorized by an OPDES general permit have otherwise been eliminated from the portion of the construction site where the operator had control.

### 8.1.3. Address

All NOTs signed in accordance with Part 6.7 of this permit are to be submitted using the form provided by the Director (or a photocopy thereof), to the address found in 5.3.

## Part 9 Definitions

1. **Applicant** means any person who is contemplating or planning to submit an NOI for approval, or has submitted an NOI for approval and is waiting for authorization to discharge storm water under the provisions of this permit.
2. **Best Management Practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the State. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
3. **Commencement of Construction** means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
4. **Control Measure** as used in this permit refers to any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the State.
5. **CWA** means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq.
6. **Dewatering Activities** means the discharge of water generated from the lowering of the groundwater table, the pumping of accumulated storm water from an excavation, or the pumping of surface water from a cofferdam.
7. **Director** means the Executive Director or chief administrator of the DEQ or an authorized representative.
8. **Discharge** when used without qualification means the "discharge of a pollutant."
9. **Discharge of Storm Water Associated with Construction Activity** as used in this permit, refers to a discharge of pollutants in storm water runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck washout, fueling), or other industrial storm water directly related to the construction process (e.g., concrete or asphalt batch plants) are located.
10. **Ephemeral Stream** means an entire stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
11. **Facility or Activity** means any OPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the OPDES program.
12. **Impaired Water (or Water Quality Impaired Water)** is identified by a State, or EPA pursuant to Section 303(d) or the Clean Water Act as not meeting applicable State water quality standards. Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.
13. **Municipal Separate Storm Sewer System or MS4** is defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

    13.1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, 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 CWA that discharges to waters of the United States;

13.2. Designed or used for collecting or conveying storm water;

13.3. Which is not a combined sewer; and

13.4. Which is not part of a Public Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

Note: A Phase II MS4 can also be owned or operated by Federal and State government, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. [see 40 CFR §122.26(b)(16)]

**14. NOI** means Notice of Intent, (DEQ Form 606-002A, and see Part 2 of this permit.)

**15. NOT** means Notice of Termination (DEQ Form 606-003, and see Part 8 of this permit).

**16.Operator** for the purpose of this permit and in the context of storm water associated with construction activity, means any party defined in 16.1 or 2, associated with a construction project that meets either of the following two criteria:

16.1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

16.2. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a Storm Water Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

In addition, ‘‘owner’’ refers to the party that owns the structure being built. Ownership of the land where construction is occurring does not necessarily imply the property owner is an operator (e.g., a landowner whose property is being disturbed by construction of a gas pipeline or a landowner who allows a mining company to remove dirt, shale, clay, sand, gravel, etc. from a portion of his property).

This definition is provided to inform permittees of DEQ's interpretation of how the regulatory definitions of “operator” and “facility or activity” are applied to discharges of storm water associated with construction activity.

**17. OPDES** means the Oklahoma Pollutant Discharge Elimination System Act.

**18. Outstanding Resource Waters** means those waters of the State which are designated as such in Oklahoma’s Water Quality Standards OAC 785:45, Appendix A.

**19. Permit** means the General Permit OKR10 for Storm Water Discharges from Construction Activities within the State of Oklahoma.

**20. Permittee** means a person who has submitted an NOI and has received authorization to discharge storm water from construction or land disturbing activities under this permit.

**21. Point Source** means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, landfill leachate collection system, or vessel or other floating craft, from which pollutants or wastes are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**22. Pollutant** means any material, substance, or property which may cause pollution (e.g., dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste).

**23. Runoff coefficient** means the fraction of total rainfall that will appear at the conveyance as runoff.

**24. Stabilization** is the process of covering exposed ground surfaces with vegetative or non-vegetative practices that reduce erosion and prevent sediment discharge from occurring.

- "Temporary stabilization" refers to the stabilization of exposed portions of the site in order to provide temporary cover (1) during the establishment and growth of vegetation, and/or (2) in areas where earth-disturbing activities will occur again in the future.
- "Final stabilization" refers to the stabilization of exposed portions of the site using practices that provide permanent cover and qualify the permittee for permit termination.

24.1. All soil disturbing activities at the site have been completed and either of the two following criteria is met:

A. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or

B. Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

When background native vegetation covers less than 100% of the ground (e.g., arid areas, and beaches), establishing at least 70% of the natural cover of the native vegetation meets the vegetative cover criteria for final stabilization (e.g., if the native vegetation covers 50% of the ground, 70% of 50% would require 35% total cover for final stabilization. On a beach with no natural vegetation, no vegetation is required.

24.2. For individual lots in residential construction, either of the following criteria is met:

A. The homebuilder has completed final stabilization as specified above; or

B. The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informed the homeowner of the need for, and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quickly as possible to keep mud out of their homes and off sidewalks and driveways.); or

24.3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to "waters of the State," and areas that are not being returned to their pre-construction agricultural use must meet the final stabilization criteria 24.1 or 24.2 above.

**25. Storm Water** means rainwater runoff, snowmelt runoff, and surface runoff and drainage.

**26. Storm Water Associated with Industrial Activity** is defined at 40 CFR 122.26 (b) (14) & (15) and incorporated here by reference. Most relevant to this permit is 40 CFR 122.26 (b) (14) (x) and 40 CFR 122.26 (b) (15) (i), that relates to construction activity including clearing, grading, and excavation activities that result in the disturbance of one or more acres of total land area, or less than one acre if are part of a larger common plan of development or sale.

**27. Storm Water Discharge-Related Activity** is defined as disturbance activities that cause, contribute to, or result in point source storm water pollutant discharges, including but not limited to excavation, site development, grading, and other land disturbing activities; and control measures to control storm water discharges including the siting, construction, and operation of best management practices (BMPs) to control, reduce, or prevent storm water pollution.

28. **Takes or Taking** means any action that would "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any threatened or endangered species. Harm may include significant habitat modification that actually injures a species.

29. **Total Maximum Daily Load or TMDL** means the sum of the individual wasteload allocations (WLAs) for point sources, safety, reserves, and loads from nonpoint sources and natural background.

30. **Waters of the State** means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, storm sewers and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion there of, and shall include under all circumstances the waters of the United States which are contained within the boundaries of, flow through, or border upon this state or any portion thereof. Provided waste treatment systems, including treatment ponds or lagoons designed to meet federal and state requirement other than cooling ponds as defined in the Clean Water Act or rules promulgated thereto, and prior converted cropland are not waters of the State. (27A O.S. §1-1-201).

## Part 10 Historic Preservation

The EPA has determined that DEQ's NPDES permitting activities are not Federal undertakings and, therefore, are not subject to review under Section 106 of the National Historic Preservation Act. However, applicants and permittees must comply with the State Antiquities Act (Title 53, Chapter 20, Section 361) where applicable and the Burial Desecration Law (Title 21, Chapter 47, Section 1168.0-1168.6), as well as with any applicable local laws concerning the identification and protection of historic properties.

Applicants and permittees who may receive Federal funding or other Federal assistance in the completion of their projects must be aware that compliance with Section 106 of the Act may apply. For information about the Section 106 review process in Oklahoma, Oklahoma properties listed on or eligible for the National Register of Historic Places, and related topics, contact:

State Historic Preservation Office
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, OK 73105
(405)521-6249
www.okhistory.org/shpo/shpom.htm

Oklahoma Archeological Survey
111 East Chesapeake
Norman, OK 73019
405/325-7211
www.ou.edu/cas/archsur

## Part 11 Endangered Species

Addendum A is a registry of Federally identified Aquatic Resources of Concern (ARC) and State identified ARC.

### 11.1 Background

The DEQ is seeking to ensure the activities regulated by the Permit are protective of endangered and threatened species and critical habitat. To ensure that those goals are met, operators seeking permit coverage are required under Part 1.3.2.E to assess the impacts of their storm water discharges and storm water discharge-related activities on identified endangered and threatened species and designated critical

habitat. This may be accomplished by following Steps 1 and 2 listed below. It is not necessary to contact DEQ if you can comply with the provisions listed in Step 2. The DEQ strongly recommends that applicants follow these steps at the earliest possible stage to ensure that measures to protect identified species are incorporated early in the planning process. At minimum, the procedures should be followed when developing the SWP3.

Permittees and contractors have an independent obligation to ensure that their activities do not result in any prohibited "take" of identified species. Many of the measures required in the Permit and in these instructions to protect identified species may also assist operators in ensuring that their construction or land disturbing activities do not result in a prohibited take of a species. Operators who plan construction or land disturbing activities within the corridor of a Federally identified ARC or a State identified ARC, (see Addendum A), may meet the requirements of Step 2.

This permit provides for the possibility of multiple operators and contractors at a construction site. Applicants should be aware that in some cases they may meet the permit eligibility requirements by relying on another permittee's certification of eligibility under Part 1.3.2.E.2.a., b., c., or d. This is allowed under Part 1.3.2.E.2.e. of the permit, however, the other permittee's certification must apply to the contractor's project area and must address the effects from the Contractor's storm water discharges and storm water discharge-related activities on listed species and critical habitat. By certifying eligibility under Part 1.3.2.E.2.e the applicant agrees to comply with any measures or controls upon which the other operator's certification under Part 1.3.2.E.2.a., b., c., or d. was based. This situation will typically occur where a developer or primary contractor, such as one for construction of a subdivision or industrial park, conducts a comprehensive assessment of effects on listed species for the entire construction project, certifies eligibility under Part 1.3.2.E.2.a., b., c., or d. and that certification is relied upon by other operators (i.e., contractors) at the site. However, applicants that consider relying on another operator's certification should carefully review that certification along with any supporting information. If an applicant does not believe that the operator's certification provides adequate coverage for the applicant's storm water discharges and storm water discharge-related activities or for the applicant's particular project area, the applicant should provide its own independent certification under Part 1.3.2.E.2.a, b, c, or d.

## 11.2 Procedures

To receive coverage under the Construction General Permit, applicants must assess the potential effects of their storm water discharges and storm water discharge-related activities on listed species. To make this assessment, applicants must follow the steps outlined below prior to completing and submitting a Notice of Intent (NOI) form, Addendum B.

**Step 1: Determine Whether the Project Area Drains to Aquatic Resources of Concern (ARC).**

A. Refer to Addendum A, that lists all of the waters of Oklahoma which the U.S. Fish and Wildlife Service and the Oklahoma Department of Wildlife Conservation consider to be sensitive because they harbor populations of federal or state listed species or their designated critical habitat.

B. If the applicant's proposed construction site is not located within any of these areas, the proposed construction storm water discharge or storm water discharge related activities are not likely to significantly affect endangered and threatened species. The applicant may then skip Step 2 and further investigation is unnecessary.

C. If the applicant's proposed construction site is located within the corridor of any ARC, the applicant must continue on to Step 2.

**Step 2: Implementation of Storm Water Control Measures to Protect Endangered and Threatened Species in ARC:**

A. Applicants whose proposed construction site is located within an ARC must incorporate the following measures into the SWP3 for this site unless permit coverage is allowed under Parts 1.3.2.E.2.d or e.

Other pollutants such as, but not limited to, oil, grease, solid waste (i.e. building material scrap, and trash), and human and hazardous waste, (e.g., paint and solvents), are not authorized for discharge under this permit. These potential pollutants must be properly managed and their contact with storm water minimized or eliminated to the greatest extent practicable.

1. Consistent with Parts 3.3 and 3.5, sediment must be retained on site to the greatest extent practicable; all sediment, solid waste, and human waste control measures must be properly installed and maintained at all times; and off-site accumulations of any escaped sediment must be removed.

2. A vegetated buffer zone of at least 100 feet must be retained or successfully established/planted between the area disturbed during construction and all perennial or intermittent streams on or adjacent to the construction site. A vegetated buffer zone at least 50 feet wide must be retained or successfully established/planted between the areas disturbed during construction and all ephemeral streams or drainages. Buffer zones shall be measured from the top of the first defined bank of the stream and shown on the site map in the SWP3.

   If characteristics of the site or the project make it impossible to maintain the required buffer, refer to Addendum I (Buffer Guidance) for information to assist you in developing equivalent sediment controls. You must maintain the buffer or selected alternative throughout your period of coverage under this permit and no construction activities may be conducted in this area. All discharges through the buffer must be non-channelized or non-concentrated, and must first be treated by the site's sediment and erosion controls.

3. Document in your SWP3 the following:
   a. If the buffer is less than 100 or 50 feet, the width of the buffer vegetation to be retained; and

   b. Information you relied on to comply with the requirement to achieve the equivalent sediment load reduction as an undisturbed naturally vegetated 100 or 50-foot buffer.

4. For any disturbances within the required 100 or 50-foot buffer area, you must comply with the following stabilization requirements, which replace the corresponding requirements in Part 3.3.2:

   a. You must immediately initiate stabilization in any exposed areas of the buffer where earth-disturbing activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days. For the purposes of this permit, earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of your construction site will not resume for a period of 14 or more days, and earth-disturbing activities have permanently ceased when clearing and excavation within any area of your construction site has been completed, and final grade has been reached.

   b. Within 7 calendar days of initiating stabilization, you are required to have completed:

      i. For vegetative cover, all soil conditioning, seeding, watering, mulching, and any other required activities related to the planting and establishment of vegetation; and/or

      ii. For non-vegetative cover, the installation or application of all non-vegetative measures.

5. You are not required to comply with this buffer requirement for the following types of construction projects, provided that you limit the area of disturbance to the minimum needed to complete the construction and to access the site, and that you retain the natural vegetation in the buffer outside this area:

   a. Construction of water crossings authorized under a CWA Section 404 permit (where required) for water lines, sewer lines, utility lines, and roadways;

   b. Construction of water-dependent structures and water access areas (piers, boat ramps, etc.) approved under a CWA Section 404 permit (where required); or

c. Development of a site where no naturally vegetated buffer area exists due to prior disturbances.

6. You must conduct inspections within 7 calendar days and within 24 hours of a storm event of 0.5 inches or greater instead of the inspection frequency specified in Part 4.5.13.B.

7. You must meet any local requirements affecting construction in the buffer.

B. Consistent with Parts 3.3.2 and 3.5.2.D, an implementation schedule must be included which describes the stabilization practices that will be used to control erosion during construction and when construction has permanently ceased. The preservation of mature vegetation on-site is preferred.

C. Consistent with Parts 3.3.1 and 4.5.11 , structural BMPs must be successfully implemented to divert uphill storm water flows from crossing disturbed areas, to store flows (e.g., retention ponds) or to otherwise control runoff from disturbed areas during construction. At a minimum this must include silt fencing and vegetated buffer strips on all down slope boundaries of the area disturbed during construction. The construction of temporary or permanent storm water detention or retention structures (e.g., ponds) is preferred, but these should not be constructed within intermittent or perennial stream channels or within floodplains.

D. Consistent with Part 3.3.1.J and 4.5.11.A.3.c, velocity dissipation devices must be incorporated into the design of outfall channels and discharge locations. Outfalls must be screened to prevent the discharge of solid materials with storm water runoff.

E. Hazardous construction materials and waste must be stored in a manner that minimizes their contact with storm water. An emergency response plan must be included which addresses the handling of accidental spills (see Part 3.3.3).

F. The applicant must comply with any terms and conditions imposed under the eligibility requirements of Part 1.3.2.E.2 a, b, c, d, or e to ensure that its storm water discharges and storm water discharge-related activities are protective of listed species and/or critical habitat. Such terms and conditions must be incorporated in the project's SWP3. If the eligibility requirements of Part 1.3.2.E.2 a, b, c, d, or e cannot be met, the applicant may seek relief from the appropriate service in the form of an approved take. As an alternative, the applicant may seek coverage under a DEQ individual permit.

**ADDENDUM A – Oklahoma Aquatic Resources of Concern (ARC) Harboring Endangered and Threatened Species and Their Critical Habitat of Concern**

## A. Aquatic Resources of Concern (ARC) for Federally Listed Species, as Identified by the U.S. Fish & Wildlife Service for the DEQ Construction Storm Water General Permit

*Grand (Neosho) River* - A two-mile corridor (one mile from each bank) of the main stem of the Grand (Neosho) River above its confluence with Tar Creek. Includes portions of Ottawa and Craig Counties.

*Cimarron River* - A two-mile corridor (one mile from each bank) of the main stem of the Cimarron River from the US Hwy-77 bridge in Logan County upstream to and including Beaver County. This includes river segments in : Logan, Kingfisher, Major, Woods, Woodward, Harper, and Beaver Counties.

*South Canadian River* - A two-mile corridor (one mile from each bank) of the main stem from the Eufaula Reservoir flood pool upstream to the northern border of Custer County. This includes river segments in: McIntosh, Pittsburg, Hughes, Pontotoc, Seminole, Pottawatomie, McClain, Cleveland, Canadian, Grady, Caddo, Blaine, and Custer Counties.

*Muddy Boggy River* - A two-mile corridor (one mile from each bank) of the main stem of the Muddy Boggy River. Includes portions of Choctaw, Atoka, and Coal Counties.

*Kiamichi River* – The **watershed** of the Kiamichi River upstream from the Hugo Reservoir. Includes portions of Pushmataha, Atoka, Pittsburg, Latimer, and Leflore Counties.

*Little River* – The **watershed** of the Little River. Includes portions of LeFlore, Pushmataha and McCurtain Counties.

*Glover River* – The **watershed** of the Glover River. Includes portions of Pushmataha and McCurtain Counties.

*Mountain Fork River* – The **watershed** of the Mountain Fork River above Broken Bow Reservoir. Includes portions of Leflore and McCurtain Counties.

