



MISSOURI DEPARTMENT OF CONSERVATION

Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180
Telephone: 573-751-4115 ▲ www.MissouriConservation.org

SARA PARKER PAULEY, Director

Reply to: Central Regional Office
3500 E. Gans Road
Columbia, MO 65201
Phone: 573-815-7901 x2872
Fax: 573-815-7902

January 18, 2024

City of Columbia Parks and Recreation, c/o Dave Dittmer
1507 Business Loop 70W
Columbia MO 65202

Dear Mr. Dittmer:

Matt Matheney and I enjoyed meeting with you to discuss a stream crossing on Gans Creek Recreational Area on the City of Columbia's property. The site (T47N, R12W, Section 5) is located on a third order portion of Gans Creek a tributary of Little Bonne Femme Creek in Boone County.

As you know, stream bank erosion is a natural process as streams will naturally meander back and forth across a flood plain over time. The natural meandering process directs water flow against the outside bends of streams creating the most erosion potential at these sites. Without a good, wooded corridor, erosion can be greatly accelerated.

The stream crossing, we looked at consisted of a bank height of 3-4' with a water depth of < 1' and 40' wide stream channel. The crossing is located along a fairly straight stretch of stream with a very consolidated gravel bar between pools. This gravel bar appears to have been stable for quite some time and for this reason, we feel this crossing may only need some stabilization on the approaches to help reduce erosion from mountain bike traffic. The crossing itself can be developed and leveled out by hand placing existing creek rock. We don't think for the trail use, it is necessary to excavate a reinforced stream crossing for bike and foot traffic. The stream corridor at this site is nearly 75 feet wide. The stream corridor upstream from this location is narrower and should be widened to a minimum of 100 feet to preserve stream bank stability.

The Missouri Department of Conservation recommends at least a 100-foot corridor of uneven aged trees and vegetation (riparian corridor) on each side of a third order stream. The massive root systems of riparian trees help hold soil in place and act as natural nutrient filters for surface run-off. Trees such as cottonwood, sycamore, river birch, silver maple, walnut and pin oak should be planted in the tree corridor. Good, wooded corridors also filter sediment, trap flood debris, reduce bottomland erosion, improve water quality, and enhance fish and wildlife habitat. I would suggest encouraging woody tree growth along both sides of the stream where possible.

COMMISSION

MARGARET F. ECKELKAMP
Washington

STEVEN D. HARRISON
Rolla

MARK L. McHENRY
Kansas City

RAYMOND T. WAGNER, JR.
Town and Country

The Missouri Department of Conservation has a tree nursery where landowners can purchase tree seedlings for a nominal cost. I have enclosed a "Seedling Order Form" for your convenience.

These recommendations are based on our field inspection of the site. Within the physical conditions present on site at the time of inspection, these recommendations offer a reasonable approach to your stream bank erosion and crossing concerns. As with any stream related issue there are risks that must be assumed; any change in the physical condition or greater than expected meteorological extremes can create change in the stream and its banks. Our recommendations have taken into account and minimized any foreseeable risks.

Please feel free to contact me if you have any questions, or if I can be of any further assistance.

Sincerely,



Scott J. Voney
Fisheries Biologist

Enclosures

c: Austin Dixon, Private Lands Conservationist, MDC
Matt Matheney, Stream Specialist, MDC