EcoSummary

BioRecon Report

Whiskey George Creek

7/14/98



BioReconnaissance Report (BioRecon): A rapid, cost effective screening mechanism for identification of biological impairment.

Purpose and Background

Whiskey George Creek at 65 drains Tates Hell Swamp in Franklin County to East Bay. Landuse within the drainage basin consists primarily of natural wetlands.
Whiskey George has been placed on the 303(d) list. Waterbodies on this list are required by EPA to have a Total Maximum Daily Load (TMDL) study performed on them. The purpose of the TMDL is to determine the amount of pollution reduction needed to restore the system to a condition suitable for its designated use. In this case, the designated use is for recreation and maintenance of a healthy, well-balanced aquatic community.

DEP's Environmental Assessment Section was requested to assess the status of selected waterbodies on the TMDL list that were placed on the list with limited data. The data available for these selected waterbodies consisted of less than 10 observations in the storet database, somewhat dated, pre-1990 information, or qualitative non-point source survey data only.

Results

Whiskey George Creek was placed on the 303(d) list for possible violations of dissolved oxygen and coliform limits. Physical/chemical parameters and nutrients were sampled in July of 1998. Macroinvertebrate communities were scheduled to be sampled using the Bio-Recon technique. A Bio-Recon is a screening tool that assesses freshwater macroinvertebrate communities based on geographic thresholds. Whiskey George Creek at hwy 65 is a tidally influenced system and experiences wide ranges in salinity characteristics. The conductivity during sampling was 5200 umhos/cm^2, making an assessment using the Bio-Recon method inappropriate.

Measured physical/chemical parameters and water quality variables met all of the criteria for Class III waterbodies. Dissolved oxygen concentration was 6.2 mg/l, above the state standard of 5.0 mg/l. Fecal and total coliform counts were low despite recent rainfall (3 inches the previous day), 12 colonies/100mL and 260 colonies/100mL, respectively. Turbidity levels (2.6 NTU's) were acceptable at Whiskey George Creek (below the 50th percentile for Florida streams). Conductivity levels were a bit elevated (5200 µmhos/cm) due to the tidal influence felt at this station. Nitrite-nitrate concentrations were below the detection limit (0.004 mg/l). Total Kjeldahl nitrogen (0.41 mg/l) and total phosphorus levels (0.014 mg/l) were lower than levels found in 90% of other streams in the state.

Suggestions

Due to tidal influence, macroinvertebrate communities were not evaluated. All physical/chemical parameters, however, did conform to Class III state standards including the 2 parameters of concern, dissolved oxygen and coliform bacteria. Water quality data suggests Whiskey George should be removed from the 303(d) list.

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Figure 1: Overview Map of Whiskey George Creek

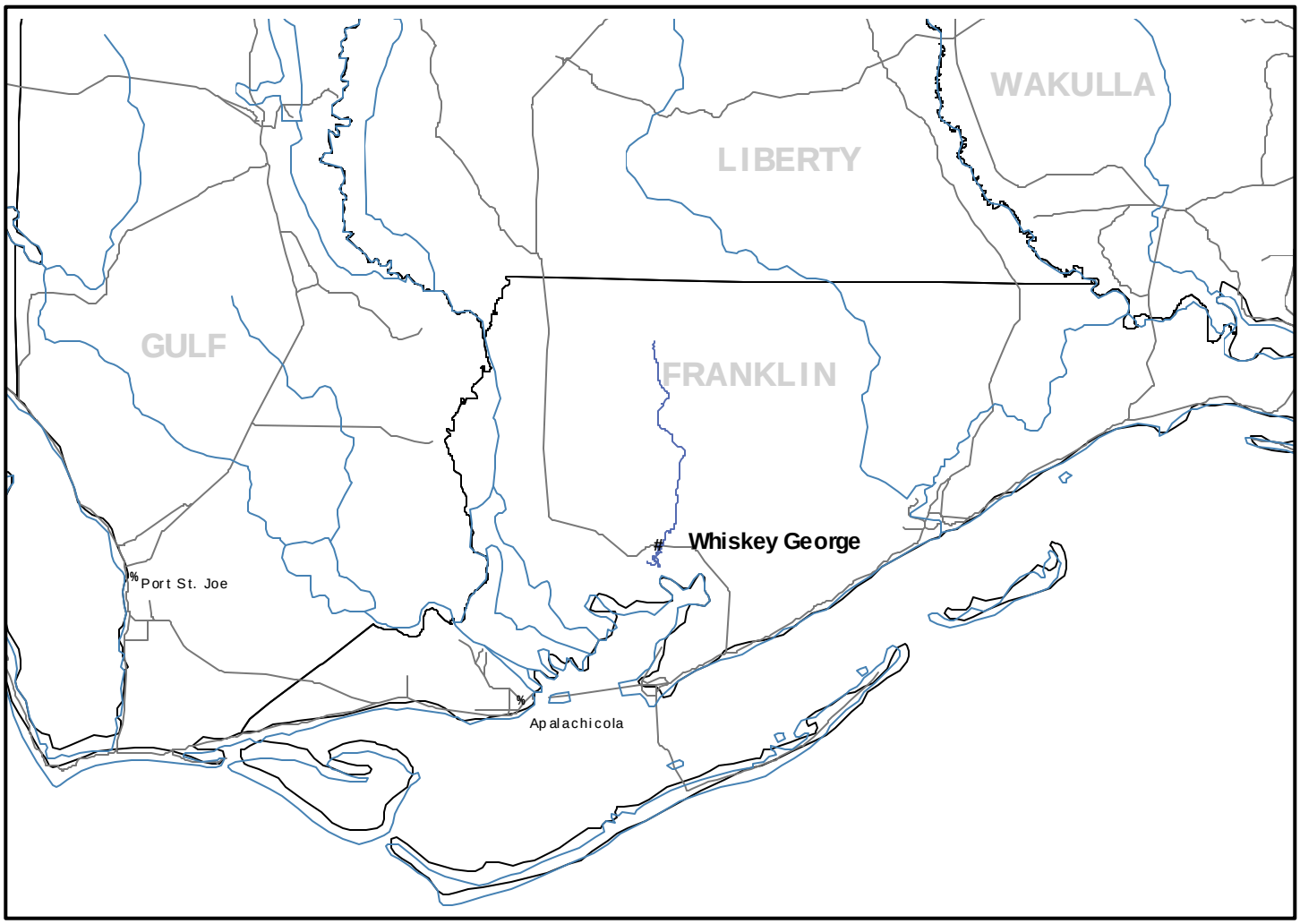


Figure 2: Data for Selected Parameters

Station	Date	# Taxa	Florida index	EPT	pH (Std Units)	Temp (C)	NOx (mg/L)	TKN (mg/L)	TP (mg/L)	Fecal coliforms (col/100 ml)	Total coliforms (col/100 ml)
WHISKEY GEORGE @ 65	7/14/98	13	1	5	6.7	29.7	BDL	0.41	0.014	12	260

STORET Code	Date	Average Depth (ft)	Width (ft)	Area (sq. ft)	Velocity (ft/s)	Flow (cfs)	DO (mg/L)	Cond. (umhos/cm)
294945084531501	07/14/98	1	40e	240e	0.1	N/A	6.2	5200

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