Chapter 15

PERMITS

ODOT ROADWAY DRAINAGE MANUAL

November 2014

Chapter 15
PERMITS

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Chapter 15
PERMITS

This chapter briefly documents the basic information for the water-related permits/certifications that may be required for a project and is based on a similar chapter from the AASHTO *Drainage Manual* (1). Many activities performed by ODOT have environmental or navigational impacts and may affect public or private land. Depending upon the nature of the impact, the activity may require ODOT to obtain a permit or certification. Some of these permits/certifications may be initiated during the planning phase of project development, and others may be initiated during the design or construction phase. ODOT personnel involved in project development, design and construction should be aware of the requirements for these permits and certifications to ensure that the necessary authorizations and clearances are obtained in a timely manner to allow the work requiring the permit and certification to proceed as scheduled.

15.1 ENVIRONMENTAL DOCUMENTS

Early in the project development phase, there may be drainage-related inputs in the development of environmental documents. These documents identify the requirements for some water-related permitting actions and they are inputs to the water-related permits for the project. Issues may be identified in the environmental process that may need to be addressed in the design phase (e.g., water quality concerns (both construction related and permanent controls), required permits, other regulatory requirements).

15.1.1 Environmental Classification

Transportation project impacts can vary from very minor to very significant on the human environment. To account for the variability of project impacts, the applicable "class of action" determines how compliance with the *National Environmental Policy Act* (NEPA) *of 1969* is implemented and documented:

1. Categorical Exclusion (CE). Issued to individual projects that do not involve significant effects on the environment. This process involves completing an environmental checklist that contains resource agency requirements for the proposed project.

2. Categorical Exclusion (CE)–Programmatic. A quantity of projects with very minimal environmental impacts programmatically approved annually by FHWA. Programmatic CE projects are typically confined to the surface of the roadway or in the previously disturbed right-of-way (e.g., overlays, rehabilitation, lighting projects).

3. Environmental Assessment (EA). An EA is prepared for actions in which the significance of the environmental impact is not clearly established.

   Should environmental analysis and resource agency review during the EA process find a project has no significant impacts on the quality of the environment; a Finding of No Significant Impact (FONSI) is issued to conclude the EA process.

4. Environmental Impact Statement (EIS). Prepared for projects where it is known that the action will have significant effect on the environment. A Record of Decision (ROD) is the final step in the EIS process. The ROD specifies the environmentally preferable alternative and provides information on the adopted means to avoid, minimize and compensate for environmental impacts.

15.1.2 Waters and Wetland Finding

Project impacts to wetlands and jurisdictional waters must be avoided when feasible and practical and, if they cannot be avoided, they should be minimized to the greatest extent possible. When the objectives of a transportation project cannot be met without impacts to waters and wetlands adjacent to the project, a waters and wetland mitigation plan is prepared detailing how lost wetland functions will be compensated. The impacts typically involve the placement of fill into the wetland or channel relocation or potential draining of the wetland. The identified impacts to waters and wetlands also are included as part of the project Section 404 Permit application

15.1.3 Storm Water Pollution Prevention Plan (SWPPP)

A SWPPP is required under the industrial and construction storm water general permits. The purpose of a SWPPP is to identify possible pollutant sources to storm water and to identify Best Management Practices (BMPs) that, when implemented, will reduce water quality impacts. BMPs are physical, structural, managerial practices or all, that when used singly or in combination, prevent or reduce pollution of storm water. The SWPPP is a living document and must reflect actual on-the-ground conditions at all times. A construction permit Notice of Intent (NOI) may also be necessary when one acre of land or more is disturbed. See Section 13.2.4 for more details.

15.1.4 Dewatering Plan

A dewatering plan is necessary any time water is to be transferred or moved from one place to another. This can include cofferdams, diversions, re-routing streams, work areas, etc. The plan should be submitted along with the Construction Permit's Notice of Intent (NOI). It becomes part of the SWPPP. A draft plan showing options for each construction phase should be available on plan sets as an aid for the contractor's compliance. The contractor and project engineer should then revise the plan appropriately once construction is active.

15.1.5 Section 7 Biological Opinion

A programmatic Biological Opinion document provides guidance for the construction activities impacting federally threatened or endangered species. Mandatory terms and conditions are given, which are to be implemented at stream crossing projects impacting the threatened or endangered species.

15.2 FHWA FLOODPLAIN EVALUATION AND FINDING

The following discussion has been adapted from FHWA Technical Advisory, T 6640.8A, "Guidance for Preparing and Processing Environmental and Section 4(F) Documents," dated October 30, 1987 (2). The Technical Advisory usage of "encroach" means the same as "encroachment," which is defined in 23 CFR 650, Subpart A. An encroachment is an action within the limits of the base (100-year) floodplain. An action is any highway construction, reconstruction, rehabilitation, repair or improvement undertaken with Federal or Federal-aid highway funds or FHWA approval.

15.2.1 Review of Floodplain Impacts

National Flood Insurance Program (NFIP) maps or, if NFIP maps are not available, information developed by the state should be used to determine whether an alternative will encroach on the base (100-year) floodplain. The location hydraulic studies required by 23 CFR 650, Subpart A, should include a discussion on the following items as appropriate for the level of risk or environmental impact for each alternative that encroaches on base floodplains or would support base floodplain development:

- the flooding risks;
- the impacts on natural and beneficial floodplain values;
- the support of probable incompatible floodplain development (i.e., any development that is not consistent with a community's floodplain development plan);
- the measures to minimize floodplain impacts; and
- the measures to restore and preserve the natural and beneficial floodplain values.

15.2.2 Draft Environmental Assessment Document, Floodplain Impacts

The draft environmental assessment document should briefly summarize the results of the hydraulic location studies. The summary should identify the number of encroachments and any support for incompatible floodplain developments and their potential impacts. Where an encroachment or support of incompatible floodplain development results in substantial impacts, the draft environmental assessment document should provide more detailed information on the location, impacts and appropriate mitigation measures. In addition, if any alternative results in a floodplain encroachment or supports incompatible floodplain development having significant impacts or requires a commitment to a particular structure size or type, the draft environmental assessment document should include an evaluation and discussion of practicable alternatives to the structure or to the significant encroachment. The draft environmental assessment document should include exhibits that display the alternatives, the base floodplains and, where applicable, the regulatory floodways.

15.2.3 Final Environmental Assessment Document, Floodplain Finding

If the preferred alternative includes a floodplain encroachment having significant impacts, the final environmental assessment document should include a Finding that it is the only practicable alternative as required by 23 CFR 650, Subpart A. The Finding should refer to Executive Order 11988 and 23 CFR 650, Subpart A. It should be included in a separate subsection entitled "Only Practicable Alternative Finding" and should be supported by the following information:

- the reasons why the proposed action should be located in the floodplain,
- the alternatives considered and why they were not practicable, and
- a statement indicating whether the action conforms to applicable state or local floodplain protection standards.

15.2.4 Programmatic Floodplain Finding for Categorical Exclusions

FHWA can issue a Programmatic Floodplain Finding for Categorical Exclusions.

15.2.5 Legal References

The following lists the legal references for the FHWA Floodplain Evaluation and Finding:

- Executive Order 11988;
- DOT Order 5650.1;
- 23 CFR 650, Subpart A; and
- 23 CFR 771.

15.3 NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

NFIP is administered by FEMA but for the state of Oklahoma, FEMA has delegated its authority to the Oklahoma Water Resources Board (OWRB). Detailed information on FEMA programs and procedures can be found at the FEMA website. The Federal Highway Administration (FHWA) and FEMA have had a long-standing cooperative relationship, which is formalized in the *Procedures for Coordinating Highway Encroachments on Floodplains with Federal Emergency Management Agency* (FEMA), available on the FHWA website. The material in this section is based on these two sources.

15.3.1 NFIP Background

The amended *National Flood Insurance Act of 1968* (42 USC 4001 et seq.) established the NFIP, which requires communities (whether city, county or state) to adopt adequate land use and control measures to qualify for flood insurance in riverine flood-prone areas.

When the Administrator of the Federal Insurance Administration has identified the flood-prone area, the community should require that, until a floodplain has been designated, no use be permitted within the floodplain area having special flood hazards for which base flood elevations have been provided. If it can be demonstrated that the cumulative effect of the proposed use, when combined with all other existing and reasonably anticipated uses of a similar nature, will not increase the water surface elevation of the 100-year flood by more than 1 ft at any point within the community, the proposed use can be permitted.

After the floodplain area has been identified and the water surface elevation for the 100-year flood and floodway data have been provided, the community may designate a floodplain that will convey the 100-year flood without increasing the water surface elevation of the flood more than 1 ft at any point. Also, the community should prohibit, within the designated floodway, fill, encroachments, new construction and substantial improvements of existing structures that would result in any increase (0.00 ft) in flood heights within the community during the occurrence of the 100-year flood discharge.

The participating cities or counties agree to regulate new development in the designated floodplain and floodway through regulations adopted in a floodplain ordinance. The ordinance should require that development in the designated floodplain be consistent with the intent, standards and criteria set by NFIP. Failure on their behalf to enforce basic requirements can result in losing their status in the program.

The hydraulics designer should be familiar with FEMA/NFIP requirements because they may either control the design of a facility within a floodplain or, when encroachments (any physical object placed in a floodplain that hinders flow) are proposed, necessitate to acquire FEMA approval of the project. The Roadway Drainage Engineer will need to apply for the OWRB's permit for ODOT's project that is located in FEMA regulated floodplain. The engineer will have to sign/seal a Memo of Agreement (MOA, see Appendix 15.B for a blank MOA form) for that project and send it to the OWRB for approval. FEMA rules and procedures must be considered early in the project planning stages so that alternatives can be included in environmental documents (see Section 15.1).

Determining the status of a community's participation in the NFIP, and reviewing applicable NFIP maps and ordinances are essential first steps in conducting location hydraulic studies and preparing environmental documents. Information on community/county of the State of Oklahoma participation in NFIP program can be obtained through the OWRB or the Oklahoma Floodplain Managers Association (OFMA).

