

EDWARDS AQUIFER AUTHORITY GENERAL MANAGER'S REPORT

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Medina County Family Honored for Conservation Efforts

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The Edwards Aquifer Authority has presented the third annual A.O. "Odie" Gilliam Agricultural Conservation Award to a Medina County family who exemplify the highest standards and commitment to agricultural water use efficiency.

Brothers Curtis and Nelson Boehme share the honor presented during the Authority's regular March board meeting. The Boehmes have regularly practiced water conservation efforts in their farming and have worked hard to encourage other irrigators to do the same. Through their use of pivot systems, the Boehmes have reduced their water usage by 50%.

Joyce Gilliam, the widow of Mr. Gilliam, and her family were on hand for the presentation and awards ceremony.

The Authority established the award to commit to memory the high standards of Mr. Gilliam's life and service.



Front Row: Left to Right: Nelson Boehme, Luana Buckner, Mrs. Joyce Gilliam, and daughters Cora Rothe and Linda Hodges.

Back Row: Left to Right: Curtis Boehme, Bruce Gilleland, Maurice Rimkus, Michael Beldon, and Olin Gilliam.

A.O. "Odie" Gilliam was an Edwards Aquifer irrigation farmer who used aquifer water for 46 years and understood deeply and personally the value of water and the need to conserve. He was a pioneer in water conservation and always ready to invest in new water conserving equipment and practices as those evolved during his irrigation career. In a magnanimous gesture typical of his commitment to conserving water for the greater good, Gilliam donated property in 1974 for construction of the Parker Creek Recharge Dam in Medina County.

Gilliam, a director of the Authority, was taken from his family, friends and colleagues on January 21, 1998. Gilliam served on the Authority board from July 1, 1996, through January 16, 1998, and was instrumental in developing water management strategies including the first region wide critical period plan for the Edwards Aquifer.

GM

GENERAL MANAGER'S MESSAGE



Gregory M. Ellis

With the passage of S.B. No. 1477 in 1993, the Texas State Legislature mandated the Edwards Aquifer Authority take all necessary measures to effectively manage the Edwards Aquifer. This mandate includes sustaining the economic viability in the region, the protection of domestic and municipal water supplies, and the continued operation of existing agriculture and industry. The Authority is working hard, through its programs and projects, to meet these important goals.

Each new legislative session, the Legislature considers a number of measures that directly or indirectly impact the operations of the Authority. Every session, Authority staff works with members of the Legislature, other local government representatives, agency personnel, and private individuals to assess the potential impact of the legislation and to inform legislators of those impacts. This session is no exception with six bills filed that directly amend the Edwards Aquifer Authority enabling legislation: H.B. No. 570, H.B. No. 1389, HB. No. 1540, H.B. No. 2409, H.B. No. 3404, and H.B. No. 3535. As of April 6, 2001, only H.B. No. 3404 has been reported from the House Committee on Natural Resources.

With the help of this publication, the Authority endeavors to keep you informed about issues concerning the Edwards Aquifer. We will also keep you up to date on the status of programs and other projects currently underway. If you need additional information on any of the programs highlighted in this publication, please contact the Authority's Public Affairs Office at (210) 222-2204 or 1-800-292-1047.

Precipitation Enhancement Program

by Bobby Bader, Hondo Field Office Manager

In March, Authority directors received a report from Dr. Bill Woodley, Woodley Weather Consultants, regarding cloud seeding in Texas. The presentation included various cloud-seeding methods and the effect of cloud seeding on a cloud's internal structure. Using the Authority's 1999 Weather Modification Program as an example Dr. Woodley provided daily rainfall totals derived from radar for one month during the Authority's program. Satellite images were also shown to be a useful tool in detecting cloud seeding signatures and realizing the effect of air pollution on a cloud's ability to produce rain.

In April, a "Request For Proposals" will be advertised to conduct an independent study to determine the effectiveness of the Authority's precipitation enhancement program. A recommendation regarding the contractor and scope of work will be presented at the May Aquifer Management Planning Committee to be considered by the board in June.

