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EDWARDS AQUIFER AUTHORITY GENERAL MANAGER'S REPORT

October/November
 2001

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Graphic Design: Lisa Llamas

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.



The 2001 Edwards Aquifer Authority Water Symposium, "From Sole Source to Integrated Resource: Water Management in the Edwards Aquifer Region" was held on September 19 & 20 at the Adams Mark Hotel in San Antonio, Texas.

We worked hard to put together a list of speakers who are well respected in the field of water. Among them were our keynote speaker Amy Vickers, author of *Water Use and Conservation* and Tom Bell, owner and publisher of *U.S. Water News*. Other speakers included State Representative David Counts, Chairman of the House Natural Resources Committee and State Representative Robert R. Puente who gave a detailed summary of water issues resulting from the 77th Session of the Texas Legislature.

Well over 100 people took part in this first time effort and we hope that the information they received through presentations, printed materials and displays will help them as they work through water issues in their areas.



From left to right: Gregory M. Ellis, General Manager, Edwards Aquifer Authority, The Honorable David Counts, Texas House of Representatives, The Honorable Robert R. Puente, Texas House of Representatives.



2001 SYMPOSIUM



September 20-21, 2001

GENERAL MANAGER'S MESSAGE

Gregory M. Ellis



Authority staff will conduct four public meetings during the month of October throughout the region for the purpose of receiving public comment regarding the 2002 staff proposed budget. The Authority does not collect taxes and must raise all revenues through an aquifer management fee, charged on the amount of Edwards Aquifer groundwater authorized to be withdrawn each year by municipal and industrial pumpers.

The \$13.2 million-dollar budget would require an aquifer management fee of \$25 per acre-foot for all municipal and industrial users, up \$2 per acre-foot from 2001. The aquifer management fee for agricultural users was limited by the 77th Texas Legislature at no more than \$2 per acre-foot. After hearing from constituents, the board is scheduled to adopt the 2002 budget at the regular November board meeting. At this time, Authority directors may consider additional amendments including land acquisitions, the buydown and other contingencies that could raise the aquifer management fee to \$27 per acre-foot for all municipal and industrial users.

More information on the proposed budget and fees and the public meeting schedule is available on the Authority's website (www.edwardsaquifer.org) or by contacting us at (210) 222-2204 or 1-800-292-1047.

Texas Supreme Court Hears Orals Argument : Bragg v. Edwards Aquifer Authority by Margaret Garcia, Program Manager Public Affairs

On Tuesday, October 2, 2001, the Supreme Court of Texas heard oral arguments in the case of **Glenn and Jolynn Bragg v. Edwards Aquifer Authority**. The Supreme Court of Texas agreed to hear the oral arguments after receiving a petition from Glenn and Jolynn Bragg following the January 2000 decision of the Fourth Court of Appeals ruling in favor of the Edwards Aquifer Authority.

Justice Sarah B. Duncan, who authored the opinion for the three-judge appeals panel, stated that, "In accordance with the plain language of the Property Rights Act and the Edwards Aquifer (Authority) Act, we hold that EAA's adoption of permitting rules generally and the rules applied to the Bragg's applications in particular were mandated by state law and thus outside the ambit of the Property Rights Act." The ruling goes on to say, "because state law mandates the EAA's denial of the Bragg's application of a permit to withdraw water from the D'Hanis Orchard well, the Property Rights Act does not apply and a TIA is not required. The same is true with respect to the Bragg's application to withdraw water from their Home Place Orchard because the Edwards Aquifer (Authority) Act requires the EAA to grant the Bragg's application to withdraw water from the Home Place Orchard well based upon the irrigator minimum."

"The Authority remains confident that our interpretation of the law is correct and the decision of the Supreme Court will vindicate our actions and our decisions," said Gregory M. Ellis, EAA General Manager. The Supreme Court may take several months to announce their final decision. The Authority will continue to rely on the opinion of the 4th Court of Appeals and continue to adopt rules and issue permits in accordance with that ruling. *(continued on next page)*

Texas Supreme Court Hears Orals Argument : Bragg v. Edwards Aquifer Authority *(continued)*

The Bragg's first brought suit against the EAA in September 1998, after EAA staff recommended denying the Bragg's application for a permit to withdraw water from their D'Hanis Orchard well, and recommended granting their application for a groundwater withdrawal permit for their Home Place Orchard well based upon the guaranteed irrigator minimum of two acre-feet per acre.

