

T E X A S

The
State
of
Water

VIDEO SUPPLEMENT



Life's better outside.®



Each installment of Texas The State of Water was produced to reflect the latest issues in water resources at the time of publication ranging from 2003 to 2011. Listed below are short summaries of each segment followed by updates outlining the ever-changing status of our environment and the policies that govern our water as of August 2013.



TEXAS THE STATE OF WATER VOLUME I 2003

Segment 1: West Texas

The Rio Grande is a river in peril. The problems begin well before the river reaches El Paso, and continue to the river's end. How is this desert city meeting its water needs, and what are the effects downstream?

- In 2007, El Paso completed a desalination plant. Can supply up to 27.5 million gallons of water a day, but rarely operates at full capacity because of the high energy costs. (Production of desalinated water costs 2.1 times more than fresh groundwater and 70 percent more than surface water – El Paso Water Utilities.) In 2012, it supplied 4 percent of El Paso's water.
- 2012 – Harsh drought conditions prompted the city of El Paso to utilize all five pumping units in their desalination plant. Never before had all units been in operation at once.

Segment 2: Caddo Lake

East Texas is water rich, at least when compared with much of the state. Despite the abundance of water, there's a fight brewing over water rights, with scenic Caddo Lake as the focal point.

- 2006 – The Texas Supreme Court ruled against the city of Marshall and the Texas Commission on Environmental Quality in a long-pending case concerning the city of Marshall's request for an amended water permit to supply industrial customers with water.

Segment 3: Down in The Valley

As the once mighty Rio Grande makes its way to the sea, its flow is constantly being reduced by forces both natural and manmade. Farmers and cities in the Valley are struggling to save the river, and their way of life.

- 2013 – Texas filed a complaint with the U.S. Supreme Court, asking the court to command New Mexico to deliver water apportioned to Texas under the 1938 Rio Grande Compact between the states of Texas, New Mexico, and Colorado to divide the waters of the Rio Grande.

Segment 4: The Panhandle

Selling groundwater and then transporting it across the state is a reality in the Panhandle. But landowners who don't want to sell their water rights are pitted against those that do. All the while the aquifer level continues to drop.

- 2011 – Canadian River Municipal Water Authority (CRMWA) purchased groundwater rights on 211,000 acres in the Texas Panhandle, owned by T. Boone Pickens' Mesa Water, for \$103 million. Those rights will help supply eleven Panhandle cities with water for generations to come, including Amarillo. Also, the City of Amarillo purchased some 34,000 acres of CRMWA's newly acquired acreage, designated solely to providing water for the city residents.

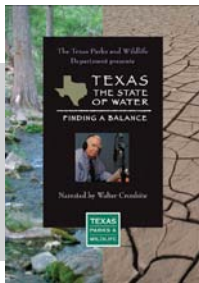
Segment 5: The Colorado & Trinity

The Colorado and Trinity are very different rivers – one rural, the other urban. Both are vital to their regions of the state, and both face a different set of problems. One thing they do have in common is their impact on the bays and estuaries at rivers end.

Segment 6: End of the Line?

The Rio Grande is emblematic of water issues facing Texas today. Problems on both sides of the border have reduced this once mighty river to a trickle, stopping the Rio Grande short of the Gulf of Mexico.

- Rains in the fall of 2003 enabled the Rio Grande once again to reach the Gulf.
- 2012 – US and Mexico signed cooperative agreement known as Minute 319. Operates under the 1944 U.S./Mexico treaty that governs both the Colorado River and the Rio Grande. The agreement moves away from water allocation towards more flexible water management that will benefit both countries and the environment. Negotiated under the auspices of the U.S./Mexico International Boundary and Water Commission. Mexico is currently behind on deliveries but has five years to comply.



TEXAS THE STATE OF WATER VOLUME II - FINDING A BALANCE 2005

Segment 1: Tomorrow's Task Today

Explains the difference between surface water rights and groundwater rights and delineates the various state and local agencies that have jurisdiction over them.