15.3.2 NFIP Maps

Where NFIP maps are available, their use is mandatory in determining whether a highway location alternative will include an encroachment on the base floodplain. The following types of NFIP maps are published:

1. Flood Hazard Boundary Map (FHBM). A FHBM does not generally originate from a detailed hydraulic study and, therefore, the floodplain boundaries shown are approximate.

2. Flood Boundary and Floodway Map (FBFM). A FBFM generally originates from a detailed hydraulic study. These hydraulic data are available through the FEMA Regional Office and should provide reasonably accurate information. This study is normally in the form of computer data records or hand data for calculating water surface profiles.

3. Flood Insurance Rate Map (FIRM). The FIRM identifies base flood elevations and rate zones for flood insurance and is generally produced at the same time as the FBFM using the same hydraulic model. FEMA has stopped publishing the FIRM in paper format since 2010 and replaced it with the Digital Flood Rate Map (DFIRM) in CD format.

4. Digital Flood Insurance Rate Maps (DFIRMs). The DFIRM is a digital FIRM that is available from the FEMA Map Service Center web site.

15.3.3 Flood Insurance Study

A Flood Insurance Study (FIS) documents the methods and results of a detailed hydraulic study. The FIS Report includes the following information:

- name of community;
- hydrologic analysis methods;
- hydraulic analysis methods;
- floodway data, including areas, widths, average velocities, base flood elevations and regulatory elevations; and
- water surface profile plots.

15.3.4 NFIP Participation Phases

A community can be in the emergency program or the regular program, in the process of converting from the emergency program to the regular program or not participating in NFIP. The emergency program is intended to provide a "first layer" amount of insurance on an emergency basis on all insurable structures before a risk study can be performed. Approximate flood boundaries are shown on a FHBM. The regular program provides a "second layer" coverage, which is offered only after the Floodplain Administrator has completed a risk study for the community. The local community Floodplain Administrator is responsible for the administration and enforcement of the floodplain management ordinances of a community participating in the NFIP. Information on community/county of the state of Oklahoma participation in NFIP program can be obtained through the OWRB or the Oklahoma Floodplain Managers Association (OFMA).

15.3.5 Regulated Floodplain Components

Figure 15.3-A illustrates the basic components of a FEMA-regulated floodplain. The floodplain is established by the base flood, which is the extent of inundation resulting from a flood flow having a 1% exceedance probability in any given year (100-year flood). The floodplain is divided into a floodway and floodway fringes.

The floodway is the main stream channel and any floodplain areas that should remain free of encroachment so that the base flood can be carried without a considerable increase in water surface elevations. The floodway fringe is the remaining area between the floodway and the floodplain boundary.

If ODOT's project is located in the flood fringes, the maximum increase above the base flood elevation (BFE) caused is usually 1 ft or less (FEMAs requirement). However, the increase may be as low as zero rise, because of local regulations that are stricter than FEMA regulations.

If ODOT's project is located in the floodway, the maximum increase above the base flood elevation (BFE) caused is 0.00 ft (FEMAs requirement).

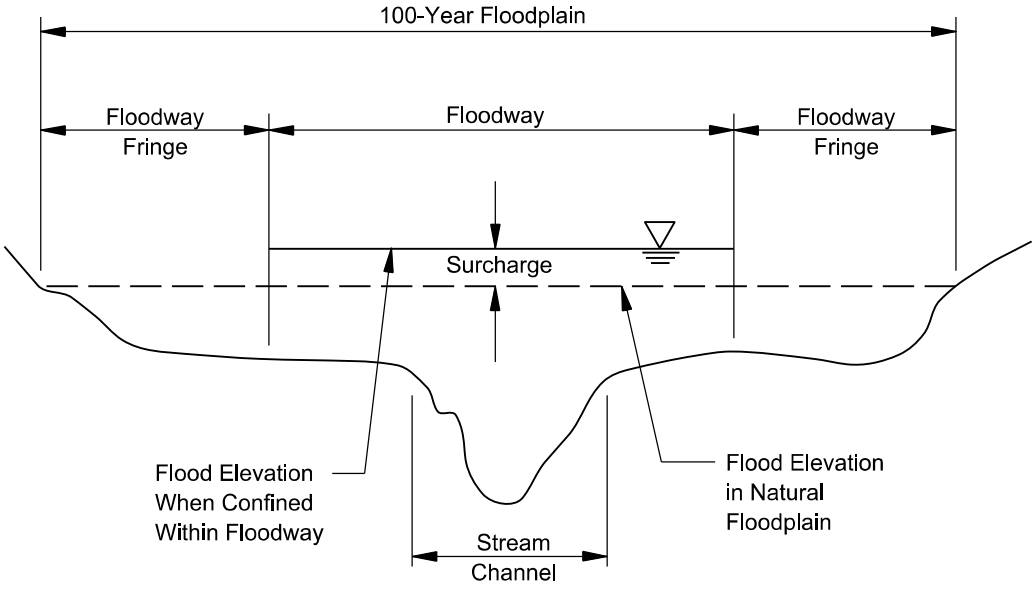


Figure 15.3-A — BASIC CONSTITUENTS OF FEMA-MAPPED FLOODPLAIN

15.3.6 Projects Requiring Coordination with OWRB

ODOT should apply for a MOA permit with the OWRB where administrative determinations are needed involving a regulatory floodplain or where flood risks in NFIP communities are significantly impacted. The circumstances ordinarily requiring coordination with the OWRB include the following:

- Where a proposed highway construction project encroaches on a regulatory floodplain and, therefore, requires an amendment to the floodplain map.

- Where a proposed highway construction project encroaches on a floodplain where a detailed study has been performed but no floodway is designated and the maximum 1-ft increase in the base flood elevation would be exceeded.

- Where a local community is expected to enter into the regular program and detailed floodplain studies are underway.

- Where a local community is participating in the emergency program and the base FEMA flood elevation in the vicinity of insurable buildings is increased by more than 1 ft. Where insurable buildings are not affected, simply notify FEMA of changes to base flood elevations as a result of highway construction.

In many situations, it is possible to design and construct cost-effective highways such that their components are excluded from the floodplain. This is the simplest way to be consistent with the requirements and should be the initial alternative evaluated. If a project element encroaches on the floodplain but has a minor effect on the floodway water surface elevation (e.g., piers in the floodway) and hydraulic conditions can be improved so that no water surface elevation (0.00 ft)

increase is reflected in the analysis for the new conditions, then the project may normally be considered consistent with the requirements.

15.3.7 Floodplain Revisions and NFIP

Where it is not cost effective to design a highway crossing to avoid encroachment on an established floodplain, consider modifying the floodplain itself. Often, the community is willing to accept an alternative floodplain configuration to accommodate a proposed crossing, provided that NFIP limitations on increases in the base flood elevation are not exceeded. In some cases, it may be possible to enlarge the floodplain or otherwise increase conveyance in the floodplain above and below the crossing to allow a greater encroachment. Such planning is best accomplished when the floodplain is first established. However, where the community is willing to amend an established floodplain to support this option, the floodplain may be revised. For each alternative encroaching on a designated or proposed regulatory floodplain, the draft environmental assessment document should provide a preliminary indication of whether the encroachment would be consistent with or require a revision to the regulatory floodplain. Engineering and environmental analyses should be undertaken, appropriate for the level of encroachment, to permit the consistency evaluation and identify impacts. Coordination with the OWRB and/or local County/City Floodplain Administrators should be undertaken for each floodplain encroachment. If the preferred alternative encroaches on a regulatory floodplain, the final environmental assessment document should discuss the consistency of the action with the regulatory floodplain. If a floodplain revision is necessary, the document should include evidence from ODOT, OWRB and the local County/City Floodplain Administrators indicating that such revision will be acceptable (see Section 15.3).

The responsibility for demonstrating that an alternative floodplain configuration meets NFIP requirements rests with the community. However, this responsibility may be borne by ODOT by proposing to construct the highway crossing. FEMA prefers that floodplain revisions be based on the hydraulic model used to develop the currently effective floodplain; but updated to reflect existing encroachment conditions. The update defines base flood elevation changes caused by encroachments since the original floodplain was established. Alternative floodplain configurations may then be analyzed. Proposed changes in base flood elevations should be referenced to the profile obtained for existing conditions when the floodplain was first established.

15.3.8 Allowable Floodplain Encroachment

15.3.8.1 Floodway Encroachment

When it is inappropriate to design a highway crossing to avoid encroachment on the floodway, and where the floodway cannot be modified to exclude the structure, FEMA will approve an alternative floodway with backwater in excess of the 1-ft above BFE (0.00 ft tolerance) only when the conditions required by the NFIP Regulation 44 CFR Chapter 1, Section 65.12 have been met. The conditions of NFIP Regulation 44 CFR Chapter 1, Section 65.12 include:

- an evaluation of alternatives, which would not result in a BFE increase above that permitted demonstrating why these alternatives are not feasible;

- documentation of individual legal notice to all affected property owners within and outside of the community, explaining the impact of the proposed action on their property;

- concurrence of the Chief Executive (CEO) and any other communities affected by the proposed action; and

- certification that no structure is located in an area that would be impacted by the increase BFE.

In this case, the Roadway Drainage Engineer should send a signed/sealed MOA, including all the necessary documentation as stated above, and the hydrology/hydraulics analysis if needed, to the OWRB to apply for a permit from OWRB for this project, as requested by Oklahoma state laws. Appendix 15.B contains a blank MOA form and Appendix 15.C contains an example completed form.

15.3.8.2 Floodplain with a Flood Insurance Rate Map (FIRM)

There are three cases for a highway crossing that encroach on the regulatory floodplain in NFIP-participating communities where a Flood Insurance Rate Map (FIRM) has been performed:

- The proposed highway crossing would not increase the BFE more than the 1 ft permitted by FEMA. In this case, it does not matter if the floodway has or has not been in established in the FIRM map. The Roadway Drainage Engineer would send a signed/sealed MOA, including the hydrology/hydraulics analysis if needed, to the OWRB to apply for a permit from OWRB for this project, as requested by Oklahoma state laws.

