

**BEFORE YOU DREDGE ...** You must allow yourself plenty of time.  
It is very important that you have completed the following procedure.

**NOTE: Dredging is not allowed April 1st - July 31st because of fish spawning.**

Call the GRDA Ecosystems and Lake Management Office at 918-782-4726 and request your dredging application. The application can also be found online at [www.grda.com](http://www.grda.com).

**Permit requirements include the following:**

- 1.) GRDA's Dredging Application
- 2.) US Corps of Engineers 404 Permit or other correspondence
- 3.) Wetland Delineation
- 4.) Heavy Metals Analysis
- 5.) Payment of \$500 permit fee

**Mail the application packet to:**

GRDA Office of Ecosystems Management  
PO Box 70  
Langley, OK 74350

Or you can drop it off at the Ecosystems and Education Center, located at 420 E Hwy 28, Langley OK 74350.

Please be patient, GRDA or the US Army Corps of Engineers may have further questions for you. The review process could take you up to a year or more to complete.

Grand River Dam Authority (GRDA) dams and lakes are licensed by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act. These licenses require that any dredging activity be approved by GRDA. Some applications must be approved by FERC. Also, the US Army Corps of Engineers (Corps) administers Section 404 of the Clean Water Act on all waters in the U.S. This federal law prohibits discharge of dredged or fill materials into U.S. waters without a permit from the Corps. The Section 404 Permit is attached.

And finally, the Oklahoma State Historic Preservation Office (SHPO) and the Oklahoma Archeological Survey (OAS) must know about dredging prior to its start so that they can protect any historic sites and prehistoric artifacts that may be hidden in the area to be dredged.

Upon receipt of GRDA's permit, dredging may begin.

**Questions:**

Call the GRDA Ecosystems Department: (918) 782-4726  
Call the Corps Regulatory Branch: (918) 669-7400

# Dredging, Excavation and Disposal Policy

Approved by the Federal Energy Regulatory Commission (April 2, 2015)

Approved by GRDA's Board of Directors (September 9, 2015)

All excavation and dredging activities on GRDA controlled land shall require a permit from the GRDA and other agencies as required (Table 1). Before the applicant begins the application process, it is strongly suggested the applicant consult with GRDA about the project in an initial consultation review. The Authority will approve excavation of a boat channel or embayment only when it determines there is no other practical alternative to achieving sufficient navigable water depth and the action would not substantially influence protected resources. *No dredging or excavation is allowed by private parties on shorelines deemed stewardship, containing wetlands, or within shorelines designated as wildlife management areas.* The following procedure is intended to support the “one step” excavation method whereby an excavator is used from the shoreline to remove substrate directly into an awaiting enclosed truck bed. Since Grand Lake has been deemed “injured” from historical lead and zinc mining activities in the watershed (DOI, 2014), sediment testing shall occur to ensure dredging does not expose sediment layers with contaminant concentrations that may negatively affect the survival of benthic organisms and to assure the dredged materials are disposed of properly.

**Table 1:** Summary table of agencies requiring permits and/or approvals to dredge or excavate on GRDA owned property and subsequent disposal of dredged material and the conditions of when permitting is required

Agencies Requiring Approval for the “One Step” Dredging Method	
Agency	Condition
Grand River Dam Authority	All Dredging and Excavation Operations
U.S. Army Corps of Engineers	All Dredging and Excavation Operations
Federal Energy Regulatory Commission	>2000 yd <sup>3</sup> of dredged material
County Floodplain Managers	All Dredging and Excavation Operations
Oklahoma Department of Environmental Quality	All Dredging Operations
Oklahoma State Historical Preservation Office	Placement of dredged material at an unregulated upland site

Issuance of the GRDA Dredging, Excavation, and Disposal permit is contingent on the applicant complying with the following conditions:

1. Adequately completing the required sediment testing and wetland delineations (in lieu of establishment of a dredging management classification incorporated in the shoreline management plan).
2. Acquiring permits and approvals from pertinent agencies.
3. Complying with proper disposal of dredged materials as outlined herein.
4. Payment of application and mitigation fees.

Note: The Dredging, Excavation and Disposal policy and permit covers the act of dredging, excavation, and disposal *only*. Further, permits may be required for any associated vegetation management activities (i.e. tree cutting) that may be necessary to provide access corridors for purposes of dredging or accessing a dock.

### **Wetland Delineation**

Wetlands are to be delineated according to the USACE Wetland Delineation Manual (U.S. Army Corps of Engineers, 1987) with applicable regional supplements. Wetland Delineations are to be performed between the applicant's property line down to the waterways and wetlands controlled by GRDA and/or the flowage easements of USACE. In the application submitted to GRDA, a wetland delineation report shall include an (1) Introduction, (2) Survey Area Description, (3) Methods, (3) Results, and a (4) summary of findings. The applicant shall also include; (1) maps of the proposed dredging activity in relation to field survey areas, (2) photographs of the dredging area and shoreline, and (3) data sheets and field notes associated with the delineation (e.g. USACE Wetland Determination Data Form).