- June 2011 – Governor Perry signed Senate Bill 332 which clearly defines that a property owner has a vested ownership interest in, and the right to produce, the groundwater below the surface of their property.
- 2012 – Texas Supreme Court unanimously upholds Rule of Capture. *Edwards Aquifer Authority v. Burrell Day* (who has since passed away) and Joel McDaniel, two farmers in the San Antonio area who challenged EAA's restrictions on their use of a water well on their land.

Segment 2: "Whiskey is for drinkin' and water is for fightin'"

Profiles recent court cases and conflicts over groundwater and surface water. Cases include: the *Sierra Club v. U.S. Fish and Wildlife Service* which resulted in the creation of the Edwards Aquifer Authority, the suit between the San Antonio Water System (SAWS) and the Living Waters Catfish Farm, the denial of the San Marcos River Foundation's (SMRF) instream flow permit by the Texas Commission on Environmental Quality (TCEQ) and subsequent suit.

- *SMRF v. TCEQ* – In 2006, District Court rules in favor of SMRF. TCEQ appeals decision and the case is assigned to Thirteenth Court of Appeals in Corpus Christi. Passed in 2007, Senate Bill 3 prohibits the issuance of new water rights for instream flow purposes but allows existing water rights to be amended for instream flow purposes. In 2008, appellate court dismisses the SMRF case, citing Senate Bill 3 as making the case moot since now clear that the state prohibits new instream flow water rights. SMRF requested a rehearing, asking for a ruling on the priority date (originally 2000) of the SMRF application. Court denies the rehearing request.
- Environmental Flows and Senate Bill 3 – In 2007, the 80th Texas Legislature passed Senate Bill 3 which created a new process for identifying environmental flows for the state's river basin and bay systems. The process requires local stakeholder participation, expert science team recommendations, and ultimately produces environmental flow standards adopted by TCEQ through rulemaking. The flow standards are intended to identify a range and distribution of flows necessary to maintain a "sound ecological environment" in rivers, streams, bays and estuaries. Standards have been adopted for the Sabine-Neches, Trinity-San Jacinto, Colorado-Lavaca, and Guadalupe-San Antonio and Mission-Aransas basin and bay systems. The Rio Grande, Nueces, and Brazos basin and bay standards are projected to be adopted by March 2014.

Segment 3: Keeping the Neches Natural

Looks at efforts to designate the upper part of the Neches River as a Scenic River, the contributions reservoirs have made and the fight of a landowner to stop a reservoir from taking his family's property.

- 2010 – U.S. Supreme Court blocking Fastrill Reservoir intensifies interest in building Marvin Nichols Reservoir.
- 2012 State Water Plan – Region C (includes Dallas) names four reservoirs, including Marvin Nichols and "a Fastrill replacement." Region D – (Marvin Nichols location) opposes.
- HB 4 passed through 83rd Texas Legislature is aimed at funding and implementing the 2012 State Water Plan. In November, voters must approve the removal of \$2 million from the state's "Rainy Day Fund" to fund the project before the bill can take full effect.

Segment 4: The Latest Liquid Gold

Looks at how water has become a commodity. Profiles why the Lower Colorado River Authority (LCRA) purchased water rights to increase the amount of water they control. Also profiles an off channel reservoir project between the San Antonio Water System (SAWS) and the Guadalupe-Blanco River Authority (GBRA) and the concerns of its impacts on the bays.

- May 2005 – SAWS withdrew from the off-channel reservoir project with GBRA.
- On January 16, 2013, the LCRA board unanimously approved \$18 million for the first step toward building a new downstream reservoir in Wharton County near Lane City.
- 2013 – LCRA board decided to cut off Highland Lakes water to most downstream users due to drought and low lake levels. The cutoff comes as the basin is caught in the grip of one of the worst droughts in history. The water flowing into the Highland Lakes, called inflows, was the lowest on record in 2011 at roughly 10 percent of the historical average. In 2012, inflows were roughly 32 percent of the historical average. LCRA's municipal and industrial customers contract for water that is guaranteed through conditions equal to that of the worst drought on record. Agricultural customers, mostly downstream rice farmers, pay a lower rate for water that can be cut back or cut off during a severe drought. Farmers in the Garwood Irrigation Division are entitled to about 20,000 acre-feet of Highland Lakes water this year based on the purchase agreement of the Garwood water right.

