

DEPARTMENT OF THE ARMY PERMIT

Permittee General Public

Permit No. NWKGP-34M, Sand and Gravel Excavation Activities

Issuing Office U.S. Army Engineer District, Kansas City

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below, and with the plans and drawings attached hereto which are incorporated in and made a part of this permit.

Project Description: Proposed and/or Completed Work: This permit authorizes the discharge of dredged and/or fill material related to mechanical sand and gravel excavation as described in Appendix I. Discharges authorized are limited to those which occur during the actual excavation process and those associated with preparation and restoration of the site (as outlined in Special Conditions i. and j.)

Project Location: Waters of the United States, including activities upstream of the defined headwater point, within the State of Missouri; excluding the Missouri and Mississippi Rivers, and waters designated by the State of Missouri as Outstanding National Resource Waters or Outstanding State Resource Waters (see attached list, State Regulation 10 CSR 20-7.031 Water Quality Standards, Tables D and E).

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2010. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state 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.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

See continuation sheets, pages 4, 5 and 6, of this document.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - (x) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (x) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorization required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.
 - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

GENERAL PUBLIC (SIGNATURE NOT REQUIRED) -----
 (PERMITTEE) (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



 (DISTRICT ENGINEER)

December 22, 2005

 (DATE)

MICHAEL A. ROSSI
Colonel, Corps of Engineers
District Engineer

BY: ^{FOR} Joseph S. Hughes
Chief, Regulatory Branch
Operations Division

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

(DATE)

Special Conditions:

- a. You must sign and return the attached "Compliance Certification" page after you complete the authorized work and any required mitigation. Your signature will certify that you completed the work in accordance with this permit, including general and specific conditions, and that any required mitigation was completed in accordance with the permit conditions.
- b. In addition to the general conditions of the permit, the following special condition applies to your project regarding Section 10 of the Rivers and Harbors Act. The permittee understands and agrees that, if future operations by the United States 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 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 Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- c. If any part of the authorized work is performed by a contractor or other party, before starting work you must discuss the terms and conditions of this permit with the contractor or party; and, you must give a copy of this entire permit to the contractor or other party involved in the excavation activities. The permittee remains responsible for ensuring compliance with all aspects of this permit.
- d. You must limit excavation of sand or gravel deposits to unconsolidated areas containing primarily smaller material (at least 85% of material is less than 3" in diameter) that is loosely packed and contains no woody perennial vegetation greater than 1-inch in diameter, measured at breast height (4.5 feet).
- e. You must maintain an undisturbed buffer of twenty (20) feet (or as specified on the attached project authorization page(s) of this permit) between the removal area and the water line at the time of excavation, and between the removal area and bank vegetation. Personal use activities involving excavation under 100 cubic yards of material, as specified in Appendix I, paragraph 3, must maintain an undisturbed buffer of ten (10) feet in the areas specified previously.
- f. You must maintain a twenty five (25) foot wide streamside (riparian) corridor in an undisturbed condition landward of the high bank for the length of the gravel removal site. Disturbed areas in this riparian zone shall be limited to maintained access road(s) for ingress and egress only. No clearing within this riparian area is authorized in association with work authorized by this permit.
- g. You must not excavate sand or gravel below the elevation of the water at the time of removal. If the stream is dry at that time, you must not excavate deeper than the lowest undisturbed elevation of the stream bottom adjacent to the site, unless specified otherwise on the attached project authorization page(s) of this permit.
- h. You must not relocate, straighten, or otherwise modify water conveyance areas within the channel. A "water conveyance area within the channel" is defined as that area between the high banks of the creek where water is flowing or, in the case of a dry stream, where water would flow after a rain event.
- i. Within 30 days of the removal of excavation equipment from the site, you must revegetate or otherwise protect from erosion, those streambank areas disturbed by the removal operation. For long-term operations (longer than 30 days) or for sites that will be periodically revisited as gravel is deposited, access points must be appropriately constructed and maintained such that streambanks and access roads are protected from erosion. The use of Reed Canary Grass is prohibited.

Special Conditions: (continued)

- j. Prior to the removal of excavation equipment from the site, oversized material or other disturbed bed material must be removed or replaced in the removal area and smoothed to approximately the original contours of the sand or gravel deposit, as much as possible. Oversized material retained on-site (not imported from off-site) is preferred when available as it better stabilizes the disturbed bar. All required buffer areas must remain intact and should not be smoothed as part of this condition. Any aggregate, fines, and/or oversized material removed from the site must be placed in an upland, nonwetland site that has been approved by the landowner. No material, including oversized, that results from the excavation activity may be stockpiled or otherwise placed into flowing water or placed against streambanks as bank stabilization, unless specifically authorized in writing by the Corps of Engineers.
- k. You must conduct all sand or gravel washing, gravel crushing, and gravel sorting above the high bank, in a nonwetland area away from areas that flood, such that gravel, silt, and wash water that is warm, stagnant, or contains silty material can not enter the stream or any wetland. A separate permit and/or settling basin for the discharge of return water may be required under Section 402 of the Clean Water Act from the Missouri Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section (573-751-6825). Gravel crushing and/or sorting activities which do not require wash water are allowed to occur on the gravel bar, provided all fines are immediately removed from the gravel bar and not stockpiled or otherwise disposed of on the gravel bar, into the stream or any other water of the U.S. (including wetlands). All fines resulting from the sorting operation must be captured in a transport truck or other suitable container and removed from the sorting location to an upland, non-wetland location the same day the sorting occurs. All sorted aggregate must be removed from the gravel bar at the end of each working day, with the exception of oversized material that will be spread out in the excavation area following project completion.
- l. You must not excavate in those areas authorized by this general permit during the dates specified on the attached project authorization page(s) in the block identified as "Seasonal Restrictions". This time period restriction is for the purpose of protecting spawning habitat and juvenile fish as well as other aquatic life indigenous to the cited stream.
- m. You must limit vehicles and other equipment to removal sites and existing crossings. Streams must be crossed perpendicular to the stream. You must obtain written approval from the Corps of Engineers, Regulatory Branch, before constructing any temporary or permanent stream crossing(s). Use of off road vehicles in streams is also regulated under Missouri State Law (RSMo 1991 Section 304.013).
- n. Fuel, oil, and other wastes and equipment containing such wastes shall not be stored nor released at any location between the high banks or in a manner such that they could enter the stream channel. You must dispose of such materials at authorized locations.
- o. No activity is authorized under this general permit 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, or which is likely to destroy or adversely modify the habitat of such species. See Appendix II, paragraph No. 1 for permitting requirements if these species are likely to be present or their habitat would be adversely modified.
- p. No activity which may affect Historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District Engineer has complied with the provisions of 33 CFR 325, Appendix C. All prospective permittees must notify the District Engineer if the excavation 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