### **Substrate and Contaminants Characterization**

Sediment from the proposed dredge site must be characterized prior to the initiation of dredging activity. Results of sediment characterization must be compiled and submitted as part of the GRDA dredging application. GRDA will review the submitted information and may request more sampling, and/or may require modifications to the dredging proposal. GRDA will deny or approve the project based on the results. Applicants who choose or are required to complete their own testing are to select the correct number of samples based on the dredge amount (Table 2).

**Table 2:** Summary of the number of samples required for chemical and grain size analysis based on volume of dredged material.

<b>Minimum Number of Samples for Sediment Characterization and Evaluation</b>		
Volume Planned for Removal (yd <sup>3</sup> )	Number of Core Sites for Chemical Analysis	Number of Core Sites for Grain Size Analysis
≤ 2000	1	3
2000-30,000	3	6
30,000-100,000	5	10

### **Grain Size Analysis**

Dredge site assessment should begin by determining the grain size of the dredged materials. Dredged material that is classified as predominately coarse may not require further testing.

To demonstrate that dredged material is coarse, 80% of the dredged material sample must be coarser than silt. Specifically, if 80% or more of the dredged material is retained on a #200 U.S. Standard sieve, no additional testing will be required. To make this determination the following procedure must be used:

- Grain size analysis must be performed using ASTM Method C-136 for the gradation analysis and ASTM Method D-2487 for classification.
- Determine the minimum number of samples required using Table 2.
- Conduct the analysis using the following U.S. Standard Sieves: 1", ½", 3/8", #4, #10, #100, #200.
- Report the results for each of the discrete sample locations as a mass percentage of retained sediments.

## **Chemical Analysis**

If greater than 20% of the materials to be dredged are fine particles, chemical characterization of sediment from the proposed dredge site must be completed prior to the initiation of dredging (see previous section for determination of grain size). Specifically, sediments should be tested for Arsenic (As), Barium (Ba), Cadmium (Cd), Chromium (Cr), Lead (Pb), Mercury (Hg), Selenium (Se), Silver (Ag), and Zinc (Zn) (RCRA-8 Metals plus Zinc).

Sediment samples are to be digested using SW846 3051A or 3050B and analyzed according to SW846 6010C or 6020A. Since test methods and technologies are constantly evolving, other methods not previously listed may be approved by GRDA provided they allow for reasonable characterization of the contaminants of concern.

## **Sample Collection**

The following standards should be applied to the collection and handling of dredged material processed for samples and analysis:

- When possible, samples should be collected with a core sampler. At dredging sites primarily composed of parent material reasonable efforts to retrieve a core of 2 feet shall be made. Other methods of collection may be approved by GRDA provided they allow for reasonable characterization of the dredged material.
- All sampling equipment must be properly cleaned prior to and following each sample collection.
- Samples collected for metals analysis must be collected and processed using non-metallic or PTFE coated liners, tubs, spoons, spatulas, and containers.
- When possible, core samples from the dredging site must be taken to the proposed dredging depth plus two foot.
- Core samples must be visually inspected for the existence of strata formation at each sample site. A written description including position, length, and color of the strata shall be provided to the GRDA in the report. Each distinct stratum must be analyzed for the required chemical constituents. If no distinct strata exist, core samples shall be divided into one foot segments and analyzed for the required chemical characteristics.

GRDA recommends the following guidance documents regarding the collection, storage, and handling for chemical and toxicological analysis:

Radtke, D.B., 2005. Bottom-material samples (ver. 1.1): U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chap. A8, June 2005, accessed 9/12/14, at <http://pubs.water.usgs.gov/twri9A8/>.

Ohio Environmental Protection Agency, Division of Surface Water., 2001. Sediment Sampling Guide and Methodologies (2<sup>nd</sup> ed.). November 2001, accessed 9/12/14, at <http://www.epa.ohio.gov/portals/35/guidance/sedman2001.pdf>

## Contaminant Thresholds

Contaminant thresholds are based off site specific sediment quality guidelines for the Tri-State Mining District (TSMD) developed by the USGS for the USFWS (MacDonald et al., 2009). These concentrations for cadmium, lead, and zinc are predicted to reduce the survival of the amphipod *Hyalella azteca* by 10% or more.

Contaminant	Cadmium	Lead	Zinc
TSMD Specific Threshold (mg kg <sup>-1</sup> )	11.1	150	2,083

**Table 3:** Tri State Mining District Specific probable effects thresholds (McDonald et al., 2009)

## Contaminants Reporting

Following the completion of sediment testing, the applicants or third parties working on behalf of the applicant are required to submit a report describing the methods used to collect the sediment samples. This report will include decontamination procedures, locations of the sample sites (GPS Coordinates), field I.D., depth of each core, coring equipment used, depth of strata & physical description of each sediment core, unique I.D. of each distinct strata or 1 foot segment from each core, results of the sediment testing, and a brief summary of the results in comparison to the GRDA thresholds. The results for the contaminants report will be provided to resource agencies for comment.

