

**Clean Rivers Program Guadalupe River
Basin
Events Inventory thru December 2013**

Date/Range	Event	Subwatershed/ Waterbody/River Segment	Comments
Feb 99-Dec-00	The turbine at the H-5 Dam in Gonzales County on the Guadalupe River taken out of service.	1804	Two separate repairs have been made on the turbines in the hydroelectric plant in the H-5 dam on the Guadalupe River. Repairs required the passing of water over the dam rather than the routine diversion through the turbines. After the first repair was completed and the system operations reinstated, it was found that the turbine was not operating correctly and the unit was taken off line again. As of December 2000, the unit was still offline.
Mar-99	Sampling in special study finds one viable Giardia cyst-Guadalupe River at Gonzales WTP intake	1803	Special study requested by Steering committee; sampling occurring bimonthly; contacted TNRCC water hygiene and City of Gonzales.
Apr-99	New discharge permit issued to Silverleaf	1805 (Canyon Lake)	0.16 MGD; discharge directly into lake, submerged 10 ft, 50 ft from bank.
Apr-99	Repairs on river begin in Comal, and Guadalupe Co.	1812, 1804	Repairs made to bank structures, clean up of debris left by flood waters.
Apr-99	Draft permit issued to Southern Livestock	1808	No discharge permit issued to concentrated animal feeding operation; land application of wastewater; off site disposal of solid waste.
May-99	Established committee made up of lake users that will serve to give public feedback concerning any vegetation control activities	1807 (Coletto Creek Reservoir)	Committee is apprised and can give comment on vegetation management plans for Coletto Creek Reservoir; meets two times a year or more often if necessary.
May-99	Contamination of surrounding soil by petroleum transmission line near Plum Creek (TNRCC site no. 12640)	1810	Repaired line; monitoring well required by TNRCC; TNRCC monitored Plum Creek.
Jan-2000	Contamination of soil by below ground storage tank diesel fuel spill, 4 mi from Comal Springs	1811	Edwards Aquifer Authority doing sampling of Comal Springs; have found low levels of naphthalene's and xylenes (ppb); Company has submitted corrective action plan to TNRCC.
Jan-00	Fish kill on Blanco River-San Marcos, Texas	1813	Unauthorized discharge of chlorinated water into the Blanco River by the City of San Marcos resulted in the death of a few dozen fish.

Feb-00	Established committee made up of lake users that will serve to give public feedback concerning any vegetation control activities	1804	Has met two times; approved of 2000 vegetation control plan for Lakes H-4 and H-5.
Feb-00	Waste field near Town Creek in Kerrville removed by homeowner	1806	A property owner removed a "field of human waste" from the banks of Town Creek in Kerrville. The 100 square foot patch was serving as a restroom for transients staying near site.
Feb-00, May-Aug-00	MTBE samples collected at potable water intakes on the Guadalupe and San Marcos Rivers	1804, 1808	The Guadalupe and San Marcos Rivers serve as sources of water for potable water treatment plants as well as experiencing high recreational pressure during the summer months. Samples for MTBE, a gasoline additive, were collected to assess the impact of recreational vehicles near the potable water intakes on Lakes Placid, Dunlap, Wood (Guadalupe River) and on the San Marcos River. No measurable amounts of MTBE were observed.
April-00	Gary Job Corps discontinues effluent discharge to San Marcos River	1814	Center is connected to the City of San Marcos collection system.
April-00	Five acres of water hyacinth were treated with 2,4-d on Lake Gonzales	1804	Less than five acres of waterhyacinth were treated with a 2,4-d aquatic herbicide. The treatment plan was developed with consultation with the advisory committee. Treatment was scheduled for additional acreage on H-4 and H-5 lakes but was cancelled due to weather conditions and turbine repairs.
April-00	Alternative poultry litter management workshop held in Victoria	1803	The TNRCC, Texas Ag Extension Service and the De-Go-La Resource Conservation and Development office held a workshop on alternative poultry litter management. Reaction by poultry operations not favorable.
May-Sept-00	Drought conditions drop river flows; intensified algal blooms; river behaves more as a lake than a riverine system in the hydroelectric impoundments	1803,1804,1813	Severe drought conditions have dropped the river flows to below 200 cfs at Lake Dunlap and to below measurable flow in the Blanco River at the City of Blanco; sampling at the Blanco site was suspended for three months. Algal blooms were reported on hydroelectric lakes.
May-00	City of Seguin has been granted a change in location of the discharge of Walnut Branch wastewater effluent	1804	The City of Seguin is diverting their effluent from Walnut Branch to the Guadalupe River. The new pipeline is under construction and will not be completed until 2001. The volume of the discharge is permitted for 4.9 MGD.
Aug-00	Notification of findings in investigation of unauthorized discharge into Joshua Creek; analytical results reported that a sample of the waste contained a total lead concentration of 133,000 milligrams per kilogram.	1806	TNRCC Region 13 investigated a complaint of unauthorized discharge of waste described as "an accumulation of lead gun shot pellets in an erosional pocket of the limestone creek bed" of Joshua Creek, a tributary of the Guadalupe River in Kendall County. An enforcement action has been instigated and the Joshua Creek Ranch has been instructed to begin to remove the lead shot and to take actions to prevent the future deposition of lead shot into the creek by shooting range activities. GBRA will request a monitoring site on Joshua Creek in the 2002-04 CRP monitoring program.
Dec-00	Proposed land disposal site in Victoria and Jackson Counties on Arenoso Creek	1803	Beneficial Land Management, Inc. has applied for a beneficial land disposal site for the disposal of sludge in Victoria and Jackson counties in the watershed of Arenoso Creek. GBRA has established a monthly monitoring site on the creek, beginning in December 2000. As of May 2001, the permit has not been issued.
Winter-00	GBRA, Comal and Guadalupe Counties and local lake associations removed large amounts of debris and objects deposited in the river beds after the flood of 1998	1804	Using funding from the NRCS, GBRA, Comal and Guadalupe Counties and the local lake associations did lake-wide cleanups of debris and large items, i.e. appliances, boats, trees, vehicles, deposited in the lakes after the flood of 1998. After identifying the safety hazards, the lakes were lowered to expose the debris. The homeowners, employees of GBRA and the counties, and contractors physically removed the debris.

00-02	Environmental coalitions formed to fight wastewater discharges and landfills	1804, 1805, 1806	Citizen groups are forming coalitions to fight discharge permits in the upper basin. The Northwest Comal County Environmental Coalition has formed to fight the issuance of the Rebecca Lake discharge permit. As of May '02, the permit is going to a contested case hearing. The group, Citizens Against River Pollution, made up of lake associations downstream of the New Braunfels Utilities Kuehler plants, has formed to push for nutrient limitations in the NBU's TPDES permits. A coalition in Seguin successfully defeated the sale and reopening of a landfill formerly operated by the city.
Jan-01	GBRA was notified by LCRA personnel of a oil field storage tank leak in Caldwell County	1808	An oil field storage tank was found to be leaking and slowly seeping into a small tributary of the San Marcos River in Caldwell County. The Railroad Commission was notified and they employed a clean up company to contain the spill and prevent further contamination of the watershed. Due to the high concentration of oil field activities, it is recommended that analysis for organic contaminants of the San Marcos River and Plum Creek in Caldwell County be done in the next biennium.
Feb-01	State Hwy 123 PCE Plume site (Hays County) designated superfund site by TNRCC	1814	Site, near the intersection of Hwy 123 and IH 35 in San Marcos has a contaminated groundwater plume of unknown origin. Sampling conducted by TNRCC in May 2000 showed detectable amounts of dichloroethane, PCE and trichloroethene. No detectable concentrations were found in Willow Springs Creek or the San Marcos River. TNRCC will be conducting a remedial investigation in the area.
March-01	Calls from residents in Wimberley area complaining of excessive aquatic vegetation in Cypress Creek and Blanco River	1815	Mike McCall investigated and found no excessive growth.
April-01	Regional composting feasibility study for Victoria and surrounding counties	1803	As a result of a workshop on alternative poultry litter management the TNRCC, Texas Ag Extension Service and the De-Go-La Resource Conservation and Development office has awarded project to the Foundation for Organic Resource Management, Fayetteville, Arkansas to study the feasibility of a regional composting facility in Victoria county. Sources of organic material include livestock, poultry, wood and shrimp.
April-01	The turbine at the H-5 Dam in Gonzales County on the Guadalupe River was put back into service.	1804	Two separate repairs have been made on the turbines in the hydroelectric plant in the H-5 dam on the Guadalupe River. Repairs required the passing of water over the dam rather than the routine diversion through the turbines. After the first repair was completed and the system operations reinstated, it was found that the turbine was not operating correctly and the unit was taken off line again. The system is now operating as design, passing river flows through the turbines to generate electricity.
May-01	Report of gray water discharge to Guadalupe River downstream of Boerne-Guadalupe River Ranch	1806	Notified TNRCC Region 11 for investigation.
May-01	Report of water quality problems in impounded 12-acre pond downstream of City of Buda wastewater effluent discharge on Andrews Branch of Porters Creek (tributary of Plum Creek)	1810	Andrews Branch is in Hays County and receives effluent from the City of Buda and an additional permit is being considered into the same watercourse. Susan Meckel, private landowner, has a 12-acre pond that impounds water in the Andrews Branch. She has observed numerous water quality problems, i.e. fish kills, algal blooms, bloodworms, in and above the impoundment. TNRCC has been notified and Mike McCall will investigate and take samples in the impoundment and in the Branch and at the city's discharge.
May-01	GBRA and local lake associations contracted to perform a dredging feasibility study on hydroelectric lakes	1804	Goldston Engineering, Inc. was hired to perform a feasibility study for the dredging of Lakes Dunlap, McQueeney, Placid, Nolte, Gonzales and Wood. The study will quantify costs associated with the project, evaluate methods available, and detail permitting

