Duck Creek (1209H) Recreational Use Attainability Analysis Summary and Recommendation

A recreational use attainability analysis (RUAA) was conducted on Duck Creek (1209H) in the summer of 2010 to determine the appropriate recreational use and numeric criteria. Duck Creek is an unclassified perennial water body that is approximately 19 miles in length. The creek is located in Robertson and Limestone counties. It was identified in the 2014 Texas Clean Water Act Section 303(d) List of Impaired Water Bodies due to elevated bacteria levels. It was initially listed in 2006.

The RUAA identified that the presumed use of primary contact recreation (PCR) for Duck Creek should be revised to secondary contact recreation 1 (SCR 1). SCR applies to water bodies where water recreation can occur, but the nature of the recreation does not involve a significant risk of ingestion. SCR 1 applies to intermittent and perennial freshwaters where site-specific information demonstrates that primary contact recreation has little to no likelihood of occurring due to physical characteristics of the water body such as shallow depths or lack of pools.

During the field surveys, field staff did not observe recreation. Two interviews were conducted with landowners who had property along or near the creek. These landowners had not personally used, witnessed, or heard of PCR occurring in Duck Creek. One landowner stated that they used the creek for fishing. Evidence of recreation included a footpath, graffiti, an animal trap, and a rifle shell. Duck Creek had an average thalweg of 0.52 meters (20.47 in) and lacked pools deeper than 1 meter. The thalweg depth was calculated from data from supplemental site visits. Only one flow measurement was taken and the flow was 4.36 cubic feet per second. The Palmer Drought Severity Index (PDSI) indicated normal conditions during both field surveys. Public access was moderate with the creek flowing through rural areas with no public parks along the stream and most of the land being privately owned. All of the sites were at road crossings, and the majority had fences upstream and/or downstream of the access point. Instream obstructions such as fences and logjams were present at all four sites.

Instream obstructions and limited access decrease the likelihood of PCR use. Duck Creek has a shallow average depth and no accounts of PCR, supporting reclassification to SCR1. In accordance with §307.4 (j)(3)(C) of the Texas Surface Water Quality Standards, the TCEQ recommends a reclassification from PCR to SCR1 with the corresponding geometric mean of 630 colonies *E. coli*/100mL for all of Duck Creek, from the confluence with the Navasota River in Robertson County to Twin Oak Reservoir dam in Robertson County, excluding Twin Oak Reservoir. This reclassification is appropriate due to "physical conditions related to the natural features of the water body" in accordance with reasons specified in 40 CFR §131.10(g)(5).

Prior to changing the currently assigned recreational use of Duck Creek in the Texas Surface Water Quality Standards, the TCEQ would provide additional public notice and opportunity for public comment. In addition, the U.S. Environmental Protection Agency would review this proposed change under the provisions of the federal Clean Water Act.