Hays Trinity Groundwater Conservation District

Year End Monitoring Data Review

December 14, 2016

What do we do?

- The District manages new well construction including business and commercial well permits.
- The District is charged to gather information needed to make sound decisions and provide information to citizens and local agencies.

How do we do it?

- Part of our responsibility is to record water level data throughout western Hays County.
- We have 50 monitoring wells each with its own hydrograph and rainfall comparisons.
- Wells are monitored monthly and data collected is uploaded to the District's website for the public's review

Water Level Averages

South of Camp Ben McCulloch

	Well Name	Nov 2015 Water Level	Nov 2016 Water Level		
	O'Neal Ranch Road	197.6	192.2	5.4	
	Storm Ranch Windmill	214.4	215.2	-0.8	
	Lost Springs Ranch	181.4	184.2	-2.8	
	Still Well #1 - WH	78.8	68.9	9.9	
	Still Well #4 - 1st WM	182	172.2	9.8	
	Roberts	377.3	374.6	2.7	
	Storm Ranch Toenail	282.5	282.4	0.1	
	Bryum Dry Cypress	178.7	175	3.7	
	McMeans	201.3	203.4	-2.1	
	Box Canyon Well 2*	219.4	213.6	5.8	
	Summer Mtn Ranch	202	204.8	-2.8	
	Hermosa Paloma	434.5	460	-25.5	
	Cox	207.2	189.1	18.1	
	Gumbert Windmill	36.6	30	6.6	
	Camp Young Judaea	33.8	41	-7.2	
	Mount Baldy	120.52	112.27	8.25	
	Downing	312.34	309.22	3.12	
				32.27	1.9 up

North of Camp Ben McCulloch

	Well Name	Nov 2015 Water Level	Nov 2016 Water Level		
	Whirlaway	664.3	650.8	13.5	
	Jack Brown	341.9	323	18.9	
	Henly	330.6	322.8	7.8	
	Roman	214.7	203.5	11.2	
	Curtis Johnson	18.8	23.4	-4.6	
	Tom Hegemier	229	222.6	6.4	
	Grolnic	447	441.7	5.3	
	Slopes of Nutty Brown	47.3	48	-0.7	
	Hills of Texas	300	273	27	
	Tull	84.8	75.4	9.4	
	Wizard Academy	292.6	237.4	55.2	
	Camp Ben	66.1	60.6	5.5	
	Mandola	212.9	185.3	27.6	
	Schmidt/Stars Hollow	185.4	191.8	-6.4	
	Broun	175.3	156.5	18.8	
	Whit Hanks	142.71	127.05	15.66	
	Whisenant & Lyle	632.78	630.81	1.97	
	DSWSC #1	53.74	46.33	7.41	
				219.9	12.9 up

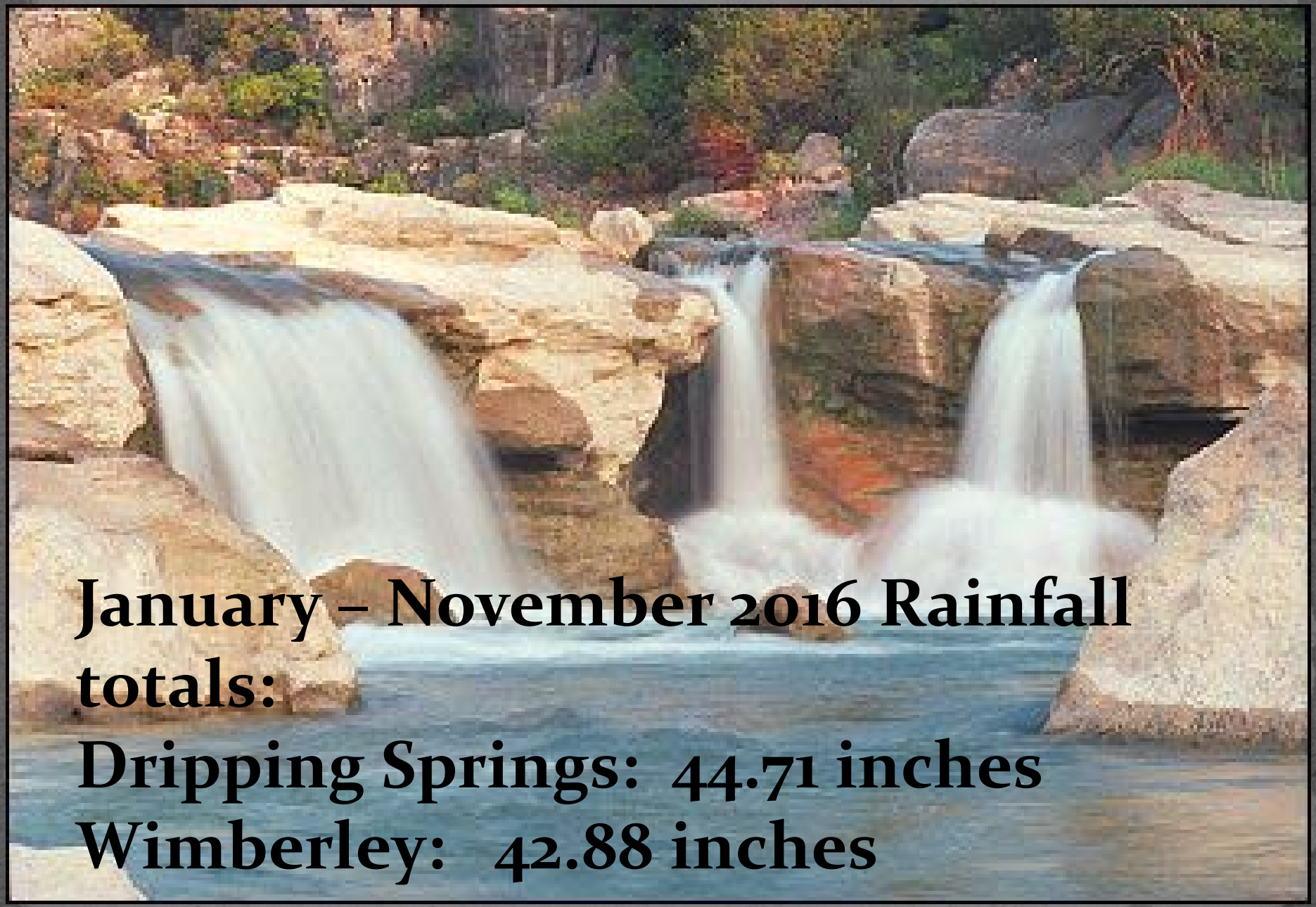
November 2015 vs. November 2016 Water Levels
North of Camp Ben are up an average of 12.9 feet

