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EDWARDS AQUIFER AUTHORITY

GENERAL MANAGER'S

REPORT

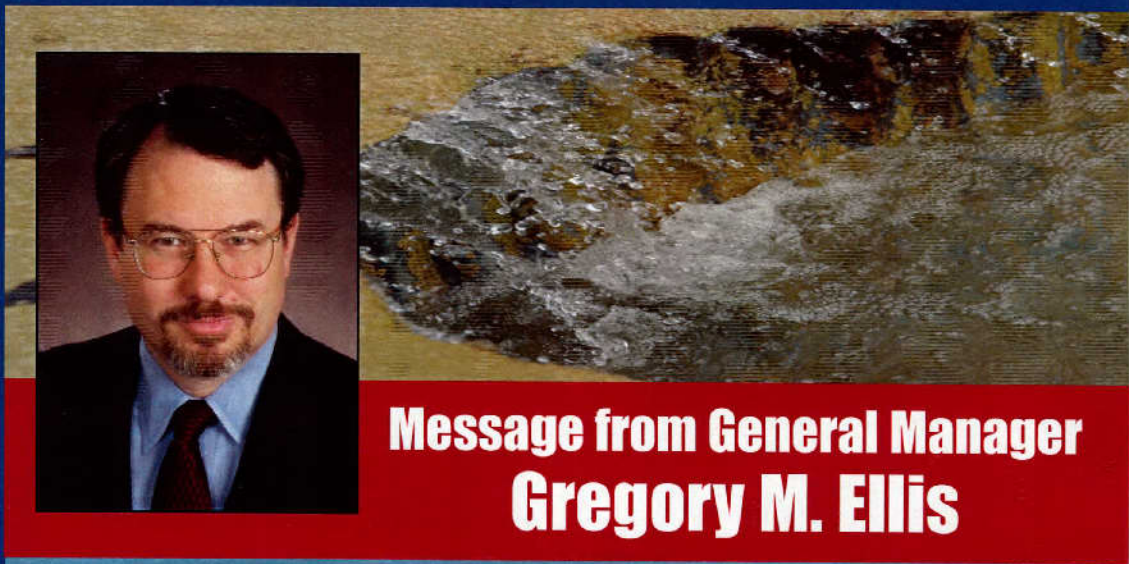
February 2004
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Editor: Margaret Garcia
Graphic Design: Ileana R. Aleman

The General Manager's Report is published monthly.

Our Mission:
The Authority is committed to manage and protect the Edwards Aquifer system and work with others to ensure the entire region of a sustainable, adequate, high quality, and cost effective supply of water, now, and in the future.



Message from General Manager Gregory M. Ellis

On Tuesday, January 9, 2001, the Edwards Aquifer Authority achieved a milestone as Authority directors issued the first initial regular groundwater withdrawal permit to the Stein Family, irrigators in Medina County. The Stein's drilled one of the first irrigation wells in Medina County in 1955 and the family has continuously irrigated since that time. In 2004, the Authority will complete the permitting process.

Of the 1,096 original Initial Regular Permit applications, the Authority has issued final decisions on 906 representing approximately 83% of all applications filed with the Authority. The Authority has issued 720 permits and denied 186 permit applications. The approved permits represent of 510,878 acre-feet of Edwards Aquifer groundwater withdrawal rights per annum (8,950 acre-feet of this total will not be effective until January 1, 2005). Approximately 190 permit applications remain.

Of the 190 permit applications remaining, 54 are under review by the State Office of Administrative Hearings(SOAH), an additional 59 are waiting to be scheduled for pre-hearings by SOAH and the remaining 77 permit applications are pending because the applicant has not provided necessary ownership documents or has an outstanding violation to settle. Authority staff anticipates completing all remaining permit applications before the end of 2004.

In 1997, before the permitting process began, total authorized pumping was 800,000 acre-feet. In 2003, total authorized pumping was 686,587.132 acre-feet and in 2004 the total authorized pumping is 627,471.700 acre-feet. Each decision on an application reduces that number by replacing the interim authorization with either a permitted amount or a denied application.

If you would like more information on the permitting process or on the status of your application please call the Authority at (210) 222-2204 or 1-800-292-1047.

Edwards Aquifer Optimization Program

by John Hoyt, Program Manager - Aquifer Science

The basic description and purpose of the Edwards Aquifer Optimization Program (EAOP) is repeated in the following paragraph to provide background information for new readers and to provide a reference for the regular reader. Subsequent paragraphs provide information relevant to the specific report month.