			required to complete the project. The consultant was asked to formulate a phased project based on priority areas identified by lake associations.
May-01	The city of Buda was brought under an enforcement order due to violations of their wastewater discharge permit.	1810	In May 2001, the city of Buda contacted GBRA for assistance in bringing their operation into compliance. In October 2001, GBRA entered into a contract to operate the city's wastewater treatment facility. The plant has been in compliance since mid-May 2001 and the city agreed to fund the clean up and restoration of a downstream landowners stock pond that had been impacted by the city's improper handling of biosolids.
Jul-01	Fire in structure in downtown Seguin, large volume of water from fire control ran down street and entered Walnut Branch	1804	
Aug-01	City of Lockhart required to monitor Total Phosphorus; GBRA monitors creek concentrations for State Representative Rick Green	1810	As a requirement of their TPDES permit, the City of Lockhart, operated by GBRA, must monitor its effluent monthly for total phosphorus. In addition, GBRA agreed to monitor total phosphorus in Plum Creek, upstream and downstream of the city's discharge through the summer of 2002. State Representative Rick Green requested GBRA's help in responding to the concern of a local resident that the city's effluent is detrimentally impacting the Plum Creek.

Sept-01 – Aug-02	GBRA received a grant from the Texas Water Development Board to do a Water Quality and Regional Wastewater Feasibility Study of the area surrounding Canyon Reservoir	1806	Because of the importance of Canyon Reservoir for water supply in the Guadalupe Basin, GBRA applied for and received grant funding to perform an assessment of the impacts to water quality and the feasibility of regional wastewater treatment in the area surrounding the reservoir. GBRA partnered with Comal County and contracted with PBS&J to perform the study.
Nov-01 – Mar 02	New invasive species found in the San Marcos River	1814	The US Fish and Wildlife Service briefed interested parties on the new invasive species, <i>Cryptocoryne beckettii</i> , that has been found in the San Marcos River. It poses a serious threat to the endangered species, the Texas Wild Rice. USFWS has plans to remove some of the plant by dredging and creating a buffer zone between it and the wild rice. GBRA has committed funds toward the project and has written letter of support to Texas Parks and Wildlife for additional funding. The dredging would occur in the summer of 2002.
2001	Since its incorporation, the Village of Wimberley began working with GBRA to develop a master plan for the area to handle water and wastewater treatment and applying for a CCN for the area	1815	GBRA is working closely with the council of the Village of Wimberley as well as their Water and Wastewater Advisory Board to put into place the infrastructure necessary to protect the watersheds from the rapid growth and high density population of the area. Two important steps in these efforts are the establishment of a CCN for the area and the development of a master plan for water and wastewater treatment.
Mar-02	EAA performed a dye tracer study of the Comal Springs	1811	The Edwards Aquifer Authority, along with over 60 volunteers from basin entities and interested parties, conducted a dye tracer study on the Comal Springs. The purpose of the exercise was to determine groundwater velocities near the Comal Springs and identify flow paths from the artesian and water table portions of the aquifer. Eosine and uranine dyes were injected into the aquifer via the Panther Canyon and LCRA wells. Monitoring teams were stationed in Landa Park, over the springs and recorded the output of the springs to develop a breakthrough curve.
Mar-02	Due to HB 2912, class B land disposal sites will be permitted rather than registered	1804	GBRA has operated a Class B sludge land disposal operation in Guadalupe County since 1987. It is a partnership with a local farmer to dispose of stabilized biosolids as a soil amendment and fertilizer for his coastal Bermuda field. In May of 2002, a permit application was submitted for the 48-acre site in accordance with the new law requiring these sites be permitted rather than registered. The notice that the application has been declared administratively complete has been posted and we are awaiting a draft permit.
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April-May 02	Aquatic vegetation treatments conducted in 2002	1804, 1807	Coleto Creek and the upper hydroelectric lakes were surveyed for aquatic vegetation and management plans were developed and presented to advisory committees. On Lakes Gonzales and Wood, the lower hydroelectric lakes, 47 acres of water hyacinth will be treated with diquat or 2,4-d products. On Coleto Creek, 16 acres of hydrilla and Eurasian watermilfoil will be treated with endothol.
April-02	Cleanup on Lake Placid	1804	GBRA assisted members of the organization, Citizens United for Lake Placid, in removing an accumulation of debris and trash on a horseshoe canal off of Lake Placid.

June-02	Abandonment of 3 16-inch pipelines that go under the Guadalupe River in Victoria County and replace with 24" line	1803	The intent of the project is to replace three existing 16" pipelines that carry natural gas under the Guadalupe River with one 24" line that can be inspected in compliance with the new US DOT regulations. TGP has concluded, and GBRA concurs that abandonment in place is the least disruptive and most environmentally sound alternative. Currently, the three lines divide off of a 24" line and cross under the river approximately 100 feet apart. The new line will be installed by directional drilling under the river. Following installation of the new segment, the existing lines will be cleaned, grouted and capped prior to abandonment.
May-02	City of New Braunfels removed "can island" from Cypress Bend Park, Guadalupe River	1812	Over the years, there has been a large deposition of aluminum cans in the Guadalupe River in the Cypress Bend Park area located in New Braunfels. The city removed 40-50 cubic yards of cans mixed with debris. The deposition came from recreationists losing their drinks or littering over the years and had accumulated to the point that it was blocking public access. The city consulted with the TNRCC, TPWD and GBRA before undertaking the project.
July-02	Historic flood event in Canyon Reservoir	1804, 1805, 1806, 1812	A low pressure system migrating westward from Florida combined with tropical moisture from the gulf and stalled over central Texas. For eight days as much as 35 inches of rain fell over the area. The largest peak stream flow from these floods represents the highest known peak gage height and discharge for 12 of the area USGS stations. For the first time since Canyon Dam was built, water passed over the emergency spillway. Because of this historic spill, a new gorge has been cut in the path of the water that flowed from the spillway to the river below Canyon Dam. Canyon Lake prevented flows of up to 125,000 cubic feet per second heading into New Braunfels. With Canyon Lake, the flow in New Braunfels was held at less than 70,000 cfs. Severe property damage did occur and recreation was suspended in the area surrounding the lake and downstream of the dam for the remainder of the summer and until clean up could occur. The flooding redirected the river flows in some areas as well as deposited large amounts of debris and sediment.

