



May 2, 2011

Mr. Frederick Land
Regulatory Branch, CESWF-PER-R
US Army Corps of Engineers
Fort Worth District
Federal Building, Room 3A37
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Mr. John Trevino
Texas Commission on Environmental Quality
401 Coordinator, MSC-150
P.O. Box 12087
Austin, Texas 78711-3087

RE: Joint U.S. Corps and TCEQ Permit Application No. SWF-2010-00506
Applicant: CTA, LLC- Central Texas Airport

Dear Messrs Land and Trevino:

I am writing to request that the US Army Corps of Engineers (US Corps) and the Texas Commission on Environmental Quality (TCEQ) consider the proximity of the Central Texas Airport site to the Colorado River, the Hooper Aquifer and the Simsboro Aquifer in the Environmental Assessment and provide for protective measures commensurate with the water quality of these two water resources. Environmental Stewardship supports the request of the Bastrop County Commissioners' Court that the environmental assessment (EA) is made public prior to any finding being formally accepted; such as a need for an environmental impact statement (EIS) or finding of no significant impact (FONSI). In this way the US Corps, TCEQ, and the community will have the opportunity to review the EA and be assured that all relevant information has been made available and used in the analysis. If appropriate at that time, we requesting that the Corps of Engineers hold a public hearing in Bastrop County to take comments and provide the public and responsible State and local government authorities with the opportunity to provide any information that may be lacking in the EA.

Environmental Stewardship believes that a future public hearing and diligent review of the water quality implications are important responses to the desires of the citizens of Bastrop County as articulated in Opportunity Bastrop County – A Citizens' Vision for Bastrop County adopted by the Bastrop County Commissioners' Court in December 2007 and the Smithville City Council in May 2008. Citizens who participated in the "town hall" meetings and surveys indicated that they were very concerned about the environmental issues facing Bastrop County, especially in the face of rapid growth. These issues relate to groundwater protection, aquifer recharge, water conservation, land use practices, preservation of farm and ranch land and wildlife habitat, rainwater collection, air quality, and waste disposal. Water quality and quantity was the most important single issue, as well as the most important environmental issue, according to comments and survey results.

The citizens of Bastrop County desire that the county's aquifers, including the Colorado River alluvium, be preserved and protected, and that the springs and riparian habitats be identified and protected as indicated in the information taken from the Opportunity Bastrop County document included below (see more detail in Attachment 1).

Colorado River Water Quality

The segment of the Colorado River being impacted by the proposed application has the highest water quality standards possible for a body of water in the State of Texas. Stream Segment 1428, extending from Longhorn Dam to just upstream of FM 969 near Utley in Bastrop County, has been designated by the TCEQ for contact recreation, exceptional aquatic life, and as a public water supply. This segment has habitat characteristics that are outstanding for their natural variability, an exceptional or unusual species assemblage, an abundance of sensitive species, exceptionally high species diversity and richness, and a balanced trophic structure according to this classification standard. The “exceptional aquatic life” designation requires that the segment meet the highest standards for temperature, pH, dissolved oxygen, chlorides, sulfate, total dissolved solids, and bacteria. The Colorado River throughout this segment has been identified by the TPWD as an ecologically significant stream segment due to the presence of the state threatened blue sucker and the stream segment’s overall use (TPWD 1999a).

Since this segment has an “exceptional aquatic life” designation, it is our expectation that any construction of the magnitude anticipated by the subject permit application would be subject to “exceptional” habitat and water quality protective measures meeting the most current best management practices. Basically, we are requesting that the project use more natural materials; better stabilization methods (soil “lifts”, etc.); use pilot channels (as opposed to concrete “trickle” channels); native and appropriate vegetation; and so forth; essentially a green version of trapezoidal channels.

According to the notice, the project is proposing “to fill the 8.55 acre pond and 5,390 linear feet (0.866 acre) of ephemeral stream that would be permanently adversely affected by the placement of concrete box culverts into the stream with an airport runway overlay and a stormwater detention pond within the project area (Figures 4 through 6 of 6)”. In short, the project will pipe a rather large stream in the middle of the project—putting it into seven 10x5 foot box culverts. We are concerned about this loss of riparian habitat and the impact on water quality as well as fish and wildlife habitat.

In general we are opposed to putting this creek into a pipe. We believe the project needs to evaluate the size of the drainage area impacted by this action and determine to what extent buffer setbacks are needed and whether an environmental variance should be required prior to putting this creek into a pipe along with the “no build” option.