The Edwards Aquifer Authority (the Authority) has undertaken the Edwards Aquifer Optimization Program (EAOP), a comprehensive program for the study and management of the Edwards Aquifer. The EAOP includes a series of seventeen interrelated, mission-directed biologic and hydrogeologic research studies known as the Optimization Technical Studies, (OTS.) The OTS are designed to evaluate potential technical options for increasing the amount of water stored in the Edwards Aquifer and identify various methods for optimizing the amount of water available for withdrawal. Data and information obtained from the OTS will provide aquifer managers with the tools necessary to make scientifically-sound decisions to benefit aquifer users and preserve the environment supported by the aquifer, including the Comal and San Marcos Springs and downstream aquatic habitats.



In January 2004, the board of directors did not consider any OTS-related items. However, the Research and Technology (R&T) Committee voted to recommend the board approve one OTS related item. The R&T Committee voted to recommend the board approve an amendment to a contract between the Authority and LBG-Guyton Associates (the Contractor) for the preparation of recharge models. Under the proposed amendment, the Contractor will prepare recharge models for the upstream portions of the Nueces and Blanco river basins and incorporate those models into a model that is being prepared for seven other basins that contribute recharge to the San Antonio segment of the Balcones fault zone Edwards Aquifer. The proposed amendment will also have the Contractor refine existing recharge models for the area of the Edwards Aquifer Recharge Zone for the Nueces and Blanco river basins and incorporate the refined models into the model for the other seven basins.

In January, the R&T Committee also received reports from contractors for three recently completed technical studies. The completed studies are:

- Structural Controls on the Edwards Aquifer/Trinity Aquifer Interface in the Camp Bullis Quadrangle, Texas
- Geophysical Survey to Determine the Depth and Lateral Extent of the Leona Aquifer in the Leona River Floodplain, South of Uvalde, Texas
- Refining the Conceptual Model for Flow in the Edwards Aquifer – Characterizing the Role of Fractures and Conduits in the Balcones Fault Zone Segment

In addition to the OTS-related items discussed above, the following OTS-related studies are currently underway or have been completed:

Edwards Aquifer Optimization Program (continued)

by John Hoyt, Program Manager - Aquifer Science

Biologic Studies

- Texas wild-rice reproduction
- Comprehensive and Critical Period Monitoring Program to Evaluate the Effects of Variable Flow on Biological Resources in the Comal and San Marcos Springs Ecosystems
- Cagle's Map Turtle instream flow and habitat requirements (completed)

Flowpath / Modeling Studies

- Edwards Aquifer computer model development - MODFLOW
- Estimation of hydraulic parameters for the Edwards Aquifer management model – MODFLOW (completed)
- Development of management modules for the Edwards Aquifer MODFLOW model
- Karst aquifer modeling research (AWWARF study)
- Edwards Aquifer freshwater/saline water interface studies
- North Medina County Flow Path Study - Hydrologic budget analysis of Medina Lake and Diversion Lake
- North Medina County Flow Path Study – Helicopter electromagnetic survey in the vicinity of Seco Sinkhole (completed)
- North Bexar County Flow Path Study - Analysis of structural controls on the Edwards and Trinity Aquifers interface in the Camp Bullis Quadrangle and surrounding area (completed)
- North Bexar County Flow Path Study - Analysis of structural controls on the Edwards and Trinity Aquifers interface in the Helotes Quadrangle
- North Bexar County Flow Path Study – Helicopter electromagnetic survey in the vicinity of Camp Bullis
- Tracer testing of aquifer flowpaths at Comal and San Marcos springs
- Leona Formation geophysical survey (completed)
- Development of updated methods for calculating recharge to the Edwards Aquifer (pilot models for the Blanco and Nueces river basins, recharge area (completed)
- Statistical Analysis of Hydrologic Data (completed)
- Edwards Aquifer fracture/conduit study (completed)

Recharge Enhancement Studies

- Range management – paired watershed study at Honey Creek and Government Canyon State Natural areas
- Range management – augmenting aquifer recharge through brush management
- Evaluation of augmentation methodologies in support of in-situ refugia at Comal and San Marcos springs

If you have questions regarding the studies listed above, please call John Hoyt, P.G., Program Manager - Aquifer Science.