October-02	Oil wells in river	1804	Due to erosion and changes in the flow pattern of the river caused by flooding in July 2002, two oil wells are now located in midstream of the Guadalupe River. They are located approximately two miles downstream of FM 1117 in Guadalupe County. GBRA was notified by the Texas Railroad Commission (TRC) and assisted in the inspection of the wells by boat. One well is located in the main channel and extends 16 feet above the water surface. The second well is approximately forty feet further downstream. These wells were cased in the 50's and there was concern that the procedures used then would be insufficient to protect the river from contamination. The TRC employee was able to inspect the wells from the top of the casings for oil on the surface of residual water in the casings and found no evidence of oil or possible leakage. The TRC was not going to list the wells as high priority but was going to contact the Corp of Engineers for assistance with the cost of removing or recapping the wells at some time in the future.
Dec 02	Complaint of construction along Blanco River, Blanco County	1813	GBRA received a complaint that construction activities associated with a new RV park going in along the banks of the Blanco River in Blanco County was causing the river to be diverted and materials to be deposited in the stream. GBRA investigated and found no diversion of the river but did notice the lack of erosion control and construction permits. TCEQ and EPA was notified by GBRA but it was felt that the construction was not doing any significant damage to the stream.
Jan 03	First phase of Blanco River Sulfate Study completed	1813	The first phase of the Blanco River Sulfate Study was completed and one tributary, Big Creek, was identified as a possible source of elevated sulfates. Five sites have been selected for monitoring in the second phase in order to isolate any possible source of sulfate. The second phase will consist of monthly monitoring of the selected sites through July 03.
Jan 03	Commercial/Industrial Metal Salvage Yard applies for permit to operate in Comfort	1806	Mr. Bill Markel is intending to operate a metal salvage business at #8 Old Comfort Road on approximately 1.3 acres. The property is in the drainage of Holiday Creek, a spring fed tributary of the Guadalupe River in Comal County. The surrounding homeowners contacted GBRA concerned about the potential of pollution from the storage of appliances, automobiles and scrap metal. It is unknown at this time what the status of the permit is.
April 03	Near miss from herbicide spill on the San Marcos River	1808	On Thursday, April 4, 2003, a tanker truck carrying 5000 gallons of concentrated Grazon P+D tried to cross the San Marcos River on Co. Rd. 266 (Hays County). The driver misjudged the turn and the back rear tires on the left side of the trailer left the bridge and became lodged on the bridge. The EPA, TPWD, and TCEQ were notified as well as the Hays County Environmental Office. Grazon P+D is an herbicide whose active ingredients are picloram and 2,4-D. An empty tanker was called to the scene so that the contents of the stranded tanker could be transferred. The area on the bridge was prepared to contain any leakage or spill. The only problem occurred when the tanker was being emptied and began to implode because the release valve wasn't opened. The valve was opened and the remaining 40 gallons was transferred. No spill or leakage occurred.

Feb-March 03	Lake Debris Cleanup Program	1804, 1812	Flood debris was deposited in area lakes as a result of the Flood of July 2002. Eight separate projects to remove major portions of the debris were managed by GBRA who served as the local contracting officer under the Natural Resources Conservation Service (NRCS) Emergency Watershed Protection Program. The program provided for a 75% federal funding of certain eligible costs. Local sponsors were GBRA, Guadalupe County, City of Seguin, and City of New Braunfels. The program is coordinated with representatives of area lake-wide associations.
Feb 03	Canyon Reservoir Water Quality and Regional Wastewater Planning Study completed	1805	GBRA and Comal County received a grant from the Texas Water Development Board to conduct a water quality and regional wastewater treatment facility feasibility study for the area surrounding Canyon Reservoir. Rapid population growth in the immediate watershed of the lake prompted the study to address the need for central wastewater collection and treatment facilities and also the need for controls of stormwater runoff in urbanized areas. The study was conducted under close coordination with a steering committee that represented a broad cross-section of study area residents and interests, including representatives from state and federal agencies. A specific aspect addressed the relative performance of on-site treatment versus regional facilities in protecting groundwater resources. The study team created a preferred regional water quality protection plan, including a facility plan to encourage centralization of wastewater treatment for new development, and a set of water quality protection alternatives considering the water quality effects and fiscal implications of the alternatives. The completed study is available on the GBRA website.
April 03	Runoff from Hog Farm in Peach Creek Watershed investigated by TCEQ and TPWD	1803	TCEQ was called to investigate a water quality complaint concerning a discharge from a hog farm into a tributary of the Peach Creek. The discharge was septic and dark in color. The hog farm had dead hogs piled up on the property. There is no containment of wastewater runoff. The farm is not permitted because there are less than 200 head on the site. TCEQ is sending the owner a notice of violation asking him to cease discharging and dispose of the dead animals properly. TPWD is also investigating the owner due to a large fish kill that resulted from the discharge.
April 03	Seguin restaurant had overflow of grease trap to Walnut Branch	1804	Church's Chicken (Seguin) had a grease trap overflow and cleaned it up by washing the grease down the parking lot into the Walnut Branch. The city has notified the owner that the clean up that was done was illegal and the city would take legal action if it occurred again. There was some damage to macrophytes in the area but there appeared to be no harm done to the fish populations.
May 03	Small diesel spill over Guadalupe River Bridge on IH 10, Seguin	1804	A semi-truck carrying a load of rolled sheet metal lost control on the IH 10 bridge over the Guadalupe River in Seguin. The truck lost approximately 5.5 gallons of crank case oil into the river. The prevailing winds coming from the south helped to contain the spill and it was removed before it traveled downstream.
July 03	Canyon Reservoir included in TWCA nutrient study	1805	GBRA is participating in the study, "Investigation to support the development of nutrient criteria based on recreational uses of reservoirs." GBRA is sampling two locations in Canyon Reservoir, one cove site and one main body site, for nutrients, solids and chlorophyll. At the time of sampling, surveys are conducted to get the recreational user's perspective of the water conditions based on their intended activity. Canyon Reservoir is one of nine reservoirs included in the study which will be conducted in 2003

			and 2004.
Aug 03	Special study on oil field activities in Caldwell County completed	1808, 1810	A study was conducted to investigate the impact of oil field activities on the water quality of the San Marcos River and Plum Creek in Caldwell County. Two sites on each of the two water bodies were monitored for organic compounds associated with petroleum production. Quarterly samples were collected during ambient conditions and after rainfall events. The analysis resulted in no detection of BTEX or TPH in any of the samples. The completed report is available on the GBRA website.
Aug 03	Special study on elevated sulfate concentrations observed in the Blanco River	1813	The study of elevated sulfates observed in the Blanco River was completed and one tributary, Big Creek, was identified as a possible source of elevated sulfates. One possible explanation for the high concentrations could be the contribution of sulfates from groundwater sources. A well monitored in the study area exhibited a sulfate concentration that was over 50% greater than the mean concentration observed in the Blanco River. The final report is available on the GBRA website.
Dec 03	Illegal dump found in Guadalupe County	1804	An illegal dump was discovered in a 15-foot ravine near Crams Creek in Guadalupe County. After being ordered to remove the debris the owner of the property chose to burn the material instead. The debris consisted of assorted building materials. After being set on fire, the material created an extreme smoke hazard. Local fire departments attempted to extinguish the fire but after 2 weeks the pile was still smoldering and re-igniting. Because of the smoke hazard and the amount of debris, TCEQ was brought in to manage the cleanup and remove the remaining material. No runoff to the Guadalupe River or a tributary occurred.
Dec 03	Domestic septage land application site in DeWitt County administratively complete	1803	Sandra Sue Smith has submitted an application for registration of a site for the beneficial land application of domestic septage. The site is located at the intersection of SH 87 and SH 72, on the west side of SH 87 in DeWitt County. Currently, the TCEQ is performing a technical evaluation of this permit. The TCEQ Executive Director will issue a decision to approve or deny the registration.