The project also proposes a very large retention pond to handle the drainage. While we agree that a retention pond is likely appropriate to control runoff and mitigate water quality issues, assuming it is a “wet pond” (labeled as a “retention pond,” on the map), it seems that this will likely create a waterfowl issues by mixing birds and planes in the same flyway. Additionally, we are concerned that a retention pond on a creek of this size and with a large drainage area in erosive soils will likely experience significant problems with sedimentation. The Austin-Bastrop River Corridor Partnership has been monitoring birds and other ecological features along this segment of the river for many years. We would request that the project conduct an evaluation of the Partnership’s data and talk with Brush Freeman (TPWD) to provide an assessment on the potential impacts of the proposed project on the birds and waterfowl in the impacted area.

CTA location vis-à-vis the Hooper, Simsboro and Alluvial Aquifers

The Central Texas Airport site situated in the fluvial terrace deposits (Qt). On both sides of the Colorado River is the Hooper formation (Eh) within the Wilcox Group (Ewi) with the Colorado River Alluvium (Qal) adjacent to the site. Less than a mile down river the Simsboro Formation (Esb) is located on both sides of the river. The designations on this map are the "outcrops" for these formations. (See "Geological Atlas of Texas Austin Sheet" Attachment 2).

The concern we are raising with the US Corps and TCEQ are 1) the potential for contamination of these important aquifers from storage tanks, runoff, leaks and spills, and 2) the potential for contamination of water quality in the Colorado River from these same sources. There is substantial literature going back to 1918, and corroborated by the Lower Colorado River Authority in recent years, that document that the Colorado River is a "gaining" river as it moves through this reach of the river (See Attachment 3). It is a "gaining" river because it gains water from the aquifers in Bastrop County. Estimates of the volume range from about 30 cfs to 50 cfs which equate to about 21,700 – 36,200 acre-feet per year. With this level of connection between the Colorado River, the alluvium, and these aquifers it is likely that any spill or leak would make it into the river and these aquifers. These aquifers are especially important to the people of Bastrop County and the State of Texas as they have been identified as significant potential water sources to human needs as Central Texas grows and prospers.

Aquifer Recharge

Due to the proximity of the CTA site with the Hooper and Simsboro Aquifers, there is opportunity to consider enhance aquifer recharge structures; with the caveat that adequate consideration be given to the potential for water quality contamination. The Simsboro Aquifer, particularly, is being targeted by water user groups throughout Central Texas to augment their water supplies. It is important that this aquifer be recharged as effectively as possible and with high quality water.

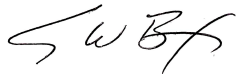
Overall Considerations

We believe that the project should conduct an environmental assessment that includes a literature review that compiles and assesses the existing data, determines the potential environmental impacts of the overall project, and provides the highest level of containment of fuel storage vessels, maintenance operations, storm-water runoff management and treatment, and habitat mitigation in keeping with the high standards that have been placed on this river segment. We believe that the proposed project should obtain and evaluate the water quality data that has been compiled by the LCRA and TCEQ professional staff as a part of the Texas Clean Rivers Program, and document the base-line water quality criteria against which the project's impacts are to be judged. In addition to this data, the significant body of data and information developed by the LCRA-SAWS project should be obtained, reviewed and evaluated.

Based on the results of the above mentioned environmental assessment the project should establish, in consultation with the LCRA, and fund a comprehensive and ongoing water quality monitoring program for both groundwater and surface water to guarantee the future protection of this important river segment.

We look forward to the opportunity to review the environmental assessment when it is made public prior to any final determination being made regarding the requested permits.

Respectfully submitted



Steve Box
Executive Director
Environmental Stewardship

cc: Bastrop County Commissioners
City of Bastrop
Lost Pines Groundwater Conservation District

Environmental Stewardship is a charitable nonprofit organization whose purposes are to meet current and future needs of the environment and its inhabitants by protecting and enhancing the earth's natural resources; to restore and sustain ecological services using scientific information; and to encourage public stewardship through environmental education and outreach. We are a Texas nonprofit 501(c) (3) public charity headquartered in Bastrop, Texas. For more information visit our website at Environmental-Stewardship.org.

