

2.2 Property & Stream Modifications

Modifications to streamside property or the stream channel itself are regulated by different agencies based on the potential impact.

Fish and Wildlife.....	AR Game & Fish Commission/ U.S. Fish & Wildlife
Water Quality.....	Arkansas Department of Environmental Quality
Stream Channel.....	U.S. Army Corps of Engineers

Section 404 of the Clean Water Act requires approval (from the Army Corps of Engineers) prior to discharging dredged or fill material into the waters of the United States. Typical activities requiring Section 404 permits are:

- Mechanically clearing, leveling or other filling in of wetlands or streams
- Filling in waterways for residential, commercial, or recreational developments
- Construction of revetments, bridges, weirs, breakwaters, levees, dams, dikes
- Placement of riprap and road fills in a stream or on a streambank

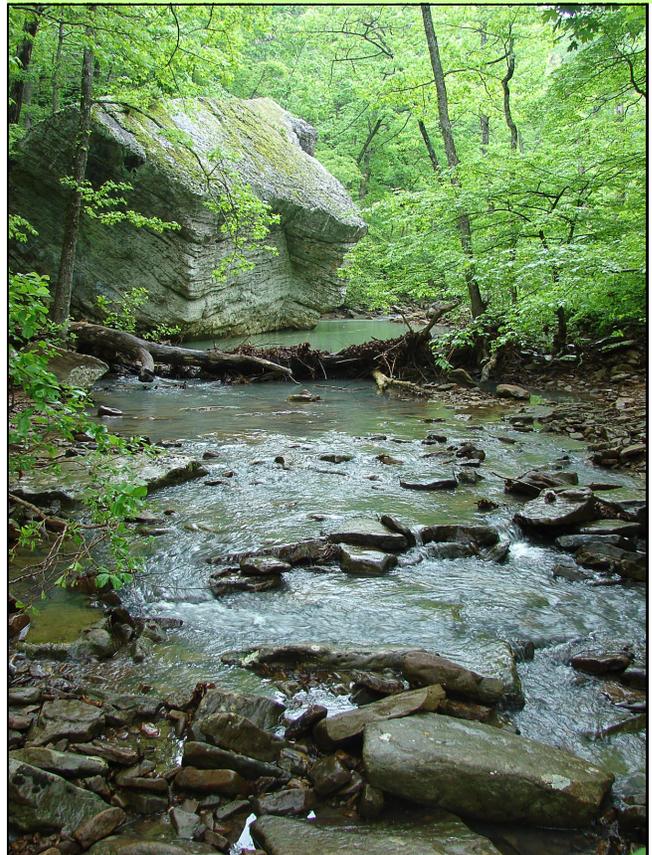
The Army Corps of Engineers issues both *Individual* and *Nationwide General* permits. Most of the activities undertaken by landowners would fall under classification of the Nationwide General permit. This is a type of general permit that authorizes a category of activities throughout the state and it does not require public notification.



Activities like those seen above require a permit from the U.S. Army Corps of Engineers.

Which waterways fall under the Army Corps of Engineer's Section 404 jurisdiction?

There is no simple answer to this question. In general, if the waterway has an ordinary high water mark with a marked change in vegetation, the Army Corps of Engineers claims jurisdiction to regulate activities on that waterway. A high water mark occurs from frequent water passage, not from sporadic flooding. Contact your local Corps office for permitting information before you do any work.



Even small streams could be under the jurisdiction of the U.S. Army Corps of Engineers.

Common Questions About Stream Modifications

Can I build a bridge across a stream to get to my property on the other side?

In order to build a bridge, property owners need to obtain permits from both the U.S. Army Corps of Engineers (COE) and the Arkansas Department of Environmental Quality (ADEQ). The Section 404 permit from the COE authorizes the actual construction of the bridge, including any fill placed in the waterway. A “Short Term Activity Authorization” from ADEQ authorizes a temporary violation of water quality standards, something that is very likely to occur during the building of a bridge. In addition, the Arkansas Game & Fish Commission Code 32.10 states that a structure, such as a bridge or dam, cannot restrict sufficient water flow to maintain fish populations downstream.

Can I dig out a swimming hole in the river?

Digging out a swimming hole is very similar to private gravel mining – and thus subject to the same regulations found in the following section. Digging a pool in the streambed is illegal, a waste of time, and very disruptive to the stream’s equilibrium. Building a pool where there currently is not a pool is a futile effort in changing the natural pool sequence of a stream. The river will simply fill in your pool with gravel during the next big flow. In addition, removing gravel can have a domino effect - causing streambank erosion both upstream and downstream.

Can I pump water from a stream?

