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EDWARDS AQUIFER AUTHORITY

GENERAL MANAGER'S REPORT

APRIL 2003

inside

Editor: Margaret Garcia
Layout & 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.

MEDINA COUNTY IRRIGATOR RECOGNIZED FOR WATER CONSERVATION EFFORTS

BY MARGARET GARCIA, PROGRAM MANAGER — PUBLIC AFFAIRS

Pictured from left to right: Michael D. Beldon, Chairman, Maurice Rimkus, Appointed Director, Medina & Uvalde counties, Bruce Gilleland, Director, District 15, Uvalde County, Luana Buckner, Director District 13, Medina & Atascosa counties, and 2003 A.O. Odie Gilliam Award Recipient, Michael Saathoff.

On Tuesday, March 11, 2003, Authority directors presented the Fifth Annual A.O. "Odie" Gilliam Agricultural Water Conservation Award to Medina County Irrigator Michael Saathoff, who exemplified the highest standards and commitment to agricultural water use and efficiency.

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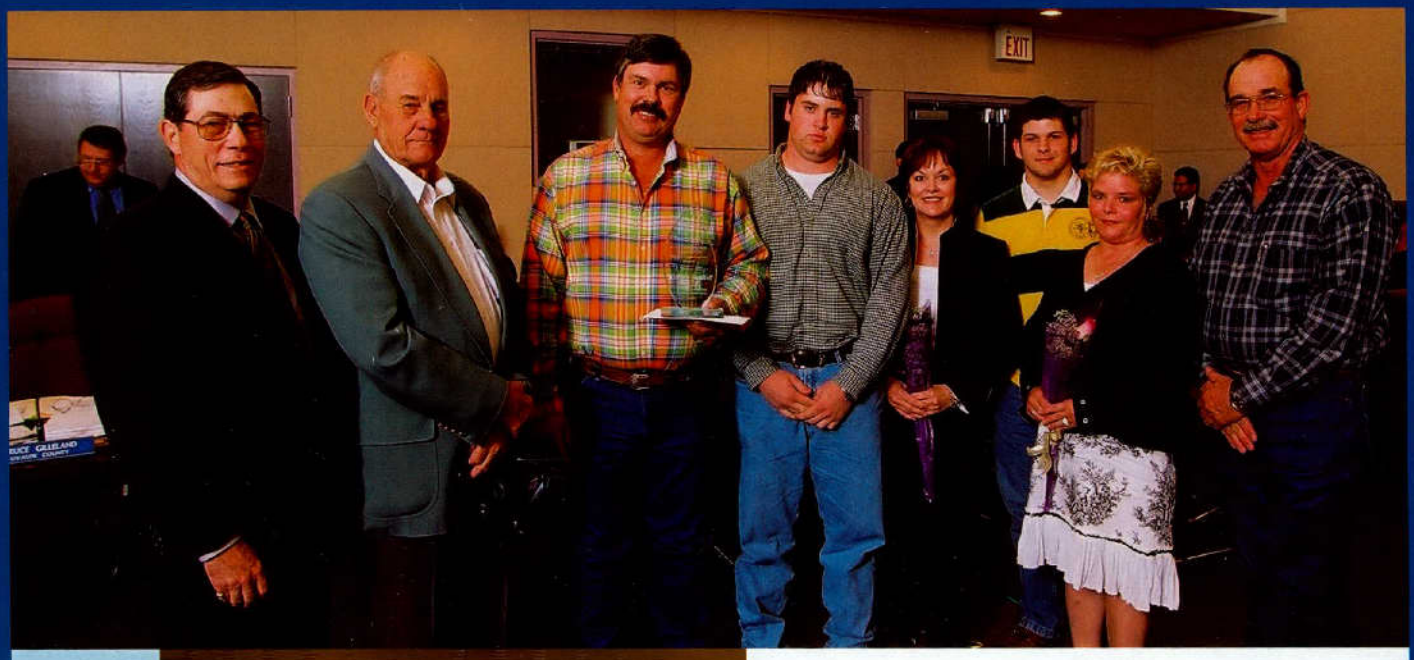
2003 A. O. "Odie" Gilliam Agricultural Water Conservation Award *(continued)*



Fifth Annual A.O. Odie Gilliam Agricultural Water Conservation Award Ceremony—March 11, 2003

Saathoff was recognized for his efforts in agricultural water conservation practices. In 2002, Saathoff irrigated over 2,170 acres with the Low Energy Precision Application (LEPA) irrigation pivot systems and installed surge valves, which decreased his water usage by 60%. Implementing water conservation practices and installing water conservation equipment were important factors contributing to the success of Saathoff's to save Edwards groundwater.

Members of the Gilliam Family were on hand for the presentation and awards ceremony.

The Authority established the award in memory of the late A.O. Odie Gillliam. Mr. Gilliam was an Authority Director representing District 12, Medina County, from July 1996 until his resignation in January 1998. Mr. Gilliam was a farmer who was dedicated to the efficient use of water in all applications. A pioneer in water conservation, Mr. Gilliam invested in new water conservation equipment and practices during his irrigation career.

Message From General Manager

Gregory M. Ellis

At their March 2003 board meeting Authority directors voted to ask the legislature to adopt several amendments to the Edwards Aquifer Authority Act.

These amendments, along with other amendments approved by the board on February 3, 2003, will be presented to the 78th Session of the Texas Legislature for consideration. Senator Jeff Wentworth and State Representative Robert Puente agreed to sponsor the legislation in their respective houses, and Senator Frank Madla has signed on as a co-sponsor of the Senate Bill.

If approved, these amendments will:

1) raise the "cap" on permitted withdrawals to 550,000 acre-feet per year and require the Authority to achieve the 550,000 acre-foot permit limit by January 1, 2005;

2) interrupt permitted withdrawals in the San Antonio pool only if the level at J -17 declines below 650 feet above mean sea level, and interrupt permitted withdrawals in the Uvalde pool only if the level at J -27 declines below 845 feet above mean sea level;

3) require reductions of permitted withdrawals to 350,000 acre-feet, on an annualized basis, when the J -17 well level is below 627 feet above mean sea level, or when the J -27 well level is below 842 feet above mean sea level;

4) require the Authority to adopt a new demand management/critical period plan by September 1, 2004, based on the 550,000 acre-foot withdrawal limit (failure to adopt the plan by the deadline will reduce permits by 20% until the plan is adopted);

5) allow the Authority to issue revenue bonds to finance recharge projects and groundwater withdrawal permit retirement; and

6) allow the Authority to use aquifer management fees to repay revenue bonds and finance recharge projects.

