

### SPECIAL POINTS OF INTEREST:

- DFCs and MAGs are now in the final stages
- A new groundwater aquifer is emerging along the IH-35 corridor
- PCCD maintains and regulates 28 earthen dams in Hays and Caldwell Counties

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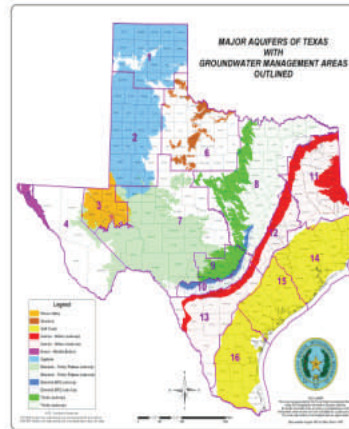
## GMA Process - 2nd Stage Begins

The final stage of state-wide groundwater process is now being implemented.

It all began in 2005 with the passage of HB-1763. This bill gave the state's water districts 5-years to designate Desired Future Conditions (DFC) for each aquifer across the entire state. This initial effort ended on September 1, 2010.

The TWDB will now test these DFCs against

mathematical groundwater models to issue Managed Available Ground-



16 GMA areas

water (MAG) numbers for the districts to manage for permitted wells.

The MAGs will be allocated within 6-months or March 1, 2011. This will set the amount of groundwater permitted each year for the next 50-years.

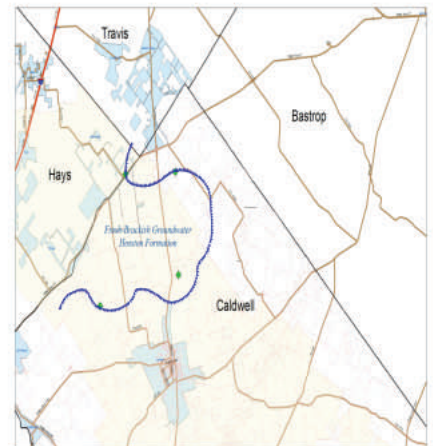
It is still unclear how exactly this will work. The issues include groundwater ownership, landowners' rights, regional planning, and exempt wells. The 2011 legislative session may or may not address the issues.

## New Groundwater Source ?

A new deep fresh-brackish aquifer is beginning to emerge near the IH-35 corridor.

The Hosston Formation may contain fresh-brackish water at depths

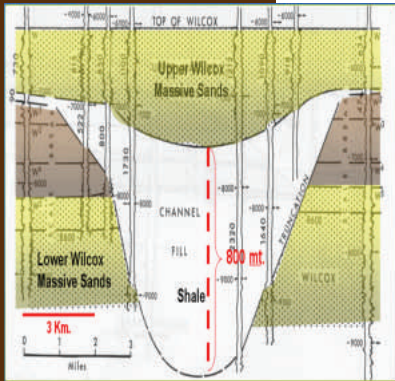
between 2,000—3,500' below the surface. These sands and gravels were deposited upon an ancient range.



Fresh-Brackish Groundwater  
Hosston Formation  
Geologist: Wu Featkegual Wilson, PG #21  
1 inch = 2 miles



# High Demand Aquifer-SE Caldwell



**Yoakum Channel  
Cross Section**

A high demand for exported water is emerging in SE Caldwell County and NE Gonzales County.

The Carrizo aquifer in this area is enormously thick due to an underlying ancient submarine canyon known as the Yoakum Channel. This Middle Wilcox channel filled with shale and then compacted allowing the overlying Carrizo to thicken.

Groundwater leasing and promotion has recently been ac-

celerating in the area, in anticipation of moving water toward the IH-35 and new State Hwy 130 area.

The Yoakum Middle Wilcox Channel developed as one of several Eocene submarine channels that later plugged with shale. A 3,000 foot deep canyon eroded out millions of cubic feet of sand and dumped over the shelf into the deep water Gulf of Mexico.

The seas rose and the canyon was subsequently filled with

fine grained clays and silts. Then the entire mass began to sag under the weight of the overlying Upper Wilcox .

This sag in SE Caldwell County and NE Gonzales County created a chute for the deposition of the overlying Carrizo coarse grained sands.

