Volume 3, Issue 2

SOUTHEAST TEXAS GROUNDWATER CONSERVATION DISTRICT

Fall 2010

THE SETGCD WELL MONITOR

Did you Know?

At 39.2 degrees Fahrenheit water is at its most dense, making it the only substance who's liquid form is more dense than its solid form!

Inside this issue:

SETGCD AND GMA 14 SET DFC'S

On August 25, 2010 Groundwater Management Area 14 (GMA 14) officially adopted Desired Future Conditions (DFC). Over the last several years the District has been working in conjunction with the GMA 14 members to set DFCs for our aquifers as mandated by state law (House Bill 1763). Groundwater conservation districts were charged by the Texas Legislature to establish desired future conditions for the relevant aquifers within each of the GMAs. DFCs are the desired and quantified physical conditions of the aquifer at a specific time in the future. The current planning cycle is 50 years, through the year 2060. However, GMAs are required to re-evaluate the DFCs no less than every five years and can consider changes to the DFCs at anytime. The Southeast Texas Groundwater Conservation District took several steps in preparation of setting the DFCs. The District circulated surveys to all known water users in the District to gather data on planned growth. Also, with the assistance of the Texas Water Development Board, the District had several Groundwater Availability Models run (GAM run). GAM

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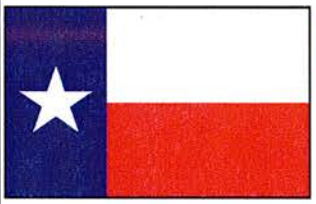


2011 Texas Legislative Session Nears

The 2011 Texas legislative session is nearing and should be a very busy session for our elected officials. Early thoughts are that little in the way of significant groundwater legislation will be addressed. Threee issues will be front and center this session; the looming budget deficit, sun setting and re-districting will command a large portion of our legislators time this session. If you are not familiar with "sun setting", it is an assessment of a state agencies to consider whether they still meet a public need. It allows the Texas legislature to look closely at each agency and make operational changes if necessary or to even abolish the agency completely. The Sunset process is guided by a twelve member body including the Lieutenant Governor and the Speaker of the House of Representatives. Several major agencies are currently under review: Texas Water Development Board, Texas Commission on Environmental Quality, the Railroad Commission, and the Texas Forest Service. You can learn more about the Advisory Commissions recommendations at www.sunset.state.tx.us

District News—Abandoned Well Plugged in Saratoga

In the photo to the left, can you see the abandoned well? This well was brought to the District's attention by the Texas Department of Licensing and Regulation. They were contacted by a local resident whose dog had gone missing for several days and was eventually found, thankfully not seriously injured, at the bottom of this abandoned 30 inch diameter well, some 20 feet down. The hazard of this well is obvious and when first searching for it I stepped over that downed tree in front of the well and nearly fell into it myself. Fortunately I was on the lookout for it.

The District's Rules, as well as Chapter 36 of the Texas Water Code, allow the District to require a landowner to close an abandoned well. In the case of this well, the landowner could not be contacted. The District took the necessary legal steps to permanently plug this well not only to protect the aquifer but to protect the local residents.

Once all of the necessary legal steps were taken, with the assistance of Hardin County Commissioner Ken Pelt, this well was permanently plugged. Hardin County employees Jim Augeri and James Smith did all of the hard work (thanks guys!). It took one afternoon to prep the site and gain access so the equipment could be brought in. The following morning the surface casing was removed and the well was plugged.

All abandoned wells are a hazard! It's obvious why large abandoned wells are hazardous to children and pets, but small wells are also a direct avenue to the water below. Even a small two inch well is a direct conduit to the aquifer . Any pollutants that enter through a the well are directly affecting the groundwater without any opportunity for natural filtering. It only takes a small amount of pollution to contaminate millions of gallons of water.

A well is considered abandoned if it has not been used for six consecutive months, unless the well is in good shape, showing no signs of deterioration and has a functioning pump in it or has been properly capped. A properly capped well must be securely in place and be able to support 400 pounds. If you know of any abandoned wells or need information on plugging a well contact John Martin at (409) 383-15777.

Continued from page 1

runs are a planning tool that uses computer simulation models to allow us to visualize the effects of pumping water from our aquifers. With these models we can simulate increases or decreases in pumping and see in what manner the aquifer will be affected. In addition to GAM Runs that were done specific to our District, GMA 14 hired a consulting firm to assist with GAM Runs that encompassed the entire GMA area. The consulting firm gathered data from different sources, such as individual GCDs, the regional water plans, and from the Texas Water Development Board.

