CONCLUSIONS

The primary water quality concern throughout the basin continues to be the elevated chloride and total dissolved solids concentrations. Elevated chloride and associated TDS concentrations increase the drinking water treatment costs, stress aquatic ecosystems and also creates a suitable environment for golden algae.

A recurring theme throughout the Basin Overview section of this report is that elevated levels of bacteria also continue to be an issue of concern and are the cause of the majority of stream impairments in the Brazos Basin. Most of the streams that are impaired are unclassified segments that are small, rural, prairie streams which are characterized by low to intermittent flows. The task of addressing bacteria in the Brazos River Basin is particularly daunting because current water quality standards mandate that all waterbodies meet primary contact recreation criteria (e.g. swimming and divining). It has long been debated at the state level about the appropriateness of designating contact recreation use for small, rural streams with low to intermittent flow because it is usually not possible for submersion recreational activities to occur due to low water levels. In many of these small, rural streams compliance with the primary contact recreation standard is hindered by the natural features of the microwatershed.

To address the inability of small, rural streams to meet primary contact recreation criteria, the Texas Commission on Environmental Quality (TCEQ) is proposing to the U.S. Environmental Protection Agency (EPA) a revision to state water quality bacteria standards. If approved by EPA, TCEQ's proposal will create a four-tiered bacteria standard consisting of primary contact recreation, secondary contact recreation 1, secondary contact recreation 2 and noncontact recreation. This tiered-structure, if approved by EPA, will eliminate 79 waterbodies from the 303(d) List and would result in less stringent bacteria criteria for 246 waterbodies statewide.

Each tier will have unique bacteria criteria. A streams flow characteristics and recreational potential will determine which standard it is evaluated against. Waterbodies where water recreation activities involve a significant risk of ingestion of water, such as wading by children, swimming, water skiing, diving, tubing, surfing and whitewater kayaking, canoeing and rafting, will be evaluated using the primary contact recreation standard. Waterbodies where water recreation activities do not involve a significant risk of ingestion of water, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, will be evaluated using the secondary contact recreation 1 standard. Waterbodies where water recreation activities do not involve a significant risk of ingestion of water and risk of ingestion occurs less frequently than secondary contact recreation1 due to physical characteristics of the waterbody or limited public access, will be evaluated using the secondary contact recreation 2 standard. The noncontact recreation standard will be applied to

waterbodies where primary and secondary contact recreation should not occur because of unsafe conditions, such as areas used for ship and barge traffic.

Routine monitoring continues to be conducted to document other water quality issues, including low dissolved oxygen levels that have been measured in many small tributaries throughout the basin.

Expanded ambient monitoring over the past decade has given water quality managers data to conduct better and more efficient assessments. Monitoring in watersheds that previously had limited data has improved the knowledge of water quality conditions in rural areas. The combination of data collection, analysis, education, stakeholder involvement, and reasonable implementation strategies are key factors in watershed management and the understanding of aquatic ecological systems.

The Authority will continue to monitor sites, analyze data, determine trends, and assist in the development of Best Management Practices to maintain the water quality in the Brazos River Basin. However, this effort has become increasingly difficult because Authority operational costs for CRP have increased steadily while the level of funding received by the Texas Clean Rivers Program (CRP) has not since the programs inception in 1991. This has forced CRP partner agencies to reduce sampling events and parameters collected, while the number of monitoring sites and parameters needed to meet the CRP goals are ever increasing. An increase in program funds is recommended to provide a constant, reliable source of water quality data. It is the BRA's opinion that the greatest attention should go to waterbodies with the greatest risk of not attaining water quality standards.

As an agency of the state, and in compliance with its mission, the BRA provides financial assistance as much as possible to alleviate some of the budget shortfalls, and also contributes to the CRP funding by payment of fees assessed to fund TCEQ's water programs. The Authority supports itself through contractual agreements with governmental and non-governmental entities, limiting the additional funding required to adequately monitor the basin's many water resources. Nevertheless, the BRA will continue to work toward full attainment of the Clean Rivers Program goals.