Real-time Precipitation Gauging System

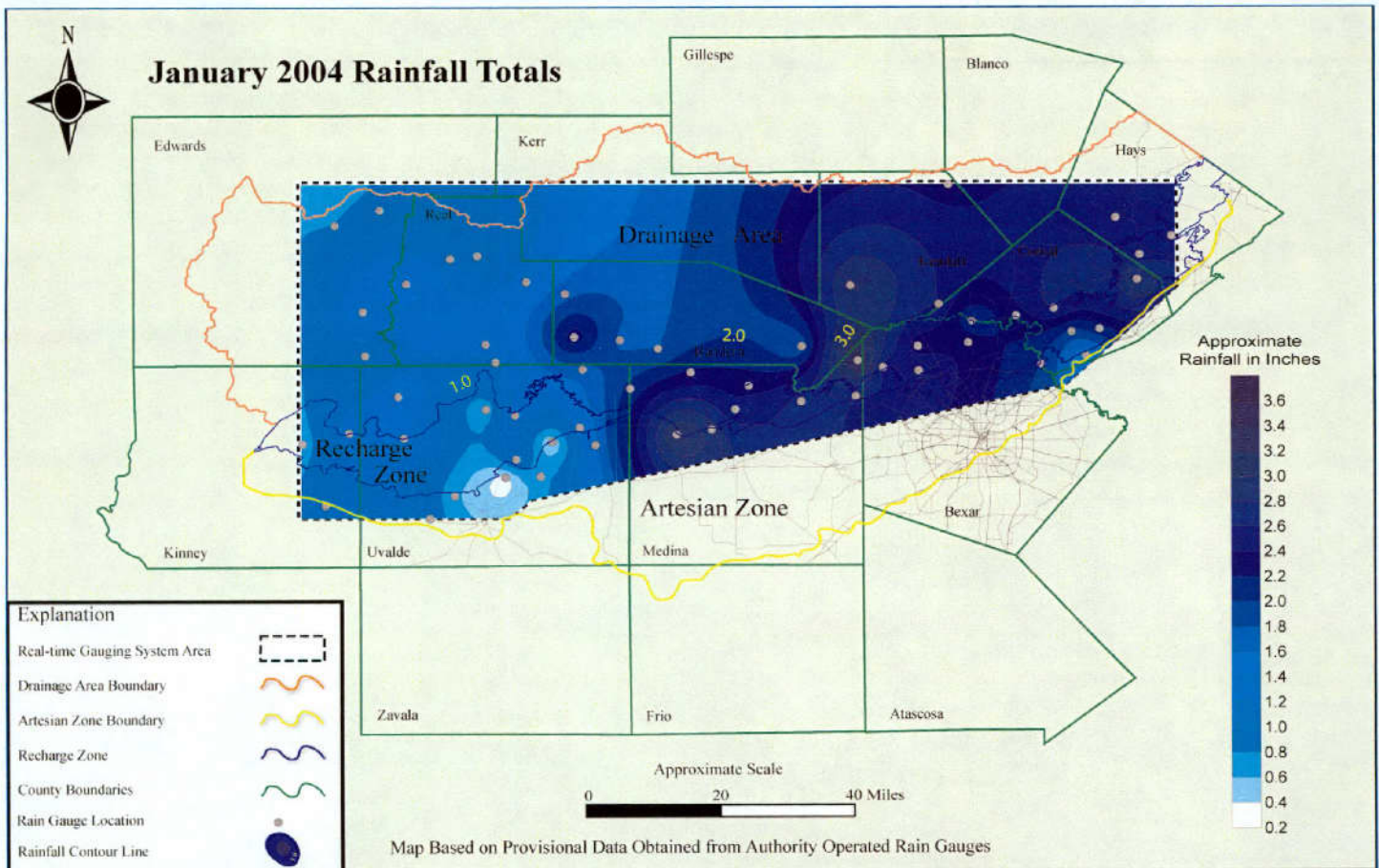
by Earl Parker, Program Manager – Investigations and Monitoring

The Authority operates 65 "real-time" precipitation gauges that transmit data to the Authority office every 6 minutes. The rain gauges are generally located over the Edwards Aquifer Recharge Zone and Drainage Area. Acquired data are used in aquifer recharge calculations, precipitation enhancement program evaluations, and a variety of research projects.

The attached map of the January 2004 rainfall totals, as recorded by the real-time gauging system, indicates a wide distribution of precipitation was recorded over the gauging system area. The average rainfall measured this month was 1.8 inches with the highest measurement of just over 3.7 inches recorded in the Medina, Bexar, and Kendall County boundary area. Slightly over three inches of rainfall were also measured in north-central Medina and northeastern Comal Counties. Most other areas in the eastern portion of the gauging system area measured over two inches while most portions in the west measured over an inch of rainfall. Only the extreme western edge of the gauging area and central Uvalde County measured under an inch of rainfall; there were no monitoring stations that recorded zero rainfall in January 2004.

If you have questions regarding the attached map or the Authority's real-time precipitation gauging system, please call Earl Parker, Program Manager - Investigations and Monitoring.