2003 - 2011	Lower Guadalupe Water Supply Project and associated environmental studies	----	<p>The Lower Guadalupe Water Supply Project (LGWSP) is a water resource partnership between GBRA, the San Antonio River Authority and the San Antonio Water System. The goal of the project is to provide a new, additional source of water to meet future water needs in the south Texas region, while protecting spring flows at the Comal and San Marcos Springs and preserving inflows to the San Antonio-Guadalupe bays and estuary system.</p> <p>The partners have commissioned Dr. Douglas Slack, Texas A&M University, to conduct a study on the Whooping Crane habitat to ensure that the LGWSP does not negatively affect the species. Additionally, Dr. George Ward, University of Texas, has been commissioned to conduct a study of the San Antonio Bay inflow to evaluate the biological productivity of the bays and estuary and conduct detailed research to determine the freshwater inflow requirements necessary to support the ecosystem of the bays and estuary.</p>
Feb 03	Kerrville State Park changes hands	1806	Kerrville Schreiner Park was transferred from TPWD to the City of Kerrville's Parks and Recreation Dept. on February 13, 2003.
May 7, 2004	Fertilizer Spill on Business Hwy 123, Seguin	1804	A trailer carrying 900 gallons of liquid fertilizer lost its entire load onto Hwy 123 and into the bar ditch south of Seguin. TCEQ advised that the fertilizer could be washed off of the pavement. The contaminated dirt in the bar ditch was removed by the responsible party, Becker's Feed, and land applied. No surface water was threatened by the spill.
May 17-18, 2004	Semi-tractor trailer went into Geronimo Creek, east of Seguin	1804	On May 17, at approximately 11:30 p.m., a tractor-trailer truck carrying auto supplies left IH 10 and plunged into Geronimo Creek under the highway near Seguin. The rig and driver were not found until 6:30 a.m. the next morning. The Seguin Fire Department deployed bales of hay and floating hoses to contain diesel fuel that was escaping from the trailer's tanks. There were auto supplies, such as batteries, containers of motor oil and transmission fluid, and car parts in the creek. The responsible party, O'Reilly Auto Parts, called in Eagle Environmental, to remove the supplies from the creek. GBRA analyzed the creek upstream and downstream of the accident site and found no change in water quality. No dead fish were observed.

June 5-10, 2004	Loss of 2-3 barrels of crude oil into the San Marcos River	1808	A line carrying crude oil in Caldwell County, near the city of Luling, developed a slow leak. Before it could be found, approximately 25 barrels were lost to the surrounding soil. Runoff from a large rainfall event carrying approximately 2-3 barrels of the crude to the San Marcos River. The Texas Railroad Commission was the regulatory authority in charge of the site. TEPPCO, the responsible party, called in BNC Environmental to deploy booms to contain the spill, and clean up the spill site. Three booms were deployed, one upstream of the city of Luling's intake, one at the Palmetto State Park, and one further downstream nearer the confluence with the Guadalupe River. The city of Luling's water treatment plant discontinued pumping from the San Marcos River off and on through June 9, 2004, due to continued presence of floating oil. Analyses of the raw water and finished water found no oil and grease or total petroleum hydrocarbons.
June 5-10, 2004 (cont.)	Loss of 2-3 barrels of crude oil into the San Marcos River	1808	BNC had crews on the river using spill containment and equipment to remove debris that may have caught some oil residue. Downstream surface water utilities were notified of the potential threat (Victoria and Gonzales). The contaminated soil was removed and moved upslope to a bioremediation site.
June 15, 2004	GBRA and TCEQ meet to discuss response to water quality events	-----	Employees of the GBRA Water Quality Division and the TCEQ Region 13 staff met to discuss the process of spill response and responsibilities during events that have the potential to impact water quality. It was learned that TCEQ does not take control of the site when an event occurs. The local law enforcement and fire departments have site control responsibilities. The responsible party is responsible for calling in the appropriate environmental clean up crews. TCEQ is there to act in an advisory capacity and observe. They will call in a response crew only if the responsible party cannot be located. GBRA offered to assist the TCEQ staff where possible, such as water quality monitoring, and site observations. GBRA will not assist in spill containment or site control.
August 28, 2004	Slow fuel leak into Youngs Creek (Guadalupe County) from train engine owned by Union Pacific Railways	1804	A train engine owned by Union Pacific and parked over Youngs Creek in Guadalupe County (a tributary of Lake Placid-Guadalupe River) developed a leak from a waste tank that contained a mixture of oil, diesel and water. Approximately 5 gallons leaked into the creek. The McQueeney Volunteer Fire Department deployed hose booms to contain the spill. There was no flow in the creek at the time so no spill reached Lake Placid.
Fall 2004	Wash out of Small Hydro Dam in Cuero	1803	A small privately owned hydro dam near Cuero was breached by high flows and washed out in the fall of 2004. The river no longer ponds behind the structure. All river flow travels around the structure. The owner of the dam is interested in fixing the structure but the repairs would require that he work from the adjacent landowner's property and the property owner will not give his permission to do so.

Dec 04	Improper disposal of horse manure and hay along banks of Guadalupe River in Kendall County	1806	A resident of Kendall County reported that her neighbor who operates a horse farm was disposing of hay and manure along the banks of the Guadalupe River. Investigations by GBRA, TCEQ and the Kendall County Sheriff's Department resulted in the removal of the material and the discontinuation of the practice.
Feb 05	Major natural gas pipeline exposed in Guadalupe River south of Victoria	1803	Changing currents in the Guadalupe River south of Victoria have exposed a 30-foot portion of a major natural gas pipeline running beneath the river. The 26" diameter pipeline is owned by Transco and was installed in 1950. The pipeline extends from South Texas to New York City and supplies 10 percent of the natural gas consumed in the U.S. There is no immediate safety risk. It will be repaired in early spring or summer and will not need to be taken out of service during the repairs.
Feb 05	Leaking oil field storage tanks located on Hog Creek in Goliad County	1807	Oil tanks belonging to the KEBO Oil Co. had been leaking approximately two weeks when located because of a hydrocarbon smell in Hog Creek, a creek in the Coletto Creek watershed. The spill was contained before any contaminants reached Coletto Creek or the reservoir. Samples were taken downstream and in the reservoir for oil related organic compounds and none were detected. The Railroad Commission was in charge of the response and clean up.
April 05	Shooting range to open in Kerr County, along Cypress Creek	1806	The Hill Country Shooting Sports Center, located near Kerrville, in Kerr County, has opened and has been selected as the venue for several major competitions in the coming years. Concern has been voiced on the impact the range will have on the water quality of the intermittent stream, Cypress Creek, and the Guadalupe River. Both GBRA and UGRA will periodically visit the stream and if necessary take samples to determine if impacts are occurring.
May 05	Hydraulic fluid spill flows into San Marcos River	1814	Hydraulic fluid spilled from a garbage truck and then was washed into a storm drain early on the morning of May 9, 2005. Firefighters installed absorbent booms and sand bags to contain the fluid. No dead fish or wildlife were found. The volume lost was unknown.
June 05	Permit to land apply WWTP sludge on Arenosa Creek Ranch in Victoria County	2453	A public meeting was held to discuss Land Application Permit no. WQ0004666000, a site that will be permitted to accept water and wastewater treatment plant sludge. The land is located 10 miles NW of Inez, Texas, Victoria County, in the Lavaca-Guadalupe Coastal Basin. The site will be managed by Beneficial Land Management, Jesse Mayfield, operator.
June 9, 2005	Lift station overflow on Geronimo Creek releases approx. 800,000 gallons of raw wastewater into creek	1804	The City of Seguin lost power to the lift station serving the Geronimo Creek WWTP that resulted into the release of 800,000 gallons of untreated wastewater into the Geronimo Creek and then into the Guadalupe River. GBRA visited the creek and at FM 1117 on the Guadalupe River and took water samples and observed no impairment to fish and wildlife. Power was restored by 11:30 pm (10 hours without power).

