

# *Uvalde Water Project*

*Managing the Edwards for the Future*

by

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Edwards Aquifer Recovery Implementation Program

Stakeholders Meeting

Seguin, Texas

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# Overview

- Who Are We?
- Why a Uvalde Pipeline Project?
- Project Impacts
- STWR Legislative Program



# **Southwest Texas Water Resources L.P.**

# Strategic Water Group LLC

- Finances and develops water supplies and related infrastructure to meet existing and growing municipal and industrial water demands in the western United States ([www.stratwater.com](http://www.stratwater.com))
- SWG investors have long time horizon and tolerance for project risks
- SWG Board actively involved in project development and implementation

## SWG Board of Managers

- Rodney T. Smith, President: founding editor of *Water Strategist*, long time advisor on water transactions throughout western United States
- David Ladensohn: retired Chairman of KLN Steel Products, investor in water sector, director of companies
- Rod Sands: retired President of Pace Foods, CEO of private investment firm, director of companies

# Objectives and Strategy

- Objective: Invest in the acquisition and development of water resources throughout the United States to meet growing municipal needs for reliable and affordable water supplies consistent with environmental stewardship
- Strategy
  - Identify solutions for areas with pressing water supply needs
  - Provide expertise and risk capital to implement solutions
  - Work with local partners to maximize likelihood of success
  - Build on long standing relationships of SWG management with water community, private sector, and financial community

# **Why A Uvalde Pipeline Project?**

# Uvalde Water Project

Managing the Edwards for the Future

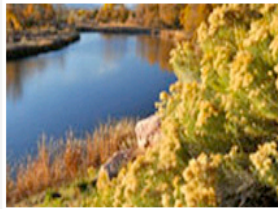
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Place your cursor over individual map components to learn more.

## Welcome to the Uvalde Water Project

### Managing the Edwards for the Future



Southwest Texas Water Resources (STWR) is developing the Uvalde Water Project to establish a resource management tool for the Edwards Aquifer that will also provide an additional water supply source for the San Antonio metropolitan area and a significant

economic boost to Uvalde County.

Accessing the under-utilized water from the Uvalde Pool of the Edwards Aquifer and transferring a portion of that water to the San Antonio metropolitan area will relieve pressure on the San Antonio Pool as well as the San Marcos Springs and Comal Springs. The Uvalde Water Project will give the Edwards Aquifer Authority an important tool to better manage the entire aquifer. The population of the greater San Antonio metropolitan area is expected to reach 2.4 million by the year 2050, with the area

### Frequently Asked Questions

Frequently Asked Questions are about project impacts, environmental impacts, Edwards water use, the Uvalde economy, property rights, San Antonio water needs, the pipeline right of way, who pays for the pipeline, and the Southwest Texas Water Resources, LP legislative program.

[Click here for answers >](#)

### Legislative Updates



Jan 13, 09 - STWR intends to continue working through the 81st Legislative Session that adjourns on June 1, 2009.

[View Legislative Updates](#)



[Why the Uvalde Water Project?](#)



[Summary of Hydrologic Impacts](#)



[Summary of Economic](#)



[Maps & Media](#)

# STWR Pipeline Project

- Pipeline is key component of STWR's strategy to provide a water resource management tool for Edwards Aquifer
- Secure long-term water supply for a water pipeline from Uvalde County to San Antonio metropolitan area
- Project proposes to maintain all existing protections of water supplies for Uvalde County under the Edwards Aquifer Authority Act
- Project does not require taxpayer funding

# Environmental Benefits of Pumping from Uvalde Pool versus San Antonio Pool

- EAA's recently adopted Cibolo Creek Rules requires permits placed in trust to offset damaging impact of moving pumping locations East:
  - Moving permits from Uvalde County to pump 1 AF east of Cibolo Creek requires 4 AF placed in trust
  - Moving permits from Bexar County to pump 1 AF east of Cibolo Creek requires 2 AF placed in trust
- This system implies pumping in Uvalde County has only 60% differential impact on springflows as pumping in Bexar County

# Uvalde Permits Superior Supply Reliability: Frequency of Cutbacks under Senate Bill 3

<i>Critical Period</i>	<i>Frequency of Management</i>		<i>Required Cutback</i>	
	<i>San Antonio</i>	<i>Uvalde</i>	<i>San Antonio</i>	<i>Uvalde</i>
None	67.3%	96.8%	none	none
Stage I	17.4%	not applicable	20%	none
Stage II	8.7%	0.5%	30%	5%
Stage III	3.0%	0.2%	35%	20%
Stage IV	3.6%	2.6%	40%	35%