*Northeast HUC-11 Watersheds* – The **watersheds** are identified by the following 11-digit Hydrologic Unit Codes: 11070207190, 11070206060, 11070209030, 11070209050, 11070209060*, 11070209040, 11070209070, 1107020206030, 11070208070, 11070209020, 11070209100, 11070209110 and 11070209120. The watersheds include portions of Ottawa, Craig, Delaware, and Mayes Counties.

* This HUC does not contain a known Ozark cavefish cave. It was included because it is entirely surrounded by 11 digit HUCs with known Ozark cavefish caves, therefore we assume that Ozark cavefishes likely occupy this portion of the aquifer.

*Elk River* – A two-mile corridor (one mile from each bank) of the Elk River. Includes portions of Delaware and Ottawa Counties.

*Spring River* – A two-mile corridor (one mile from each bank) of the Spring River. Includes portions of Ottawa County.

**B. ARC for State Listed Species, as Identified by the Oklahoma Department of Wildlife Conservation for the DEQ Construction Storm Water General Permit.**

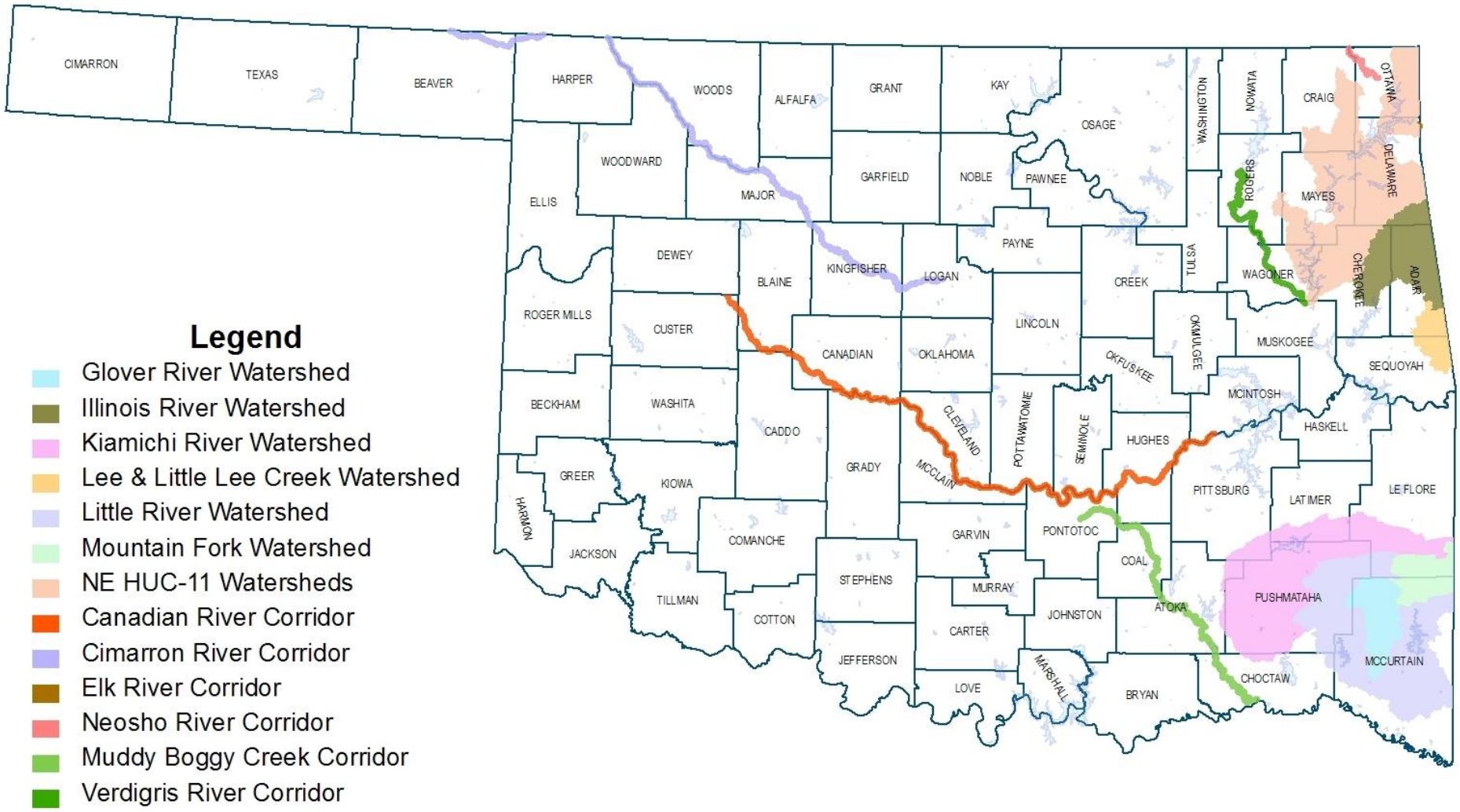
*Illinois River* – A **ten-mile** corridor (five miles from each bank within the watershed) of the main stem of the Illinois River above the Tenkiller Reservoir. Includes portions of Cherokee, Delaware and Mayes Counties.

*Lee and Little Lee Creeks* – The **watershed** of Lee Creek and Little Lee Creek. Includes portions of Sequoyah and Adair Counties.

Note: No storm water discharge-sensitive endangered or threatened species occur in the following counties: Cimarron, Texas, Beckham, Greer, Washita, Kiowa, Alfalfa, Comanche, Grant, Garfield, Oklahoma, Garvin, Murray, Stephens, Carter, Lincoln, Johnston, Okfuskee, Okmulgee, Washington, Nowata, and Rogers.

# 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




## Legend

- Glover River Watershed
- Illinois River Watershed
- Kiamichi River Watershed
- Lee & Little Lee Creek Watershed
- Little River Watershed
- Mountain Fork Watershed
- NE HUC-11 Watersheds
- Canadian River Corridor
- Cimarron River Corridor
- Elk River Corridor
- Neosho River Corridor
- Muddy Boggy Creek Corridor
- Verdigris River Corridor

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**ADDENDUM B –NOTICE OF INTENT**

See Reverse Side for Instructions

| **DEQ FORM 606-002A** Sept, 13, 2012 | | **Oklahoma Department of Environmental Quality Notice of Intent (NOI) for Storm Water Discharges Associated with CONSTRUCTION ACTIVITY on Sites of One or More Acres Under the OPDES General Permit OKR10** |
|---|---|---|

SUBMISSION OF THIS NOTICE OF INTENT CONSTITUTES NOTICE THAT THE PARTY IDENTIFIED IN Part I OF THIS FORM INTENDS TO BE AUTHORIZED BY AN OPDES PERMIT ISSUED FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY IN THE STATE OF OKLAHOMA. BECOMING A PERMITTEE OBLIGATES SUCH DISCHARGER TO COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMIT. IN ORDER TO OBTAIN AUTHORIZATION, ALL REQUESTED INFORMATION MUST BE PROVIDED ON THIS FORM. SEE INSTRUCTIONS ON BACK OF FORM.

**IF YOUR FACILITY OR SITE IS ON INDIAN COUNTRY LAND, FILE YOUR NOI WITH THE EPA, USING EPA FORM 3510-9.**

☐ **NEW APPLICATION** ☐ **RENEWAL** ☐ **MODIFICATION Enter Authorization Number: OKR10**_____

## I. Facility Operator Information

Name: _____Phone: (_____)_____ _____

Address: _____

City: _____ State: _____ Zip Code: _____ E-mail Address: _____

## II. Site Information

Name of the project: _____Address: _____

City:_____ County: _____ ZIP Code: _____

**Location:** Latitude: _____ Longitude: _____

Name of Receiving Water Body: _____

Is the discharge to an impaired water body on the DEQ 303(d) list? ☐ Yes ☐ No

Is there an approved TMDL or watershed plan applicable to this site? ☐ Yes ☐ No Purpose of Project _____ (See Instructions)

Is this site a part of the common plan of development or sale? ☐ Yes ☐ No Estimated area to be disturbed (to nearest acre): _____

ENDANGERED SPECIES

Based on the instructions provided in Part 11 and Addendum A of the permit, is the proposed construction or land disturbing activity within the corridor of any of the listed Aquatic Resources of Concern (ARC)? ☐ Yes ☐ No

If the answer is yes, please refer to Part 11.2 Step 2.
All permit eligibility requirements with regard to protection of endangered species through the indicated Section of Part 1.3.2.E.2 of the permit have been complied with. (check one or more boxes):

a. ☐ b. ☐ c. ☐ d. ☐ e. ☐

## III. Certification

_____ (Initial) "I certify that this facility is registered with the Secretary of State of Oklahoma." Please provide the full name of company/corporation if different than that listed in Section I above.

_____ (Initial) "I certify that a Storm Water Pollution Prevention Plan (SWP3) has been prepared for this facility in accordance with Part 4.5 of this permit."

"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.
I understand that continued coverage under this permit is contingent upon maintaining eligibility as provided for in Part 1.3."

Name (Please Print):_____ Date: _____

Signature:_____ Title_____

For DEQ use only: Assigned Authorization Number: OKR10 _____

# Instructions – DEQ Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity to be Covered Under the OPDES General Permit OKR10

## Who Must File a Notice of Intent Form

Under the provisions of the Clean Water Act, as amended, (33 U.S. 1251 et.seq.the Act), Oklahoma Environmental Code, Title 27A of the Oklahoma Statutes, Section 2-6-201 et. seq. and the rules OAC 252:606-1-3(b), discharge of storm water from construction activities is prohibited without an Oklahoma Pollutant Discharge Elimination System Permit. The operator of a construction site that has such a storm water discharge must submit an NOI to obtain coverage under an OPDES Storm Water General Permit (OKR10). If you have questions about whether you need a permit under the OPDES Storm Water program, or if you need information, write to the address listed below or telephone the Environmental Complaints and Local Services Division, Department of Environmental Quality (DEQ), at (405) 702-6100 and ask for the Storm Water Unit.

**Where to File an NOI Form:**

**DEQ/Environmental Complaints and Local Services (ECLS)**
**Storm Water Unit**
**707 North Robinson, P.O. Box 1677**
**Oklahoma City, OK 73101-1677**
**FAX (405) 702-6226**

**Note: do not submit an SWP3 with the NOI, unless the project is located (1) within Outstanding Resource Waters, or (2) within a Federal and State ARC, or (3) within a larger site which is disturbing land of 40 or more acres.**

## Completing The Form

You must type or print, using upper-case letters, in the appropriate areas only. If you have any questions on this form, call DEQ-ECLS at (405) 702-6100 and ask for the Storm Water Unit.

**Section I. Facility Operator Information**
Provide the legal name, mailing address, and telephone number of the person, firm, public organization, or any other entity that either individually or together meet either of the following two criteria: (1) have operational control over the site specifications (including the ability to make modifications in specifications); and (2) have the day-to-day operational control of those activities at the site necessary to ensure compliance with plan requirements and permit conditions. If you are a Co-Permittee, check the appropriate box. Do not use a colloquial name.

Enter the appropriate letter to indicate the legal status of the operator of the facility: F = Federal; S = State; M = Public (other than Federal or State); P = Private.

**Section II. Site Information**
Enter the Project's official or legal name and complete street address, including city, county, state, ZIP code and phone number. If the site lacks a street address, indicate with a general statement the location of the site (e.g., Intersection of State Highways 61 and 34). The applicant must also provide the latitude and longitude of the facility in degrees, minutes, and seconds to the nearest 15 seconds ($45^{o}$ 7' 24" = 45.1234 decimal latitude) of the approximate center of the site.

The latitude and longitude of your facility can be located on USGS quadrangle maps. The quadrangle maps may be obtained at 1-888-ASK-USGS. Longitude and latitude may also be obtained at the Census Bureau Internet site: http://www.census.gov/cgi-bin/gazetteer. Only one location description is needed: address; section, township, and range; or latitude and longitude.

Provide the address and phone number where the SWP3 may be viewed, if different from the address previously given. Check the appropriate box.

Enter the name of the closest predominant receiving water body. The Oklahoma 303(d) list can be found online at
http://www.deq.state.ok.us/WQDnew/305b_303d/index.html or the DEQ GIS Map and Data Viewer at
http://maps.deq.ok.gov/deq_wq/
If your facility or site is on Indian Country land, do not complete this form. File your NOI with the EPA online at http://cfpub.epa.gov/npdes/stormwater/enoi.cfm

Enter the description of the purpose of your project, such as residential subdivision, commercial building, road and bridge, wind farm etc.

Indicate whether your discharge will be consistent with the conditions and requirements of EPA approved or established TMDLs. An approved TMDL report can be found online on the DEQ website at
http://www.deq.state.ok.us/WQDnew/tmdl/index.html

Indicate whether your site is a part of the common plan of development or sale, which is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

Enter the estimated area to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest acre.

Indicate if the proposed construction site or land disturbing activity is within the corridor of a listed Aquatic Resource of Concern (ARC), Addendum A of the General Permit, and associated with the discharges and requirements to be covered by this permit as follows, Part 1.3.2.E.2:

a The proposed construction site or land disturbing activity is not located within any of the corridors of the Federal or State identified ARC, and further investigation is not required.

b The proposed construction site or land disturbing activity is located within a corridor of a Federal or State identified ARC (Addendum A). The SWP3 describes this area in relation to the listed water or watershed and specifies the measures to be employed to protect the endangered or threatened species or their critical habitat.

c If one of those eligibility criteria cannot be met, applicants may use Addendum I (Buffer Guidance) for equivalent sediment controls or contact DEQ for further assistance; or

d The applicant's federally approved activities are authorized by the appropriate Federal or State agency and that authorization addresses the Endangered Species Act Section 7 consultation for the applicant's storm water discharge or storm water discharge-related activities; or

e The applicant's storm water discharges and storm water discharge-related activities were already addressed in another operator's certification of eligibility under Part 1.3.2.E.2 a, b, c, or d that included the applicant's project area. By certifying eligibility under Part 1.3.2.E.2 e, the applicant agrees to comply with applicable measures or controls upon which the other operator's certification under Part 1.3.2.E.2 a, b, c or d was based.

**Section III. Certification**
Certify that this company/corporation is registered with the Secretary of State of Oklahoma;

Certify that a Storm Water Pollution Prevention Plan (SWP3) has been prepared for this facility in accordance with Part 4.5 of this permit;

Federal Statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:
For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or their designee, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign had been assigned or delegated to the manager in accordance with corporate procedures.
For a partnership or sole proprietorship: by a general partner of the proprietor, or; For a municipality, state, Federal, or other public agency: by either a principal executive or ranking elected official.

## ADDENDUM C – 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 Must 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: ☐

Check here if the storm water construction or industrial discharge is being terminated: ☐

**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 _____

# Instructions for Completing Notice of Termination (NOT) for Storm Water Discharges Associated with Construction Activity

## When To File an NOT Form:

Permittees who are presently covered under an issued NPDES or OPDES general permit for storm water discharges associated with industrial/construction activity may submit a **Notice of Termination** (NOT) form when their facilities no longer have any storm water discharges associated with industrial/construction activity as defined in the storm water regulations at 40 CFR 122.26(b)(14), or when they are no longer the operator of the facilities. For a construction site, when the site has been finally stabilized (i.e., a uniform perennial vegetative cover with a density of at least 70% of the native background cover has been established for all unpaved areas and areas not covered by permanent structures or where equivalent permanent stabilization measures such as riprap or gabions have been used), and all storm water discharges from construction activities that are authorized by general permit (OKR10) are eliminated, or they are no longer the operator of the facility, an NOT must be submitted that is signed in accordance with Part 6.7 of the general permit. If you need assistance or have questions, contact the Storm Water Unit of the Environmental Complaints and Local Services at (405) 702-6100.

## Section I: Permit Information:

Enter the existing OPDES General Storm Water Permit number assigned to the facility or site identified in Section I.

## Section II: Facility Operator Information:

Give the legal name of the person, firm, public organization or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same name as the facility. The operator of the facility is the legal entity that controls the facility's operation, rather than the plant or site manager.

## Section III: Facility/Site Location Information:

Enter the facility's or site's official or legal name and complete address, including city, state, and ZIP code. If the facility lacks a street address, indicate the latitude and longitude of the facility to the nearest 15 seconds.

## Section IV: New Operator Information

If you are no longer the operator of the facility/site, provide the information pertaining to the new operator at the facility/site, including the name and address of the new operator.

## Section V: Certification

The NOT form must be signed by a responsible party as follows:

For a Corporation: by a responsible officer, which means: (i) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function; or their designee, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: by a general partner or the proprietor.

For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

## Where to File an NOT form:

NOTs must be sent to the following address:

**DEQ**
**Environmental Complaints and Local Services**
**Storm Water Unit**
**707 North Robinson, P.O. Box 1677**
**Oklahoma City, OK 73101-1677**

## ADDENDUM D - CONTRACTOR CERTIFICATION

(Optional; sample format)

_____

(Name of Operator)

_____

(Project Name)

Contractors, builders, regular suppliers or others (contractors) involved in construction activity who are not the operator, developer, or general contractor, and have not been issued the Storm Water Construction General Permit (Permit) authorization, execute this Contractor Certification which places the responsibility of complying with and abiding by the intent and purpose of the permit with the contractor for any and all work performed under the authority and direction of the contractor. Furthermore, the contractor assumes responsibility to avoid or eliminate any actual or potential adverse effects upon the environment according to the Storm Water Pollution Prevention Plan (SWP3), during all phases of building, construction, or delivery activity on any and all construction sites under the control and responsibility of the contractor as described in the SWP3.

