

**Annual Report
to the
Board of Directors
on
Attainment of Management Plan Goals
and
Selected Activities**

of the

**South Plains Underground
Water Conservation District**

Fiscal Year 2006

September 1, 2005 through August 31, 2006

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South Plains Underground Water Conservation District

Board of Directors

| <u>Name</u> | <u>Representing</u> | <u>Term Ends</u> |
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| Scott Hamm, Secretary | Precinct 4 | May 2010 |
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District Mission Statement

The South Plains Underground Water Conservation District will develop, promote, and implement management strategies to provide for the conservation, preservation, recharging, and prevention of waste of the groundwater resources, over which it has jurisdictional authority, for the benefit of the people that the District serves.

Introduction and Overview

SB 1, 75th Texas Legislature (1997), requires groundwater conservation districts governed by Chapter 36, Texas Water Code, to submit management plans for certification by the Texas Water Development Board. The management plans must specifically address the following management goals as applicable:

1. provision for the most efficient use of groundwater;
2. control and prevention of the waste of groundwater;
3. control and prevention of subsidence;
4. conjunctive surface water management issues;
5. natural resource issues;
6. drought conditions; and ,
7. conservation

The management plans must also identify the performance standards and management objectives under which each district will operate to achieve their management goals.

The current Management Plan of the District was developed during the spring and summer of 2003. After notice and hearing, the Board of Directors officially adopted the plan on September 9, 2003. The plan became effective on September 9, 2003 and was certified by the Texas Water Development Board on November 7, 2003.

This annual report is a review of the District's activities for fiscal year 2005 and an evaluation of the District's performance in meeting its goals and objectives.

Report on Attainment of Goals

Goal 1.0 Encouraging the most efficient use of groundwater

Management Objective 1.01—Water Level Monitoring

During winter 2006, 138 wells were measured. This compares to 139 wells in 2005. A report of the change in water levels was presented at the South Plains Ag Conference in February. Also, a list of water level measurements was included in the May edition of the District's newsletter.

Performance Standards

1.01a—98% of measurement wells had water levels recorded. Three wells were placed inactive.

1.01b—100% of wells had field notes written.

1.01c—138 water level measurements entered into database

1.01d—138 wells in network

1.01e—There were 2 wells added as replacements

Management Objective 1.02—Technical Field Services

111 requests for Technical Field Services were fulfilled in 2006. This is 11 more than the 100 requests in 2005. June was the busiest month for flow tests, when 33 tests were performed.

A number of tests were made for prospective land buyers.

Performance Standards

1.02a—111 field service requests were fulfilled

1.02b—146 tests were entered in database. Some of the results were from previous years.

Management Objective 1.03—Laboratory Services

The total number of lab tests performed for producers in 2006 was 70. This is higher than the 64 tests run in 2005.

Also, 19 bacteria tests were run in 2006, compared to 29 in 2005. Twelve of the tests were positive for either coliform or e-coli bacteria.

Performance Standards

1.03a—89 lab service requests were fulfilled

1.03b—116 records entered in database. Some of the results were from previous years.

1.03c—89 results were reported to constituents. There were four tests performed for wells not located in the district.

Management Objective 1.04—Research and Demonstration

The District participated in two research studies during FY 2006. Both studies were conducted by the Bureau of Economic Geology. The first study was a follow-up visit to three sites previously visited during the arsenic investigation. The second project pertains to water salinity. A water well was drilled in a native

pasture, and water samples will be collected and used to establish a baseline set of values. A comparison of the baseline to irrigated area water salinity is proposed for phase two of this project.

Performance Standards

1.04a—The District participated in 100% of the research and demonstration project opportunities

1.04b—A record of these opportunities is noted in the Board’s minutes

Management Objective 1.05—Center Pivot Inventory

No center pivot inventory was required in 2006 by the District’s Management Plan.

Performance Standards

1.05a—N/A

1.05b—N/A

1.05c—1,406 pivots, 35 side rolls, 2 row water, and 13 drip type irrigation systems are entered in District’s database

Goal 2.0

Controlling and Preventing Waste of Groundwater

Management Objective 2.01—Well Permitting and Completion

Since March 1993, the District has issued over 1,767 permits. The number of permits issued during 2006 was 86. This is lower than the 94 issued in 2005. January had the highest number of permits issued, which was 20.

Also, 132 wells were inspected during 2006.

Performance Standards

2.01a—86 permits issued

2.01b—132 well sites inspected

2.01c—7 well sites failed to meet completion standards

Management Objective 2.02—Open, Deteriorated or Uncovered Wells

Open or uncovered wells are discovered in one of two ways:

1. a person reports it to the District office, or
2. District staff discovers the well during a field visit

Twelve open, deteriorated or uncovered wells were reported to or discovered by District staff during 2006. Twelve wells have been corrected at this time.