## Disposal of Dredged Material Considerations and Disposal Plan

The applicant is to follow all state and local laws regarding the disposal or placement of dredged material. If the applicant wishes to beneficially reuse the dredged material, the applicant must first consult with the Oklahoma Department of Environmental Quality (ODEQ) Solid Waste Compliance Group. ODEQ may require further testing of the material to satisfy their disposal concerns.

Dredging projects requiring discharge into any waters of the US during excavation or the disposal of material, storage of the dredged material below the flood control pool 757.0 Pensacola Datum (P.D.), temporary placement of fill below 745.0 P.D., or wetland disturbance will require further consultation with GRDA, FERC, U.S. Army Corps of Engineers (USACE), and other pertinent federal and state agencies and will only be considered if the project provides a public service or use.

If the dredge material is deemed unregulated or beneficial reuse is supported by ODEQ, dredge material is to be placed outside of both the GRDA and USACE flowage easements at an upland site (Additional Permits may be required from the county floodplain manager.)

Finally, placement of dredged material has the potential to disturb or bury archeological sites. If placement of unregulated dredge material or material destined for beneficial reuse is placed at an unregulated upland site, the applicant will need to satisfy any requests from the State Historical Preservation Office (SHPO) for consultation or performance of an archeological site assessment.

The applicant or third party on behalf of the applicant is required to submit to GRDA a general disposal plan that includes:

1. A physical description of the dredged material (i.e. grain size & chemical composition)
2. Proposed location of disposal (i.e. landfill approved to accept non-hazardous waste) or placement (i.e. beneficial reuse) site.
3. A description of how the material is going to be used (if proposing beneficial reuse).

### **Criteria for Qualified Contractors**

Contractors performing the required wetland delineations and contaminants testing on behalf of the applicant are required to have proper certifications. It is recommended that selected environmental and wetlands consultants be listed with the Regulatory Office at the Tulsa District USACE. Testing laboratories are required to have Oklahoma Department of Environmental Quality accreditation in the any tests required. Furthermore, the contractor selected to conduct the actual act of dredging or excavation is required to have GRDA approval. At the request of the applicant, the GRDA, as a courtesy, will provide a list of contractors and laboratories for the applicant to consider. However, it is the responsibility of the applicant to determine a person or organization has the capability to provide the services outlined in this policy and GRDA makes no recommendations as to a particular contractor on this list.

### **Recommended Sequence and Schedule of Dredging Application**

1. The applicant informs GRDA of intent to begin the dredging application; giving a general description of the proposed site (substrate type, estimated volume of dredged material, location of project, and location of disposal). GRDA will discuss the project with the applicant; checking shoreline management classification and if the project is feasible.
2. The applicant secures the Army Corps of Engineers permit and submits it to GRDA along with the GRDA application to dredge.
3. The applicant with the help of an environmental consultant shares a sampling plan with GRDA. GRDA in turn reviews the plan to ensure the necessary data will be collected.
4. The applicant completes testing as described in the sampling plan and submits reports to GRDA. GRDA in turn reviews the results and determines if the proposed project will expose contaminants above established thresholds or disturb wetlands. GRDA may modify the permit if contaminants exceed the thresholds outlined herein. GRDA submits the application to resource agencies for comment listed in Table 1 above.
5. If the project requires  $>2000 \text{ yd}^3$  of material to be removed, GRDA will submit the application to FERC for approval.
6. If no reasonable objections to the project are given, GRDA will issue a permit to dredge to the applicant.

## **Potential Actions if Wetlands are Found**

If the wetland delineation indicates that wetlands are present at or near the proposed dredging site, GRDA will examine the project further in order to protect wetland resources. Specifically GRDA will review:

1. Whether the act of dredging or excavation will disturb the delineated wetlands.
2. Whether the movement of excavators and awaiting trucks will disturb the delineated wetlands.
3. Whether any proposed structures will disturb the delineated wetland.

## **Potential Actions if Sediments Exceed Thresholds**

If the metals data collected indicate the proposed project will expose contaminants greater than the TSMD thresholds, GRDA may require the following actions to satisfy environmental concerns.

1. Adjust the proposed dredging depth so contaminants exposed on the disturbed bottom are lower.
2. Require resampling (1 core) to a deeper depth to examine if “over dredging” will expose lower contaminant concentrations.
3. Abandonment of the project

If the adjustment of dredging depth exposes contaminant concentrations below the TSMD thresholds, GRDA may approve the project.

## **Timing and Requirements for Approved Dredging Projects**

Dredging for new or previously authorized uses is seasonally restricted. To avoid impact to spawning fish, applicants are prohibited from dredging during the spawning season (April 1 - July 31). GRDA requires notification of project commencement, post-dredging site review, and sign-off by GRDA compliance staff at the completion of the action; Contractors are required to post their permit on site throughout the dredging process. Deviations from the permit may require full restoration of the site and/or permits being revoked.

