

REGIONAL WATER QUALITY PROTECTION PLAN GOALS AND OBJECTIVES

Stakeholder Committee Goal Statement:

“Develop an implement-able Regional Water Quality Management Plan that **preserves and protects** resources and manages activities within the planning region so that existing and future land use, land management, and development activities **maintain or enhance the existing water quality of the groundwater and surface water within both the Barton Springs Segment of the Edwards Aquifer and the contributing portion** of the watersheds within the planning region, for the benefit of people and the environment.”

Objectives necessary to accomplish the goal:

Objective 1

How do we define “Water Quality” for this project?

1. Develop a working definition of water quality for the planning region which can be utilized during the development of the regional plan.

Strategy to Achieve Objective 1

- Use the definition of “Water Quality” adopted by the project Executive Committee:

Water quality being defined for this project as: “The condition of water, as affected by chemical, physical, biological and habitat factors, and its hydrological regime, for use as public and private drinking water supplies, for protection and propagation of the Barton Springs Salamander, and for aesthetic and recreational use within the contributing area and aquifer boundary for the Barton Springs segment of the Edwards Aquifer”.

- Supplement the common definition of “Environment” to include the earthen media, water, air, flora and fauna in the planning region.
- Supplement the definition of the term “hydrological regime” to include flow rates, flow volumes, base flow and additional storm water flows.
- Supplement the Executive Committee’s definition of “Water Quality” to include not only the protection and propagation of the Barton Springs Salamander, but also other beneficial plant and animal communities.

Objective 2

What Causes Water Quality Problems?

2. Identify activities within the planning region that have had or could have a short term or long term adverse impact on water quality in the Barton Springs Segment of the Edwards Aquifer or in the contributing watersheds within the planning region.

Strategy to Achieve Objective 2

- Use existing rules, regulations, published studies and generally accepted engineering and scientific standards to list short term and long term activities that have been shown to adversely impact water quality.
- Rank short term and long term activities with respect to their potential impact on water quality within the planning region.
- **Impacts of Infrastructure?**

Objective 3

What Standards do we Apply?

3. Identify standards that can be used to establish goals and **maintain or enhance** baseline water quality, including: (1) existing regulatory standards for drinking water; (2) current analysis of groundwater quality in the Barton Springs Segment of the Edwards Aquifer; (3) current surface water quality in the contributing watersheds within the planning region; (4) scientifically-based thresholds for adverse impacts to human health and the environment; and, (5) existing hydrologic flow regimes.

Strategies to Achieve Objective 3

- Review existing groundwater, surface water and drinking water regulations to determine applicable water quality parameters and their corresponding limits.
- Review existing groundwater, surface water and drinking water evaluations to determine any available historical and current levels for the identified water quality parameters.
- Review technical literature to determine any regulatory agency approved scientifically based water quality parameter thresholds for adverse impact to human health and the environment.
- Review technical literature to determine any peer-reviewed scientifically based water quality parameter thresholds for adverse impact to human health and the environment.
- Review technical literature to identify methods for determining existing stormwater runoff rates and volumes.

Objective 4

Who Can Act?

4. Identify entities capable of implementing, monitoring, and enforcing water quality protection measures within the planning area, as well as any existing legal and institutional constraints on these entities, and develop procedures to educate and inform the public of voluntary measures they can implement.

Strategies to Achieve Objective 4

- Review existing legislation and legal authority for existing entities in the planning region and determine their existing powers to regulate activities affecting water quality.
- Review options for implementing water quality plans among existing local political subdivisions, determine areas of gaps/overlaps and recommend solutions to fill the gaps and clarify areas of overlap.
- Recommend options for establishing legal authority to implement any new water quality protection measures not currently authorized, including possibly establishing a new entity or entities, or expanding the authorities of existing entities.
- Develop a communication strategy to educate and inform the public of voluntary measures they can implement.

Objective 5

What Measures are Already in Place?

5. Identify existing water quality plans and regulations currently in effect in the planning region including any parameters used to measure the success of those plans and regulations, identify any significant deficiencies in these plans and regulations, and identify proposed solutions for these deficiencies.

Strategies to Achieve Objective 5

- Review existing water quality plans and regulations which include parameters used to measure the success of water quality protection measures.
- Using existing rules, regulations, published studies and generally accepted engineering and scientific standards list what can be considered existing structural and non-structural Best Management Practices (BMP's) for the protection of water quality. As part of this evaluation an assessment of the success rate and cost of operations and maintenance of the BMP's will be performed.
- Using existing rules, regulations, published studies and generally accepted engineering and scientific standards develop monitoring standards for measuring water quality of the groundwater and surface water within both the Barton Springs Segment of the Edwards Aquifer and the contributing portion of the watersheds within the planning region, as defined in the objectives.

Objective 6

What New Measures, Policies and Initiatives are Needed?

6. Identify new structural and non-structural water quality protection measures to maintain or enhance the existing groundwater or surface water quality, as defined above, including any parameters used to measure the success of those protection measures.

Strategies to Achieve Objective 6

- Using published studies and generally accepted engineering and scientific standards, list additional structural BMP's (i.e. engineered devices, constructed features, etc.) for the protection of water quality. As part of this evaluation an assessment of the success rate and cost of operations and maintenance of the structural BMP's will be performed.
- Using published studies and generally accepted engineering and scientific standards, list additional non-structural BMP's (i.e. administrative controls, zoning/development requirements, open space preservation, etc.) for the protection of water quality. As part of this evaluation an assessment of the success rate and cost of operations and maintenance of the non-structural BMP's will be performed.
- Identify alternative sponsors and methods of financing for land preserve acquisitions, developing capital improvements, monitoring and operations and maintenance to meet water quality parameters.
- Using published studies and generally accepted engineering and scientific standards, develop recommendations for the control of additional stormwater runoff rates and volumes resulting from development activities.
- Using published studies and generally accepted engineering and scientific standards, develop recommendations for alternative sources and uses of water for consumptive purposes, to reduce the need for additional water sources in the region.
- Using published studies and generally accepted engineering and scientific standards, develop recommendations for the preservation of open space.
- Develop recommendations for parameters to be used to measure the success of new water quality protection measures.
- Develop recommendations for minimizing "new" sources of pollution within the planning region.
- Develop recommendations to minimize negative economic impacts to land owners and the general public.
- **Supplementation?**
- **Impacts of Infrastructure?**

Objective 7

What is our Strategy for Action?

7. Identify a strategy to: (1) enforce existing water quality protection measures; (2) implement the identified solutions for existing deficient water quality protection measures; (3) implement the identified new water quality protection measures; (4) monitor and assess the effectiveness of the water quality protection measures; and, (5) revise current and future water quality protection measures assessed to be ineffective.

Strategy to Achieve Objective 7

- Using the previously developed assessment of the existing water quality protection measures, recommend procedures to adequately enforce existing water quality protection measures
- Using the previously developed assessment of any areas where existing water quality protection measures are deficient, recommend changes to those measures, and procedures to adequately enforce the proposed solutions.
- Using the previously developed list of additional structural and non-structural BMPs, recommend specific implementation measures and procedures to adequately enforce the implementation measures.
- Identify general public policies that influence water quality.
- Using the previously developed list of critical water quality parameters (including existing limits and other scientifically based thresholds), recommend specific monitoring measures, identify legal mechanisms for performing the monitoring, recommend the process to evaluate the monitoring data and assess the effectiveness of the water quality protection measures.
- Based on the recommended procedures for assessing the effectiveness of water quality protection measures, recommend procedures for revising and updating any water quality protection measures deemed to be ineffective.