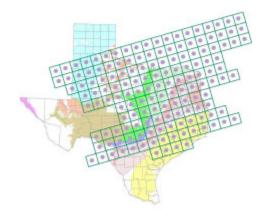GAM
Groundwater
Availability
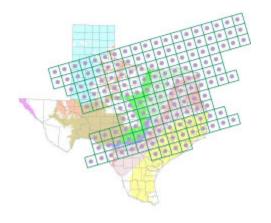Modeling

texas water development board

GAM

- Purpose: to develop the best possible groundwater availability model with the available time and money.
- Public process: you get to see how the model is put together.
- Freely available: standardized, thoroughly documented, and available over the internet.
- Living tools: periodically updated.

What is a Numerical Groundwater Flow Model?

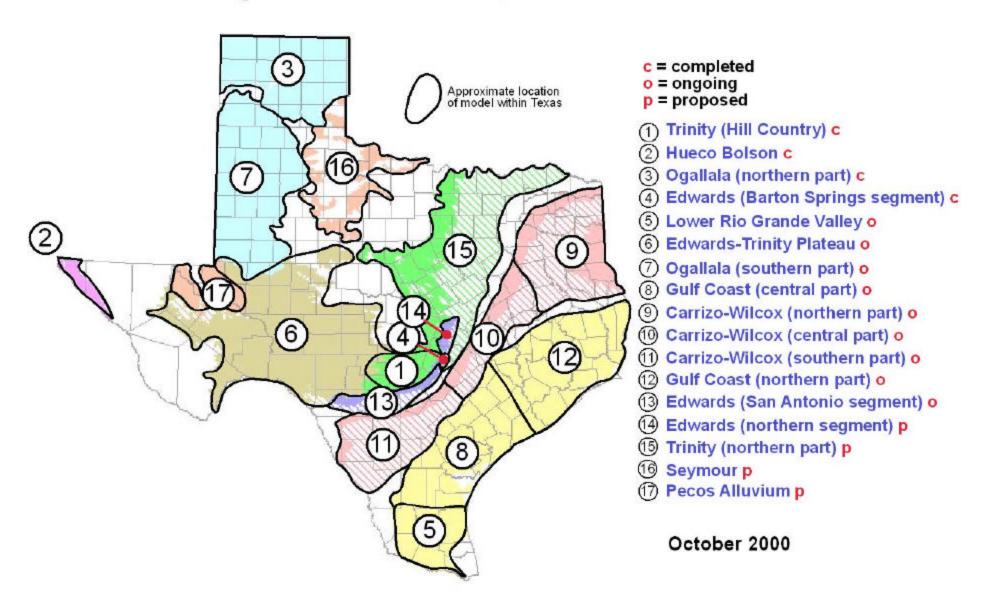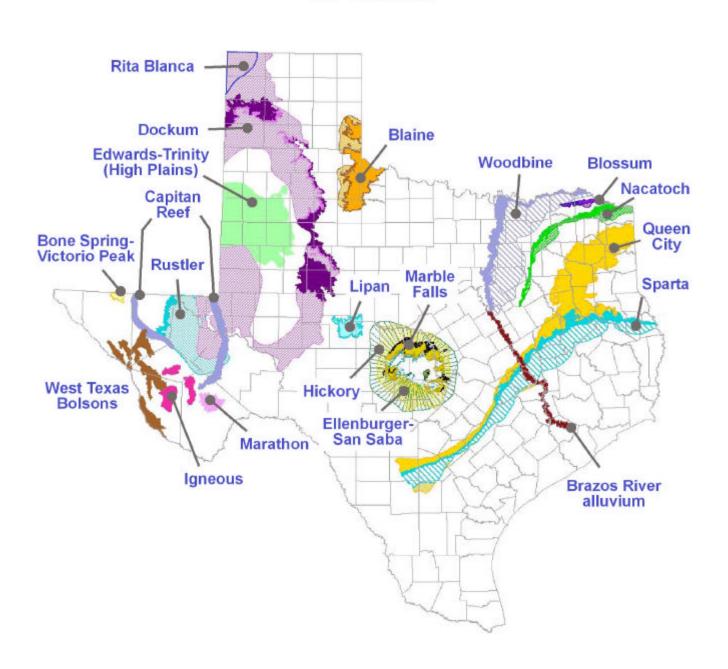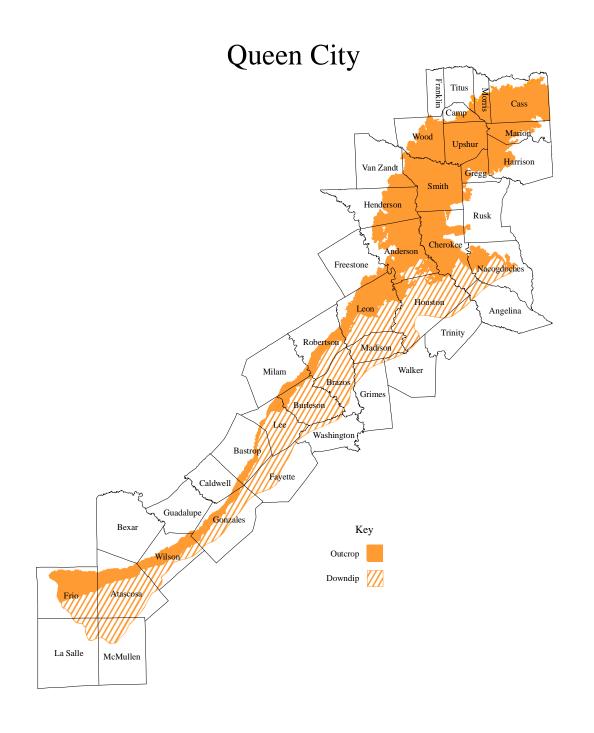- **'The aquifer in a computer!'**