Special Conditions: (continued)

District Engineer 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.

q. You must provide notification to the appropriate Corps of Engineers district, as specified in Appendix I, before you initiate any gravel removal activity and receive written confirmation of authorization under this general permit from the Corps of Engineers before you start any excavation or related operations.

APPENDIX I

CRITERIA FOR AUTHORIZATION BY GENERAL PERMIT NWKGP-34M

1. The appropriate District Engineer has the discretion to require an individual permit on a case-by-case basis for any activity authorized herein.
2. This general permit applies to the general public and governmental agencies when such activities are performed to provide immediate construction materials or materials stockpiled in an upland area for private use or commercial sale. Excavation and dredging activities occurring in flowing or open water, such as hydraulic dredging, are not included in this authorization.
3. Private property owners are authorized to remove up to a total of 100 cubic yards of gravel per year from any single gravel bar location on their property, for their personal use, without regard to special condition q. (notification requirements). Excavation activities for personal use must comply with all conditions of this permit. This does not relieve any personal use applicant from notifying the appropriate Corps district if the activity may affect a Federally threatened or endangered species or its habitat (see Appendix II, Endangered Species Consultation). If you have any questions concerning threatened and endangered species possibly occurring in your project area, you should contact the appropriate Corps of Engineers district or the U.S. Fish and Wildlife Service.
4. The cumulative impacts of this general permit may be reevaluated at the discretion of the Corps of Engineers at any time, but will be reevaluated at least every five (5) years.
5. APPLICANT NOTIFICATION REQUIREMENTS. (does not apply to personal use activities under 100 cubic yards, see Appendix I, paragraph 3, above)

If you wish to perform work under the authority of this General Permit, you must provide notification to the appropriate Corps of Engineers district before you initiate any gravel removal activity. You must submit the following information in this notification:

- (1) A completed application form ENG 4345, or equivalent information.
- (2) A clearly marked site location map.
- (3) A drawing showing the details of the proposed work (Plan and Cross-sectional views of each excavation area).
- (4) An operation plan which describes how you will conduct the work, details how impacts to the stream and riparian area will be avoided and/or minimized, and measures to restore the site (including gravel bars, stream banks, and riparian areas) following completion of excavation.

You must receive written confirmation of authorization under this general permit from the Corps of Engineers before you start any excavation or related operations. Completed activities considered for authorization after-the-fact under the general permit must conform to all conditions of the permit. After-the-fact authorization under this general permit will generally be limited to one activity per applicant.

Note to Commercial Operators: As set forth in the Land Reclamation Act, Chapter 444.770.3. RSMo, this Section 10 and 404 general permit may satisfy your permitting requirements with the Missouri Department of Natural Resources' Land Reclamation Program (LRP). If your activity is authorized by this general permit, the Corps of Engineers will forward a copy of this permit to the LRP. You should contact the LRP at 573-751-4041 to determine whether or not an LRP permit is also required.

APPENDIX II

CORPS REVIEW PROCEDURES FOR AUTHORIZATION BY GENERAL PERMIT NWKGP-34M

(For Corps Use Only)

1. **ENDANGERED SPECIES CONSULTATION.** The excavation activity must not be located in any waterbody identified as containing potential habitat for any Federally listed threatened or endangered species unless, following coordination with the U.S. Fish and Wildlife Service, a "no effect" or "not likely to adversely affect" determination is agreed upon between the Corps of Engineers and the U.S. Fish and Wildlife Service. These waterbody locations will be maintained by the Corps of Engineers and will be referenced for each individual activity.

Activities authorized under this general permit may affect the following species and/or habitat; Arkansas darter, Neosho madtom, Niangua darter, Topeka shiner, Curtis' pearlymussel, Fat pocketbook, Neosho mucket, Pink mucket pearlymussel, Scaleshell, Sheepnose, Spectaclecase, Winged mapleleaf, Ozark hellbender, Indiana bat, Hine's emerald dragonfly, and Bald eagle. The Corps of Engineers will maintain a list of waters where the activities authorized under this permit may affect such listed species or designated critical habitat. If the proposed activity is located in any water included in this list, the following conditions must be met and will be coordinated by the appropriate Corps of Engineers District:

- 1) Each proposed activity within the range of the above species must be coordinated with the U.S. Fish and Wildlife Service and Missouri Department of Conservation to allow for timely, site specific evaluation and concurrence that the activity, as conditioned under the general permit, is not likely to adversely affect listed species or designated critical habitat.
- 2) Additional project specific conditions must be imposed if, through timely informal consultation between the Service and the Corps, they are determined to be necessary to avoid the likelihood of adverse effects to listed species or designated critical habitat.
- 3) In the event that the likelihood of adverse effects to listed species or designated critical habitat cannot be avoided, authorization will not be provided under the general permit until such time as: i) formal consultation between the Service and the Corps is provided; ii) a non-jeopardy Biological Opinion is issued; and iii) the terms and conditions of any associated Incidental Take Statement are incorporated as enforceable conditions to the project authorization under the general permit.

