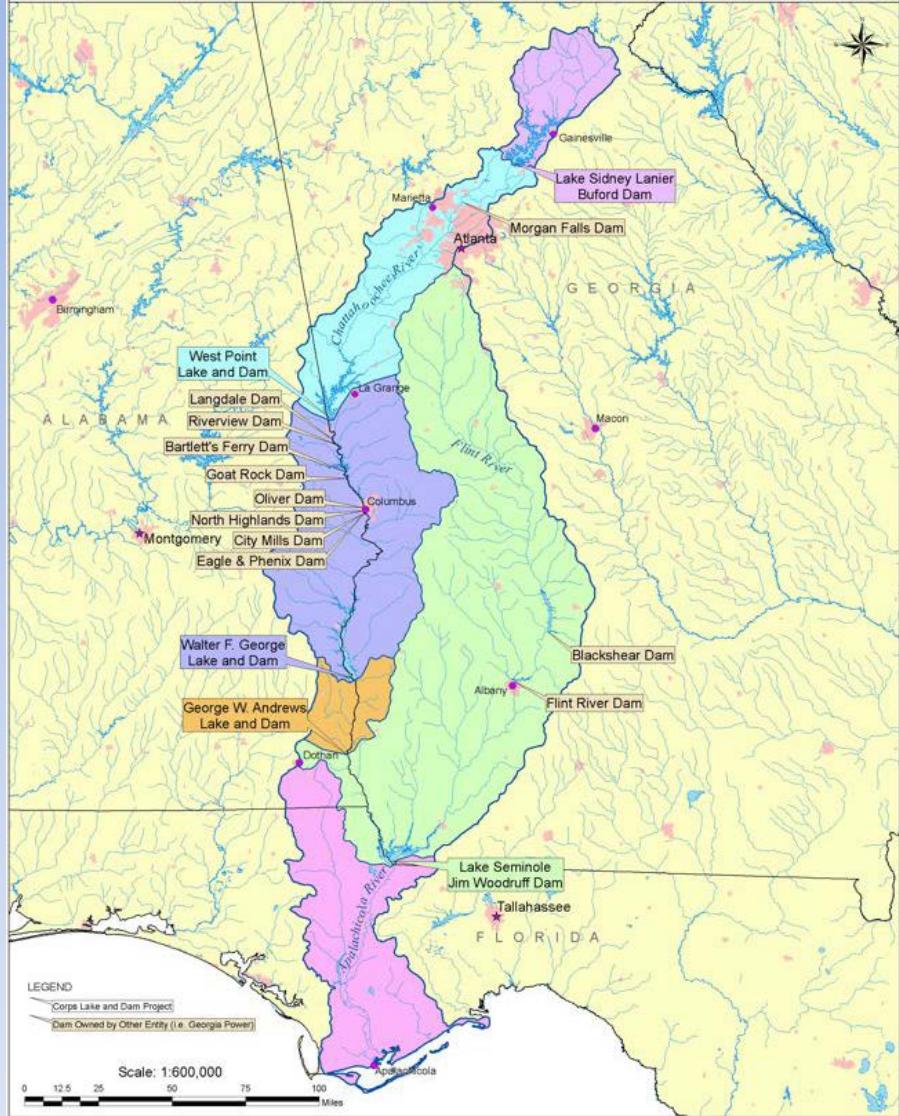
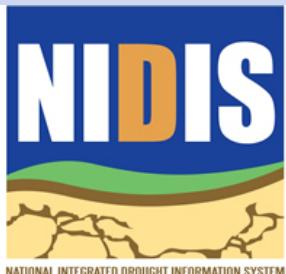


National Integrated Drought Information System

Southeast US Pilot for Apalachicola- Flint-Chattahoochee River Basin

20 November 2012



Outline

Welcome – Keith Ingram, Southeast Climate Consortium, UF

Current drought status and how we got here – David Zierden, Florida Climate Center, FSU