Sept. 1, 2005	Small leak in PVC pipe carrying salt water from oil well near San Marcos River near Luling	1808	A small leak developed in a pipe carrying salt water associated with oil field activities. The pipe is owned by Vintage Petroleum Co. Vintage built a berm to contain the spill which amounted to less than 1000 gallons and used a vacuum truck to remove the liquid. The leak occurred near the town of Stairtown and was a potential threat to the San Marcos River.
Sept. 2005 – Jan. 2006	Citizens voice concerns about quarry operations in Kerr County	1806	Residents of Kerr County are concerned about quarry and rock crushing operations near the Guadalupe River. They are concerned about impacts to water and air quality as well as impacts to water flow and river banks.
Oct. 2005	Complaints continue on plant material coming from Landa Lake	1811	Large mats of vegetative material made up of leaves from the aquatic plant Vallisneria (described as long, thin strands, dark green and ribbon-like) have been reported on the Comal River and Lake Dunlap, and originating in Landa Lake. The leaves appear to be cut immediately above the roots of the plant. The New Braunfels Parks Department is not cutting the plants. The probable causes of the mats of broken or cut plant material could be homeowners along the lake clearing their waterfront or the Giant Ram's Horn Snail that was introduced to Landa Lake in 1983.
Oct. 2005	Statewide Survey of Golden Alga includes Coletto Creek Reservoir	1807	<i>Prymnesium parvum</i> , golden algae, can produce blooms that are highly toxic and have caused large fish kills in some Texas reservoirs. The Texas Parks and Wildlife Department is conducting a study across the state, looking for the alga, and the water quality conditions that may prompt its blooms. The Coletto Creek Reservoir in Goliad County has been included in the study. Water quality data, cell counts and bioassays are being collected and the final report should be available in August 2006.
Nov. 2005	Oil spill on Guadalupe River near Domino Five, Guadalupe County	1804	A large film of oil was reported on the Guadalupe River but diminished within a week of the first sighting. The report stated that a steady, thick oily film was seen coming down the center of the river. Neighbors report that there have been two oil-drilling companies working in close proximity to the river. At least seven oil wells were operating at the time of the investigation and there was evidence of earth moving activities.
Nov. 2005	New Texas Watch monitoring group forms in Kerr and Gillespie Counties – Will monitor water leaving Old Tunnel, home to over 3 million Mexican free-tailed bats	1806	A monitoring group has formed to monitor the water flowing through the abandoned railroad tunnel that is home to over 3 million Mexican free-tailed bats. The Old Tunnel is located south of Grapetown and west of Luckenbach, on the Balcones Escarpment. The unnamed tributary flows into Block Creek and then into the Guadalupe River in Kendall County. GBRA is helping with training of new group.
Jan. 18, 2006	Watermaster investigated construction site in Comal County	1812	Rockin' R River Co. was investigated by the So. TX Watermaster for possible diversion of the Guadalupe River. There was no diversion but it was noted that there was large amount of raw soil that had been pushed into the main river channel between the silt fencing and the river channel. It was reported to the Region 13 office for further investigation.

Jan. 24, 2006	Spill of 50% Caustic (Sodium Hydroxide) in Dewitt County	1803	A truck overturned at the intersection of Hwy 183 and Hwy 111 in Dewitt County, releasing a sizable amount of 50% sodium hydroxide into a drainage ditch. The spill was contained by a series of earthen berms constructed by the Yoakum Volunteer Fire Department. No material reached the nearby creek.
Mar. 20, 2006	Holmes Foods applies for discharge permit in Gonzales County	1803	Holmes Foods has applied to TCEQ for a TPDES permit for the discharge of treated wastewater at a volume not to exceed an average daily flow of 7000 gallons per day. The discharge route is into Five Mile Creek and then into Sandies Creek.
March 2006	Paddling trail opens on San Marcos River near Luling	1808	Six-mile stretch of the San Marcos River, from the U.S. Hwy 90 to Luling at the Zedler Mill, is the first inland paddling trail in Texas. Two other paddling trails are being developed in the basin.
Mar. 30, 2006	A 4" line was discovered crossing the San Marcos River near the golf course in Luling	1808	A 4" line crossing the San Marcos River was found to be damaged by debris and about 18" above the water level. The RRC was notified but there is no information on what is transported in the pipe or who owns the pipe. The RRC is investigating.
May 2006	Uranium Energy Corporation begins drilling test wells for uranium mining in Goliad County	1807	In response to the Uranium Energy Corporation's announcement of drilling operations in Goliad County, the Uranium Information at Goliad group has been formed. The goals of the group are to research uranium mining and its impacts on ground water and property values and to educate the citizens of Goliad County. They have held several town meetings that have allowed the citizens to hear all sides of the issue as well as ask questions of the mining company.
May 2006	Watershed Protection Plan efforts for Plum Creek	1810	The TSSWCB, the TCEQ, the EPA, the GBRA and other entities along with a group of stakeholders in the Plum Creek watershed have begun work on the development of a watershed protection plan for the watershed. The upper portion of Plum Creek has been designated as impaired due to elevated bacteria counts and the lower portion has been listed as a concern due to nutrient concentrations (total phosphorus, nitrate-nitrogen and ammonia-nitrogen). See section in 2007 Basin Highlights for further information.
Summer 2006	Low flows and elevated coliform bacteria counts prompt UGRA to issue warning of exposure to pathogens during contact recreation	1806	UGRA monitors 19 river sites for bacterial quality from May to September. Due to elevated bacterial counts, the UGRA issued a reminder to recreationists that there is a risk of exposure during low flow periods. GBRA followed suit with a similar reminder.
October 2006	SDHS issues a fish consumption advisory for Canyon Reservoir	1805	The State Department of Health Services issued a fish consumption advisory for Canyon Reservoir due to elevated mercury found in the fish tissue of long-nosed gar and striped bass. The advisory applies only to the consumption of these two species.

May 2004 – Dec 2007	TSSWCB and the Texas AgriLife Extension Service fund the development of the Plum Creek Watershed Partnership and Watershed Protection Plan	1810	Development of a stakeholder driven protection plan with the goal of restoring water quality in the Plum Creek watershed. See additional information in Coordination and Cooperation Section.
2007	Uranium Energy Corporation begins drilling test wells for uranium mining in Goliad County	1807	In response to the Uranium Energy Corporation's announcement of drilling operations in Goliad County, the Uranium Information at Goliad group was been formed in 2006. The goals of the group are to research uranium mining and its impacts on ground water and property values and to educate the citizens of Goliad County. They continue to educate the local citizens on all sides of the issue.
Jan 2007	GBRA notifies NBU of a potential problem with exposed raw sewage collection line crossing Lake Dunalp	1804	GBRA was notified by a local contractor of a potential problem with an exposed collection line that crosses Lake Dunlap in New Braunfels. The line looks to have been damaged in the floods of the recent years. NBU is aware and is working on scheduling repairs.
May 2007	Local homeowners concerned with potential condominum development planned near Lake Placid that will be served by septic tanks alone	1804	Guadalupe County and the City of Seguin are working on the zoning of a planned condominium development along the banks of Lake Placid that will be served by septic tanks. Local homeowners are concerned with the possible threat to water quality in the lake.
Sept 2007	Development companies look to develop in Calhoun County		Two large developments are being planned for the backwater areas of the Lavaca-Guadalupe Coastal Basin.
Sept 2007	Acme Brick excavation cause river bank erosion and sloughing	1804	GBRA investigated the potential impact of the erosion and loss of the river bank near Acme Brick due to excavation activities on the site. The investigation showed that there were no impacts to river flow but there is still concern with impacts to water quality.
Sept 2007	Park planned for banks of Joshua Creek in Kendall County	1806	A ranch in Kendall County has been planned for the banks of Joshua Creek. GBRA has provided the County with preliminary water quality data to establish a baseline.
Sept 2007	Kerrville man jailed for failing to clean up salvage yard besides the Guadalupe River	1806	Milton Taylor was jailed because for failure to clean up a illegal dump site. Mr. Taylor agreed to clean up the batteries, oil and junk vehicles. His revised probation required that he hire an engineer and submit a site evaluation by November 10.
2007	Excelon selects Lower Guadalupe Basin for the site of their future nuclear power plant	1701	Victoria and surrounding counties were selected as the possible site of a new nuclear power plant.
Nov 2007	Public Meeting on infestation of waterhyacinths on Lakes Gonzales and Wood	1804	Plans are underway to control waterhyacinth in the spring of 2008 by developing a partnership with TPWD, the US Army Corps of Engineers, GBRA and the Friends of Lake Wood. The plan will include physical, mechanical and chemical controls.