Segment 5: The Phoenix Flow – Freshwater Inflows to Bays

Examines how freshwater inflows impact ecological and economic future of bays, past TPWD studies and present studies by Texas A&M. Also looks at the establishment of the Environmental Flows Study Commission, the rise of ecotourism and the interest in whooping cranes.

- 2013 – *The Aransas Project v. Shaw*, Senior United States District Judge Janis Graham Jack held that the Texas Commission on Environmental Quality's (TCEQ) water management practices caused a "take" of the endangered whooping cranes in violation of the Endangered Species Act (ESA) and ordered the TCEQ to seek an Incidental Take Permit under Section 10 of the ESA, and prepare a corresponding Habitat Conservation Plan that will

balance the interests of Texas water users with the need to protect the whooping cranes' critical habitat. Judge's ruling is being appealed. 5th Circuit Court of Appeals has ordered a stay of the judge's order pending the outcome of the appeal.

Segment 6: The Links of your Lifestyle

Profiles the Water Conservation Task Force and the successes of water conservation in San Antonio and the importance of good range management on private lands. Also profiles a housing development in San Antonio designed with water conservation in mind and volunteer opportunities with Texas Watch to monitor local streams and rivers.

- The 2012 State Water Plan envisions 24 percent of new water supplies – more than 2 million acre-feet per year (651.6 billion gallons per year) – resulting from municipal and agricultural water conservation by 2060. Recognizing the importance of water conservation in Texas, in 2007 the legislature created the Water Conservation Advisory Council (Council), a group of 23 experts representing various agencies, political subdivisions, water users, and interest groups. The legislature directed the Council to address several charges and provide a report to state leadership before every legislative session.
- 2013 – Texas Parks and Wildlife partnered with the Texas Commission on Environmental Quality to launch the Take Care of Texas Campaign featuring country music star Kevin Fowler. The campaign encourages Texans to do their part in caring for the environment highlighting water conservation and air quality.



TEXAS THE STATE OF WATER VOLUME III - THE STATE OF SPRINGS 2007

Segment 1: Lost Springs

Examines the importance of springs to Native Americans and early settlers with visits to Big Spring, Comanche Springs in Ft. Stockton and San Pedro Springs near Carizo Springs.

- 2011 – The Middle Pecos Groundwater Conservation District (MPGCD) denies permit to Clayton Williams and Fort Stockton Holdings to export 41 million gallons of water per day from land Williams holds in Pecos County. Williams is already permitted to use that amount for agricultural purposes; the new permit would have allowed the transport of the water to a freshwater district in Midland that Williams established last year. The Middle Pecos district's decision to deny the transport permit was a unanimous 11-0 and came after two years of prolonged legal wrangling.
- 2012 – Fort Stockton Holdings files suit in 83rd District Court against MPGCD.

Segment 2: Threatened Springs

Looks at the importance of San Marcos and Comal Springs to river flows and plans of the Edwards Aquifer Authority to raise pumping caps. It profiles opposition by the Save Our Springs coalition to development of an office complex in Austin. It also features efforts by the City of Del Rio to protect San Felipe Springs with a Watershed Management Plan. We also visit a landowner in Blanco whose spring is threatened by developers building homes and a golf course.

- In February 2013, the U.S. Fish and Wildlife Service approved a Habitat Conservation Plan and incidental take permit for the Edwards Aquifer Recovery Implementation Program. The move put a formal stamp of approval on five years of work to balance water pumping and use of the aquifer with protection of several endangered species that depend on freshwater springs in Central Texas.

Segment 3: Found Springs

Examines how efforts to control brush on private lands may yield more water to aquifers and streams. We visit the Selah preserve near Johnson City, the Powell Ranch near San Angelo and the Leon River restoration project near Gatesville.

Segment 4: Springs for Sale? – The Water Marketers

Examines the Rule of Capture and how private companies and individuals are buying up land and water rights to sell groundwater to the highest bidder. Billionaire T. Boone Pickens' Mesa Water project is profiled, along with the struggles of a small Groundwater Conservation District in Kinney County.