January 2004 Rainfall Totals





Formation of the Authority's Water Quality Advisory Task Force

by Geary Schindel, Chief Technical Officer

At the November 2003 board meeting, the Authority's Board of Directors formed the Water Quality Advisory Task Force (WQATF). This task force is composed of 29 members that represent water purveyors, governmental agencies, development interests, environmental interests, citizens and technical experts. There are also eight non-voting resource members on the task force. Former State Senator John Sharp, from Victoria Texas, is chairing the task force. The WQATF has been asked by the board to make recommendations regarding the following issues:

- What protection is needed for Edwards Aquifer water quality?
- What agencies have jurisdiction over water quality protection and recharge zone protection?
- Where is there duplication of staffs and functions?
- Who should promulgate and enforce any additional regulations?
- What specific role should the Edwards Aquifer Authority have in any additional regulation?
- What is a fair funding mechanism for Recharge Zone regulation and remediation?

The WQATF had its first meeting on January 20. At this meeting, the organization of the task force was discussed along with its charge. Two presentations were also made at the meeting: Darcy Frownfelter, General Counsel for the Authority, presented an overview of the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Recharge Zone Regulations; and I made a presentation on the hydro-geologic characteristics of the Edwards Aquifer.

The WQATF will be holding monthly meetings to hear from various governmental agencies which have regulatory responsibilities in the region. Upcoming meetings will include presentations by representatives from the US Environmental Protection Agency, TCEQ, the City of San Antonio, Bexar County On-Site Sewage Program, the Edwards Aquifer Authority, and others. In addition, there will be opportunities for input from citizens throughout the region. The Authority staff will be providing staffing and support for the WQATF. The WQATF is expected to complete its tasks by the middle of the summer.

Update on the San Marcos Springs Tracer Test.

In January, the Authority, along with its consultant, George Veni and Associates, initiated a series of tracer tests in the San Marcos area as part of the Focused Flowpath task for the Authority's Optimization Technical Studies program. Dye was placed in Rattlesnake Cave, Ezells Cave, and Primers Fissure.

More than 30 sites have been monitored using activated charcoal detectors or automatic water samples with samples being analyzed using the Authority's luminescence spectrometer.

Results from the tracer tests are still being analyzed but the preliminary results indicate that dye from Primers Fissure flowed northeast to Ezells Cave, Wonder Cave, the Artesian Well at Texas State University, Spring Lake Wells, and ultimately discharged at Spring Lake at San Marcos. Dye placed in

Formation of the Authority's Water Quality Advisory Task Force

by Geary Schindel, Chief Technical Officer (continued)

Ezells Cave followed the same path and also discharged at Spring Lake. Groundwater velocities were as high as ½ mile per day. None of the dyes were detected at visible concentrations at the monitoring sites but were very easily detected with the Authority's spectrometer. Additional tests will be performed in the San Marcos area over the coming months.

We wish to thank the City of San Marcos, Water and Waste Water Utility; Aquarena Center at Texas State University at San Marcos; South Hays Fire Department, Texas State University, Guadalupe Blanco River Authority, Wonder World Cave, and the citizens of San Marcos for assistance in access to their property and facility's for this study.



Authority Welcomes New Employees

by Margaret Garcia, Program Manager- Public Affairs



In January, Reginald "Reg" Warren joined the Authority's Administrative Team as GIS Analyst. He holds a bachelors degree in GIS from Southwest Texas State University. Reg is currently working on his masters degree in GIS and hopes to obtain it by the end of 2004. Prior to coming to the Authority, he worked for USAA as a GIS Architect. Reg also worked for ESRI for over two years as a Systems Specialist. He is knowledged in GIS catastrophe management, risk analysis, and marketing. Reg has worked with GIS for over 16 years.



In January, Epifanio "Epi" Villarreal joined the Authority's Investigations and Monitoring Team as Field Representative. Epi holds a bachelors degree in Natural Resources and Environmental Studies from Texas State University. Prior to coming to the Authority, Epi worked for ACRT Inc. for nine months as a Utility Forester where he inspected transmission power lines, and prescribed vegetation management on transmission easements. Epi also worked for Texas Structural Pest Control as an Investigator for two years where he regulated compliance work, investigated consumer complaints, and prepared violation reports.

Conservation Rules Approved by Authority

by Rick Illgner, Program Manager- Groundwater Management Strategies

In December, Authority directors approved Groundwater Conservation and Reuse rules (ch. 715, subch. C) to implement the Groundwater Conservation Plan (GCP). The purpose of the Authority's GCP is to encourage, promote, and document year-round conservation measures in the region. The development and implementation of regional and individual GCPs will assist the Authority and its applicants with successful management of groundwater consumption. The approved rules slightly modify the GCP approved in 2000; therefore, the Authority will be considering revisions to the GCP in February.