Streamflows and groundwater – Chris Smith, USGS

Reservoirs' status and projections – Bailey Crane, US AC

Precip received and forecast – Victor Murphy, NWS

Seasonal outlooks – David Zierden, FSU

Streamflow forecasts – Jeff Dobur, SE River Forecast Center, NOAA

Summary and Discussion – Keith Ingram, SECC

Current drought status from Drought Monitor

U.S. Drought Monitor

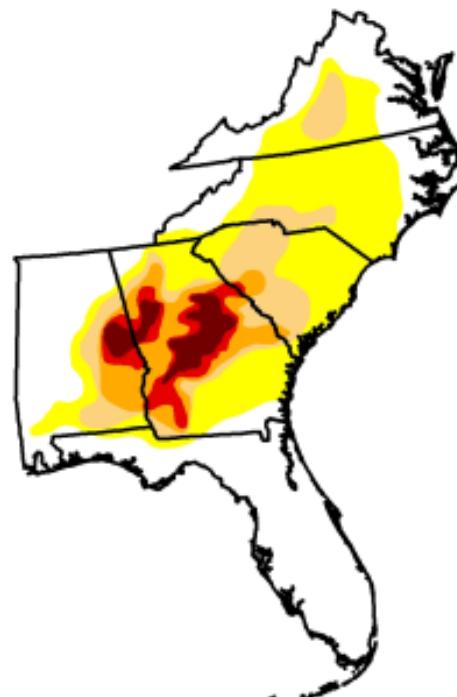
Southeast

November 13, 2012

Valid 7 a.m. EST

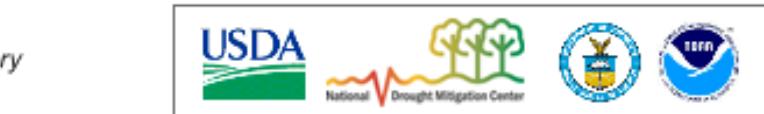
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	45.28	54.72	25.10	13.78	6.99	3.43
Last Week (11/06/2012 map)	53.19	46.81	22.90	12.30	6.85	3.52
3 Months Ago (08/14/2012 map)	52.96	47.04	22.34	12.76	9.41	3.48
Start of Calendar Year (12/27/2011 map)	40.38	59.62	43.05	28.62	18.71	0.00
Start of Water Year (09/25/2012 map)	66.49	33.51	17.18	11.50	8.53	3.52
One Year Ago (11/08/2011 map)	40.77	59.23	46.58	34.06	22.99	0.00

Intensity:



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

<http://droughtmonitor.unl.edu>



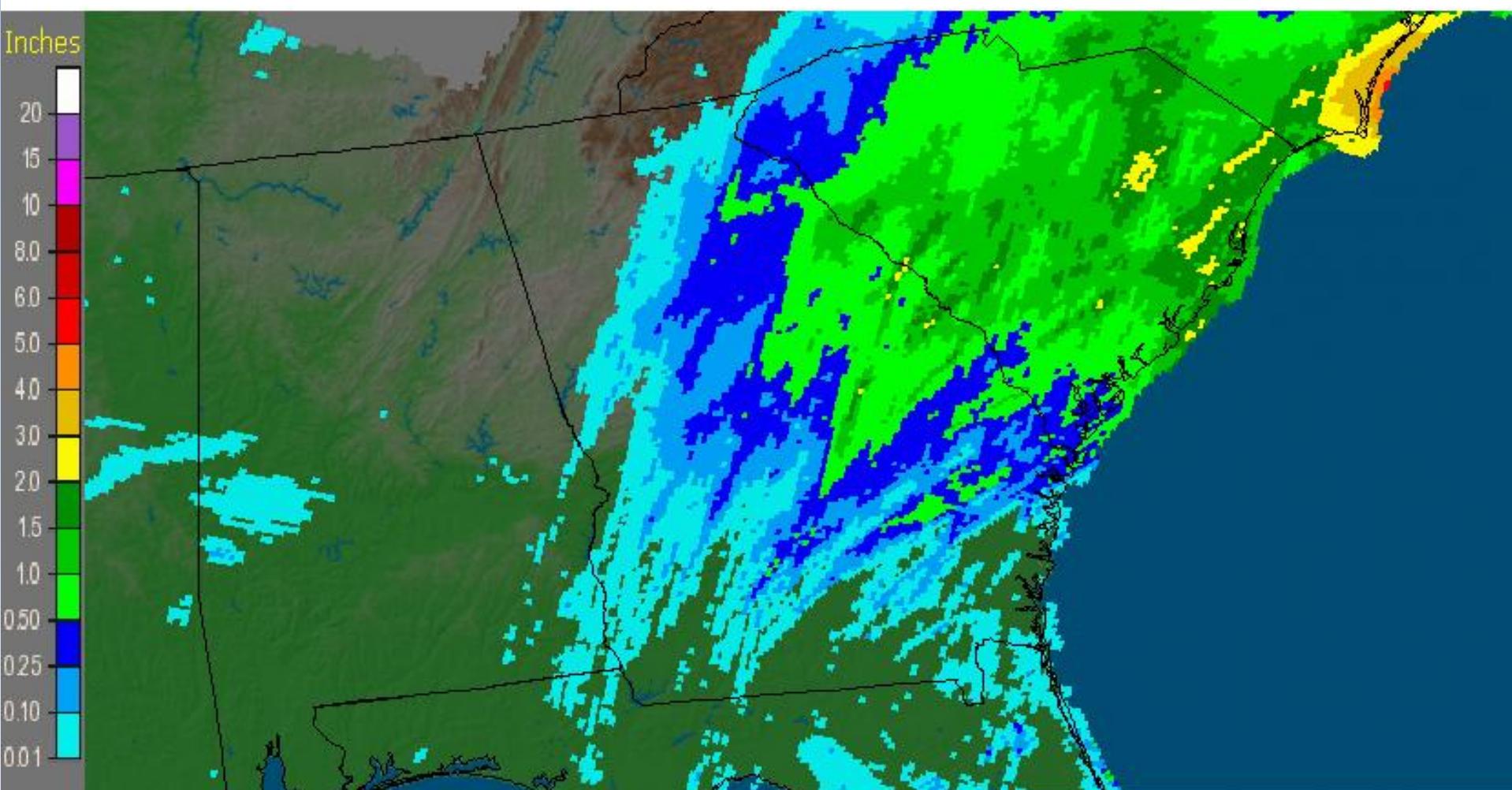
Released Thursday, November 15, 2012
David Miskus, Climate Prediction Center/NCEP/NWS/NOAA