## **Unanticipated Discovery of Cultural Resources and Human Remains**

If at any time, the applicant or contractors working on behalf of the applicant believe they have encountered cultural resources on GRDA property (e.g. Native American artifacts, historical properties) work is to stop immediately and GRDA is to be contacted. At a minimum, GRDA shall suspend the permit/application, secure the discovery site, and contact the State Historical Preservation Office (SHPO). Work in the project area will not be re-started until the treatment of the discovery by GRDA and SHPO has been completed. If the discovery appears to be eligible for listing on the National Register of Historic Places (NRHP), GRDA will consult with FERC, Indian Tribes, and SHPO to determine the appropriate treatment of the discovery which may include permanent abandonment of the project.

If at any time suspected human remains are discovered on GRDA or the adjoining private property, all work is to stop immediately and GRDA Law Enforcement is to be contacted (918-256-0911). GRDA Law Enforcement will then contact the State Medical Examiner to determine if the remains are of a potential crime scene or of Native American Ancestry. If the remains are of Native American ancestry GRDA will contact SHPO, and Native American Tribes. Work in the project area will not be re-stated until the treatment of the discovery has been completed.

## **References**

Department of Interior (DOI), State of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Cherokee Nation, et al. 2014. Grand Lake O' the Cherokee Natural Resources Damages: Restoration Compensation and Determination Plan. Retrieved from:  
<http://www.fws.gov/southwest/es/oklahoma/Documents/Contaminants/Final%20RCDP%20for%20Grand%20Lake.pdf> September 11, 2014

MacDonald DD, Smorong DE, Ingersoll CG, Besser JM, et al. 2009. Development and evaluation of sediment and pore-water toxicity thresholds to support sediment quality assessments in the Tri-state Mining District (TSMD), Missouri, Oklahoma and Kansas. Prepared by USGS, Columbia MO and MacDonald Environmental Sciences Ltd., Nanaimo, BC for the USEPA, Dallas, TX; USEPA Kansas City, MO; and USFWS, Columbia, MO.

U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, Environmental Laboratory, Vicksburg, MS.

**Grand River Dam Authority**

Ecosystems Management, 918-782-4726, P.O. Box 70, Langley, OK 74350



# Application for Permit to Dredge

**FOR GRDA USE ONLY:**

UTM Coordinate

Reservoir

GRDA Map &amp; Tract Number

x

y

Permit Number

NAME: \_\_\_\_\_ Email Address: \_\_\_\_\_

MAILING ADDRESS: \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

LAKE ADDRESS: \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

PHONE: Home \_\_\_\_\_ Work \_\_\_\_\_ Cell \_\_\_\_\_ Lake Phone No. \_\_\_\_\_

LOCATION OF PROPERTY: Lake \_\_\_\_\_ Arm/Cove/Area \_\_\_\_\_

DRIVING DIRECTIONS by land: \_\_\_\_\_ Gated Community Access Code: \_\_\_\_\_

LEGAL DESCRIPTION of PROPERTY: County \_\_\_\_\_

Sec \_\_\_\_\_, T \_\_\_\_\_ N, R \_\_\_\_\_ E or Subdivision \_\_\_\_\_ Blk \_\_\_\_\_ Lot \_\_\_\_\_

**NAME OF GRDA'S PERMITTED CONTRACTOR:** \_\_\_\_\_ CONTRACTOR PERMIT #: \_\_\_\_\_**DESCRIPTION OF DREDGING ACTIVITY:**

For what purpose do you want to dredge (be specific): \_\_\_\_\_

Location of dredging site; including maps, photos, plats, survey's (See Examples A-E) \_\_\_\_\_

Size of area to be dredged and approximate volume of dredged material to be taken (See Example F)

AREA (FEET<sup>2</sup>) = LENGTH X WIDTH: \_\_\_\_\_ (Length) X \_\_\_\_\_ (Width) = \_\_\_\_\_ (Square Feet)VOLUME (YARDS<sup>3</sup>) = LENGTH X WIDTH X DEPTH ÷ 27 = CUBIC YARDS:

\_\_\_\_\_ (Length) X \_\_\_\_\_ (Width) X \_\_\_\_\_ (Depth) /by 27 = \_\_\_\_\_ (Cubic Yards)

(Cubic Yards) Dredged material that is removed must be placed above the flowage easement. Please provide the location, including detailed drawing of where the removed dredged material will be placed. See Disposal Plan for Dredged Materials.

**ATTACH SKETCH, MAP OR DRAWING OF WORK LAYOUT AND DIMENSIONS. ALSO ATTACH A PLAT MAP AND SURVEY OF PROPERTY.**

Name of abutting landowner(s) (person who owns property in front of where this work is to be done): (If other than applicant, WRITTEN PERMISSION must be submitted.)

Name \_\_\_\_\_ Address \_\_\_\_\_

I understand that Federal Energy Regulatory Commission (FERC) approval may be required BEFORE I may begin this project. I understand and agree that I am responsible for securing a USACE Permit (if applicable) and any other local, state (including ODEQ), or federal permits, if any, that may be required.

I am enclosing the sum of Five Hundred Dollars (\$500.00) as the required fee for this application, I understand that said sum shall be retained by GRDA to defray all costs regardless of the disposition of the final inspection. I also understand that the receipt and/or deposit of your cash, check, or money order by GRDA does not constitute the granting or issuance of a permit.