- The proposed highway crossing would increase the BFE more than the 1 ft permitted by FEMA and the floodway has been established in the FIRM. In this case, the hydraulics designer should change the proposed drainage structure size and the highway crossing profile in an effort to bring the increase of the BFE down to 1 ft or less as required by FEMA.

- The proposed highway crossing would increase the BFE more than the 1 ft permitted by FEMA and the floodway has not been established in the FIRM. In this case, all the requirements as stated in Section 15.3.8.1 would apply.

15.3.8.3 Floodplain Indicated on a FHBM

In NFIP-participating communities, where detailed Flood Insurance Studies have not been performed, the state should generate its own technical data to determine the base floodplain elevation and design encroachments in accordance with FHWA 23 CFR 650, Subpart A. Furnish base floodplain elevations to the community and coordinate with FEMA, as outlined

previously, where the increase in base flood elevations in the vicinity of insurable buildings exceeds 1 ft.

15.3.8.4 Unidentified Floodplains

Design encroachments outside of NFIP communities or NFIP-identified flood hazard areas in accordance with state guidance.

15.3.9 Replacing Existing Structures

If an existing structure is replaced in a floodplain of a NFIP-participating community, the replacement structure is considered consistent with the NFIP criteria if it is hydraulically equal to or better than the one it replaces. That is, the replacement structure does not increase the base flood elevations. Generally, this applies directly to crossings in which either the roadway profile is lowered or the replacement structure is the same as or larger than the existing structure. In such cases, the hydraulics designer may base the design solely on typical agency design procedures. However, many bridge replacements combine an increase in structure size with an increase in the roadway profile elevation or a deeper superstructure. If such changes constitute additional obstruction in the floodway, FEMA coordination is required.

15.3.10 Applicability of NFIP Criteria to ODOT

Consistency with NFIP criteria is mandated for all state projects involving encroachments in floodplains of communities participating in NFIP. Ensure that such projects that include scope of work from the following list are consistent with the requirements:

- replacement of an existing culvert with a smaller opening area (e.g., shorter length, deeper superstructure, higher or less hydraulically efficient railing);
- replacement of a culvert and approach roadway with an increase in the roadway profile;
- safety project involving the addition of a safety barrier;
- rehabilitation of a roadway resulting in a higher profile;
- highway crossing at a new location;
- longitudinal encroachment of a highway on floodplain (with or without crossing);
- storage of materials in floodplain; and
- state buildings in floodplain.

Some communities have adopted floodplain ordinances that are more restrictive than basic FEMA criteria. Examples include the following:

- no-increase ordinances that preclude any encroachment on the floodplain (i.e., no floodway);
- design to accommodate ultimate watershed development; and
- roadway profiles to be set above 100-year flood elevation.

Generally, FEMA condones stricter ordinances, but it does not require them. In fact, FEMA regulations specifically state that existing watershed conditions are the basis for establishing flood insurance rate zones, not future conditions. The implication of an ordinance with stricter requirements is that highway crossings should span and clear the 100-year flood elevation. Neither FHWA nor FEMA requires states to comply with stricter ordinances. On federal-aid projects, FHWA will fund costs in excess of those required for highways to meet basic FEMA criteria if the stricter criteria has been adopted by the state as a statewide standard.

If the design will accommodate such ordinances, the state should require that any cost in excess of what would be required to accommodate either FEMA basic criteria or state criteria be borne by the community enforcing such an ordinance, unless otherwise mandated by federal, state law or policy. This rationale is consistent with both the hierarchical structure of government and the fact that the state is responsible for ensuring the equitable use of highway funds.

15.3.11 FEMA/NFIP Map Revisions

Currently, FEMA publishes the following forms of map revision:

1. Conditional Letter of Map Revision (CLOMR). This letter (see Figure 15.3-B) from FEMA Region 8 provides comments on a proposed project and the need for a revised FIRM if the project is constructed. It indicates whether or not the project meets NFIP criteria.

2. Letter of Map Revision (LOMR). Issued by FEMA with an accompanying copy of an annotated FIRM, this acknowledges changes in the base flood elevation, floodplain boundary or floodway based on post-construction or revised conditions.

3. Physical Map Revision. This reprint of the FIRM reflects changes to the base flood elevations, floodplain boundary or floodway based on revised conditions.

Normally, a request for a CLOMR requires a follow-up request for a LOMR after construction is complete, unless the response to a request for a CLOMR indicates that a map revision is not required. FEMA determines the need for a physical map revision. Other map issues include:

- typical conditions requiring FEMA map revision,
- hydrologic data for FEMA map revisions,
- hydraulic analyses for FEMA map revisions,
- NFIP map revision request procedure,
- FEMA response, and
- FEMA fees.

ODOT may submit any proposed project with a request for a CLOMR. FEMA will then determine the need for a map revision. However, an application for a CLOMR is necessary when any of the following conditions are met:

- proposed construction encroaches in the floodway, and there is any increase in the base flood elevation associated with the floodway encroachment;
- construction in the floodplain (not just floodway) changes the base flood elevation by more than 1 ft;
- a floodway revision is desired to ensure that other development does not obstruct a proposed bridge opening; and
- new hydrologic and hydraulic analyses demonstrate that the existing study is not accurate.

The same is true of LOMRs that apply to post-construction conditions. FEMA considers a LOMR to apply to any existing construction that may have occurred since the imposition of the floodway.

No map revisions are necessary under the following conditions:

- All proposed construction is outside the floodway boundary, and bridge low chords are above the regulatory floodway elevation.
- Construction occurs within the floodway (e.g., piers), but the base flood elevations are the same or lower due to compensatory excavation or other improvement measures within the floodway, and the floodway does not need to be revised.

When is a Conditional Letter of Map Revision (CLOMR) required?

FEMA's review and comment on a project that is proposed within the Special Flood Hazard Area is referred to as a Conditional Letter of Map Revision (CLOMR). A CLOMR comments on whether the proposed project meets the minimum floodplain management criteria of the National Flood Insurance Program (NFIP) and, if so, what revisions will be made to the community's NFIP map if the project is completed as proposed. FEMA works with the applicant to ensure the proposed project is compliant with the program. When all program requirements are met, the CLOMR can be issued. Although not required, FEMA encourages the local floodplain administrator to approve the floodplain permit after FEMA comments on the CLOMR. A copy of the comment by FEMA is sent to both the applicant and the local floodplain administrator.

There are only two situations where NFIP regulations require a CLOMR to be obtained from FEMA before a project can be built.

The first is for a project on a stream or river that has been studied through detailed hydrologic and hydraulic analyses and for which base flood elevations (BFEs) have been specified, but a floodway has not been designated (44 CFR (c)(l0)). If the community proposes to allow development that would result in more than a 1.0 foot increase in the base flood elevation, a CLOMR with detailed analysis should first be obtained.

The second situation requiring a CLOMR is for a project on a stream or river for which detailed analyses have been conducted and both base flood elevations (BFEs) and a floodway have been designated (44 CFR 60.3 (d)(4)). If the community proposes to allow development totally or partially within the floodway that would result in any (greater than 0.0 foot) increase in the base flood elevation, a CLOMR should be obtained. If there are to be no proposed changes the applicant should still demonstrate through detailed analysis that the rise in the floodway is no more than 0.00 feet (44 CFR 60.3 (d)(3)).

Although the two situations described above are the only requirements to obtain a CLOMR prior to permitting development, FEMA will review and comment and, if appropriate, issue a CLOMR for any proposed project when requested by a participating community. Even in situations where a CLOMR is not mandatory, the community is encouraged to require a CLOMR from the applicant prior to approval of the permit if they are unsure of the program impact of the proposed work and to ensure the project is compliant with FEMA regulations. It should be noted for projects where a CLOMR is not required but a LOMR is submitted after construction is completed, there is a risk that the project was not in compliance with the program requirements and the LOMR cannot be issued, in addition to a potential violation for the community. For proposed work in an Approximate A zone and a LOMR will be submitted to remove the area from the FEMA floodplain, a CLOMR may be required. Situations such as these are evaluated on a case-by-case basis; contact the LOMR manager at Baker for details.

All requests for CLOMRs should be supported by detailed flood hazard analyses prepared by a qualified professional engineer. The specific data and documentation requirements are contained in Part 65 of the NFIP regulations and in FEMA's application/certification forms (MT-2). To defray costs to NFIP policyholders, FEMA charges fees to recover review costs. Specific information on the fee schedule and exemption requirements is contained in the MT-2 forms.

The CLOMR does not revise the effective Flood Insurance Rate Map (FIRM) nor change the insurance rating/requirements. Only the LOMR can do that.

Once a project is completed, within 6 months the community MUST request a revision to the FIRM through a LOMR to change the effective map (44 CFR 65.3). "As-built" certification and other data should be submitted to support the LOMR request.

Figure 15.3-B — CONDITIONAL LETTER OF MAP REVISION (CLOMR) INSTRUCTIONS FOR FEMA REGION 6

15.3.12 Hydrologic Data for FEMA Map Revisions

The hydrologic data used for the current NFIP maps should be used in the hydraulic models for checking FEMA compliance and requesting map revisions. The only exception is when the agency is contesting the validity of the existing hydrologic data. FEMA will only consider new hydrologic data if it can be demonstrated to be more accurate than the existing data. The following methods acceptable to FEMA are shown in order of preference:

- statistical analysis of peak annual gaged discharges;
- regional regression equations; and
- rainfall-runoff modeling (e.g., NRCS methods).