The case was tried in Medina County before Judge Mickey R. Pennington, 38th Judicial District, who declared the EAA's proposed actions on the Bragg's permit applications and the Authority's issuance of its permitting rules to be void because the EAA did not perform "takings impact assessments" (TIA) pursuant to the Texas Private Real Property Rights Preservation Act. The trial court judgment was appealed by the EAA to the Fourth Court of Appeals.

2001 Aquifer Management Fees

by Brock Curry, Administrative Program Manager

In September, the Authority collected \$ 127,656 in non-agricultural aquifer management fee revenue bringing the total collected for 2001 to \$ 5,799,812 or 71.9 % of budgeted aquifer management fee revenue. Staff has initiated enforcement action against permit applicants with delinquent fees. Of the \$ 189,200 total outstanding non-agricultural fees considered delinquent, \$ 142,005 is current year revenue. Since August, the Authority has collected \$9,895 in previously delinquent revenue.

In September, the Authority also received \$ 9,311 from agricultural users for groundwater used in 2000. Year-to-date collections total \$ 396,128 or 99 % of the amount budgeted as 2001 revenue.

Public Meeting Notice

by Brock Curry, Administrative Program Manager

The Edwards Aquifer Authority is conducting public meetings to receive comment regarding proposed 2002 Aquifer Management Fee Rates and Budget. These meetings will be held at the following times and locations:

Wednesday, October 10, 2001

6:00 PM
Edwards Aquifer Authority
Conference Center
1615 N. St. Mary's Street
San Antonio, Texas

Tuesday, October 16, 2001

6:00 PM
Comal County
Commissioners Court
150 N. Seguin St., Ste. 301
New Braunfels, Texas

Wednesday, October 17, 2001

6:00 PM
Uvalde Civic Center
300 E. Main Street
Uvalde, Texas

Monday, October 22, 2001

6:00 PM
Hondo Community Center
1014 18th Street
Hondo, Texas

Copies of the proposed 2002 fee rates and budget may be obtained from the Edwards Aquifer Authority by calling (210) 222-2204 or 1-800-292-1047, or may be viewed on the Authority's website at www.edwardsaquifer.org.

2001 Precipitation Enhancement Program

by Bobby Bader, Program Coordinator



The Authority's 2001 Precipitation Enhancement Program officially ended on Saturday, September 15, 2001. The first week of September was very active for cloud-seeding operations. Flights were not conducted in some target area counties because of flood warnings and saturated soil conditions. The final cloud-seeding flight of the 2001 season occurred on September 9. Between September 11 to September 13, WMI aircraft were grounded because of the New York tragedy and no flights occurred the last few days of the program due to the lack of suitable clouds in the target area.

During the 2001 season, flights were made on 35 days, many of these days contained multiple cloud-seeding flights. Total flight time for the 2001 program was 153 hours, ejecting 834 flares and burning the wing-mounted generators for 34.5 hours during seeding operations.

Two reports will be generated and made available to the Authority, South Central Texas Water Advisory Committee, the Precipitation Enhancement Advisory Group and individuals interested in the program. Weather Modification, Inc. (WMI) will prepare their final operational report on the 2001 season operations, and Woodley Weather Consultants, Inc., on report on the effectiveness of the Precipitation Enhancement Program from 1999–2001. A preliminary report from Woodley Weather Consultants will be presented to the board at the January 2002 board meeting.

On September 18, 2001, the Authority submitted to the Texas Department of Agriculture a grant application for 50% reimbursement from the State of expenses for the 2002 and 2003 cloud-seeding seasons. This application does not obligate the Authority to conduct future cloud-seeding programs, but provides the opportunity for Authority reimbursement in the event the board elects to continue the precipitation enhancement program in 2002, and/or 2003.

In October, Authority staff will submit an application for a new weather modification permit to the Texas Department of Licensing and Regulation. The four-year permit will be requested in the name of the Authority, this change will allow more flexibility in the operational program in the event the board elects to continue the precipitation enhancement program.