I understand and agree that all dredging and excavation shall be left with gradually sloped sides so as not to change the present contour line by creating any permanent channels above said contour line. Dredged and excavated materials shall be placed on applicant's property above the applicable flowage easement.

I understand the disposal requirements and will abide by such requirements.

Date \_\_\_\_\_ Signature of Applicant \_\_\_\_\_

**COMPLIANCE STAFF CONSULTATION**

I hereby certify that I have consulted with the applicant or his/her representative.

Date \_\_\_\_\_ Ecosystems Compliance Officer \_\_\_\_\_

Date \_\_\_\_\_ Ecosystems Management \_\_\_\_\_

# Disposal Plan for Dredged Materials

## (Template)

### Contact Information

Name of Applicant: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Lake Address: \_\_\_\_\_

Phone: Daytime: \_\_\_\_\_ Evening: \_\_\_\_\_ Cell: \_\_\_\_\_ Email: \_\_\_\_\_

### Proposed Disposal Location

Disposal Location: \_\_\_\_\_

Disposal Property Address: \_\_\_\_\_

Legal Description: County: \_\_\_\_\_ Sec \_\_\_\_\_, T\_\_\_\_\_N, R\_\_\_\_\_E

Disposal Pile GPS Coordinates if disposing on an unregulated site\*:

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

\*Note: A map of the disposal site is useful. Coordinates will allow GRDA and commenting agencies to quickly locate the disposal location on a map.

Proposed Beneficial Re-Use (if applicable):

---

---

---

---

---

---

---

### Physical Description of Dredged Material

Volume of Sediment for Disposal (cubic yards): \_\_\_\_\_

Grain Size*									
Sample 1		Sample 2		Sample 3		Sample 4		Sample 5	
% Coarse	% Fine	% Coarse	% Fine	% Coarse	% Fine	% Coarse	% Fine	% Coarse	% Fine
Sample 6		Sample 7		Sample 8		Sample 9		Sample 10	
% Coarse	% Fine	% Coarse	% Fine	% Coarse	% Fine	% Coarse	% Fine	% Coarse	% Fine

\*Please attach laboratory reports.

Elemental Composition ( $\text{mg kg}^{-1}$ )*											
Core No.: _____											
Core Section	Depth (ft)	As	Ba	Cd	Cr	Pb	Ag	Zn	Se	Hg	% Solids
1	0-1										
2	1-2										
3	2-3										
4	3-4										
5	4-5										
6	5-6										
7	6-7										
8	7-8										
9	8-9										
10	9-10										

\*Note: Include laboratory reports

I hereby confirm the information contained in the disposal plan for dredged materials is true and accurate.

Signature

Date

**Instructions for Preparing a  
Department of the Army Permit Application**

**Blocks 1 through 4.** To be completed by Corps of Engineers.

**Block 5. Applicant's Name.** Enter the name and the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

**Block 6. Address of Applicant.** Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

**Block 7. Applicant Telephone Number(s).** Please provide the number where you can usually be reached during normal business hours.

**Blocks 8 through 11.** To be completed, if you choose to have an agent.

**Block 8. Authorized Agent's Name and Title.** Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

**Blocks 9 and 10. Agent's Address and Telephone Number.** Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

**Block 11. Statement of Authorization.** To be completed by applicant, if an agent is to be employed.

**Block 12. Proposed Project Name or Title.** Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

**Block 13. Name of Waterbody.** Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

**Block 14. Proposed Project Street Address.** If the proposed project is located at a site having a street address (not a box number), please enter it here.

**Block 15. Location of Proposed Project.** Enter the latitude and longitude of where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

**Block 16. Other Location Descriptions.** If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality that the site is located in.

**Block 17. Directions to the Site.** Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known.

**Block 18. Nature of Activity.** Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

**Block 19. Proposed Project Purpose.** Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

**Block 20. Reasons for Discharge.** If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

**Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards.** Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

**Block 22. Surface Areas of Wetlands or Other Waters Filled.** Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

**Block 23. Description of Avoidance, Minimization, and Compensation.** Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, or a brief statement explaining why compensatory mitigation should not be required for those impacts.

**Block 24. Is Any Portion of the Work Already Complete?** Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identity the authorization, if possible.