November 2015 vs. November 2016 Water Levels
South of Camp Ben are up an average of 1.9 feet

2016 Rainfall Totals

NCDC Station	Month	Rainfall Amount
DRIPPING SPRINGS	1	0.45
	2	1.43
	3	3.82
	4	7.39
	5	7.57
	6	3.78
	7	0.22
	8	12.4
	9	3.2
	10	0.2
	11	4.25
Jan-Nov Total		**44.71**

NCDC Station	Month	Rainfall Amount
WIMBERLEY	1	0.84
	2	1.17
	3	4.75
	4	4.83
	5	7.23
	6	3.4
	7	1.46
	8	10.43
	9	6.41
	10	0.22
	11	2.14
Jan-Nov Total		**42.88**

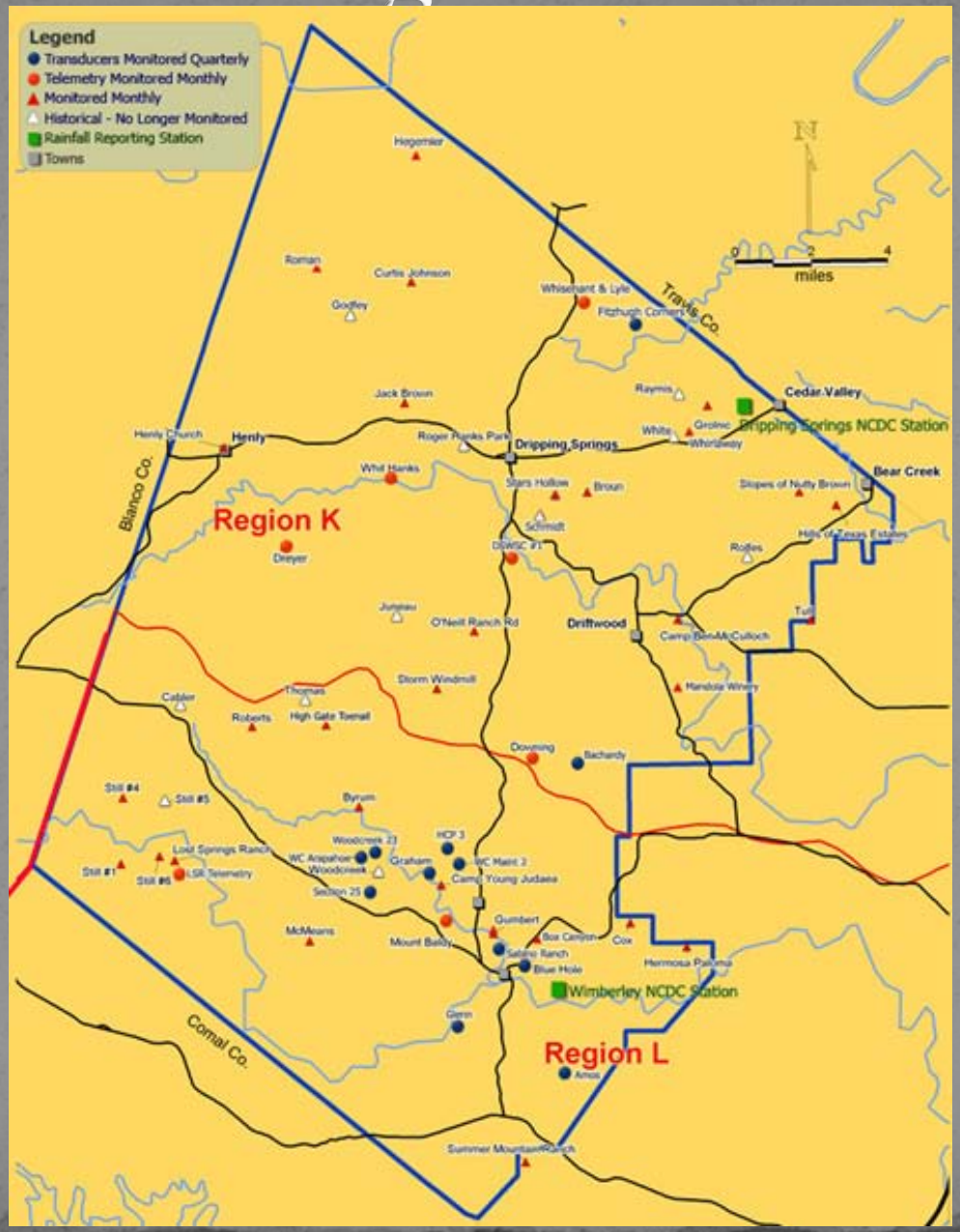


January – November 2016 Rainfall totals:

Dripping Springs: 44.71 inches

Wimberley: 42.88 inches

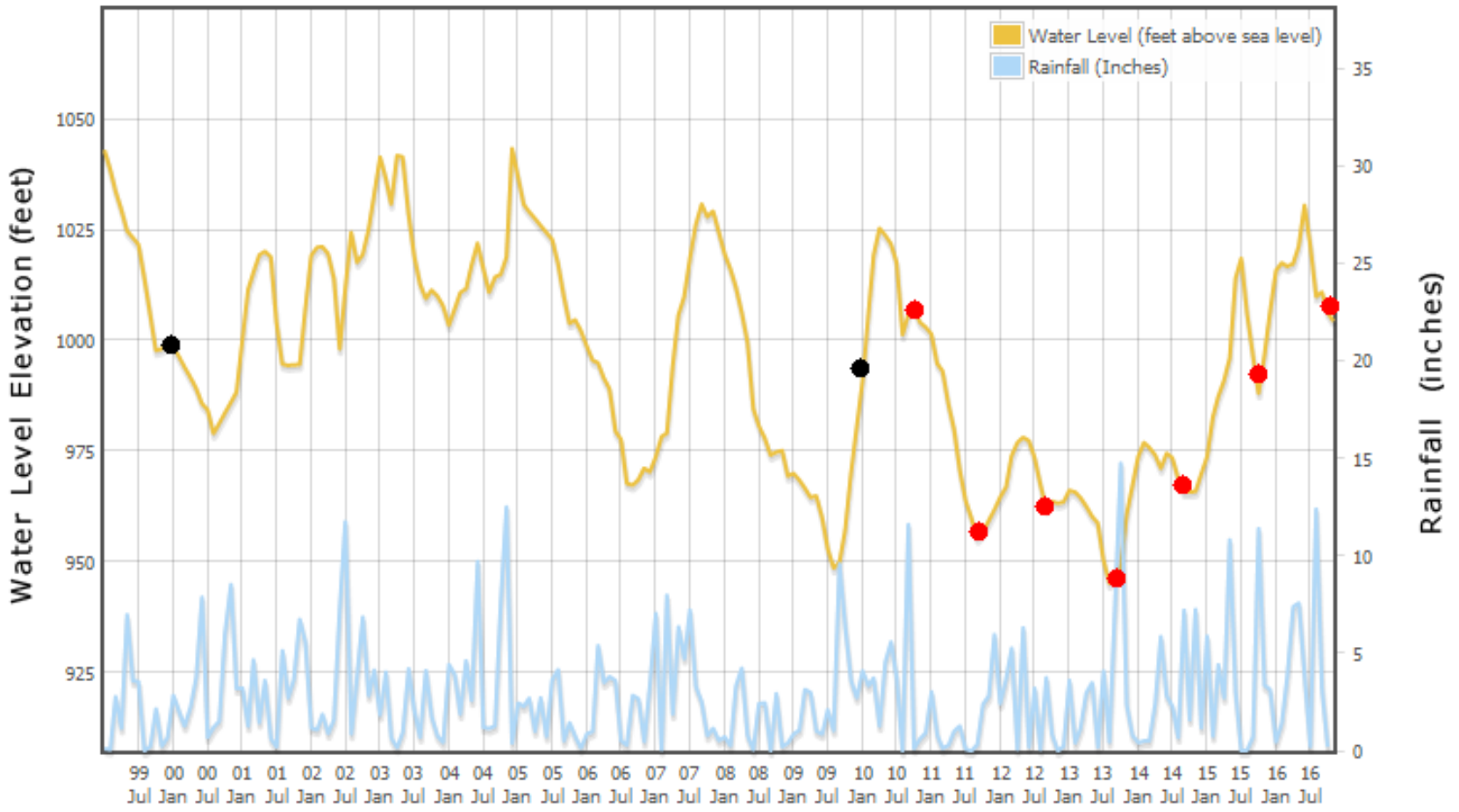
Monitoring Well Locations



Henly Church

30° 11' 46" NORTH
98° 12' 45" WEST

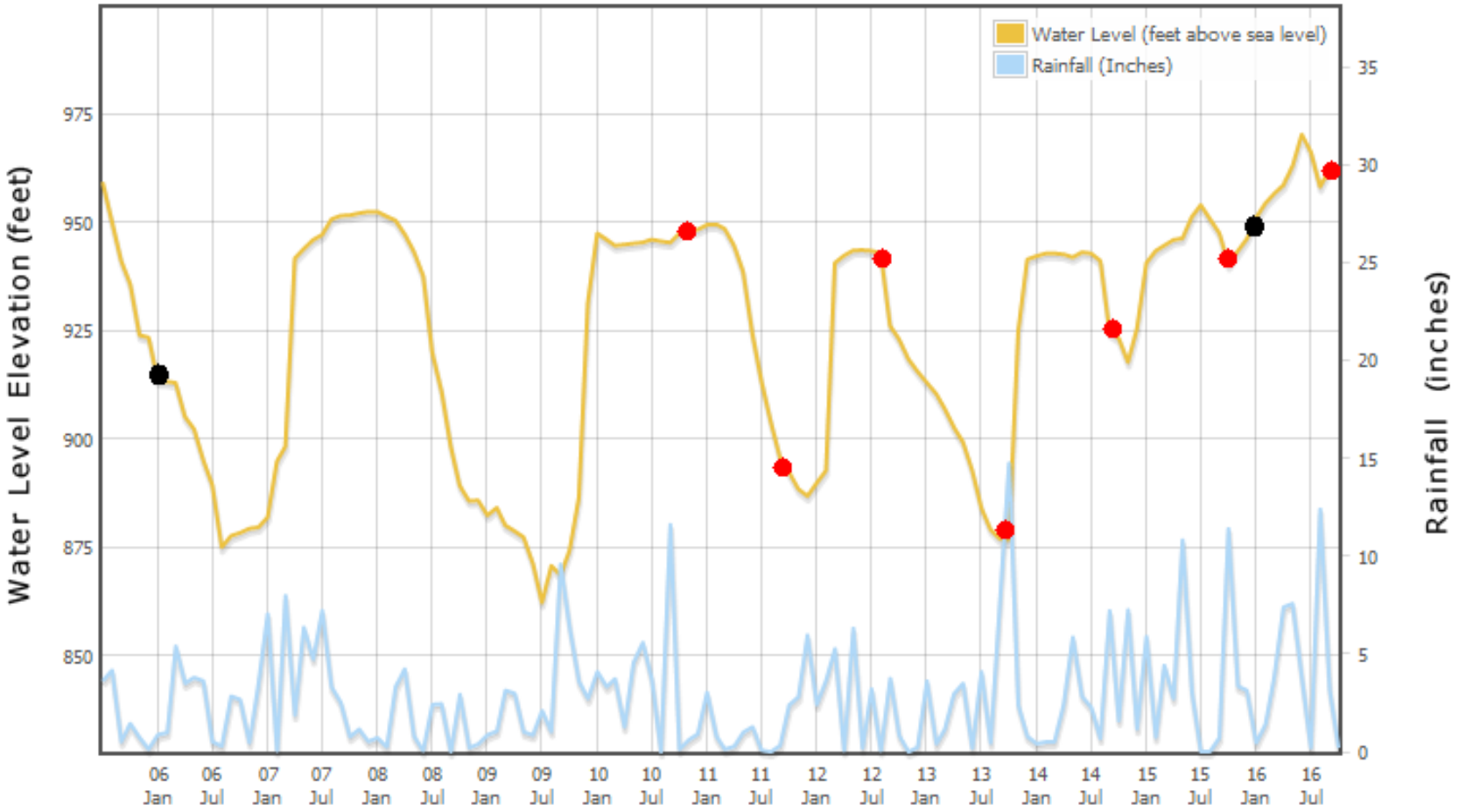
Total Well Depth: 460
Elevation: 1325.8920