(continued on next page)

Message from General Manager *(continued)*

Amendments approved on February 3, 2003 would:

1) establish residency requirements for candidates seeking appointment or election to the Authority's board of directors and create a process to certify residency of those candidates;
2) remove the requirement for the Authority's single-member district lines to be drawn the same as county voting precinct lines;
3) allow Edwards Aquifer groundwater to be used outside of the Authority's boundaries if that area is located within the original permittees' or applicant's Certificate of Convenience and Necessity;
4) allow irrigators to transfer currently restricted groundwater rights to other agricultural uses within the same county; and
5) validate all groundwater withdrawal permit transfers made prior to the effective date of these amendments.

If this legislation does not pass, the Authority will have to issue permits in excess of the authorized permit cap, and will not have the ability to issue revenue bonds for the purchase of groundwater rights. Something has to be done this session to avoid that crisis.

This session of the legislature looks like it will be very active in terms of water law generally, and that is especially true for the Edwards Aquifer Authority. The Legislature has already struggled through heated debates on insurance and tort reform, and still has to debate the budget.

Authority staff will continue to work hard to keep members of the legislature informed and will work with bill sponsors, committee members, lobbyists and agencies on the EAA bills and other water-related legislation.

With the help of this publication I will keep you informed of all activities that may ultimately affect the Authority. If you would like more information contact the Public Affairs Office at (210) 222-2204 or 1-800-292-1047 or visit us on the web at www.edwardsaquifer.org.

Edwards Aquifer Optimization Program Update

by John Hoyt, Program Manager — Aquifer Science

The basic description and purpose of the Edward 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 March 2003, the board of directors approved one OTS related item. Also, in March , the Research and Technology (R&T) Committee received a report regarding a contract amendment for an OTS-related item.

The board voted to approve an amendment to the joint funding agreement (JFA) between the Authority and the United States Geological Survey (USGS) for groundwater modeling services. The amendment extends the JFA performance period and increases the Authority's cooperative funding share from $219,000 to $319,000. The JFA, originally approved in April 2000, is for the development of a computer simulation model of the Edwards Aquifer to be used for aquifer management purposes. The increase in funding and performance time will facilitate the greater than anticipated level of effort to construct the model.

On March 26th, the R&T Committee received a report from Authority staff regarding Amendment 6 to the contract between the Authority and BIO-WEST, Inc. The contract is titled: Comprehensive and Critical Period Monitoring Program to Evaluate the Effects of Variable Blow on Biological Resources in the Comal and San Marcos Springs Aquatic Ecosystems. Amendment 6 makes modifications to the project work scope (monitoring plan) but does not change the board-approved project budget for 2003. The 2003 project budget was developed considering the monitoring plan changes made pursuant to Amendment 6.

David Bowles

The primary modifications to the monitoring plan are to:

- Eliminate the winter comprehensive sampling event;
- Eliminate water chemistry sampling during comprehensive sampling events;
- Eliminate predator surveys during comprehensive sampling events;
- Change the locations of drift net surveys during comprehensive sampling events from flowing channels to spring openings; and
- Increase the number of survey areas for the Comal Springs riffle beetle (pictured at left).

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Edwards Aquifer Optimization Program Update (continued)

The committee was briefed on Amendment 6 but no action was required since there are no changes to the project budget.

The OTS-related studies currently underway or completed include the following:

- 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).
- Edwards Aquifer computer model development.
- Improved aquifer parameter estimation for computer model in-put data sets (completed)
- Edwards Aquifer freshwater/saline water interface studies.
- Hydrologic budget analysis of Medina Lake and Diversion Lake for the North Medina County Flow Path Study.
- Analysis of structural controls on the Edwards and Trinity Aquifers interface in the Camp Bullis Quadrangle and surrounding area.
- Development of updated methods for calculating recharge to the Edwards Aquifer (Blanco and Nueces River basins completed).
- Statistical Analysis of Hydrologic Data (completed).
- Edwards Aquifer fracture/conduit study.
- Evaluation of water quality and water quantity benefits of woody species best management practices on selected watersheds in the Edwards Aquifer region.
- 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, Aquifer Science Program Manager.

2002 Annual Groundwater Withdrawing Reporting

by Steven D. Walthour, Program Manager — Investigations & Monitoring

Each year Authority staff mails the Annual Groundwater Withdrawal Report forms to all irrigation users of Edwards Aquifer groundwater. These forms were mailed December 20, 2002 and due back to the Authority by January 31, 2003. As of March 18, 2003, the Authority has received 614 of the 680 forms mailed to irrigation users.

In January, the Authority mailed the Annual Groundwater Withdrawal Report forms for municipal and industrial users. The completed Groundwater Withdrawal Report forms for these users were due to the Authority by March 1, 2003. As of March 18, 2003, the Authority has received 341 of the 407 forms mailed to municipal and industrial users.

Authority staff is currently contacting all non-reporting aquifer users regarding the need to file their Annual Groundwater Withdrawal Report forms.

For more information regarding this program contact Mr. Michael Garrett, Program Associate.

Inside the Edwards Aquifer with Geary M. Schindel

Chief Technical Officer

The Edwards Aquifer is classified as a karst aquifer. The term "karst" describes a "terrain with distinctive hydrology and landforms arising from a combination of high rock solubility and well-developed secondary porosity." Here's how the process works - rainfall picks up carbon dioxide from the air and from vegetation forming a weak acid; which, given thousands to millions of years, forms a integrated groundwater flow network. Caves, sinkholes, sinking streams, and springs exhibit the surface expression of karst. In the deeper portions of the Edwards Aquifer, we may also have a dissolution process associated with hydrogen sulfide at work. As dissolution of the limestone occurs along discrete paths, it allows more flow to occur, which causes more dissolution, which allows more flow - creating a positive feedback loop. Given enough time, these processes can form large integrated aquifers such as the Edwards.