Attachment 1 Opportunity Bastrop County

The citizen's desire to have the rivers, streams and springs protected

Opportunity Bastrop County – A Citizens' Vision for Bastrop County

The citizens of Bastrop County have indicated their vision for the environment (desired future conditions) through Opportunity Bastrop County, a document that was adopted by the Commissioners Court in December 2007 and the Smithville City Council in May 2008. Citizens who participated in the "town hall" meetings and surveys indicated that they were very concerned about the environmental issues facing Bastrop County, especially in the face of rapid growth. These issues relate to groundwater protection, aquifer recharge, water conservation, land use practices, preservation of farm and ranch land and wildlife habitat, rainwater collection, air quality, and waste disposal. Water quality and quantity was the most important single issue, as well as the most important environmental issue, according to comments and survey results.

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Support Aquifer Preservation and Protection (page 6)

Though most of the water supply for the County comes from the Carrizo/Wilcox aquifer group, much of the municipal and private water in the County are taken from the shallower aquifer immediately below and bordering the Colorado River.

However, the Colorado River alluvium aquifer is not recognized by the State as an aquifer and therefore is not afforded the protective measures and monitoring that other minor aquifers in the State receive. Since this shallow aquifer is such an important part of the geophysical and ecological system of the County, the County should take measures:

- To protect and enhance this resource by having it recognized as a minor aquifer; and
- To encourage land management and runoff management that enhances groundwater recharge.

Identify and preserve significant springs and riparian habitat (page 7)

The County should identify significant springs and other riparian features that contribute to water quality and have potential for nature-tourism. Springs along the river provide a considerable portion of its total flow after it leaves Travis County, especially in times of drought and low water releases from the Highland lakes. This flow supports river floating sports and fishing and dilutes Austin's effluent. Increased ground water pumping may result in these springs drying up and reducing surface water in the Colorado River and other streams in the County.

Preserving undeveloped natural buffers along streams has a significant economic benefit. Preservation retains the ecological value of the streams, reduces flooding, and reduces the need for storm water management because it slows runoff and filters many pollutants before they enter waterways.

These buffers also provide a corridor for wildlife movement as well as human walking trails along streams and the river. Leaving the river in a more natural state will also enhance its attraction for river users.

Groundwater provides municipal drinking water for most city and rural residents in the County. This groundwater derives from the Carrizo-Wilcox Aquifer, which reaches from the Hooper Formation in the west to the Carrizo Formation in the east. It provides water to riverbank terraces and springs along the Colorado as the river flows through Bastrop County.

One of the concerns voiced at several meetings was the ‘over pumping’ of groundwater, when more water is taken from the aquifer than is replenished. According to the LPGCD, currently more water use is permitted than is capable of being recharged into the aquifers from rainwater. With continued population growth, and the potential for groundwater to be pumped to users outside of the County, inadequate aquifer recharge will increase in magnitude and consequences.

Texas law is somewhat unique in that there is little control over groundwater pumping. Typically, property owners have been able to produce and use the water beneath their land. This was not a problem when the population was small and there were not very many wells. More wells being drilled results in more conflict among well owners about the amount of water being pumped versus capacity. Recent legislation will require that water suppliers have water conservation plans that encourage citizens and industries to conserve water

The Lost Pines Groundwater Conservation District (LPGCD) is charged with conserving groundwater in Bastrop and Lee counties. Texas law regarding groundwater districts and water mining exemptions limit the LPGCD’s ability to protect groundwater resources.

Working closely with the LPGCD can ensure that water management in new development minimizes negative impacts on existing well owners and future water supplies. The County’s involvement can ensure that desired future conditions for water sources and supplies adequately protect those resources.