Feb. 11, 2008	Vandals add green dye to Rebecca Creek at Cypress Cove Road	1805	GBRA, the Comal County Sheriff's office and Region 13 investigated reports of green dye in Rebecca Creek. A packet that appeared to have contained the dye was found at the water's edge. The dye is similar to the dye used to dye the San Antonio River green during the St. Patrick's Day celebrations and is not thought to be toxic to fish or invertebrates. No evidence of a fish kill was seen.
Feb. 16-19, 2008	Fish kill reported on Plum Creek in Hays County	1810	A small fish kill developed on Plum Creek immediately north of the community of Umland in Hays County. Fish species included largemouth bass, small mouth buffalo, sunfish and log perch. A landowner noticed the dead fish on Saturday, Feb 16 but did not report the kill until the following Tuesday, Feb. 19. TPWD investigated the kill and due to the lapse of time, was not able to determine the cause.
Feb. 19	A gas well blew out near the San Antonio River in Refugio County	1901	An oil well blew out, sending gas, condensate and sand into the air and the surrounding ground. The Refugio Co. Fire Department and Miller Environmental deployed booms on the San Antonio River to contain any runoff. A berm was built around the well site to contain any oil or runoff of condensate. All contamination was contained.
April	GBRA, TSSWCB and NRCS investigate brush removal in Comal County	1806	NRCS estimates that brush in Texas uses over 3.5 trillion gallons of water annually. Control of brush presents a viable option for increasing the availability of water. The participating entities will be working to establish the program in 2009-10.
March 2008	Renovation and rehabilitation of refinery near Nixon	1803	Lazarus Energy Holdings LLC purchased the facility once known as Leal Petroleum, and hope to have refinery online in Spring 2008. When renovations are complete, the plant will be used to refine crude oil into diesel, jet fuel and naphtha (a precursor of gasoline feedstock) at a rate of 50,000 gallons per day.
April 10, 2008	Fuel leaking into San Marcos River after 18-wheeler crashed on IH 35 in San Marcos	1814	An 18-wheeler carrying general merchandise crashed through the guardrail on IH 35 and plunged into the San Marcos River, about a mile from the headwaters, in San Marcos. The truck leaked fuel from its side tanks. TCEQ officials were on the scene overseeing the clean up.
April 29, 2008	Hays Co. Environmental Officials notified of feral hog slaughtering operation in county	1814	A feral hog slaughtering operation was shut down in Hays County. It was suspected that the entrails and other non-processed materials were being disposed of directly into the San Marcos River.
Summer 2008	GBRA looking into changes in confluence with San Antonio River at lower end of river	1802	Currently, the flow from the San Antonio River may be entering the Guadalupe River in a different location, possibly through Elms Bayou, due to past log jams that have created cuts over to Elms Bayou.
June 2008	NBU repairs raw sewer line crossing upper Lake Dunlap	1804	New Braunfels Utilities, using a metal utility pole and metal straps, secured the sagging sewer line that crosses Lake Dunlap.
2009	Wastewater permits in basin begin renewal process	All	The Guadalupe River Basin is in TCEQ's Basin E group. In an effort to make renewal of wastewater permits more efficient, TCEQ has placed basins in groups. Permits in each group will be on a five year renewal cycle. Status of wastewater permits can be viewed at http://www.tceq.state.tx.us/nav/data/permit_data.html .
2009	Drought plagues river basin	All	Drought conditions across the river basin continued through three quarters of 2009. A break came in the fall of the year as rains began in earnest, especially heavy in the lower basin. The upper portion of the watershed did not see significant rains in 2009. Canyon Reservoir reached its lowest elevation since it impounded water in 1968.

March 2009	New Braunfels Utilities relocating lift station in floodway	1804	New Braunfels Utilities issued \$10.2 million in bonds to make improvements to the city's water and wastewater system. Most of the bond money will be used to relocate a lift station from the floodway on the opposite side of the Guadalupe River from the Kuehler plants.
March 2009	Toxic Release Inventory includes Guadalupe River Basin industries	1803	Ineos Nitriles in Calhoun County and Invista's Victoria facility made the state's top ten list for chemical releases to the environment.
July 2009	Plum Creek Watershed Protection Plan first plan in state accepted by EPA	1810	EPA reviewed and found that the Plum Creek Watershed Protection Plan met requirements outlined in the 2004 National Nonpoint Source Program Guidelines. The partnership continues to meet quarterly. The WPP has brought over \$2 million to the watershed in the form of nonpoint source infrastructure improvement grants and education and outreach resources.
September 2009	Broken oil field brine line discovered during sampling event on Salt Branch in Plum Creek Watershed	1810	GBRA discovered a broken 2" water line, that was spraying oily water into the Salt Branch, a tributary of Plum Creek, near Luling. The water coming from the pipe was high in chlorides and the stream banks at least 10 m downstream were covered in black oily tar. The Railroad Commission was notified and they oversaw the repairs to the line by the owner, Lutex Oil Limited. By the next month the area was completed cleaned and all residue was removed. No water quality impacts were observed.
Fall 2009	New Braunfels Utilities offers to voluntarily remove Total P from Kuehler discharges	1804	NBU is in negotiations with TCEQ and the homeowner associations to voluntarily remove Total Phosphorus from the wastewater effluent discharged from the Kuehler plants. NBU is proposing to implement chemical removal of Total P but is requesting that it not be a limit written into the permits.
Fall 2009	GBRA, Texas AgriLife Extension and Texas State Soil and Water Conservation Board meet with public to begin development of Geronimo and Alligator Creeks Watershed Partnership	1804	A watershed protection plan is being developed on Geronimo and Alligator Creeks in Comal and Guadalupe Counties with the goal of removing Geronimo Creek from the 303d list of impaired water bodies. The creek was listed in 2004 for bacteria impairments. The partnership steering committee or topical workgroups (urban NPS, Agricultural NPS and Wastewater/OSSF) will meet monthly in order to draft the WPP.
Fall 2009	Guadalupe County begins Flood Mitigation Study in Geronimo Creek watershed	1804	Parallel to the WPP efforts, Guadalupe County has received a grant from the Texas Water Development Board to conduct a flood mitigation study for the Geronimo Creek watershed. The study will identify up to five sites for possible construction of flood control structures.
Fall 2009	City of New Braunfels and GBRA investigate source of elevated E. coli concentrations in Dry Comal Creek	1811	City of New Braunfels and GBRA field staff did a windshield survey of land use activities in the portion of the watershed of the Dry Comal Creek that lies within the city's jurisdiction. Bacteria samples were collected at a number of locations. Cattle using the creek as a water source are suspected to be a source of the contamination. The city is talking to the land owner about other options for his cattle.
December 2009	Lakes Wood and Gonzales lowered during hard freeze to help control waterhyacinths	1804	In order to utilize the hard freeze as a method of controlling waterhyacinths in the lower two hydro impoundments, GBRA lowered the lakes 18" to expose approximately 50 acres of the nuisance plant to four days of subfreezing temperatures.
December 2009	USFW proposing to list nine species of mussels in TX – four found in Guadalupe River Basin	all	USFW conducting status review to determine whether or not these species warrant listing under the Endangered Species Act. The four species of mussels found in the Guadalupe River Basin in the Golden Orb, Texas Fatmucket, Texas Pimpleback and False Spike.
March 2010	Bays and Basins Instream Flow Recommendation Project Begins on Guadalupe River and San Antonio Bay	all	SB 3 requires that flow recommendations be made to TCEQ in order to maintain a sound ecological environment in the river, bays and estuaries. A stakeholder group and science team have been formed to develop those recommendations.