When a request for a CLOMR or LOMR is necessary, the hydraulics designer should develop the following computer models, with exceptions as noted. All models should tie into the effective Flood Insurance Study (FIS) profile upstream and downstream of the revised reach using sound hydraulic engineering practices to avoid discontinuities in the profile. The distance will vary depending on the magnitude of the requested floodway revision and the hydraulic characteristics of the stream:

1. Duplicate effective model of the natural and floodway conditions. Rerun the original study model using the same computer program used for the original study to ensure that the base line is accurate. If the effective model is not available, an alternative model should be developed. The model should be run confining the effective flow area to the currently established floodway and calibrated to reproduce, within 0.10 ft, the “with floodway” elevations provided in the Floodway Data Table for the current floodway. The alternative model should be based on floodplain geometry that existed when the original model was developed.

2. Corrected effective model of the natural and floodway conditions. Many original studies may have technical errors, inaccuracies associated with not having enough cross sections or inaccurate cross section data, or they did not include bridges or other structures that existed at the time of the original study. Also, an updated version of the computer program may provide more accurate bridge modeling. The newer version of the same computer program may be used to show how the results would have appeared at the time of the original study if newer technology had been used. With adequate justification, FEMA may consider this as the base line by which to compare the impacts of any changes that have occurred since the original model was developed. If the hydraulics designer considers no such changes to have occurred that may detrimentally affect the state design, this model will not be necessary. FEMA may accept an alternative computer model to the original one if the original model is unavailable or inappropriate, or the alternative model is justified as providing more accurate results.

3. Updated effective model reflecting changes in the floodplain that may have occurred since the original model was established. It is not the ODOTs responsibility to provide studies for map revisions for changes other than those proposed by the state. Often, either the community may not have requested map revisions or non-permitted activities may have changed base flood elevations. The state is not responsible for such changes unless they were the result of the state's construction. However, these changes may

either adversely affect the design of the project or the project will incur no additional increase in the base flood elevation when accounting for these changes. Therefore, the need for development and submission of a pre-project model is left to the discretion of the hydraulics designer.

4. Post-project model reflecting the changes to the floodplain and floodway conditions anticipated by the proposed construction. This determines the impact of the project. FEMA only requires the duplicate effective model and the post-project model. The additional models (corrected and pre-project models) may be necessary to prove to FEMA that the existing effective model is not accurate and a new model should be the basis for comparison.

15.3.13 NFIP Map Revision Request Procedure

Generally, for state projects, an application for a CLOMR or LOMR should be prepared by the state and submitted to FEMA by the participating community, the agency having provided supporting documentation. The procedural outline below assumes that a CLOMR or LOMR is needed:

- Contact the Floodplain Administrator of the participating community to discuss the need for a map revision, to identify any conflicts and to establish areas of cooperation. With the approval of the community, the state will act as its agent for conducting the study and preparing the appropriate documentation.

- Obtain detailed data for the FIS from FEMA. This will include the hydrologic and hydraulic analyses, current mapping and active CLOMRs and LOMRs. The community may have this information. However, the source for the most current data is FEMAs Technical Evaluation Contractor.

- Acquire cross section survey data and establish existing field conditions in the floodplain at the proposed site.

- Document the results of the hydraulic models.

- Acquire and complete Form MT-2 “Application/Certification Forms for Conditional Letters of Map Revision, Letters of Map Revision and Physical Map Revisions.”

- Provide the participating community with the application and supporting documentation. Send the application and supporting documentation to the participating community with a request to submit the package to FEMA through OWRB. Request the community to confirm the submittal and notify the state of FEMAs response.

FEMAs response is usually a request for additional data, issuance of a map revision or an indication that no map revision is required.

15.3.14 Legal References

The following lists the regulations for the National Flood Insurance Program and for FHWA:

- 44 CFR 60.3, and
- 23 CFR 650.115(a)(5).

15.4 NATIONAL PERMIT/CERTIFICATIONS

The U.S. Army Corp of Engineers Regulations, Administrative and Policy Materials are provided on the Headquarters website. Similarly, the U.S. Coast Guard procedures are provided at the Bridge Administration Division website. Specific legal references are provided in the following sections for each permit.

15.4.1 Section 401 of the *Clean Water Act* Certification

15.4.1.1 Purpose

The purpose of the *Clean Water Act*, Section 401 Certification is to restore and maintain the chemical, physical and biological integrity of the Nation's waters through the prevention, reduction and elimination of pollution.

15.4.1.2 Applicability

A Section 401 Certification is required in conjunction with any Section 404 permit, individual or nationwide. For information on the Section 401 Water Quality Certification for Regional General Permits, see Section 15.4.2.8.3.

15.4.1.3 Responsible State Agency

Section 401 of the Federal *Clean Water Act* requires states to review projects and Federal permits to ensure that they will not impact the stream quality or violate Surface Water Standards. The Oklahoma Department of Environmental Quality (DEQ) conducts this review and issues a Section 401 certification as part of the Section 404 Permitting process with the US Army Corps of Engineers.

15.4.1.4 Responsible ODOT Unit

ODOT Environmental Programs Division is responsible for securing Section 404 permits and 401 Certifications.

15.4.1.5 Legal References

The following lists the legal references for the Section 401 Certification:

- Section 401 of the Federal *Water Pollution Control Act* (1972), as amended by the *Clean Water Act* (1977 and 1987), 33 USC 1341;
- 33 CFR 320-332; and
- 40 CFR 230 and 233.

15.4.2 Section 404 of the *Clean Water Act*

15.4.2.1 Purpose

The purpose of Section 404 of the *Clean Water Act* is to ensure that the physical, biological and chemical quality of our Nation's water is protected from irresponsible and unregulated discharges of dredged or fill material that could permanently alter or destroy these valuable resources.

15.4.2.2 Applicability

Section 404 of the Federal *Clean Water Act* requires that anyone, including a government agency, political subdivision, landowner or developer who is proposing to conduct activities that involve the discharge of "dredged or fill material" into "waters of the United States," obtain a permit. The term "discharge of dredged material" includes "all mechanized land clearing, ditching, channelization and other excavation activities that would have the effect of degrading or destroying waters of the United States." The term "waters of the United States" includes all lakes, waterways, rivers, streams and jurisdictional wetlands (see Section 15.4.2.7 for a definition of "Waters of the United States"). Waters of the United States includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters and all impoundments of these waters. All blue line or broken blue line streams as shown on the USGS 7.5 Minute Quadrangle Map are generally recognized to be "Waters of the United States". The term "fill" means any material used that will replace an aquatic area with dry land or change the bottom elevation of a wetland (e.g., concrete, riprap, earth fill).

15.4.2.3 Responsible Federal Agency

For Section 404 Permits, the U.S. Army Corps of Engineers is the Federal agency with overall responsibility for administering the program, reviewing permit applications and issuing permits. Note that each Corps District has its own procedures and permit requirements.

15.4.2.4 Responsible ODOT Unit

ODOT is responsible for securing Section 404 Permits for state highway projects. The Roadway Engineering Manager in charge of the project is responsible for completing the application forms and assembling the required details, including a location map and the nature and quantity of fill into the waters of the United States for roadway size structures while Bridge Division completes it for bridge size structures. These items should be in accordance with the permit application instructions. All this information will then be submitted to the ODOT Environmental Programs Division (EPD). EPD reviews the information, adds any wetland impacts and submits the permit application to USACE. USACE will do the coordination with Oklahoma DEQ for the 401 certification for individual permits and general permits. For NWPs, there is a blanket certification with 401 conditions from Oklahoma DEQ for securing the Section 404 Permit for all ODOT Highway System projects

15.4.2.5 Documentation

Appendix 15.A summarizes the documentation that should be included in the Permit File for a Section 404 Permit.

15.4.2.6 Definitions

The following definitions are applicable to Section 404 Permits:

1. Ordinary High Water (OHW). The line showing on the shore that is established by fluctuations of water and is indicated by physical characteristics such as clear, natural lines impressed on the waterway bank, shelving, changes in the character of the soil, destruction of terrestrial plants, the presence of litter or debris or other appropriate means that consider the characteristics of the surrounding area. In the absence of documented ordinary high water data, states have used the computed Q_2 flow elevation as the ordinary high water elevation for permit applications.

2. Special Aquatic Sites. Mudflats, refuges, riffle and pool complexes, sanctuaries, vegetated shallows and wetlands.

3. Waters of the United States. In general, for identification, the "Waters of the United States" include all jurisdictional wetlands and areas within a blue solid line or a blue dash line on the 7.5 minute USGS quadrangle maps. Each river, stream, creek, intermittent tributary, pond, impoundment, lake or wetlands is considered part of the Waters of the United States. Irrigation ditches or channel modifications that intersect a blue line and intercept the flow may also be considered Waters of the United States.

4. Jurisdictional Wetlands. Bogs, marshes, sloughs and swamps are other terms used to describe these areas. Floodplains, or areas where water stands on, at or near the groundline, may be considered suspected jurisdictional wetlands. Guidelines, as established by the U.S. Army Corps of Engineers Wetland Delineation Manual (available online), indicate that jurisdictional wetlands should have all of the following characteristics:

    - a majority of water-tolerant plants;
    - saturated soils; and
    - water on, at or near the surface of the ground during a specified portion of the growing season.

On January 9, 2001, the U.S. Supreme Court issued a decision, Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers (521 US 159, 2001) (herein referred to as SWANCC) that limits the scope of the U.S. Army Corps of Engineers *Clean Water Act* (CWA) regulatory permitting program (Section 404) applied to isolated waters of the United States. The Supreme Court overturned the Corps' assertion of Federal jurisdiction over certain isolated wetlands based upon the presence of migratory birds.

The U.S. Supreme Court has ruled in Rapanos vs. United States, Nos. 04-1034 - 1384 (June 19, 2006) that not all wetlands are under the jurisdiction of the *Clean Water Act*. The requirement for a *Clean Water Act* permit to discharge dredged or fill material into "navigable waters" only applies to relatively permanent, standing or continuously flowing waters. It does not apply to channels through which water flows intermittently or ephemerally, or which periodically provide drainage for rainfall. Wetlands near ditches or man-made drains that empty into traditional navigable waters are not included.