Broun

30° 10' 42" NORTH
98° 03' 12" WEST

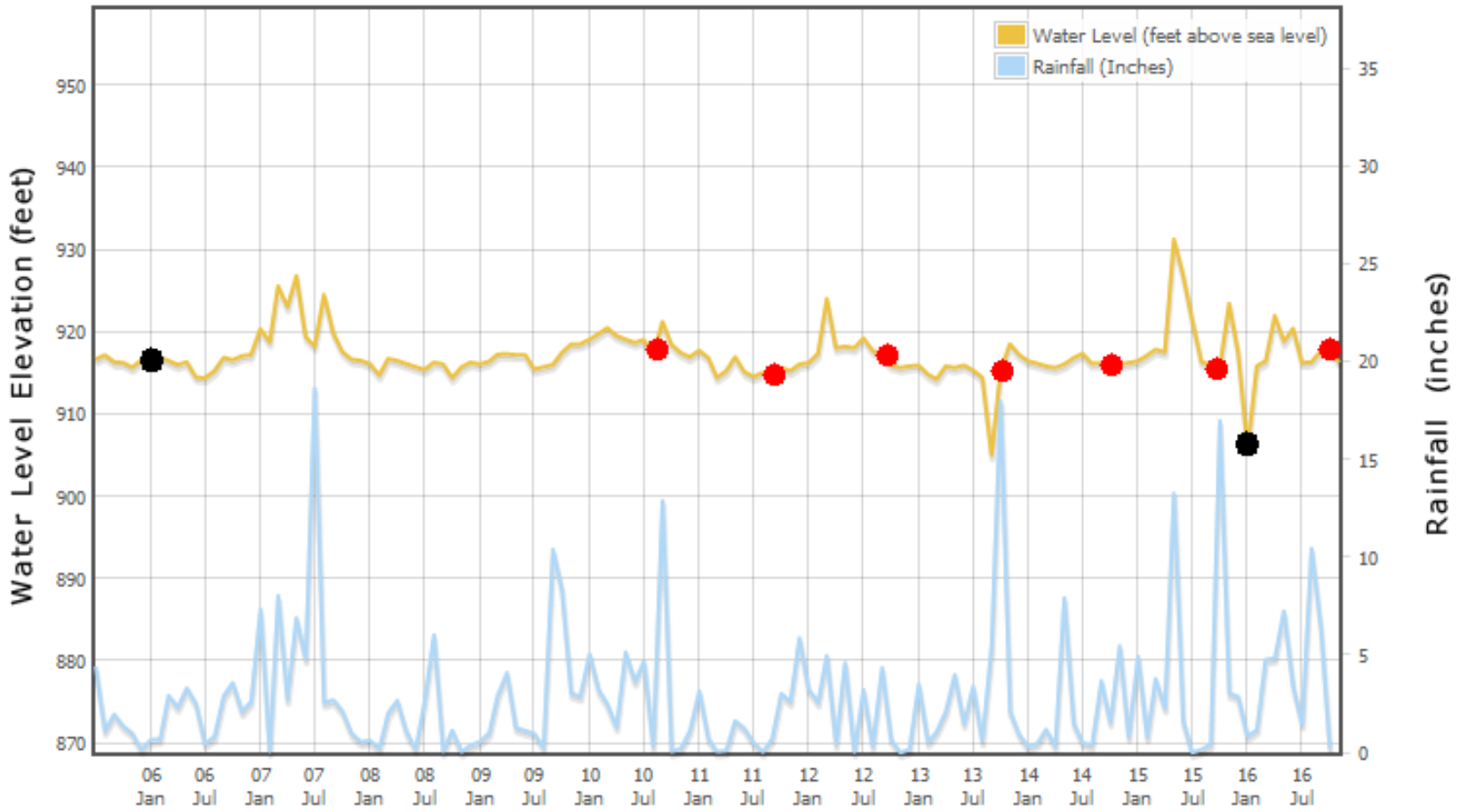
Total Well Depth: 280
Elevation: 1117.7200