**Block 25. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site.** List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

**Block 26. Information about Approvals or Denials by Other Agencies.** You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

**Block 27. Signature of Applicant or Agent.** The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

## DRAWINGS AND ILLUSTRATIONS

### General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). **While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.**

# US Army Corps of Engineers Guide Sheet

1. **Letter of Request** to include the following: routine
  - a. **Description of Work** being requested
  - b. **Requester's Name, Address, Telephone Number(s) and E-mail address**
  - c. If the Requester is not the property owner, attach a **Letter of Agreement** from the surface property owner
2. **Site Map** clearly identifying the general location of the area on the lake.
3. **404 Regulatory Review** is required if any of the proposed work is at or below the 745' contour, or if there are potential impacts to waterways & wetlands  
**Call 918-669-7400** to request a **Regulatory Review**.
4. **Pictures** of area where the work will occur. Note: If the area is eroded, pictures of the site prior to the erosion occurring will be helpful.
5. **Construction Plans** to include drawings or schematics of the proposal.
  - a. **Detailed Illustrations** showing the top and bottom flowage easement elevations, clearly identified
  - b. **Pertinent Elevations** of proposed work including top and bottom elevations
  - c. **Types and Total Volumes of Materials** to be used (this may be included on the Boundary Survey)
6. **Boundary Survey** by a registered land surveyor that must include the following elements:
  - a. **750' and 745' Contours**, clearly marked
  - b. **Land/Water Interface or Shoreline** with water level elevations clearly noted and dated
  - c. Grand River Dam Authority (GRDA) **Metes and Bounds Property Line**
  - d. Requester's **Property Boundaries**
  - e. **Easement Elevations** – the Property Title should give this information
  - f. Show the **Top of the Flowage Easement** Line – May be 757', 758' or 760'
  - g. Copies of Recorded Documents showing the **Government Tract Number(s)** and Pertinent Flowage Elevation.
  - h. NOTE: **Government Tract Numbers** may possibly be obtained from GRDA
7. List all **Proposed and Existing Structures**, including **Fill Material**, within the flowage easement. Include ground elevations for all structures. Fill Material is considered a structure and is only allowed in certain situations)
8. **Legal Description** – Length, Width, Section, Township, Range, County, State and depicting flowage easement
9. Provide copies of all **Title Documents**, excluding the abstract.
10. Return completed Application Package with all of the above-listed items to:

Tulsa District, US Army Corps of Engineers  
ATTN: CESWT-RE-A  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, Oklahoma 74128 – 4609

For questions regarding this Application Guide Sheet, call: 918-669-7250

**U.S. ARMY CORPS OF ENGINEERS**  
**APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT**  
33 CFR 325. The proponent agency is CECW-CO-R.

**Form Approved -  
OMB No. 0710-0003  
Expires: 30-SEPTEMBER-2015**

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT**

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

**(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)**

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

**(ITEMS BELOW TO BE FILLED BY APPLICANT)**

5. APPLICANT'S NAME			8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)				
First -	Middle -	Last -	First -	Middle -	Last -		
Company -			Company -				
E-mail Address -			E-mail Address -				
6. APPLICANT'S ADDRESS:			9. AGENT'S ADDRESS:				
Address-			Address-				
City -	State -	Zip -	Country -	City -	State -	Zip -	Country -
7. APPLICANT'S PHONE NOS. w/AREA CODE			10. AGENTS PHONE NOS. w/AREA CODE				
a. Residence	b. Business	c. Fax	a. Residence	b. Business	c. Fax		

**STATEMENT OF AUTHORIZATION**

11. I hereby authorize, \_\_\_\_\_ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

\_\_\_\_\_  
SIGNATURE OF APPLICANT

\_\_\_\_\_  
DATE

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see instructions)					
13. NAME OF WATERBODY, IF KNOWN (if applicable)			14. PROJECT STREET ADDRESS (if applicable)		
			Address		
15. LOCATION OF PROJECT			City -	State -	Zip -
Latitude: °N Longitude: °W					
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)					
State Tax Parcel ID		Municipality			
Section -		Township -		Range -	

17. DIRECTIONS TO THE SITE

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

**USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
-------------------------------	-------------------------------	-------------------------------

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres  
or  
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete?  Yes  No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

**City -** \_\_\_\_\_ **State -** \_\_\_\_\_ **Zip -** \_\_\_\_\_

b. Address-

**City -** \_\_\_\_\_ **State -** \_\_\_\_\_ **Zip -** \_\_\_\_\_

c. Address-

**City -** \_\_\_\_\_ **State -** \_\_\_\_\_ **Zip -** \_\_\_\_\_

d. Address:

**City** - **State** - **Zip** -

### e. Address:

City - \_\_\_\_\_ State - \_\_\_\_\_ Zip - \_\_\_\_\_

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

\* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

**SIGNATURE OF APPLICANT**

DATE

**SIGNATURE OF AGENT**

DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguise a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

# Environmental and Wetland Consultants

Updated: July 2015

Freese and Nichols, Inc.  
4055 International Plaza, Suite 200  
Fort Worth, TX 76109, 817-735-7300  
Mr. Steven P. Watters, [www.freese.com](http://www.freese.com)

Eagle Environmental Consulting, Inc.  
P.O. Box 335, Vinita, OK 74301  
918-272-7656, 918-256-6131 (fax)  
Mr. Steve Votaw - [steve@eagle-env.com](mailto:steve@eagle-env.com)

EGIS, Inc. – Environmental Consulting  
EGIS Natural Developments, Inc.  
314 South Main, Bentonville, AR 72712  
479-271-9252, 1-800-718-2492  
479-271-8627 (fax), [www.egis-env.com](http://www.egis-env.com)  
Mr. Manuel Barnes - [mbarnes@egis-env.com](mailto:mbarnes@egis-env.com)