Groundwater Withdrawal Transfers

by Steven D. Walthour, Permitting and Enforcement Program Manager

Authority staff processed 42 transfers from March 1, 2001 to April 1, 2001, representing 2,320,290 acre-feet in groundwater withdrawal rights. In addition, six change of ownership or miscellaneous transfers have been processed by Authority staff. Since the inception of the transfer program, the Authority has processed 372 transfers representing 58626.986 acre-feet of water rights.

Transfer forms may be obtained from Authority offices. For information regarding groundwater withdrawal transfers, contact Javier Hernandez, Program Associate at (210) 222-2204.

2000 Emergency Drought Management Rules

by Steven D. Walthour, Permitting and Enforcement Program Manager

In March, Authority directors authorized settlement offers for two pumpers who exceeded their pumping allotments during the summer and early fall 2000. The Authority required reductions in pumping of Edwards groundwater from May to November 2000, as a result of low aquifer levels and reduced springflow.

Settlement offers were authorized for the City of Kyle for \$27,013.32, and Crystal Clear Water Supply Corporation for \$5,550.00, for late aquifer management fees, and \$992.00 as a settlement offer. As part of the Authority's Supplemental Environmental Program, Crystal Clear Water Supply Corporation will sponsor a water conservation program, in lieu of paying penalties.

2000 Aquifer Management Fees

by Brock Curry, Administrative Program Manager

In March, the Authority collected \$603,623 in non-agricultural aquifer management fee revenue bringing the total collected for 2001 to \$2,515,083. Outstanding non-agricultural fees in the amount of \$454,081 became delinquent on March 1, 2001.

In March, the Authority also received \$55,062 from agricultural users for groundwater used in 2000. The Authority has collected a total of \$348,884 from agricultural users in 2001. Of those irrigators reporting their use, only one is considered delinquent, owing \$685 in aquifer management fees.

Enforcement Program

by Steven D. Walthour, Permitting and Enforcement Program Manager

In March, two alleged violators settled with the Edwards Aquifer Authority regarding enforcement matters facing their companies. Frontier Leasing/Rex Cribley, Partner, and Hanson Aggregates West, Inc. Authority staff is investigating approximately 80 additional cases that could lead to enforcement action. These cases generally include non-reporters of water use; over-pumping interim authorization; withdrawing water for irrigation, municipal or industrial use without interim authorization; well abandonment; and water wasters. For information regarding this program please contact Kathy Elguea, Permitting and Enforcement Coordinator, at (210)222-2204.

Initial Regular Permits

by Steven D. Walthour, Permitting and Enforcement Program Manager

In March, Authority staff met with county clerks from Comal, Bexar, Medina, and Uvalde counties to discuss how the Authority can better assist permit holders and the county clerks when recording initial regular permits. The county clerks provided valuable information and suggestions regarding recording permits that will ultimately result in developing a uniform method for recording permits throughout the region.

Authority staff will implement many of the suggestions provided regarding filing permits. By implementing these measures staff hopes to simplify the process and provide better tracking when recording permits.

Agriculture Water Conservation Loan Program

by Bobby Bader, Hondo Field Office Manager

In March, Authority directors approved amendments to the Authority's General Guidelines for the Agricultural Water Conservation Loan Program. The revisions allow the applicant to pledge permitted water rights as collateral, if additional security is required for the loan to be fully secured. The approved guidelines will no longer consider refinance loans on existing equipment and will require an applicant to allow the Authority to erect a sign on or near the property containing the new equipment which states that they obtained funding through the Authority's Agricultural Water Conservation Loan Program.

The amendments to the general guidelines were necessary in order to finalize the loan application to the Texas Water Development Board (TWDB) for \$1,000,000. The loan application was submitted in March and will be considered by the TWDB at their May meeting. The Authority expects to begin making individual loans

Groundwater Conservation Plan

by Rick Illgner, Planning and Conservation Program Manager

In February, staff began a series of workshops to assist applicants in preparation of individual groundwater conservation plans (GCP). Eight workshops were held in the region. Three workshops were conducted for irrigation applicants in February. In March, three workshops were held for municipal applicants and two were held for industrial applicants.

