



Jim Douglas, Director
Nebraska Game and Parks Commission
2200 N. 33rd St
Lincoln, NE. 68503
402-471-5539

04/19/2021

Dear Mr. Douglas,

The department has reviewed the Nebraska Game and Parks (NGPC) plans for a new reservoir to be constructed on an unnamed tributary of West Papillion Creek in Douglas County Nebraska. Based on this review the design as proposed will provide water quality protection within the reservoir, as well as, downstream for many years into the future as such the department supports the grant application being submitted to the Reservoir Fisheries Habitat Partnership.

Being an urban stream/reservoir, some of the most common issues are sedimentation, E.coli, and high levels of nutrients (both dissolved in the water column and associated with sediment). The proposed sediment basin provides a well proven method to prevent and/or slow sedimentation from entering the main part of the reservoir. We have worked with NGPC on numerous lake construction/renovation projects and the sediment basin/wetland combination is by far the most cost-effective method we have found to prevent nutrient rich sediment from negatively affecting water quality and shortening the life span of reservoirs. In addition, E. coli is often associated with high sediment loads. By reducing the associated sediment before it enters the lake will allow UV light penetration to kill E. coli that enters the reservoir.

Other proposed structures within the lake have also shown to greatly reduce sedimentation and the turbid waters associated with them. Armored shorelines will help to prevent shoreline erosion while armored angler nodes and break waters both help to slow fetch that can erode shorelines and resuspend bottom sediments. This will not only help to prevent E.coli issues but will also help to reduce nutrients entering the water column.

Finally, providing increased depth of the lake in numerous places will help the lake to better attenuate any nutrients that are present.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Macy".

Jim Macy
Director