Groundwater Modeling

- Includes everything we know about the aquifer
- a regional tool to help define groundwater availability
- evaluate water management strategies
- run "What ifs…"

Location of Completed, Ongoing, and Proposed Models for GAM

Approximate location of model within Texas

c = completed
o = ongoing
p = proposed

1. Trinity (Hill Country) c
2. Hueco Bolson c
3. Ogallala (northern part) c
4. Edwards (Barton Springs segment) c
5. Lower Rio Grande Valley o
6. Edwards-Trinity Plateau o
7. Ogallala (southern part) o
8. Gulf Coast (central part) o
9. Carrizo-Wilcox (northern part) o
10. Carrizo-Wilcox (central part) o
11. Carrizo-Wilcox (southern part) o
12. Gulf Coast (northern part) o
13. Edwards (San Antonio segment) o
14. Edwards (northern segment) p
15. Trinity (northern part) p
16. Seymour p
17. Pecos Alluvium p

October 2000

Location of the Minor Aquifers in Texas

Queen City

Key

Outcrop ■

Downdip ▨

Sparta

Anderson

Cherokee

Nacogdoches

Leon

Houston

San Augustine

Sabine

Robertson

Madison

Angelina

Trinity

Brazos

Walker

Grimes

Burleson

Lee

Washington

Bastrop

Fayette

Caldwell

Gonzales

Wilson

Frio

Atascosa

La Salle

McMullen

Key

Outcrop

Downdip

Reklaw Formation

Queen City Sand

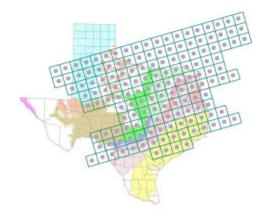Weches Formation

Sparta Sand

Carrizo Sand and Wilcox Group
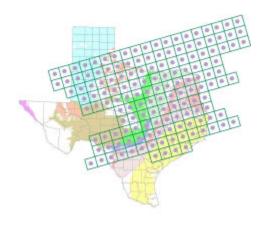
We need your help!

- we need:
  - your guidance on the important issues
  - your knowledge on the area
  - your review of the model as it is developed

Stakeholder Advisory Forum (SAF)

- SAF will consist of knowledgeable and interested people

- will meet periodically

On March 15, 2002, the Texas Water Development Board held the first Stakeholders advisory meeting for the Queen City/Sparta Aquifer Groundwater Availability Model in Austin, Texas. The meeting focused on a basic discussion of GAM and requirements for the Queen City/Sparta Aquifer model. Some of the questions asked during the forum included:

Question:	Response:
How many segments with the Queen City/ Sparta be modeled in?	It will be modeled in 3 segments, much like the current Carrizo Wilcox models.
There is not much data available for the Queen City Sparta aquifers, will the consultants collect more during the project?	If the consultants think they can accomplish the model and collect more data for the money available, then yes, but no extra money will be available for data collection than is all ready allocated for the model.
Do we have to calibrate the model to water levels in the Carrizo Wilcox Models?	Yes, the Queen City/Sparta layers must calibrate to with the Carrizo layers.
Can we have TAG meetings quarterly along with SAF meetings?	The SAF meetings are suppose to serve as tech meetings and public forums. It is important to keep the GAM process as transparent as possible.

Attendance list:

Name	Affiliation
Ernest Michaleiz	---
Allan Lange	Lipan-Kickapoo GCD
E.C. Dodson	---
Stanly M. Cole Sr.	9 Miles
A. J. Jones	CRBWC
Jim Geeson	---
Michael Hailsche	---
Charles Hailsche	---
Alfonse schwartz	---
Will Wilde	---
Allan Standen	LBG Guyton
James Beach	LBG Guyton
Nolan Niehues	---