Groundwater Withdrawal Transfers

by Rick Illgner, Program Manager – Groundwater Management Strategies

In January, Authority staff processed three partial sales and lease transfers representing 300 acre-feet in Edwards Aquifer groundwater withdrawal rights. Since the inception of the transfer program, Authority staff has processed 967 partial sales and lease transfers representing 179,236.931 acre-feet of groundwater withdrawal rights. Of the 967 partial sale and lease transfers completed, only 696 are currently active representing 127,773.994 acre-feet. Active transfers include 101 sub-leased transfers representing 23,118.832 acre-feet. In addition, Authority staff processed four changes of ownership or miscellaneous transfers representing 200 acre-feet of Edwards Aquifer groundwater.

January 2004 Transfer Table Summary

Transfer Description	Number of Transfers	Acre-Feet
January 2004 (1/1/04 - 1/31/04) Transfers (Partial Sales, Leases, Sub-leases, and Re-sales)	3	300.000
January 2004 (1/1/04 - 1/31/04) 100% Change of Ownership (Sale of Place of Use) or Miscellaneous Transfers	4	200.000
Total Number of Transfers (Partial Sales, Leases, and Sub-leases, and Re-sales) Completed as of 1/31/04	967	179,236.931
Total Number of Active Transfers (Partial Sales, Leases, Sub-leases, and Re-sales) as of 1/31/04	696	127,773.994
Total Number of Active Sub-leased Transfers as of 1/31/04	101	23,118.832
Total Number of Active Re-sale Transfers as of 1/31/04	96	3,349.392

Transfer forms are located at the Authority's main office located at 1615 N. St. Mary's Street. For more information, contact Naomi Esquivel, Program Associate.

January 2004 Board Meeting

by Margaret Garcia, Program Manager – Public Affairs

Authority Directors Declare District 4 Vacancy

At their regular monthly meeting held Tuesday, January 13, 2004, in Uvalde, Texas, the Edwards Aquifer Authority Board of Directors voted to accept the resignation of District 4 Director and former chairman Michael D. Beldon. Mr. Beldon was appointed to the board by the Texas Legislature in 1995 and served as chairman from 1995 until his resignation which took effect December 31, 2003. Authority directors instructed the General Manager to proceed with filling this vacancy in accordance with the agency's by-laws.

In other action, Authority directors received a technical briefing on the Authority's well metering program. The Edwards Aquifer Authority Act requires the Authority to monitor all industrial, irrigation and municipal wells that withdraw water from the Edwards Aquifer. In keeping with this mandate, the Authority has installed 690 irrigation well flow meters at the Authority's expense and has required municipal and industrial well owners to install 875 flow meters since 1996. As a result of this program, the Authority monitors and operates one of the largest water well flow meter networks in the United States.

Directors also approved an agreed final order for five initial regular permits for applicants who had previously filed protests on their proposed permits. After the applicants provided additional documentation to substantiate their claims for more Edwards groundwater than originally proposed by staff, all parties agreed to a final permit. These agreed final orders represent approximately 7,064 acre-feet of Edwards groundwater. Authority directors also adopted an omnibus final order approving four initial regular permits representing approximately 1,886 acre feet of Edwards Aquifer groundwater. Since January 2001, the board has issued 711 permits, representing 501,928 acre-feet of groundwater withdrawal rights, and denied 186 permit applications.

The meeting held in Uvalde fulfills a commitment made by the board of directors to the region to hold at least two monthly meetings each year outside of the Authority office in San Antonio. "We encourage people in the region to attend our board and committee meetings so they can observe our board at work and they are also welcome to address the board regarding any issue," said Doug Miller, board chairman. "This board has always had a regional approach to management of the aquifer and meetings outside of San Antonio help us keep that perspective."

Well Construction Program

by Rick Illgner, Program Manager – Groundwater Management Strategies

In January, Authority staff issued 20 well construction and plugging permits. This total includes four exempt Edwards Aquifer domestic well permits, three well plugging permits, and thirteen "drill through" the Edwards Aquifer permits. For more information contact Jeff Robinson, Regulatory Program Coordinator.

2003 Audit

by Brock Curry, Program Manager – Administration

Auditors from the firm of Padgett, Stratemann & Co., L.L.P. will conduct their on-site investigation the week of February 16. As required by the Texas Water Code, this annual audit must be completed within 120 days following the end of the fiscal year. The Authority's fiscal year ended December 31, 2003. Staff anticipates presenting the audit for board approval at the regular April meeting.