The DFCs that were adopted by GMA 14 are quantified in most instances by what is called "drawdown". As you can see from the tables below, the drawdowns within the Southeast Texas GCD are quite minimal. These drawdowns reflect a projected annual pumpage of approximately 174,000 acre feet per year beginning in 2010 and continuing through the year 2060. Currently, it is estimated that within the District we are only producing approximately 100,000 acre feet per year.

County	Chicot Aquifer	Evangeline Aquifer	Burkeville Aquifer	Jasper Aquifer
Jasper	-10 ft	-23 ft	-24 ft	-21 ft
Newton	-9 ft	-20 ft	-22 ft	-18 ft
Hardin	-17 ft.	-27 ft	-23 ft	-37 ft
Tyler	-3 ft	-16 ft	-19 ft	-33 ft

The DFCs, once adopted, were submitted to the Executive Administrator of the Texas Water Development Board. The Executive Administrator will in turn issue each GMA and GCD an amount of Managed Available Groundwater (MAG) that can be permitted to meet the established DFC. To make sure that the DFCs are met, static water level readings are being taken twice a year (typically in the spring and fall).

Aquifer Average Thicknesses

Thickness Data Provided by the Texas Water Development Board

Aquifer		District Average In Feet	Hardin County Average	Jasper County Average	Newton County Average	Tyler County Average
Chicot		274	332	269	278	48
Evangeline		914	1259	876	736	497
Jasper		906	1326	871	695	889

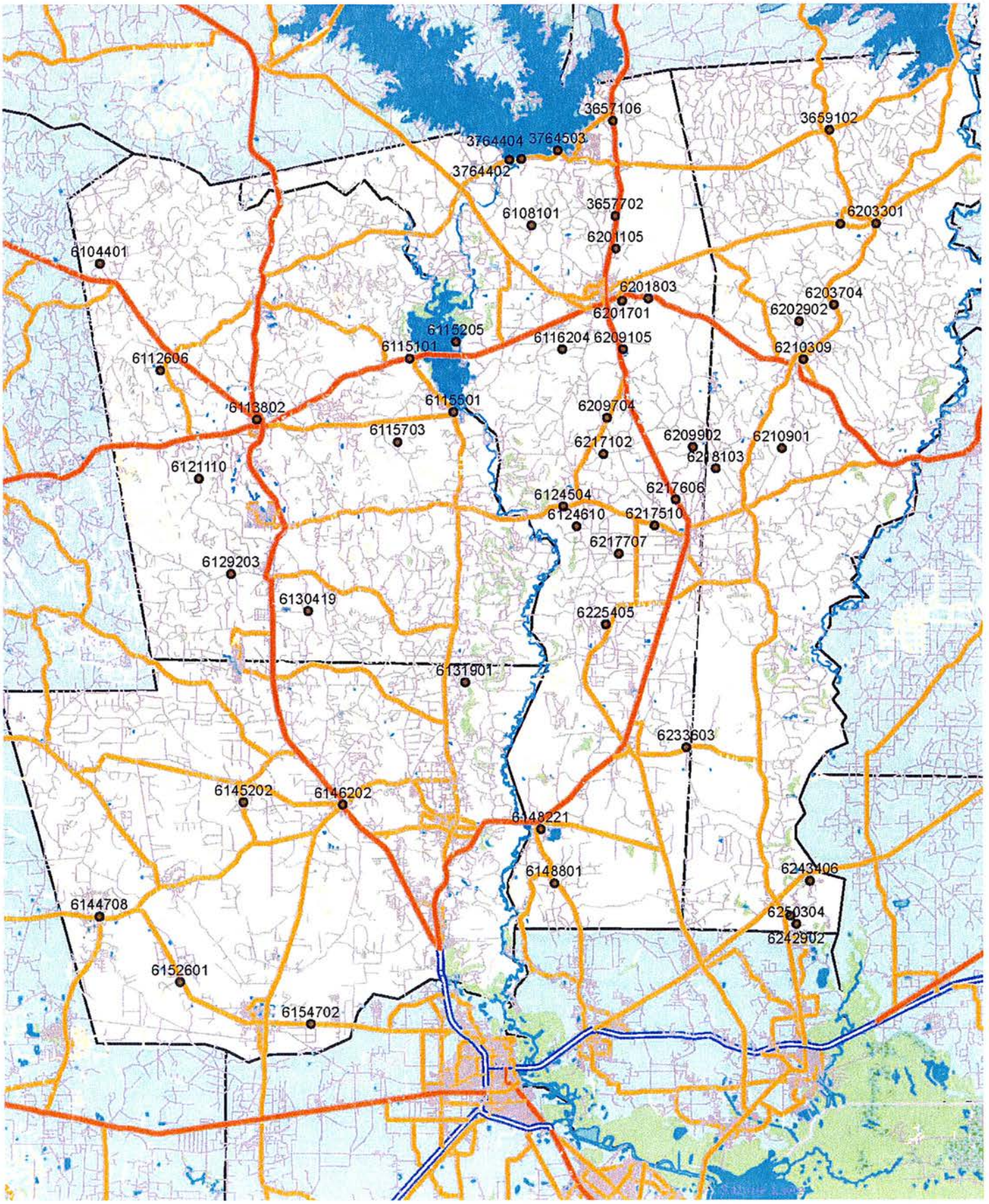
Expected Drawdowns
Based on Model 10-023 Prepared by the Texas Water Development Board