2. **PROJECT DOCUMENTATION AND COMPLIANCE.** The authorized work must be documented on the attached Project Authorization Page(s) by the Corps of Engineers. A separate Project Authorization Page must be completed for each separate excavation site. This allows multiple copies of this page to be attached to the general permit, thereby documenting site specific requirements for several excavation locations conducted by a single applicant. The Project Authorization Page(s) also serves to document site specific variances from special conditions e., g., and 1. of the general permit or to add special conditions for protection of Federally listed species. A separate plan view depicting the relative location of several sites in relation to one another may also be attached to clarify site number locations. Also, these data will be used as a tool to insure compliance with the conditions of the general permit.



Table D
Outstanding National Resource Waters

Stream	Location
Current River	Headwaters to Northern Ripley Co. Line
Jacks Fork River	Headwaters to Mouth
Eleven Point River	Headwaters to Hwy. 142

Table E
Outstanding State Resource Waters

Waterbody	Miles/Acres	Location	County(ies)
Baker Branch	4 mi.	Taberville Prairie	St. Clair
Bass Creek	1 mi.	in Three Creek Conservation Area	Boone
Big Buffalo Creek	1.5 mi.	Big Buffalo Creek Conservation Area	Benton-Morgan
Big Creek	5.3 mi.	Sam A. Baker State Park	Wayne
Big Sugar Creek	7 mi.	Cuivre River State Park	Lincoln
Big Lake Marsh	150 ac.	Big Lake State Park	Holt
Blue Springs Creek	4 mi.	Blue Spring Creek Conservation Area	Crawford
	(1.5 mi. adjacent to owned lands)		
Boone Femme Creek	2 mi.	Three Creeks Conservation Area	Boone
Brush Creek	0.7 mi.	Bonanza Conservation Area	Caldwell
Bryant Creek	1.5 mi.	Bryant Creek Natural Area in Rippee Conservation Area	Ozark/Douglas
Cathedral Cave Branch	5 mi.	Onondaga Cave State Park	Crawford
Chariton River	9.8 mi.	Rebels Cove Conservation Area	Putnam-Schuyler
Chloe Lowry Marsh	40 ac.	Chloe Lowry Marsh Conservation Area	Mercer
Coakley Hollow	1.5 mi.	Lake of the Ozarks State Park	Camden
Coonville Creek	2 mi.	St. Francois State Park	St. Francois
Courtois Creek	12 mi.	Mouth to Hwy. 8	Crawford
Crabapple Creek	1.0 mi.	Bonanza Conservation Area	Caldwell
Devils Ice Box Cave Branch	1.5 mi.	Rock Bridge State Park	Boone
East Fork Black River	3 mi.	Johnson's Shut-Ins State Park	Reynolds
First Nicholson Creek (East Drywood Creek)	2 mi.	Prairie State Park	Barton
Gan's Creek	3 mi.	Rock Bridge State Park	Boone
Huzzah Creek	6 mi.	Mouth to Hwy. 8	Crawford
Indian Creek	17.5 mi.	Mark Twain National Forest	Douglas-Howell
Ketchum Hollow	1.5 mi.	Roaring River State Park	Barry
Little Piney Creek	25 mi.	Mouth to 21,35N,08W	Phelps
Little Black River	3 mi.	Mud Puppy Natural History Area S22,T24N,R3E to S25,T24N,R3E	Ripley
Log Creek	0.4 mi.	Bonanza Conservaton Area	Caldwell
Meramec River	8 mi.	Adjacent to Meramac State Park	Crawford/Franklin
Meramec River	3 mi.	Adjacent to Onondaga and Huzzah State Forest	Crawford
Mill Creek	5 mi.	Mark Twain National Forest	Phelps
N. Fork White River	5.5 mi.	Mark Twain National Forest	Ozark
Noblett Creek	5 mi.	Above Noblett Lake, Mark Twain National Forest	Douglas-Howell
Onondaga Cave Branch	0.6 mi.	Onondaga Cave State Park	Crawford
Pickle Creek	3 mi.	Hawn State Park	Ste. Genevieve
S. Prong L. Black River	2 mi.	In Little Black Conservation Area	Ripley
Shoal Creek	0.5 mi.	Bonanza Conservation Area	Caldwell
Spring Creek	17 mi.	Mark Twain National Forest	Douglas
Spring Creek	6.5 mi.	Mark Twain National Forest	Phelps
Taum Sauk Creek	5.5 mi.	Johnson's Shut-Ins State Park Addition S23,T33N,R2E to S5,T33N,R3E	Reynolds-Iron
Turkey Creek	4.6 mi.	In Three Creeks Conservation Area	Boone
Van Meter Marsh	80 ac.	Van Meter State Park	Saline
Whetstone Creek	5.1 mi.	Whetstone Creek Conservation Area	Callaway

VERIFICATION OF NWKGP-34M PROJECT AUTHORIZATION

1. Identification Number and/or Site No. (Assigned by Corps)	2. Corps Approving Official (Not Valid Unless Signed)
3. Applicant (Company or Name)	4. Responsible Person (If Different from Applicant)

5. Detailed Location Description (A Drawing on the Reverse Side May Also Be Used in Addition to This Block)

6. Minimum Buffer Strip Distances	Approving Official
6a. Excavation Area to Water Line	feet
6b. Excavation Area to Bank/Bank Vegetation	feet
6c. Other (specify)	feet

7. Excavation Depth Information
(Note: If authorization allows excavation below the elevation of the adjacent stream bottom, justification is required such as presence of bed rock to prevent head cutting, excessive bedload, or other appropriate reasons.)