Aquifer Management Fees

by Brock Curry, Program Manager – Administration

On January 13, Authority staff issued 294 non-agricultural aquifer management fee invoices based on authorized use for 2004. These invoices totaled \$9,192,241. If paid in full, these fees are due March 1, 2004. Pumpers may elect to pay the fees monthly. The 2004 non-agricultural aquifer management fee rate set by the board is \$29.00 per acre-foot. As of January 31, the Authority has collected about \$777,000 from non-agricultural users.

Agricultural aquifer management fees based on the amount of groundwater used in 2003 were due January 31. As set forth in the Edwards Aquifer Authority Act, the aquifer management fee rate for agricultural users is \$2.00 per acre-foot. As of January 31, the Authority has collected about \$95,000 in agricultural fee revenue.

2002 Annual Report

by Brock Curry, Program Manager – Administration

For the second time in as many years, the Authority has earned the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for the Authority's Comprehensive Annual Financial Report for 2002. In receiving this commendation, the Authority has achieved the highest standards in government accounting and financial reporting established by GFOA. A copy of the 2002 Annual Report is available on the Authority's website located at www.edwardsaquifer.org.

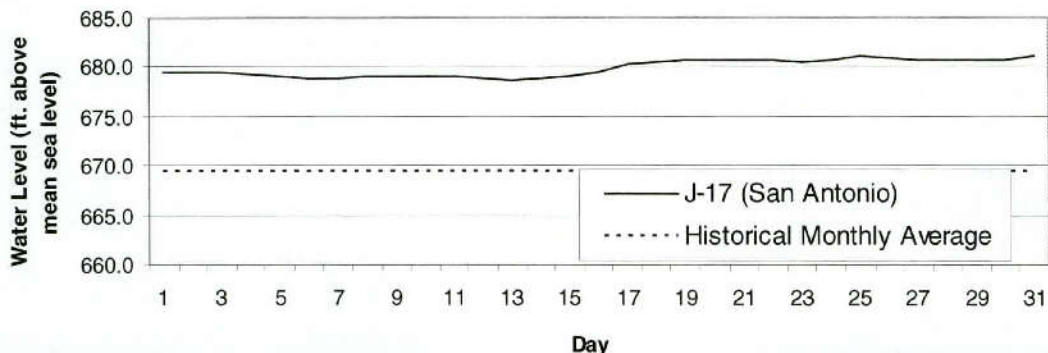
Monthly Water Level & Springflow Report

Aquifer levels can be viewed on the Authority's web site at www.edwardsaquifer.org

J-17 (San Antonio) Index Well – January 2004

The J-17 index well level average in January 2004 was 679.9' above mean sea level (msl) - down 0.2 feet from last month's average of 680.1' msl. The January 2004 high was 681.2' (Jan 25) and the low was 678.7' (Jan 13), a range of 2.5 feet. The January 2004 average is 10.5 feet above the J-17 historical monthly average for January of 669.4' msl.

J-17 (San Antonio) Index Well -
January 2004

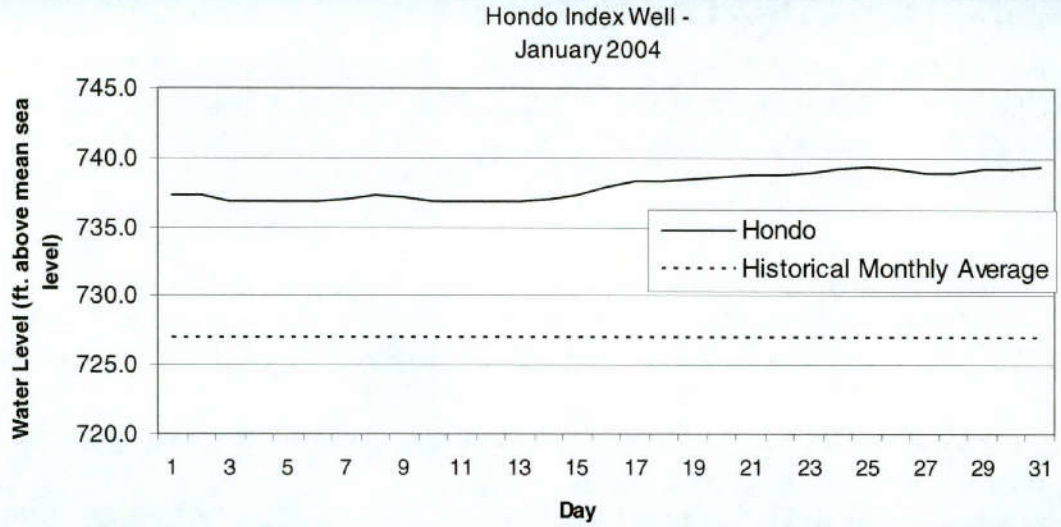


J-17 (San Antonio) Index Well – Historic Record: 1986-2003

	January 2004	January 2003	Historical Record	
Maximum	681.2	694.8	June 14, 1992	703.3
Minimum	678.7	693.3	June 29, 1990	612.5
Average	679.9	693.9	Jan. (1986-2003)	669.4

