



Animal Enhancement Activity—KS-ANM28 Aquatic organism passage barrier removal

Kansas Criteria for National Animal Enhancement Activity—ANM28

Additional eligibility requirements for this enhancement:

- Aquatic barriers must be on:
 - Perennial or intermittent streams (as identified on U.S. Geological Survey [USGS] topographic maps, 1:24000 hydrography dataset, or other reliable data source that identifies stream presence), OR
 - Wetlands adjacent to perennial/intermittent streams which provide refugia for native aquatic organisms.
 - Functioning wetlands may be naturally occurring or created.
 - A certified wetland determination is not required.
- Streams and/or wetlands must include one of the following:
 - Have a direct connection to Threatened or Endangered Species (T&E) Designated Critical Habitat as identified on Kansas Department of Wildlife and Parks (KDWP) County T&E lists located at:
<http://www.kdwp.state.ks.us/news/Other-Services/Threatened-and-Endangered-Species/Threatened-and-Endangered-Species/County-Lists>.
 - Have been designated as Exceptional State Waters, Special Aquatic Life Use Waters, or Outstanding National Resource Waters, by the Kansas Department of Health and Environment (KDHE) as identified on the following: <http://www.kdheks.gov/nps/resources/specwaterinfo.pdf>.
- If more than one barrier exists on a stream-reach in the offered area, the barrier furthest downstream should be removed first unless other structures upstream can be demonstrated as having a greater impact on aquatic organism passage, then those may be replaced first.

Example: Removing an impoundment dam would restore aquatic habitat to a stream on a permanent basis, whereas a downstream barrier that is perched one inch above-grade might only become a barrier during low-flow conditions.

Common Aquatic Barriers in Kansas:

- Impoundment dams
- Low-head dams
- Corrugated metal pipe with water velocities exceeding the known range of movement for native species during critical flows for the species
- Undersized concrete bridges, constrictive bridges, or bridges backing up water during normal flows
- Concrete bridges with floors
- Pipes with flap devices to control backflows into wetlands
- Perched low water crossings.
- Low water crossings that widen or constrict stream channel
- Log jams or debris jams
- Embankment ponds without outlet pipes or with perched outlet pipes
- Fill in streams: includes rip-rap; concrete, large rocks not serving as components of streambank stabilization projects
- Trenching for water diversion
- Old pipelines used for oil, gas, or water located in streams or wetlands
- Any demonstrable barrier