8. Season Restrictions (You must not excavate during time frames specified below) Restricted Excavation - Start Date through End Date, inclusive (mm/dd/yy)	Approving Official
8a.	
8b.	
8c.	
8d.	

9. Comments, Site Specific Conditions, etc.

COMPLIANCE CERTIFICATION

GENERAL PERMIT NWKGP-34M

Special Condition "a." of this permit document requires that you submit a signed certification regarding the completed work and any required mitigation. This certification page satisfies this condition if it is provided to the Kansas City District at the address shown at the bottom of this page upon completion of the project.

APPLICATION NUMBER:

APPLICANT:

ADDRESS:

PROJECT LOCATION: (Waters of US name; Section, Township, Range; County name, Missouri; additional location information.)

a. I certify that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions.

b. I certify that any required mitigation was completed in accordance with the permit conditions.

c. Your signature below, as permittee, indicates that you have completed the authorized project as certified in paragraphs a and b above.

(PERMITTEE)

(DATE)

Return this certification to:

U.S. Army Corps of Engineers

**Missouri
Combined Stream Spawning Season
Sand and Gravel Closures**

County 1	County 2	County 3	County 4	County 5	Waterbody	Miles From	To	Closed	CR
Atchison					High Creek	10.0 Conf. with McElroy Creek (19, 66N, 41W)	Headwaters (35, 67N, R40W)	06/01 – 08/31	2
Atchison					McElroy Creek	6.0 Conf. with High Creek (19, 66N, 41W)	Iowa State Line (35, 67N, 41W)	06/01 – 08/31	2
Atchison					Mill Creek	8.0 Hwy 111 (11, 63N, 41W)	Headwaters SE of Rock Port (6, 64N, 40W)	03/15 – 06/15	4
Atchison					West High Creek	6.0 Conf. with High Creek (21, 66N, 41W)	Iowa State Line (31, 67N, 40W)	06/01 – 08/31	2
Barry	Stone				Flat Creek	20.6 Mouth (34, 23N, 24W)	Hwy 39 (6, 23N, 25W)	03/15 – 06/15	3
Barton					First Nicholson Creek (East Drywood)	2.0 Prairie State Park		03/15 – 06/15	5
Bollinger	Cape Girardeau				Whitewater River	19.2 Bollinger Mill (14, 31N, 11E)	County Road 234 (25, 33N, 10E)	03/15 – 06/15	27
Boone					Bass Creek	4.0 Mouth (20, 47N, 12W)	Hwy 63 (27, 47N, 12W)	03/15 – 07/15	57
Boone					Bonne Femme Creek	8.5 Andrew Sapp Road (35, 47N, 13W)	Hwy 63 (3, 47N, 12W)	03/15 – 07/15	7
Boone					Gans Creek	4.8 Mouth (1, 47N, 13W)	Highway 63 (33, 48N, 12W)	03/15 – 06/15	5
Boone					Kelley Branch	5.8 Mouth (12, 50N, 13W)	Highway U (10, 50N, 12W)	03/15 – 06/15	47
Boone					Silver Fork	8.5 Hwy 63 (13, 50N, 13W)	Hwy V (33, 51N, 12W)	03/15 – 06/15	47
Boone					Turkey Creek	8.1 Mouth (20, 47N, 12W)	Rangeline Road (24, 47N, 12W)	03/15 – 07/15	57
Buchanan	Clinton				Castile Creek	28.0 Route Y (22, 57N, 32W)	Conf. with Platte River (25, 55N, 34W)	03/15 – 06/15	4
Butler	Wayne				Black River	28.3 Hwy 67 (13, 26N, 5E)	Clearwater Dam (6, 28N, 3E)	03/15 – 07/31	23
Caldwell					Brush Creek	8.0 Conf. with Shoal Creek (30, 56N, 27W)	Headwaters NE of Polo (22, 55N, 28W)	03/15 – 6/15	45
Caldwell	Clinton	Ray			Crabapple Creek	9.0 Conf. with Shoal Creek (21, 56N, 27W)	Headwaters W of Cowgill (20, 55N, 30W)	03/15 – 06/15	45
Caldwell	Ray				Crooked River	49.0 Hwy 10 (31, 52N, 26W)	Headwaters N of Converse (9, 54N, 30W)	03/15 – 06/15	4
Caldwell	Ray				Crooked River, East Fork	25.0 Conf. with Crooked River (23, 52N, 28W)	Headwaters E of Polo (24, 55N, 28W)	05/15 – 07/15	24
Caldwell					Log Creek	15.0 Conf. with Shoal Creek (25, 56N, 28W)	Headwaters NNW of Prairie Ridge (16, 55N, 29W)	03/15 – 06/15	45
Caldwell	Clinton	Livingston			Shoal Creek	73.0 Route D in Livingston County (28, 56N, 25W)	Headwaters E of Lathrop (30, 55N, 30W)	05/15 – 07/15	245
Callaway					Meyers Branch (Tavern Creek)	2.4 Mouth (23, 46N, 7W)	Headwaters near Hwy D (16, 46N, 7W)	05/01 – 07/31	7
Callaway					Tavern Creek	7.8 Mouth (34, 46N, 7W)	Headwaters near Hwy K (33, 47N, 7W)	05/01 – 07/31	7
Callaway	Montgomery				Whetstone Creek	15.9 Mouth (8, 48N, 6W)	I-70 (14, 48N, 8W)	03/15 – 06/15	47
Camden	Miller				Grand Glaize Creek	8.8 Lake of the Ozarks (25, 39N, 15W)	Conf. with Wet Glaize (24, 38N, 15W)	03/15 – 06/15	3