Hondo Index Well – January 2004

The Hondo index well level average in January 2004 was 738.0' above mean sea level (msl) - down 0.6 feet from last month's average of 738.6' msl. The January 2004 high was 739.3' (Jan 31) and the low was 736.8' (Jan 13), a range of 2.5 feet.

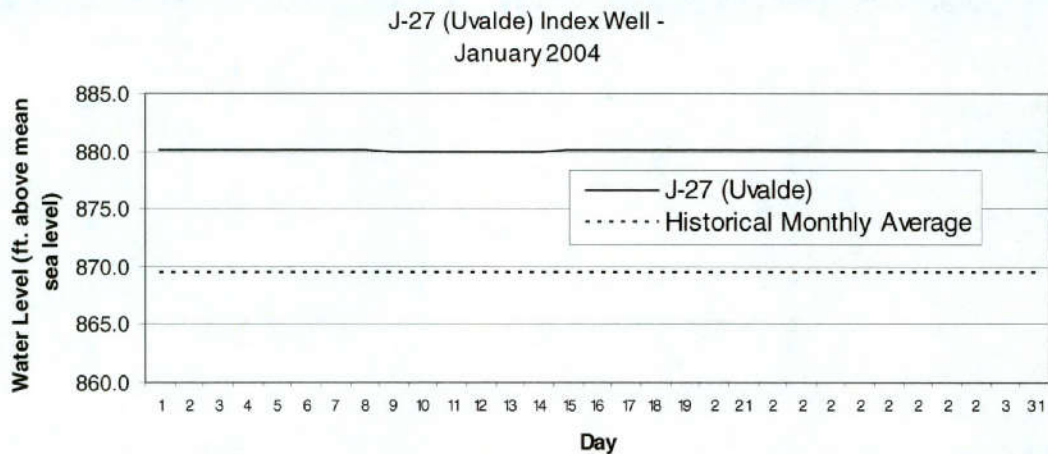


The January 2004 average is 11.1 feet above the Hondo Well historical monthly average for January of 726.9' msl.

Hondo Index Well – Historic Record: 1986-2003				
	January 2004	January 2003	Historical Record	
Maximum	739.3	757.7	June 14, 1992	779.0
Minimum	736.8	756.2	June 29, 1990	651.0
Average	738.0	756.8	Jan. (1986-2003)	726.9

J-27 (Uvalde) Index Well – January 2004

The J-27 index well level average in January 2004 was 880.1' above mean sea level (msl) - unchanged from last month's average of 880.1' msl. The January 2004 high was 880.2' (Jan 25) and the low was 880.0' (last occurred on Jan 22), a range of 0.2 feet.



The January 2004 average is 10.7 feet above the J-27 historical monthly average for January of 869.4' msl.

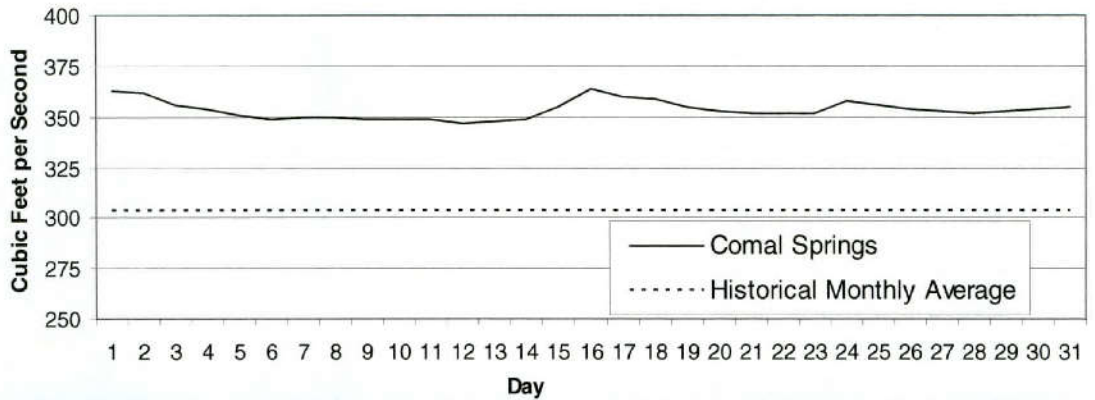
J-27 (Uvalde) Index Well – Historic Record: 1940-2003				
	January 2004	January 2003	Historical Record	
Maximum	880.2	883.3	June 15, 1987	889.0
Minimum	879.9	883.0	April 13, 1957	811.0
Average	880.1	883.2	Jan.. (1940-2003)	869.4