March 2010	Scuttled boat in tributary of Canyon Reservoir	1805	GBRA investigated a boat that was scuttled on a tributary of Canyon Reservoir. The boat was loosing oil from the engine. The investigation determined that the boat had been accidentally sunk by a neighbor's child. Luckily the boat was found to be in a dammed stock pond and not on a tributary flowing into the reservoir. The boat owner removed the vessel.
April 2010	Fish kill investigated by TPWD and GBRA on Comal River	1811	A small number of sunfish and river minnows were found dead in a short reach of the Comal River off of Elizabeth Street, adjacent to Schlitterbahn parking lot. DO normal; other live fishes observed in area. Cause of fish kill not determined.
April 2010	The Aransas Project sues TCEQ to protect whooping cranes and other species	all	An organization called the Aransas Project has filed a suit against the TCEQ, alleging that the agency violated the Endangered Species Act by not allowing enough fresh water to reach the coastal marshes. The petition could bring Texas rivers under federal control.
April 2010	Upper San Marcos River listed as impaired due to total dissolved solids	1814	The upper San Marcos River has been listed on the 303d list of impaired waterbodies due to total dissolved solids that exceed the stream standard for that stream segment. More data will be collected to confirm the impairment.
June 2010	Hays County Environmental Health Department investigating stream monitoring program in their jurisdiction	1810, 1814, 1815	The Hays County Environmental Health Department is requesting funds from the Commissioners Court in order to establish a monitoring program in Hays County. They will be working with GBRA in order to prevent duplication of efforts and to collect data as a contributor under the CRP QAPP.
July 2010	Results of Boating Capacity Study on Guadalupe Hydro Lakes released	1804	The goal of the study was to construct an informative management tool to better manage the pressures of increased recreational use and shoreline development on hydro lakes. Based on surveys of boaters, shoreline property owners, and selected stakeholders it was determined that concern on level of use primarily focused on Lakes Dunlap, McQueeney and Placid (the upper three lakes). In general, the respondents wanted fewer people, had mild concern over safety due to the number of people using watercraft on the lakes and their behavior, and a general feeling that the lakes were moderately crowded. Study available on GBRA website.
November 2010	Fish kill on Plum Creek	1810	The TPWD and the TCEQ investigated a large fish kill on Plum Creek that was the result of a major upset at the city of Kyle wastewater treatment plant operated by AquaTX. Approximately 1 million gallons of poorly treated wastewater was released from their outfall into the creek near Heidenreich Road, causing severe dissolved oxygen depletion and a spike in the ammonia-nitrogen concentration. Nearly 3,000 fish were killed.
Spring – Summer 2011	Drought returns to Guadalupe River Basin	All	Drought conditions across the river basin returned in 2010-11. The upper portion of the watershed has not seen significant rains in 2011. Canyon Reservoir is in good conditions through Summer 2011, but if the drought continues 2012 will be a record-breaking year.
2011	Hydrofracking in the Eagle Ford Shale in DeWitt and Gonzales Counties	1803	The Eagle Ford Shale Play has become one of the richest oil and gas deposits in Texas because of the newest exploration technology called hydrofracking. Fracking is the process to stimulate wells and recover natural gas and oil by creating fractures that extend from a well bore into formations and allow the product to travel more easily. The fracking solution can be made up of a proprietary mixture of organic chemicals, acids and bases. Concerns have been raised about the impacts that these activities will have on ground water quality, surface water quality, the quantity of water needed in a water-short area and the potential for spills and loss of containment of chemicals.
Summer 2011	City of Kyle does study on wastewater reuse	1810	The City of Kyle is conducting a study of the feasibility of implementing the Region L water supply strategy of using

	opportunities		reclaimed water by identifying potential users and costs of expanding an existing single user system. Reclaimed water is acknowledged by the Barton Springs/Edwards Aquifer Conservation District as a regional means of groundwater planning for protecting aquifer levels and spring flows and is also acknowledged in the Edwards Aquifer Authority's Comprehensive Water Management Plan as a water conservation technology with the potential to provide the region with additional water for municipal use.
November 2011	Ban the Can	1811, 1804	Voters in New Braunfels overwhelmingly approved a ban on disposable containers. The ordinance threatens a fine of up to \$500 and covers any disposable food or beverage container. The ban covers the portions of both the Comal River and the Guadalupe River that flow through the city limits of New Braunfels.
Fall 2011	Work on Lake Dunlap dam, stump removal	1804	GBRA lowered Lake Dunlap in the fall of 2011 in order to complete necessary repairs and rehabilitation of the Dunlap Dam. After consulting TPWD, Texas Black Bass Clubs, Preserve Lake Dunlap Homeowners Association and local fishing clubs, the decision was made to mark or remove some underwater hazards while the lake was low. The committee reviewed underwater obstacles and selected the appropriate course of action for selected hazards, keeping both boater and skier safety and biological habitat in mind.
Fall 2011	Cypress Creek Watershed Protection Plan enters 2 nd phase	1815	Phase I of the Cypress Creek Project has been completed and Phase II will build on the work of the Cypress Creek Watershed Committee. The goals of Phase II will be to identify best management projects (BMPs) that are best suited for Central Texas and make the most sense for ecological health of the watershed and to the economy of the area. The watershed will be modeled to determine the amount of pollutant loads that will be removed if the BMPs are implemented. The final product of Phase II will be a Watershed Protection Plan that includes a preferred timeline, the cost of the management practices and a list of possible BMP sponsors.
September 2011	Residents of Victoria County fight against disposal well	1803	Almost 600 residents of Victoria County asked for County Commissioners Court support to fight against a disposal well near FM 1685 and Loop 463 in Victoria County. American Disposal Services has received a permit from the Railroad Commission of Texas for a disposal well to inject non-hazardous waste from oil and gas production. Spokesman for the disposal company explained that the injection would occur 1500 feet below groundwater, but residents are still concerned about the potential contamination of groundwater supplies.
December 2011	Upper San Marcos, Spring Lake and Sink Creek Project	1814	Texas State University and the Rivers Institute are conducting water quality monitoring and characterization studies on the upper San Marcos River, Spring Lake and Sink Creek, a tributary that flows into Spring Lake. Spring Lake and the upper San Marcos River have experienced increased turbidity and algal blooms. The objectives of the studies are to determine the nonpoint sources of nutrients and sediment into the upper watershed. Based on the data collected and with stakeholder input, a watershed characterization will be developed and management measures will be recommended.
December 2011	Edwards Aquifer Recovery Implementation Project	1811, 1808, 1814	The USFWS brought together 26 stakeholders from throughout the region, representing diverse and sometimes conflicting interests spanning from the Hill Country to the Gulf Coast, to participate in a collaborative process to develop a plan that would aid in the recovery of federally listed species dependent on the aquifer.

September 2011	SB2 Environmental Flows	All	The Texas Instream Flow Program was created by the Texas Legislature to assess how much water rivers need to remain healthy. The program is administered by TPWD, TCEQ, and the TWDB. In addition to determining the amount of water that needs to be in the river for the river to ensure a healthy environment, the process will define a "healthy environment" for each river.
December 2011	Whooping Crane lawsuit	All	In response to a lawsuit filed in 2010 by an organization called The Aransas Project (TAP), TCEQ, GBRA and other effected parties are defending the process by which water rights are allocated in the state. TAP alleges that Texas violated the federal Endangered Species Act (ESA) by not allowing enough fresh water to reach the San Antonio Bay ecosystem on the Gulf Coast where the federally-protected whooping cranes winter each year. TAP has argued that TCEQ violated the "taking" provision of Section 9 of the ESA, a provision that prohibits any activity that kills or harms a listed species or that destroys their habitat.
Summer 2012	Ban the Can	1811, 1804	The ordinance adopted by the city of New Braunfels that established a ban on disposable containers was in place over the 2012 recreational season and there has been a noticeable difference in the amount of trash that floats down to the hydroelectric lake downstream of the city. The ordinance imposes a \$500 fine on any disposable food or beverage container used on the Comal River or the portions of the Guadalupe River that flows through the city. The goal of the ordinance is to reduce the amount of trash and litter deposited in the rivers each tourist season. The referendum has stood up in the courts.
December 2012	Habitat Conservation Plan signed by USFW	1811, 1808, 1814	After more than seven years and rigorous negotiations between 26 stakeholders and a dedicated program manager, the U.S. Fish and Wildlife Service (USFWS) has approved the Edwards Aquifer Recovery Implementation Program (EARIP) Habitat Conservation Plan (HCP) and issued an incidental take permit under the Endangered Species Act (ESA) to protect most users of aquifer water. The EARIP process began in 2006 with an "ad hoc" effort and progressed in 2007 with the passage of Senate Bill 3, Article 12, by the Texas Legislature. The efforts of those 26 stakeholders and another 60 participants resulted in the Edwards Aquifer HCP designed to protect endangered species that depend on spring flow emanating from the Edwards Aquifer springs.
May 2012	BBASC Work Plan Submitted	All	The Work Plan for Adaptive Management from the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) was submitted to TCEQ on May 25, 2012. The work plan followed the submittal of an environmental flow analyses and a recommended environmental flow regime for the river basin and bay system completed in 2011. The work plan is a comprehensive list of study efforts and activities that will provide additional information for future environmental flow rule-making as well as expand knowledge on the ecosystems of the rivers and bays within our basin.
2012-13	Drought persists	All	Drought conditions across the river basin continue to persist in 2012-13.
2012	Hydraulic Fracturing in the Eagle Ford Shale in DeWitt and Gonzales Counties	1803	The Eagle Ford Shale in DeWitt and Gonzales Counties continues to be one of the richest oil and gas plays in the US. The exploration technology of hydraulic fracturing is used to recover oil and gas deposits. Concerns about the impacts of these operations continue to be raised. These concerns include the potential for contamination of ground water by fracking fluids and drilling activities, spills that could enter the surface water resources and