**Missouri
Combined Stream Spawning Season
Sand and Gravel Closures**

County 1	County 2	County 3	County 4	County 5	Waterbody	Miles From	To	Closed	CR
Camden	Morgan				Little Niangua River	18.5 Lake of the Ozarks (3, 38N, 18W)	East Section Line (33, 38N, 20W)	03/15 – 06/15	3567
Camden	Dallas	Hickory			Little Niangua River	22.5 East Section Line (33, 38N, 20W)	East Section Line (26, 36N, 19W)	03/15 – 06/15	123
Camden	Dallas	Laclede			Niangua River	59.0 Lake of the Ozarks (9, 37N, 17W)	Hwy K (8, 34N, 18W)	03/15 – 06/15	3567
Camden					Wet Glaize Creek	3.2 Conf. with Grand River (24, 38N, 15W)	Route A (31, 38N, 14W)	03/15 – 06/15	236
Carter	Dent	Shannon			Current River	121.0 Lower NPS Ownership (16, 23N, 2E)	Montauk (25, 32N, 7W)	03/15 – 06/15	5
Cedar	Polk				Bear Creek	9.7 Hwy A (10, 34N, 25W)	South Section Line (6, 33N, 24W)	03/15 – 06/15	2
Cedar	Polk	St. Clair			Brush Creek	9.6 Hwy J (18, 36N, 25W)	South Section Line (6, 35N, 24W)	03/15 – 06/15	126
Clay	Clinton				Clear Creek	19.0 Conf. with Fishing River (18, 52N, 30W)	Route W (4, 54N, 31W)	06/01 – 08/31	2
Clinton	Daviess	DeKalb			Grindstone Creek	43.0 Conf. with Grand River (15, 60N, 29W)	Headwaters S of Osborn (27, 57N, 31W)	05/15 – 07/15	24
Clinton					Little Platte River	10.0 Smithville Lake (25, 55N, 32W)	Route H (27, 56N, 31W)	03/15 – 06/15	3
Cole	Osage				Osage River	12.0 Conf. with Missouri River (5, 44N, 9W)	Lock and Dam (16, 43N, 10W)	03/15 – 06/15	37
Cooper					Clear Creek	5.0 Mouth (32, 48N/47N, 19W)	Headwaters (23, 47N, 19W)	03/15 – 06/15	2
Cooper	Moniteau				Moniteau Creek	28.0 Hwy 87 (19, 46N, 14W)	Hwy 50 (17, 45N, 17W)	05/15 – 07/15	2
Crawford					Blue Springs Creek	5.0 Meramec River (5, 39N, 2W)	Headwaters (3, 39N, 2W)	11/15 – 02/15	36
Crawford	Washington				Courtois Creek	14.0 Huzzah Creek (12, 38N, 3W)	Hwy 8 (13, 37N, 2W)	03/15 – 06/15	35
Crawford	Phelps				Dry Fork	5.0 Meramec River (31, 38N, 5W)	Hwy 8 (34, 38N, 6W)	11/15 – 02/15	36
Crawford					Huzzah Creek	29.5 Meramec River (2, 38N, 3W)	Hwy 49 (24, 35N, 3W)	03/15 – 06/15	35
Crawford	Phelps				Meramec River	8.0 Scott's Ford (27, 38N, 5W)	Hwy 8 (6, 37N, 5W)	11/15 – 02/15	356
Crawford					Meramec River	14.7 Bird's Nest (21, 38N, 5W)	Scott's Ford (27, 38N, 5W)	03/15 – 06/15	35
Dade					Big Sac River	6.1 Stockton Lake (5, 31N, 25W)	Hwy U (11, 31N, 25W)	03/15 – 06/15	3
Dade					Maze Creek	4.1 Stockton Lake (5, 32N, 25W)	1 st N/S Road above Hwy 245 (15, 32N, 25W)	03/15 – 06/15	23
Dade					Sons Creek	4.8 Stockton Lake (26, 32N, 27W)	Hwy BB (4, 31N, 27W)	03/15 – 06/15	3
Dade					Turnback Creek	15.6 Stockton Lake (15, 31N, 26W)	Dade/Lawrence County Line (35, 30N, 26W)	03/15 – 06/15	3
Dallas					Cahoonie Creek	2.5 Conf. with Thomas Creek (2, 36N, 20W)	West Section Line (3, 36N, 20W)	03/15 – 06/15	23
Dallas					Dousinbury Creek	0.7 Conf. with Niangua River (11, 33N, 19W)	First Road Crossing (12, 33N, 19W)	03/15 – 06/15	2

