



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

GENERAL PERMIT NO. OK00G30015
FOR DEVELOPMENTS UTILIZING LOW IMPACT DEVELOPMENT (LID) STRATEGIES

In accordance with Title 33 CFR 325.5(c), as published November 13, 1986, in the Federal Register, the District Engineer (DE), U.S. Army Corps of Engineers (Corps), Tulsa District, authorizes a General Permit (GP) for Developments Utilizing LID Strategies. This GP is issued pursuant to Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403).

Stormwater management is an important component of any development, whether residential or commercial. Typically, conventional stormwater management systems are designed to collect, convey, and discharge runoff as quickly and efficiently as possible through pipes and hardened channels. The purpose of this GP is to encourage developers to consider an alternative to these conventional methods. The alternative approach is LID. The LID approach seeks to slow runoff, mimicking a site's pre-development hydrology, and focusing on retention, detention, and infiltration to maintain a natural hydrologic balance. This can be accomplished through site design and management strategies that will both achieve the developer's stormwater management goals and have a beneficial impact on the aquatic resources by improving water quality.

Scope of Work: Work authorized by this GP is limited to discharges of dredge or fill material into waters of the U.S. for the construction or expansion of residential, commercial, and institutional foundations and building pads and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development). Residential developments include multiple and single unit developments. Examples of commercial developments include retail stores, industrial facilities, restaurants, business parks, and shopping centers. Examples of institutional developments include schools, fire stations, Government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship. This work is authorized provided that:

- (1) The permit applicant notifies the Corps prior to the use of this GP in accordance with the notification procedures outlined below. No work shall be performed until the applicant submits satisfactory plans for the proposed activity and receives written authorization from the DE.
- (2) The development's aggregate total loss of waters shall not exceed 600 linear feet of ephemeral or intermittent stream bed. This includes any loss of waters associated with development of individual subdivision lots. No other permits will be authorized in conjunction with this permit.
- (3) The activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal adverse impacts to the aquatic environment.
- (4) The development cannot cause more than a 20 percent increase of runoff across all flow events when comparing pre- and post-development runoff. This will be considered the flow control objective and must be achieved through LID site design and management strategies.
- (5) The applicant must individually address the four basic elements (See Note 1): (a) conservation measures; (b) site planning and minimization techniques; (c) distributed and integrated management practices (See Note 2); and (d) maintenance and education. An explanation of how these LID strategies contributed to achieving the flow control objective is required by this GP. (See also Notification Procedures)

The following activities are not authorized by this GP.

- (1) Stream channelization that results in the armoring of any stream bed with an impermeable layer that restricts infiltration.
- (2) Permanent impacts to perennial streams
- (3) Discharges into special aquatic sites (wetlands, stream riffle and pool complexes, sanctuaries and refuges, and vegetated shallows)

Note 1: The four basic elements to site design and management strategies utilized to meet the flow control objectives are explained in more detail in Enclosure 3. Addressing all four elements will constitute a complete LID design.

Note 2: The distributed and integrated management practices shall be implemented as needed to achieve the flow control objective after conservation measures and site planning and minimization techniques have been utilized to the most extent practicable. A list of distributed and integrated management practices is located in Enclosure 4.

Location of Work: This GP is applicable to all waters in Oklahoma and Texas located within the Tulsa District boundaries (See Enclosure 5), except:

- (1) defined archeological and historical sites,
- (2) sites listed, or eligible, but not formally listed, in the National Register of Historic Places
- (3) State Historic sites, and
- (4) Critical Resource Waters (CRW), Outstanding Resource Waters (ORW), and High Quality Waters (HQW) within the Oklahoma portion of the Tulsa District civil works boundary. Maps outlining these waters can be found on the Tulsa District Regulatory webpage at Critical Resource Water Maps.

ORWs: Waters designated ORWs in Appendix A of the Oklahoma Water Quality Standard (July 10, 2009) include the following, and all waters located in watersheds of these waters:

- (1) Flint Creek (all) in Adair County and the following tributary: Sager Creek.
- (2) Illinois River - North from the confluence of the Barren Fork River in Cherokee, Adair, and Delaware Counties, east to the Arkansas State Line, and the following tributaries: Tahlequah Creek and Ballard Creek.
- (3) Barren (Baron) Fork River - In Cherokee and Adair Counties, from its confluence with the Illinois River, upstream to the Arkansas State Line, and including the following tributaries: Tyner Creek, Dennison Hollow, Peachater Creek, Scrapper Hollow, England Hollow, Green Creek, Shell Branch, and Evansville Creek.
- (4) Mountain Fork River - Upstream of the 600 feet above mean sea level (msl) elevation (upstream of Broken Bow Reservoir) in McCurtain and Le Flore Counties, and the following tributaries: Boktuklo Creek, Blue Creek, Big Eagle Creek, Little Eagle Creek, Cucumber Creek, Beech (Beach) Creek, Cow Creek, and Panther Creek.
- (5) Big Lee Creek - Above 420 feet msl elevation in Sequoyah County, and the following tributaries: Webbers Creek and Briar Creek (Bear Creek).
- (6) Little Lee Creek, in Adair and Sequoyah Counties, and the following tributary: Jenkins Creek.