The PCCD and the Gonzales County groundwater districts overlap each other in this high demand area and some land-owners face double taxation issues.

*The Attorney  
General's Opinion  
on the  
Overlapping  
Gonzales-PCCD  
area was  
inconclusive*

## Texas State Legislative Session

The Texas Legislature has officially begun its 82nd Regular Session. While there is a need to address water supply issues, the general thinking is that there are so many other matters that will occupy Legislators' time that serious attention to water issues will be skipped this year.

Texas has a system that is unique when it comes to water. Water flowing in water-courses in Texas is owned by the State. People, including corporations, wanting to use the water for commercial purposes have to acquire a permit to use it from the State. Water on the surface of the ground that is not in a watercourse, not part of an underground River, and not classified as the underflow of a stream is owned by the person in possession of the water. Groundwater that is found under the ground's surface is not classified as surface water. While those are the general rules, water in Texas can change "character" and surface water can become groundwater and groundwater can become surface water.

One bill dealing with groundwater ownership has already been filed. Sen. Fraser of Horseshoe Bay has filed a bill to modify the wording in the Texas Water Code dealing with ownership of groundwater. The bill has been proposed because of an ongoing debate about whether the person who owns the land's surface also owns the water underneath the land, or whether that person just "owns" the right to capture the water that may be found under the land. There is a case pending in the Texas Supreme Court that has the potential for answering the question.

# PCCD Dams

Flood control was the primary purpose of the original 28 dams constructed across the PCCD area.

It has been almost 50-years since the first dam was planned and constructed.

When the dams were originally constructed, the area was primarily occupied by rural landowners. Now much of that land that surrounds the dams and lakes is urbanized with city lots and small acreage parcels.

The State of Texas classifies dams in terms of hazard probabilities. This classification system refers to the consequences of failure.

Most of the dams when they were first constructed were not "high hazard" due to the rural nature of the downstream land.

A recent geological study of the potential hazards of each dam has been made under conditions of extreme flood events.

It should result in more frequent inspections of certain dams where two distinct lithologic units bifurcate the dams and lakes. In one instance a fault separates toe units across a dam. This could lead to differential erosion at the point of contact. However, numerous geological factors need to be consid-

ered, as well as other surface parameters.

Inspection is a key ingredient to safety, as well as detailed mapping of the individual structures.

Maintenance is also a very important aspect of the hazard safety of each individual structure at periodic intervals.



## New Building for PCCD

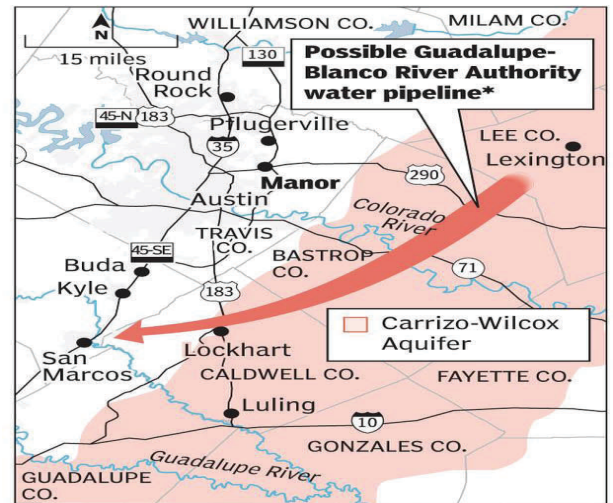
A new building is in the works for the PCCD in Lockhart at a new location.

Plans are being considered for the purchase of land for the new building in a city owned industrial park.

It is likely that contracts will soon be signed for the land. Designs for the new building are now emerging with consideration given to a rela-

tively large meeting room and staff offices, including a possible lab.

The plans for the land and the new building could be finished during 2011.



\*Actual route and length of pipeline is unknown.

Robert Calzada AMERICAN-STATESMAN

Proposed GBRA Pipeline

## GBRA Proposes 100-Mile Pipeline - \$400 Million

GBRA (Guadalupe-Blanco River Authority) has proposed a \$400 million water pipeline and infrastructure to move groundwater from Lee and Bastrop Counties to the I-35 corridor and San Antonio.

The groundwater target is designated as the Simsboro Formation in the Wilcox Group and the Carrizo Formation.