Camp Young Judaea

30° 01' 46" NORTH
98° 07' 08" WEST

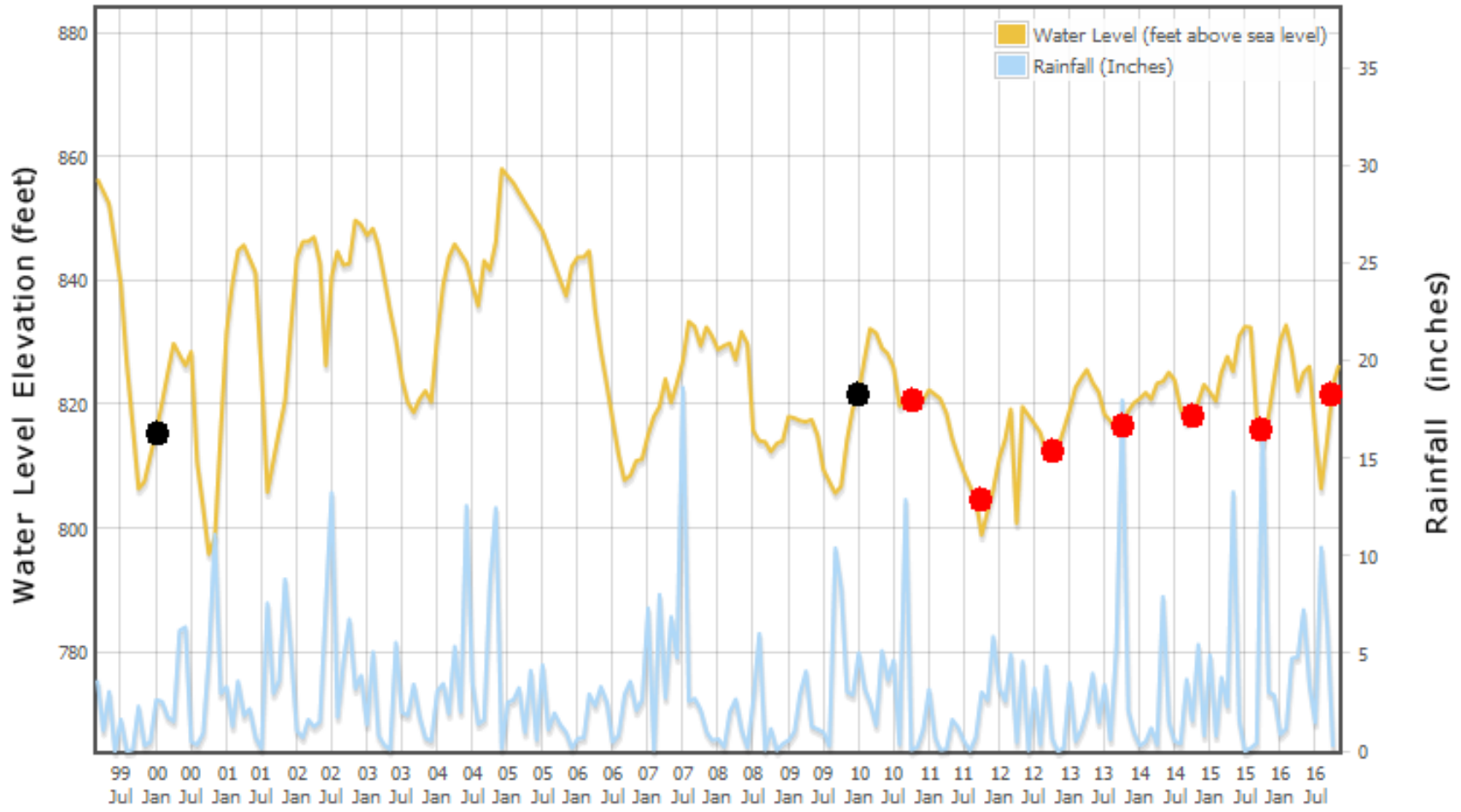
Total Well Depth: 250
Elevation: 955.2574