Performance Standards

2.02a—12 open, deteriorated or uncovered wells reported to the District

2.02b—12 initial inspections accomplished

2.02c—Initial contact with landowner made in approximately 4 days

2.02d—The average time to be corrected was 43 days

2.02e—12 were corrected (100%).

Management Objective 2.03—Maximum Allowable Production

There were no reports of suspected maximum allowable production violation during 2006.

Performance Standards

2.03a—N/A

2.03b—N/A

2.03c— N/A

Management Objective 2.04—Water Quality Monitoring

Water quality samples were obtained during the summer of 2006. These were taken from the District's established network of wells. Some wells that were sampled in 2005 were not sampled in 2006 because they were not in operation. Also, the 2005 water quality map was posted for viewing and printing on the District's web site. The February edition of the newsletter contained water quality results.

Performance Standards

2.04a—91 samples collected and analyzed

2.04b—90% of samples analyzed in 2005 were analyzed in 2006

2.04c—2 water quality maps were made available to the public (office and web)

2.04d— 91 test results were entered in database

Goal 3.0

Public Education and Information

Management Objective 3.01—Classroom Education

During 2006, the District continued its 2 classroom educational programs, which consist of book covers and the *Major Rivers* curriculum.

Performance Standards

3.01a—*Major Rivers* was distributed to eight 4th grade classes at three schools

3.01b—4,500 book covers distributed

Management Objective 3.02—Newsletter

Four editions of the District's newsletter, *South Plains Groundwater News*, were published during 2006. The May edition of the newsletter contained a history of water level measurements from the District's network of water level measurement wells. Also included was a map of the District showing all of the measurement well locations.

Performance Standards

3.02a—Four newsletter editions were published

3.02b—3900 newsletters were distributed

3.02c—Six articles addressed methods of enhancing and protecting the quantity of useable quality groundwater

Management Objective 3.03—News Releases

Six news articles were published in the *Brownfield News* during 2006. These articles addressed the District's cost-in-water depletion program, the District's flow meter program, the drought, the distribution of the lawn sprinkler gages and

irrigation economics. The District's web site was also utilized to post news releases.

Performance Standard

3.03—Six news releases were prepared for publication in the local newspaper

Management Objective 3.04—Public Speaking Engagements

The District fulfilled 4 public speaking engagements during 2006. These included:

- Update on water levels and water quality at the 2006 South Plains Ag Conference
- Two appearances on “Talk of Brownfield” radio show promoting the South Plains Ag Conference and the Irrigation Management Workshop.
- One presentation was made to area school children at Kids, Kows & More in November.

Performance Standard

3.04—Four programs were presented to protect and enhance our groundwater

Management Objective 3.05—Printed Material Resource Center and Technical File

Thirty-six-(39) different publications are displayed in the reception area of the office. These publications are obtained from various sources, including the TWDB, the USGS and the Texas Ag Extension Service. District staff developed three of the brochures.

78 items were distributed from the resources center. 14 of these items were related to irrigation water quality.

Performance Standards

3.05a—There were 8 items on conservation, 2 on rules, 13 on permitting, 32 on water quality and 23 on general information procured by the public from the resource center

3.05b—No items were requested from the District's technical file

Goal 4.0

Drought Condition Information

Management Objective 4.01—Rain Gages

The District maintains a network of 33 rain gages. The readings from the rain gages are gathered monthly and rainfall maps are published on the District's web site. District staff notifies the local newspaper when new rainfall maps are published.

Performance Standards

4.01a—33 rain gages in District network.

4.01b—394 monthly rain gage readings of 396 taken

Goal 5.0 **Conservation Techniques and Remaining Useable Groundwater**

Management Objective 5.01—Saturated Thickness Maps

The most recent saturated thickness map is from 2005. No additional saturated thickness map is required until 2010.

Performance Standards

5.01a—There are currently 3 saturated thickness maps displayed in the District office. The maps are also available on the District’s web site.

Management Objective 5.02—Conservation Literature

Thirteen publications displayed in the reception area of the office are devoted to water conservation for the home and the farm. A new brochure entitled “*Municipal Water Conservation*” was developed by the District.

Performance Standards

5.02a—15 publications are dedicated to water conservation

5.02b—8 items were obtained by the public in 2006

SPUWCD WEATHER MODIFICATION PROGRAM

The District participated in the Southern Ogallala Aquifer Rainfall Enhancement (SOAR) program during 2006. This was the ninth year the District has participated in weather modification. The target area contains 3 groundwater districts in Yoakum, Gaines and Terry Counties. The Sandy Land UWCD administered the program operations, and the South Plains UWCD recorded rainfall data and supplied the monthly rainfall contours for the program.