Habitat Conservation Plan

by Rick Illgner, Planning & Conservation Program Manager

In September, the Authority amended the comprehensive and critical period variable flow bio-monitoring contracts being conducted by BIO-WEST on the San Marcos and Comal Springs aquatic ecosystems. The Authority's comprehensive and critical period monitoring being conducted by BIO-WEST on the San Marcos and Comal Springs aquatic ecosystems is designed to determine the impacts that variable flow has on those systems. Results from this historical monitoring and sampling event will be used to present a balanced Habitat Conservation Plan to the U. S. Fish & Wildlife Service based on the best available science. (continued on next page)

Habitat Conservation Plan (continued)

The board approved an amendment to add high flow trigger events to the critical period monitoring contract and proceed to monitor the effects from the early September runoff events. In addition, the Research and Technology Committee of the board met on September 27 and recommended the board amend the comprehensive monitoring contract by adding research elements on the response of the Comal Riffle Beetle to drought conditions and the Fountain Darter to temperature.

The heavy rainfall that occurred at the end of August provided the Edwards Aquifer with much needed recharge and the Authority with the opportunity to study the biological impacts of an unusually high flow event. BIO-WEST had just completed the fall, comprehensive monitoring event when the rainfall caused the flow at the Comal gauging station to peak at 1729 cubic feet per second (cfs) and a daily average of 876 cfs. Based on the historical record, flows of this magnitude occur less than 0.5% of the time (a low flow event that occurs this often would be less than 20 cfs). High flows tend to modify habitat by scouring the substrate, burying plant community and washing organisms downstream. Visual inspection from the shoreline indicated that the high flow had altered the plant community.



The research activities planned for the Fountain Darter and the Comal Springs Riffle Beetle are intended to better understand how each of the species responds to consequences of drought and low flow conditions. No studies or explanations can be found to explain the response of the Comal Springs Riffle Beetle to the drought of record. Similarly, studies have not been conducted to determine how the Fountain Darter responds to increased temperatures brought on by low springflow conditions. The contract amendment for these research efforts will be considered at the October 2001 board meeting.

October 2001 Board Meeting

by Margaret Garcia, Public Affairs Program Manager

At their regular monthly board meeting held Tuesday, October 9, 2001, Edwards Aquifer Authority (Authority) directors approved the public meeting schedule for the \$13.2 million dollar, 2002 staff proposed budget. The Authority does not collect taxes and must raise all revenues through an aquifer management fee, charged on the amount of Edwards Aquifer groundwater authorized to be withdrawn each year by municipal and industrial pumpers. The 2002 budget would require an aquifer management fee of \$25 per acre-foot for all municipal and industrial users, up \$2 per acre-foot from 2001. The aquifer management fee for agricultural users was limited by the 77th Texas Legislature at no more than \$2 per acre-foot. These public meetings are scheduled throughout the region giving the public an opportunity to comment on the proposed 2002 budget.

In addition, Authority directors voted to adopt a resolution supporting an amendment to the Texas Constitution. Proposition 19 will be on the November 6 ballot and if passed, would allow the Texas Water Development Board (TWDB) to issue a maximum of \$2 billion dollars in general revenue bonds. \$50 million of the bonds are earmarked for the Water Infrastructure Fund created by Senate Bill No. 2, passed during the 77th Texas Legislature. Authority directors also approved initial regular permits for 8 applicants, representing 1409.39 acre-feet of Edwards groundwater.

In other business, Authority directors received a technical briefing on the economic and biologic impacts of management alternatives presented in the Authority's Habitat Conservation Plan. Authority consultants Mr. Roy Frye, Hick & Co., and Mr. Ed Oberney, BIO-West, presented the technical briefing.

October 2001 Board Meeting (continued)

In addition, Authority directors approved a joint funding agreement with the United States Geological Survey for data-collection services and an additional amendment to the existing BIO-WEST contract to provide additional funding for fountain darter and riffle beetle laboratory studies. The fountain darter and the riffle beetle are endangered species found only in Comal Springs located in Comal County.

10 Years of Service

by Margaret Garcia, Public Affairs Program Manager



In September, Rick Illgner, Program Manager for the Authority's Planning and Conservation program was recognized for 10 years of service. Rick has over 22 years experience in water resources, and currently oversees the Authority's Comprehensive Water Management Plan, Habitat Conservation Plan, Agricultural Water Conservation Loan Program, Groundwater Conservation Plan, precipitation enhancement program and the Authority's Groundwater Trust.

Rick is a member of the American Water Works Association, Texas Water Conservation Association and the Texas Alliance of Groundwater Districts. Rick joined the Edwards Underground Water District in July 1991 after 14 years with water districts in Texas and Kansas. He has held various positions with the Authority and was named Program Manager for Planning and Conservation in 1999.