HQWs: Waters designated HQW listed in Appendix A of the OWQS (July 10, 2009) include the following:

- (1) Water Quality Management Basin 1, Middle Arkansas River: Lower Illinois River from headwater of Robert S. Kerr Reservoir to Tenkiller Dam, Upper Illinois River from Tenkiller dam upstream, Fourteen Mile Creek, Spring Creek, Little Snake Creek, Spring Creek, Brush Creek, Beaty Creek, Honey Creek, Cave Springs Branch, Warren Branch.

- (2) Water Quality Management Basin 2, Lower Arkansas River: Lee Creek downstream from 420 feet msl, Black Fork upstream from Cedar Creek, Sallisaw Creek upstream from U.S. Route 64.
- (3) Water Quality Management Basin 3, Upper Red River: Pennington Creek, Guy Sandy Creek, Honey Creek, Crater Creek, Panther Creek, West Cache Creek upstream from Panther Creek.
- (4) Water Quality Management Basin 4, Lower Red River: Little River from the Arkansas State Line to Pine Creek Dam, Mountain Fork River downstream Broken Bow Dam, Mountain Fork River downstream from U.S. Highway 70 bridge, Lukfata Creek, Glover River, Cedar Creek above Glover River, Carter Creek, Pine Creek, West Fork of Glover River, Bluff Creek, East Fork of Glover River, Cypress Creek, Little River upstream from and including Pine Creek Reservoir, Pine Creek, Terrapin Creek, Houston Creek, Cloudy Creek, Jack Creek, Black Fork, Cedar Creek above Kiamichi River, Blue River upstream from State Route 48A Bridge.
- (5) Water Quality Management Basin 7, Panhandle Region: North Canadian (Beaver) River upstream from Texas State Line to New Mexico State Line, Cimarron River upstream from the Colorado State Line to the New Mexico State Line.

Duration: This GP is in effect for a period of 5 years from date of issuance, unless it is specifically modified, suspended, or revoked. Upon its expiration, the GP will be considered for renewal. The GP may be modified, suspended, or revoked, in whole or in part, at anytime, if the DE determines that the proposed project or cumulative effects of its activities would have more than minimal adverse environmental impacts or may be contrary to public interest. Work previously authorized by this GP will not be affected by subsequent modification, suspension, or revocation of the GP.

If the DE determines that the adverse effects of the proposed work are more than minimal, then he/she will notify the applicant either (1) that the project does not qualify for authorization under the GP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the GP subject to the applicant's submitting a mitigation proposal that would reduce the adverse effects to the minimal level; or (3) that the project is authorized under the GP with specific modifications or conditions.

Water Quality Certification: Section 401 Water Quality Certifications have been issued without special conditions from the Oklahoma Department of Environmental Quality (ODEQ) and the Texas Commission on Environmental Quality (TCEQ).

Other Authorizations: Individuals considering work on lands or waters under the jurisdiction of other Federal, State, or local agencies are responsible for obtaining any permits required by such agencies.

Notification Procedure: Persons desiring to perform work under this GP should furnish their application to the Corps, Tulsa District as early as possible prior to the anticipated construction date. The prospective permittee shall not begin the activity:

(1) Until notified by the DE that the activity may proceed under the GP with any special conditions imposed by the District or Division Engineer; or

(2) If notified by the District or Division Engineer that an individual permit is required, until after the individual permit has been evaluated and issued.

The notification must be in writing, signed by the applicant and should be submitted on a Department of the Army Permit Application (Eng Form 4345). If construction and material placement is to be in a Corps lake, the information must be sent through the appropriate Lake Manager. Information for work in all other locations should be sent directly to the District Engineer, U.S. Army Corps of Engineers, Tulsa District, ATTN: Regulatory Office, 1645 South 101st East Avenue, Tulsa, OK 74128-4609. The content of the application must include the following information:

- (1) Name, address, and telephone number(s) of the prospective permittee.
- (2) Location of the proposed project and a vicinity map. The location of the proposed work may be shown on a 7.5 minute USGS quadrangle map.
- (3) Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause. All impacts associated with the development, whether immediate or designed/planned for the future, must be submitted in detail (for example if this is phase one of a planned three phase development).
- (4) A pre-development and planned post-development hydrologic analysis (with incorporated LID strategies utilized) must be submitted. As mentioned in the Scope of Work (4) the post-development runoff cannot increase by more than 20 percent.
- (5) Delineation of any special aquatic sites (wetlands, stream riffle and pool complexes, sanctuaries and refuges) to be avoided by the proposed construction and an explanation of how they contribute to the developments flow control objective.
- (6) To ensure long-term viability of the integrated management practices, a reliable and long-term maintenance plan, with clear and enforceable guidelines (e.g., through Homeowner Association).
- (7) A site plan view. This should be drawn to show any delineated special aquatic sites, flow direction, property boundaries, directional north, the proposed activity with distances and dimensions, excavation and fill areas, the quantity of excavation and fill.
- (8) A LID plan view. This should be drawn and labeled to show the LID strategies, to include all: conservation measures, site planning and minimization techniques, and distributed management practices.
- (9) A cross-section or profile view of the impact area. This should be drawn to indicate excavation and fill areas, fill types, existing and proposed contours of the stream and embankment, and the water depth.
- (10) Information on any temporary features to be constructed (such as a work road) including the location, dimensions, quantities, source of borrow materials, water management design, timing and duration, and removal and restoration parameters.
- (11) A description of alternative routes and designs considered for avoiding and minimizing impacts to the aquatic ecosystem. The submitted information should support that the proposed project is the least environmentally damaging practicable alternative.
- (12) Mitigation: Permit applicants are responsible for proposing an appropriate compensatory mitigation plan to offset unavoidable impacts. For activities involving any permanent loss of waters of the U.S., the application must include a statement describing how impacts to waters of the U.S. are to be avoided and minimized. The application must also include a statement describing how impacts to waters of the U.S. are to be compensated.
- (13) A title block should be included on each page of the drawings. The title block should include the proposed activity, applicant, waterbody, and County/State.
- (14) If the project is to be located in a lake not operated by the Corps, written approval from the owner/manager must be furnished.

Verification Procedure: Upon receipt of a notification by a prospective permittee, the Corps will expeditiously provide a copy of the applicant's request including project information to the following:

-Oklahoma Archeological Survey (if in Oklahoma)

-State Historic Preservation Office

-U.S. Fish and Wildlife Service (USFWS), if the Corps determines that the proposed project has the potential to affect Federally-listed threatened or endangered species.

These agencies will have 30 days to indicate they will be providing site-specific comments with regard to the proposed project. Their comments must relate to matters within their expertise (i.e., proximity to known archeological or cultural resources, special water quality considerations, and endangered species, respectively) and must be provided in writing. Once they notify the Corps they will be providing site-specific comments, the Corps will wait 5 additional days for these comments before proceeding with the GP decision. The Corps will fully consider comments provided by these agencies in the determination of whether the project should proceed under the GP.

If the DE determines that the proposed work meets the provisions of the GP, and no extraordinary conditions exist that would warrant filing a formal application, the Corps would notify the applicant by letter that the project falls under this GP.

If the DE determines that the proposed work does not meet the provisions of the GP, or that extraordinary conditions exist, the Corps will notify the applicant that filing a formal application will be necessary. The applicant should be aware that additional evaluation time will be required for a final decision on any individual permit application submitted subsequent to disqualification under the GP.

Wetland Delineation Manual Regional Supplements: The Corps Manual provides technical guidance and procedures, from a National perspective, for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act (33 USC 1344) or Section 10 of the Rivers and Harbors Act (33 USC 403). According to the Corps Manual, identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology.

Any wetland delineation performed by a consultant must be completed in accordance with the [1987 Corps of Engineers Wetland Delineation Manual](#) or applicable Regional Supplement. The submitted wetland delineation should be accompanied by appropriate documentation and will be subject to review and validation by this office.

The Tulsa District includes geography that will ultimately be served by four Regional Supplements. Specifically these are:

(1) Great Plains Region,

(2) Midwest Region,

(3) Eastern Mountains and Piedmont Region (formerly known as Mid-Atlantic and Southeast), and

(4) Atlantic and Gulf Coastal Plain Region.

Each of these Regional Supplements addresses regional wetland characteristics and improves the accuracy and efficiency of wetland-delineation procedures. Regional differences in climate, geology, soils, hydrology, plant and animal communities, and other factors are important to the identification and functioning of wetlands.

For a Map of the Regional Supplements Applicable within Tulsa District See Enclosure 6.