The program started May 1 and ended August 31. The District's network of rain gauges averaged 3.92 inches May through August, compared to 11.32 inches for the same period last year. The District spent \$18,201 during the 2006 program, compared to \$22,752 in 2005, when the program lasted one additional month.

IRS COST-IN-WATER DEPLETION PROGRAM

2006 was the seventh year the South Plains Underground Water Conservation District participated in the IRS cost-in-water depletion program. This program benefits irrigated landowners who have experienced a cash loss due to declining water levels. The program was considered a success, as 72 landowner requests were processed, including 7 new requests.

SPUWCD.ORG

The District has developed and maintains a web site. The site provides education and information for District constituents, as well as people state-wide. The web site can be accessed from the Texas Alliance of Groundwater District's web site and is linked from various water district web sites. General information, hydrologic maps, rainfall information, newsletters, rules, management plan and district program descriptions are available on the site. In 2006, there were a total of 8,320 visitors to the web site.

FLOWMETER PROGRAM

2006 marks the fifth year for the District's Flowmeter Program. With the help of approximately 50 cooperators, the District reads flow meters each month during the growing season to determine water usage on various crops. Water usage for 2006 will be calculated at the end of the growing season. The following table contains a summary of irrigation water applied during previous years.

| | <u>Cotton</u> | <u>Peanuts</u> | <u>Grain</u> | <u>Wheat</u> |
|-------------|----------------------|-----------------------|---------------------|---------------------|
| 2002 | 8.44 in. | 19.35 in. | 6.0 in. | 7.0 in. |
| 2003 | 10.79 in. | 19.85 in. | 5.3 in. | 5.87 in. |
| 2004 | 7.99 in. | 14.46 in. | 0.49 in. | 6.25 in. |
| 2005 | 9.86 in. | 16.59 in. | 0.50 in. | 3.42 in. |

JOINT PLANNING

As required by the Legislature, the members of GMA #2 have met twice and discussed several issues, including delineation of aquifer subdivisions and differing uses and supplies of groundwater across the management area. District staff have also prepared several studies to help the Board with the goal of defining a desired future condition for the applicable aquifer(s). These studies include an estimate of future groundwater availability based on 2005 saturated thickness, as well as water level changes.

SORGA

The Southern Ogallala Regional Groundwater Alliance (SORGA) was formed in April 2004 between the seven groundwater conservation districts of Groundwater Management Area #2. The Alliance provides a framework for joint studies and other projects benefiting a significant portion of the southern Ogallala aquifer. In 2006 the members of SORGA met 1 time. A list of cooperative projects was developed at this meeting. Although not prioritized, these include: 1) using a shared employee for public education/relations, 2) using a shared geologist, and 3) using shared geophysical logging equipment.

PUBLIC EDUCATION

During the summer of 2006, the District placed 1,000 lawn sprinkler gages at various locations throughout the county. Distributed with the gages were brochures containing conservation tips for homeowners.

The District sponsored an Irrigation Management workshop in March. A representative from Senninger gave a presentation on pressure regulators to producers.

OTHER ACTIVITIES

The District, as requested by TAGD, continues to serve as a representative on the NRCS State Technical Committee. The use of Farm Bill funds for conservation programs is helpful for groundwater conservation, and having representation at this level should benefit groundwater conservation districts throughout the State. In 2006, Jason Coleman attended 2 NRCS State Technical Committee meetings and gave a report to the membership of TAGD. He also participated in 3 conference calls as part of the State Technical Committee.

SUMMARY

The original legislative intent of groundwater district performance evaluations through management plan certification and auditing was to answer two main questions:

1. Is the district operational, and
2. Is the district actively engaged in achieving stated goals, objectives, and performance standards?

Without a doubt, the South Plains Underground Water Conservation District is operational and is achieving its stated goals, objectives, and standards. That is not to say, however, that there is no room for improvement.

The following are recommendations where the District could improve its service:

| Management Objective | Recommendation |
|---|--|
| 1.02—Technical Field Services | |
| 1.03—Laboratory Services | |
| 1.04—Research and Demonstration | Look at installing an automatic water level recorder for public education. |
| 1.05—Center Pivot Inventories | |
| 2.01—Well Permitting and Completion | |
| 2.02—Open or Uncovered Wells | Consider offering well caps for landowners at a minimal cost. |
| 2.03—Maximum Allowable Production | |
| 2.04—Water Quality Monitoring | Investigate the feasibility of semi-annual testing. |
| 3.01—Classroom Education | Schedule programs pro-actively, not just when requested. |
| 3.02—Newsletter | |
| 3.03—News Releases | |
| 3.04—Public Speaking Engagements | Search for opportunities to speak publicly, including City Councils. |
| 3.05—Printed Material Resource Center and Technical File | |
| 4.01—Rain Gages | |
| 5.01—Saturated thickness Maps | |