	Expected Average Water Level Decline Through The Year 2060	Average Decline Percentage				
Chicot	-10	3.65%	3.01%	3.72%	3.60%	6.25%*
Evangeline	-22	2.41%	1.75%	2.51%	2.99%	4.43%
Jasper	-27	2.98%	2.04%	3.10%	3.88%	3.04%

*Based on actual expected water level decline for Tyler County

SETGCD Monitor Wells
Static Water Levels

		Depth to Static Water Level						Water Level Difference	
State_Well	County	2000	2005	May_2009	Nov_2009	May_2010	Nov_2010	10 Year	1 Year
6131901	Hardin	-43.03	-12.77	-25.35	-31.38	-42.25	-42.1	0.93	-10.72
6144708	Hardin	-28.83	-25.82	-24.21	-25.8	-25.23	-26.34	2.49	-0.54
6145202	Hardin					-9.66	-14.04	N/A	-14.04
6146202	Hardin	-56.23	-52.85	-56.86	-54.8	-53.15	-54.55	1.68	0.25
6152601	Hardin	-37.26	-31.05	-29.67	-30.94	-31.66		N/A	N/A
6154702	Hardin	-32.45	-29.52	-25.2	locked gate	-28.72	-29.19	3.26	N/A
3657106	Jasper	-8.81	-9.74	-4.69	-5.17	-6.3	-9.96	-1.15	-4.79
3657702	Jasper	-118.17		-117.61	-118.3	-118.95	-118.95	-0.78	-0.65
3764402	Jasper	-116.15	-115.5	-113.27	-112.32	-110.3	-115.71	0.44	-3.39
3764404	Jasper	-56.1	-58.45	-46.83	-49.19	-48.75	-53.35	2.75	-4.16
3764503	Jasper	-38.9	-36.05	-32.33	-31.38	-30.43	-39.27	-0.37	-7.89
6108101	Jasper	-42.6	-42.09	-40.82	-41.15	-41.15	-42.13	0.47	-0.98
6115205	Jasper	39.96		28.18	33.38	39.96	39.96	0	6.58
6116204	Jasper	-52.12		-51.61	-52.8	-52.9	-53.93	-1.81	-1.13
6124504	Jasper	-31.5	-32.59	-24.59	-28.54	-29.35	Dry	N/A	N/A
6124610	Jasper			-30.59	-32.28	-31.79	-33.8	N/A	-1.52
6148209	Jasper	-217.62		-177.09	-181.34	-182.8	-178.24	39.38	3.1
6148221	Jasper	-35.23		-28.92	-30.63	-29.8	-32.73	2.5	-2.1
6148801	Jasper		-11.93	-5.38	-10.38	-8.5	-12.08	N/A	-1.7
6201701	Jasper	-80.23	-75.43	-93.42	-96.05	-85.58	-84.7	-4.47	11.35
6201803	Jasper	-87.05	-83.22	-85.54	-90.55	-87.5	-88.15	-1.1	2.4
6209105	Jasper	-2.05	-1.9	-1.38	-1.5	-3.64	-4.09	-2.04	-2.59
6209704	Jasper		-37.58	-34.4	-33.82	-33.8	-36.87	N/A	-3.05
6209902	Jasper		-24.48	-16.13	-26.25	-19.45	-26.01	N/A	0.24
6217102	Jasper		-58.35	Dry	Dry	Dry	-56.07	N/A	N/A
