

1 – WATERSHED INTRODUCTION

WATERSHED PROTECTION PLANNING

The San Bernard Watershed Protection Plan process was started in September 2009. Portions of the San Bernard River do not meet contact recreation standards due to elevated bacteria levels, and they have been placed on the TCEQ list of impaired waters (303d). There are also sections of the San Bernard that have excessive nutrients and low dissolved oxygen, which may negatively affect fish and other aquatic life. Over the course of the two year project, the Houston-Galveston Area Council has worked with community organizations, citizens, government agencies, and local industries. The overall goal of the WPP is to identify the causes and sources of water quality impairments and to bring water quality standards into compliance with state criteria. This WPP was conducted to bring the water quality up to acceptable standards on a voluntary basis before it declined to the point where a TMDL would be required.

The San Bernard Watershed Protection Plan is a study of the entire watershed to identify pollutant sources and causes, and to form an action plan to control the pollutants entering the waterways. This plan integrates a number of studies to determine what may be causing changes in water quality. Ambient water quality monitoring has been going on in the watershed in some locations for as many as forty years, and a few studies have been done on the river to assess habitats and flooding. This Watershed Protection Plan is a stakeholder driven process, which provides an opportunity for the local leadership to guide the process so that the outcome fits for their specific watershed, and plans for potential future growth without further impairing the water quality. The population of the watershed is expected to more than double in the next thirty years, which could potentially have major impacts on water quality. Once completed, this plan will be approved by the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA).

Watershed Protection Plans address the causes and sources of pollution in watersheds. There are two types of pollution in the watershed: point source and non-point source. Point source pollution comes from a known source such as an outfall from a wastewater treatment facility. Point sources are generally regulated by state and federal laws and require a permit. Nonpoint source pollution is the collection of all of the other runoff that flows into the waterways including agricultural uses, residential uses, commercial uses, and natural areas. When rainwater flows across the land in a watershed it takes with it all contaminants that are left behind by everyday uses. Since nonpoint source pollution is a combination of many types of pollutants, it is hard to determine where it is coming from and it is difficult to regulate. The vast majority of the San Bernard Watershed is devoted to agricultural uses and has scattered areas of residential development, with a few more dense residential developments in the tidal portion of the watershed. Many areas of the tidal portion of the river are used for recreation by local residents. Some of the upper portions of the watershed have very low flow due to overgrowth of vegetation along the waterways or siltation due to lack of vegetation.

The San Bernard Watershed Protection Plan will give the local decision makers the tools necessary to improve water quality in the region, prepare for growth, incorporate Best Management Practices (BMPs), and coordinate the framework for implementing and integrating protection and restoration strategies. This plan also identifies management techniques, sources of funding, and technical assistance for the problems identified in the watershed based on modeling efforts and expected population growth. The Watershed Protection Plan (WPP) will follow the Nine Key Elements of watershed based plans as required by the Environmental Protection Agency (EPA). Stakeholders have been very active in the watershed and were instrumental in the development of this Watershed Protection Plan and will continue to be the major force that drives the implementation of this plan.

