

1.10.8 Turkey Creek

Turkey Creek begins approximately five miles north of Woodville in Tyler County and flows intermittently to the southeast with perennial flow beginning about 12 miles southeast of Woodville before the confluence of Village Creek about eight miles north of Kountze in Hardin County. The Turkey Creek Unit is arguably the most biologically diverse unit within the Big Thicket National Preserve, as 70 species of trees, 50 kinds of wild shrubs, 40 plus varieties of vines, and about 486 species of herbaceous plants have been identified within the unit (Peacock 1994). Numerous cypress sloughs, baygalls, swamps, and beaver ponds border the creek, many of which depend on overbank flows from Turkey Creek (Gunter 1993, Peacock 1994). Logging activities adjacent to the Turkey Creek Unit over the last few decades have reduced forested lands within the Turkey Creek watershed (Gunter 1993). Land use analysis of drainage areas upstream of sampling reaches within the Turkey Creek watershed showed a ten percent decrease in forested lands upstream of Hwy 1943 (Moring 2003). Because the Corridor Units of the Big Thicket National Preserve are relatively thin strips of land, increased deforestation within the watershed could impact the aquatic community of Turkey Creek as the physical characteristics of the drainage area are altered. Rizzo et al. (2000) monitored water quality (2-4 week intervals) in six drainage basins of the Big Thicket National Preserve between 1996 and 1999 and found Turkey Creek to be among those with the best water quality (i.e. low nutrients, low chlorophyll a, no hypoxia). Biological collections from Village Creek also indicate water quality is excellent. Bordelon and Harrel (2004) collected six species of freshwater mussels from Turkey Creek. Because freshwater mussels are good indicators of water quality and are often the first organisms to decline during adverse conditions (Resh and Rosenberg 1993, Howells et al 1996), the presence of six species indicates the creek is still relatively undisturbed. Additional biological collections from two locations on Turkey Creek have documented 27 species of fish (Appendix C), including seven species intolerant of degradation, and 139 taxa of benthic macroinvertebrates, including 113 aquatic insect taxa (Moring 2003). The ecologically significant stream segment is from the confluence with Village Creek in Hardin County upstream to FM 1943 in Tyler County.

- **Riparian conservation area-** fringed by the 7,784-acre Turkey Creek Corridor Unit of the Big Thicket National Preserve



Figure 30. Turkey Creek north of FM 3063 in Hardin County (8/15/01).



Figure 31. Turkey Creek south of FM 3063 in Hardin County (8/15/01).