The Benham Companies, LLC  
3700 W. Robinson, Suite 200  
Norman, OK 73072, 405-701-3131, 405-364-1708  
Ms. Debby McElreath, [debby.mcelreath@benham.com](mailto:debby.mcelreath@benham.com)  
Tulsa Office: One West 3rd Street, Suite 100  
Tulsa, OK 74103, Ms. Renee Fleshman  
918-492-1600, 918-496-0132 (fax)

David Blackford Consulting Services, LLC  
12 Doral Lane, Holiday Island, AR 72631-5116  
479-253-7529, 479-253-2792 (fax)  
[lida37@arkansas.net](mailto:lida37@arkansas.net)

TranSystems Corporation  
2400 Pershing Road, Suite 400, Kansas City, MO  
64108  
816-329-8700, 816-329-8701 (fax), Mr. Tom Clark

Loomis Austin  
3103 Bee Cave Road, Suite 225, Austin, TX 78746  
512-327-1180, 512-327-4062 (fax)  
Mr. Clifton Ladd - [cladd@loomisomoore.com](mailto:cladd@loomisomoore.com)

Trinity Consultants  
120 East Sheridan, Suite 205, Oklahoma City, OK 73104  
405-228-329, 405-228-3293 (fax)  
[www.trinityconsultants.com](http://www.trinityconsultants.com)

URS Corporation  
1437 S. Boulder, Suite 1020, Tulsa, OK 74119  
918-582-2552, 918-582-1328 (fax)  
Ms. Michelle Barnett

Envir-Rowe Services, LLC  
215 County Road 1222, Pittsburg, TX 75686-5617  
903-855-1004, 903-235-2734 (cell)  
Mr. Jed Rowe, CWD, [envir-rowe@earthlink.net](mailto:envir-rowe@earthlink.net)

Applied Ecological Services, Inc.  
1904 Elm Street, Eudora, KS 66025  
785-542-3090, 785-542-3570 (fax)  
[www.appliedeco.com](http://www.appliedeco.com)

Maxim Technologies, Inc.  
P.O. Box 7777, Boise, ID 83707, 208-389-1030  
Mr. Walt Vering

Horizon Environmental Services, Inc.  
1507 South IH 35, Austin, TX 78741  
512-328-2430, 512-328-1804 (fax)  
Mr. C. Lee Sherrod, [lee\\_sherrod@horizon-esi.com](mailto:lee_sherrod@horizon-esi.com)  
[www.horizon-esi.com](http://www.horizon-esi.com)

Advanced Ecology, Ltd.  
2557 State Hwy 7 Eas, Center, TX 75935  
1-800-780-9105, 936-598-9588, 936-598-9579 (fax)  
Mr. Keith Webb, [kwebb@advancedecology.com](mailto:kwebb@advancedecology.com)

KBA EnviroScience, Ltd.  
359 Lake Park Road, Suite 110, Lewisville, TX 75057  
972-436-9669, 972-436-9667 (fax)  
Mr. C. Keith Bradley, [www.kbaenv.com](http://www.kbaenv.com)

Barker Lemar Engineering Consultants  
1801 Industrial Circle  
West Des Moines, IA 50265, 515-256-8814  
Mr. Kevin M. Griggs, Wetland Manager  
[kgriggs@barkerlemar.com](mailto:kgriggs@barkerlemar.com), [www.barkerlemar.com](http://www.barkerlemar.com)

Black and Associates Environmental Consultants, Inc.  
1908 W. Boyd, Norman, OK 73069-4830  
405-360-2852, 405-360-2880, Mr. Jerry J. Black

Terracon Consultants, Inc.  
10930 East 56th Street, Tulsa, OK 74146  
918-250-0461, 918-250-4570 (fax)  
[www.terracon.com](http://www.terracon.com)

Adaptive Ecosystems, Inc.  
801 Main Street, Suite 103, Grandview, MO 64030  
816-966-8199, 816-966-8212 (fax)  
Stephen W. Parker, MS – President  
[sparker@adaptiveecosystems.com](mailto:sparker@adaptiveecosystems.com)  
[www.adaptiveecosystems.com](http://www.adaptiveecosystems.com)

TRC Environmental Corporation  
505 East Huntland Drive, Suite 250  
Austin, TX 78752, 512-684-3144  
Ms. Carla Kartman, [ckartman@trcsolutions.com](mailto:ckartman@trcsolutions.com)

Isbell Engineering Group, Inc.  
1405 W. Chapman Drive, Suite 200, Sanger, TX  
76266, 940-458-7503, Mr. Cody Johnson

Blackshare Environmental Solutions  
5121 S Wheeling Avenue, Tulsa OK 74105  
98-388-0970 ext 204; Mr. Kenneth Webb

Goshawk Environmental Consulting, Inc.  
P.O. Box 151525, Austin, TX 78715-1525  
Physical Address: 5383 Hartson, Kyle, TX 78640  
512-262-7526, 281-271-8140 (fax)  
Mr. Zane N. Homesley, [www.goshawkenv.com](http://www.goshawkenv.com)