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County 1	County 2	County 3	County 4	County 5	Waterbody	Miles From	To	Closed	CR
Dallas					Four Mile Creek	0.7 Conf. with Niangua River (4, 34N, 18W)	Route P (9, 34N, 18W)	03/15 – 06/15	2
Dallas					Greasy Creek	12.9 Conf. with Niangua River (17, 34N, 19W)	South Section Line (34, 33N, 20W)	03/15 – 06/15	2
Dallas					Jakes Creek	4.5 Conf. with Niangua River (15, 36N, 18W)	First County Road Crossing (33, 36N, 18W)	03/15 – 06/15	6
Dallas					Jones Creek	0.4 Conf. with Niangua River (2, 32N, 19W)	First Road Crossing (11, 32N, 19W)	03/15 – 06/15	2
Dallas					Mill Creek	3.5 Conf. with Niangua River (10, 36N, 18W)	West Section Line (8, 36N, 18W)	11/15 – 02/15	6
Dallas	Webster				Niangua River	40.0 Hwy K (8, 34N, 18W)	Conf. of East & West Forks (33, 32N, 18W)	03/15 – 06/15	12
Dallas	Laclede				Niangua River	12.0 Prosperine Access (5, 35N, 17W)	Bennett Spring (25, 35N, 18W)	11/15 – 02/15	6
Dallas	Greene	Polk	Webster		Pomme de Terre River	24.6 Hwy H (20, 32N, 21W)	One mile above Hwy DD (17, 30N, 19W)	03/15 – 06/15	12
Dallas	Hickory				Thomas Creek	2.7 Conf. with Little Niangua River (36, 37N, 20W)	South Section Line (12, 36N, 20W)	03/15 – 06/15	23
Daviess	Grundy				Hickory Creek	7.0 Hwy 6 (32, 61N, 25W)	Headwaters (13, 60N, 26W)	05/15 – 07/15	2
Daviess					Marrowbone Creek	25.0 Hwy 13 (4, 58N, 27W)	Headwaters SW of Winston (17, 58N, 29W)	03/15 – 06/15	4
Daviess	Harrison				Tombstone Creek	10.0 Conf. with Sugar Creek (25, 62N, 26W)	Headwaters SE of Gilman City (31, 62N, 26W)	05/15 – 07/15	24
Franklin					Bourbeuse River	55.2 Mouth (11, 42N, 1E)	Noser Mill (7, 42N, 2W)	03/15 – 06/15	35
Franklin					Spring Creek	2.3 Mouth (34, 42N, 2W)	Spring Creek Road (4, 41N, 2W)	11/15 – 02/15	3
Greene	Polk				Little Pomme de Terre River	8.4 Conf. with Pomme de Terre River (3, 31N, 21W)	South Section Line (31, 31N, 20W)	03/15 – 06/15	2
Greene					Little Sac River	2.3 Hwy 65 (19, 30N, 20W)	Farm Road 70 (21, 30N, 20W)	03/15 – 06/15	3
Greene	Polk				North Dry Sac River	8.8 Conf. with Little Sac River (6, 31N, 22W)	East Section Line (19, 31N, 21W)	03/15 – 06/15	2
Greene	Webster				South Fork	3.3 Conf. with Pomme de Terre River (1, 30N, 20W)	Hwy DD (19, 30N, 19W)	03/15 – 06/15	2
Grundy	Harrison				Sugar Creek	25.0 Hwy 146 Grundy County (29, 62N, 25W)	Headwaters NE of Bethany (35, 64N, 27W)	05/15 – 07/15	24
Harrison					Big Creek, East Fork	40.0 Conf. with West Fork (9, 63N, 28W)	Iowa State Line (35, 67N, 28W)	03/15 – 06/15	4
Harrison					Big Creek, West Fork	38.0 Conf. with East Fork (9, 63N, 28W)	Iowa State Line (26, 67N, 27W)	03/15 – 06/15	4
Harrison					Lotts Creek	8.0 Worth County Line (7, 66N, 29W)	Iowa State Line (35, 67N, 29W)	03/15 – 06/15	4
Harrison					Thompson River	6.0 NE of Akron (11, 66N, 26W)	Iowa State Line (35, 67N, 26W)	03/15 – 06/15	4
Harrison					Trail Creek	16.0 Conf. with Thompson River (36, 64N, 26W)	Headwaters SE of Ridgeway (10, 64N, 27W)	05/15 – 07/15	24
Harrison					Unnamed Creek	4.0 Conf. with Sugar Creek (7, 62N, 26W)	Headwaters (15, 62N, 27W)	05/15 – 07/15	2
Harrison					Unnamed Creek	4.0 Conf. with Sugar Creek (8, 62N, 26W)	Headwaters (23, 62N, 27W)	05/15 – 07/15	2

