

Aquifer Group to build and operate world-class Enhanced Aquifer Recharge Laboratories

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

January 2009, Fredericksburg, Texas – **Aquifer (AG) Group, LLC** is structured to locate, design, finance, develop, construct, operate and maintain segments of aquifer recharge, recovery, treatment and supporting delivery canals and other infrastructure to enhance environmental flows, improve drought preparedness and provide dependable sustainable water resources for the State's growing water demand.

Aquifer Group is the first U.S. owned company with the capabilities to locate lost aquifer recharge and complete surface water restoration opportunities prolific enough to support the Company's private-sector solutions of development and investment for sustainable public water recovery and delivery infrastructure.

As a replacement for management's proposed "**Pilot Project Initiative**", Aquifer Group is evaluating recharge sites to design, construct and operate of a series of owned research laboratories to implement and evaluate new paradigm water restoration and conservation technologies and methodologies. Each laboratory will also provide a secondary foundation for research into global water monitoring and related alternative energy opportunities.

Primary Research Mission:

Aquifer Group's **Enhanced Aquifer Recharge Laboratories (EARL Projects)** will be designed and managed for the evaluation, improvement and/or development of global sciences, technologies and methodologies necessary to create sustainable fresh water reserves and banks globally. In support of our current water projects management is considering four sequential mission specific laboratories.

1. The **Carrizo EARL Project** is a proposed \$54 million dollar infrastructure laboratory designed to demonstrate and research combining of enhanced natural recharge and traditional Aquifer Recharge and Recovery (ASR) methodologies for diversion, balance, storage and recovery of excess floodwaters and treated waste water effluent for municipal water reserves on a large-scale. A second component of this Project is to test utilization of sand aquifers as filters to mitigate biological components.

2. The **West Texas EARL Project** will demonstrate and research restoring or enhancing natural aquifer recharge along with the impact of using selective brush remediation as a tool for restoring surface water, spring flow, environmental flows and for diversion of excess flood flows into groundwater storage for the purpose of creating sustainable water reserves or "banks." In addition to water

quality research, components of this project will evaluate impact on agricultural economics, grazing and wildlife, environmental and climate impact.

3. The **Alternative Energy EARL Project** uses Aquifer Group's IR5 Methodology and our rangeland stewardship easement's geographical footprints as important tools to locate and develop sustainable alternative energy resources such as: a) Geothermal Power, b) Wind Power and Compressed Air Storage, c) Low-Head Hydroelectric Power, d) Solar Power, and, e) utilization of noxious brush and recharge basin filter grasses for feedstock for either boiler fuel or production of cellulosic fuels.

4. The **Nebraska-Kansas Ogallala EARL Project** will focus on methodologies to recharge the rapidly declining Ogallala Aquifer and enhancing regional surface water availability to support that recharge and satisfy water transfer rights, treaties and commitments.

Second Research Mission:

Aquifer Group's **Global Resource Flux Network (GRFNet)** and its aligned **Data Acquisition Network Operations Center (DANOC)** work in partnership with State and Federal Agencies, Texas Tech MESONET and industry leaders to create a comprehensive globally integrated platform to measure and monitor the impact and/or change (the flux) of atmospheric, surface and sub-surface resources such as water, vegetation, wildlife, atmospheric gasses and energy. Global Resource Flux evaluations will be conducted at various EARL facilities.

The GRFNet platform will also be evaluated for additional market opportunities such as disaster response and management, environmental and other credit or incentives monitoring, rural education and communication benefits, agricultural and commodity monitoring services.

Third Research Mission:

In association with Aquifer Group and others, **Midland Adams Group's** portfolio Company - **FFrE Energy, LLC** will utilize EARL Project facilities to research alternative energy opportunities such as wind generation and compressed air storage; low-head hydro and geothermal power generation and solar array power generation.

FFrE Energy will also work with Aquifer Group and others to evaluate cellulosic ethanol and bio-crude feedstock production opportunities.

Midland Adams Group is currently in discussions with **Battelle, Lawrence Livermore and Southwest Research Institutes** to select leadership alliance(s) to facilitate proposals, funding and manage research programs at the various EARL Projects.

As the EARL Project owner, Aquifer Group will fund identification, design, project management and site acquisition for each project. Additional funding is anticipated from industry leaders, local, state and federal agencies, and, international agencies charged with resolving global water, energy and other deficits.

"Aquifer Group and its partners are excited about the opportunity to create world-class research facilities and programs to help Texas and the world deploy much needed solutions more efficiently than traditional government based research is able to deliver." said **Aquifer Group Chief Executive Officer, John Brocksch**.