Arkansas Game & Fish Commission Code 32.11 makes it unlawful to lower any body of water to such an extent that fish life is endangered. This code also specifies that all intake pipes be fitted with screening to prevent fish entry. The landowner also cannot transfer (by sale or gift) the water pumped to another landowner or to another piece/parcel of property that the landowner owns. Surface water should not be used as a domestic water supply. Although the water may look clear and clean, it carries many pollutants that could make you very ill.

Can I dam up a creek that flows through my property to form a pond?

If the creek running through your property has an ordinary high water mark (i.e. the bed of the creek has different vegetation/soils than the banks of the creek, see page 5), then the waterway is probably under the regulatory jurisdiction of the U.S. Army Corps of Engineers. Call their regulatory district office for further clarification and to obtain a permit for the work to be done. In addition, the Arkansas Game & Fish Commission code 32.10 states that a structure, such as a bridge or dam, cannot restrict sufficient water flow to maintain fish populations downstream.

Can I remove living or dead trees from the stream corridor?

You do not need a permit to simply remove built up debris from the stream bed. You will need a permit from the Corps of Engineers if your activities alter the stream bed itself. You do not need a permit if the living trees that you want to remove are above the high water mark. However, removal of trees within the stream corridor is highly discouraged because it could lead to bank instability and soil erosion among other problems.

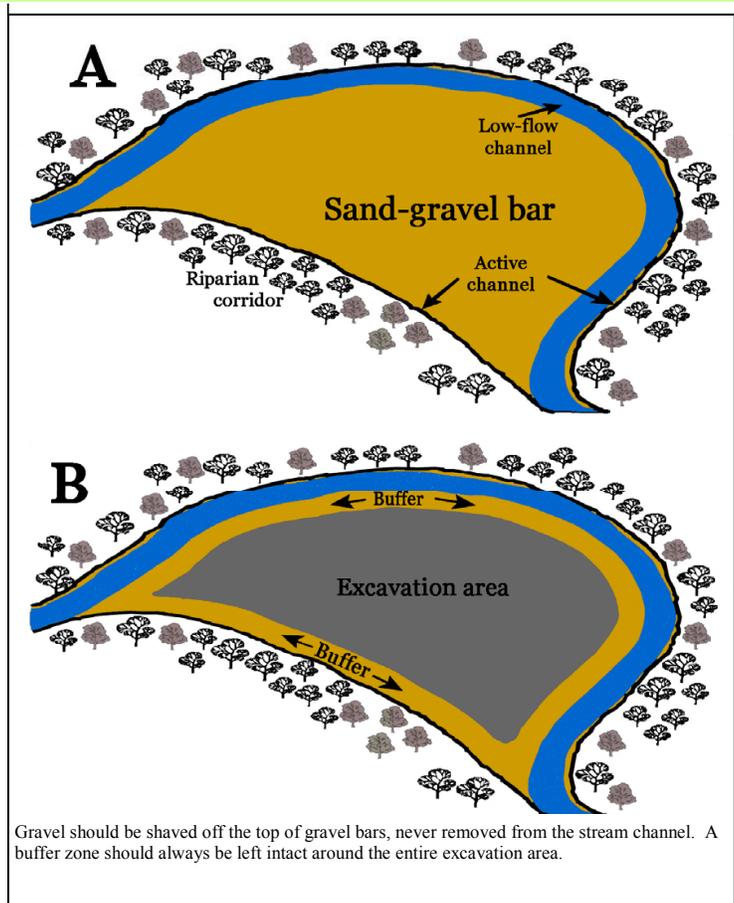
Focus on Gravel Mining

Gravel is found in abundance along the Kings River because of destabilization and erosion caused by many years of land use changes both upstream and downstream. Commercial gravel mining is illegal on the Kings River, but is still legal on its tributaries. **A permit from the Arkansas Department of Environmental Quality must be obtained for ALL commercial gravel mining operations.** Gravel should NEVER be removed from the stream channel itself—even if the stream is not currently flowing.

Contrary to popular belief, gravel mining will not reduce the total amount of gravel in the stream channel (in fact gravel mining can cause an increase in the total gravel load). If gravel is taken out from the stream channel, the river changes in order to regain the natural slope of its streambed. This means that it will take gravel from an upstream site, usually from a streambank, in order to level off the hole that has been created by gravel mining. **Gravel mining can directly cause upstream and downstream streambank erosion.** Effects can reach as far as 7 miles.

The effects of gravel mining may not be immediately obvious because only heavy rain events (over 2 inches) result in large scale gravel movement. Bank erosion and channel instability upstream and downstream of the mining site become obvious during these larger flood events. During some years these storm events are infrequent on the Kings, so there may be a lag of several years before the effects of instream gravel mining are evident.