Mitigation: The regulations are located in Part 332, Compensatory Mitigation for Losses of Aquatic Resources, dated April 10, 2008. Discharges of dredged or fill material into waters of the U.S. must be avoided or minimized to the maximum extent practicable at the project site. Compensation for unavoidable discharge of fill materials may require appropriate mitigation measures. Factors that the DE will consider when determining the acceptability of appropriate and practicable mitigation will include, but are not limited to:

- a. The approximate functions and values of the aquatic resource being impacted, such as habitat value, aquifer recharge, sediment conveyance or retention, flood storage, effects special aquatic sites downstream of proposed project, etc.;
- b. The permanence of the project's impacts on the resource; and
- c. The potential long-term effects of the action on remaining functions and values of the impacted aquatic resource.

To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes. A watershed approach to compensatory mitigation must be used to consider how the types and locations of compensatory mitigation projects will provide the desired aquatic resource functions. In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services. Restoration is the preferred form of compensatory mitigation for loss of aquatic resource functions. If avoidance and minimization is not practicable then compensatory mitigation, through in-kind rehabilitation, enhancement, or preservation is required since there is a greater uncertainty that these methods of compensation will successfully offset permitted impacts. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing wetland or upland buffer zones to protect aquatic resource values; replacing the loss of aquatic resource values by creating, restoring, or enhancing similar functions and values; or using bioremediation techniques in conjunction with other methods to offset project impacts.

Conditions of GP: All work authorized under this GP is subject to General Permit-LID Specific Conditions (Enclosure 1) and General Conditions (Enclosure 2).

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April 28, 2011

David A. Manning
Chief, Regulatory Office

Date of Issuance

Enclosures

GENERAL PERMIT – LOW IMPACT DEVELOPMENT (LID)
SPECIFIC CONDITIONS

1. Permittee Construction Schedule: Permittee Construction Schedule: Prior to commencing construction, you shall complete and return the "Permittee Construction Schedule" form. Should construction be initiated prior to 30 days from validation of this permit, return the completed form as soon as possible. If you prefer, you may telephone 918-669-7400 to inform the U.S. Army Corps of Engineers regarding the construction start date. A copy of the "Permittee Construction Schedule" form will accompany the and final authorization letter.
2. Compliance Certification: Following completion of the authorized activity, the permittee shall submit a signed certification regarding the completed work and any required mitigation. A copy of the "Permittee Compliance Certification" form will accompany the final authorization letter.
3. Erosion Control Measures (ECM) (Sediment Control): The ECM such as staked hay bales or silt screen barriers shall be implemented and maintained to prevent unnecessary turbidity in receiving waters during construction. Barriers shall remain in place and effective until sufficient vegetation coverage on exposed areas is established. ECM shall be inspected by the permittee after every storm event and if there is any damage to the barrier, it shall be replaced or repaired within 24 hours of discovery.
4. Clearing Vegetation:
 - a. The permittee shall minimize to the maximum extent practicable the removal of stream-shading trees when preparing the project site, individual lots and any associated crossings.
 - b. The clearing of vegetation for stream crossings should be kept to the minimum necessary in the right-of-way (ROW). Blanket spraying of broadleaf herbicides in ROW should be avoided.
 - c. Disturbed areas shall be returned as closely as possible to the original topographic contours and reestablished with stabilizing vegetation promptly following completion of construction.
5. Stockpiling of Materials: Any stockpile area shall not be located in a wetland or stream. You shall incorporate ECMs along the entire length of the stockpile area to prevent excavated material from eroding in the upland location to any adjacent jurisdictional waters.
6. Riverine Deposited Woody Material: You shall minimize the removal of large woody material naturally deposited within the waterway channel and bed. This material provides habitat diversity of aquatic species and riparian dependent species and functions to maintain normal sediment transport processes. Such material should only be moved or removed if it contributes to the improper function of a structure or is responsible for localized erosion.

GENERAL PERMIT – LOW IMPACT DEVELOPMENT (LID)
GENERAL CONDITIONS

1. Navigation:

- a. The permittee understands and agrees that, if future operations by the U.S. require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his/her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the U.S. Army Corps of Engineers (Corps), to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration;
- b. No activity may cause more than a minimal adverse effect on navigation; and
- c. No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized by this permit.

2. Aquatic Life Movements: No activity may substantially disrupt the necessary lifecycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas: Activities, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavation, filling, or smothering downstream by substantial turbidity) of an important spawning area are not authorized.

4. Waterfowl Breeding Areas: Activities, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

5. Shellfish Beds: No activity, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations.

6. Suitable Material: No activity, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes: No activity, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, may occur in the proximity of a public water supply

8. Property Rights: This permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations, nor does it obviate the requirement to obtain other Federal, State, or local assent required by law for the activity authorized herein.

9. Management of Water Flows: To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream modification within the right-of-way will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. The development cannot cause more than a 20 percent increase of runoff across all flow events. It will be necessary to conduct hydrologic analyses to show the comparison between Pre-development versus Post-development runoff and that the flow control objective has been achieved.