In North America, karst is most commonly formed in limestone, dolostone, and gypsum. A karst land surface is not always as apparent as some locations such as Mammoth Cave, Kentucky or north central Florida where large sinkholes dot the surface. In some karst areas, the terrain can be more subdued like in the Balcones Fault Zone of the Edwards Aquifer, the Trinity Aquifer formed in the Glen Rose

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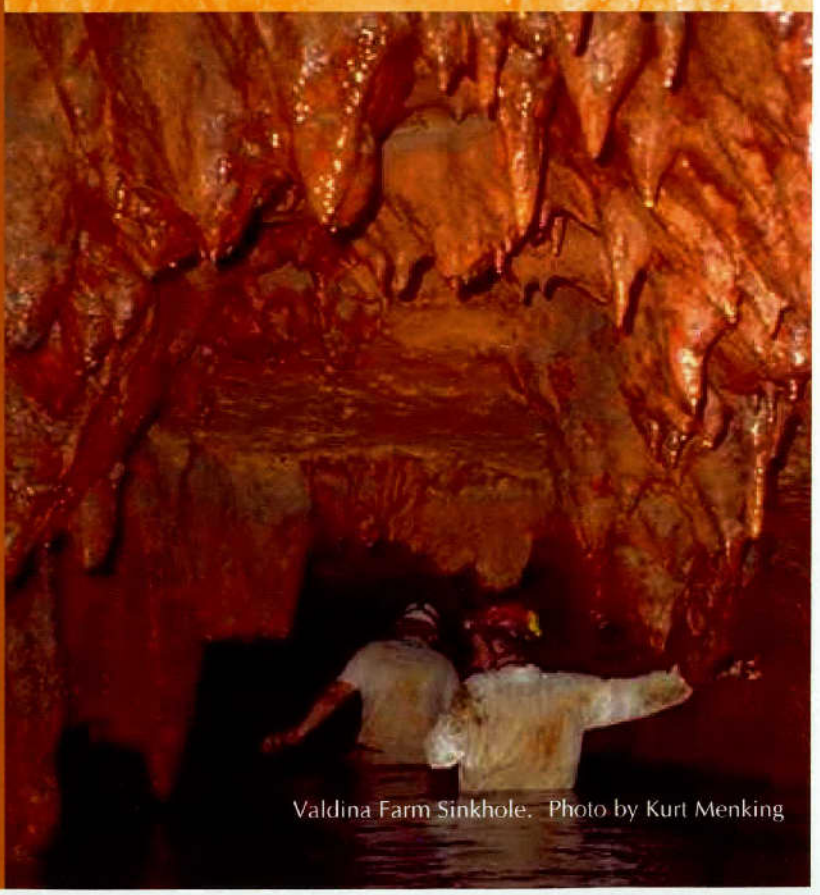
Karst:
The term "karst" describes a "terrain with distinctive hydrology and landforms arising from a combination of high rock solubility and well-developed secondary porosity."



Valdina Farm Sinkhole. Photo by Kurt Menking

Inside the Edwards Aquifer: Karst (continued)

Limestone, or the Edwards Plateau. About 20% of the contiguous U.S. and 30-40% of the U.S. east of Tulsa, OK is underlain by carbonate rocks, which are subject to dissolution.

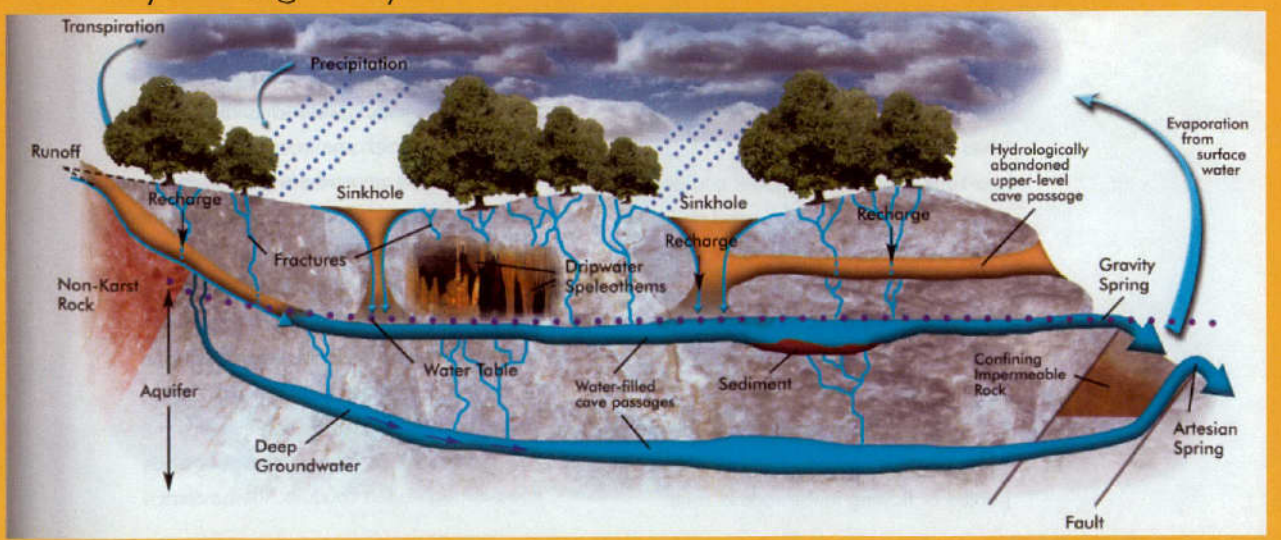
What's so special about karst?

Karst presents a number of relatively unique problems in comparison to other landscapes. Karst aquifers are generally considered a triple porosity/permeability system. In karst, groundwater occurs in the primary pores in the rock; in secondary pores formed by fractures, faults, and bedding plane partings; and in tertiary pores formed by caves and conduits ranging in size from 2 millimeters to 20 meters. When the porosity is well connected, they create high permeability allowing for high production wells and large springs like in the Edwards Aquifer. The triple porosity/permeability groundwater systems also have other characteristics that include rapid transport and little filtration of contaminants, difficulties in designing groundwater monitoring and remediation systems, and challenges in regulating land uses to protect public water supplies.