2001 Groundwater Festival

by Cathy Haney, Education Coordinator

This year's celebration of Central Texas Groundwater was held at the Aquarena Center located in San Marcos, on September 21, 2001. The Authority was a proud sponsor of the event, which helps to educate students within the Authority's region, on the importance of protecting our most precious resource, groundwater. Approximately 700 students grades 4th–6th participated in this year's event.



Edwards Aquifer Optimization Program Update

by John Hoyt, Aquifer Science Program Manager

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). *(continued on next page)*

Edwards Aquifer Optimization Program Update *(continued)*

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 September 2001, the Research and Technology (R&T) Committee and the Authority's board of directors considered two amendments to an ongoing biological OTS. At the September 25th special board meeting, the board approved Amendment 2 to the contract to "Evaluate the Effects of Variable Flow on Biological Resources in the Comal and San Marcos Aquatic Ecosystems" (the Contract). Amendment 2 adds high-flow trigger levels to the critical period monitoring portion of the contract. At the September 26th R&T Committee meeting, the committee recommended the board approve Amendment 3 to the contract. Amendment 3 adds laboratory studies to the comprehensive monitoring portion of the contract. The laboratory studies will evaluate the effect of daily temperature changes on fountain darter reproduction during periods of low springflow and to evaluate the mobility of the Comal Springs riffle beetle during periods of low springflow. The board will consider Amendment 3 at the October 9th board meeting.

In addition to committee and board action in September 2001, a general report on the various OTS groups is provided below.

Biological Studies – All of the initial recommended biological studies approved by the board have been initiated. Of the initially recommended studies, the well sampling for aquifer biota and the Texas wild-rice Mapping studies are no longer receiving Authority funding.

Edwards Aquifer Computer Model - The U.S. Geological Survey (USGS) and the Bureau of Economic Geology (BEG) continue to develop input files and are conducting steady state calibration activities. The transient calibration process is scheduled to begin in December 2001. A meeting of the groundwater modeling advisory panel group was held on September 6, 2001. The model will be complete in September 2003.

Flowpath/Modeling Studies - The USGS, San Antonio Water System (SAWS), and the Authority continue to work on the north Medina County flow path study. The USGS has all gauging equipment in place for the hydrologic balance work for Medina Lake and Diversion Lake. The USGS has initiated well inventory work in north Medina County and is scheduled to begin installing monitoring wells for the project in October 2001. HDR continues to obtain data sets from the USGS and the Authority for the Recharge Methodology project. Within the next few months, Authority staff will submit a proposed contract for fracture/conduit studies to the R&T Committee and the board.

Work scopes for the recharge/recirculation and focused flow path studies are being developed. A work scope for a recharge and recirculation (R&R) evaluation has been developed by a group of potential cooperative agencies and was submitted to the R&T Committee for consideration. On September 26, the R&T Committee tabled the draft work scope to allow committee members more time to evaluate the item.

Statistical Analysis of Hydrologic Data – Argonne National Laboratories (ANL) will prepare the final report of their statistical analysis by October 31, 2001.

Edwards Aquifer Optimization Program Update *(continued)*

Range Management Study - The Natural Resource Conservation Service (NRCS) has all instrumentation in place for the Honey Creek State Natural Area (SNA) demonstration project and has initiated brush clearing in a demonstration area. The Government Canyon SNA demonstration project has on hold pending consultations with the U.S. Fish and Wildlife Service (USFWS) over concerns regarding Golden-cheeked warbler habitat. At a meeting on September 12, 2001 between the NRCS and the Authority, it was decided that baseline data collection should be initiated in anticipation of an eventual agreement with the USFWS. The OTS-related studies currently underway include:

- Comprehensive and Critical Period Monitoring Program to Evaluate the Effects of Variable Flow on Biological Resources in the Comal and San Marcos Springs Ecosystems.
- Texas Wild-rice reproduction.
- Cagle's Map Turtle instream flow and habitat requirements.
- Edwards Aquifer computerized model development.
- Improved aquifer parameter estimation for computer model in-put data sets.
- Hydrologic budget analysis of Medina Lake and Diversion Lake for the North Medina County Flow Path Study.
- Development of updated methods for calculating recharge to the Edwards Aquifer.
- Statistical analysis of hydrologic data.
- Studies of the freshwater/saline water interface of the Edwards Aquifer.
- Range management of woody species.