10. Flood Plain Ordinances: Activities authorized by Department of the Army permits sometimes require flood plain development permits. Communities participating in the National Flood Insurance Program are required by that program to review all proposed development to determine if a flood plain permit is required. The permittee must comply with any applicable Federal Emergency Management Agency-approved State or local flood plain management requirements.

11. Equipment: Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls:

- a. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the OHWM or high tide line, must be permanently stabilized at the earliest practicable date.
- b. Permittees are encouraged to perform work within waters of the U.S. during periods of low or non-flowing conditions.
- c. The areas de-vegetated during construction shall be immediately stabilized after project completion to avoid erosion and the runoff of turbid waters.

13. Removal of Temporary Fills: Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

14. Proper Maintenance: Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers: No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a “study river” for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service (USFWS)).

16. Tribal Rights: No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species:

a. No activity is authorized under any General Permit (GP) which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, the permittee shall not begin work on the activity until notified by the DE that the requirements of the ESA have been satisfied and that the activity is authorized.

b. Authorization of an activity by a GP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the office of the USFWS or their World Wide Web pages at <http://www.fws.gov/southwest/es/EndangeredSpecies/>.

18. Historical Properties:

a. No activity which may affect historic properties listed, or that have been determined eligible for listing but are not formally listed, in the National Register of Historic Places is authorized, until the District Engineer (DE) has complied with the provisions of 33 CFR Part 325, Appendix C. The prospective permittee shall immediately notify the DE, if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the DE that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. The DE may stop work, if he/she determines that archeological investigations are warranted.

b. If you discover any previously unknown historical or archaeological material/human remains, you shall stop work and immediately contact the Corps, Regulatory Office at 918-669-7400. "The Corps will initiate the Federal, State and Tribal coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

19. Compliance: All activities identified and authorized herein shall be consistent with the terms and conditions of this permit; and that any activities not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit which may result in the modification, suspension, or revocation of this permit, in whole or in part, as set forth more specifically in General Conditions Number 24 hereto, and in the institution of such legal proceedings as the U.S. Government may consider appropriate, whether or not this permit has been previously modified, suspended, or revoked in whole or in part.

20. Mitigation: The DE will determine the appropriate and practicable mitigation necessary to offset adverse effects on the aquatic environment by considering the following:

- a. The project must be designed and constructed to avoid and minimize adverse effects to waters of the U.S. to the maximum extent practicable at the project site.
- b. To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes. Examples of mitigation that may be appropriate and practicable include, but are not limited to: (1) Reducing the size of the project; (2) establishing and maintaining wetland or upland vegetated and riparian buffers to protect open waters such as streams; (3) and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferably in the same watershed.
- c. The permittee will give preference to use of mitigation bank credits as the primary preference hierarchy for mitigation. Where potential impacts are not located in the service area of an approved mitigation bank, or the approved mitigation bank does not have the appropriate number and resource type of credits available to offset those impacts, in-lieu fee mitigation, if available, is generally preferable to permittee-responsible mitigation. Permittee-responsible mitigation, either on-site or off-site, shall be considered if a mitigation bank and/or in-lieu fee program is unavailable or the use of which would be impracticable.
- d. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

21. Minimization: The permittee agrees to make every reasonable effort to implement the work authorized herein in a manner so as to minimize any degrading of water quality, adverse impact of the work on fish and wildlife habitat, aquatic resources, and other natural environmental values.

22. Inspection: The permittee shall allow the DE or his/her authorized representative(s) or designee(s) to make periodic inspections at anytime deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

23. Proper Maintenance: The permittee shall maintain the structure or work authorized herein in good condition, including maintenance to include public safety. If and when the permittee desires to abandon the activity authorized herein, unless such abandonment is part of a transfer procedure by which the permittee is transferring his interests herein to a third party, he/she must restore the area to a condition satisfactory to the DE. Most LID integrated management practices need upkeep to remove sedimentation, check erosion, and ensure infiltration and overall function. To ensure long-term viability of the integrated management practices, a reliable and long-term maintenance plan, with clear and enforceable guidelines shall be submitted.