			demand on the stressed water resources of the area.
2012	Meadows Center for Water and the Environment	All	Texas State University-San Marcos established The Meadows Center for Water and the Environment, formerly the River Systems Institute, as a leadership initiative to coordinate and further university-wide efforts in the field of aquatic resource management. The Meadows Center started out as International Institute for Sustainable Water Resources in January 2002, and was renamed the River Systems Institute in 2005.
2012-13	Cypress Creek Watershed Protection Plan	1815	Phase II of the Cypress Creek Project is being facilitated by the Meadows Center for Water and the Environment. The main goal for the Cypress Creek Project is to ensure that the long-term integrity and sustainability of the Cypress Creek watershed is preserved and that water quality standards are maintained for present and future generation.
2012-13	Upper San Marcos, Spring Lake and Sink Creek Project	1814	The Upper San Marcos River is included on the 2012 303(d) List due to elevated concentrations of total dissolved solids (TDS). This project will develop a WPP for the San Marcos River to reduce TDS in the river, and also proactively address concerns related to bacteria, nutrients and sediment in the river and in Spring Lake. The project is being facilitated by the Meadows Center for Water and the Environment.
2013	Texas Instream Flow Program to begin in 2013	1803, 1804	The program was created in 2001 by the state legislature to study Texas rivers and streams in an effort to determine the amount of water required to maintain a healthy river (sound ecological environment). The study on the lower Guadalupe River will begin in 2013, and ending in December 2016.
2012	GBRA funds environmental flow study in Mid-Basin	1803	The GBRA is funding a study to characterize the flow-habitat and flow-ecological relationships in this reach to provide a means of assessing biological impacts or benefits of various flow regimes relative to the mid-Basin project. The study is being conducted on the Gonzales reach, the lower Guadalupe River below the confluence with the San Marcos River to near the city of Cuero. The study will be concluded in 2014.
2011-13	UGRA Bacterial Reduction Plan	1806	In the second year of a grant from TCEQ, the groundwork has been laid for implementing numerous bacteria reduction strategies and UGRA is coordinating with the City of Kerrville, TXDOT, and Kerr County to put those strategies in place. The strategies will address the primary sources of bacteria pollution that have been identified in the Guadalupe River in Kerrville including birds nesting on the SH 16 Bridge, large flocks of domestic waterfowl congregating in the lakes, septic systems, and pollution from general urban runoff. The ultimate goal of the project is to reduce the bacteria levels in the Guadalupe River to a concentration that does not represent a health risk to swimmers and will allow this segment to be removed from the impaired water body list. Construction of the bird deterrents on the SH 16 Bridge in Kerrville was completed in January 2013.
September 2012	Geronimo and Alligator Creeks Watershed Protection Plan accepted by EPA	1804A	The WPP was accepted by EPA September 13, 2012 as meeting their guidance requirements for watershed plans. It is only the third WPP developed for Texas waters that has this designation. Since that time, implementation of the WPP has been underway. All implementation activities are voluntary, and are dependent upon a combination of factors such as stakeholder participation, financial and technical resources, and political will.
November 2012	Kyle WWTP spill	1810	AquaTexas reported a spill of at least 100,000 gallons of partially treated sewage containing solids from a final clarifier into Plum Creek from the Kyle WWTF on November 21, 2012. TCEQ and TPWD investigations continue.
2013	City of Buda and Hays County partner to	1810	The City of Buda and Hays County have partnered to submit an

	remove failing septic systems and treat at city's WWTP		application for the planning and design of the Hillside Terrace Project through the Texas SRF loan forgiveness program. The project would design a collection system and lift station to remove over 260 homes from failing septic systems and process the wastewater at the City of Buda's WWTP. Due to the economic status of Hillside Terrace residents, the project qualified for 70% loan forgiveness (highest available). This area was identified in the Plum Creek Watershed Protection Plan as a potential source of E. coli bacteria in the creek.
2013	Feral Hog Task Force to form in Caldwell County	1810	Caldwell County, landowners, SH130 and others have formed a task force to control the populations of feral hogs in the county. Feral hogs have established themselves across Texas and pose a variety of challenges, including direct deposition of bacteria; stream bank destabilization; agricultural damage; predation of livestock, pets and wildlife; transmission of disease and parasites; and environmental damage to both urban and rural environments.
2012-13	Proposed Solid Waste Disposal Sites under Review by TCEQ	1804, 1810	Permit applications for two solid waste disposal sites have been submitted to TCEQ. The permits are currently in the review process. The Post Oak Municipal Solid Waste Landfill (proposed permit no. 2378), located in eastern Guadalupe County in the Nash Creek subwatershed, is being strongly protested by local landowners and stakeholders in the county. The second location, 130 Environmental Park (proposed permit no. 2383) is in Caldwell County near the City of Lockhart.
July 2013	Water Quality Monitoring associated with the Habitat Conservation Plan on Comal and San Marcos Springs begins	1811, 1814	Water quality and biological data collections will be used to support the HCP biological goals and objectives. The HCP monitoring program will be used to gather baseline data on the ecosystems of the Comal and San Marcos Rivers and Springs, assess effectiveness of the conservation measures included in the HCP, identify impairments and concerns, and support adaptive management decisions. The monitoring program includes routine water quality monitoring, groundwater, sediment and storm water monitoring.
August 2013	Waterhyacinth treatments in lower Guadalupe River and Diversion System	1801	In partnership with TPWD, GBRA treated over 200 acres of waterhyacinths in the lower Guadalupe River. The waterhyacinths were treated by aerial applications of a glyphosate product. Followup treatments will be conducted in spring 2014.
August - October 2013	New Wastewater Treatment Facilities planned for Plum Creek Watershed	1810	The Walton Development has been approved for a new wastewater treatment discharge permit (WQ0015064001). The facility will be permitted to discharge up to 1.5 million gallons to Clear Fork/Plum Creek. The plant, which will provide wastewater treatment for a planned development in the Uhland area, is proposed to be located between Maxwell and Lockhart, near the intersection of CR 229 (Misty Lane) and CR 230 (Jolly Road). Additionally, Walton Development renewed permit for the Ranch at Clear Fork wastewater treatment plant (permit no. WQ0014439001). This permit is for the discharge of treated wastewater to the Clear Fork Plum Creek not to exceed 0.7 million gallons.
September 2013	Fish Kill on Cypress Creek	1815	On September 9, 2013, a fish kill was reported on the Cypress Creek in Wimberley. TPWD investigated and estimated 25 largemouth bass and sunfish were killed by low dissolved oxygen conditions. Afternoon thunderstorms and high temperatures likely resulted in low dissolved oxygen concentrations that led to a fish kill.

September 2013	Guadalupe River above Canyon Reservoir stops flowing due to severe drought	1806	The Guadalupe River above Spring Branch could not be sampled on September 2013 due to the intense drought that has plagued the area since 2012. The same situation occurred in September of 2011, demonstrating that the relief from drought in 2012 was very short-lived.
October 2013	Kyle WWTP reports spills	1810	Spills or illegal releases of untreated wastewater were reported by the operators of the city's wastewater treatment facility. Spills were reported on 10/13/2013, 10/31/13. Spills and plant upsets continue to be a problem at this facility. Additional spills were investigated and fines issued in November and December 2012.
October 2013	Record flood hits upper Guadalupe River Basin	1806, 1809	A typical, early fall, flood event occurred from the evening of October 30 through late afternoon on October 31, 2013. There was widespread rainfall of 2-4 inches across portions of eight counties; substantial areas of 6-10 inches across Hays, western Comal, and central Travis counties; and a bull's eye of 12-14 inches in a narrow swath from Wimberley to Driftwood. The rainfall resulted in major flash flooding along the I35 Corridor from Georgetown to New Braunfels, and major to record flooding for a number of creeks and rivers. (NOAA) Canyon Reservoir saw a rise of 4 feet overnight due to the flood event.
November 2013	Grass carp released in Guadalupe River	1804	In an effort to control the invasive aquatic plant, hydrilla, 3270 triploid grass carp were stocked into the Guadalupe River below Seguin. The stocking rate recommended by TPWD was 30 fish per acre of hydrilla. The grass carp were successfully used to control hydrilla in 1996.