The Authority is required by statute to develop effective and enforceable conservation and reuse plans. The purpose of the GCP is to promote and document year-round conservation measures in the region, and to guide applicants in the development of individual GCPs. The Authority's GCP was approved in September 2000. For more information contact the Authority at (210) 222-2204 or 1-800-292-2047.

Seco Creek

by John Hoyt, Aquifer Science Program Manager

The Authority operates four recharge dams across the Edwards Aquifer Recharge Zone (EARZ). These recharge structures are located at San Geronimo, Parker, Verde, and Seco creeks. An annual average of 3,144 acre-feet of water has been contributed to the Edwards Aquifer (Edwards Aquifer Authority Report 00-2) from these structures.

Of the four recharge structures operated by the Authority, Seco Creek Sinkhole has historically contributed the most recharge. It has averaged 2,223 acre-feet of annual recharge to the Edwards Aquifer (Edwards Aquifer Authority Report 00-2). Below are pictures of a recharge event observed by Authority staff at Seco Creek Sinkhole on March 12, 2001.

Recharge Event at the Seco Creek Sinkhole located in Medina County March 12, 2001



Edwards Aquifer Optimization Program Update

by John Hoyt, Aquifer Science Program Manager

The basic description and purpose of the Edward Aquifer Optimization Program (EAOP) is repeated each month in this report to provide background information for new readers and to provide a reference for the regular reader. The following paragraph provides the description and purpose of the EAOP; subsequent paragraphs provide a report of activities specific to the report month.

The Edwards Aquifer 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 March 2001, the board of directors authorized staff to negotiate a contract with HDR Engineering, Inc. (HDR) for the development of pilot recharge models for the Nueces and Blanco River basins.

Continue on next page

Edwards Aquifer Optimization Program Update (Continued)

Authority staff has negotiated the contract, presented it to the Research and Technology (R&T) Committee, and will take it to the board for consideration in April. If approved the project will result in an updated method of calculating recharge to the Edwards Aquifer in the two basins. A successful evaluation of the updated methodology may result in the same methods being applied to other surface water basins that recharge the aquifer. An updated method of recharge calculation is needed to provide daily recharge values for use in a new-generation computer simulation model of the aquifer currently under construction by the United States Geological Survey (USGS).

In March 2001, the R&T Committee also considered the monitoring plan for well sampling of aquifer biota. The monitoring plan was prepared pursuant to a joint funding agreement (JFA) between the Authority and Southwest Texas State University (SWTSU), acting through its Edwards Aquifer Research and Data Center (EARDC). The committee recommended the board approve the monitoring plan at the April 2000 board meeting. If the board approves the monitoring plan, EARDC will implement a three-year study that includes collecting aquifer-dwelling species from wells, springs, and caves; species identification; and population analysis. It is anticipated the study will develop new information regarding the distribution and population status of aquifer biota.

In addition to the pending contracts and agreements discussed above, the following OTS-related studies have been initiated:

- 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 mapping.
- Texas Wild-rice reproduction.
- Cagle's Map Turtle instream flow and habitat requirements.
- Well sampling of aquifer biota (monitoring plan development).
- Edwards Aquifer computerized model development.
- Improved aquifer parameter estimation for computer model input data sets.
- Hydrologic budget analysis of Medina Lake and Diversion Lake for the North Medina County flow path study.
- Statistical analysis of hydrologic data.
- Saline water study.
- Range management of woody species.



Cagle's Map Turtle



SAWS Saline Zone Drilling

OTS-related studies expected to be considered by a committee and the board in the near future include:

- Studies regarding the effect of fractures and conduits on flow paths in the aquifer.
- Continuation of Authority cooperation with San Antonio Water System (SAWS) in the saline water zone studies.

If you have questions regarding the studies listed above, please call John Hoyt, Aquifer Science Program Manager, at (210) 222-2204.