15.4.2.7 Types of Section 404 Permits

The U.S. Army Corps of Engineers issues individual permits, Nationwide and Regional General Permits. Each of these is discussed in the following sections.

15.4.2.7.1 Individual Permits

These permits are the basic form of authorization under the U.S. Army Corps of Engineers permit program. Individual permits are required where a proposed project does not meet the terms or conditions of either a regional general or nationwide permit, or both, due either to the type of activity, size of project or when it is probable that the project will cause more than minimal impact to the aquatic environment. The following applies:

- Individual permits are issued following a full public interest review of an individual application for a Department of the Army permit. A public notice is distributed to all known interested persons and agencies. After evaluating all comments and information received, a final decision on the application is made.

- The permit decision is influenced by the outcome of a public interest balancing process where the benefits of the project are balanced against the detriments. A permit is often granted unless the proposal is found to be contrary to the public interest, or the impact could have been avoided, the project minimized, or mitigation was determined to be inadequate.

- Processing time usually takes 120 to 180 days unless a public hearing is required or an environmental impact statement is prepared.

15.4.2.7.2 Nationwide Permits (NWP)

Nationwide permits are issued to the general public every five years and are applicable anywhere (with some special limitations) in the United States. There are currently 50 different categories of activities authorized under this permit program. Some of the activities require notification to the U.S. Army Corps of Engineers prior to implementation, and some require submittal of wetland delineation if the project is proposed to be constructed within a wetland. All nationwide general permits have restrictions based on activity, project size, area impacted, construction method, etc. Some of the nationwide permits currently in effect include approved categorical exclusions, maintenance, minor road crossings, bank stabilization, etc.

The most common types of these permits for transportation purposes are covered under NWP Numbers 3, 6, 7, 12, 13, 14, 23, 25, 33, 27, 41 and 43. ODOT usually submits a Section 404 permit application for all projects that appear to qualify for a Nationwide Permit, plus those that will require an Individual 404 Permit. For Nationwide Permits requiring a preconstruction notification, the preconstruction notification requirement is satisfied by submitting the Section 404 Permit application and completing the requirements of NWP General Condition 31.

1. NWP No. 3: Maintenance. This NWP authorizes the repair, rehabilitation or replacement of any previously authorized structure or fill. In addition, it can allow the removal of accumulated sediment and debris in the vicinity of existing structures or permit temporary structures, fill and work to conduct the maintenance activity. All permitted work is to restore the facility back to original conditions. A preconstruction notification is required for the sediment and debris removal activities.

2. NWP No. 7: Outfall Structures and Maintenance. This NWP is seldom used.

3. NWP No. 13: Bank Stabilization. This NWP is for the placement of streambank stabilization for erosion prevention. This permit is limited to 500 linear ft and with material below ordinary high water mark being an average of less than one cubic yard per running foot. A preconstruction notification for fills is required in special aquatic sites (wetlands) or the project is in excess of 500 linear ft in length or involving the discharge of fill material greater than one cubic yard per running foot along the bank below the plane of the ordinary high water mark.

4. NWP No. 14: Linear Transportation Crossings. This NWP is limited to the loss of one half acre. The permittee must submit a preconstruction notification to the District Engineer prior to commencing the activity if (1) the loss of waters of the United States exceeds $^{1}/_{10}$ acre; or (2) there is a discharge in a special aquatic site, including wetlands (Sections 10 and 404).

5. NWP No. 23: Approved Categorical Exclusions. This NWP is applicable to highway projects with at least partial Federal funding that have FHWA-approved categorical exclusions. This is the primary Nationwide Permit used for ODOT projects that have been categorically approved by the FHWA. Note, use of the following requires PCN to the Corps: construction of bicycle and pedestrian lanes, paths and facilities; landscaping; emergency repairs under 23 U.S.C. 125; improvements to existing rest areas and truck weigh stations; or fill in waters of the U.S.

6. NWP No. 27: Stream and Wetland Restoration Activities. The permittee must submit a preconstruction notification to the District Engineer prior to commencing the activity.

7. NWP No. 33: Temporary Construction, Access, and Dewatering. Temporary structures, work and discharges (including cofferdams) necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the U.S. Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work and discharges (including cofferdams) necessary for construction activities not otherwise subject to the U.S. Corps of Engineers or the U.S. Coast Guard permit requirements. Take appropriate measures to maintain near normal downstream flows and to minimize flooding.

8. NWP No. 41: Reshaping Existing Drainage Ditches. A Preconstruction Notification is required for projects that affect greater than 500 linear ft.

9. NWP No. 43: Stormwater Management Facilities. The discharge must not cause the loss of greater than one-half acre of non-tidal waters of the United States, including the loss of no more than 300 lineal ft of stream bed unless, for intermittent and ephemeral stream beds, this 300 linear ft limit is waived in writing by the District Engineer. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. This NWP does not authorize discharges of dredged or fill material for the construction of new stormwater management facilities in perennial streams. A PCN is required prior to commencing the activity. (See General Condition 31)

15.4.2.7.3 Regional General Permits (RGP)

The U.S. Army Corps of Engineers is authorized to issue, after notice and opportunity for public hearing, general permits on a regional or statewide basis for any category of recurring activities that are similar in nature, similar in their impact on water quality and the aquatic environment and cause only minimal adverse impact both individually and cumulatively. The purpose of the general permit is to allow certain minimal impact activities to occur with little, if any, delay or paperwork. These permits may be issued to a specific group, entity or agency or to the public in general.

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:

- those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts; or

- the general permit would result in avoiding unnecessary duplication of regulatory control exercised by another Federal, state or local agency provided that it has been determined that the environmental consequences of the action are individually and cumulatively minimal.

A RGP is obtained through ODOT's EPD the same way as nationwide or individual permits.

15.4.2.8 Nationwide Permits Regional Conditions

Individual USACE regions may set its own Regional Conditions that apply within their jurisdiction for any of the Nationwide Permits. Regional Conditions are asserted by the District Engineer using discretionary authority to ensure that the NWP would not result in more than minimal adverse environmental effects either individually or cumulatively. The Regional Conditions may be for a specific geographic area, class of activity or class of waters within the state whenever there is sufficient concerns for the environment under the section 404(b)(1) Guidelines or any other factor of the public interest so requires.

The USACE Tulsa District has the following regional conditions that apply to ODOT. For all discharges and activities proposed for authorization under any NWP into the waters of the United States listed below (including adjacent wetlands); applicants shall notify the Tulsa District

Engineer (DE) in accordance with NWP General Condition (GC) 31 Pre-Construction Notification (PCN):

- Pitcher Plant Bogs. Wetlands typically characterized by an organic surface soil layer and include vegetation (e.g., pitcher plants (Sarracenia sp.), sundews (Drosera sp.), and sphagnum moss (Sphagnum sp.)).

- Cypress-Tupelo Swamps. Wetlands comprised predominantly of bald cypress trees (Taxodium distichum), and water tupelo trees (Nyssa aquatica), that are occasionally or regularly flooded by fresh water. Common associates include red maple (Acer rubrum), swamp privet (Forestiera acuminata), green ash (Fraxinus pennsylvanica) and water elm (Planera aquatica). Associated herbaceous species include lizard's tail (Saururus cernuus), water mermaid weed (Proserpinaca spp.), buttonbush (Cephalanthus occidentalis) and smartweed (Polygonum spp.). (Eyre, F. H. Forest Cover Types of the United States and Canada. 1980. Society of American Foresters, 5400 Grosvenor Lane, Bethesda, Maryland 20814-2198. Library of Congress Catalog Card No. 80-54185).

In addition, the following regional condition applies in the State of Oklahoma:

- Designated Critical Resource Waters (CRWs). CRWs are Outstanding Resource Waters (ORWs) and their watersheds, and High Quality Waters (HQWs) designated by the State of Oklahoma in Appendix A of the Water Quality Standards (OAC 785, Chapter 45). The ORWs include those waters in the supporting watersheds, HQWs do not. Both ORWs and HQWs include adjacent wetlands. The current list of CRWs is available on the Corps website.

15.4.2.9 Nationwide Permits Mitigation Information

Mitigation includes measures that avoid, minimize or compensate for impacts to the aquatic ecosystem (streams and wetlands). Avoidance and minimization associated with NWP authorizations are limited to on-site measures. The following descriptions apply:

1. Avoid. Take all appropriate and practical measures to avoid adverse impacts to the aquatic ecosystem.

2. Minimize. Take all appropriate and practical measures to minimize adverse impacts to the aquatic ecosystem.

3. Compensate. The applicant may be required to implement appropriate and practical measures to compensate for adverse project impacts to the aquatic ecosystem that cannot reasonably be avoided or minimized. Compensatory mitigation can take many forms, some of which are the use of buffer zones adjacent to the stream corridors and wetland areas; stream restoration or “naturalization”; specific mitigation; mitigation banking; in-lieu fee-based mitigation; protection of areas by deed restrictions; or conservation easements. (See NWP General Condition 31.)

The Environmental Programs Division is responsible for developing and implementing mitigation plans for ODOT projects. The mitigation plan should include the following (see Section 15.1.2 and Volume One and Two, Chapter 8 "Wetlands").

- A complete description of efforts made to avoid and minimize adverse project impacts to the aquatic ecosystem and a thorough description of the proposed compensatory mitigation.
- Wetland delineation (if appropriate), conducted in accordance with the appropriate U.S. Corps of Engineers *Wetlands Delineation Manual*.
- A detailed description of the nature and location of all proposed ground-disturbing activities and structures associated with the compensatory mitigation project.
- For work that would create new aquatic resources or modify existing aquatic resources, provide a description of the proposed hydrology, a soil description and a planting plan.
- A proposal for monitoring the success of the proposed mitigation plan, including the name and telephone number of the responsible party, success criteria and a compliance reporting program. Continue monitoring for at least two years after all mitigation activities have been completed and planting survival requirements have been achieved. Include all appropriate contingency plans and address provisions for long-term operations and maintenance.