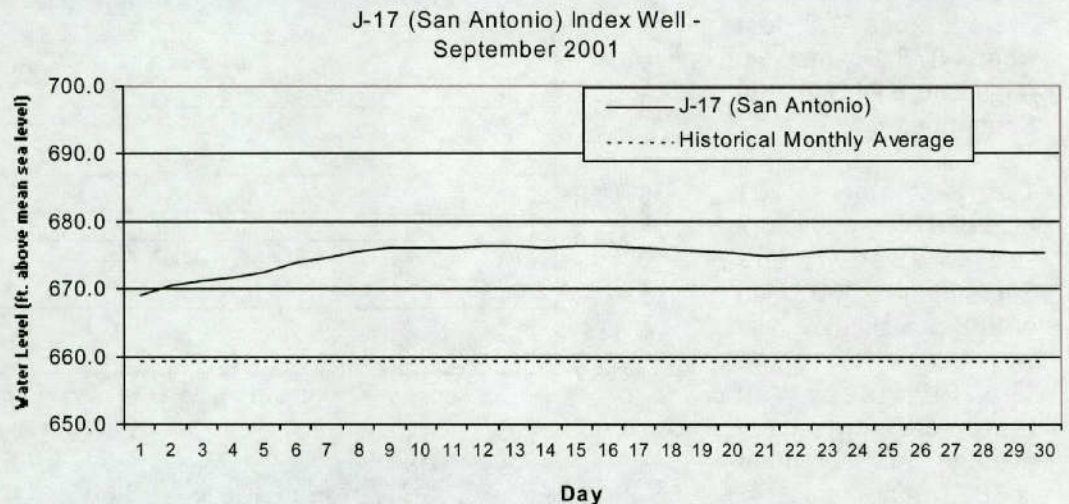
If you have questions regarding the Authority's OTS, call John Hoyt, Aquifer Science Program Manager at (210) 222-2204.

Monthly Water Level & Springflow Report

J-17 (San Antonio) Index Well—September 2001

The J-17 index well level average rose 19.9 feet from 655.0' above mean sea level (msl) in August to 674.9' msl in September.

The September 2001 high of 676.3' is 31.9 feet above the September 2000 high of 644.4' msl. The J-17 historical monthly average for September is 659.5' msl.



J-17 (San Antonio) Index Well—Combined Record for Two Wells: 1932-2001

	Sept. 2001	Sept. 2000	Historical Record	
Maximum	676.3	644.4	June 14, 1992	703.3
Minimum	669.2	635.5	August 17, 1956	612.5
Average	674.9	640.5	Sept. (1932-2000)	659.5

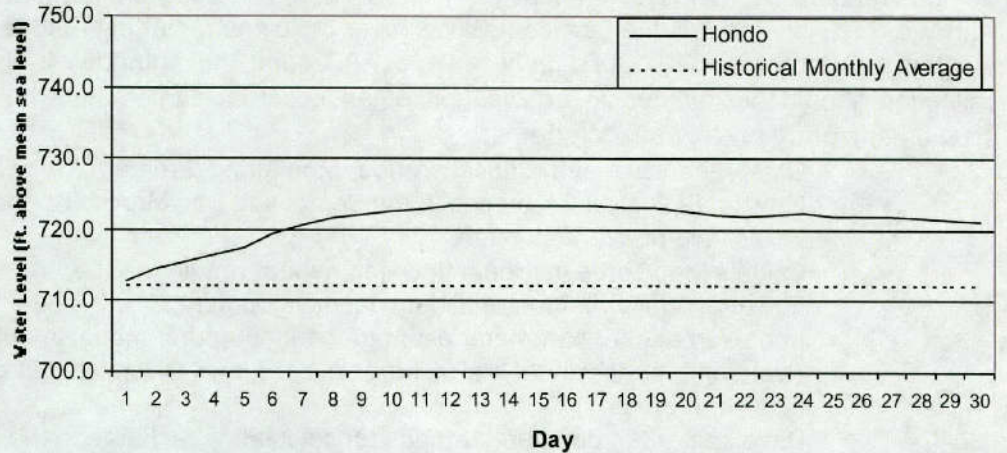
Hondo Index Well—September 2001

The Hondo index well level average rose 16.2 feet from 705.0' msl in August to 721.2' msl in September.

The September 2001 high of 723.5' msl is 37.3 feet above the September 2000 high of 686.2' msl.

The Hondo Well historical monthly average for September is 712.2' msl.