- 2011 – Canadian River Municipal Water Authority (CRMWA) purchases groundwater rights on 211,000 acres in the Texas Panhandle, owned by T. Boone Pickens' Mesa Water, for \$103 million. Those rights will help supply eleven Panhandle cities with water for generations to come, including Amarillo. Also, the City of Amarillo purchased some 34,000 acres of CRMWA's newly acquired acreage, designated solely to providing water for the city residents.
- Kinney County Groundwater Conservation District (GCD) – as board membership changes, two water marketing groups, WaterTexas and Grass Valley Water, receive permits from the GCD. In 2011, the San Antonio Water System (SAWS) rejects the proposal from Grass Valley Water to supply 30,000 acre-feet per year to San Antonio, with possible capacity to deliver up to 95,000.
- 2012 – SAWS will build a desalination plant to treat brackish groundwater. Planned to be operational in 2016 and produce 10 million gallons of drinking water per day.

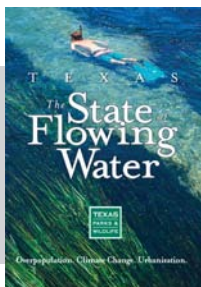
Segment 5: Springs for the Future

Examines various strategies to acquire and manage property to protect springs and aquifer recharge. It profiles Government Canyon State Natural Area where a coalition of entities banded together to conserve land over Edwards Aquifer, protecting the watershed for San Antonio; and to West Texas where Independence Creek feeds the Pecos River and Dolan Falls Preserve that feeds the Devils River. Finally the Storm family tells their story of negotiating a conservation easement to keep their family ranch intact and protect a vital watershed south of Dripping Springs.

Segment 6: Links to your Lifestyle

Profiles various water conservation strategies that every homeowner can implement to reduce their use of water and save money at the same time. We see how using drought tolerant native plants, reduces water and fertilizer use and how new appliances and fixtures inside the home reduce water waste.

- 2013 – The 83rd Texas Legislature passed SB 198 mandating that property owners' association or HOA may not restrict property owners from implementing drought resistant landscaping or water conserving natural turf.



TEXAS THE STATE OF WATER VOLUME IV - THE STATE OF FLOWING WATER 2009

Segment 1: Keeping the Flow

Examines the importance of water flowing in creeks and streams as an integral part of sustaining healthy rivers as well as recharge underground aquifers. The Texas Instream Flow Program and the creation of Paddling Trails are also featured.

- Texas Instream Flow Program continues to work to meet 2016 legislative deadlines.
- Additional Paddling Trails have been created.

Segment 2: Refuge from a Reservoir

Looks at the efforts of residents of East Texas to help establish a National Wildlife Refuge where the City of Dallas wants to build another reservoir. It also looks at efforts in Dallas to conserve water as well as alternatives to building another reservoir.

- 2010 – U.S. Supreme Court ruled in favor of the *U.S. Fish and Wildlife Service v. The City of Dallas and the Texas Water Development Board (TWDB)*. Appealed from federal district court and the Fifth Circuit Court that ruled in favor of the refuge. Fastrill Reservoir blocked and the Neches River National Wildlife Refuge established.
- 2012 State Water Plan includes off-channel Fastrill Replacement project.
- 2013 – Conflict between water planning regions C and D over the proposed Marvin Nichols Reservoir. The reservoir proposed by Region C and would provide water to said region which includes the Dallas-Fort Worth metropolitan area, but the reservoir itself would exist in Region D causing flooding of private lands. The State Office of Administrative Hearing will provide a mediator to facilitate the process of resolving the conflict before water plans from either region can be approved.

Segment 3: Reservoir on the Side

Profiles three projects that reflect the growing trend of building reservoirs off the main channel of a river to lessen the impacts to the natural hydrology of rivers.

- 2009 – LCRA withdrew from deal with SAWS. SAWS sues LCRA for \$1.2 billion.
- 2011 – LCRA board votes to settle lawsuit by reimbursing SAWS \$18.8 million right away, and then \$1.4 million a year for eight years. The agreement will officially terminate the contract and end the lawsuit.
- A number of off-channel reservoirs are proposed in the State Water Plan
- 2013 – *The Aransas Project v. Shaw*, Senior United States District Judge Janis Graham Jack held that the Texas Commission on Environmental Quality's (TCEQ) water management practices caused a "take" of the endangered whooping cranes in violation of the ESA and ordered the TCEQ to seek an Incidental Take Permit (ITP) under Section 10 of the ESA, and prepare a corresponding Habitat Conservation Plan (HCP) that will balance the interests of Texas water users with the need to protect the whooping cranes' critical habitat. Judge's ruling is being appealed. 5th Circuit Court of Appeals has ordered a stay of the judge's order pending the outcome of the appeal.