15.4.2.10 Application Procedure

See Appendix 15.A.

15.4.2.11 Distribution of Permits

Upon receipt of the Corps Section 404 Permit, the Roadway Engineering Manager in charge of the project will include the approved 404 permit, which contains the expiration date of the permit, the type of permit received and the locations covered by the permit in the project submittal. Depending upon the project activities, other state offices may need to be notified of the permit conditions. The Environmental Programs Division distributes the permit.

15.4.2.12 Legal References

The following lists the legal references for Section 404 Permits:

- Section 404 of the Federal *Water Pollution Control Act* (1972), as amended by the *Clean Water Act* (1977 and 1987), 33 USC 1344; and
- 33 CFR 320-332.

15.4.3 Section 402 of the *Clean Water Act*

15.4.3.1 Purpose

The purpose of Section 402 of the *Clean Water Act*, which is also known as Section 402 National Pollutant Discharge Elimination System (NPDES) Construction Permit program, is to restore or maintain, or both, the chemical, physical and biological integrity of the Nation's waters through the prevention, reduction and elimination of pollution. Authority for this program is delegated from EPA to the Oklahoma Department of Environmental Quality, which administers the program as the Oklahoma Pollutant Discharge Elimination System (OPDES).

15.4.3.2 Applicability

OPDES Construction Permit(s) are required for all construction activities involving clearing, grading and excavation that disturb one acre or more of land area. In addition, all construction activities that are on or adjacent to waters of the state require a construction permit regardless of land area disturbed. The OPDES Program consists of a Surface Water Discharge (SWD) permit and storm water permits. The SWD permit controls discharges from point sources of pollution such as construction dewatering activities. The storm water program regulates stormwater discharges from three potential sources—municipal separate storm sewer systems (MS4s), construction activities and industrial activities. Most stormwater discharges are considered point sources and operators of these sources may be required to receive an OPDES permit before they can discharge. This permitting mechanism is designed to prevent stormwater runoff from washing harmful pollutants into local surface waters (e.g., streams, rivers, lakes).

15.4.3.3 Responsible State Agency

In Oklahoma, the Department of Environmental Quality (DEQ) administers the NPDES program, which includes enforcement, management and implementation of the permit program.

15.4.3.4 Responsible ODOT Unit

The ODOT Environmental Programs Division is responsible for the OPDES Program. They coordinate with the designer and field personnel for the implementation of the Storm Water Pollution Prevention Plan (SWP3) and other terms of the permit, as well as additional requirements that may be required by MS4 programs or approved Total Maximum Daily Load (TMDL) requirements for a particular watershed's water quality impairment.

15.4.3.5 Legal References

The following lists the legal references for the NPDES Construction Permit:

- Section 402 of the Federal *Water Pollution Control Act* (1972), as amended by the *Clean Water Act* (1977 and 1987), 33 USC 1342;

- 40 CFR 122-136; and
- Title 252 Department of Environmental Quality, Chapter 606. Oklahoma Pollutant Discharge Elimination System (OPDES) Standards.

15.4.4 Section 10 of the *Rivers and Harbors Appropriation Act* of 1899

Section 10(b) of the *Rivers and Harbors Appropriation Act* approved March 3, 1899 (33 USC 403) (hereinafter referred to as Section 10), prohibits the unauthorized obstruction or alteration of any navigable water of the United States. The construction of any structure in or over any navigable water of the United States, the excavating from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition or capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The instrument of authorization is designated a permit. The authority of the Secretary of the Army to prevent obstructions to navigation in navigable waters of the United States was extended to artificial islands, installations and other devices located on the seabed, to the seaward limit of the outer continental shelf, by Section 4(f) of the *Outer Continental Shelf Lands Act of 1953*, as amended (43 USC 1333(e)). See 33 CFR Part 322.

15.4.4.1 Purpose

The purpose of the Section 10 Navigable Waters Permit is to protect and preserve the navigable waterways of the United States.

15.4.4.2 Applicability

A Section 10 Navigable Waters Permit is required for structures or work affecting a navigable waterway. Examples of work include bridge rehabilitation, construction, dredging, channelization and filling.

15.4.4.3 Responsible Federal Agency

For Section 10 Navigable Waters Permits, the U.S. Army Corps of Engineers is the Federal agency with overall responsibility for reviewing permit applications and issuing permits. If a Section 9 permit is also required, the U.S. Coast Guard is the Federal agency with overall responsibility for reviewing permit applications and issuing permits.

15.4.4.4 Responsible ODOT Unit

The Roadway Drainage Engineer is responsible for the Section 10 Permit for roadway projects that are related to Section 15.4.4.2 including the submittal of all completed application forms, required sketches showing the project location, etc. The Bridge Division is responsible for coordination of bridge size structures.

15.4.4.5 Legal References

The following lists the legal references for Section 10 Permits:

- Section 10 of the *Rivers and Harbors Appropriation Act of 1899*, 33 USC 403;
- 23 CFR Part 650, Subpart H; and
- 33 CFR 320-332.

15.4.5 Section 9 of the *Rivers and Harbors Appropriation Act of 1899*

15.4.5.1 Purpose

The purpose of the Section 9 of the *Rivers and Harbors Appropriation Act of 1899* is to ensure that there will be no interference to navigation on the navigable waterways of the United States.

15.4.5.2 Applicability

A Section 9 Navigable Waters Permit is required for the construction, modification, replacement or removal of any bridge or causeway over a navigable waterway. Coast Guard permits are not required for the following projects:

- construction of Federal-aid bridges (23 CFR 650, Subpart H) crossing non-tidal waters not presently used as or susceptible to use as a means of transporting interstate or foreign commerce;

- removal of an existing bridge that will not be replaced by another bridge;

- if ODOT will retain the entire bridge or designated sections for purposes other than transporting people or physical matter across a navigable waterway (i.e., fishing pier), the state should notify the U.S. Army Corps of Engineers (USACE) District Office with jurisdiction over the bridge's geographic area. USACE will either approve or deny the request. If the state receives USACE approval, the state must adhere to the USACE permit requirements, because USCG no longer has jurisdiction over the bridge. If USACE denies the request, USCG retains jurisdiction to prescribe removal conditions to protect navigation; and

- repair or replacement of worn or obsolete parts on an existing bridge.

If there are any questions on bridge permit requirements, contact the Chief of the Coast Guard, Bridge Administration District with jurisdiction over the bridge's geographic area.

15.4.5.3 Responsible Federal Agency

For Section 9 Navigable Waters permits, the U.S. Coast Guard is the Federal agency with overall responsibility for administering the program, reviewing permit applications and issuing

permits. The USCG, Bridge Administration Division is responsible for issuing permits. Their procedures are provided in the *Bridge Permit Application Guide*.

15.4.5.4 Responsible ODOT Unit

Roadway culverts are rarely located in the navigable waterways of the United States. If a Section 9 permit is required, the Roadway Drainage Engineer is responsible for including the submittal of all completed application forms, required sketches showing the project location, etc., as described in the publication *Bridge Permit Application Guide*.

15.4.5.5 Legal References

The following lists the legal references for Section 9 Permits:

- Section 9 of the *Rivers and Harbors Appropriation Act of 1899*, 33 USC 401;
- 23 CFR part 650, Subpart H; and
- 33 CFR 114-118.

15.5 STATE/COUNTY/CITY PERMITS/CERTIFICATIONS

In addition to the various national permits that may be required for a construction project, projects may be subject to state, county and city permitting requirements.

15.5.1 Oklahoma

The OWRB has the responsibility for water rights, dam safety and other water related activities, including permitting for highway construction in FEMA regulated floodplain.

15.5.1.1 Water Rights

Typically, all surface water and ground water is the property of the people of the state. Whether a water rights permit is needed depends on the type of proposed water use. These permits may be required:

- for domestic water use,
- for water distribution systems, and
- for commercial use.

15.5.1.2 Dam Safety

The National Dam Safety Program (NDSP), which was formally established by the *Water Resources and Development Act of 1996*, includes: grant assistance to the states, dam safety research and dam safety training. National responsibility for the promotion and coordination of dam safety lies with FEMA. Responsibility for administration of the provisions of the NDSP is given to the states. Rules and regulations relating to applicable dams are promulgated by the responsible state agency.

Under the Federal regulations, a dam is an artificial barrier that does or may impound water that is 25 ft or greater in height or has a maximum storage volume of 50 acre-ft or more (3). The Oklahoma Dam Safety Program is administered by the OWRB. Information is available at their website: http://www.owrb.ok.gov/hazard/dam/dams.php. Their fact sheet indicates that they use the Federal definition for a small dam: “Construction application may not be necessary if the dam will be less than 25 ft in height above the stream bed or if the lake impounded by the dam will less than 50 acre-ft of water; however, approval is required regardless of size if there are houses or habitable structures located below the dam.”

15.5.1.3 Permitting Highway Construction in FEMA Regulated Floodplain

FEMA has delegated its authority to OWRB as a regulatory agency for FEMA regulated floodplain. Referring to Oklahoma laws, any ODOT highway project located in FEMA regulated floodplain will need a permit from OWRB.

Based on an agreement between ODOT and OWRB, the Roadway Drainage Engineer should send the signed/sealed MOA to OWRB to apply for a permit for any in-house ODOT Roadway Design Division highway project that is located in FEMA regulated floodplain.

If this ODOT Roadway Design Division highway project is performed by a private consulting engineer firm, the MOA will be signed/sealed by an Oklahoma registered professional engineer who is working for that firm. The first part of this MOA should list the ODOT Roadway Drainage Engineer, Roadway Design Division with all the necessary information, as the contact person as required by OWRB. This MOA will be sent to OWRB through the Roadway Design Engineer's office.

15.5.2 County/City

Hydraulics designers should be aware that many county and city government entities may have drainage ordinances or other permitting requirements. Contact the local NFIP coordinator/Floodplain administrator for details.