Hondo Index Well -
September 2001



Hondo Index Well—Historical Record: 1986-2001

	Sept. 2001	Sept. 2000	Historical Record	
Maximum	723.5	686.2	June 14, 1992	779.0
Minimum	712.9	679.4	June 29, 1990	651.0
Average	721.2	682.8	Sept. (1986-2000)	712.2

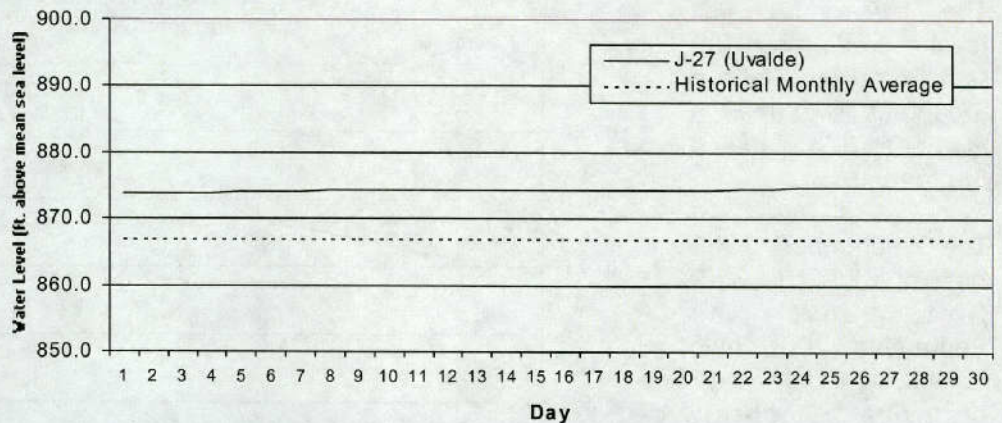
J-27 (Uvalde) Index Well—September 2001

The J-27 index well level average rose 1.2 feet from 873.1' msl in August to 874.3' msl in September.

The September 2001 high of 874.7' msl is 6.2 feet above the September 2000 high of 868.5' msl.

The Uvalde Well historical monthly average for September is 867.0' msl.

J-27 (Uvalde) Index Well -
September 2001



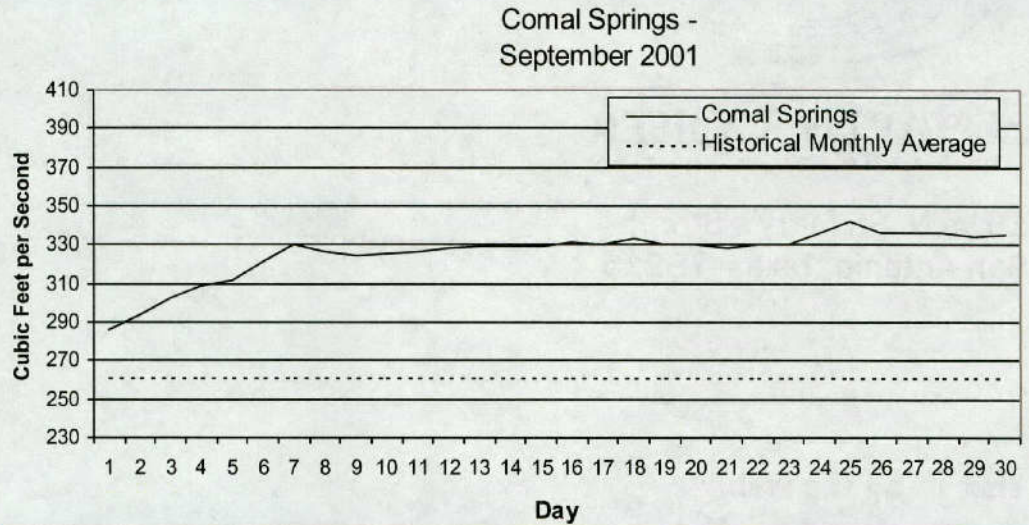
J-27 (Uvalde) Index Well Historical Record: 1940-2001

	Sept. 2001	Sept. 2000	Historical Record	
Maximum	874.7	868.5	June 15, 1987	889.0
Minimum	873.8	868.1	April 13, 1957	811.0
Average	874.3	868.3	Sept. (1940-2000)	867.0

Comal Springs—September 2001

The Comal springflow reached a maximum flow of 342 cubic feet per second (cfs) on September 25th. The minimum flow occurred on September 1st at 286 cfs.