1. Contractor company name: _____

2. Contractor address: _____

3. Project locations: _____

_____

(For additional addresses, attach list to this form)

4. Contractor must be thoroughly familiar with the original Notice of Intent (NOI) filed by _____

_____ with the Oklahoma Department of Environmental Quality.

(Operator Name)

Contractor must also be thoroughly familiar with, and adhere to, the Storm Water Pollution Prevention Plan (SWP3) and the Best Management Practices (BMP) on file at the following location; _____

The Contractor is certifying below that they assume all physical responsibility for any and all construction activities performed by the Contractor or under the direction and control of the Contractor, to avoid or eliminate any actual or potential adverse effects upon the environment pertaining to the properties listed in Item 3 above.

### Certification

I certify that I understand the terms and conditions of the Oklahoma Pollutant Discharge Elimination System Act (OPDES) General Permit that authorizes storm water discharges associated with construction activity from the construction site identified as part of this certification. I have read and understand the Operators Notice of Intent and Part 1.3 eligibility requirements for coverage under the general permit for storm water discharges from construction activities, including those requirements published in the modified OPDES General Permit OKR10 of September 13, 2012, and the SWP3 and BMP described pertaining to the project locations in Item 3 above. I agree that as a contractor, builder, regular supplier, or a support service company, I am responsible for installing and/or maintaining the appropriate pollution prevention measures that I am responsible for according to the agreement I have with the permittee.

I understand that continued coverage under this permit is contingent upon maintaining eligibility as provided for in Part 1.3 of the permit.

Signature: _____ Title: _____

Print Name: _____ Date: _____

## ADDENDUM E – 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 Must 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:_____

# Instructions for Completing an Inspection Request for Storm Water Discharges Associated with Construction Activity

## When To File an Inspection Request Form:

Permittees who are presently covered under an issued NPDES or OPDES general permit for storm water discharges associated with construction activity may submit a **Inspection Request** (IR) form when their facilities are getting ready to file a Notice of Termination (NOT). For a construction site, when the site has been finally stabilized (i.e., a uniform perennial vegetative cover with a density of at least 70% of the native background cover has been established for all unpaved areas and areas not covered by permanent structures or where equivalent permanent stabilization measures such as riprap or gabions have been used), and all storm water discharges from construction activities that are authorized by general permit (OKR10) are eliminated, or they are no longer the operator of the facility, an NOT must be submitted that is signed in accordance with Part 4.5 of the general permit. If you submit this IR form to DEQ prior to termination of your current permit, the DEQ will conduct an inspection and provide any assistance necessary within 30 days of receipt of this form. Upon completing the inspection, the DEQ will notify you of any needed changes to the site conditions or that the site has met the final stabilization requirements under the permit. This Inspection Request form should not be substituted for an NOT. You must continue to meet the conditions and terms of the permit until you have filed the NOT. If you have questions, contact the Storm Water Unit of the Environmental Complaints and Local Services (405) 702-6100.

## Section I: Permit Information:

Enter the existing OPDES General Storm Water Permit number assigned to the facility or site identified in Section I.

## Section II: Facility Operator Information:

Give the legal name of the person, firm, public organization or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same name as the facility. The operator of the facility is the legal entity that controls the facility's operation, rather than the plant or site manager.

## Section III: Facility/Site Location Information:

Enter the facility's or site's official or legal name and complete address, including city, state, and ZIP code. If the facility lacks a street address, indicate the latitude and longitude of the facility to the nearest 15 seconds.

## Section IV New Operator Information

If you are no longer the operator of the facility/site, provide the information pertaining to the new operator at the facility/site, including the name and address of the new operator if any.

## Section V: Certification

The Inspection Request form must be signed by a responsible party as follows:

For a Corporation: by a responsible officer, which means: (i) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function; or their designee, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

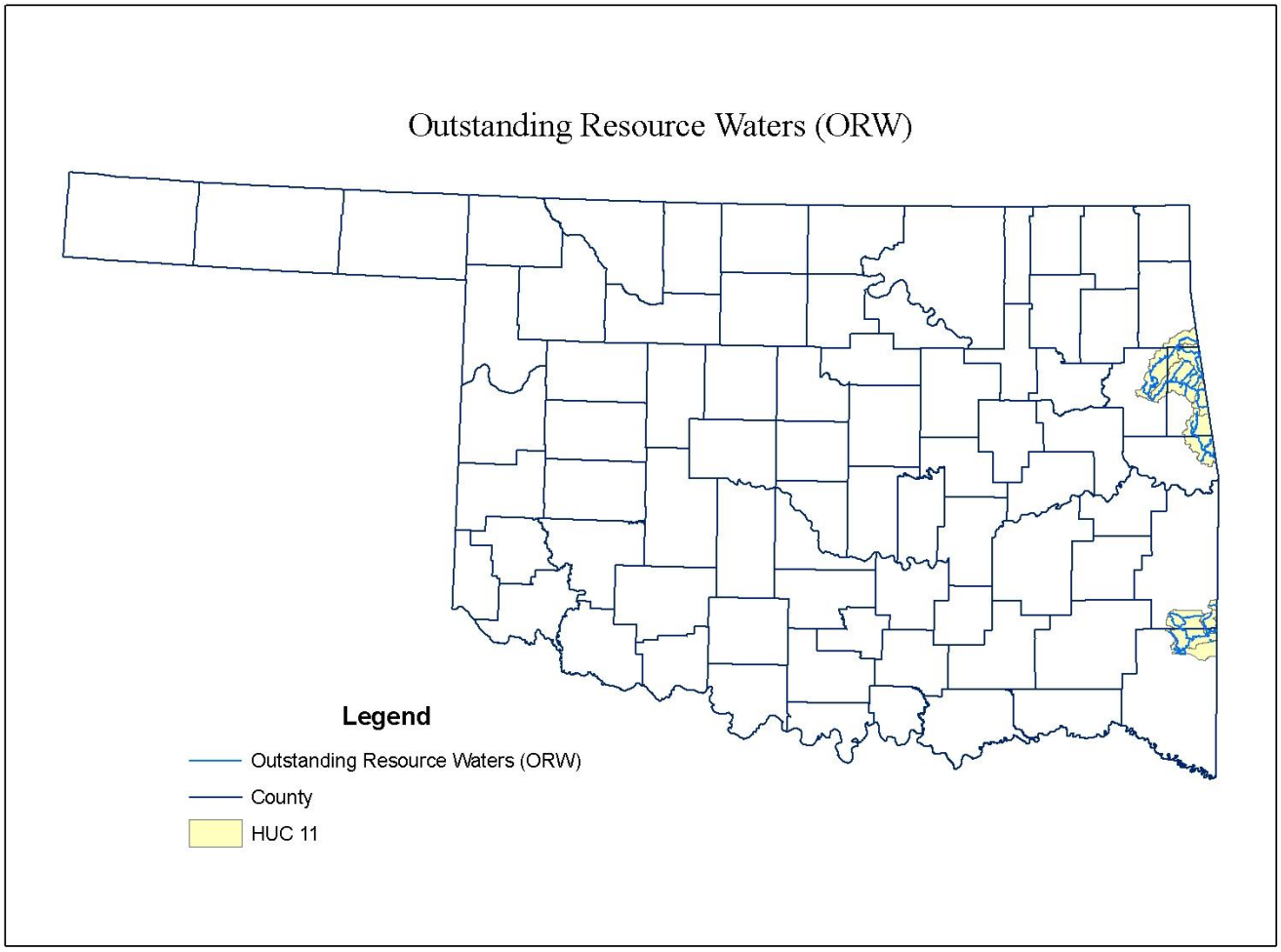
For a partnership or sole proprietorship: by a general partner or the proprietor.

For a municipality, state, federal, or other public agency: by either principal executive officer or ranking elected official.

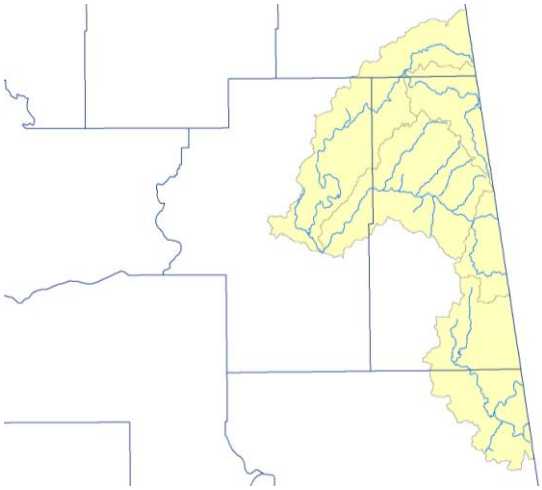
Inspection Requests must be sent to the following address:

**DEQ**
**Environmental Complaints and Local Services**
**Storm Water Unit**
**707 North Robinson, P.O. Box 1677**
**Oklahoma City, OK 73101-1677**

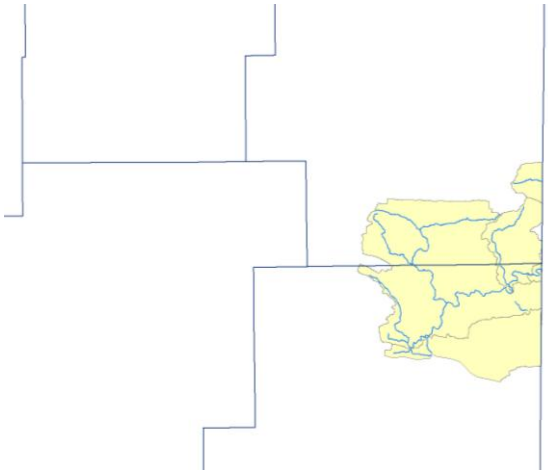
## ADDENDUM F – OUTSTANDING RESOURCE WATERS (ORW)




## Outstanding Resource Waters Details



**Illinois River & Lee Creek Watersheds**



**Mountain Fork River Watershed**

# ADDENDUM G – ADDITIONAL REQUIREMENTS for CONCRETE and ASPHALT BATCH PLANTS

## G.1 Additional SWP3 Requirements

Site Description: including the nature of industrial activities at your facility and a site map. The site map shall specify the locations of all storm water monitoring points, if any;

## G.2. Summary of Potential Pollutant Sources

You must document the area at your facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product (also see Part 4.5.6).

## G.3.Sampling Data

You must provide a summary of any existing storm water discharge sampling data taken at your facility. All storm water sampling data collected during the term of this permit must also be summarized and included in this part of the SWP3. The SWP3 shall document the procedures for conducting the types of analytical monitoring specified by this permit.

## G.4.Storm Water Controls

Describe the type and location of existing non-structural and structural BMPs selected for each of the areas where industrial materials or activities are exposed to storm water. For areas where BMPs are not currently in place, describe appropriate BMPs that you will use to control pollutants in storm water discharges. Selection of BMPs should take into consideration:

A. Non-Structural BMPs

1. Good Housekeeping: You must keep all exposed areas of the facility in a clean, orderly manner where such exposed areas could contribute pollutants to storm water discharges. Common problem areas include: around trash containers, storage areas and loading docks. Measures must also include: a schedule for regular pickup and disposal of garbage and waste materials, routine inspections for leaks and conditions of drums, tanks and containers.

2. Minimizing Exposure: You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended).

3. Preventive Maintenance: You must have a preventive maintenance program which includes timely inspection and maintenance of storm water management devices, (e.g., cleaning oil/water separators, catch basins) as well as inspecting, testing, maintaining and repairing facility equipment, and systems to avoid breakdowns or failures that may result in discharges of pollutants to surface waters.

4. Routine Facility Inspections: In addition to, or as part of the Comprehensive Site Evaluation Report required, you must have qualified facility personnel inspect all areas of the facility where industrial materials or activities are exposed to storm water. You shall develop the routine facility inspection procedures and document the evaluation of existing storm water BMPs. You must correct any deficiencies in implementation of your SWP3 you find as soon as practicable, but not later than within 14 days of the inspection. You must document in your SWP3 the results of your inspections and the corrective actions you took in response to

any deficiencies or opportunities for improvement that you identify. You must develop an inspection form and include in your SWP3.

5. Employee Training: You must describe a stormwater employee training program for the facility, including spill response, good housekeeping and material management practices, and must identify periodic dates (e.g., every 6 months during the months of July and January) for such training.

B. Structural BMPs

You must comply with Part 3.3.1 for sediment and erosion control. .Also you could use the following BMPs, which include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). You must maintain all BMPs in effective operating condition. If site inspections indicate BMPs are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls.

**G.5 Comprehensive Site Compliance Evaluation**

The concrete or Asphalt batch plants covered under this permit must conduct an Annual Comprehensive Site Compliance Evaluation and file a report (see Addendum H). At a minimum, your documentation of the comprehensive site evaluation must include the scope of the inspections, the name(s) of personnel making the inspections, the date(s) of the inspections, and major observations relating to the implementation of the SWP3. Major observations should include, the location(s) of discharges of pollutants from the site, BMPs that need to be maintained;, BMPs that failed to operate as designed or that proved inadequate for a particular location, additional BMPs that are needed to address any conditions requiring corrective action identified during the inspection, previously unidentified discharges from the site, previously unidentified pollutants in existing discharges, evidence of, or the potential for, pollutants entering the drainage system, evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring; and any required revisions to the SWP3 resulting from the inspection.

A. Frequency and Inspectors

You must conduct a comprehensive site compliance evaluation at least once a year. The inspections must be conducted by qualified personnel with at least one member of your stormwater pollution prevention team participating in the comprehensive site inspections. The qualified personnel you use may be either your own employees or outside consultants that you have hired, provided they are knowledgeable and possess the skills to assess conditions at your facility that could impact storm water quality. They must also have the skills to assess the effectiveness of the BMPs you have chosen to use to control the quality of your storm water discharges. If you decide to conduct more frequent inspections, your SWP3 must specify the frequency of inspections.

B. Scope of the Comprehensive Site Compliance Evaluation

Your inspections must include all areas where industrial materials or activities are exposed to storm water, as identified in Part G.1 and areas where spills and leaks have occurred within the past three (3) years.

C. Corrective Actions

If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated in the future:

1. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another OPDES permit) occurs at your facility;
2. A discharge violates a numeric effluent limit;
3. You become aware, or DEQ determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
4. An inspection or evaluation of your facility by a DEQ official, or local MS4, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
5. You find in your routine facility inspection, quarterly visual inspection, or comprehensive site inspection that your control measures are not being properly operated and maintained.

D. Corrective Action Report and Deadlines

Within 14 days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed, the basis for that determination. If you determine that changes are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

**G.6 Maintaining Updated SWP3**

A. Change in Your Physical Operation

You must amend the SWP3 whenever there is a change in design, construction, operation, or maintenance at your facility which has a significant effect on the discharge, or potential for discharge, of pollutants from your facility;

B. Maintaining Your SWP3

You must amend the SWP3 whenever during inspections or investigations by you or by local, State, or Federal officials it is determined the SWP3 is ineffective in eliminating or significantly minimizing pollutants from sources identified under the SWP3 or is otherwise not achieving the general objectives of controlling pollutants in discharges from your facility.

**G.7 Monitoring Requirements**

All facilities will be subject to quarterly visual monitoring. Also the Numeric Effluent Limitation Monitoring (NELM) is required once per year if your asphalt batch plants are covered under this permit. Also these specific monitoring requirements and limitations are applied to the discharge at facilities with co-located activities. Where storm water from the co-located activities is co-mingled, the monitoring requirements and limitations are additive.

A. Quarterly Visual Monitoring

The requirements and procedures for quarterly visual monitoring are applicable to all concrete and asphalt batch plants covered under this permit, regardless of your industrial activities.

1. You must perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. If no storm event resulted in runoff from the facility during a monitoring quarter, you are excused from visual monitoring for that quarter provided you document in your monitoring records that no runoff occurred. You must sign and certify the documentation in accordance with Part 6.7.

2. Your visual examination must be made during daylight hours (e.g., normal working hours). The visual examinations must be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging from your facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lighted area. No analytical tests are required to be performed on the samples. All such samples must be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term.

The following Table is an example of what you should look for in a visual monitoring sample.

**TABLE G-1 VISUAL MONITORING**

| Parameter | Method | Results |
|---|---|---|
| Color and Extent | Visual | Clear, yellow, red, blue, green, brown, black, milky, etc. |
| Odor | Smell | None, earthy, sewage, musky, rotten eggs, petroleum, etc. |
| Clarity or Turbidity | Come up with your own test such as: clean off the label from a 2 liter clear plastic bottle, fill the bottle with the sample, and try to see things through it. | 1) can't see through the bottle<br>2) can see through but could not read newsprint<br>3) can see through and can read newsprint<br>4) pretty clear, but not as clear as bottled water<br>5) as clear as bottled water |
| Floating solids | Visual | Yes/no - describe what they are. |
| Settled solids | Use same 2 liter bottle | Tablespoons or cups of material or millimeters of solids on bottom after 24 hours |
| Suspended solids | Look through the container. | What do you see? |
| Foam | Visual | Yes/no - how thick is the foam?<br>How much of the surface does it cover? What color is the foam? |
| Oil sheen | Visual | Color and extent |

| Parameter | Method | Results |
|---|---|---|
| Other obvious indicators of storm water pollution | Indicate what you observed that would lead a reasonable person to believe that the storm water was polluted. | Tell it like you see it. |

3. You must maintain your visual examination reports onsite with the SWP3. At a minimum, the report must include the examination date and time, examination locations, examination personnel, the nature of the discharge (i.e., runoff or snow melt), results of observations of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination. If applicable, the report shall include why it was not possible to take samples within the first 30 minutes.