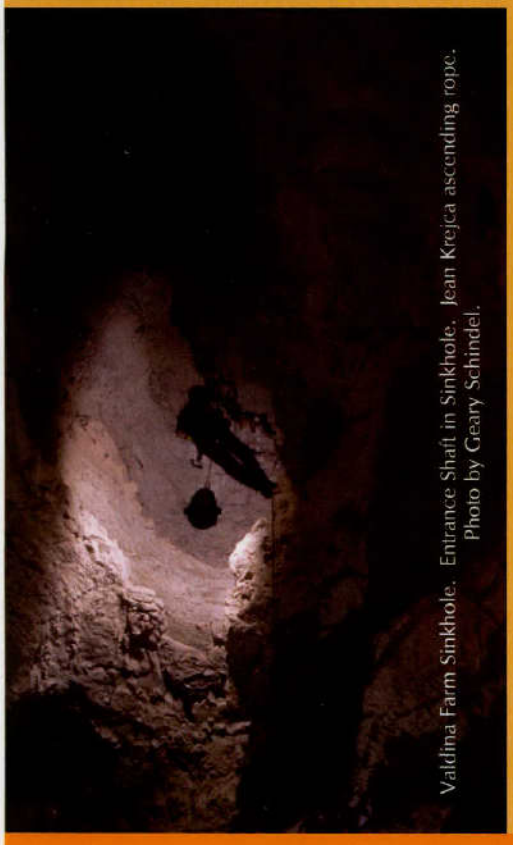
Groundwater and contaminant movement

Many environmental problems in karst center on groundwater contamination and transport. Groundwater movement in karst is predominantly through interconnected solution channels (or macro fissures) that facilitate rapid and turbulent flow. Unlike groundwater movement in sand and gravel or many rock aquifers, movement in karst aquifers usually cannot be described by traditional scientific principles such as Darcy's Law. As an example, when groundwater flow in sand and gravel aquifers occurs within the pore space between the sand and gravel, velocities are commonly measured in inches or feet per day. In karst aquifer, groundwater movement predominantly occurs in large conduits and velocities can be measured in hundreds to thousands of feet per day. This results in rapid transport of contaminants when present within a karst system. Recent tracer test studies by the Authority at Comal and San Marcos springs indicates groundwater velocities that range from 2,000 to 6,000 feet per day. Groundwater velocities in other parts of the aquifer may be a little slower.

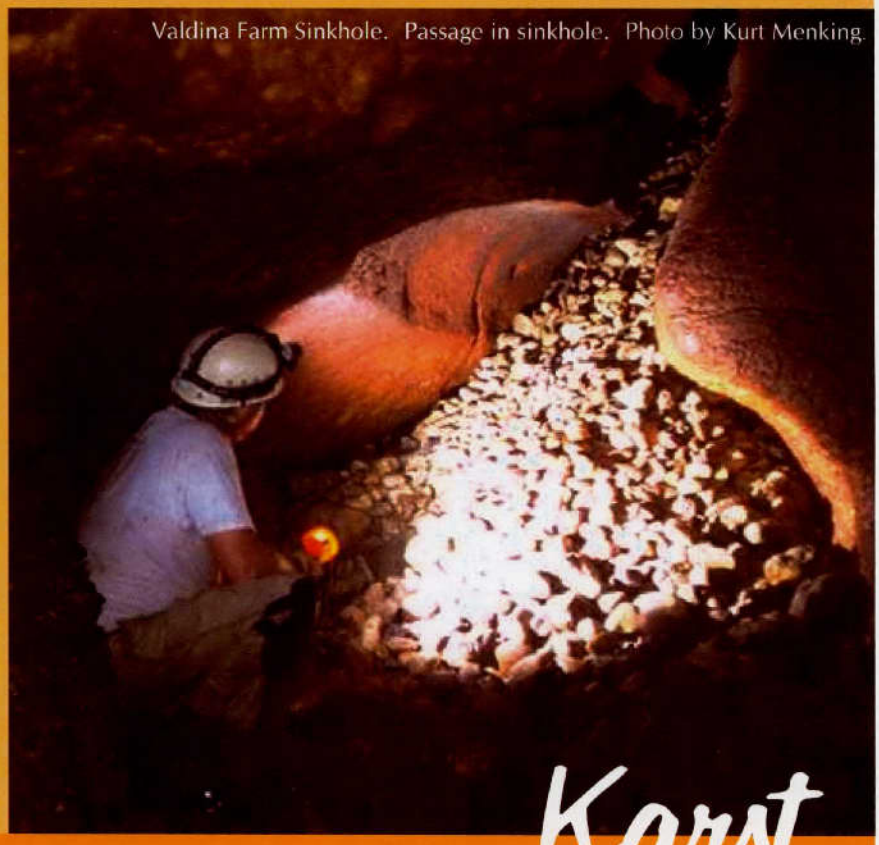
The Hydrologic Cycle in Karst Areas



Source: Living with Karst—A Fragile Foundation—American Geological Institute c2001



Valdina Farm Sinkhole. Entrance Shaft in Sinkhole. Jean Krejca ascending rope. Photo by Geary Schindel.



Valdina Farm Sinkhole. Passage in sinkhole. Photo by Kurt Menking.

Karst

Groundwater in karst usually discharges to the surface in large springs at a regional base level stream or river. Some karst groundwater basins have recharge areas covering hundreds of square miles and the Edwards is no exception. Missouri and Florida are both noted for their large karst springs – some which discharge millions of gallons per day. Comal and San Marcos springs, which drain the Edwards Aquifer, are some of the largest in the western U.S. and rank with the largest springs in the country.

Because groundwater flow in karst occurs in discrete conduits, traditional groundwater investigation tools, such as monitoring wells and pumping tests, have more limited application and, if improperly applied, can result in serious misinterpretation of groundwater flow and contaminant transport. Karst hydrologists have developed other tools for these environments - they include the inventory of karst features, tracer testing, evaluation of the distribution of physical and chemical groundwater characteristics, and geophysical surveys. The use of tracer testing to determine groundwater velocity and discharge location has been found to be a very effective tool. In addition, tracer testing can be used to help define the areas of contribution to a water resource allowing the implementation of engineering and land use controls.

Reference: Living with Karst. An AGI Environmental Awareness Series. Excellent reference material on karst hydrology and geology. For more information visit www.agiweb.org, or 703.379.2480

March 2003 Board Meeting

by Margaret Garcia, Program Manager — Public Affairs

At their regular monthly board meeting held Tuesday, March 11, 2003, Authority directors voted to ask the legislature to adopt several amendments to the Edwards Aquifer Authority Act. These amendments, along with other amendments approved by the board on February 3, 2003, will be presented to the 78th Session of the Texas Legislature for consideration. A complete listing of these amendments approved by the board can be found in the General Managers message on page 3 of this report.

In other action, Authority directors approved a Proposal for Decision (PFD) brought from the State Office of Administrative Hearings (SOAH). The SOAH administrative law judge recommended the board issue an initial regular permit to Burrell Day & Joel McDaniel, a South Bexar County ranch partnership, for 14 acre-feet. The applicant originally requested 600-acre feet of Edwards Aquifer groundwater withdrawal rights but could only substantiate 14 acre-feet. This protested permit was referred to SOAH in 2001. This action by the board represents the judicial authority granted to it by the Texas Legislature. The applicant may appeal the board's decision to a state district court.

Authority directors also referred another set of groundwater withdrawal permit protests to SOAH. This set includes 49 contested permit proposals to be heard by SOAH to propose a final action on each application to the board.