Segment 4: Lifeline of the Bays

Looks at the implementation of legislation to have local stakeholders cooperatively determine how much fresh water needs to be reserved for each of the Texas river and bay systems.

Segment 5: Water Futures

Examines how population growth and climate change predictions and may impact Texas.

- Drought that began in late 2010 is ongoing. 2011 was the driest year on record for Texas. Also hottest until 2012. Widespread impacts to Texas fish, wildlife and parks.
- 2012 – Hottest year the contiguous United States in more than a century of record-keeping, shattering the mark set in 1998 by a wide margin, according to National Oceanic and Atmospheric Administration (NOAA). The average temperature in 2012 was 55.3 degrees, one degree above the previous record and 3.2 degrees higher than the 20th-century average. They described the data as part of a longer-term trend of hotter, drier and more extreme weather.

Segment 6: Living in the Balance

Examines how sustainable building practices can reduce water and energy needs in the future.

- 2013 – The 83rd Texas Legislature passed SB 198 mandating that property owners' association or HOA may not restrict property owners from implementing drought resistant landscaping or water conserving natural turf.



TEXAS THE STATE OF WATER VOLUME IV - THE STATE OF THE GULF: AMERICA'S SEA . 2011

Segment 1: Burden of Bounty

Ecosystem services that the Gulf provides and the risks of its use (BP Oil Spill).

- January, 2013 – BP Exploration and Production Inc. pleaded guilty 14 criminal counts for its illegal conduct leading to and after the 2010 Deepwater Horizon disaster, and was sentenced to pay \$4 billion in criminal fines and penalties, the largest criminal resolution in U.S. history.
- 2013 – Oil production in the Gulf of Mexico increases, first such increase in four years. Offshore oil production beyond 2020 is expected to increase at a faster rate than onshore production.
- 2013 – The 83rd Texas Legislature passes a bill officially making the endangered Kemp's Ridley sea turtle the turtle of Texas.

Segment 2: Hurricanes: Forces of Nature

A look at how hurricanes have impacted Texas.

Segment 3: Fisheries for the Future

TPWD's coastal hatcheries and stocking program.

- Beginning September 1, 2013, the seagrass protective regulations in effect in Redfish Bay State Scientific Area near Rockport will be expanded to cover the entire Texas coast.

Segment 4: What's in the Water?

Water quality along the coast.

Segment 5: Climate of Changes

How sea level rises may impact Texas.

- Drought that began in late 2010 is ongoing. 2011 was the driest year on record for Texas. Also hottest until 2012. Widespread impacts to Texas fish, wildlife and parks.
- 2012 – Hottest year the contiguous United States in more than a century of record-keeping, shattering the mark set in 1998 by a wide margin, according to National Oceanic and Atmospheric Administration (NOAA). The average temperature in 2012 was 55.3 degrees, one degree above the previous record and 3.2 degrees higher than the 20th-century average. They described the data as part of a longer-term trend of hotter, drier and more extreme weather.

Segment 6: Action for the Oceans

Volunteer efforts to protect coastal waters and beaches (abandoned crab trap removal, beach clean-ups).



© 2013 TPWD. PWD LF K0700-1680B

TPWD receives federal assistance from the U.S. Fish and Wildlife Service and other federal agencies. TPWD is therefore subject to Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, in addition to state anti-discrimination laws. TPWD will comply with state and federal laws prohibiting discrimination based on race, color, national origin, age, sex or disability. If you believe that you have been discriminated against in any TPWD program, activity or event, you may contact the U.S. Fish and Wildlife Service, Division of Federal Assistance, 4401 N. Fairfax Drive, Mail Stop: MBSP-4020, Arlington, VA 22203, Attention: Civil Rights Coordinator for Public Access.



Life's better outside.®