6217510	Jasper	-21	-18.35	-14.7	-17.87	-16.04	-20.2	0.8	-2.33
6217606	Jasper	-2.05	-2.93	-1.09	-1.42	-4.56	-9.19	-7.14	-7.77
6217707	Jasper	-16.66	-15.03	-4.15	-4.63	-6.85	-16.38	0.28	-11.75
6225405	Jasper	-61.5	-60.1	-57.5	-59.07	-58.14	-60.62	0.88	-1.55
6233603	Jasper	-10.6	-14.12	-10.92	-10.63	-12.65	-14.92	-4.32	-4.29
3659102	Newton				-99.74	-99.12	-100.33	N/A	-0.59
6202902	Newton			-11.65	-11.5	-13.29	-16.35	N/A	-4.85
6203204	Newton	-67.15	-22.4	-68.15	-68.32	-69.5	-68.9	-1.75	-0.58
6203301	Newton	-40.5	-39.95	-45.42		-40.88	-40.82	-0.32	N/A
6203704	Newton	-171.66	-173.6	-172.78	-172.83	-173.38	-174.12	-2.46	-1.29
6210309	Newton	-63.85		-65.93	-65.25	-69.35	-67.15	-3.3	-1.9
6210901	Newton	-19.37	-17.35	-16.48	-16.34	-16.14	-18.54	0.83	-2.2
6218103	Newton			-33.99	-35.25	-36.09	-39.04	N/A	-3.79
6242909	Newton	-41.59	-38.48	-36.03	-33.38	-36.7	-37.79	3.8	-4.41
6243406	Newton	-29.7	-27.95	-26.29	-25.96	-26	-26.48	3.22	-0.52
6250304	Newton	-38.6	-37.98	-35.58	-30.23	-35.9	-37.05	1.55	-6.82
6104401	Tyler	-161.77	-164.75	-168.71	-165.17	-164.96	-165.26	-3.49	-0.09
6112606	Tyler	-122.65	-119.15	UTL - Ike	-123.5	-122.88	-123.48	-0.83	0.02
6113802	Tyler	-163.27	-164.3	-174.13	-164.36	-165.03	-165.07	-1.8	-0.71
6115101	Tyler	-33.55	-33.67	-33.09	-33.84	-32.83	-33.57	-0.02	0.27
6115501	Tyler	-114.95	-130.21	Obstr.	-121.25	-116.43	-117.55	-2.6	3.7
6115703	Tyler	-15.88	-7.96	-5	-5.2	-11.95	-18.4	-2.52	-13.2
6121110	Tyler	-9.74	-4.57	-3.96	-5.25	-11.06	Dry	N/A	N/A
6129203	Tyler	-26.25	-23.34	-15.38	-22.44	-20.9	-26	0.25	-3.56
6130419	Tyler	-16.88	-6.44	-3.62	-8.9	-7.65	-15.99	0.89	-7.09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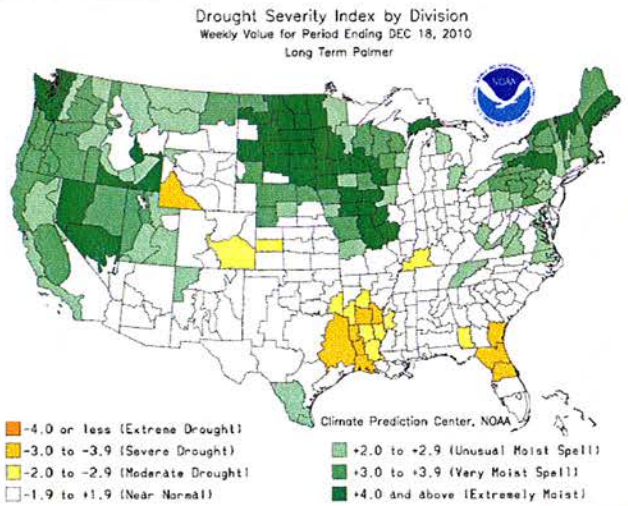


DROUGHT CONDITIONS

As expected, and as you can see by the December 18, 2010 Palmer Drought Severity Index (left), Southeast Texas is experiencing severe drought conditions. The drought conditions are expected to remain, if not increase, through the next several months.