B. Numeric Effluent Limitation Monitoring (NELM)

1. *NELM for Asphalt Batch Plant*. If your facility has discharges of storm water from an asphalt batch plant, you must comply with the limitations and monitoring requirements of Table G-2 (also see Table 3.1) for all discharges containing asphalt batch plant runoff, regardless of your industrial activities.

**TABLE G-2 NUMERIC EFFLUENT LIMITATIONS FOR ASPHALT BATCH PLANT**

| Parameter | Limitation | Monitoring Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids | 23 mg/l, daily max.<br>15 mg/l, 30-day avg. | 1/year | Grab |
| Oil and Grease | 15 mg/l, daily max.<br>10 mg/l, 30-day avg. | 1/year | Grab |
| pH | 6.5-9.0, min. and max. | 1/year | Grab |

2. *Monitoring Periods*. If the project takes less than one year to complete, you shall collect at least one sample. Otherwise, you must start to collect your grab samples and analyze the samples annually within the following time periods:

   The yearly monitoring periods are from January 1st to December 31st.

3. *Collection and Analysis of Samples*. You must assess your sampling requirements on an outfall by outfall basis.

   a. When and How to Sample. All required monitoring must be performed on a storm event that results in an actual discharge from your site (at least 0.1 inch of storm water event defined as a "measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days). The 72 hours (3 days) storm interval does not apply if you are able to document that less than a 72-hour (3 days) interval is representative for local storm events during the sampling period. In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs at your facility.

   b. Take a minimum of one grab sample within the first 30 minutes of the discharge resulting from a measurable storm event. If it is not practicable to take the sample during the first 30 minutes, the sample must be collected as soon as practicable after the first 30 minutes. Document in your SWP3 why it was not possible to take samples within 30 minutes. Submit this information on or with the Discharge Monitoring

Report (DMR) (See Part G.8). If the sampled discharge commingles with process or non-process water, attempt to sample the storm water discharge before it mixes with the non-storm water. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

c. To get help with monitoring. Consult the EPA Industrial Stormwater Monitoring and Sampling Guidance that can be downloaded from the EPA Web Site at: http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf

4. *Storm Event Data.* For each monitoring event, except snowmelt monitoring, you must provide the date and duration (in hours) of the storm event(s); rainfall measurements or estimates (in inches) of the storm event; time (in days) since the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sample. For snowmelt monitoring, you must identify the date of the sampling event.

5. *Follow-up Monitoring Requirements if Discharge Exceeds Numeric Effluent Limit*

You must conduct follow-up monitoring within 30 calendar days, or during the next qualifying runoff event of implementing corrective action(s) taken pursuant to Part 4.5.15 in response to an exceedance of a numeric effluent limit contained in this permit.

Monitoring must be performed for any pollutant(s) that exceeds the effluent limit. You must continue to monitor, at least quarterly, until your discharge is in compliance with the effluent limit or until DEQ waivers the requirement for additional monitoring. You must include the results of follow-up monitoring in the report.

C. Representative Outfalls - Substantially Identical Discharges.

Applicable monitoring requirements apply to each outfall authorized by this permit, except as otherwise exempt from monitoring as a "substantially identical outfall." If your facility has two (2) or more outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of the outfalls' drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). You may monitor selected substantially identical outfall(s) on a rotating basis. For this to be permissible, you must describe each outfall authorized by this permit and rationale for any substantially identical outfall determinations, including the locations of the outfalls, why the outfalls are expected to discharge substantially identical effluents, estimates of the size of the drainage area (in square feet) for each of the outfalls; and an estimate of the runoff coefficient of the drainage areas (low: under 40 percent; medium: 40 to 65 percent; high: above 65 percent). The allowance for monitoring only one of the substantially identical outfalls is not applicable to any outfalls with numeric effluent limitations. You are required to monitor each outfall covered by a numeric effluent limit as identified in Part 3.4.1 (also see G.7.B).

D. Adverse Climatic Conditions Waiver

When adverse weather conditions prevent the collection of samples according to the relevant monitoring schedule, you must take a substitute sample during the next qualifying storm event. Adverse conditions (i.e., those which are dangerous or create inaccessibility for personnel) may include such things as local flooding, high winds, electrical storms, or situations which otherwise make sampling impracticable such as drought or extended frozen conditions. You must report any failure to monitor and indicate the basis for not sampling during the usual reporting period in your inspection report.

## G.8 Reporting

A. Reporting Results of Numeric Effluent Limitation Monitoring (NELM)

You are required to submit the results of your NELM to the DEQ according to the following schedule:

1. Save and submit monitoring results by March 1st of the year following the monitoring period.
2. Visual monitoring results must be retained with the SWP3. Do not submit unless requested to do so by the Executive Director.
3. If required, you must submit NELM results obtained from each outfall associated with industrial activity (or an adverse climatic condition certification as per Part G.7.D) on a Discharge Monitoring Report (DMR) form. One form must be submitted for each storm event sampled. An example of a form can be obtained from the DEQ web site found at:

http://www.deq.state.ok.us/WQDnew/stormwater/dmr.pdf

The signed DMR must be sent to: DEQ – ECLS, P.O. Box 1677, Oklahoma City, OK 73101-1677

B. Annual Comprehensive Site Compliance Evaluation Reporting Requirement

1. An Annual Comprehensive Site Compliance Evaluation Report using Form 606-006 found in Addendum G must be filed each year. The report must include items specified in Part G.5. The report must be filed by March 1st of each year beginning in 2013.

   If your permit becomes effective less than one (1) month from the end of the yearly monitoring period, your first monitoring period starts with the next respective annual monitoring period.

2. The report must include a certification signed and dated by you or by an authorized representative of your facility (see Part 6.7) that states the following:

   I certify under penalty of law that I have read and understand the requirements for filing this Comprehensive Site Compliance Evaluation Report.

   *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 gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

# ADDENDUM H – ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT FOR CONCRETE AND ASPHALT BATCH PLANTS

**See Page 4 for Instructions**

| DEQ FORM 606-006 Sept. 13, 2012 | | **Oklahoma Department of Environmental Quality**<br>**Annual Comprehensive Site Compliance Evaluation Report for Industrial Facilities (ACSCER)** |
|---|---|---|

Submission of this Comprehensive Site Compliance Evaluation Report, Part B, provides notice that the party identified in Section I of this form is not required to conduct Benchmark Monitoring for storm water discharges associated with industrial activities under the OPDES program. This Annual Comprehensive Site Compliance Evaluation Report is required for all authorized industrial facilities.

**All Requested Information Must Be Provided on This Form (Part A) and the ACSCER Form (Part B).**

**See Instructions on Page 4 of the Form**.

## Section I.

OPDES Permit Authorization Number: _____

## Section II. Facility Operator Information

Name: _____ Phone:_____

Address:_____

City: _____ State:_____ Zip Code:_____

## Section III. Facility Location

Name:_____ Phone:_____

Address: _____

City: _____ County: _____ Zip Code:_____

Latitude: _____ Longitude:_____

## Section IV. Certification

*I certify under penalty of law that I have read and understand the requirements for filing this Comprehensive Site Compliance Evaluation Report. This report is also to be retained as part of the Storm Water Pollution Prevention Plan (SWP3) for at least three (3) years from the date permit coverage expires or is terminated and will be made available to any state or federal inspector visiting this facility. All records of actions taken in accordance with G.8 of this permit as part of the SW P3 will be retained for at least three (3) years from the date permit coverage expires or is terminated. 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 gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Print Name: _____ Date:_____

Signature:_____ Title:_____

Annual Comprehensive Site Compliance Evaluation Report - Part B Page 1.

Reporting Period: _____.

- ✓ How many routine facility inspections did you perform during the reporting period? _____

- ✓ How many corrective actions to remove the original violation and document these actions according to corrective action deadlines?

| Date | Deficiencies | Corrected (Y or N) | Date Corrected |
|---|---|---|---|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

- ✓ What must you do to correct the deficiencies that remain uncorrected?
  _____

  _____

- ✓ Were all BMPs you indicated you would be using in your SWP3 including good housekeeping practices, actually being implemented at the time of the Annual Comprehensive Site Compliance Evaluation?
  Yes _____ No_____
- ✓ If one or more BMPs were not being implemented, were corrective actions taken after the FIRST inspection to find the problem?
  Yes _____ No_____ All BMPs were being implemented _____
- ✓ Was/were the same failure(s) to implement a BMP deficiency(ies) noted in more than one inspection?
  Yes _____ No_____ No deficiencies noted in any inspection _____
- ✓ Did any of your routine facility inspections find that one or more of your BMPs was not effective in controlling the pollutant source for which it was designed?
  Yes _____ No_____ All BMPs were effective _____
- ✓ If you found one or more ineffective BMPs, have they all been replaced with an alternative or modified BMP?
  Yes _____ No_____ All BMPs were being effective _____
- ✓ Are there additional BMPs needed to address any conditions requiring corrective action?
  Yes _____ No_____
- ✓ At any time during the reporting period, did you discover any previously unidentified illicit discharges from your facility or previously unidentified pollutants in the existing discharges?
  Yes _____ No_____
- ✓ Have all illicit discharges (including any discovered in previous years) been eliminated or permitted?
  Yes _____ No_____ Permit applied for _____ No known illicit discharges _____
- ✓ Have any significant spills or leaks occurred at your facility during the reporting period?
  Yes _____ No_____
- ✓ If any significant spills or leaks occurred, did they result in either a dry weather discharge or an actual discharge of the spilled or leaked material commingled with storm water (as opposed to the spilled material being washed away by storm water?)
  Yes _____ No_____

Part B. Page 2

- ✓ If any significant spills or leaks occurred, did they result in more than the minimum amounts of material being discharged in storm water? Base your answer on your knowledge of the material you spilled or that leaked. The minimum amounts could vary with the nature (toxicity, oxygen demand, pH, etc.) of the spilled or leaked material from amounts left after normal "sweeping" type cleanup to the point at which even trace amounts left after cleanup could cause an environmental problem.
  Yes _____ No_____ No spills or leaks occurred_____
- ✓ Have all known spills or leaks been cleaned up or otherwise prevented from contaminating storm water that would be discharged under the authority of this permit?
  Yes _____ No_____ No spills or leaks occurred_____
- ✓ How many times did you visually monitor all your storm water discharges at all the facility outfalls during the reporting year, and document the condition of and around the outfalls, including flow dissipation measures to prevent scouring? (Count only those done in accordance with the procedures at Part G.7.A Quarterly Visual Monitoring)
  Yes _____ No_____ Number of Visual Monitoring _____
- ✓ Would the results of your visual monitoring indicate that there are pollutants in your storm water discharges that are not adequately controlled by your current BMPs?
  Yes _____ No_____
- ✓ If the results of your visual monitoring indicated a potential problem, was it due to one or more of the following?

1. New pollutant source (including exposure of previously unexposed material).
2. Failure to implement or maintain an existing BMP.
3. Less than expected performance from a BMP.
4. No BMP was selected to deal with that problem.
5. N/A (No problems identified)

- ✓ If your visual monitoring indicated a potential problem, what have you done to resolve the problem?
  1. Eliminated exposure or pollutant source.
  2. Modified existing BMPs.
  3. Added a new BMP.
  4. Plan to address problem by end of current reporting year.
  5. Nothing planned.
  6. N/A (No problems identified).
- ✓ Did any analysis of any element tested during any previous discharge monitoring period exceed the numeric limitation value?
  Yes _____ No_____
- ✓ If your answer to the previous question was "Yes", please name the element and the test results.

| Element | Test Results | Element | Test Results |
|---|---|---|---|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

- ✓ Are there any required revisions to the SWP3 resulting from the inspection?
  Yes _____ No_____

ADDENDUM H Annual Comprehensive Site Compliance Evaluation Report - Instructions

**Instructions for Completing the Annual Comprehensive Site Compliance Evaluation Report Form 606-006, Storm Water Discharges Associated with Industrial Activity**

**When to File an ACSCER Form:**

Permittees who are presently covered under an issued OPDES general permit for storm water discharges associated with industrial activity must submit an Annual Comprehensive Site Compliance Evaluation Report by March 1st of each year, beginning in 2013. This is in lieu of filing analytical benchmark discharge monitoring reports. If you need assistance or have questions, contact the Storm Water Program of the Environmental Complaints & Local Services of the DEQ at (405) 702-6100.

**Section I: Permit Information:**

Enter the existing OPDES General Storm Water Construction Permit number assigned to the facility identified in Section II.

**Section II. Facility Operator Information:**

Give the legal name of the person, firm, public organization or any other entity that owns or operates the facility described in this application. The name of the operator may or may not be the same name as the facility. The operator of the facility is the legal entity that controls the facility's operation, rather than the plant or site manager.

**Section III: Facility/Site Location Information**:

Enter the facility's official or legal name and complete address, telephone, city, state, and ZIP code. If the facility lacks a street address, indicate the latitude and longitude of the facility to the nearest 15 seconds.

**Section IV: Certification**

The ACSCER form must be signed by a responsible party such as the owner or an officer, such as: president, vice president, secretary, and treasurer of either a corporation, company, trust, partnership, or sole proprietorship by a general partner or the proprietor. For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

**How to complete the Comprehensive Site Compliance Evaluation Report Part B**

1. Inspect all areas where materials or activities are exposed to storm water, and areas where spills and leaks have occurred within the past 3 years.
2. Report industrial material, residue or trash on the ground that could contaminate or be washed away.
3. Prevent leaks or spills from industrial equipment, drums, barrels, tanks, etc.
4. Prevent offsite tracking of industrial material or sediment.
5. Prevent tracking or blowing of raw, final, or waste material from areas of no exposure to exposed areas.
6. Include evidence of, or potential for pollutants entering the drainage system.

Corrective Actions:

1. Review to determine if revisions/modifications are needed to eliminate problems or meet the effluent limits in this permit;
2. Document your discovery of any of the conditions listed in Part 4.5.15 and Addendum H within 24 hours and any corrective actions to be taken to eliminate or further investigate the deficiency within 14 days of such discovery.
3. Complete the corrective action report with the information included in your SWP3.

**Reporting is required by March 1st of the year beginning in 2013.**

**Where to file an ACSCER :**

DEQ - ECLS

Storm Water Program

P.O. Box 1677

Oklahoma City, Oklahoma 73101-1677

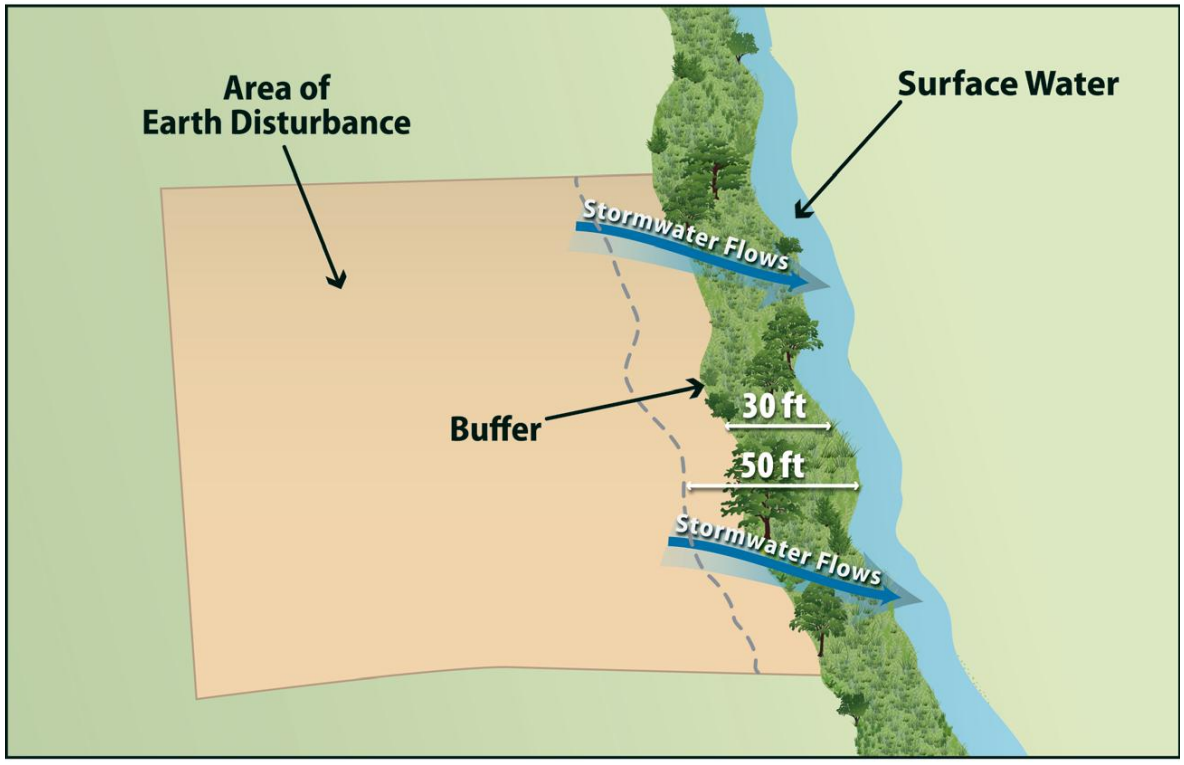
## ADDENDUM I – BUFFER GUIDANCE

The purpose of this guidance is to assist you in complying with the requirements in Parts 3.3.1.A and 3.5.2.A of this permit regarding the establishment of natural buffers or equivalent sediment controls.