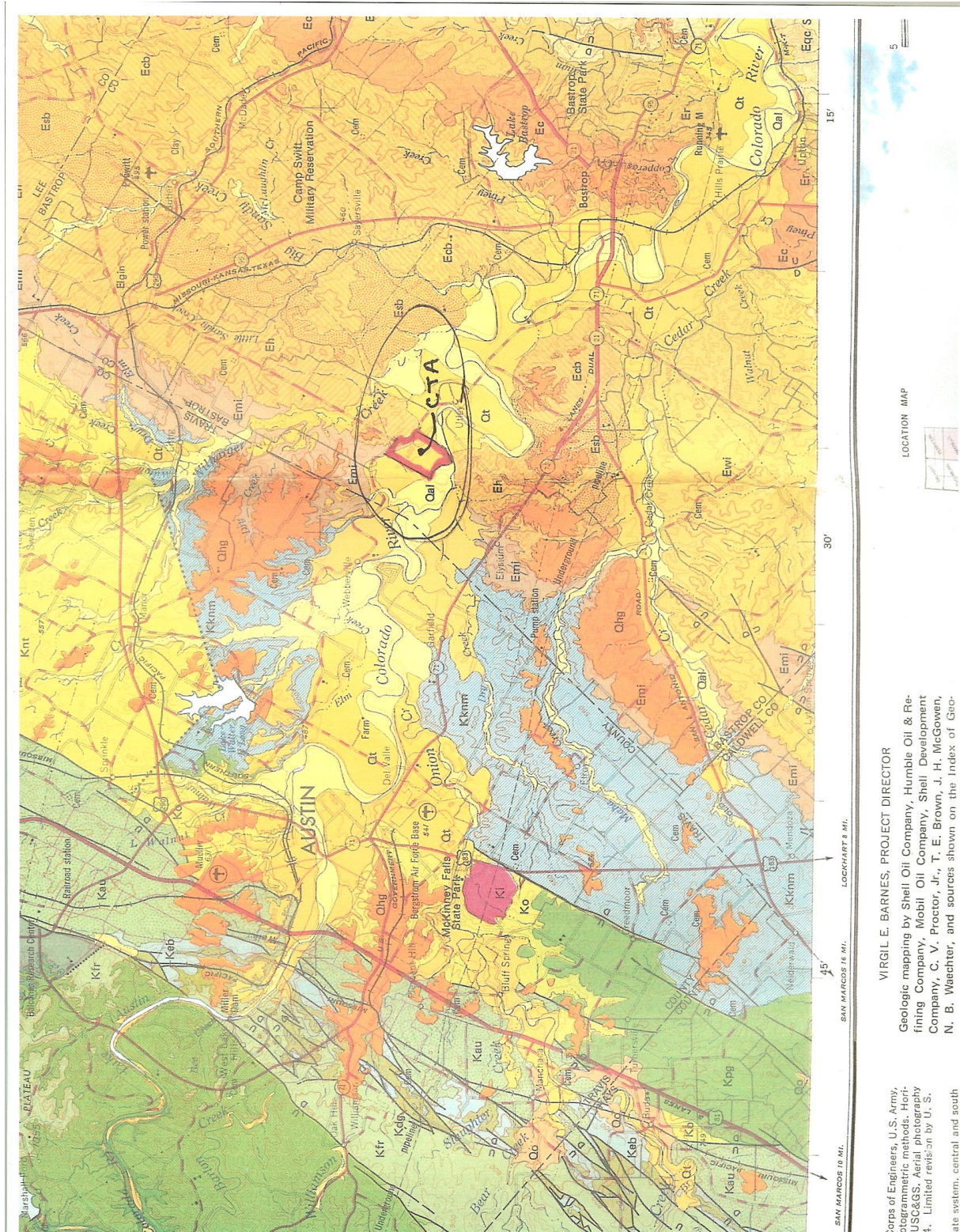
Becoming a stakeholder in the work of the Lower Colorado Regional Water Planning Group (LCRWPG – Region K) will help ensure adjacent cities and counties have similar objectives and use per-customer targets. Such conservation plans need to be incorporated into city/county regulations where possible.

LCRA Survey on Citizen’s Values – (October 24, 2009 press release)

During the summer of 2008 LCRA conducted a community conversation about water supply to get citizens input to help shape the types of water supplies that LCRA will study in their effort to plan for our grandchildren and great-grandchildren. More than 220 people attended three community conversations about water supply held in Burnet, Wharton and Austin. These were unique opportunities for neighbors to sit down together and discuss their values about water supply and wishes for future generations. Also, nearly 500 interested stakeholders participated in the process through the LCRA website. In all, participants suggested 189 water supply options and gave more than 150 values that they hold regarding water supply. LCRA staff compiled and analyzed the public input. The three water supply options mentioned most often were conservation, desalination and reuse. **The values that were mentioned most often were clean water, protection of the environment, recreation and lifestyle, and availability.**

Attachment 2 CTA Site Location

The Central Texas Airport site situated in the fluvial terrace deposits (Qt). On both sides of the Colorado River is the Hooper formation (Eh) within the Wilcox Group (Ewi) with the Colorado River Alluvium (Qal) adjacent to the site. Less than a mile down river the Simsboro Formation (Esb) is located on both sides of the river. The designations on this map are the "outcrops" for these formations. ("Geological Atlas of Texas Austin Sheet).