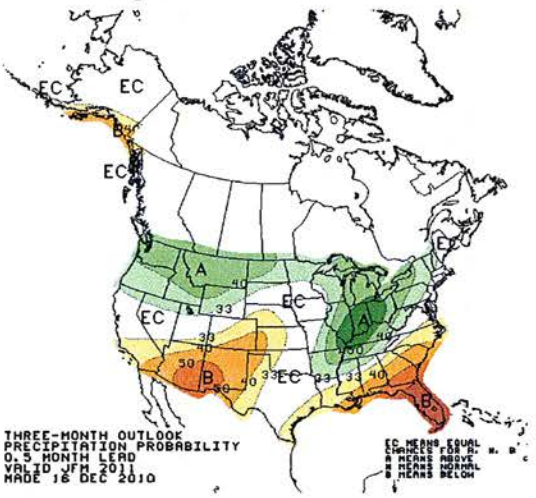
RAINFALL TOTALS

As you can see from the chart below, our monthly rainfall totals have been something of a rollercoaster this year. For the months of August, September and October we have received only about half of our normal rainfall.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Jasper	2.30	4.36	2.61	0.88	2.73	5.49	3.84	1.58	3.09	0.53
Lumberton	4.26	5.95	2.30	0.64	1.42	5.09	9.30	4.45	3.02	1.38
Newton	3.12	4.80	1.05	0.28	1.26	6.39	3.24	3.27	1.43	0.93
Silsbee	4.60	54.54	2.47	0.35	1.86	2.80	6.42	1.80	2.24	2.85
Woodville	2.84	4.07	3.19	1.04	2.16	5.64	6.40	1.72	4.58	0.88
Kountze	7.07	5.09	2.62	0.47	1.75	3.59	4.62	2.75	U/A	2.60

NEAR OR BELOW NORMAL PRECIPITATION EXPECTED

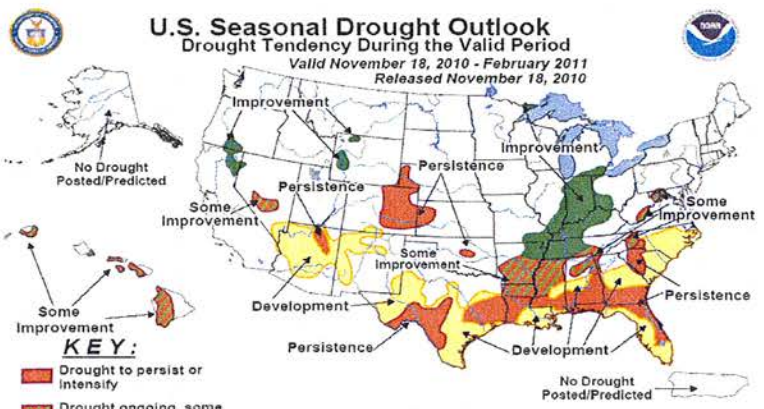
The recently updated precipitation probability outlook map (below), provided by NOAA's Climate Prediction Center, shows that we can expect near normal to slightly below normal rainfall totals for the next three month period.



Nina conditions are in place and are expected to strengthen and continue at least into the spring of 2011, according to the Climate Prediction Center (CPC). As mentioned earlier, over the next three months, drought conditions in East Texas are expected to persist and probably intensify unless the predicted long term weather patterns change.

SEASONAL DROUGHT OUTLOOK

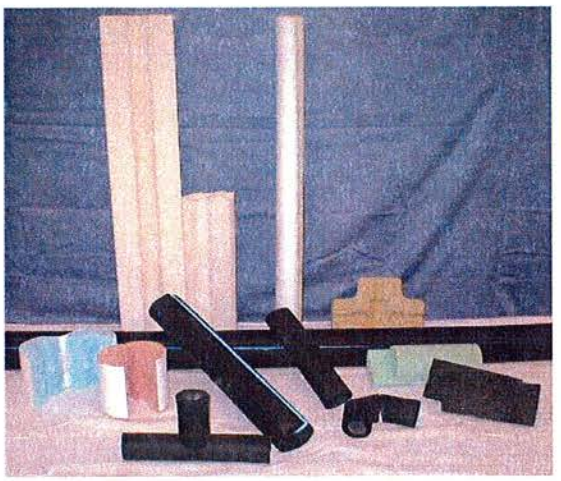
The U.S. Seasonal Drought Outlook map illustrates that with over a 12 inch precipitation deficiency in the District, the drought conditions are expected to linger throughout the end of 2010 and continue through the early part of 2011. Not only will the drought in southeast Texas continue, it is expected to spread to much of the southern half of the state. La



