

**Texas Instream Flow Program
Lower San Antonio River Study Design Workgroup
Meeting Notes
October 21, 2008**

**Decisions & Discussions
By Workgroup as a Whole**

Consensus Objectives

Participants agreed to the following as objectives to be used for the study design of the Lower San Antonio River, with the understanding that there could be some additional work on the objectives at the next meeting.

Overall Objective

- Determine natural, historic, and current parameters of water quality of the river system

Biology

- Determine and maintain flows necessary to support:
 - native species and biological communities known to occur in the river and riparian zones
 - key aquatic habitats

Geomorphology

- Determine and balance the geomorphic effects of different flows, including:
 - channel migration
 - positive and negative effects of overbank flows
 - woody-debris dynamics

Water Quality (to be evaluated further)

Objectives

- Maintain flow in order to sustain water quality to support:
 - Biodiversity,
 - Economic uses, and
 - Recreational uses

Indicators:

The workgroup also noted the following as possible water quality indicators

- Dissolved oxygen levels
- Purity
- Sensitive or intolerant species
- Contact recreation
- Low bacterial count
- Edible fish
- Salinity

Connectivity

- Identify the interaction of groundwater and surface water
- Evaluate the connectivity of important habitat features of the river and riparian zone that support the basin goal

Objectives under Consideration

Hydrology/Hydraulics. The workgroup as a whole discussed but did not reach consensus on objectives for the Hydrology/Hydraulics discipline. The following reflect some of the ideas being discussed:

- Determine and maintain a flow regime within the natural distribution and range of variability
- Establish programs to correct for extreme high and low flow stages
- Determine and maintain significant elements of the flow regime that supports all other study objectives
- Determine and maintain the ecologically significant elements of the flow regime
- Evaluate water losses and gains through the system
- Manage a variable flow regime to sustain ecological processes and productive capacity

Objectives Not Yet Discussed

With the Workgroup as a Whole

Other: The smaller groups developed proposed objectives that were in an “other” category. Some of these objectives were moved into one of the five disciplines or connectivity category. The following remained and were not discussed by the group as a whole:

- Define goals for recreational uses of the San Antonio River (type and location)
- Buy-in from stakeholders and users

Proposed Objectives Generated

By Smaller Groups of Participants

The workgroup, as a whole, developed the consensus objectives noted above after considering proposed objectives generated by participants in small groups. The proposed objectives of each small group are combined below, and are grouped in the four disciplines that will be part of the study, plus connectivity. A general “other” category was included for proposed objectives that did not fit within the categories reflecting the four disciplines or connectivity.

Small group participants responded to the following question, to develop proposed objectives:

What specific conditions are needed to accomplish our goal for the Lower San Antonio River?

Biology

- Determine and maintain flows necessary to support native species and biological communities known to occur in the river and riparian zones and habitat, and to the extent possible, decrease non-native species
- Maintain native species and biological communities known to occur in the river and riparian zone
- Increase native species diversity and decrease non-native species
- Increase or maintain desired riparian habitats
- Increase or maintain desired aquatic habitats
- Restore the river prawn

Geomorphology

- Determine the geomorphic effects of different flows
- Stabilize stream channel migration
- Balance the negative and positive effects of over bank episodes (positive: ecology; negative: erosion, oxygen to roots)
- Evaluate woody debris recruitment, placement and log jams, and determine flows that facilitate appropriate woody debris dynamics
- Minimize adverse effects of stream channel migration
- Establish baseline parameters of various components of the river system

Hydrology and Hydraulics

- Determine and maintain flows within natural range of variability
- Identify management schemes for withdrawals that cause flow to be less than subsistent
- Establish programs to correct for extreme high and low flow stages
- Determine and maintain a variable flow regime with similar distribution to the natural historical record

Water Quality

- Determine and maintain sufficient water quality to support sound ecological communities and local economic uses.
- Control/allow salinity upstream for species and estuaries (saltwater barrier)
- Maintain water quality sufficient to support sound ecological communities and local uses
- Maintain desirable oxygen levels and water purity to sustain and support biodiversity
- Maintain flow in order to sustain water quality that supports ecology and productivity
- Make the river fishable and sustainable (meet water quality standards)
- Determine natural, historic, and current parameters of water quality of the river system

Connectivity

- Consider interaction of groundwater and surface water
- Determine and maintain connectivity of important habitat features of the river and riparian zone that support basin goal

Other

- Define goals for recreational uses of the San Antonio River (type and location)
- Protection of tributaries and springs that flow into the San Antonio River
- Balance the negative and positive effects of over bank episodes
- Buy-in from stakeholders and users