### Step 1 - Determine Whether 100 Feet or 50 Feet of Natural Buffer Is Required

If your land disturbing activities will occur within the Aquatic Resources of Concern which are identified by USFWS and ODWC, a vegetated buffer of at least 100 feet is required between the area disturbed and all perennial or intermittent streams on or adjacent to the construction site, or a vegetated buffer of at least 50 feet is required between the area disturbed and all ephemeral streams. If your disturbing activities will be adjacent to the waters of the State, a vegetated buffer of at least 50 feet is required. Figure I – 1 illustrates when a site would be required to comply with the requirements in Part 3.3.1.D due to their proximity to surface waters. If the surface water is not located within 50 feet of the earth-disturbing activities, Part 3.3.1 does not apply. If you determine that the buffer requirements apply to your site and those buffer requirements cannot be met, you may continue on to Step 2.

**Figure I - 1. Example of Earth-Disturbing Activities within 50 feet of a Surface Water.**




### Step 2 - Determine Compliance Alternatives to the Buffer Requirements

You have three compliance alternatives from which you can choose:

Alternative 1. Provide and maintain a 100-foot or 50-foot undisturbed natural buffer; or

Alternative 2. Provide and maintain an undisturbed natural buffer that is less than 100-feet or 50-feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 100-foot or 50-foot undisturbed natural buffer; or

Alternative 3. If it is infeasible to provide and maintain an undisturbed natural buffer of any size, you must implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 100-foot or 50-foot undisturbed natural buffer.

The compliance alternative selected above must be maintained throughout the duration of permit coverage. The following provides detailed guidance for how you can comply with each of the compliance alternatives. Part I.1 below provides guidance on how to provide and maintain natural buffers consistent with the Alternatives 1 and 2. Part I.2 below provides guidance on how to comply with the requirement to provide a 100-foot or 50-foot buffer equivalent through erosion and sediment controls consistent with Alternative 2 and 3.

## I.1 Guidance for Providing and Maintaining Natural Buffers

The following guidance is intended to assist you in complying with the requirements to provide and maintain a natural buffer during construction. This part of the guidance applies to you if you choose either Alternative 1 (100-foot or 50-foot buffer) or Alternative 2 (a buffer of < 100 feet or < 50 feet supplemented by additional erosion and sediment controls that achieve the equivalent sediment load reduction as the 100-foot or 50-foot buffer).

### A. *Buffer Width Measurement*

Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:

1. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or

2. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

Refer to Figure I – 2 and Figure I - 3. You may find that specifically measuring these points is challenging if the flow path of the surface water changes frequently, thereby causing the measurement line for the buffer to fluctuate continuously along the path of the waterbody. Where this is the case, DEQ suggests that rather than measuring each change or deviation along the water's edge, it may be easier to select regular intervals from which to conduct your measurement. For instance, you may elect to conduct your buffer measurement every 5 to 10 feet along the length of the water.

**Figure I - 2. This image shows buffer measurement from the ordinary high water mark of the water body, as indicated by a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and/or the presence of litter/debris.**

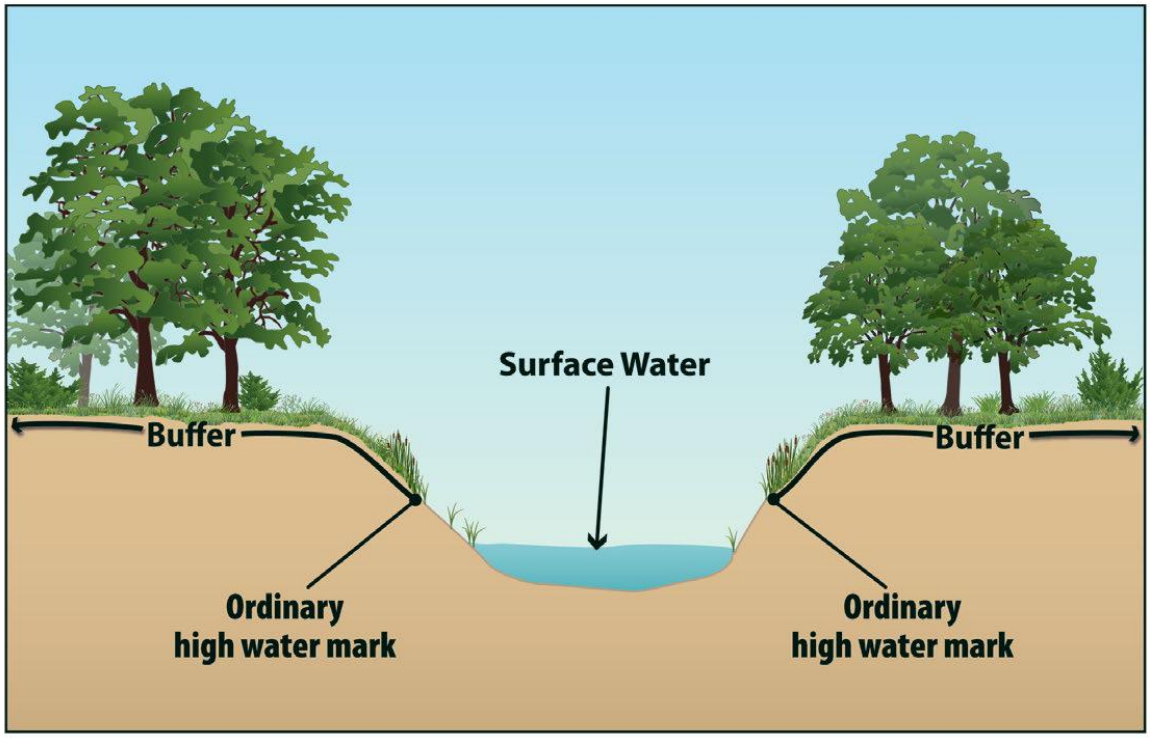
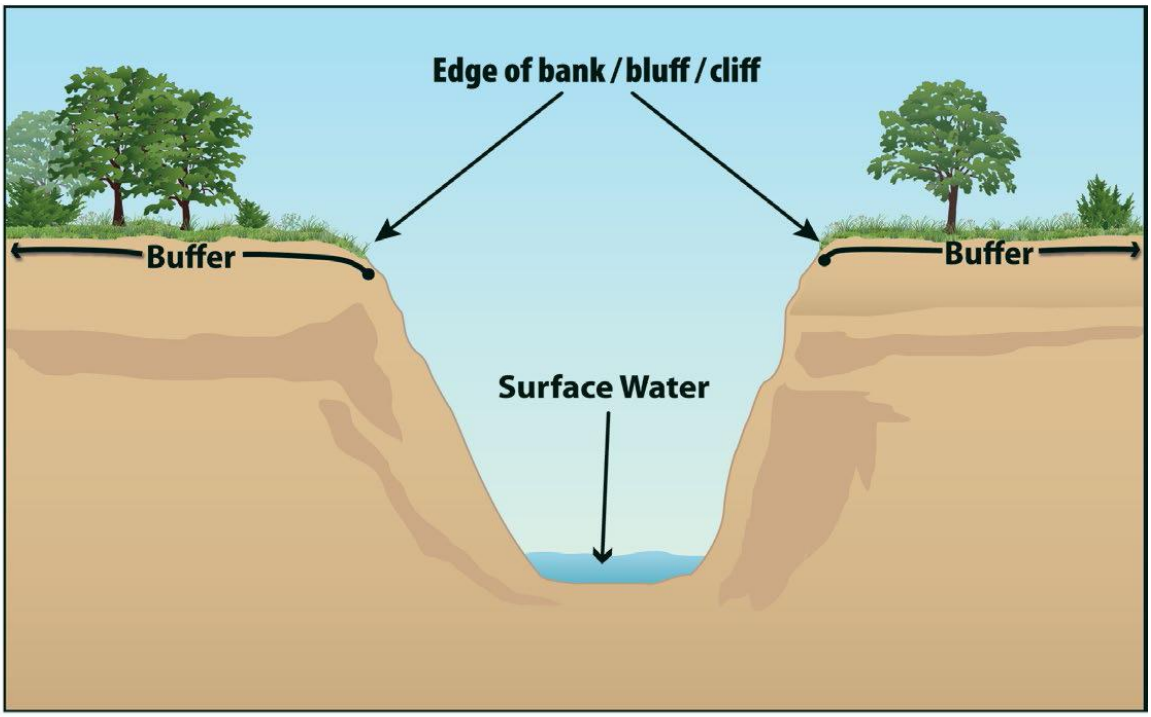



**Figure I - 3. This image shows buffer measurement from the edge of the bank, bluff, or cliff, whichever is applicable.**



**B.** ***Limits to Disturbance within the Buffer***

You are considered to be in compliance with this requirement if you retain and protect from construction activities the natural buffer that existed prior to the commencement of construction. If the buffer area contains no vegetation prior to the commencement of construction (e.g., sand or rocky surface), you are not required to plant any additional vegetation. As noted above, any preexisting structures or impervious surfaces are allowed in the buffer provided you retain and protect from disturbance the vegetation in the buffer outside the preexisting disturbance.

To ensure that the water quality protection benefits of the buffer are retained during construction, you are prohibited from conducting any earth-disturbing activities within the buffer during permit coverage.

**C.** ***Discharges to the Buffer***

You must ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls (*for example, you must comply with the Part 3.3.1.F.2 requirement to establish sediment controls around the downslope perimeter of your site disturbances*), and if necessary to prevent erosion caused by stormwater flows within the buffer, you must use velocity dissipation devices.

**D.** ***SWP3 Documentation***

You must document the reduced width of the buffer you will be retaining and you must also describe the erosion and sediment controls you will use to achieve an equivalent sediment reduction, as described in Part I.2 below. Note that you must also show any buffers on your site plan in your SWP3. Additionally, if any disturbances related to the exceptions in Part 3.3.1.A (also see Step 2 of Part 11) occur within the buffer area, you must document this in the SWP3.

**I.2 Guidance for Providing the Equivalent Sediment Reduction as the 100-foot or 50-foot Buffer**

If you are selecting Alternative 2 (provide and maintain a buffer that is less than 100feet or 50 feet that is supplemented by additional erosion and sediment controls that, together, achieve the equivalent sediment load reduction as the 100-foot or 50-foot buffer) or Alternative 3 (implement erosion and sediment controls that achieve the equivalent sediment load reduction as the 100-foot or 50-foot buffer), the following guidance is intended to assist you in demonstrating that you will achieve the equivalent sediment reduction as the 100-foot or 50-foot buffer.

**A** ***Determine Whether It Is Feasible to Provide a Reduced Buffer***

DEQ recognizes that there will be a number of situations in which it will be infeasible to provide and maintain a buffer of any width. While some of these situations may exempt you from the buffer requirement entirely (See Part 3.3.1.A), if you do not qualify for one of these exemptions, there still may be conditions or circumstances at your site that make it infeasible to provide a natural buffer. For example, there may be sites where a significant portion of the property on which the earth-disturbing activities will occur is located within the buffer area, thereby precluding the retention of natural buffer areas. DEQ believes there are likely to be other examples of situations that make it infeasible to provide any buffer area.

Therefore, in choosing between the 2 different compliance alternatives (Alternative 2 or 3), you should only elect to comply with Alternative 2 if it is feasible for you to retain any natural buffer on your site. (Note: For any buffer width retained, you are required to comply with the requirements in Part I.1, above, concerning the retention of vegetation and restricting earth disturbances.) Similarly, if you determine that it is infeasible to provide a natural buffer of any size during construction, you should elect to comply with Alternative 3. After making this determination, you should proceed to Part I.2 to determine how to provide controls that, together

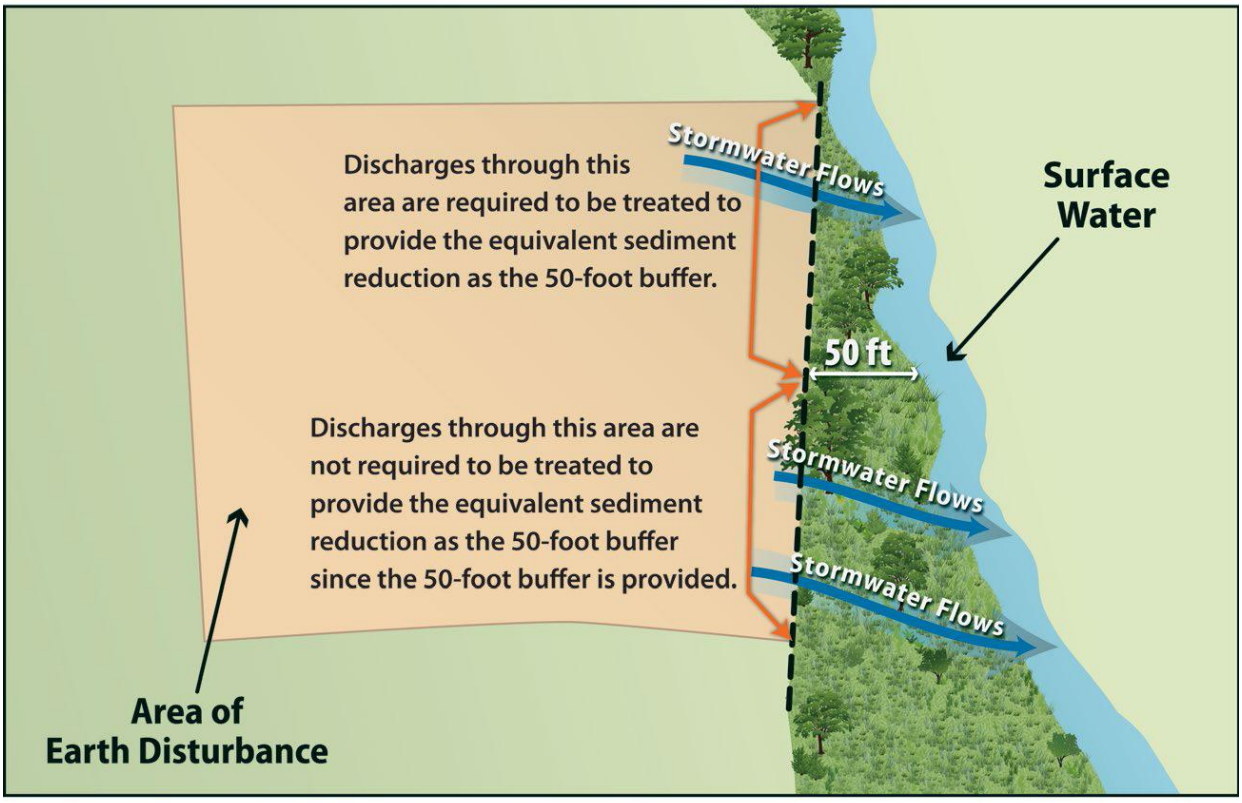
with any buffer areas that is being retained, if applicable, will achieve an equivalent sediment load reduction as the 100-foot or 50-foot buffer. You must describe why it is infeasible to provide and maintain an undisturbed natural buffer of any size in the SWP3.

**B.** ***Design Controls That Provide Equivalent Sediment Reduction as 100-foot or 50-foot Buffer***

You must next determine what additional controls must be implemented on your site alone or in combination with any retained natural buffer, to achieve a reduction in sediment equivalent to that achieved by a 100-foot or 50-foot buffer.

Note that if only a portion of the natural buffer is less than 50 feet, you are only required to implement erosion and sediment controls that achieve the sediment load reduction equivalent to the 100-foot or 50-foot buffer for discharges through that area. You would not be required to provide treatment of stormwater discharges that flow through 100 feet 50 feet or more of natural buffer. See Figure I - 4.

**Figure I - 4 Example of how to comply with the requirement to provide the equivalent sediment reduction when only a portion of your earth-disturbances discharge to a buffer of less than 100 feet or 50 feet.**




Guidelines to help you work through these requirements are provided below.

**Step 1 -** Estimate the Sediment Reduction from Your Site if You Had Retained a 100-foot or 50-foot Natural Buffer

In order to design controls that match the sediment removal efficiency of a 100-foot or 50- foot buffer, you first need to know what this efficiency is for your site. The sediment removal efficiencies of natural buffers vary according to a number of site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of sediment controls used to reduce the discharge of sediment prior to the buffer. DEQ has simplified this calculation by developing buffer performance tables covering a range of vegetation and soil types for the areas covered by the permit. See Attachment 1, Tables I - 1 through I - 4.

Note: buffer performance values in Tables I - 1 through I - 4 represent the percent of sediment captured through the use of perimeter controls (e.g., silt fences) and 100-foot or 50-foot buffers at disturbed sites of fixed proportions and slopes. Using Tables I - 1 through I - 4 (see Attachment 1), you can determine the sediment removal efficiency of a 100-foot or 50-foot buffer for your geographic area by matching the vegetative cover type and the type of soils that predominate at your site. For example, if your site is located in Oklahoma City (see Table I - 1), and your buffer vegetation corresponds most closely with that of fescue grass, and the soil type at your site is best typified as sand, your site's sediment removal efficiency would be 90 percent.

In this step, you should choose the vegetation type in the tables that most closely matches the vegetation that would exist naturally in the buffer area on your site regardless of the condition of the buffer. However, because you are not required to plant any additional vegetation in the buffer area, in determining what controls are necessary to meet this sediment removal equivalency in Step 2 below, you will be able to take credit for this area as a fully vegetated "natural buffer."

