

**DRAFT**

**STRATEGY PROPOSALS**  
**GUADALUPE RIVER BASIN & BAYS**  
**STAKEHOLDERS COMMITTEE**  
**AUG. 2011**

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**OVERVIEW**

As the population of the basin continues to grow, it becomes even more important that ALL people – from headwaters to estuary – become as conservative of their water as possible. Climate Change, it seems, as evidenced by more frequent, serious droughts and intense heat waves is more rapidly forcing these changes upon our basin and state.

Every gallon or acre foot that is conserved is one less that will be needed from the rivers in the basin, or from the aquifers and springs which feed them. Texans are just scratching the surface of maximum water conservation – we have long prided upon conservative people – now we must prove it again in how we manage our most precious natural resource. *Agua es Vida!*

Fortunately, we have numerous options or strategies available in order to improve our basin's catchment, its rivers and the ways we affect these resources.

Such as:

**CONSERVATION** – both agricultural, rural and urban dwellers.

**RAINWATER HARVESTING** – on homes, public buildings and businesses. Additionally, applications on streets, parking areas and farm and ranch lands can catch and hold rain and stormwater for recharge, human use and agricultural benefits.

**RIPARIAN ZONE & WETLAND RESTORATION AND STEWARDSHIP** – Proper stewardship of riparian zones on the basin's creeks and rivers can build up the in-bank water holding capacities which serve to maintain base flows during dry periods and provide a healthy riparian habitat for both aquatic species and other wildlife. Floods are reduced and water quality improved as well as other benefits.

Restored and healthy wetlands on the rivers or on the Gulf provide not only the cleansing actions desirable for inflows and a very productive wildlife habitat, but also protection for inland communities from hurricanes.

**DESAL of SEA WATER or BRACKISH GROUNDWATER**

**WATERSHED or “CATCHMENT” STEWARDSHIP - It is a proven fact among hydrologists, rangeland specialists and other field water personnel, that a well-managed, healthy watershed not only provides a desirable livestock and wildlife environment, but increases groundwater penetration and recharge, reduces floods and other benefits.**

**On many karst limestone watersheds, as are common across the Hill Country and Edwards Plateau, selective brush management and subsequent improved rangeland management, has proven to sometimes increase ground recharge and springflows. Normally, ashe juniper (cedar, mountain cedar) has been the target brush species, but in other cases water thirsty mesquite control has produced desirable hydrological benefits. There are numerous cases and studies that have given rise to these efforts from San Angelo south to San Antonio.**

**ALTERNATIVE OPTIONS – Permit buy-outs, dry year irrigation options, WW effluent dedications, riparian well buy-outs, cooperation and coordination with key riparian Groundwater Districts and Headwaters Groundwater Districts to improve and maintain spring flows, etc.**

**( TO BE CONTINUED, IN-DEPTH DISCUSSION OF EACH BELOW)**

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**CONSERVATION EFFORTS** - Each city, town and water utility sets goals to lower future river and/or groundwater use using a conservation program which best fits their situation for both the utility and customers. A stringent leak detection and customer education program would be installed. Excellent models would be either SAWS or El Paso's programs.

An inverted pyramid rate structure should be a major part of the program to reward low water users and to penalize water wasters. A share of the high water users' fees would be dedicated to paying for the conservation program and staff.

Rural homeowners would be strongly encouraged to follow suit with appropriate conservation efforts perhaps financially assisted by state, groundwater or river authority programs.

Final goal is to match SAWS 2010 per capita water usage within \_\_\_\_\_ years. Individual goals of a minimum reduction of per capita water use of 10% calculated every two (2) years. All using the same approved TWDB methodology.

**Example:** Guadalupe City now uses 250 gals. of water per person per day in 2011. By Jan. 1, 2014 water use would be lowered 25 gals. per person per day to an average per capita of 225 gals. per person per day. The town's utility serving 1200 persons has saved 30,000 gals. per day or 10,950,000 gals per yr.

**AGRICULTURAL IRRIGATION CONSERVATION** – As agricultural irrigation statewide and nationwide is the major use of fresh water it is imperative to assist and develop basin and/or groundwater district programs to constantly improve efficiencies of water canal delivery systems and on-farm irrigation conservation. If existing federal, state or water district programs do not provide sufficient cost-share funding, then a basin conservation committee will attempt to improve funding and level of participation. Similar conservation goals for various areas, crops and methods of irrigation would be developed with the aid of agricultural extension, research and federal expertise.

**EXAMPLES:** Improved center pivots using LEPA systems; in-ground soil moisture monitors; conversion of surface delivery by ditch or furrow

to pipelines, lined canals and permanent or annual drip irrigation where possible; improved crop varieties and farming/till methods; use of

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organic crop residue or plastic mulches to reduce water use and weeds; regular area conservation seminars and field days; and other methodologies as appropriate or needed. Special priorities for assistance would be for farms and systems using surface water for irrigation with the exception of the headwaters counties where groundwater is directly tied to recharge and springflows to creeks and rivers.

Irrigators drawing water from creeks and rivers in the basin with riparian rights and no permits would also be contacted and asked to enter into a voluntary water conservation program.

**DRY YEAR FARM IRRIGATION BUY-OUT –**

**RIPARIAN WELL BUY-OUTS -**

**WASTE WATER EFFLUENT DEDICATION -**

**RAINWATER HARVESTING PROGRAM (RWH) -**

