Charting The Course:
A Water Plan & Policy For Texas

Jim Conkwright, Manager
High Plains Underground Water Conservation District No. 1
Lubbock, TX
A balancing act . . .

- Water district manager
- RPWG member
- RPWG administrator
- Member, GMA # 1
- Member, GMA # 2
“Charting The Course”

With so many “boats” to steer, it can become
difficult to navigate the water!

Has legislation cleared the way?
Effective September 1, 2005, House Bill 1763 made profound changes in how groundwater availability is determined in Texas.
House Bill 1763

- Recognizes decisions on groundwater availability.
- Requires RWPGs to use groundwater availability numbers from the GWCDs.
- Defines a permitting target for groundwater production.

Source: Dr. Robert Mace, TWDB, “Changing Face of Water Rights in Texas.”
House Bill 1763

- Affects rules and plans of groundwater conservation districts.
- Requires joint planning among water districts within same groundwater management area.
- Affects groundwater projects planned statewide.
- Affects both regional and state water plans.

Source: Dr. Robert Mace, TWDB, “Changing Face of Water Rights in Texas.”
A big area . . . big challenges!

- HPUWCD is a large area, covering all or part of 15 counties.
- It has more than 56,000 permitted water wells.
- It is estimated that there are from 72,000 to 75,000 total water wells drilled within the district.
- Groundwater production ranges from single digit gallons per minute (gpm) to limited areas that can produce up to 1,000 gpm.
- There are different soils, crops grown, and climatic conditions.
District Management Philosophy

- Historically, the district’s permit requirements, rules, and regulations have been based upon water well spacing.
- No production limits.
- Our philosophy is to keep rules and regulations simple.
- This makes it easier to monitor, assess, analyze, and thereby manage groundwater usage.
## Revised well spacing requirements  
*(Effective June 9, 2004)*

<table>
<thead>
<tr>
<th>Well Production (Factor determining spacing of proposed wells)</th>
<th>Minimum distance from nearest well or proposed well site</th>
<th>Minimum distance from property line</th>
<th>Expected or usual size of pump <em>(inside diameter of column pipe)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>25 to 70 gpm</td>
<td>100 yards</td>
<td>25 yards</td>
<td>2-inch or smaller</td>
</tr>
<tr>
<td>&gt; 70 to 165 gpm</td>
<td>200 yards</td>
<td>50 yards</td>
<td>3-inch</td>
</tr>
<tr>
<td>&gt; 165 to 265 gpm</td>
<td>300 yards</td>
<td>75 yards</td>
<td>4-inch</td>
</tr>
<tr>
<td>&gt; 265 to 390 gpm</td>
<td>350 yards</td>
<td>87.5 yards</td>
<td>5-inch</td>
</tr>
<tr>
<td>&gt; 390 to 560 gpm</td>
<td>400 yards</td>
<td>100 yards</td>
<td>6-inch</td>
</tr>
<tr>
<td>&gt; 560 to 1,000 gpm</td>
<td>500 yards</td>
<td>125 yards</td>
<td>8-inch</td>
</tr>
<tr>
<td>&gt; 1,000 gpm</td>
<td>540 yards</td>
<td>135 yards</td>
<td>10-inch or larger</td>
</tr>
</tbody>
</table>
### Average Changes In Depth To Water In Feet For Observation Wells

**High Plains Underground Water Conservation District No. 1**

<table>
<thead>
<tr>
<th>Number of Observation Wells Maintained</th>
<th>Average Annual Change 1996 – 2006</th>
<th>Average Annual Change 2001 - 2006</th>
<th>Average Annual Change 2005 - 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARMSTRONG</td>
<td>10</td>
<td>+ 0.49</td>
<td>+ 0.55</td>
</tr>
<tr>
<td>BAILEY</td>
<td>110</td>
<td>- 0.72</td>
<td>- 0.39</td>
</tr>
<tr>
<td>CASTRO</td>
<td>91</td>
<td>- 1.72</td>
<td>- 1.52</td>
</tr>
<tr>
<td>COCHRAN</td>
<td>74</td>
<td>- 0.72</td>
<td>- 0.58</td>
</tr>
<tr>
<td>CROSBY</td>
<td>75</td>
<td>- 0.48</td>
<td>+ 0.06</td>
</tr>
<tr>
<td>DEAF SMITH</td>
<td>87</td>
<td>- 0.48</td>
<td>- 0.35</td>
</tr>
<tr>
<td>FLOYD</td>
<td>100</td>
<td>- 0.74</td>
<td>- 0.34</td>
</tr>
<tr>
<td>HALE</td>
<td>109</td>
<td>- 1.65</td>
<td>- 1.21</td>
</tr>
<tr>
<td>HOCKLEY</td>
<td>88</td>
<td>- 0.47</td>
<td>- 0.31</td>
</tr>
<tr>
<td>LAMB</td>
<td>97</td>
<td>- 1.43</td>
<td>- 1.28</td>
</tr>
<tr>
<td>LUBBOCK</td>
<td>135</td>
<td>- 0.46</td>
<td>- 0.27</td>
</tr>
<tr>
<td>LYNN</td>
<td>81</td>
<td>- 0.38</td>
<td>+ 0.15</td>
</tr>
<tr>
<td>PARMER</td>
<td>94</td>
<td>- 1.73</td>
<td>- 1.38</td>
</tr>
<tr>
<td>POTTER</td>
<td>7</td>
<td>- 0.18</td>
<td>+ 0.60</td>
</tr>
<tr>
<td>RANDALL</td>
<td>50</td>
<td>+ 0.02</td>
<td>- 0.01</td>
</tr>
<tr>
<td><strong>DISTRICT</strong></td>
<td><strong>1,208</strong></td>
<td><strong>- 0.84</strong></td>
<td><strong>- 0.58</strong></td>
</tr>
</tbody>
</table>
Proposed Groundwater Management