Similarly, if a portion of the buffer area adjacent to the surface water is owned by another party and is not under your control, you can treat the area of land not under control as having the equivalent vegetative cover and soil type that predominates on the portion of the property on which your construction activities are occurring. *For example, if your earth-disturbances occur within 50 feet of a surface water, but the 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10 foot area adjacent to the stream as having the equivalent soil and vegetation type as predominates in the 40 foot area under your control. You would then make the same assumption in Step 2 for purposes of determining the equivalent sediment removal.*

Alternatively, you may do your own calculation of the effectiveness of the 50-foot buffer based upon your site-specific conditions, and may use this number as your sediment removal equivalency standard to meet instead of using Tables I – 1 through I - 4. This calculation must be documented in your SWP3.

**Step 2 - Design Controls That Match the Sediment Removal Efficiency of the 100-foot or 50-foot Buffer**

Once you have determined the estimated sediment removal efficiency of a 100-foot or 50-foot buffer for your site in Step 1, you will be required to select stormwater controls that will provide an equivalent sediment load reductions.

To make the determination that your controls and/or buffer area achieve an equivalent sediment load reduction as the 100-foot or 50-foot buffer, you may use stormwater controls listed in Tables I-1 through I-4 to select a single designed control, such as 12" or 6" waddle, roll material, silt fence or straw mulch (see Attachment 1), or you will need to use a model or other type of calculator. There are a variety of models available that can be used to support your calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other models.

Alternatively, you may elect to install a combination of stormwater controls and to retain some amount of a buffer. Whichever control(s) you select, you must demonstrate in your SWP3 that the controls will provide at a minimum the same sediment removal capabilities as the 100-foot or 50-foot buffer (Step 1). You are allowed to take credit for the removal efficiencies of your required perimeter controls in your calculation of equivalency, because these were included in calculating the buffer removal efficiencies in Tables I - 1 through I - 4. (Note: You are reminded that the controls must be kept in effective operating condition until you have completed final stabilization on the disturbed portions of the site discharging to the surface water.)

If you are retaining a buffer of less than 100 feet or 50 feet, you may take credit for the removal that will occur from the reduced buffer and only need to provide additional controls to make up the difference between the removal efficiency of a 100-foot or 50-foot buffer and the removal efficiency of the narrower buffer. For example, if you are retaining a 30 foot buffer, you can account for the sediment removal provided by the 30-foot buffer retained, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided. To do this, you would plug the width of the buffer that is retained into RUSLE or another model, along with other stormwater controls that will together achieve a sediment reduction equivalent to a natural 50-foot buffer.

As described in Step 1 above, you can take credit for the area you have retained as a "natural buffer" as being fully vegetated, regardless of the condition of the buffer area. *For example, if your earth-disturbances occur 30 feet from a surface water, but the 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10-foot area as a natural buffer, regardless of the activities that are taking place in the area. Therefore, you can assume (for purposes of your equivalency calculation) that your site is providing the sediment removal equivalent of a 30-foot buffer, and you will only need to design controls to make up for the additional removal provided by the 20- foot of buffer that is not being provided.*

**Step 3 - Document How Site-Specific Controls Will Achieve the Sediment Removal Efficiency of the 100-foot or 50-foot Buffer**

In Steps 1 and 2, you determined both the expected sediment removal efficiency of a 100-foot or 50-foot buffer at your site, and you used this number as a performance standard to design controls to be installed at your site, which alone or in combination with any retained natural buffer, achieves the expected sediment removal efficiency of a 100-foot or 50-foot buffer at your site. The final step is to document in your SWP3 the information you relied on to calculate the equivalent sediment reduction as an undisturbed natural buffer. DEQ will consider your documentation to be sufficient if it generally meets the following:

For Step 1: refer to the Table in Attachment 1 that you used to derive your estimated 100-foot or 50-foot buffer sediment removal efficiency performance. Include information about the buffer vegetation and soil type that predominate at your site, which you used to select the sediment load reduction value in Tables I - 1 through I - 4. Or, if you conducted a site-specific calculation for sediment removal efficiency, provide the specific removal efficiency, and the information you relied on to make your site-specific calculation.

For Step 2: (1) Specify a single designed stormwater control (see Table I-1 thru I-4) or other stormwater controls that you used to estimate sediment load reductions from your site. Specify a model or other type of calculator that you used to support your calculation if any; and (2) the results of calculations showing how your controls will meet or exceed the sediment removal efficiency from Step 1. If you choose Alternative 3, you must also include in your SWP3 a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size.

## ATTACHMENT 1

Sediment Removal Efficiency Tables: Percent of sediment removal was calculated for a 200-foot runoff area with a 100-foot buffer, and a 100-foot runoff area with a 50-foot buffer. DEQ recognizes that very high removal efficiencies, even where theoretically achievable by a 50-foot or 100-foot buffer, may be very difficult to achieve in practice using alternative controls. Therefore in the tables below, DEQ has limited the removal efficiencies to a maximum of 90%. Efficiencies that were

calculated at greater than 90% are shown as 90%, and this is the minimum percent removal that must be achieved by alternative controls.

**Best Management Practices Defined**

- Fescue: Buffer strip (100 feet or 50 feet) at the end of the overland flow path of Fescue grass, the area has not been grazed
- Grama Grass: Buffer strip (100 feet or 50 feet) at the end of the overland flow path of Grama grass, at least the third year after seeding
- Range Grass: Buffer zone (100 feet or 50 feet) at the end of the overland flow path of a generic low production range grass
- Switchgrass: Buffer zone (100 feet or 50 feet) at the end of the overland flow path of Switchgrass growth
- Weeds: Buffer zone (100 feet or 50 feet) at the end of the overland flow path of at least 5 years of growth of generic weeds started from volunteer germination
- 12” Waddle: 12 inch straw sock or wattle installed at the base of the runoff area
- 6” Waddle: 6 inch straw sock or wattle installed at the end of the overland flow path
- Roll Material: Erosion control blanket placed over the disturbed area
- Silt Fence: Full retardance fabric silt fence installed at the end of the overland flow path
- Straw Mulch: Straw mulch applied over the disturbed area, 4000 lbs/acre

**Soils Defined**

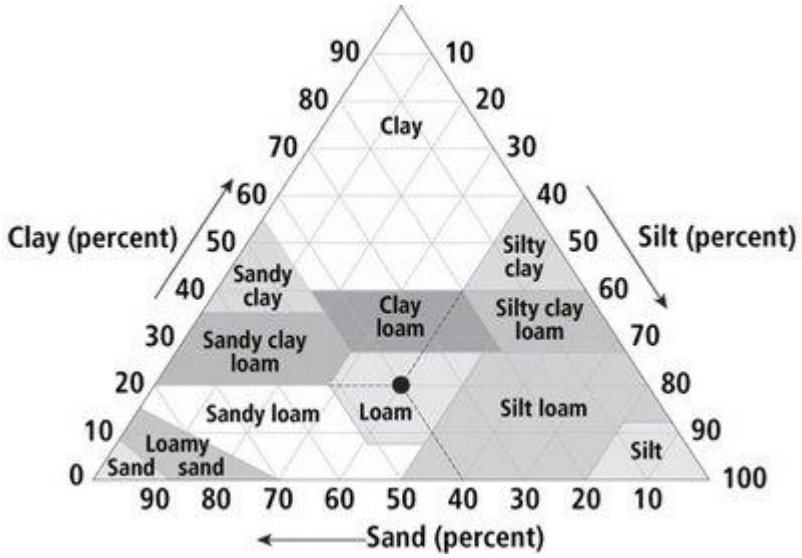


**Table I-1 Estimated Estimated Buffer Performance of Blade Fill in Oklahoma City, Oklahoma ***

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Fescue (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Grama Grass (100' Buffer) | 74 | 79 | 79 | 79 | 78 | 78 | 78 | 76 | 78 | 74 | 71 |
| Grama Grass (50' Buffer) | 65 | 77 | 78 | 78 | 78 | 78 | 77 | 76 | 74 | 67 | 50 |
| Range Grass (100' Buffer) | 89 | 90 | 92 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Range Grass (50' Buffer) | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 89 |
| Switchgrass (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Switchgrass (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Weeds (100' Buffer) | 47 | 49 | 48 | 50 | 48 | 49 | 50 | 46 | 50 | 50 | 48 |
| Weeds (50' Buffer) | 42 | 47 | 47 | 48 | 47 | 49 | 48 | 46 | 48 | 45 | 41 |
| 12" Waddle | 86 | 74 | 72 | 84 | 56 | 72 | 82 | 27 | 86 | 90 | 90 |
| 6" Waddle | 38 | 58 | 56 | 67 | 45 | 62 | 69 | 20 | 62 | 55 | 24 |
| Roll Material | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Silt Fence | 86 | 77 | 80 | 90 | 70 | 83 | 89 | 43 | 90 | 90 | 90 |
| Straw Mulch | 85 | 87 | 87 | 86 | 88 | 87 | 83 | 90 | 87 | 89 | 89 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

**Table I-2 Estimated Buffer Performance of Blade Cut in Oklahoma City, Oklahoma ***

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 88 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 88 |
| Fescue (50' Buffer) | 87 | 88 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 89 | 84 |
| Grama Grass (100' Buffer) | 24 | 52 | 70 | 63 | 74 | 72 | 70 | 71 | 48 | 33 | 11 |
| Grama Grass (50' Buffer) | 24 | 39 | 65 | 54 | 71 | 70 | 60 | 70 | 39 | 15 | 10 |
| Range Grass (100' Buffer) | 78 | 85 | 89 | 90 | 90 | 90 | 90 | 89 | 88 | 84 | 24 |
| Range Grass (50' Buffer) | 77 | 83 | 89 | 89 | 90 | 90 | 90 | 89 | 85 | 80 | 68 |
| Switchgrass (100' Buffer) | 86 | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 85 |
| Switchgrass (50' Buffer) | 85 | 88 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 88 | 81 |
| Weeds (100' Buffer) | 18 | 26 | 33 | 31 | 33 | 34 | 35 | 28 | 26 | 22 | 15 |
| Weeds (50' Buffer) | 23 | 22 | 32 | 31 | 31 | 35 | 31 | 28 | 22 | 15 | 14 |
| 12" Waddle | 80 | 72 | 71 | 81 | 55 | 70 | 80 | 25 | 84 | 83 | 73 |
| 6" Waddle | 9 | 11 | 47 | 35 | 43 | 57 | 51 | 19 | 17 | 0 | 1 |
| Roll Material | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Silt Fence | 86 | 76 | 80 | 90 | 69 | 82 | 88 | 40 | 90 | 90 | 90 |
| Straw Mulch | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

**Table I-3 Estimated Buffer Performance of Blade Fill Tulsa, Oklahoma ***

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Fescue (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Grama Grass (100' Buffer) | 74 | 80 | 79 | 79 | 78 | 78 | 77 | 76 | 79 | 76 | 69 |
| Grama Grass (50' Buffer) | 65 | 76 | 79 | 79 | 78 | 77 | 77 | 75 | 76 | 67 | 52 |
| Range Grass (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Range Grass (50' Buffer) | 89 | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Switchgrass (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Switchgrass (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Weeds (100' Buffer) | 50 | 50 | 48 | 51 | 50 | 50 | 49 | 47 | 51 | 51 | 48 |
| Weeds (50' Buffer) | 43 | 48 | 47 | 49 | 48 | 47 | 49 | 45 | 49 | 44 | 40 |
| 12" Waddle | 86 | 74 | 71 | 83 | 55 | 70 | 81 | 24 | 86 | 90 | 90 |
| 6" Waddle | 39 | 60 | 55 | 67 | 44 | 59 | 69 | 18 | 65 | 53 | 25 |
| Roll Material | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Silt Fence | 86 | 76 | 79 | 90 | 69 | 82 | 89 | 41 | 90 | 90 | 90 |
| Straw Mulch | 84 | 86 | 87 | 86 | 87 | 86 | 86 | 89 | 86 | 87 | 88 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

**Table I-4 Estimated Buffer Performance of Blade Cut in Tulsa, Oklahoma ***

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 88 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 87 |
| Fescue (50' Buffer) | 87 | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 83 |
| Grama Grass (100' Buffer) | 29 | 52 | 73 | 62 | 75 | 74 | 70 | 70 | 52 | 33 | 9 |
| Grama Grass (50' Buffer) | 18 | 45 | 64 | 57 | 73 | 72 | 63 | 70 | 38 | 25 | 10 |
| Range Grass (100' Buffer) | 79 | 85 | 89 | 90 | 90 | 90 | 90 | 87 | 89 | 85 | 72 |
| Range Grass (50' Buffer) | 76 | 84 | 88 | 90 | 90 | 90 | 90 | 88 | 86 | 81 | 69 |
| Switchgrass (100' Buffer) | 86 | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 85 |
| Switchgrass (50' Buffer) | 84 | 88 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 89 | 81 |
| Weeds (100' Buffer) | 21 | 30 | 33 | 32 | 34 | 35 | 34 | 26 | 30 | 24 | 15 |
| Weeds (50' Buffer) | 19 | 27 | 31 | 30 | 33 | 34 | 32 | 28 | 24 | 19 | 14 |
| 12" Waddle | 79 | 74 | 69 | 80 | 55 | 70 | 80 | 26 | 84 | 84 | 73 |
| 6" Waddle | 0 | 18 | 46 | 37 | 43 | 58 | 54 | 19 | 14 | 6 | 0 |
| Roll Material | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Silt Fence | 86 | 77 | 79 | 89 | 68 | 81 | 88 | 39 | 90 | 90 | 90 |
| Straw Mulch | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

# ATTACHMENT I-B.2
# Nationwide Permits 12 & 16
# (Gate Extension Utilities & CDMSA Ops)

# Nationwide Permit 12 Requirements

**12. Utility Line Activities.** Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project. Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in preconstruction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area. **(APPLIES)**

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody. **(APPLIES)**

**Utility line substations:** This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities. **(NOT APPLICABLE)**

**Foundations for overhead utility line towers, poles, and anchors:** This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible. **(NOT APPLICABLE)**

**Access roads:** This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into nontidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows. **(APPLIES)**

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit. **(NOT APPLICABLE)**

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate. **(APPLIES IF UTILIZED)**

***Notification:*** The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 31.) (Sections 10 and 404)

- **Note 1:** Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation. **(NOT APPLICABLE)**
- **Note 2:** Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills. **(APPLIES)**
- **Note 3:** Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15). **(NOT APPLICABLE)**
- **Note 4:** For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities. **(NOT APPLICABLE)**

# Nationwide Permit 16 Requirements

**16. Return Water From Upland Contained Disposal Areas.** Return water from an upland contained dredged material disposal area (*Waurika called CDMSA*). The return water from a contained disposal area is administratively defined as a discharge of dredged material by 33 CFR 323.2(d), even though the disposal itself occurs in an area that has no waters of the United States and does not require a section 404 permit. This NWP satisfies the technical requirement for a section 404 permit for the return water where the quality of the return water is controlled by the state through the section 401 certification procedures. The dredging activity may require a section 404 permit (33 CFR 323.2(d)), and will require a section 10 permit if located in navigable waters of the United States. (Section 404)

**33 CFR Part 323 attached in following pages 398 to 404 (e-CFR Code of Federal Regulations, GPO)**

**Go to 33 CFR 323.2(d), pages 398 to 400.**

lighted buoy as approved by the United States Coast Guard.

[51 FR 41228, Nov. 13, 1986, as amended at 60 FR 44761, Aug. 29, 1995]

# PART 323—PERMITS FOR DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES

Sec.
323.1 General.
323.2 Definitions.
323.3 Discharges requiring permits.
323.4 Discharges not requiring permits.
323.5 Program transfer to States.
323.6 Special policies and procedures.

AUTHORITY: 33 U.S.C. 1344.

SOURCE: 51 FR 41232, Nov. 13, 1986, unless otherwise noted.

## § 323.1 General.

This regulation prescribes, in addition to the general policies of 33 CFR part 320 and procedures of 33 CFR part 325, those special policies, practices, and procedures to be followed by the Corps of Engineers in connection with the review of applications for DA permits to authorize the discharge of dredged or fill material into waters of the United States pursuant to section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) (hereinafter referred to as section 404). (See 33 CFR 320.2(g).) Certain discharges of dredged or fill material into waters of the United States are also regulated under other authorities of the Department of the Army. These include dams and dikes in navigable waters of the United States pursuant to section 9 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401; see 33 CFR part 321) and certain structures or work in or affecting navigable waters of the United States pursuant to section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403; see 33 CFR part 322). A DA permit will also be required under these additional authorities if they are applicable to activities involving discharges of dredged or fill material into waters of the United States. Applicants for DA permits under this part should refer to the other cited authorities and implementing regulations for these additional permit requirements to determine whether they also are applicable to their proposed activities.

## § 323.2 Definitions.

For the purpose of this part, the following terms are defined:

(a) The term *waters of the United States* and all other terms relating to the geographic scope of jurisdiction are defined at 33 CFR part 328.

(b) The term *lake* means a standing body of open water that occurs in a natural depression fed by one or more streams from which a stream may flow, that occurs due to the widening or natural blockage or cutoff of a river or stream, or that occurs in an isolated natural depression that is not a part of a surface river or stream. The term also includes a standing body of open water created by artificially blocking or restricting the flow of a river, stream, or tidal area. As used in this regulation, the term does not include artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water for such purposes as stock watering, irrigation, settling basins, cooling, or rice growing.

(c) The term *dredged material* means material that is excavated or dredged from waters of the United States.