# Using Uvalde Water Rights in San Antonio without Pipeline

- Existing law allows for leasing or sale of transferable permits
- Increased pumping in San Antonio pool further stresses springflows
- Place superior reliability of Uvalde permits into lower supply reliability of San Antonio Pool
- Continued concentration of pumping in San Antonio Pool further reduces supply reliability of existing rights in San Antonio Pool



# **Project Impacts: Hydrologic and Economic**

# Methods To Assess Hydrologic Impacts

- Historic record: identify interrelations among springflows and key well elevations with the location of recharge and pumping
- EAA Groundwater Model where pumping set at maximum allowed levels and assess impact of alternative pumping locations

# Hydrologic Impacts: Analysis of Historic Record

- Springflows
  - San Antonio Pool: long-term impact of sustained increase in pumping reduces total springflows by 60% of increased pumping
  - Uvalde Pool: long-term impact of sustained increase in pumping has no significant impact on total springflows
- Well J-17 (San Antonio): increased pumping in Uvalde more beneficial for elevation than increased pumping in San Antonio
- Well J-27 (Uvalde): increased pumping in Uvalde has relatively small impact on well elevation

# Hydrologic Impacts: Groundwater Model

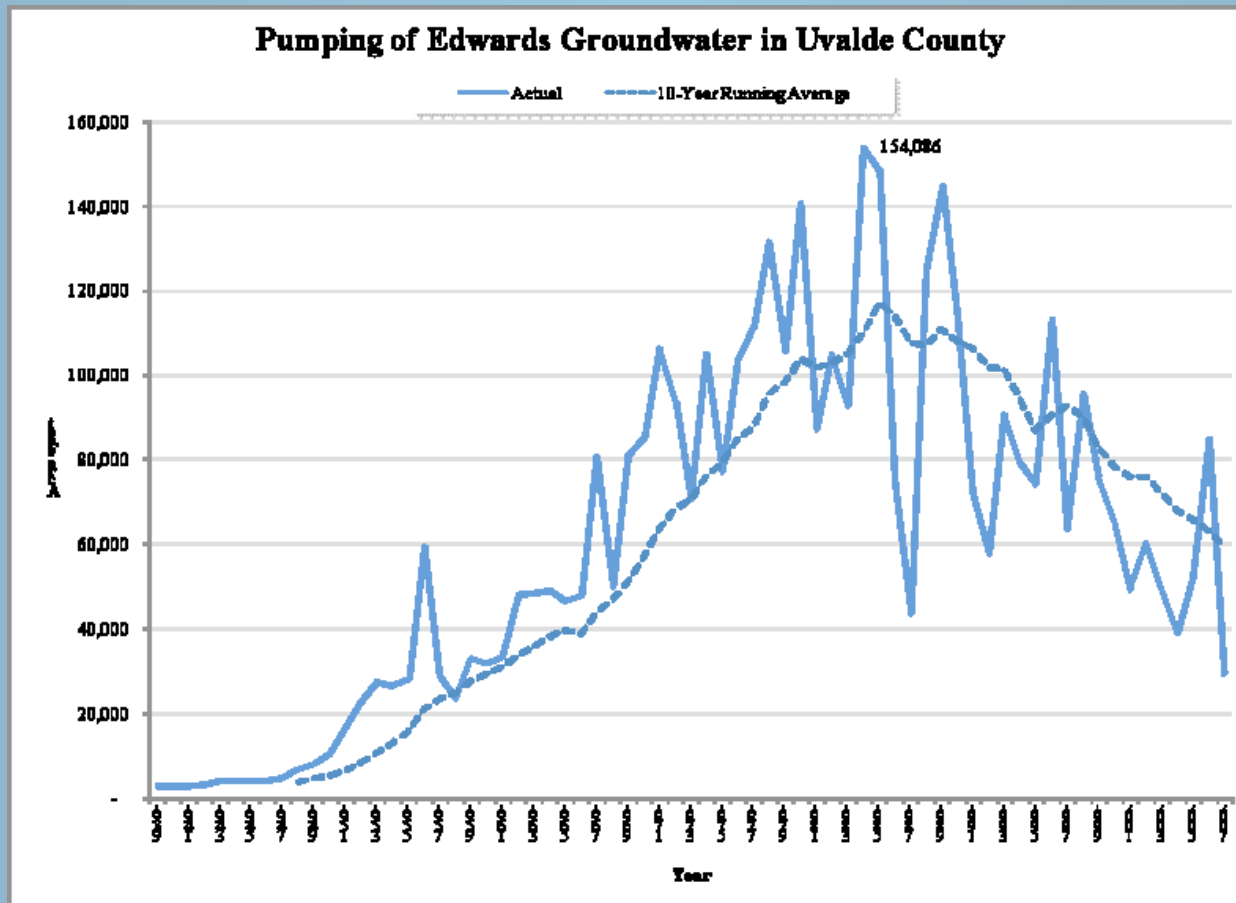
- Springflows
  - Pumping at maximum allowed levels reduce flows at Comal Springs by 55 cfs and San Marcos Springs by 10 cfs relative to historical levels
  - Uvalde Water Project increases flows at Comal Springs by 8 cfs (15% of the impact of increasing pumping to fully permitted amounts)
  - Uvalde Water Project has no estimated impact on springflows at San Marcos Springs