In addition, the board approved an agreed final order for four initial regular permits for applicants who had previously filed protests on their proposed permits. After further review of the applicants' files, all parties agreed the applicants provided additional documentation to substantiate their claims for more Edwards groundwater than originally proposed by staff. This agreed final order represents approximately 9,500 acre-feet of Edwards groundwater. In addition, Authority directors adopted an omnibus final order approving two initial regular permits representing approximately 87 acre-feet of Edwards Aquifer groundwater withdrawal rights.

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EDWARDS AQUIFER AUTHORITY

March 2003 Board Meeting *(continued)*

In other action, Authority directors approved four new members to the Authority's Citizens Advisory Committee (CAC).

The new members are Mr. Robert Thornton of San Marcos, Dr. Ralph Beeman of Victoria, Mr. Ken Roberts of La Coste, and Mr. Carl Nentwich of San Antonio.

The CAC is required by state law to provide input to the Authority in the development of its Habitat Conservation Plan.

Water Well Flow Meter Program

by Steven D. Walthour, Program Development

Since the inception of the Water Well Flow Meter Program, in 1997, Authority staff has installed 682 flow meters on irrigation wells at an average cost of $1,606.36. Staff continues field inspections of irrigation well sites that were not metered at the Authority's expense because the wells were either out of service or not capable of withdrawing water.

In 2002, the Authority spent $43,952.23 for repairs and maintenance of irrigation flow meters. In 2003, the Authority has spent 1,459.39. The Edwards Aquifer Authority Act requires the Authority to purchase, install and maintain measuring devices for permitted irrigation wells in existence before September 1, 1993.

For more information regarding the Authority's Water Well Flow Meter Program contact Mr. Michael Garrett, Program Associate.

Initial Regular Permits

by Steven D. Walthour, Program Development

In March, Authority directors approved six Agreed Final Orders with six Initial Regular Permits (IRP's) as well as two Omnibus Final Orders and IRP's. In addition, the board approved the General Manager's motion to extend the time limit to consider a proposal for summary disposition filed with the State Office of Administrative Hearings (SOAH), Administrative Law Judge, regarding the Bragg application for an Initial Regular Permit.

In addition, Authority staff recommended fifty-seven contested case hearings to the SOAH. Of the original fifty-seven cases the board referred forty-nine contested case hearings to SOAH. The remaining protests were removed following a request from the applicants to withdraw their protests. The board also accepted a Proposal for Decision issued by the Administrative Law Judge and issued an Initial Regular Permit.

Initial Regular Permits *(continued)*

In all, the Authority has acted on and completed 851 Initial Regular Permit applications representing approximately 78% of all applications filed with the Authority. In addition, the Authority has issued 676 permits and denied 176 permit applications representing 494,806 acre-feet of Edwards Aquifer permitted groundwater withdrawal rights.

Aquifer Management Fees

by Brock Curry, Program Manager — Administrative

Staff issued 235 invoices for non-agricultural aquifer management fees in December 2002. These invoices, totaling $9,371,461, were due in full by March 1 unless the permittee elected to pay monthly. As of March 31, the Authority has collected a total of $3,370,879 in non-agricultural aquifer management fees or 36% of the amount budgeted for 2003. Seven (7) users with fees totaling $12,491 did not meet the March 1 payment deadline and are now considered delinquent. Staff will be working with the board to proceed with enforcement action against those users.

In December, the Authority also issued the 2002 annual use report form for all aquifer users to report their groundwater use. For agricultural users, this report form also serves as an invoice for aquifer management fees - both of which were due by January 31. As of March 31, the Authority has collected $193,094 from agricultural users based on 96,547 acre-feet of groundwater used in 2002. The amount of revenue collected represents 97% of the 2003 budgeted revenue for agricultural aquifer management fees. Staff will also begin enforcement action against those agricultural users that have not reported their 2002 use or paid the fees due on that use.

Region L Population Forecasts Modified

by Rick Illgner, Program Manager — Groundwater Management Strategies

On March 19, 2003, the Texas Water Development Board (TWDB) approved the population numbers for use in preparing regional water supply plans created pursuant to the Brown-Lewis Water Plan. The newly approved population numbers are based on the 2000 census data. The new population numbers are lower than the projected population numbers used in the 2002 State Water Plan (SWP) approved by the TWDB. According to Dr. Dan Hardin, TWDB, possible erroneous assumptions about growth rates for certain population groups were made in the previous population projections.

The growth did not occur as assumed. The result is that the newly projected population numbers for Region L are almost 122,000 lower in 2010 ranging to 569,000 lower in 2050 (see graph).

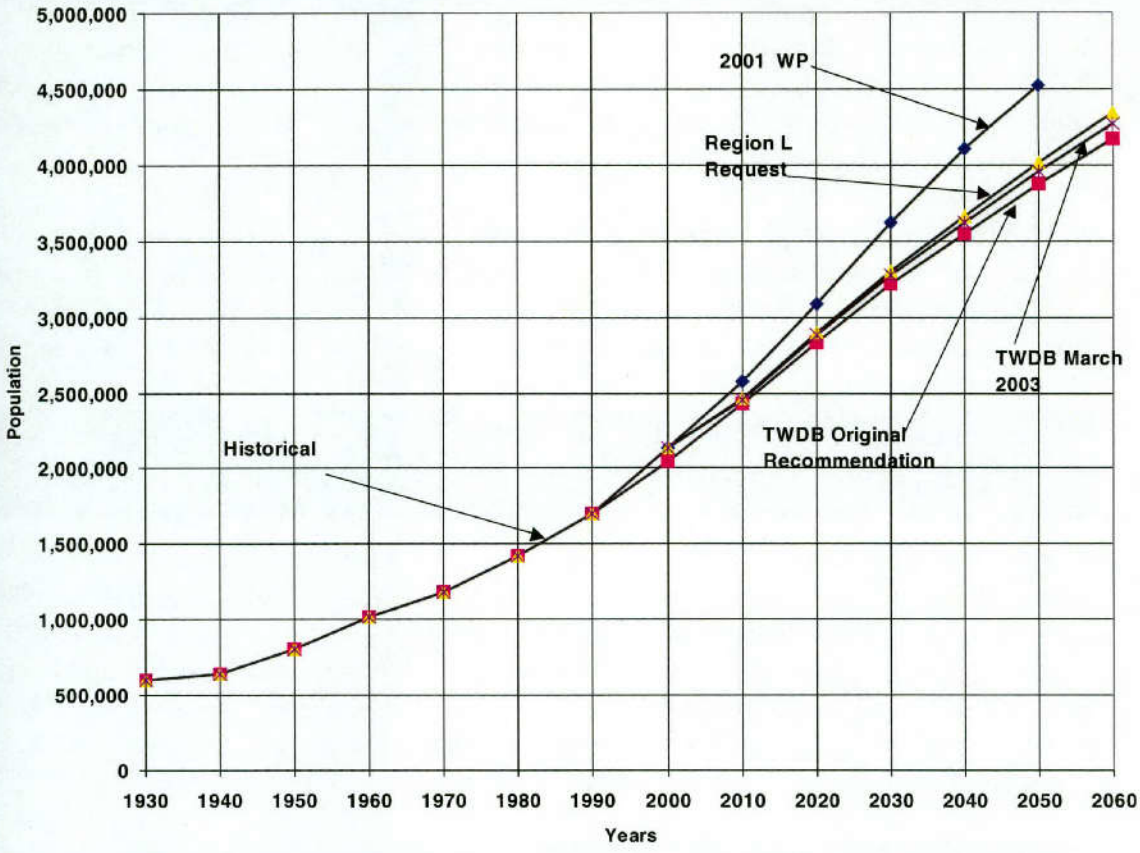
Region L Population Forecasts Modified (continued)