New Faces at the Authority

by Raquel Garza, Human Resource Coordinator



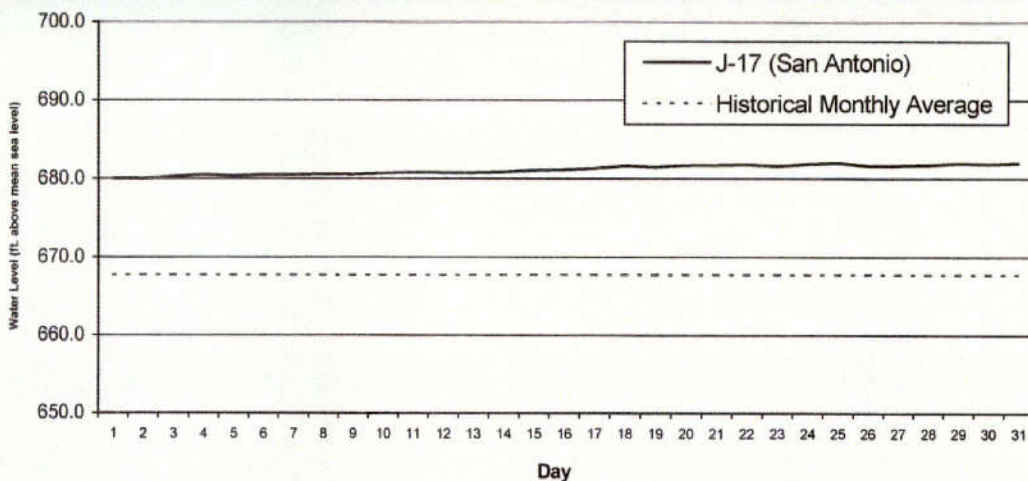
The Edwards Aquifer Authority congratulates Cyndi Holman on her promotion to Public Service Assistant. Cyndi will join the Public Affairs Team effective April 2, 2001.

Holman has worked at the Authority for 2 1/2 years as a part-time receptionist. She has also worked as office manager for Bookkeepers Consultants. Holman has eight years of experience dealing with the public.

Monthly Water Level & Springflow Report

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

The J-17 index well level average rose 0.8 feet from 680.3' above mean sea level (msl) in February to 681.1' msl in March. The March 2001 high of 682.0' is 19.6 feet above the March 2000 high of 662.4' msl. The J-17 historical monthly average for March is 667.7' msl.

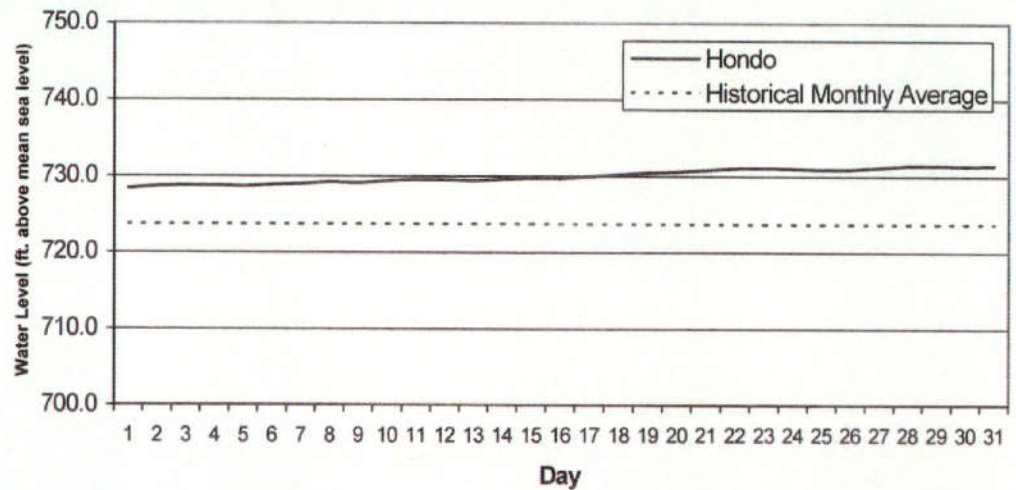


J-17 (San Antonio) Index Well—Combined Record for Two Wells: 1932-2001

	March 2001	March 2000	Historical Record	
Maximum	682.0	662.4	June 14, 1992	703.3
Minimum	680.0	658.0	August 17, 1956	612.5
Average	681.1	660.5	Mar.(1932-2000)	667.7