This proposed line would provide approximately 80,000 acre feet of water per year by the year 2020.

The proposal has stirred controversy between two Planning Districts, Region K and Region L, as well as the Bastrop Lost Pines Groundwater District which have opposing views.

The groundwater would be produced by four separate business entities.

## Plum Creek Conservation District

1403 Blackjack St. ( FM 20 East)

Suite -C

PO Box 328

Lockhart, Texas 78644

Phone: 512-398-2383

Fax: 512-398-7776

E-mail: [info@pccd.org](mailto:info@pccd.org)

Web Site: [www.pccd.org](http://www.pccd.org)

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**Wm Feathergail Wilson, PG, Consulting Geologist**

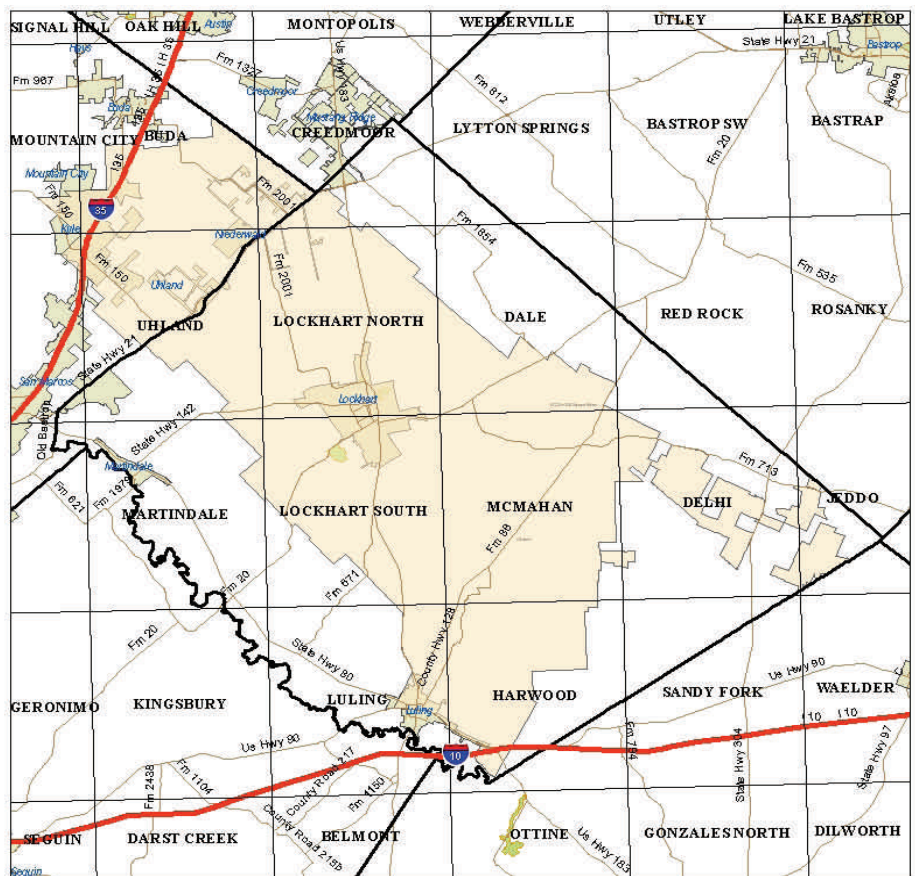
Map of the PCCD overlain by USGS 7.5 minute topographic quadrangles.

## PCCD History

The Plum Creek Conservation District was formed by a legislature enactment in 1957 for flood control. It was amended on January 1st, 1989 to add groundwater responsibilities and approved by the District voters on May 1st, 1993. The combined district covers portions of Caldwell and Hays Counties, Texas. It overlaps the Barton Springs-Edwards Aquifer Conservation District and the Edwards Aquifer Authority control area.

At the present time, PCCD maintains 28 flood control dams in Hays and Caldwell Counties. The District also oversees all of the groundwater issues and rules within its area.

Recently (2009), PCCD revised its rules to reflect and emphasize a science based set of requirements for newly permitted groundwater wells.



7.5 Minute USGS Topographic Quadrangles

Geologist: Wm Feathergail Wilson, PG #22

1:300,000