Region L Population Projections

March 24, 2003

Credits:
Chart obtained from Region L

Information Source:
The information in this article was obtained from the Texas Water Development Board.



Determining the population numbers is a prerequisite to determining demand for the area. Approved population and demand numbers are integral to planning for the water needs of the area. The Brown-Lewis Water Plan created a grassroots planning process. With the passage of the Brown-Lewis Water Plan, the TWDB designated 16 regional planning areas in the state. The Edwards Aquifer Authority was included in the regional planning area called the South Central Texas Regional Water Planning Group (Region L). The planning group, Region L, convened in 1998 and met throughout 1998, 1999, 2000, and 2001. On January 4, 2001, Region L adopted and submitted a regional water plan to the TWDB. The TWDB approved the regional water plan and incorporated it into the 2002 SWP.

The Texas Water Code requires that the SWP be updated every five years. Consequently, Region L continues to meet and has developed and approved a scope of work with ten major tasks for the development of the 2006 regional water plan, which will in turn become part of the 2007 SWP.

Region L representatives worked with TWDB staff to develop the population numbers for the planning area. The final population numbers were approved by the TWDB on March 19, 2003 and water demand numbers are scheduled for approval in August 2003.

Authority General Manager, Greg Ellis, represents the Authority on Region L's Board. Authority directors Susan Hughes and Doug Miller also serve on the Region L Board, and represent the environmental and small business interests, respectively. Director Miller also serves on Region L's Executive Committee. The next quarterly meeting is scheduled for May 1, 2003.

Well Construction Program

by Rick Illgner, Program Manager — Groundwater Management Strategies

In March, Authority staff issued fifty-six well construction permits. This total includes twenty-five Edwards Aquifer domestic well permits, one Edwards Aquifer livestock well permit, one Edwards Aquifer livestock well permit, one Edwards Aquifer municipal well permit and six Edwards Aquifer well plugging permits. In addition, twenty-two permits were issued to drill through the Edwards Aquifer.

EDWARDS AQUIFER AUTHORITY RULES 713, subchapters A-D (regarding well construction and plugging standards) will be considered by the Research and Technology Committee of the board on Wednesday, April 30, 2003 at 2:00 p.m. in the Authority's Conference Center. For more information regarding the Authority's well construction program contact Jeff Robinson, Regulatory Programs Coordinator.

Groundwater Withdrawal Transfers

by Rick Illgner, Program Manager — Groundwater Management Strategies

During March Authority staff processed 31 partial sales and lease transfers representing 8,068.900 acre-feet in groundwater withdrawal rights. Since the inception of the transfer program, Authority staff processed 798 partial sales and lease transfers representing 143,791.805 acre-feet of Edwards Aquifer groundwater withdrawal rights. Of the 798 partial sale and lease transfers completed, only 610 are currently active representing 112,464.123 acre-feet. Active transfers include 97 sub-leased transfers representing 20,486.132 acre-feet. In addition, Authority staff also processed 3 change of ownership or miscellaneous transfers representing 527.250 acre-feet.

Authority Enforcement Program

by Steven D. Walthour, Program Development

In February, notice of violation letters were mailed to well owners regarding abandoned wells requiring plugging, and withdrawing groundwater from the Edwards Aquifer without having groundwater rights. Authority staff is currently investigating approximately sixty (60) additional cases that could lead to enforcement action. Staff met with water well drillers to discuss Authority rules. In addition, Authority staff investigated and closed approximately ten potential enforcement referrals because those referrals did not lead to an actual violation of the Authority's rules.

For further information regarding the Authority's Enforcement Program, contact Dino Rangel, Permits/Enforcement Coordinator.

Authority Community Event

South Texas Farm & Range Forum

The Authority participated in the 2003 South Texas Farm & Range forum on March 1, 2003, in Seguin, Texas. The Forum brings together small landowners from urban and rural areas to discuss issues in agriculture and wildlife.

(Pictured from left to right): Doug Miller, Director, District 9, Susan Hughes, Director, District 6, and Ray Buck, Water Resources Coordinator, Edwards Aquifer Authority

Monthly Water Level & Springflow Report

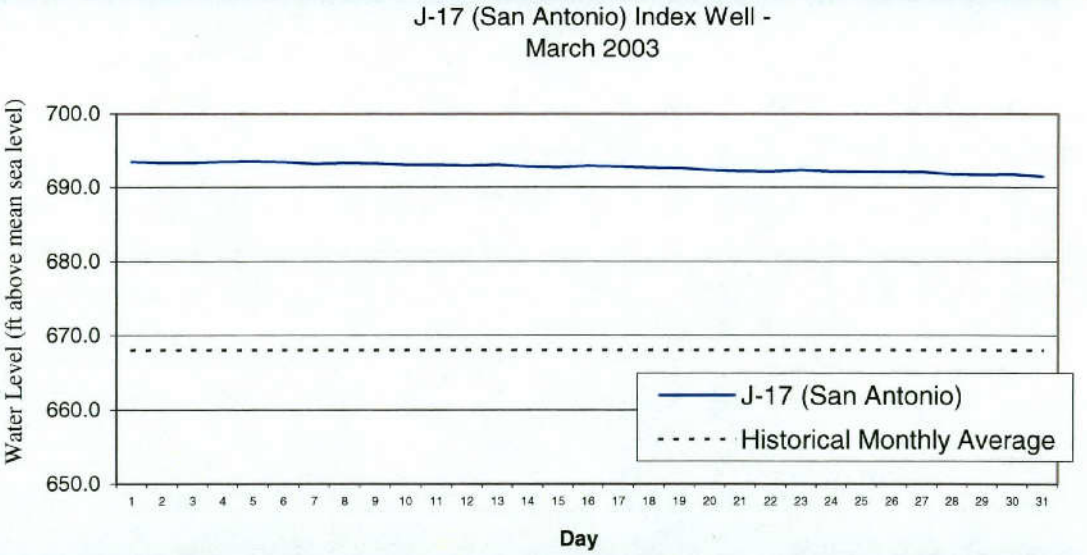
Aquifer levels can be viewed on the Authority's website at
www.edwardsaquifer.org

J-17 (San Antonio) Index Well—March 2003

The J-17 index well level average dropped 0.3 feet from 693.0' above mean sea level (msl) in February to 692.7' msl in March.