15.6 REFERENCES

1. **AASHTO.** *Drainage Manual, Chapter 2 Permits and Certifications.* Washington, DC : Technical Committee on Hydrology and Hydraulics, American Association of State Highway and Transportation Officials, 2012.

2. **FHWA.** *Guidance for Preparing and Processing Environmental and Section 4(f) Documents.* Washington, DC : Technical Advisory, October 30, 1987. T 6640.8A. Available online at FHWA's website.

3. **FEMA.** *Federal Guidelines for Dam Safety.* Washington, DC : Federal Emergency Management Agency, 2004. FEMA-93.

APPENDIX 15.A
SECTION 404 APPLICATION PROCEDURE

The Section 404 application should be prepared and submitted to the U.S. Corps of Engineers at least 90 days prior to the letting date to allow the U.S. Corps of Engineers sufficient time to process the application and issue a permit prior to preparation of the bid documents and FHWA review. For individual permits (over 1/2 acres of impact), the lead time should be increased to six months prior to letting as the individual permit requires the U.S. Corps of Engineers to advertise with a public notice for up to 30 days and sufficient time is needed to address any public comments.

The typical application package includes the Section 404 application form, optional fill quantity sheet, an environmental document Categorical Exclusion (CE) or an Environmental Assessment (EA), a location map (the project plans title sheet and a copy of the USGS quadrangle map for the project area) and appropriate project plan sheets to define the proposed work activity.

In addition to the permanent construction activity, the application package should address anticipated temporary fill activities associated with the project construction (e.g., traffic diversions, stream diversions, cofferdams, contractor work platforms, falsework piling, haul road crossings).

The permit application packet shall be on 8½″ × 11″ sheets or 11″ × 17″ plan sheets, defining all impacts to "Waters of the United States," such as bridge and culvert crossing locations or fill placement into jurisdictional wetlands locations. Bridge location drawings require a plan and elevation view and wetlands impact details should be shown on a plan view with a cross section through the fill area. Indicate the acres of the wetlands filled on the drawing.

The level of detail required in the permit application packet is as follows:

1. Vicinity Map (taken from USGS quad map):

    - location of activity or wetland mitigation site (if applicable),
    - name of waterbody,
    - names or numbers of highways/roads,
    - north arrow, and
    - scale.

2. Plan View Sketch:

    - name of waterbody and all highways/roads,
    - area showing the limits of the fill placement,
    - location of all wetlands,
    - north arrow, and
    - scale.

3. Elevation View (or typical cross section):

- OHW elevation,
- other water elevations,
- riprap, and
- other fill material.

4. Other Documentation:

- hydrogeomorphic classification (HGM document),
- wetlands delineation/documentation, and
- wetland mitigation plan.

On major road projects that are expected to require individual Section 404 Permits, the U.S. Army Corps of Engineers has deemed it necessary to include a detail showing the plan view and a longitudinal cross section of each 36-in. diameter or greater culvert falling in naturally occurring waterways. An overall project map should be included with the permit application to show the location of each such culvert and the locations of the wetlands impacts throughout the project. In this case, the U.S. Corps of Engineers interprets the definition of "Waters of the United States" to include all naturally occurring draws.

Include the quantities of the various fill materials and show both the total cubic yards and the cubic yards placed below the Ordinary High Water (OHW) elevation in the permit application. In addition, provide the total area in square feet or acres of the fill material placed below OHW. Any wetland mitigation plans required should also be submitted with the permit application.

The hydraulics designer should review constructability issues at project sites where temporary work causeways and cofferdams will be required. Construction activities such as bridge pier construction, storm drain outfalls in rivers and earth haul roads across streams may all require temporary filling of the "Waters of the United States." Engineers should submit detailed sketches of temporary causeways, etc., with the applications. All construction activities that impact the "Waters of the United States" (either permanent or temporary) should be included in the permit application.

Projects that have both road construction and bridge construction should have one combined Section 404 Permit application. Multiple projects in the same contiguous section of roadway will also usually be submitted in one combined application.

Projects that consist of several individual sites in one project but on several waterways, highway routes or counties may require separate applications by waterway, highway or county to aid the U.S. Army Corps of Engineers in processing the application.

Include the estimated cost of construction with the application.

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SECTION 404 PRE-CONSTRUCTION NOTIFICATION FORM FOR STATE PROJECTS

DATE: _____

Project No.:		J/P:		Facility:		County:	
Description:							
Let Date:				Division:		Programmed Construction Project	

Sta or Str. No.	Location			Waterbody		Description		Calculations			
	Latitude	Longitude	Legal	Critical Resource Water?	Type	Existing Structure/Condition	New Structure	Area acre	Cubic Yards of Fill*	Linear Feet of Impacts	Notes
Structure name and Station from plans	Decimal Degrees	Decimal Degrees	Township, Range, Section	Name of Waterbody and if it is a Critical Resource Water	See below	Size, Type, and Condition of Structure	Size and Type of Structure	Area of Fill below OHWM	Cubic Yards of fill	Length of Impacts to Blue Line Stream	Number 1, 2, etc. List note description below

AVOIDANCE AND MINIMIZATION:
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.

Types: BP--Bank Protection, CC—Channel Change, Chan--Channel Work, RCB--Reinforced Concrete Box, SB--Span Bridge,** Wet--Wetlands, Misc—Miscellaneous

*Only necessary if impacts are over 0.1 acres

**Wetland Information will be added from the delineation report by ODOT

Notes:

Number 1, 2, etc. Describe note here

- Note whether the impact is fill or excavation in existing channel
- Note type of fill (rip rap, drilled shafts, dirt, etc.)
- Note Ordinary High Water Mark (OHWM) elevation
- Note any other important information pertaining to the calculations and impacts

FHWA Approved Clearance type: CE: ____ FONSI/EA: ____ EIS: ____ Date: ____ Pending: ____ None: ____

Applicant: Name: Oklahoma Department of Transportation Phone No: (405) 522-0734

Address: 200 Northeast 21st Street, Oklahoma City, OK 73105-3204

Application Prepared By: Name: ODOT Designer or Consultant Name Phone No:

Processing Agent: Oklahoma Department of Transportation

This is not an official United States Army Corps of Engineers form. It is for use by the Oklahoma Department of Transportation only.

Revised October 23, 2013

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SECTION 404 PRE-CONSTRUCTION NOTIFICATION FORM FOR COUNTY PROJECTS

DATE: _____

Project No.:		J/P:		Facility:		County:	
Description:							
Let Date:				Division:		Programmed Construction Project	

Sta or Str. No.	Location			Waterbody		Description		Calculations			
	Latitude	Longitude	Legal	Critical Resource Water?	Type	Existing Structure/Condition	New Structure	Area acre	Cubic Yards of Fill*	Linear Feet of Impacts	Notes
Structure name and Station from plans	Decimal Degrees	Decimal Degrees	Township, Range, Section	Name of Waterbody and if it is a Critical Resource Water	See below	Size, Type, and Condition of Structure	Size and Type of Structure	Area of Fill below OHWM	Cubic Yards of fill	Length of Impacts to Blue Line Stream	Number 1, 2, etc. List note description below

AVOIDANCE AND MINIMIZATION:
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.

Types: BP--Bank Protection, CC—Channel Change, Chan--Channel Work, RCB--Reinforced Concrete Box, SB--Span Bridge,** Wet--Wetlands, Misc—Miscellaneous

*Only necessary if impacts are over 0.1 acres

**Wetland Information will need to be added from the delineation report by the Consultant

Notes:

Number 1, 2, etc. Describe note here
- Note whether the impact is fill or excavation in existing channel
- Note type of fill (rip rap, drilled shafts, dirt, etc.)
- Note Ordinary High Water Mark (OHWM) elevation
- Note any other important information pertaining to the calculations and impacts

FHWA Approved Clearance type: CE: ____ FONSI/EA: ____ EIS: ____ Date: ____ Pending: ____ None: ____

Applicant: Name: County Commissioner Name Phone No: (405) 522-0734

Address: County Address

Application Prepared By: Name: Consultant Name or County Name Phone No:

Processing Agent: Consultant or County Address

This is not an official United States Army Corps of Engineers form. It is for use by the Oklahoma Department of Transportation only.

Revised October 23, 2013

INSTRUCTIONS FOR COMPLETING A SECTION 404 PERMIT APPLICATION

Date: Date Application submitted
Project No: Federal Aid Project or other number assigned
J/P: Job Piece No.
Facility: State Highway, County Road, County Bridge, Route No., etc.
County: County name
Description: Briefly describe type of work and extent
Let Date: Construction let date
Division: ODOT Division
Programmed Construction Project Cost: The listed cost for the construction project

Sta or Str No.:

Structure name and station from plans.

Location:

Latitude and longitude in decimal degrees. Under Legal, list the Township, Range, and Section.

Waterbody:

Name of river, creek, channel, etc. If the creek is unnamed, give the name of the downstream receiving water in the notes. Also state whether the waterbody is a Designated **Critical Resource Water (CRW).** The CRW list can be found at:
http://www.swt.usace.army.mil/portals/41/docs/missions/regulatory/wqc/crw.pdf

Type:

BP Bank Protection. List the total length of the project in the notes.

CC Channel Change. Any altering, moving, or changing the physical location of the stream or channel which will require fill or excavation within the existing channel.

Chan Channel Work. Any work in an existing channel which does not alter its physical location and is not associated with construction of a facility or structure.

RCB Reinforced Concrete Box. Any fill and/or excavation in the existing channel due to replacing, lengthening, etc., of the box structure. The lengthened portion of the box and apron is considered fill.

SB Span Bridge. Includes abutments, piers, and work done in the channel while construction the bridge.

Wet Wetlands. Any permanent fill in jurisdictional wetlands. Wetland information is only to be added by either ODOT (State Projects) or the Consultant (County Projects Only)

Revised October 23, 2013

Misc Miscellaneous. Anything not covered by another type. Include description in the notes.

Description of Structure:

Existing Describe existing structure, size, and condition (such as degradation of the structure, missing apron, scour, etc.).