24. Modification, Suspension, and Revocation of GPs:

- a. This permit may be modified, suspended, or revoked by the DE in accordance with 33 CFR 1344, Part 325.7(a), (b), (c), (d), and (e).
- b. The DE will immediately suspend activities authorized herein, upon finding the immediate suspension would be in the general public interest.
- c. The DE upon suspension will provide the permittee of a written notice thereof which shall indicate (1) the extent of the suspension, (2) the reasons for this action, and (3) any corrective or preventative measures to be taken by the permittee which are deemed necessary by the DE to abate imminent hazards to the general public interest. The permittee shall take immediate action to comply with the provisions of this notice. Within 10 days following receipt of this notice of suspension, the permittee may request a

meeting with the DE or request a hearing in order to present information relevant to a decision as to whether his/her permit should be reinstated, modified, or revoked.

d. This permit may be either modified, suspended, or revoked, in whole or in part, if the Secretary of the Army or his/her authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest.

e. In issuing this permit, the Government has relied on the information and data, which the permittee has provided in connection with his/her permit application. If subsequent to the issuance of this permit, such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, Suspended, or revoked, in whole or in part, and/or the Government may, in addition, institute appropriate legal proceedings.

f. Any modification, suspension, or revocation of this permit shall not be the basis for any claim for damages against the U.S.

25. Real Estate:

a. Real Estate –Deed Restrictions (Mitigation Only): You shall record this permit under applicable State or local law, the permittee shall take such action as may be necessary to record this permit with the Register of Deeds or other appropriate official charged with the responsibility of maintaining records of title to and interests in real property.

b. Real Estate Easements-Government Property: A request for an easement on Government property will be sent to the appropriate Area/Lake Manager or the DE along with this GP.

26. Compliance Certification: Every permittee who has received GP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification form will be provided by the Corps with the authorization letter and will require:

- a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;
- b. A statement that any required mitigation was completed in accordance with the permit conditions; and
- c. The signature of the permittee certifying the completion of the work and mitigation.

27. Disturbed Areas:

- a. The clearing of vegetation shall be minimized and limited to the immediate area of impact.
- b. Disturbed areas shall be returned as closely as possible to the original topographic contours and reestablished with stabilizing vegetation promptly following completion of construction.

SITE DESIGN AND MANAGEMENT STRATEGIES TO MEET
FLOW CONTROL OBJECTIVES

The goal and flow control objective for Low Impact Development (LID) is achieved through the following site design objectives. The objectives are grouped into four basic elements that constitute a complete LID design. One through 4 must be addressed in the Preconstruction Notification.

1. Conservation Measures
 - 1.1. Maximize retention of native forest and riparian buffers and cover and restore disturbed vegetation to intercept, evaporate, and transpire precipitation.
 - 1.2. Preserve permeable, native soil and enhance disturbed soils to store and infiltrate storm flows.
 - 1.3. Retain and incorporate topographic site features that slow, store, and infiltrate stormwater.
 - 1.4. Retain and incorporate natural drainage features and patterns.
2. Site planning and minimization techniques
 - 2.1. Utilize a multidisciplinary approach that includes planners, engineers, landscape architects and architects at the initial phases of the project.
 - 2.2. Locate buildings and roads away from critical areas and soils that provide effective infiltration.
 - 2.3. Minimize total impervious surface area and eliminate effective impervious surfaces.
3. Distributed and integrated management practices
 - 3.1. Manage stormwater as close to its origin as possible by utilizing small scale, distributed hydrologic controls.
 - 3.2. Create a hydrologically rough landscape that slows storm flows and increases time of concentration.
 - 3.3. Increase reliability of the stormwater management system by providing multiple or redundant LID flow control practices.
 - 3.4. Integrate stormwater controls into the development design and utilize the controls as amenities, create a multifunctional landscape.
 - 3.5. Reduce the reliance on traditional conveyance and pond technologies.
4. Maintenance and Education
 - 4.1. Develop reliable and long-term maintenance programs with clear and enforceable guidelines, e.g., through Homeowner Association.
 - 4.2. Educate LID project homeowners and landscape management personnel on the operation and maintenance of LID systems and promote community participation in the protection of those systems and receiving waters.