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County 1	County 2	County 3	County 4	County 5	Waterbody	Miles From	To	Closed	CR
Hickory	Polk				Lindley Creek	16.5 Pomme de Terre Reservoir (8, 35N, 21W)	Polk/Dallas County Line (1, 34N, 21W)	03/15 – 06/15	3
Hickory	Polk				Pomme de Terre River	12.5 Pomme de Terre Reservoir (24, 35N, 23W)	Hwy D (17, 34N, 22W)	03/15 – 06/15	3
Hickory					Pomme de Terre River	19.5 Truman Lake (26, 38N, 22W)	Pomme de Terre Dam (2, 36N, 22W)	03/15 – 06/15	24
Hickory					Starks Creek	2.0 Conf. with Little Niangua River (23, 38N, 20W)	North Section Line (22, 38N, 20W)	03/15 – 06/15	23
Howard					Salt Creek	4.0 Mouth (11, 49N, 18W)	Headwaters near Hwy 87 (33, 50N, 17W)	06/01 – 08/31	7
Jasper					Spring River	8.2 KS/MO State Line (34, 29N, 34W)	Conf. Spring River/North Fork Spring River (4, 29N, 33W)	04/15 – 07/15	2
Jefferson	Washington				Big River	17.1 Brown's Ford Bridge (Survey 3053, 40N, 3E)	Hwy 21 (26, 39N, 3E)	03/15 – 06/15	6
Laclede	Phelps	Pulaski	Wright		Gasconade River	150.0 Hwy D (24, 37N, 10W)	Highway 5 (6, 29N, 14W)	03/15 – 06/15	2356
Laclede	Webster	Wright			Osage Fork of the Gasconade River	63.0 Conf. with Gasconade River (23, 35N, 14W)	Route F (12, 31N, 17W)	03/15 – 06/15	2567
Lawrence					Center Creek	3.8 County Road 1.5 miles above Lawrence/Newton County Line (19, 27N, 28W)	Hwy 97 (28, 27N, 28W)	11/15 – 02/15	3
Lawrence					Spring River	13.9 Hwy 60 (20, 26N, 26W)	Hwy H (2, 27N, 27W)	11/15 – 02/15	3
Lawrence					Williams Creek	2.4 Conf. with Spring River (28, 28N, 27W)	Hwy V (34, 28N, 27W)	11/15 – 02/15	3
Lincoln					Big Sugar Creek	12.2 Mouth (24, 49N, 1E)	Highway B (1, 50N, 1W)	03/15 – 06/15	457
Lincoln	Pike				Sandy Creek	11.3 Mouth (15, 51N, 2W)	Headwaters near Hwy 61 (10, 52N, 2W)	03/15 – 06/15	47
Madison					St. Francis River	14.2 Hwy 72 (4, 33N, 5E)	Conf. with Marble Creek (22, 32N, 6E)	03/15 – 07/31	23
Maries	Osage				Maries River	27.2 County Road 611 (26, 43N, 10W)	North Section Line (35, 41N, 10W)	03/15 – 06/15	2
Marion					South Fabius River	42.5 Hwy 61 Bridge (23, 59N, 6W)	Shelby County Line (18, 59N, 8W)	03/15 – 06/15	6
Marion					Troublesome Creek	16.2 South Fabius River (13, 59N, 7W)	Lewis County Line (2, 59N, 8W)	03/15 – 06/15	6
Miller					Barren Fork	3.9 Conf. with Tavern Creek (35, 40N, 13W)	Hwy 17 (3, 39N, 13W)	03/15 – 06/15	2
Miller					Brushy Fork	3.2 Conf. with Barren Fork (3, 39N, 13W)	Hwy 17 (4, 39N, 13W)	03/15 – 06/15	2
Miller					Jack Buster Creek	3.4 Mouth at Saline Creek (15, 41N, 14W)	Route MM (35, 42N, 14W)	03/15 – 06/15	236
Miller					Little Saline Creek	7.7 Mouth at Saline Creek (25, 41N, 14W)	Hwy 52 (23, 41N, 15W)	03/15 – 06/15	236
Miller					Little Tavern Creek	1.6 Conf. with Tavern Creek (33, 39N, 12W)	East Section Line (33, 39N, 12W)	03/15 – 06/15	2
Miller					Osage River	1.2 Hwy 54 Bridge (29, 40N, 15W)	Bagnell Dam (19, 40N, 15W)	03/15 – 06/15	37
Miller					Saline Creek	12.4 Mouth at Osage River (36, 41N, 14W)	Hwy 54 (10, 41N, 15W)	03/15 – 06/15	236

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County 1	County 2	County 3	County 4	County 5	Waterbody	Miles From	To	Closed	CR
Miller					Tavern Creek	34.6 Hwy 52 (27, 41N, 12W)	South Section Line (12, 38N, 13W)	03/15 – 06/15	1236
Morgan					Gravois Creek	2.1 Lake of the Ozarks (17, 41N, 17W)	Hwy 5 (7, 41N, 17W)	03/15 – 06/15	3
Morgan					Indian Creek	0.3 Lake of the Ozarks (19, 41N, 16W)	First slab above lake (17, 41N, 16W)	03/15 - 6/15	3
Morgan					Little Gravois Creek	1.0 Lake of the Ozarks (10, 41N, 17W)	First slab above lake (10, 41N, 17W)	03/15 – 06/15	3
Newton					Hickory Creek	5.0 Conf. with Shoal Creek (18, 25N, 31W)	1 st County Road crossing above Alternate Hwy 71 (33, 25N, 31W)	11/15 – 02/15	3
Newton					Lost Creek	7.9 OK/MO State Line (8, 25N, 34W)	Hwy CC (15, 25N, 33W)	05/01 – 07/31	2
Nodaway					Honey Creek	20.0 Conf. with Platte River (14, 64N, 34W)	Iowa State Line (31, 67N, 33W)	03/15 – 06/15	4
Oregon					Eleven Point River	44.0 Hwy 142 (16, 22N, 2W)	Forks (5, 24N, 5W)	03/15 – 06/15	5
Osage					Little Maries Creek	3.3 Conf. with Maries River (35, 43N, 10W)	South Section Line (33, 43N, 10W)	03/15 – 06/15	2
Ozark					Bryant Creek	2.2 Norfork Lake (9, 22N, 12W)	Cook Access (5, 22N, 12W)	03/15 – 06/15	3
Ozark					Little North Fork River	4.2 Bull Shoals Lake (19, 22N, 15W)	COE Boundary (4, 22N, 15W)	03/15 – 06/15	3
Ozark					North Fork River	13.5 Dawt (3, 22N, 12W)	Rainbow Spring (32, 24N, 11W)	11/15 – 02/15	2
Ozark					Pond Fork	3.0 Bull Shoals Lake (19, 22N, 15W)	COE Boundary (1, 22N, 16W)	03/15 – 06/15	3
Phelps	Pulaski	Texas			Big Piney River	47.2 Conf. with Gasconade River (31, 37N, 10W)	Slabtown Access (16, 33N, 10W)	03/15 – 06/15	23567
Phelps					Little Piney Creek	15.8 Mouth of Beaver Creek (25, 37N, 9W)	1 st Crossing of Dent County Line (16, 35N, 8W)	11/15 – 02/15	356
Phelps					Mill Creek	9.0 Mouth (20, 37N, 9W)	Mouth of Deep Hollow Creek (32, 36N, 9W)	11/15 – 02/15	36
Phelps					Spring Creek	7.5 Mouth (22, 35N, 10W)	County Road 212 (6, 34N, 9W)	11/15 – 02/15	36
Polk					Little Sac River	17.8 Stockton Lake (2, 32N, 24W)	Polk/Greene County Line (7, 31N, 22W)	03/15 – 06/15	3
Pulaski	Texas				Roubidoux Creek	20.2 South Section Line (3, 34N, 12W)	Highway 32 (2, 32N, 12W)	03/15 – 06/15	2
Pulaski					Roubidoux Creek	6.0 Mouth (14, 36N, 12W)	East Section Line (6, 35N, 11W)	11/15 – 02/15	6
Ray					Crooked River, West Fork	16.0 Conf. with Crooked River (27, 52N, 27W)	Headwaters at Route M (34, 53N, 29W)	05/15 – 07/15	24
Shannon					Barren Fork	9.0 County Road Crossing (32, 31N, 4W)	Above Hwy A Bridge (18, 31N, 4W)	11/15 – 02/15	3
Shannon					Jacks Fork River	45.0 Conf. with Current River (16, 29N, 3W)	Forks (29, 28N, 7W)	03/15 – 06/15	5
St. Charles					Callaway Fork	4.0 Hwy F (Survey 108, 45N, 2E)	Callaway Lake Dam (6, 45N, 2E)	03/15 – 06/15	7
St. Clair					Baker Branch	4.0 Mouth of Flat Creek (6, 37N, 27W)	Taberville Prairie (15, 38N, 28W)	03/15 – 06/15	5