Comal Springs – January 2004

Comal springflow averaged 354 cubic feet per second (cfs) in January 2004 - down 10 cfs from last month's average of 364 cfs. Comal springflow ranged from a maximum of 364 cfs (Jan 16) to a minimum of 347 cfs (Jan 12), a range of 17 cfs.

The January 2004 average was 50.8 cfs above the historical monthly average of 303.2 cfs.

Comal Springs -
January 2004



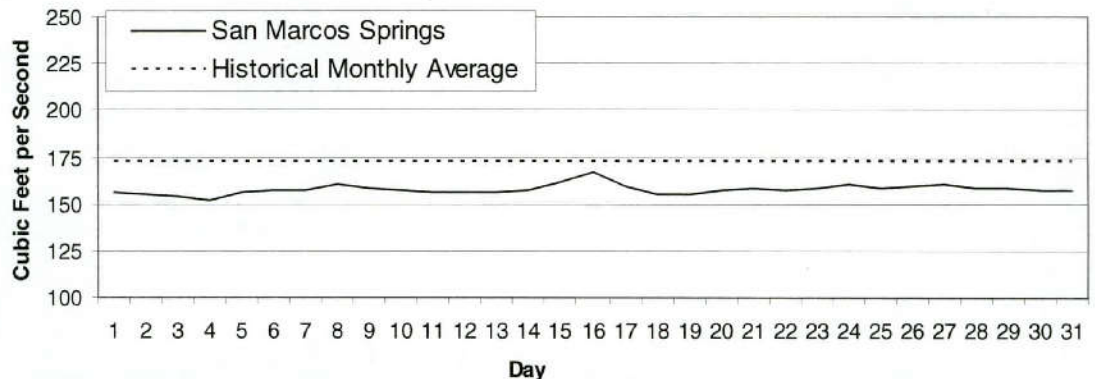
Comal Springs Historic Record - 1927-2003				
	January 2004	January 2003	Historical Record	
Maximum	364	460	October 14, 1973	534.0
Minimum	347	439	August 8, 1956	0.0
Average	354	448	Jan. (1927-2003)	303.2

San Marcos Springs – January 2004

San Marcos springflow averaged 157 cfs in January 2004 - down 5 cfs from last month's average of 162 cfs. San Marcos springflow ranged from a maximum of 167 cfs (Jan 16) to a minimum of 152 cfs (Jan 4), a range of 15 cfs.

The January 2004 average was 15.8 cfs below the historical monthly average of 172.8 cfs.

San Marcos Springs -
January 2004



San Marcos Springs Historic Record - 1956-2003				
	January 2004	January 2003	Historical Record	
Maximum	167	322	March 12, 1992	451.0
Minimum	152	311	August 15, 1956	46.0
Average	157	317	Jan. (1956-2003)	172.8



**EDWARDS AQUIFER
AUTHORITY**

1615 N. St. Mary's Street
San Antonio, Texas 78215

210.222.2204 or 1.800.292.1047
www.edwardsaquifer.org

BE AQUIFER AWARE

CALENDAR OF EVENTS FOR FEBRUARY & MARCH

FEBRUARY

Tues. 2/10 3 PM Board Meeting, Edwards Aquifer Authority, Conference Center
1615 N. St. Mary's Street, San Antonio, Texas

Thur. 2/16 President's Day, EAA Offices Closed

Tues. 2/24 11 AM Aquifer Management Planning Committee
1 PM Permits Committee
2 PM Legislative Committee

Wed. 2/25 11 AM Finance/Administrative Committee
1:30 PM R&T Committee

MARCH

Mon. 3/1 12 PM Executive Committee

Tues. 3/9 3 PM Board Meeting, Edwards Aquifer Authority, Conference Center
1615 N. St. Mary's Street, San Antonio, Texas

Tues. 3/23 11 AM Aquifer Management Planning Committee
1 PM Permits Committee
2 PM Legislative Committee

Wed. 3/24 11 AM Finance/Administrative Committee
1:30 PM R&T Committee

Authority meeting times & dates are subject to change.

Visit our website at www.edwardsaquifer.org for up-to-the minute information on meeting times and dates.