- Utilize annual depth-to-water level data from the observation well program.
- We are currently evaluating methods to utilize the percent of change with reference to recent saturated thickness of the aquifer.
- Public awareness/outreach to district constituent groups.
Does It Work?

- Preliminary data from the northern three counties in GMA # 1 (Armstrong, Potter, and Randall Counties) show limited decline.

- These counties are similar in remaining groundwater.

- Water use in Southwest Potter and North Randall Counties is evolving from agricultural use to urban and/or industrial use.

- We are evaluating the same methodology in the remaining counties within the High Plains Water District.

- If not appropriate, we’ll take another approach!
A Closer Look

As an example, let’s look at data from Randall County.
Randall County

Randall County Well Number 755921 – 1995 to 2006
Saturated Thickness in 1995 of 87 Feet

Depth to Water in Feet from Land Surface

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
<td>260.00</td>
</tr>
</tbody>
</table>

Years
Randall County

Randall County Well Number 649704 -- 1995 to 2006
Saturated Thickness in 1995 of 85 Feet

Depth to Water in Feet from Land Surface

Years

0.00  20.00  40.00  60.00  80.00  100.00  120.00  140.00  160.00  180.00  200.00  220.00  240.00
Observation Well # 10-08-132
Randall County

Randall County Well Number 1008132 — 1995 to 2006
Saturated Thickness in 1995 of 60 Feet

Depth to Water in Feet from Land Surface

Years

Public Awareness

• Most of public are unaware of DFC requirements contained in HB 1763.

• It will be very important to keep the public & stakeholders informed as the GWCDs work to set desired future conditions for the aquifer(s) they manage.
Public Awareness Opportunities

- HPWD plans meetings with water leaders & decision makers (2007).

- HPWD plans meetings in each of its five district directors’ precincts to involve public and other stakeholders (2007).

- Waiting to see if any revisions are made to HB 1763 during 80th regular Texas Legislative session.
Public Awareness Opportunities

- Monthly newsletter
- 52nd Year of Publication.
- Circulation is 6,581 readers.

- News releases.
- 60-second radio PSAs.
- 30-second TV PSAs.
- Media interviews.
- www.hpwd.com
“Charting The Course”

• We feel the responsibility lies with GWCDs.

• GWCDs can set realistic conditions and goals—rather than letting others do it.

• Decision should rest with an elected board—rather than an appointed group.

• We will be working with the TWDB to present the DFCs and managed available groundwater data to the RWPGs for inclusion in their plans.
Looking Ahead To Joint Planning and RWPGs

Both offer numerous opportunities & challenges.
GWCDs & RWPGs

Region O contains:

- Garza County F&UWCD
- High Plains UWCD
- Llano Estacado UWCD
- Mesa UWCD
- Sandy Land UWCD
- South Plains UWCD

- 4 counties are not within a GWCD.

- Portion of the High Plains UWCD is in Region A.
Groundwater Management Areas 1 & 2

- **GMA # 1 includes:**
  - Hemphill County UWCD,
  - High Plains UWCD,
  - North Plains GWCD &
  - Panhandle GWCD.

- **GMA # 2 includes:**
  - Garza County U & FWCD,
  - High Plains UWCD,
  - Llano Estacado UWCD,
  - Mesa UWCD,
  - Permian Basin,
  - Sandy Land UWCD,
  - & South Plains UWCD.
Groundwater Management Areas 1 & 2

Both are actively meeting

- GMA #1 will likely set a desired future condition of 50/50 or 1.25 percent by 2007.
- GMA #2 is taking a “wait and see” approach to possible legislative changes and will likely set its DFC by the 2010 deadline.
Opportunities

• Managing the groundwater resource.

• Joint planning between GMAs within same aquifer.

• Public involvement / participation.

• Water districts have more authority to manage groundwater as per SB 1 & SB 2.
Challenges

- Unprotected areas.
- Perceived “taking” of property rights.
- Conflict resolution.
- Equitable setting of DFCs.
- Public involvement.
- Another layer of water management to deal with.
- Allowing time to do the job right without changing in mid-stream.
- Increased state supervision over locally-controlled UWCDS.
- New terminologies.
- Unchartered territory for all—even TWDB.
HB 1763 & Legislature

- It is our hope that the legislature will allow GWCDs to implement and work through provisions in HB 1763.

- Any changes made during the upcoming session should be for clarity only.
Smooth Sailing Ahead?

"If one does not know to which port one is sailing, no wind is favorable."

--Seneca The Elder