(d)(1) Except as provided below in paragraph (d)(2), the term *discharge of dredged material* means any addition of dredged material into, including redeposit of dredged material other than incidential fallback within, the waters of the United States. The term includes, but is not limited to, the following:

(i) The addition of dredged material to a specified discharge site located in waters of the United States;

(ii) The runoff or overflow from a contained land or water disposal area; and

(iii) Any addition, including redeposit other than incidential fallback, of dredged material, including excavated material, into waters of the United States which is incidental to any activity, including mechanized landclearing, ditching, channelization, or other excavation.

(2) The term *discharge of dredged material* does not include the following:

(i) Discharges of pollutants into waters of the United States resulting

from the onshore subsequent processing of dredged material that is extracted for any commercial use (other than fill). These discharges are subject to section 402 of the Clean Water Act even though the extraction and deposit of such material may require a permit from the Corps or applicable State section 404 program.

(ii) Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chainsawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.

(iii) Incidental fallback.

(3) Section 404 authorization is not required for the following:

(i) Any incidental addition, including redeposit, of dredged material associated with any activity that does not have or would not have the effect of destroying or degrading an area of waters of the United States as defined in paragraphs (d)(4) and (d)(5) of this section; however, this exception does not apply to any person preparing to undertake mechanized landclearing, ditching, channelization and other excavation activity in a water of the United States, which would result in a redeposit of dredged material, unless the person demonstrates to the satisfaction of the Corps, or EPA as appropriate, prior to commencing the activity involving the discharge, that the activity would not have the effect of destroying or degrading any area of waters of the United States, as defined in paragraphs (d)(4) and (d)(5) of this section. The person proposing to undertake mechanized landclearing, ditching, channelization or other excavation activity bears the burden of demonstrating that such activity would not destroy or degrade any area of waters of the United States.

(ii) Incidental movement of dredged material occurring during normal dredging operations, defined as dredging for navigation in *navigable waters of the United States*, as that term is defined in part 329 of this chapter, with proper authorization from the Congress and/or the Corps pursuant to part 322 of this Chapter; however, this exception is not applicable to dredging activities in wetlands, as that term is defined at section 328.3 of this Chapter.

(iii) Certain discharges, such as those associated with normal farming, silviculture, and ranching activities, are not prohibited by or otherwise subject to regulation under section 404. See 33 CFR 323.4 for discharges that do not required permits.

(4) For purposes of this section, an activity associated with a discharge of dredged material destroys an area of waters of the United States if it alters the area in such a way that it would no longer be a water of the United States.

NOTE: Unauthorized discharges into waters of the United States do not eliminate Clean Water Act jurisdiction, even where such unauthorized discharges have the effect of destroying waters of the United States.

(5) For purposes of this section, an activity associated with a discharge of dredged material degrades an area of waters of the United States if it has more than a *de minimis* (*i.e.*, inconsequential) effect on the area by causing an identifiable individual or cumulative adverse effect on any aquatic function.

(e)(1) Except as specified in paragraph (e)(3) of this section, the term fill material means material placed in waters of the United States where the material has the effect of:

(i) Replacing any portion of a water of the United States with dry land; or

(ii) Changing the bottom elevation of any portion of a water of the United States.

(2) Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.

(3) The term fill material does not include trash or garbage.

(f) The term *discharge of fill material* means the addition of fill material into waters of the United States. The term generally includes, without limitation, the following activities: Placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; the building of any structure, infrastructure, or impoundment requiring rock,

sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, or other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; placement of overburden, slurry, or tailings or similar mining-related materials; and artificial reefs. The term does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products (See §323.4 for the definition of these terms). See §323.3(c) concerning the regulation of the placement of pilings in waters of the United States.

(g) The term *individual permit* means a Department of the Army authorization that is issued following a case-by-case evaluation of a specific project involving the proposed discharge(s) in accordance with the procedures of this part and 33 CFR part 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR part 320.

(h) The term *general permit* means a Department of the Army authorization that is issued on a nationwide or regional basis for a category or categories of activities when:

(1) Those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts; or

(2) The general permit would result in avoiding unnecessary duplication of regulatory control exercised by another Federal, State, or local agency provided it has been determined that the environmental consequences of the action are individually and cumulatively minimal. (See 33 CFR 325.2(e) and 33 CFR part 330.)

[51 FR 41232, Nov. 13, 1986, as amended at 58 FR 45035, Aug. 25, 1993; 58 FR 48424, Sept. 15, 1993; 63 FR 25123, May 10, 1999; 66 FR 4574, Jan. 17, 2001; 66 FR 10367, Feb. 15, 2001; 67 FR 31142, May 9, 2002; 73 FR 79645, Dec. 30, 2008]

### § 323.3 Discharges requiring permits.

(a) *General.* Except as provided in §323.4 of this part, DA permits will be required for the discharge of dredged or fill material into waters of the United States. Certain discharges specified in 33 CFR part 330 are permitted by that regulation (''nationwide permits''). Other discharges may be authorized by district or division engineers on a regional basis (''regional permits''). If a discharge of dredged or fill material is not exempted by §323.4 of this part or permitted by 33 CFR part 330, an individual or regional section 404 permit will be required for the discharge of dredged or fill material into waters of the United States.

(b) *Activities of Federal agencies.* Discharges of dredged or fill material into waters of the United States done by or on behalf of any Federal agency, other than the Corps of Engineers (see 33 CFR 209.145), are subject to the authorization procedures of these regulations. Agreement for construction or engineering services performed for other agencies by the Corps of Engineers does not constitute authorization under the regulations. Division and district engineers will therefore advise Federal agencies and instrumentalities accordingly and cooperate to the fullest extent in expediting the processing of their applications.

(c) *Pilings.* (1) Placement of pilings in waters of the United States constitutes a discharge of fill material and requires a section 404 permit when such placement has or would have the effect of a discharge of fill material. Examples of such activities that have the effect of a discharge of fill material include, but are not limited to, the following: Projects where the pilings are so closely spaced that sedimentation rates would be increased; projects in which the pilings themselves effectively would replace the bottom of a waterbody; projects involving the placement of pilings that would reduce

the reach or impair the flow or circulation of waters of the United States; and projects involving the placement of pilings which would result in the adverse alteration or elimination of aquatic functions.

(2) Placement of pilings in waters of the United States that does not have or would not have the effect of a discharge of fill material shall not require a section 404 permit. Placement of pilings for linear projects, such as bridges, elevated walkways, and powerline structures, generally does not have the effect of a discharge of fill material. Furthermore, placement of pilings in waters of the United States for piers, wharves, and an individual house on stilts generally does not have the effect of a discharge of fill material. All pilings, however, placed in the *navigable waters of the United States,* as that term is defined in part 329 of this chapter, require authorization under section 10 of the Rivers and Harbors Act of 1899 (see part 322 of this chapter).

[51 FR 41232, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]

### § 323.4 Discharges not requiring permits.

(a) *General.* Except as specified in paragraphs (b) and (c) of this section, any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under section 404:

(1)(i) Normal farming, silviculture and ranching activities such as plowing, seeding, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices, as defined in paragraph (a)(1)(iii) of this section.

(ii) To fall under this exemption, the activities specified in paragraph (a)(1)(i) of this section must be part of an established (*i.e.*, on-going) farming, silviculture, or ranching operation and must be in accordance with definitions in §323.4(a)(1)(iii). Activities on areas lying fallow as part of a conventional rotational cycle are part of an established operation. Activities which bring an area into farming, silviculture, or ranching use are not part of an established operation. An operation ceases to be established when the area on which it was conducted has been coverted to another use or has lain idle so long that modifications to the hydrological regime are necessary to resume operations. If an activity takes place outside the waters of the United States, or if it does not involve a discharge, it does not need a section 404 permit, whether or not it is part of an established farming, silviculture, or ranching operation.

(iii)(A) *Cultivating* means physical methods of soil treatment employed within established farming, ranching and silviculture lands on farm, ranch, or forest crops to aid and improve their growth, quality or yield.

(B) *Harvesting* means physical measures employed directly upon farm, forest, or ranch crops within established agricultural and silvicultural lands to bring about their removal from farm, forest, or ranch land, but does not include the construction of farm, forest, or ranch roads.

(C)(*1*) *Minor drainage* means:

(*i*) The discharge of dredged or fill material incidental to connecting upland drainage facilities to waters of the United States, adequate to effect the removal of excess soil moisture from upland croplands. (Construction and maintenance of upland (dryland) facilities, such as ditching and tiling, incidential to the planting, cultivating, protecting, or harvesting of crops, involve no discharge of dredged or fill material into waters of the United States, and as such never require a section 404 permit.);

(*ii*) The discharge of dredged or fill material for the purpose of installing ditching or other such water control facilities incidental to planting, cultivating, protecting, or harvesting of rice, cranberries or other wetland crop species, where these activities and the discharge occur in waters of the United States which are in established use for such agricultural and silvicultural wetland crop production;

(*iii*) The discharge of dredged or fill material for the purpose of manipulating the water levels of, or regulating the flow or distribution of water within, existing impoundments which have been constructed in accordance with

applicable requirements of CWA, and which are in established use for the production of rice, cranberries, or other wetland crop species. (The provisions of paragraphs (a)(1)(iii)(C)(*1*) (*ii*) and (*iii*) of this section apply to areas that are in established use exclusively for wetland crop production as well as areas in established use for conventional wetland/non-wetland crop rotation (e.g., the rotations of rice and soybeans) where such rotation results in the cyclical or intermittent temporary dewatering of such areas.)

(*iv*) The discharges of dredged or fill material incidental to the emergency removal of sandbars, gravel bars, or other similar blockages which are formed during flood flows or other events, where such blockages close or constrict previously existing drainageways and, if not promptly removed, would result in damage to or loss of existing crops or would impair or prevent the plowing, seeding, harvesting or cultivating of crops on land in established use for crop production. Such removal does not include enlarging or extending the dimensions of, or changing the bottom elevations of, the affected drainageway as it existed prior to the formation of the blockage. Removal must be accomplished within one year of discovery of such blockages in order to be eligible for exemption.

(*2*) Minor drainage in waters of the U.S. is limited to drainage within areas that are part of an established farming or silviculture operation. It does not include drainage associated with the immediate or gradual conversion of a wetland to a non-wetland (e.g., wetland species to upland species not typically adapted to life in saturated soil conditions), or conversion from one wetland use to another (for example, silviculture to farming). In addition, minor drainage does not include the construction of any canal, ditch, dike or other waterway or structure which drains or otherwise significantly modifies a stream, lake, swamp, bog or any other wetland or aquatic area constituting waters of the United States. Any discharge of dredged or fill material into the waters of the United States incidental to the construction of any such structure or waterway requires a permit.

(D) *Plowing* means all forms of primary tillage, including moldboard, chisel, or wide-blade plowing, discing, harrowing and similar physical means utilized on farm, forest or ranch land for the breaking up, cutting, turning over, or stirring of soil to prepare it for the planting of crops. The term does not include the redistribution of soil, rock, sand, or other surficial materials in a manner which changes any area of the waters of the United States to dry land. For example, the redistribution of surface materials by blading, grading, or other means to fill in wetland areas is not plowing. Rock crushing activities which result in the loss of natural drainage characteristics, the reduction of water storage and recharge capabilities, or the overburden of natural water filtration capacities do not constitute plowing. Plowing as described above will never involve a discharge of dredged or fill material.

(E) *Seeding* means the sowing of seed and placement of seedlings to produce farm, ranch, or forest crops and includes the placement of soil beds for seeds or seedlings on established farm and forest lands.

(2) Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design. Emergency reconstruction must occur within a reasonable period of time after damage occurs in order to qualify for this exemption.

(3) Construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption.

(4) Construction of temporary sedimentation basins on a construction site which does not include placement of fill material into waters of the U.S. The term ''construction site'' refers to

any site involving the erection of buildings, roads, and other discrete structures and the installation of support facilities necessary for construction and utilization of such structures. The term also includes any other land areas which involve land-disturbing excavation activities, including quarrying or other mining activities, where an increase in the runoff of sediment is controlled through the use of temporary sedimentation basins.

(5) Any activity with respect to which a State has an approved program under section 208(b)(4) of the CWA which meets the requirements of sections 208(b)(4) (B) and (C).

(6) Construction or maintenance of farm roads, forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained in accordance with best management practices (BMPs) to assure that flow and circulation patterns and chemical and biological characteristics of waters of the United States are not impaired, that the reach of the waters of the United States is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized. These BMPs which must be applied to satisfy this provision shall include those detailed BMPs described in the State's approved program description pursuant to the requirements of 40 CFR 233.22(i), and shall also include the following baseline provisions:

(i) Permanent roads (for farming or forestry activities), temporary access roads (for mining, forestry, or farm purposes) and skid trails (for logging) in waters of the U.S. shall be held to the minimum feasible number, width, and total length consistent with the purpose of specific farming, silvicultural or mining operations, and local topographic and climatic conditions;

(ii) All roads, temporary or permanent, shall be located sufficiently far from streams or other water bodies (except for portions of such roads which must cross water bodies) to minimize discharges of dredged or fill material into waters of the U.S.;

(iii) The road fill shall be bridged, culverted, or otherwise designed to prevent the restriction of expected flood flows;

(iv) The fill shall be properly stabilized and maintained during and following construction to prevent erosion;

(v) Discharges of dredged or fill material into waters of the United States to construct a road fill shall be made in a manner that minimizes the encroachment of trucks, tractors, bulldozers, or other heavy equipment within waters of the United States (including adjacent wetlands) that lie outside the lateral boundaries of the fill itself;

(vi) In designing, constructing, and maintaining roads, vegetative disturbance in the waters of the U.S. shall be kept to a minimum;

(vii) The design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body;

(viii) Borrow material shall be taken from upland sources whenever feasible;

(ix) The discharge shall not take, or jeopardize the continued existence of, a threatened or endangered species as defined under the Endangered Species Act, or adversely modify or destroy the critical habitat of such species;

(x) Discharges into breeding and nesting areas for migratory waterfowl, spawning areas, and wetlands shall be avoided if practical alternatives exist;

(xi) The discharge shall not be located in the proximity of a public water supply intake;

(xii) The discharge shall not occur in areas of concentrated shellfish production;

(xiii) The discharge shall not occur in a component of the National Wild and Scenic River System;

(xiv) The discharge of material shall consist of suitable material free from toxic pollutants in toxic amounts; and

(xv) All temporary fills shall be removed in their entirety and the area restored to its original elevation.

(b) If any discharge of dredged or fill material resulting from the activities listed in paragraphs (a) (1) through (6) of this section contains any toxic pollutant listed under section 307 of the CWA such discharge shall be subject to any applicable toxic effluent standard or prohibition, and shall require a section 404 permit.

(c) Any discharge of dredged or fill material into waters of the United

States incidental to any of the activities identified in paragraphs (a) (1) through (6) of this section must have a permit if it is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States nay be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration. For example, a permit will be required for the conversion of a cypress swamp to some other use or the conversion of a wetland from silvicultural to agricultural use when there is a discharge of dredged or fill material into waters of the United States in conjunction with construction of dikes, drainage ditches or other works or structures used to effect such conversion. A conversion of a section 404 wetland to a non-wetland is a change in use of an area of waters of the United States. A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States.

(d) Federal projects which qualify under the criteria contained in section 404(r) of the CWA are exempt from section 404 permit requirements, but may be subject to other State or Federal requirements.

### § 323.5 Program transfer to States.

Section 404(h) of the CWA allows the Administrator of the Environmental Protection Agency (EPA) to transfer administration of the section 404 permit program for discharges into certain waters of the United States to qualified States. (The program cannot be transferred for those waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce shoreward to their ordinary high water mark, including all waters which are subject to the ebb and flow of the tide shoreward to the high tide line, including wetlands adjacent thereto). See 40 CFR parts 233 and 124 for procedural regulations for transferring section 404 programs to States. Once a State's 404 program is approved and in effect, the Corps of Engineers will suspend processing of section 404 applications in the applicable waters and will transfer pending applications to the State agency responsible for administering the program. District engineers will assist EPA and the States in any way practicable to effect transfer and will develop appropriate procedures to ensure orderly and expeditious transfer.

### § 323.6 Special policies and procedures.

(a) The Secretary of the Army has delegated to the Chief of Engineers the authority to issue or deny section 404 permits. The district engineer will review applications for permits for the discharge of dredged or fill material into waters of the United States in accordance with guidelines promulgated by the Administrator, EPA, under authority of section 404(b)(1) of the CWA. (see 40 CFR part 230.) Subject to consideration of any economic impact on navigation and anchorage pursuant to section 404(b)(2), a permit will be denied if the discharge that would be authorized by such a permit would not comply with the 404(b)(1) guidelines. If the district engineer determines that the proposed discharge would comply with the 404(b)(1) guidelines, he will grant the permit unless issuance would be contrary to the public interest.

(b) The Corps will not issue a permit where the regional administrator of EPA has notified the district engineer and applicant in writing pursuant to 40 CFR 231.3(a)(1) that he intends to issue a public notice of a proposed determination to prohibit or withdraw the specification, or to deny, restrict or withdraw the use for specification, of any defined area as a disposal site in accordance with section 404(c) of the Clean Water Act. However the Corps will continue to complete the administrative processing of the application while the section 404(c) procedures are underway including completion of final coordination with EPA under 33 CFR part 325.