The March 2003 high of 693.5' is 14.7 feet above the March 2002 high of 678.8' msl.

The J-17 historical monthly average for March is 668.0' msl.



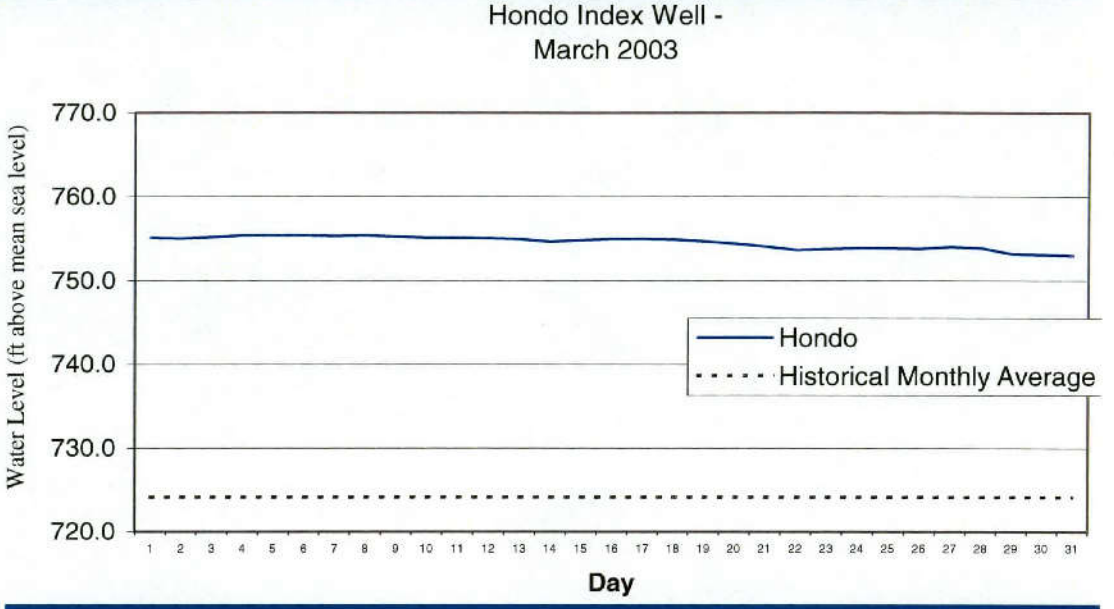
J-17 (San Antonio) Index Well—Combined Record for Two Wells: 1932-2002

	March 2003	March 2002	Historical Record	
Maximum	693.5	678.8	June 14, 1992	703.3
Minimum	691.5	676.0	August 17, 1956	612.5
Average	692.7	677.3	Mar. (1932-2002)	668.0

Hondo Index Well—March 2003

The Hondo index well level average dropped 0.8 feet from 755.3' msl in February to 754.5' msl in March. The March 2003 high of 755.4' msl is 29.5 feet above the March 2002 high of 725.9' msl.

The Hondo Well historical monthly average for March is 724.1' msl.



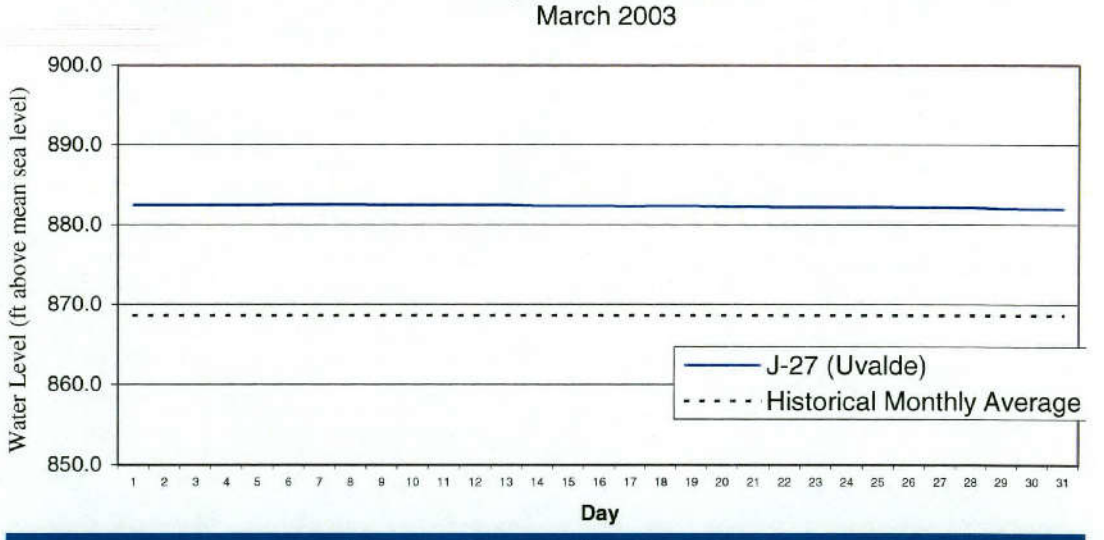
Hondo Index Well—Historical Record: 1986-2002

	March 2003	March 2002	Historical Record	
Maximum	755.4	725.9	June 14, 1992	779.0
Minimum	753.0	721.9	June 29,1990	651.0
Average	754.5	724.5	Mar. (1986-2002)	724.1

J-27 (Uvalde) Index Well—March 2003

The J-27 index well level average dropped 0.4 feet from 882.7' msl in February to 882.3' msl in March. The March 2003 high of 882.5 msl is 5.8 feet above the March 2002 high of 876.7' msl.

The Uvalde Well historical monthly average for March is 868.6' msl.