The September 2001 average is 326 cfs, which is 64.6 cfs above the historical monthly average of 261.4 cfs.



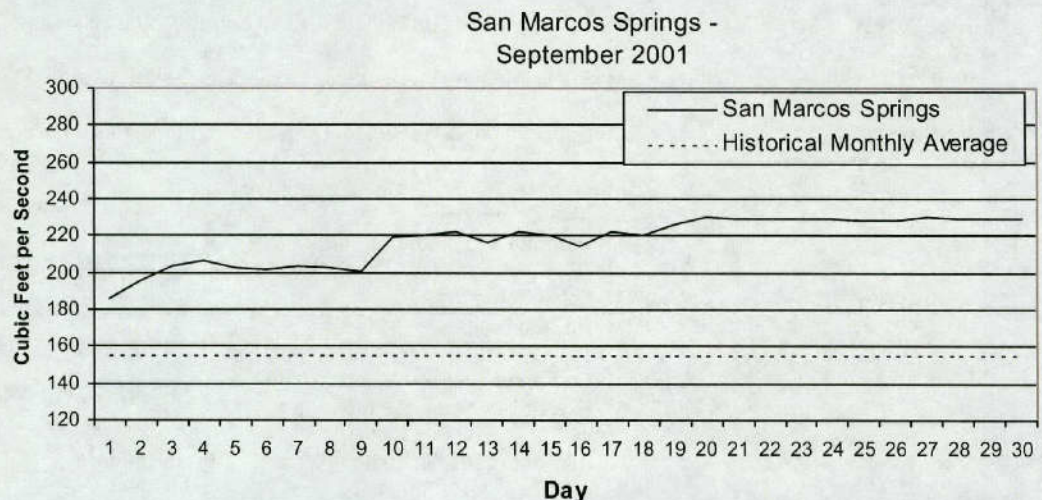
Comal Springs Historical Record: 1927-2001

	Sept. 2001	Sept. 2000	Historical Record	
Maximum	342	186	October 14, 1973	534.0
Minimum	286	140	August 8, 1956	0.0
Average	326	168	Sept. (1927-2000)	261.4

San Marcos Springs—September 2001

The San Marcos springflow reached a maximum flow of 230 cfs on September 27th. The minimum flow occurred on September 1st at 186 cfs.

The September 2001 average is 218 cfs, which is 62.2 cfs above the historical monthly average of 155.8 cfs.



San Marcos Springs Historical Record: 1956-2001

	Sept. 2001	Sept. 2000	Historical Record	
Maximum	230	117	March 12, 1992	451.0
Minimum	186	108	August 15, 1956	46.0
Average	218	111	Sept. (1956-2000)	155.8



EDWARDS AQUIFER
A U T H O R I T Y

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

Visit us on the web!
www.edwardsaquifer.org

Calendar of Events for October & November 2001

October

Tues. 10/09	4 PM Board Meeting, Edwards Aquifer Authority, Conference Center, San Antonio, TX
Wed. 10/10	6 PM Public Meeting on Budget (Edwards Aquifer Authority, San Antonio, TX)
Tues. 10/16	6 PM Public Meeting on Budget (Comal County Commissioner's Court, New Braunfels, TX)
Wed. 10/17	6 PM Public Meeting on Budget (Uvalde Civic Center, Uvalde, TX)
Mon. 10/22	6 PM Public Meeting on Budget (Hondo Community Center, Hondo, TX)
Tue. 10/23	9 AM Finance/Administrative Committee 11 AM AMP Committee 2 PM Permits/Recharge Committee
Wed. 10/24	2 PM Legal Committee 3 PM R&T Committee

Questions regarding meeting times and dates, please contact the Authority at 210-222-2204.

November

Mon. 11/05	9:30 AM Committee Liaison Meeting 12 PM Executive Committee Meeting
Mon. 11/12	<i>Authority Offices Closed (Veteran's Day Holiday)</i>
Tues. 11/13	4 PM Board Meeting, Edwards Aquifer Authority, Conference Center, San Antonio, Texas
Thurs & Fri. 11/22-23	<i>Authority Offices Closed (Thanksgiving Day Holidays)</i>
Tues. 11/27	9 AM Finance/Administrative Committee 11 AM AMP Committee 2 PM Permits/Recharge Committee
Wed. 11/28	2 PM Legal Committee 3 PM R&T Committee