Mount Baldy

30° 00' 57" NORTH
98° 07' 01" WEST

Total Well Depth: 400
Elevation: 938.6330



Drought Management

Discharge Flow Rate	30 Day Mean	60 Day Mean	Alarm Trigger	Critical Trigger	Emergency Trigger
Region K					
Pedernales Rv nr Johnson City, TX (08153500) as of 2016-12-13	112.37	98.92	31.6	10.2	2.23
Days with flow Above Stage Trigger			41	60+	60+
Onion Ck nr Driftwood, TX (08158700) as of 2016-12-13	68.27	50.73			
Region L					
Blanco Rv at Wimberley, TX (08171000) as of 2016-12-13	103.23	92.07	28.5	14.5	9.28
Days with flow Above Stage Trigger			60+	60+	60+
Jacobs Well Spg nr Wimberley, TX (08170990) as of 2016-12-13	16.43	14.48			

Drought Stage

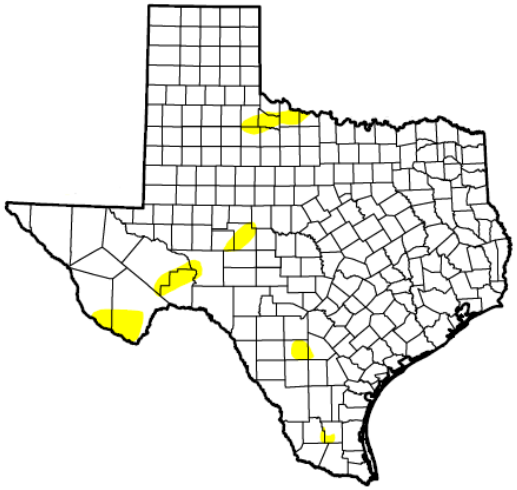
- As of December 14, 2016, the District continues to be within drought stage 1,

  No Drought/Voluntary Conservation.
- Domestic and Agricultural wells are exempt from District production curtailments, but are encouraged to reduce during drought times.

Drought Triggers

- The District uses three drought triggers: The Pedernales River, the Blanco River and the Palmer Drought Severity Index
- To move into drought stage Alarm, the two rivers must flow for 30 consecutive days below the drought stage trigger.
- Also reviewed are the drought conditions indicated within the Palmer Drought Severity Index for our area.

U.S. Drought Monitor
Texas

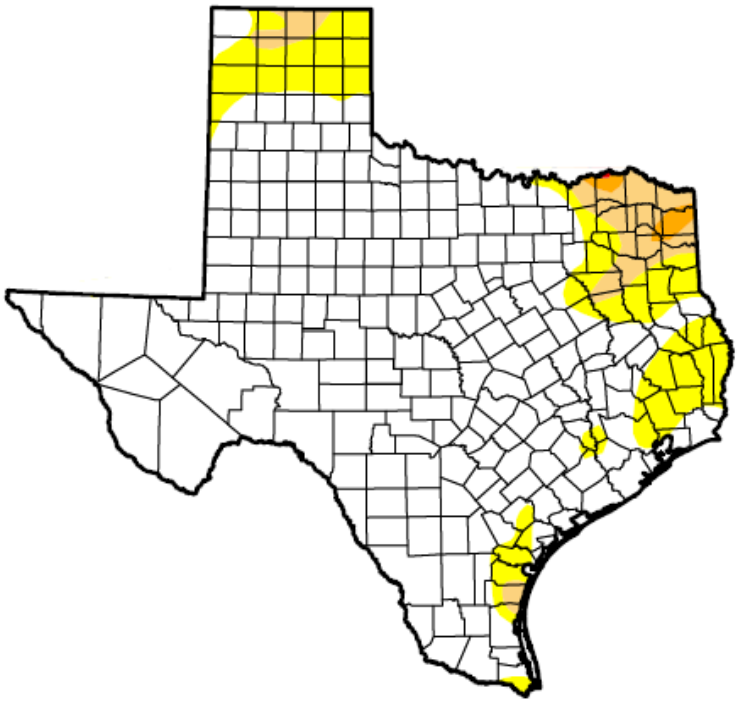


December 1, 2015
(Released Thursday, Dec. 3, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	96.38	3.62	0.00	0.00	0.00	0.00
Last Week 11/24/2015	92.65	7.35	0.61	0.00	0.00	0.00
3 Months Ago 9/1/2015	58.06	41.94	24.76	9.99	1.32	0.00
Start of Calendar Year 12/30/2014	34.37	65.63	44.68	25.73	11.70	3.17
Start of Water Year 9/29/2015	34.51	65.49	38.32	17.55	6.27	0.00
One Year Ago 12/2/2014	34.05	65.95	43.29	22.05	9.50	2.57