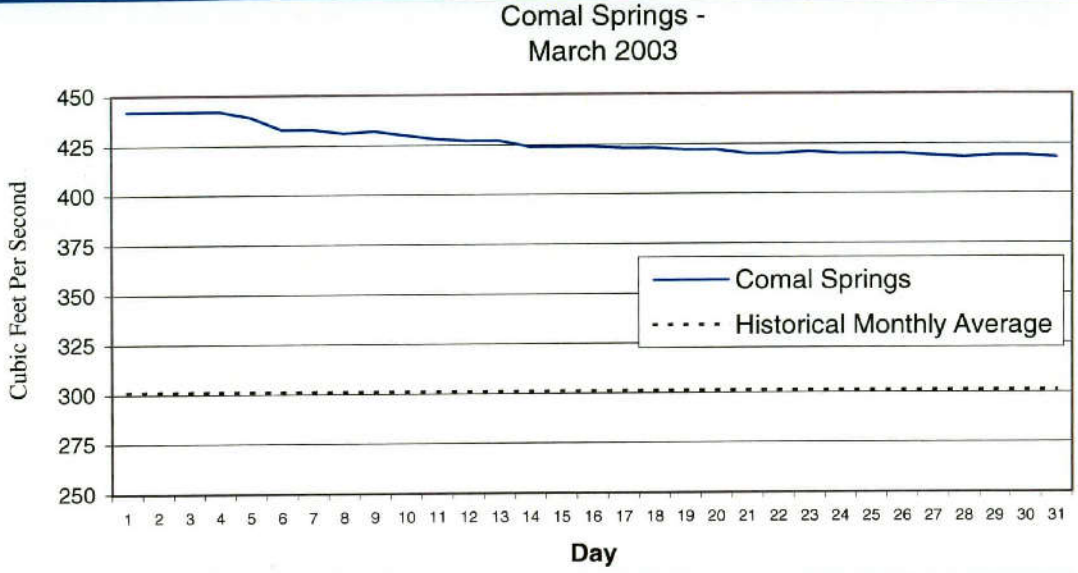
J-27 (Uvalde) Index Well Historical Record: 1940-2002

	March 2003	March 2002	Historical Record	
Maximum	882.5	876.7	June 15, 1987	889.0
Minimum	882.0	876.3	April 13, 1957	811.0
Average	882.3	876.4	Mar. (1940-2002)	868.6

Comal Springs—March 2003

The Comal springflow reached a maximum flow of 442 cubic feet per second (cfs) on March 1st. The minimum flow occurred on March 28th at 418 cfs.

The March 2003 average was 427 cfs, which was 125.9 cfs above the historical monthly average of 301.1 cfs.



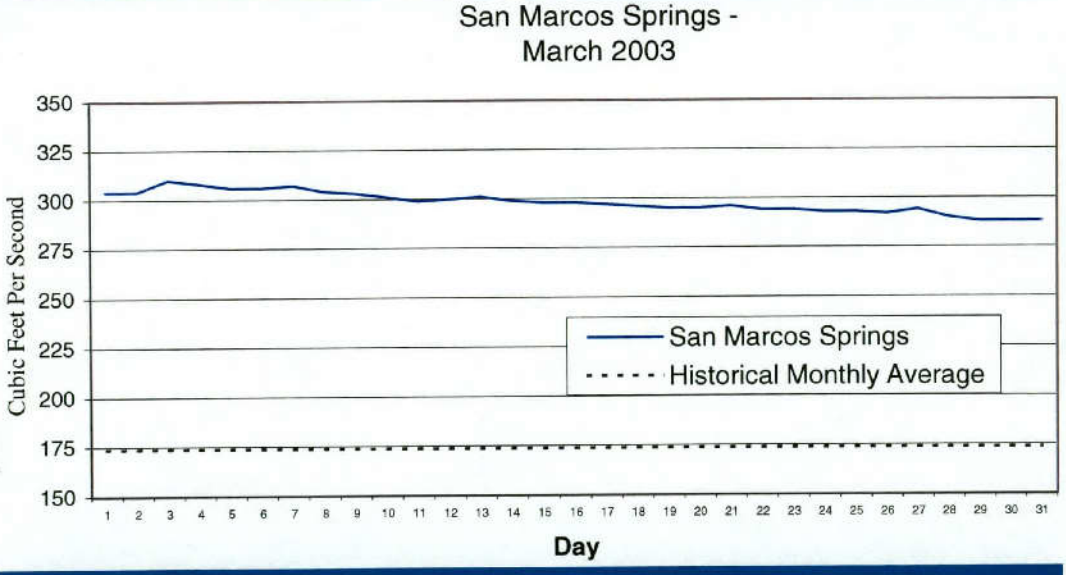
Comal Springs Historical Record: 1927-2002

	March 2003	March 2002	Historical Record	
Maximum	442	381	October 14, 1973	534.0
Minimum	418	361	August 8, 1956	0.0
Average	427	371	Mar. (1927-2002)	301.1

San Marcos Springs—March 2003

The San Marcos springflow reached a maximum flow of 310 cfs on March 3rd. The minimum flow occurred on March 29th at 288 cfs.

The March 2003 average was 298 cfs, which was 124.2 cfs above the historical monthly average of 173.8 cfs.



San Marcos Springs Historical Record: 1956-2002

	March 2003	March 2002	Historical Record	
Maximum	310	277	March 12, 1992	451.0
Minimum	288	234	August 15, 1956	46.0
Average	298	256	Mar. (1956-2002)	173.8

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BE AQUIFER AWARE

CALENDAR OF EVENTS FOR APRIL & MAY

APRIL	Tues. 4/8	3PM	Board Meeting, Edwards Aquifer Authority Conference Center, 1615 N. St. Mary's Street San Antonio, Texas
	Mon. 4/21		State Holiday—San Jacinto Day (Authority Offices Open)
	Tues. 4/22	10 AM	Habitat Conservation Plan Work Group
		11 AM	Aquifer Management Planning Committee
		1 PM	Permits Committee
	Wed. 4/23	11 AM	Finance/Administrative Committee
		2 PM	R&T Committee
	Fri. 4/25		Authority Offices Closed—Battle of Flowers
MAY	Tues. 5/13	3PM	Board Meeting, Edwards Aquifer Authority Conference Center, 1615 N. St. Mary's Street San Antonio, Texas
	Mon. 5/26		Authority Offices Closed—Memorial Day Holiday
	Tues. 5/27	10 AM	Habitat Conservation Plan Work Group
		11 AM	Aquifer Management Planning Committee
		1 PM	Permits Committee
	Wed. 5/28	11 AM	Finance/Administrative Committee
		1 PM	Ad Hoc Building Committee
		2 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.