# Hydrologic Impacts: Groundwater Model cont'd

- Risk of Critical Management Period in San Antonio Pool reduced (see table)
- Uvalde Pool only faces a Stage II Critical Period Management Period (5% cutback) 2% of the time

<i>Critical Period Management</i>	<i>Probability with Uvalde Water Project</i>	<i>Probability without Uvalde Water Project</i>	<i>Cutback</i>
None	41%	36%	0%
Stage I	28%	31%	20%
Stage II	22%	23%	30%
Stage III	8%	9%	35%
Stage IV	1%	1%	40%

# Impact on Irrigated Agriculture: Irrigation Water Use Peaked in 1980s



# Growth of Sprinklers Conserves Irrigation Water

## Irrigated Acreage and Use of Sprinklers in Uvalde County

<i>Year</i>	<i>Total Irrigated Acres*</i>	<i>Sprinkler Acres</i>	<i>Share Sprinkler</i>
1958	13,945	390	2.8%
1964	21,379	400	1.9%
1969	35,596	900	2.5%
1974	40,412	2,580	6.4%
1979	39,612	12,261	31.0%
1984	51,370	15,348	29.9%
1989	49,032	15,048	30.7%
1994	49,811	17,538	35.2%
2000	48,691	27,633	56.8%

\* does not reflect double cropping

# Project Based Mostly on Under-Utilized Permits in Uvalde Pool

- Final Initial Regular Permits for Irrigation in Uvalde Pool

- Base Irrigation: 61,888.464 AF\*

- Unrestricted Irrigation Water:\* 53,823.298 AF

- Total: 115,711.762 AF

\* does not reflect unrestricted water available from EAA conservation regulations

# Economic Impact on Local Economy

- Sources of stimulus to Uvalde County economy:
  - Operation of new water company
  - New recurring income stream for participants in STWR leasing program
  - Project construction
- Water company & STWR water right leasing program generate 74 to 121 jobs permanently and increase annual output in Uvalde County by \$15 million
- Construction activity generates 173 jobs and increase output in Uvalde County by \$44 million



# **STWR Legislative Program**

# History of Pipeline Prohibition

- Bexar County water supply projects in 1990 included purchase of 10 acres west of Knippa Gap to pump 80,000 AF per year
- Suspicion that a permit system would never preempt rule of capture in the Edwards Aquifer
- Pipeline prohibition added to EAA legislation as a “belt and suspenders” protection against a Bexar water raid
- Prohibition protected against a massive water project proceeding without concern for groundwater resources or local farming community

# STWR Legislative Objectives

- Exemption from existing pipeline prohibition in Edwards Aquifer Act
- EAA authorized to undertake administrative process to assure that projects qualifying for exemption achieve defined objectives
- Maintain base acre foot water supply
- Assure that Uvalde water remains within Edwards Aquifer
- Protect supply reliability of Uvalde pool
- Support development of policy options that provide protections and benefits for Uvalde County



**For Additional Information Visit:  
<http://www.uvaldewaterproject.com>**