DISTRIBUTED AND INTEGRATED MANAGEMENT PRACTICES

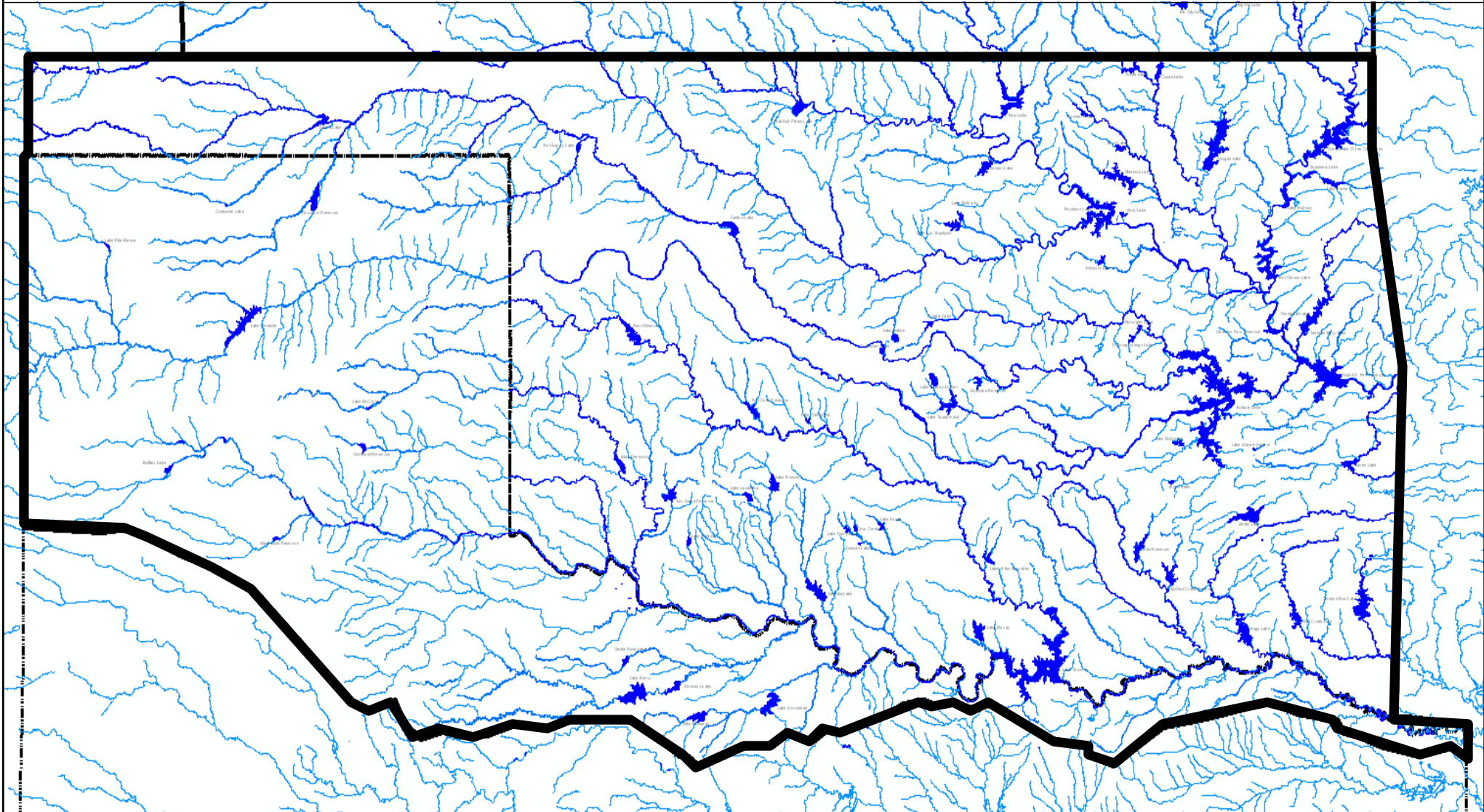
There are many management practices or techniques that qualify as Low Impact Development (LID) and are often referred to as "best management practices" (BMPs). Some of the most widely utilized techniques are listed below. Please note that this list is not an exhaustive list, and that new techniques or combinations of older techniques are continually being developed. Additional information about these techniques and others can be found by following the references listed at the bottom of the page.

- Bioretention /Rain Gardens
- Infiltration /Grassed Swales
- Increased Flow Paths
- Eliminating Curbs and Gutters
- Eliminate Culverts, Pipes, and Inlets
- Amended or Approved Soils
- Tree Box Filters
- Pervious or Porous Pavements and Pavers
- Reduce Impervious Surface (e.g., Narrower Streets, etc.)
- Rain Barrels /Cisterns /Water Use
- Infiltration Basins /Trenches or French Drains
- Parking Lot, Street and Sidewalk Storage
- Vegetative Swales, Buffers and Filter Strips
- Maintain Natural Drainage Flow Patterns
- Vegetated or Green Roofs
- Maintain Riparian / Forested Buffers
- Dry and Wet Ponds
- Stormwater or Constructed Wetlands
- Parking Groves

References:

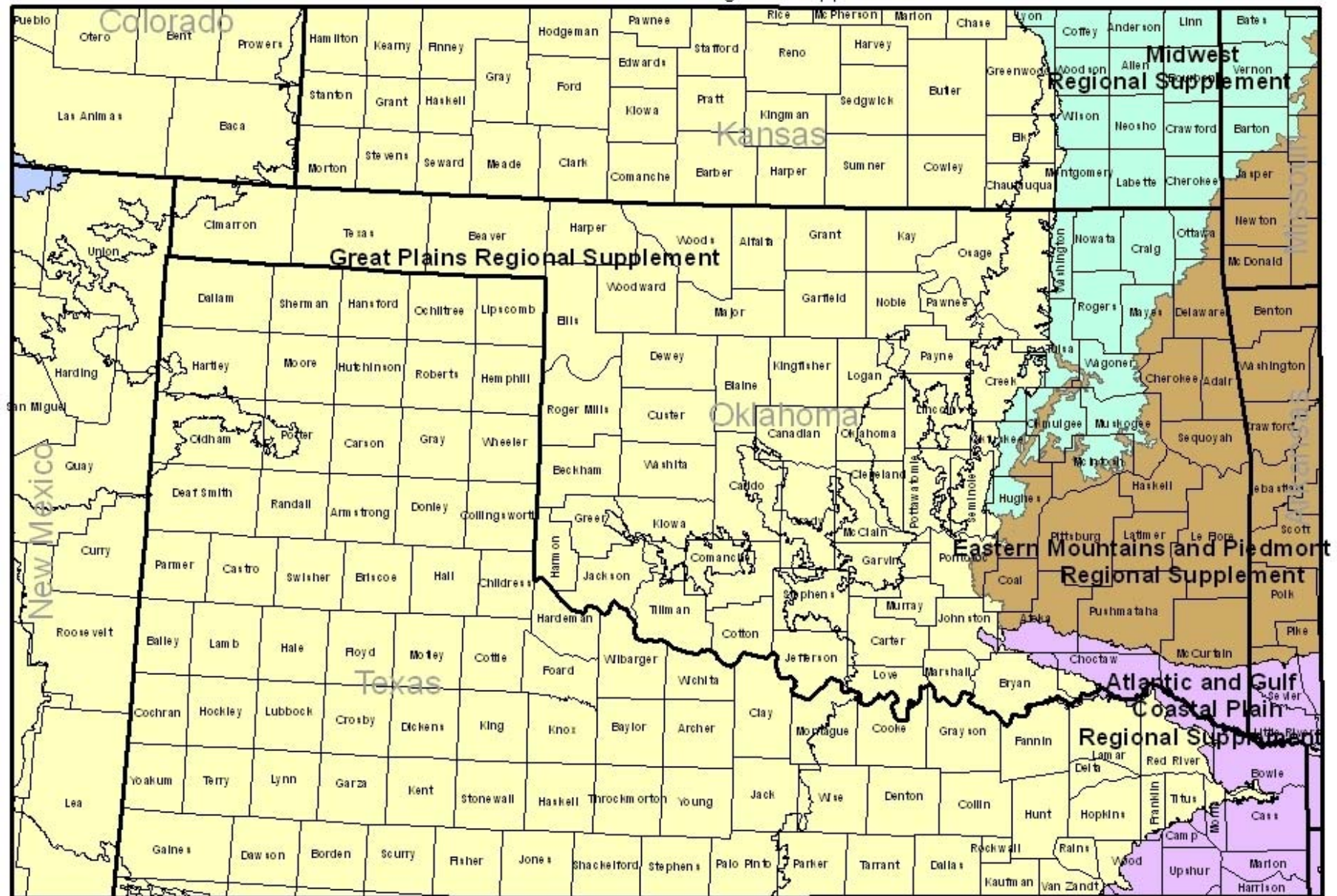
- <http://lid.okstate.edu/>
- <http://www.stormwaterok.net/>
- <http://www.lowimpactdevelopment.org/links.htm>
- http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=5
- <http://www.epa.gov/nps/lid/>
- <http://www.epa.gov/owow/nps/lid/lidnatl.pdf>
- <http://www.lid-stormwater.net/>
- <http://www.nrdc.org/water/pollution/storm/chap12.asp>
- <http://www.epa.gov/watertrain/smartgrowth/resources/index.htm>
- <http://lowimpactdevelopment.org/bigbox/>

U.S. Army Corps of Engineers, Tulsa District
Low Impact Development General Permit Boundary



NOTE: This permits boundary is outlined with the heavy black line (above). The permit encompasses all of Oklahoma and the portion of Texas located within the Tulsa Districts Regulatory Authority. This permit is not authorized within the Kansas portion Regulated by Tulsa District.

U.S. Army Corps of Engineers
Wetland Delineation Manual Regional Supplements



NOTE: Wetland delineation regional boundaries are depicted as sharp lines. However, climatic conditions and the physical and biological characteristics of landscapes do not change abruptly at the boundaries. In reality, regions often grade into one another in broad transition zones that may be tens or hundreds of miles wide. The lists of wetland indicators presented in these Regional Supplements may differ between adjoining regions. In transitional areas, investigators must use experience and good judgment to select the supplement and indicators that are appropriate to the site based on its physical and biological characteristics.