U.S. Drought Monitor
Texas



December 6, 2016
(Released Thursday, Dec. 8, 2016)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	81.90	18.10	4.87	0.65	0.03	0.00
Last Week 11/29/2016	66.37	33.63	14.18	3.27	0.08	0.00
3 Months Ago 9/6/2016	92.46	7.54	0.57	0.00	0.00	0.00
Start of Calendar Year 12/29/2015	95.48	4.52	0.00	0.00	0.00	0.00
Start of Water Year 9/27/2016	94.83	5.17	0.62	0.00	0.00	0.00
One Year Ago 12/6/2015	97.17	2.83	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
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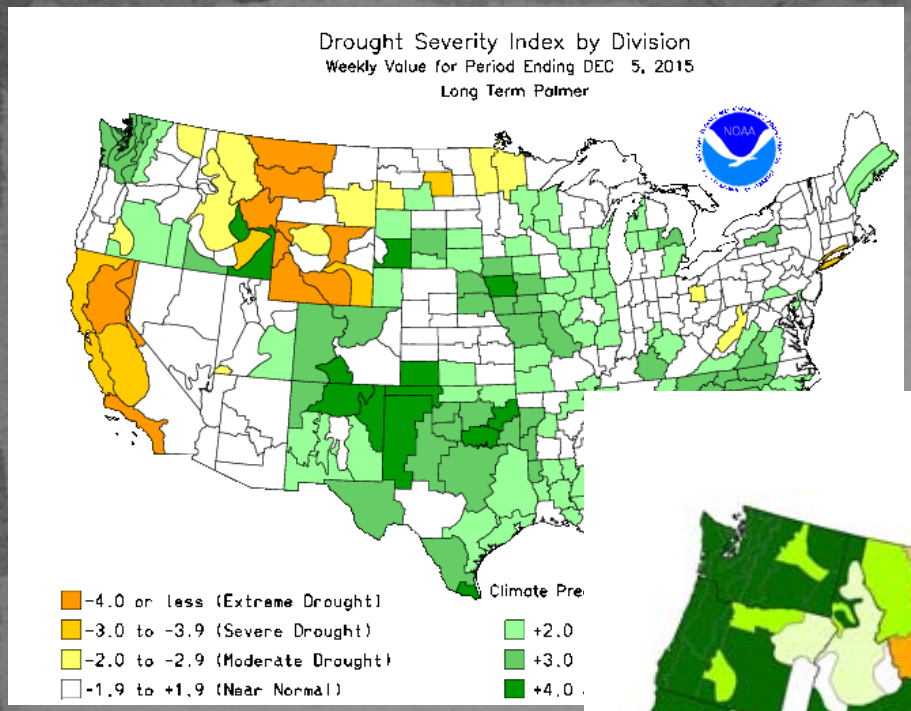
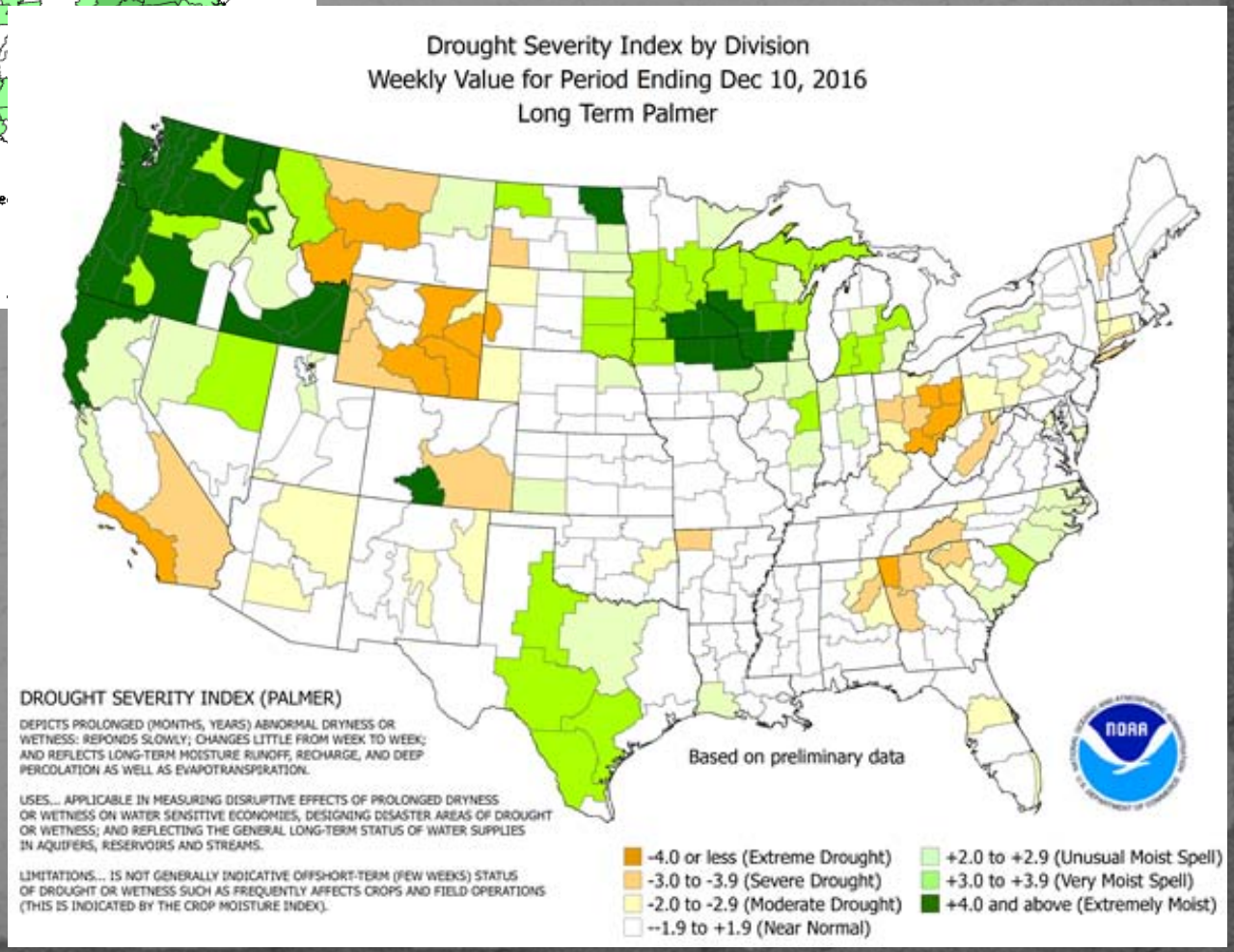
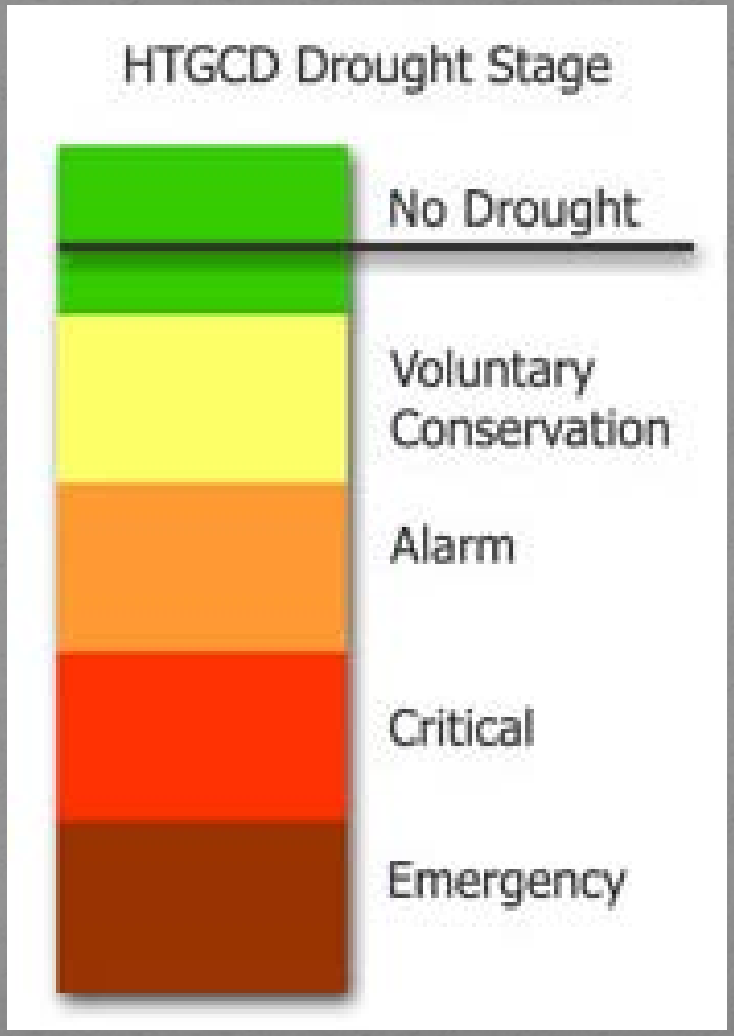
NOAA/NWS/NCEP/CPC


Drought Severity Index by Division
Weekly Value for Period Ending DEC 5, 2015
Long Term Palmer
NOAA
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
-1.9 to +1.9 (Near Normal)
+2.0
+3.0
+4.0


Drought Severity Index by Division
Weekly Value for Period Ending Dec 10, 2016
Long Term Palmer
DROUGHT SEVERITY INDEX (PALMER)
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS: RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.
LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
Based on preliminary data
NOAA
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
--1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)

HTGCD Drought Stage



How can the District help you?

- Please go to our website, www.haysgroundwater.com and check out our Water Level Monitoring map and see how close you live to one of our monitoring wells.
- You may be able to compare our historic well level data to your well level.

Thank you!

My Information:

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- Email: Manager2@haysgroundwater.com
- Website: www.haysgroundwater.com

Server/Documents/Education/Presentations