VIRGIL E. BARNES, PROJECT DIRECTOR

Geologic mapping by Shell Oil Company, Humble Oil & Refining Company, Mobil Oil Company, Shell Development Company, C. V. Proctor, Jr., T. E. Brown, J. H. McGowen, N. B. Waechter, and sources shown on the Index of Geo-

logical Atlas of Texas, U.S. Army, Corps of Engineers, U.S. Army, Topographic Methods, Horizontal Control, USC&GS, Aerial Photography, Limited revision by U. S. Geological Survey, central and south

**Protecting the Water Quality of the
Colorado River and Associated Aquifers.**

Protective Groundwater-Surface Water Safeguards – Having considered the water needs of Central Texas and the potential water available from the aquifers under the jurisdiction of the Lost Pines Groundwater Conservation District (LPGCD) within Groundwater Management Area 12 (GMA-12), and in consideration of the potential irreversible changes that might result from implementation of the desired future conditions described herein, the LPGCD has been requested to investigate and install a monitoring program in the District that will provide an early warning of potential unintended impacts to the Colorado River, streams and springs within Bastrop and Lee counties. An adjunct system would be appropriate for the Central Texas Airport to ensure that leaks, spills or other contamination from the CTA does not impact the aquifers or the river as a result of the water “gained” from the aquifers in this region or otherwise contaminate the aquifers.

Historical records¹ and recent studies² indicate that the Colorado River has been, and remains, a gaining river as it passes through the river segment associated with the Carrizo-Wilcox aquifer group, especially the Simsboro outcrop. The historical low-flow studies conducted by the USGS¹ in 1918 and flow-duration curve generated by Dutton¹ in 2003 indicate that these groundwater formations contribute a volume of water that approximates 25,000 acre-feet per year to the Colorado River (26,100 acre-feet per year was used to calibrate the Carrizo-Wilcox groundwater availability model). The Lower Colorado Regional Water Planning Group (Region K) estimates that over-pumping of these aquifers could cause this historical relationship to change from a “gaining” to a “losing” river by 2050³, and recent GAM studies⁴ of the region have shown a recent decline in surface water outflows. It is reasonable and prudent therefore to take appropriate actions to monitor and protect against such impacts should they start to occur.

Monitoring of the groundwater–surface water relationship of the Colorado River and the Gulf Coast aquifer has been accomplished in the coastal portion of the basin providing a model for a potential monitoring project. The LCRA-SAWS^{5,6,7} Water Project developed and implemented such a program in Wharton and Matagorda counties where the river is associated with the Gulf Coast Aquifer. Such a project, where shallow wells are placed in close proximity to existing river and stream gage stations, would likely provide an adequate means of monitoring this relationship. The information gained would likewise be helpful in guiding remedial actions should they be needed in order to protect the integrity of the aquifers and surface waters.

1. Dutton, Alan R., Bob Harden, Jean-Philippe Nicot, and David O'Rourke. February 2003. Groundwater Availability Model for the Central Part of the Carrizo-Wilcox Aquifer in Texas, Appendix B – Surface Water- Groundwater Interaction in the Central Carrizo-Wilcox Aquifer.

2. Saunders, Geoffrey P. June 2009. Low-Flow Gain-Loss Study of the Colorado River in Bastrop County, Texas.

3. Lower Colorado Regional Water Planning Group. January 2006. Adopted Region “K” Water Plan for the Lower Colorado Regional Water Planning Group.

4. Hutchinson, Bill. November 18, 2009. Presentation to the Lost Pines Groundwater Conservation District Board: Joint Planning in Groundwater Management Area 12.

5. LSWP Groundwater for Agriculture Team: URS Corporation, Baer Engineering and Environmental Consulting, Inc. June 2006. Shallow Monitoring Well Installation Wharton and Matagorda Counties, Texas.

6. LSWP Groundwater for Agriculture Team: URS Corporation, Baer Engineering and Environmental Consulting, Inc. March 2008. Monitoring Data Report from April 2006 to December 2007 for the LSWP Shallow Wells Installed in Wharton and Matagorda Counties, Texas.

7. URS Corporation, INTERA, and Baer Engineering and Consulting. April 2009. Development of the LCRB Groundwater Flow Model for the Chicot and Evangeline Aquifers in Colorado, Wharton, and Matagorda Counties.