

Aquifer Group provides bridge between rural, urban and environmental water interests

Aquifer Group is part of Texas' first comprehensive public-private water infrastructure partnership

March 2007 (3) - Austin, Texas – Aquifer Group, LLC is structured to locate, design, finance, develop, construct, operate and maintain prolific aquifer recharge, surface water restoration projects throughout rural areas of Texas. As a sustainable groundwater reserve is developed recovery wellfields, treatment and supporting delivery canals and other infrastructure will be added to enhance environmental flows, improve drought preparedness and provide dependable sustainable water resources for the State's growing water demand.

Aquifer Group's proven technologies, products and services are important environmental, political and financial solutions for growing global needs to supply new water resources for mitigation, human and eco-system sustainability. Aquifer Group water reserve, recovery and transportation models are compatible with environmental, wildlife, fishery, ranching and recreational uses.

Unlike traditional water broker and speculator proposals to supply the rapidly growing urban areas by depleting groundwater resources from predominately rural ranching and agricultural regions of our State ...Aquifer Group has a viable four-segment alternative that **satisfies rural, urban, conservation and environmental interests!**

Segment One: Sustainable Strategic Reserve (groundwater) "banks" provide perpetual water and income for ranch and agricultural landowners in remote regions of the State through leases and royalties tied directly to restoration of aquifer recharge lost to erosion, siltation and sedimentation. Aquifer Group and other water industry experts anticipate that before the State's urban water shortage becomes critical, and, before well fields and water transportation infrastructure are in place, approximately 20 million acre-feet of excess surface water can be diverted into storage within existing and depleted aquifers and alluvial deposits. Even as this water bank is in the process of drawdown, recharge will continue.

The decades required to "bank" this natural resource allows rural areas much needed time for accurate groundwater mapping, planning and certification before withdrawal and transporting of water to urban areas during times of drought.

Segment Two: Restore rangeland water production by returning large areas of ranch land to pre-drought open savanna conditions by selective remediating or removing noxious brush such as mesquite and cedar to reduce surface and spring water lost to evapotranspiration. Water resources lost to the recent proliferation of brush is

estimated in the tens of millions of acre-feet annually. Accurate selection of brush remediation sites provides quantitative, measurable and manageable methods of significantly improving our environment and ranch value.

Restored rangeland water creates new diffuse water rights for diversion through aquifer recharge conduits into long-term storage where, unlike surface reservoirs, **water is not lost to evaporation or pollution**. As a method of **permanently improving rural land values and economies**, restored rangeland water that is not diverted into groundwater storage enriches grazing, wildlife and recreation by renewing water levels and restoring environmental flows for ranch ponds, creeks, rivers and springs.

Segment Three: Enhanced water resources and environmental flows result from Aquifer Group's proposed method to recover, treat and move huge quantities of water from rural areas to growing urban markets is well throughout and beneficial for rural, urban and environmental interests.

In an equitable manner from under large areas of rangeland, Aquifer Group well fields are designed to recover three classes of groundwater (recharge recovery credits + rule-of-capture/historical rights + brackish or marginal water). Specially designed water treatment/desalination/blending facilities greatly reduce drawdown of high-quality groundwater while reducing damage to the aquifer's reservoir and adjacent landowner rights.

When appropriate, Aquifer Group moves water from remote well fields via a two-part transportation system that **benefits both landowner and the environment**. In most cases, our well fields and blending facilities pump water via open, gravity flow concrete lined canals to large diameter pipes and pumped-storage where water is collected for the next stage of its delivery.

From our storage facilities atop plateaus in West and North Texas, gravity flow pipe or canal manifolds distribute controlled releases of water into the headwaters of certain Texas Rivers which are selected because they do not lose significant water through evaporation or infiltration. **Wildlife, fish, ranchers and recreational users along the Llano, San Saba, Guadalupe and other rivers benefit by sustained environmental flows during time of drought.**

Aquifer Group's raw water predictably makes its way to **short term storage in River Authority lakes** where raw water is then distributed to the growing urban markets via existing water delivery and treatment systems.

Segment Four: Urban water supply and recharge with treated effluent complete our environmental, political and financially correct solutions to Texas' growing water deficit.

Aquifer Group is studying the use of right-of-way established for the **Texas' SH 130 transportation corridor to construct major urban recharge and pipelines to balance and distribute water from our designated lakes and rivers** (see **Active Storage Reserve**). SH 130 is strategically located between the communities and metropolitan areas growing along Interstate 35 and significant natural recharge and traditional ASR well fields our scientists identified along the Carrizo Aquifer outcrop.

Our bi-directional pipeline, when coupled with Aquifer Group's unique well fields and water treatment/desalination/blending facilities, also **allow traditional aquifer recharge-storage and recovery of excess floodwaters and treated effluent normally lost to the Gulf of Mexico**.