Hondo Index Well—March 2001

The Hondo index well level average rose 2.2 feet from 727.8' msl in February to 730.0' msl in March. The March 2001 high of 731.5' msl is 23.0 feet above the March 2000 high of 708.5' msl. The Hondo Well historical monthly average for March is 723.7' msl.

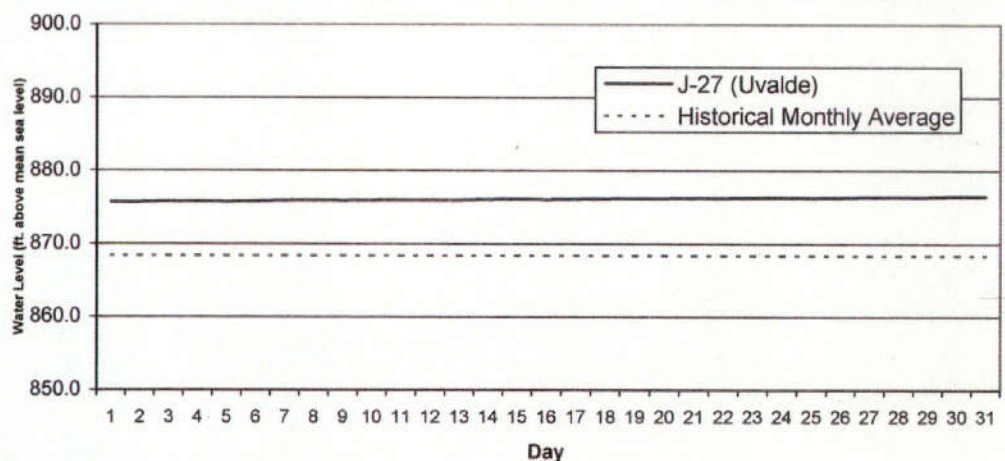


Hondo Index Well—Historical Record: 1986-2001

	March 2001	March 2000	Historical Record	
Maximum	731.5	708.5	June 14, 1992	779.0
Minimum	728.4	701.8	June 29, 1990	651.0
Average	730.0	706.4	Mar.(1986-2000)	723.7

J-27 (Uvalde) Index Well—March 2001

The J-27 index well level average rose 0.8 feet from 875.3' msl in February to 876.1' msl in March. The March 2001 high of 876.5' msl is 0.5 feet above the March 2000 high of 876.0' msl. The Uvalde Well historical monthly average for March is 868.4' msl.