CONSERVE WATER..... TIPS FOR WINTER

Don't Let Cold Weather Catch You Unprepared! Although it doesn't happen too often here in Southeast Texas, once or twice a year we experience a hard enough freeze to cause water pipes to burst. Not only is it an inconvenience, but a burst water pipe can waste thousands of gallons of water before you even realize it has happened. However, you can cross that off your list of winter worries by taking a few simple precautions.

- Disconnect and drain outdoor hoses. Detaching a hose allows water to drain from the faucet. Otherwise, a single, hard overnight freeze can burst either the faucet or the pipe it's connected to.

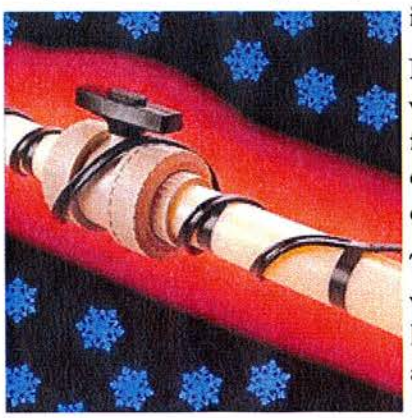


- Insulate pipes or faucets in unheated areas. If you have pipelines in the attic, an unheated garage or cold crawl space under the house, wrap the water pipes before temperatures plummet. Hardware or building supply stores will have good pipe wrapping materials available.
- Consider using electrical "heat tape". This tape runs a low voltage current along the length of the tape warming the pipe. It is very useful in attics and crawl spaces where an electrical outlet is readily accessible.
- Seal off access doors, air vents and cracks. Winter winds whistling through overlooked openings can quickly freeze exposed water pipes.
- Don't forget any water lines you may have running to the garden or cattle troughs. Be sure that these pipes get extra attention. Since we don't always pay attention to these pipes, it could be hours or days before you realize the pipe has burst. Inspect all your connections after any freeze.

Conservation Corner

Be sure to know the location of the master water shutoff. If a pipe bursts this valve turns it off. So find it now and be sure everyone in the family knows where it is and what it does. Also, it is a good idea to keep the plumber's telephone number handy. Write it down now before you need it in an emergency.

In severe cold weather, you may want to allow a faucet to drip a small continuous stream. Although this may seem to be wasting water, it is better to lose a few gallons per hour than hundreds of gallons per hour if the pipe bursts.



If you know where a freeze-up occurred and want to try thawing it yourself, do not under any circumstances use a torch with an open flame as this could cause a house fire. Also, overheating a single spot can burst the pipe and heating a soldered joint could cause it to leak or come completely apart.

The easiest tool to use for thawing pipes is a hair dryer. Wave the warm air back and forth along the pipe, not on one spot. If you don't have a hair dryer, you can wrap the frozen section with rags or towels and pour hot water over them. It's messy, but it works.

Southeast Texas Groundwater Conservation District
P.O. Box 1407, Jasper, TX 75951
(409) 383-1577, www.setgcd.org

" 'Till taught by pain, men really know not what good water is worth"
- From "Don Juan" by Byron

CALENDAR OF EVENTS

January 13, 2011	SETGCD - Hearing, 9:00 permit requests by East Texas Electric Co-op followed by the Regular meeting of the Board, in Kirbyville
January 18, 2011	MLK Day observed—District office closed
February 10, 2011	SETGCD—Regular meeting of the Board, in Kirbyville
February 21, 2011	Presidents Day observed—District office closed
March 10, 2011	SETGCD—Regular meeting of the Board, in Kirbyville
April 14, 2011	SETGCD—Regular meeting of the Board, in Kirbyville
April 22, 2011	Good Friday observed—District office closed

WATER FACTS

- Each day the sun evaporates a trillion tons of water.
- The average American golf course uses an average of 312,000 gallons of water each day.
- 95% of the water that enters the home goes down the drain.
- Under some circumstances hot water can freeze faster than cold water (the Mpemba Effect).
- Once evaporated, a water molecule stays in the air for approximately 10 days.
- In the U.S., nearly 80% of all water is used for irrigation or in the creation of electricity.