New Describe proposed structure. If type is bank protection, give length in notes.

Calculations:

Area in acres.

- Provide quantities for area of fill.
- Designate whether area of fill is within the existing channel or in a completely new channel.
- Only provide excavation acreage if construction will widen the existing channel and provide this as a separate quantity in the notes section below.
- Do not cancel out area of fill with area of excavation. Excavation must be treated as a separate quantity from fill.
- Fill and excavation areas should be calculated below the ordinary high water mark (OHWM) for channels.
- Include in the notes the OHWM elevation used.
- OHWM elevation can be obtained from the General Plan and Elevation plan sheets as the lowest bank or OHWM can be obtained from the ODOT biologist. The Q2 elevation may give a more conservative OHWM elevation when a biologist elevation or profile elevation is not available.
- Temporary fills do not need to be included in the quantities if the area will be returning to its original state after project completion.
- If wetlands are identified in the NEPA document/delineation report, ODOT (State Projects) or Consultant (County Projects Only) will add this information or may give you these acreages to add to the form.

Cubic Yards of Fill

- This calculation is only required if fill is over 0.1 acres per structure/crossing
- Provide cubic yards of fill in this space

Linear Feet of Impacts

- Provide the linear feet of the impact along the stream from the start of the impact to the end of the impact.
- This number should be calculated along the flowline of the stream/drainage.

Notes.

Revised October 23, 2013

- State whether impact is fill or excavation
- State type of fill (rip rap, drilled shafts, dirt, etc.)
- State Ordinary High Water Mark (OHWM) elevation.
- Note any other important information pertaining to the calculations and impacts.

Avoidance and Minimization Statement:

Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. This statement is necessary to obtain the 404 permit. 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.

HELPFUL INFORMATION

- If the loss of waters is within a Critical Resource Water, a Pre-construction Notification (PCN) **IS** required.
- If the loss of waters is less than 0.1 acres, a PCN is not required.
- If the loss of wetlands is less than 0.1 acres, a PCN **IS** required.
- If the loss of waters and wetlands is between 0.1 acres and 0.5 acres a PCN is required and mitigation may be required.
- If the loss of waters and wetlands is greater than 0.5 acres, an Individual Permit is required and mitigation is required.
- Loss of waters of the United States are Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of a regulated activity…it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services…Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States.

For questions or more information please contact:

Jared Bechtol
Environmental Programs Division
405-522-0734
jbechtol@odot.org

Revised October 23, 2013

APPENDIX 15.B
MOA REGULATORY FLOODPLAIN PERMIT FORM

"Attachment A"
Application No. _____
(For OWRB Use Only)

ODOT
APPLICATION FOR PERMIT
For Proposed Development on State Owned
Property Within Regulatory Floodplain

Submit application to: Planning and Management Division
Oklahoma Water Resources Board
3800 N. Classen Blvd.
Oklahoma City, OK 73118
(405)530-8800; FAX (405) 530-8900

Application may be sent by facsimile transmission, but must be followed by U.S. Postal Service mail or interagency mail submission of hardcopy.

1. Applicant: Oklahoma Department of Transportation, 200 N.E. 21st Street, Oklahoma City, OK 73105

   Contact Person: _____

   Telephone Number: _____

2. ODOT Project No.: _____ J/P No. _____

   Proposed Let Date: _____

3. Location of Proposed Development

   County: _____ Community Name: _____

   Map Panel: _____ Zone: _____

   Highway: _____

   Creek/ River Name: _____

   Legal Description: _____

   Physical Location: _____

4. Category of Proposed Construction or Development:

   _____ construction of roadway and bridges

   _____ placement of structures

   _____ filling, grading, channelizing, drilling, mining and excavating

   _____ other development or substantial improvement

   _____ all of the above

5. Description of Proposed Construction or Development:

_____

_____

_____

_____

_____

Computed BFE elev. (Upstream of Structure) _____

6. PROFESSIONAL ENGINEER CERTIFICATION: I hereby verify that the above stated information is true and correct to the best of my knowledge. I further verify that the proposed construction or development subject of this application will meet the applicable requirements of the Rules of the Oklahoma Water Resources Board and regulations of the Federal Emergency Management Agency concerning floodplain management. Copies of the hydrologic and hydraulic studies that address potential impacts to the regulatory floodplain from the proposed construction or development are available at the Oklahoma Department of Transportation.

(P.E. Seal) _____

Signature of Professional Engineer

_____

Name of Professional Engineer (Print of Type)

_____

Title of Professional Engineer

_____

Oklahoma P.E. Certification No.

_____

Date

FOR OWRB USE

Date application received: _____

Application reviewed by: _____

Regulatory floodplain construction or development verified: _____ Yes _____ No

Individual permit _____

Recommendation for permit issuance: _____

Permit issuance approved: _____

Date: _____

Permit No. _____ OWRB FPM 02/17/2011

APPENDIX 15.C
EXAMPLE MOA REGULATORY FLOODPLAIN PERMIT FORM

"ATTACHMENT A"
Application No. _____
(For OWRB Use Only)

ODOT
APPLICATION FOR PERMIT
For Proposed Development on State Owned
Property Within Regulatory Floodplain

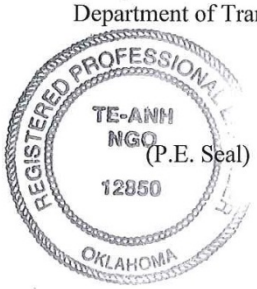
Submit application to: Planning and Management Division
Oklahoma Water Resources Board
3800 N. Classen Blvd.
Oklahoma City, OK 73118
(405)530-8800; FAX (405) 530-8900
Application may be sent by facsimile transmission, but must be followed by U.S. Postal Service mail or interagency mail submission of hardcopy.

1. **Applicant**: Oklahoma Department of Transportation, 200 N.E. 21st Street, Oklahoma City, OK 73105
   Contact Person: Te Anh Ngo, P.E. , CFM
   Telephone Number: (405) 521-6772
2. **ODOT Project No.**: FAP-BRFY-17C(112) **J/P No.**: 26487(04)
   Proposed Let Date: 2015
3. **Location of Proposed Development**
   County : Washita County **Community Name:** Washita county
   Map Panel: 40149C0050E **Zone:** A
   Highway: SH-199
   Creek/ River Name: Sand Creek
   Legal Description: between section s 13&14,T-11-N-R-19-W,about 2.00 miles north of the City of Burns Flat, Washita County.
   Physical Location: Station 1473+44.70 , ODOT survey SWO 4764(01)
4. **Category of Proposed Construction or Development**:
   ___ construction of roadway and bridges
   ___ placement of structures
   ___ filling, grading, channelizing, drilling, mining and excavating
   ___ other development or substantial improvement
   _X_ all of the above
5. **Description of Proposed Construction or Development:**

There will be no need for a bridge structure because the watershed is 99% controlled by SCS/NRCS structure No. 9 . The existing base flood elevation is estimated as at elevation 1671.00 ft. The new base flood elevation is only 1655.40 ft and totally being contained within Sand Creek banks. Hydraulics analysis is available upon request.

Computed BFE elev. (Upstream of Structure) 1655.40

6. **PROFESSIONAL ENGINEER CERTIFICATION:** I hereby verify that the above stated information is true and correct to the best of my knowledge. I further verify that the proposed construction or development subject of this application will meet the applicable requirements of the Rules of the Oklahoma Water Resources Board and regulations of the Federal Emergency Management Agency concerning floodplain management. Copies of the hydrologic and hydraulic studies that address potential impacts to the regulatory floodplain from the proposed construction or development are available at the Oklahoma Department of Transportation.



(P.E. Seal)

_____
Signature of Professional Engineer

_Te Anh Ngo_____
Name of Professional Engineer (Print of Type)

Roadway Drainage Engineer
Title of Professional Engineer

_12850_____
Oklahoma P.E. Certification No.

__07/03/2012_
Date

FOR OWRB USE

Date application received:_____

Application reviewed by:_____

Regulatory floodplain construction or development verified: ___ Yes ___ No

Individual permit

Recommendation for permit issuance:_____

Permit issuance approved:_____
Date

Permit No. _____ **OWRB FPM 02/17/2011**

APPENDIX 15.D
POST CONSTRUCTION RUNOFF CONTROL REQUIREMENTS FROM THE DEQ PERMIT

The hydraulics designer should document their decision process for the development of a post-construction storm water management program. The rationale should address the overall post-construction storm water management program and the individual BMPs, measurable goals, and responsible persons for the program. The rationale must include the following information, at a minimum:

1. A description of your program to address storm water runoff from new development and redevelopment projects. Include in this description any specific priority areas for this program.

2. How your program will be specifically tailored for your local community, minimize water quality impacts, and attempt to maintain pre-development runoff conditions?

3. Any non-structural BMPs in your program, including, as appropriate:

    a. Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation;

    b. Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure;

    c. Education programs for developers and the public about project designs that minimize water quality impacts; and

    d. Other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive OPDES Permit OKR04 for Small MS4s, Feb 8, 2005 Part IV, Page 16 maintenance and spill prevention.

4. Any structural BMPs in your program, including, as appropriate:

    a. Storage practices such as wet ponds and extended-detention outlet structures;

    b. Filtration practices such as grassed swales, bioretention cells, sand filters and filter strips;

    c. Infiltration practices such as infiltration basins and infiltration trenches

5. Describe the mechanisms (ordinance or other regulatory mechanism) you will use to address post-construction runoff from new developments and redevelopments and why you chose that mechanism. If you need to develop a mechanism, describe your plan and

a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.

6. How you will ensure the long-term operation and maintenance (O&M) of your selected BMPs. Options to help ensure that future O&M responsibilities are clearly identified include any agreement between you and another party such as the post-development landowners or regional authorities.

7. Identify who is responsible for overall management and implementation of your post-construction storm water management program and, if different, who is responsible for each of the BMPs identified for this program.

8. How you will evaluate the success of this minimum measure, including how you selected the measurable goals and target dates for each of the BMPs