# ATTACHMENT I-C.1
# USFWS IPaC ESA, Wetlands and Critical Habitat Report for Waurika Project

U.S. Fish and Wildlife Service

# Trust Resources List

**This resource list is to be used for planning purposes only — it is not an official species list.**

**Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:**

**Oklahoma Ecological Services Field Office**
9014 EAST 21ST STREET
TULSA, OK 74129
(918) 581-7458
http://www.fws.gov/southwest/es/Oklahoma/

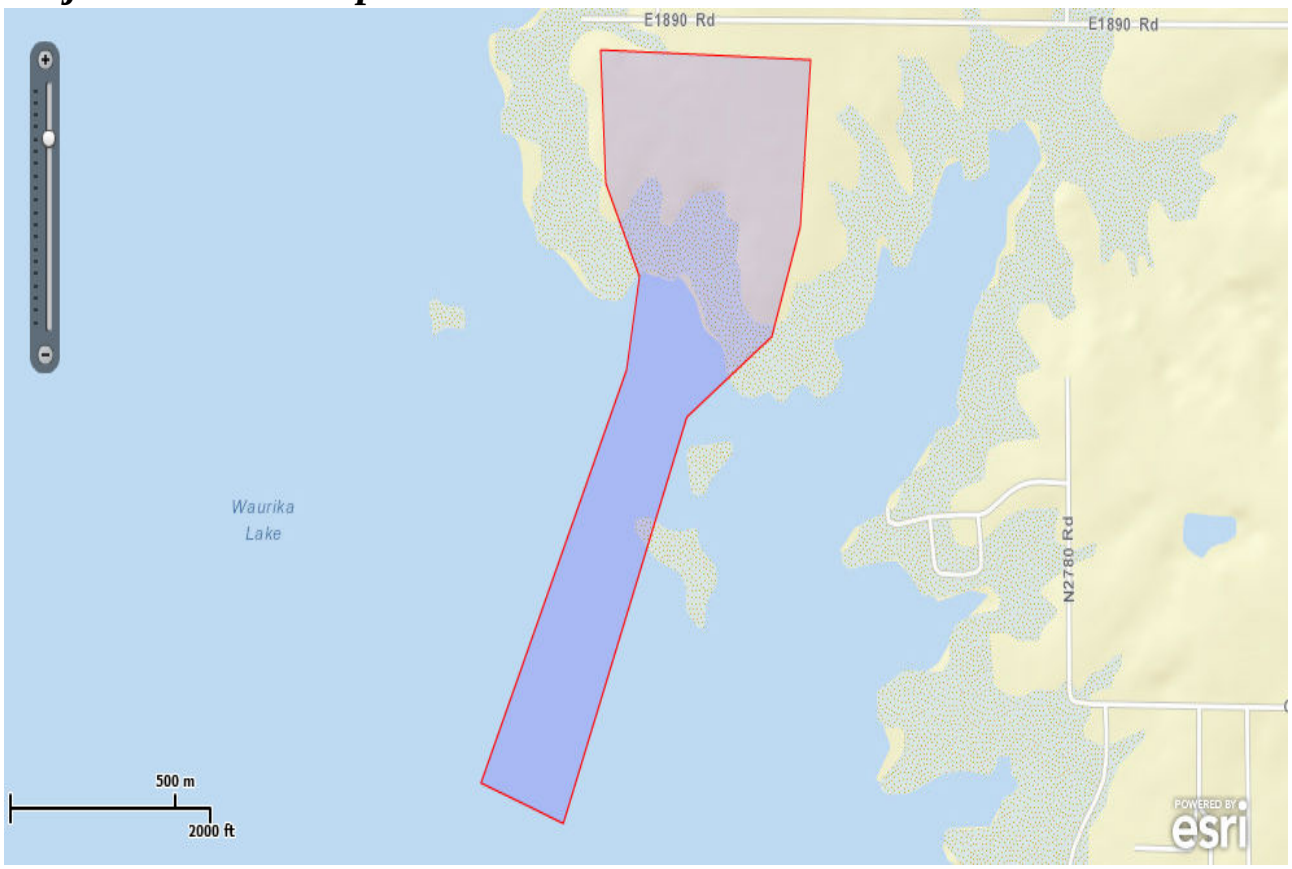
## *Project Name:*

WLMCD Waurika Lake Water-Intake Channel Maintenance Project

U.S. Fish and Wildlife Service

# Trust Resources List

## *Project Location Map:*




## *Project Location Measurements:*

Area : 165.0 ac.

Length : 3.0 mi.

## *Project Counties:*

Jefferson, OK

## *Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):*

MULTIPOLYGON (((-98.0493736 34.2744312, -98.0424213 34.2742184, -98.0427646 34.270672, -98.0437088 34.2683313, -98.0465154 34.2666183, -98.0506108 34.2579738, -98.0533317 34.2588357, -98.0485153 34.267622, -98.0480861 34.2696081, -98.0492019 34.2715941, -98.0493736 34.2744312)))

U.S. Fish and Wildlife Service

# Trust Resources List

## *Project Type:*

Dredge / Excavation

## *Endangered Species Act Species List (USFWS Endangered Species Program).*

There are a total of **5** threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

### Species that should be considered in an effects analysis for your project:

| Birds | Status | | Has Critical Habitat | Contact |
|---|---|---|---|---|
| Least tern (*Sterna antillarum*) Population: interior pop. | Endangered | species info | | Oklahoma Ecological Services Field Office |
| Piping Plover (*Charadrius melodus*) Population: except Great Lakes watershed | Threatened | species info | Final designated critical habitat Final designated critical habitat | Oklahoma Ecological Services Field Office |
| Red Knot (*Calidris canutus rufa*) Population: | Threatened | species info | | Oklahoma Ecological Services Field Office |
| Sprague's Pipit (*Anthus spragueii*) Population: | Candidate | species info | | Oklahoma Ecological Services Field Office |
| Whooping crane (*Grus americana*) Population: except where EXPN | Endangered | species info | Final designated critical habitat | Oklahoma Ecological Services Field Office |

### Critical habitats within your project area:

*There are no critical habitats within your project area.*

U.S. Fish and Wildlife Service

# Trust Resources List

## *FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).*

*There are no refuges found within the vicinity of your project.*

## *FWS Migratory Birds (USFWS Migratory Bird Program).*

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: http://www.fws.gov/migratorybirds/CCMB2.htm.

For information about conservation measures that help avoid or minimize impacts to birds, please visit:
http://www.fws.gov/migratorybirds/CCMB2.htm.

**Migratory birds of concern that may be affected by your project:**
There are **23** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to the ECOS Help Desk.

U.S. Fish and Wildlife Service

# Trust Resources List

| Species Name | Bird of Conservation Concern (BCC) | Species Profile | Seasonal Occurrence in Project Area |
|---|---|---|---|
| Bald eagle (*Haliaeetus leucocephalus*) | Yes | species info | Wintering |
| Bell's Vireo (*Vireo bellii*) | Yes | species info | Breeding |
| Burrowing Owl (*Athene cunicularia*) | Yes | species info | Breeding |
| Cassin's Sparrow (*Aimophila cassinii*) | Yes | species info | Breeding |
| Chestnut-collared Longspur (*Calcarius ornatus*) | Yes | species info | Wintering |
| Dickcissel (*Spiza americana*) | Yes | species info | Breeding |
| Fox Sparrow (*Passerella liaca*) | Yes | species info | Wintering |
| Golden eagle (*Aquila chrysaetos*) | Yes | species info | Wintering |
| Harris's Sparrow (*Zonotrichia querula*) | Yes | species info | Wintering |
| Hudsonian Godwit (*Limosa haemastica*) | Yes | species info | Migrating |
| Lark Bunting (*Calamospiza melanocorys*) | Yes | species info | Wintering |
| Le Conte's Sparrow (*Ammodramus leconteii*) | Yes | species info | Wintering |
| Little Blue Heron (*Egretta caerulea*) | Yes | species info | Breeding |
| Loggerhead Shrike (*Lanius ludovicianus*) | Yes | species info | Year-round |
| McCown's Longspur (*Calcarius mccownii*) | Yes | species info | Wintering |
| Mississippi Kite (*Ictinia mississippiensis*) | Yes | species info | Breeding |
| Painted Bunting (*Passerina ciris*) | Yes | species info | Breeding |
| Red-headed Woodpecker (*Melanerpes erythrocephalus*) | Yes | species info | Year-round |
| Scissor-tailed Flycatcher (*Tyrannus forficatus*) | Yes | species info | Breeding |

U.S. Fish and Wildlife Service

# Trust Resources List

| | | | |
|---|---|---|---|
| Short-eared Owl (*Asio flammeus*) | Yes | species info | Wintering |
| Snowy Plover (*Charadrius alexandrinus*) | Yes | species info | Migrating |
| Sprague's Pipit (*Anthus spragueii*) | Yes | species info | Wintering |
| Swainson's hawk (*Buteo swainsoni*) | Yes | species info | Breeding |

## *NWI Wetlands (USFWS National Wetlands Inventory).*

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

**Data Limitations, Exclusions and Precautions**
The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

**Exclusions** - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include

U.S. Fish and Wildlife Service

# Trust Resources List

seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

**Precautions** - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

**The following wetland types intersect your project area in one or more locations:**

| Wetland Types | NWI Classification Code | Total Acres |
|---|---|---|
| Freshwater Pond | PUBHh | 1.1003 |
| Freshwater Pond | PUBHx | 0.1752 |
| Freshwater Pond | PUBFh | 0.1319 |
| Lake | L1UBHh | 7723.9727 |

# ATTACHMENT I-C.2
# USFWS Migratory Bird Program Conservation Measures

U.S. Fish & Wildlife Service

# Migratory Bird Program

Conserving the Nature of America

Search

The Migratory Bird Program - Conserving America's Birds

Avocets Credit: Donna A. Dewhurst



## Council for the Conservation of Migratory Birds

### Avian Conservation Resources
### *For Avoiding and Minimizing Human Impacts to Birds*

Birds are an important part of all ecosystems and act as strong indicators of environmental health. In addition to legal responsibilities to comply with protecting and conserving birds, it is in society's best interest to prevent further impacts to birds or the habitats upon which they depend. Human activities are the biggest driver of bird population declines. The Migratory Bird Program is working with federal, state, industry, and bird conservation groups to find innovative ways to reduce impacts to birds and implement strategic habitat conservation strategies to ensure bird population persistence.

The Migratory Bird Program is developing, or already has developed recommendations, guidance, and other tools to help project proponents reduce impacts to birds and their habitats. The information, tools, and training provided by the Migratory Bird Program on this webpage strives to improve bird protection and conservation for future generations.

**Avian Knowledge Network Histogram Tools**

**NATIONWIDE STANDARD CONSERVATION MEASURES**

**(In Development)** This will be a list of standard Conservation Measures that can be employed at all construction projects nationwide.
These will be simple, low to no cost measures that will help to protect all birds and their resources regardless of the type or location of the activity

**ACTIVITY/STRUCTURE-SPECIFIC**

**BUILDING GLASS & LIGHTING:**

**Building Glass and Lighting Measures by Expert Workgroup (In Development)**

**COMMUNICATION TOWERS:**

**US Fish & Wildlife Service Communication Tower Guidance**

**POWER LINES:**

**Reducing Avian Collisions with Power Lines: State of the Art in 2012 (website for purchase)**

**Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006**

**Additional Information and Guidance**

- **Avian Power Line Interaction Committee Website (APLIC)**
- **Avian Protection Plan Guidelines**

**TRANSPORTATION:**

**Federal Highways Wildlife Protection Measures**

**WIND ENERGY:**

**US Fish & Wildlife Service Land-Based Wind Energy Guidelines**

**US Fish & Wildlife Service Wind Energy Website**

**OIL & GAS:**

**US Fish & Wildlife Service 2012: Management of Oil and Gas Activities on National Wildlife Refuge System Lands**

## STRESSOR-SPECIFIC

**ENTRAPMENT HAZARDS:**

BLM Instructions Memorandum Policy:

**Best Management Practices (BMP) for reducing the risk of direct wildlife mortality from the following five fluid mineral practices:**

1. Open Pits and Tanks Containing Freestanding Liquids;
2. Chemical Tank Secondary Containment;
3. Pit, Tank, and Trench Entrapment Hazards;
4. Exhaust Stacks; and
5. Wire Exclosure Fences for Well Pads or Production Facilities and Associated Rights-of-way.

**BLM Measures for Minimizing Avian Impacts from Mining Claim Markers**

**OUTDOOR LIGHTING:**

**National Park Service Universal Outdoor Lighting Guidelines (In Development)**

## SPECIES-SPECIFIC

**US Fish & Wildlife Service Bald Eagle Conservation Measures**

**HUNTING & FISHING:**

**NOAA Fisheries Seabird Conservation Measures for Commercial Fishing**

## TRAINING

**Migratory Bird Conservation: A Trust Responsibility**

**Migratory Bird Conservation for Federal Partners**

**Avian Knowledge Network Histogram Tools**
***Frequency of Observed Bird Species Occurrences by Region, State, or County***

The Avian Knowledge Network (AKN) Histogram Tool is currently available for 32 states within the continental United States. The AKN Histogram Tool aggregates bird-monitoring (point-count, area search, distance sampling, transect sampling, nest success), bird-banding, and broad-scale citizen science data, and new datasets are being added to the AKN annually. All of these data are described and maintained
using a common schema http://www.birdscanada.org/birdmon/default/resources.jsp

The results can help users determine the best times of year to conduct activities or implement best management practices to avoid and minimize impacts to bird species of concern that are known to occur within a project or activity area. To query the data and view histogram results use the links below.

California Avian Data Center AKN Histogram Tool

Eastern Avian Data Center AKN Histogram Tool Northeast Region (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode island, Vermont, West Virginia)

Eastern Avian Data Center AKN Histogram Tool Southeast Region (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia)

Midwest Avian Data Center AKN Histogram Tool Midwest Region (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin)

Last updated: October 8, 2014

# ATTACHMENT I-C.3
# Fish and Wildlife Coordination / Correspondence (Pending)

# ATTACHMENT I-D.1
# Cultural Resources Survey Report – Bison Archeological Consulting Services, Inc.

# ATTACHMENT I-D.2
# Cultural Resources Coordination/Correspondence to State Agencies and Native American Tribes

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Dr. Bob Blackburn
State Historic Preservation Officer
Oklahoma Historical Society
Oklahoma History Center
800 Nazih Zuhdi Dr.
Oklahoma City, OK 73105

Dear Dr. Blackburn:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

We request your comment on our determination of "no historic properties identified" for the proposed clearing of a water intake structure at Waurika Reservoir. If you have questions please contact Ken Shingleton at 918-669-7661.

Sincerely,

for William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Dr. Robert Brooks
Oklahoma Archeological Survey
111 E. Chesapeake
Norman, OK 73019-5111

Dear Dr. Brooks:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

We request your comment on our determination of "no historic properties identified" for the proposed clearing of a water intake structure at Waurika Reservoir. If you have questions please contact Ken Shingleton at 918-669-7661.

Sincerely,

for William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Chairperson Lewis Maynahonah Sr.
Apache Tribe of Oklahoma
P.O. Box 1330
Anadarko, OK 73005

Dear Chairperson Maynahonah:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources. Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Governor Bill Anoatubby
Chickasaw Nation, Oklahoma
P.O. Box 1548
Ada, OK 74821-1548

Dear Governor Anoatubby:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources. Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

for William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Chairperson Johnny Wauqua
Comanche Nation, Oklahoma
P.O. Box 908
Lawton, OK 73502

Dear Chairperson Wauqua:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources. Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Chairperson Jeff Houser
Fort Sill Apache Tribe of Oklahoma
Route 2, Box 121
Apache, OK 73006

Dear Chairperson Houser:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources. Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

Chairperson Ronald "Dawes" Twohatchet
Kiowa Indian Tribe of Oklahoma
P.O. Box 369
Carnegie, OK 73015-0369

Dear Chairperson Twohatchet:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources. Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

William K. Dunlap
Chief, Recreation Section

Enclosure

**DEPARTMENT OF THE ARMY**
U.S. ARMY, CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 20, 2015

Operations Division
Natural Resources and Recreation Branch
Recreation Section

President Terri Parton
Wichita and Affiliated Tribes of Oklahoma
P.O. Box 729
Anadarko, OK 73005

Dear President Parton:

This letter is to initiate consultation as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) for the proposed clearing of a water intake channel within Waurika Reservoir, Jefferson County, Oklahoma. Waurika Reservoir is owned and managed by the U.S. Army Corps of Engineers, Tulsa District.

Waurika Lake Master Conservancy District (WLMCD) maintains a water intake structure and associated channel within the normal conservation pool of Waurika Reservoir. Over the course of its life these structures have become clogged with sediment from the normal operation of the reservoir. Accordingly, WLMCD plans to dredge this material and deposit it outside of the reservoir. In order to accomplish this goal, structures associated with the dredging operation will be installed partly on Tulsa District property at the reservoir, and partly on WLMCD-owned property adjacent to the Tulsa District property. The WLMCD portion of the project area will include construction of a six-foot deep Confined Disposal Facility (CDF), which will hold the reservoir dredge material.

Tulsa District has determined that the Area of Potential Effect (APE) for this action includes WLMCD property in addition to Tulsa District property, amounting to a total of approximately 73 acres of land. This is because government-owned property (the dredged sediment) will be trans-located to private property. Accordingly, WLMCD asked Bison Archaeological Consulting Services (Bison) to conduct the archaeological investigation of the entire 73-acre APE. The report of investigations, in which no cultural resources were identified, is attached for your review.

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources. Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

William K. Dunlap
Chief, Recreation Section

Enclosure

# ATTACHMENT I-E
# Public Comments
# (Pending)

# ATTACHMENT I-F
# Newspaper/Electronic/Social Media Public Notice (Pending)