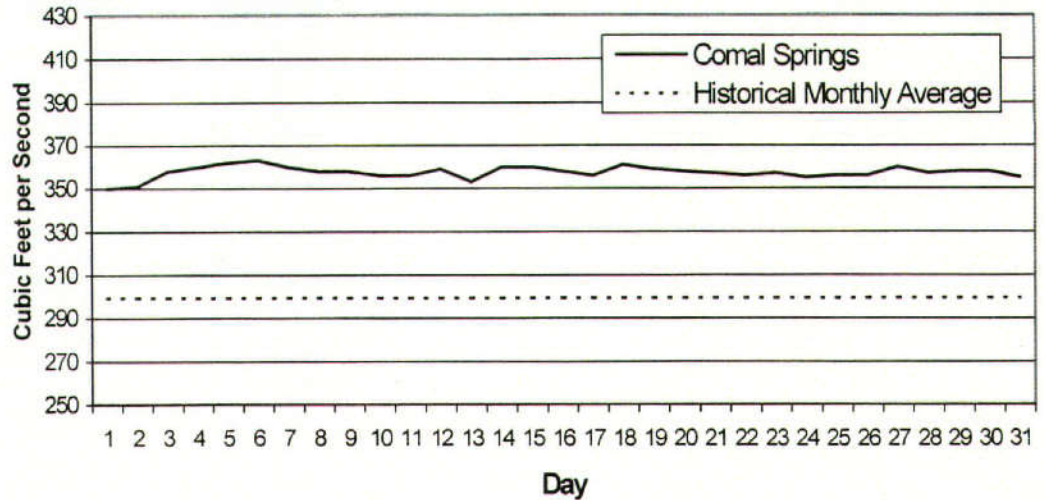


J-27 (Uvalde) Index Well Historical Record: 1940-2001

	March 2001	March 2000	Historical Record	
Maximum	882.0	662.4	June 14, 1992	703.3
Minimum	680.0	658.0	August 17, 1956	612.5
Average	681.1	660.5	Mar.(1932-2000)	667.7

Comal Springs—March 2001

Comal springflow reached a maximum flow of 363 cubic feet per second (cfs) on March 6th. The minimum flow occurred on March 1st at 350 cfs. The March 2001 average is 357 cfs, which is 57.7 cfs above the historical monthly average of 299.3cfs.



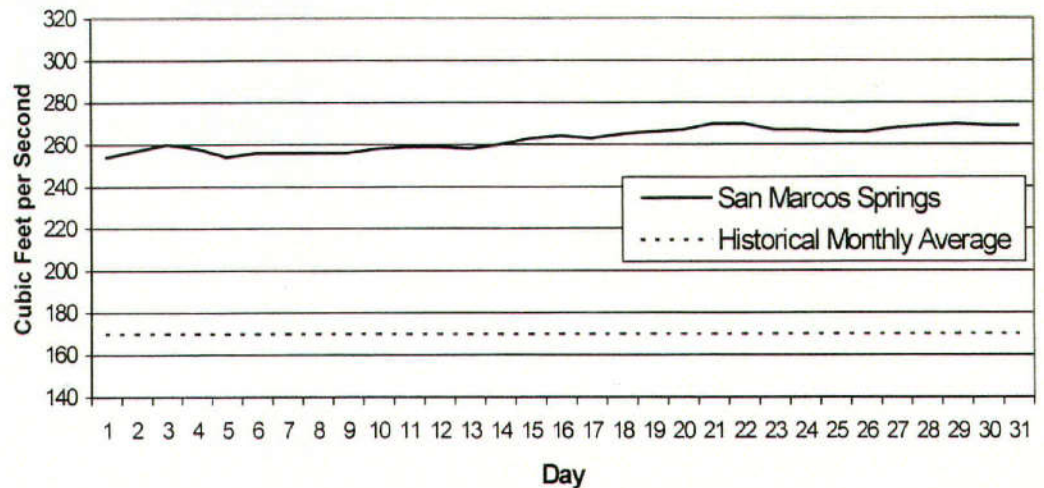
Comal Springs Historical Record: 1927-2001

	March 2001	March 2000	Historical Record	
Maximum	363	300	October 14, 1973	534.0
Minimum	350	283	August 8, 1956	0.0
Average	357	292	Mar.(1927-2000)	299.3

San Marcos Springs—March 2001

San Marcos springflow reached a maximum flow of 270 cfs on March 21st.

The minimum flow occurred on March 1st at 254 cfs. The March 2001 average is 263cfs, which is 93.0 cfs above the historical monthly average of 170.0 cfs.



San Marcos Springs Historical Record: 1956-2001

	March 2001	March 2000	Historical Record	
Maximum	270	123	March 12, 1992	451.0
Minimum	254	112	August 15, 1956	46.0
Average	263	115	Mar.(1956-2000)	170.0



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Calendar of Events for April 2001

Tue. 04/10	1:30 PM	Critical Period Work Group
	3 PM	Ad Hoc Committee on Revenue Bonds (cancelled)
	4 PM	Board Meeting, Edwards Aquifer Authority San Antonio, Texas
Tue. 05/08	4 PM	Board Meeting, Edwards Aquifer Authority San Antonio, Texas