Atoka, Inc. Consulting Services  
2695 Airport Road, Hot Springs, AR 71913, 800-305-2392  
Dr. Jerry Overton, [JOVerton@sbcglobal.net](mailto:JOVerton@sbcglobal.net)  
[www.ATOKAINC.com](http://www.ATOKAINC.com)  
or Little Rock Office: 11701 I-30, Bldg 1, Suite 119,  
Little Rock, AR 72209, 501-455-1700

Hoffman – Prieur & Associates, Inc.  
Land Surveyors/Consulting Engineers  
320 O'Bryan Lane, Van Buren, AR 72956  
479-474-7916, 479-474-2450 (fax)  
Mr. Van Hale, P.E., [www.hoffman-prieur.com](http://www.hoffman-prieur.com)

Kimley-Horn and Associates, Inc.  
12700 Park Central Drive, Suite 1800  
Dallas, TX 75251, 972-770-1300, 972-239-3820 (fax)  
Mr. Larry Clendenen, [larry.clendenen@kimley-horn.com](mailto:larry.clendenen@kimley-horn.com)  
[www.kimley-horn.com](http://www.kimley-horn.com)

Whitenton Group, Inc.  
Environmental Consultants and Training  
13280 Rivercrest Drive, Little Rock, AR 72212,  
501-225-1552, 501-223-5312 (fax), 501-258-7141 (mobile)  
Ms. Lisa Gandy, PhD, PWS  
[www.whitentongroup.com](http://www.whitentongroup.com)  
Texas Office: 3413 Hunter Road  
San Marcos, TX 78666  
512-353-3344, 512-212-4043 (fax)  
512-470-7195 (mobile)  
Mr. Scott Jecker, CWB, PWS

Enercon Services, Inc.  
5100 East Skelly Drive, Suite 450  
Tulsa, OK 74135  
918-665-7693, 918-665-7232 (fax)  
or Oklahoma City Office  
6525 N. Meridian, Suite 503  
Oklahoma City, OK 73116  
405-722-7693, 405-722-7694 (fax)  
Ms. Emily Trice

FTN Associates, Ltd.  
3 Innwood Circle, Suite 220  
Little Rock, AR 72211  
501-225-7779, 501-225-6738 (fax)  
Dr. Gary E. Tucker, [get@ftn-assoc.com](mailto:get@ftn-assoc.com)  
[www.ftn-assoc.com](http://www.ftn-assoc.com)  
Fayetteville Office: 124 West Sunbridge  
Drive, Fayetteville, AR 72703  
479-571-3334, 479-571-3338 (fax)  
Dr. David X. Williams, [dxw@ftn-assoc.com](mailto:dxw@ftn-assoc.com)

Kleinfelder  
10926 E. 55th Place, Tulsa, OK 74146  
918-627-6161, 918-627-6262  
Mr. Brent Neece, [bneece@kleinfelder.com](mailto:bneece@kleinfelder.com)  
Lenexa KS Office: 7802 Barton  
Lenexa, KS 66214  
913-962-0909, 913-962-0924  
Mr. Tom Plattner,  
[tplattner@kleinfelder.com](mailto:tplattner@kleinfelder.com)

Bluum Outdoor Environments  
507 S. Main, Suite 606, Tulsa, OK 74103  
918-599-8500, 918-599-8180 (fax)  
918-853-8733 (cell), Mr. J. Nathan Vaughn

Soil Restoration Technologies  
P.O. Box 639, Bixby, OK 74008  
918-449-1175, 918-449-1176 (fax)  
918-527-5718  
Mr. Bob Richardson, Restoration Biologist

AquAeTer, Inc.  
215 Jamestown Park, Suite 100  
Brentwood, TN 37027  
615-373-8532, 615-373-8512 (fax)  
Amanda Klink, [aklink@aquaeter.com](mailto:aklink@aquaeter.com)  
awilding@aquaeter.com  
[www.aquaeter.com](http://www.aquaeter.com)

A & M Engineering and Environmental  
Services, Inc.  
10010 E. 16th Street, Tulsa, Oklahoma  
74128-4813  
918-665-6575, 918-665-6576 (fax)  
[aandm@aandmengineering.com](mailto:aandm@aandmengineering.com)

Lake Ozark Environmental LLC  
PO Box 2325  
Lake Ozark, Missouri 65049  
Contact : Douglas Beck President /  
Owner CECM  
Office 573-964-6956  
Cell Phone 573-216-8141  
Fax 573-365-9941  
E-mail [dabbjb@charter.net](mailto:dabbjb@charter.net)  
[www.lakeozarkenvironmental.com](http://www.lakeozarkenvironmental.com)

Bernard E. Thompson, CERS  
10201 Hwy 59 N, Suite A  
Grove, OK 74344  
918-786-7108, 918-786-6699 (fax)  
[laci@real-estategroup.com](mailto:laci@real-estategroup.com) or  
[bernie@real-estategroup.com](mailto:bernie@real-estategroup.com)