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St. Clair					Panther Creek	2.4 Conf. with Brush Creek (36, 36N, 25W)	South Section Line (32, 36N, 24W)	03/15 – 06/15	2
St. Clair					Sac River	12.0 Truman Lake (23, 37N, 26W)	Section Line (14-15, 36N, 26W)	03/15 – 06/15	34
Stone					Crane Creek	8.4 Stone County Road 13-195 (1, 25N, 24W)	Stone/Lawrence County Line (19, 26N, 24W)	11/15 – 02/15	36
Stone					James River	26.2 McCord Bend (14, 24N, 24W)	Hootentown Bridge (19, 26N, 22W)	03/15 – 06/15	36
Stone					Spring Creek	2.5 Mouth (6, 25N, 23W)	Hwy A at Hurley (30, 26N, 23W)	11/15 – 02/15	3
Taney					Beaver Creek	23.1 Mouth (34, 23N, 19W)	Hwy 76 at Bradleyville (10, 24N, 18W)	03/15 – 07/31	23
Taney					Swan Creek	2.3 Bull Shoals Lake (33, 24N, 20W)	COE Boundary (33, 24N, 20W)	03/15 – 06/15	3
Washington					Mineral Fork	16.0 Big River (15, 39N, 2E)	Conf. of Fourche a Renault/Mine a Breton (7, 38N, 2E)	03/15 – 06/15	35
Wayne					St. Francis River	12.4 Conf. with Big Creek (33, 30N, 5E)	Hwy 67 (13, 28N, 5E)	03/15 – 06/15	23
Webster					Niangua River, East Fork	0.5 Conf. of Niangua River (33, 32N, 18W)	T32/T31 Line (33, 32N, 18W)	03/15 – 06/15	2
Webster					Niangua River, West Fork	0.3 Conf. of Niangua River (33, 32N, 18W)	T32/T31 Line (33, 32N, 18W)	03/15 – 06/15	2
Worth					Grand River, East Fork	23.0 Route M at Denver (31, 65N, 30W)	Iowa State Line (35, 67N, 30W)	03/15 – 06/15	4
Total						2158.4			

**SPAWNING SEASON LISTING CRITERIA
3/95**

1. Officially designated critical habitat for aquatic RTE species (e.g., Niangua darter critical habitat). This may include either state or federal listings of critical habitat.
2. Stream reaches that have not been officially designated as critical habitat, but which may be considered critical to the maintenance of recovery of sensitive species. This may include "buffer" reaches upstream from or in tributaries to designated ("officially listed") critical habitats. For example, we have typically applied a one mile buffer to the critical habitat reaches designated by USFWS for the Niangua darter.
3. Stream reaches which support seasonal concentrations of spawning, incubating or rearing fishes or mussels of management interest. This could include resident species (e.g., RTE or other sensitive species, rainbow trout, rock bass, smallmouth bass, suckers, etc.) or species that migrate into a reach seasonally to spawn (e.g., walleye, white bass, etc.).
4. Remnant examples of historic habitats especially in areas where streams have been severely impacted by channelization, levee construction, snagging, clearing or similar activities.
5. Designated Outstanding National or State Resource Waters as defined by the Missouri Department of Natural Resources when these waters support significant biological resources that may be impacted by sand and gravel excavation during periods of spawning, incubation or rearing.
6. Agency management areas (e.g., trout management waters, stream black bass management areas, etc.).
7. Areas with unique fish communities or unexpected high biodiversity due to the presence of species generally considered atypical to the area and, in the opinion of the biologist, are of sufficient scarcity to require protection.