Gravel mining can also negatively impact aquatic species through increases in silt and turbidity. A study of gravel mining on the Kings River showed a 50% reduction in Smallmouth bass populations downstream of gravel mines.



Gravel should be shaved off the top of gravel bars, never removed from the stream channel. A buffer zone should always be left intact around the entire excavation area.

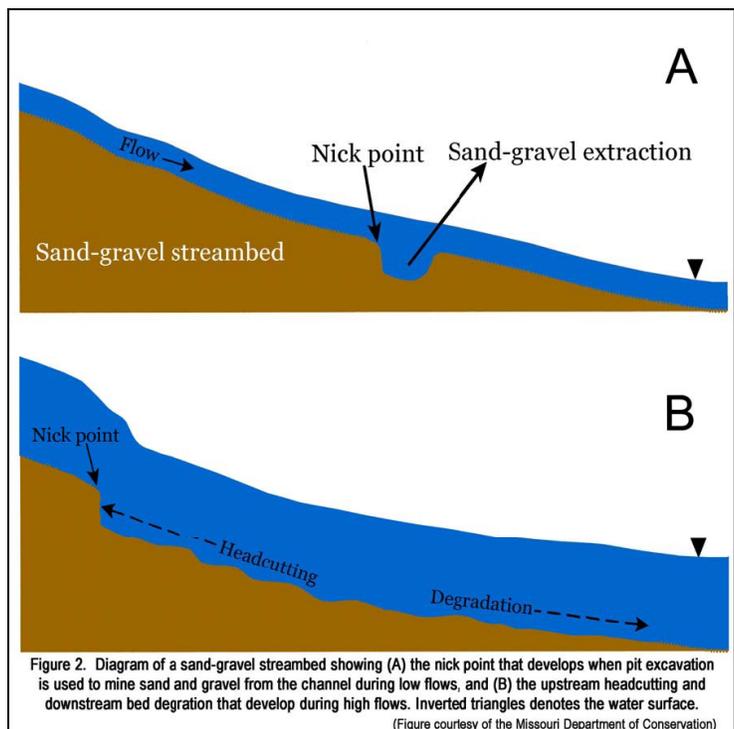


Figure 2. Diagram of a sand-gravel streambed showing (A) the nick point that develops when pit excavation is used to mine sand and gravel from the channel during low flows, and (B) the upstream headcutting and downstream bed degradation that develop during high flows. Inverted triangles denotes the water surface. (Figure courtesy of the Missouri Department of Conservation)

Common Questions About Gravel Mining

Am I allowed to remove gravel out of a streambed for use on my own property?

Yes, a landowner can remove gravel for use **exclusively on his/her own property**. The gravel cannot be used to barter with or be sold. There is not currently a limitation on how much gravel a landowner can remove from the streambed, but a landowner must still follow rules for gravel removal including:

- At no time can equipment operate in the water.
- At no time can gravel removal result in a violation of Arkansas water quality standards. Example: Gravel removal cannot occur if it will result in increased sediment in the stream, even if the sediment load is temporary.
- Gravel removal cannot cause the stream to change course, alter the location of the deepest part of the stream channel, or cause bank or channel instability.
- Rule of Thumb: Do not remove gravel from the stream channel or the area where water would be flowing during the wet season. Never dig a pit that is lower than the water level. This could result in stream instability and property loss for you and/or your neighbor. Do not remove gravel where there is established stream vegetation.

Can I sell the gravel that I mine out of a streambed?

Commercial gravel operations are not allowed to operate on the Kings River because of its designation as an Extraordinary Resource Waterway. Commercial gravel operations can still operate on the tributaries of the Kings River. These operations must obtain a permit from the Arkansas Department of Environmental Quality's Mining Division and follow the mining standards found in Arkansas Regulation 15 – The Arkansas Open-Cut Mining and Land Reclamation Code.

Do I need any permits to mine gravel from a streambed on my property?

If you are mining gravel for use on your OWN property, you do not need a mining permit. This gravel cannot be sold, traded, or given away for use on another property.

Who do I contact to get more answers about gravel mining or file a complaint about illegal mining activities?

Contact Arkansas Department of Environmental Quality Mining Division at (501) 682-0805.

Which law regulates gravel mining in Arkansas?

Arkansas Regulation Number 15 – The Arkansas Open-Cut Mining and Land Reclamation Code as amended in 2014. This code is available at:

https://www.adeq.state.ar.us/regs/files/reg15_final_140213.pdf