<http://www.drought.unl.edu/dm/monitor.html>

7 Day Precipitation Totals

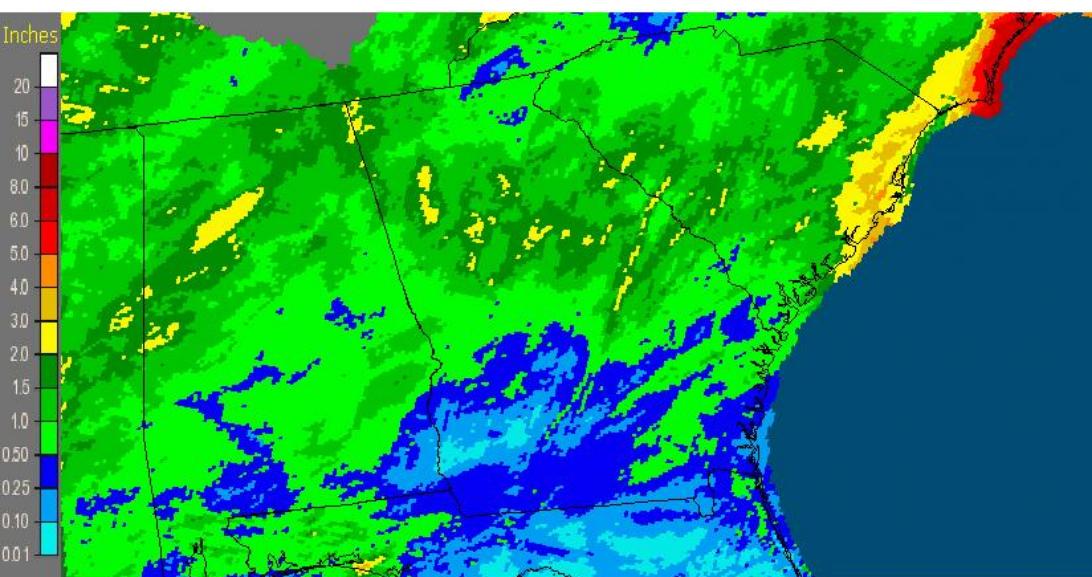
Georgia: Current 7-Day Observed Precipitation

Valid at 11/20/2012 1200 UTC - Created 11/20/12 13:55 UTC

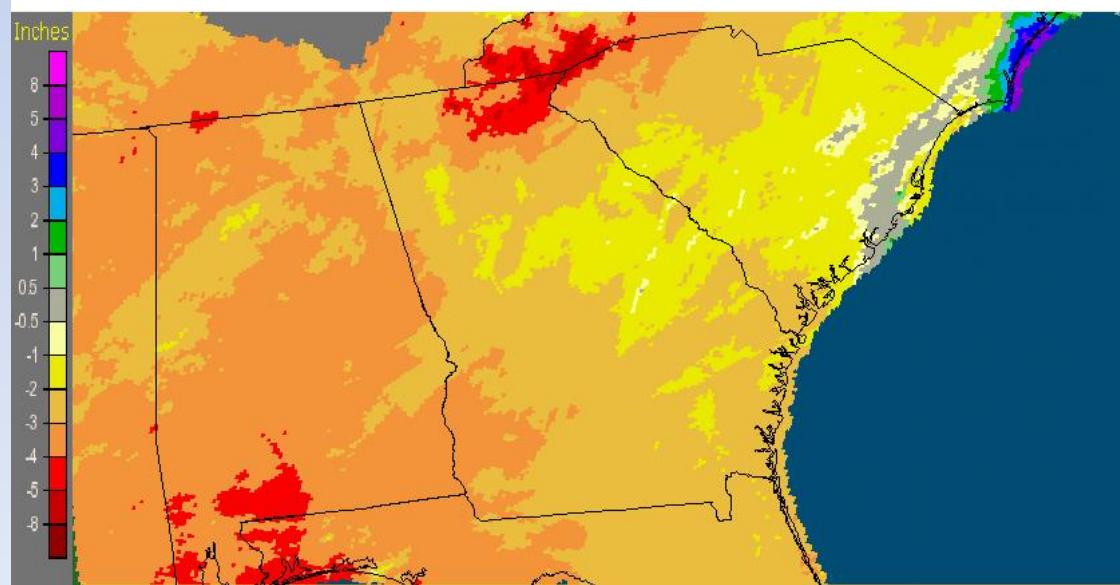


30-Day Rainfall Totals

Georgia: Current 30-Day Observed Precipitation
Valid at 11/20/2012 1200 UTC- Created 11/20/12 14:04 UTC

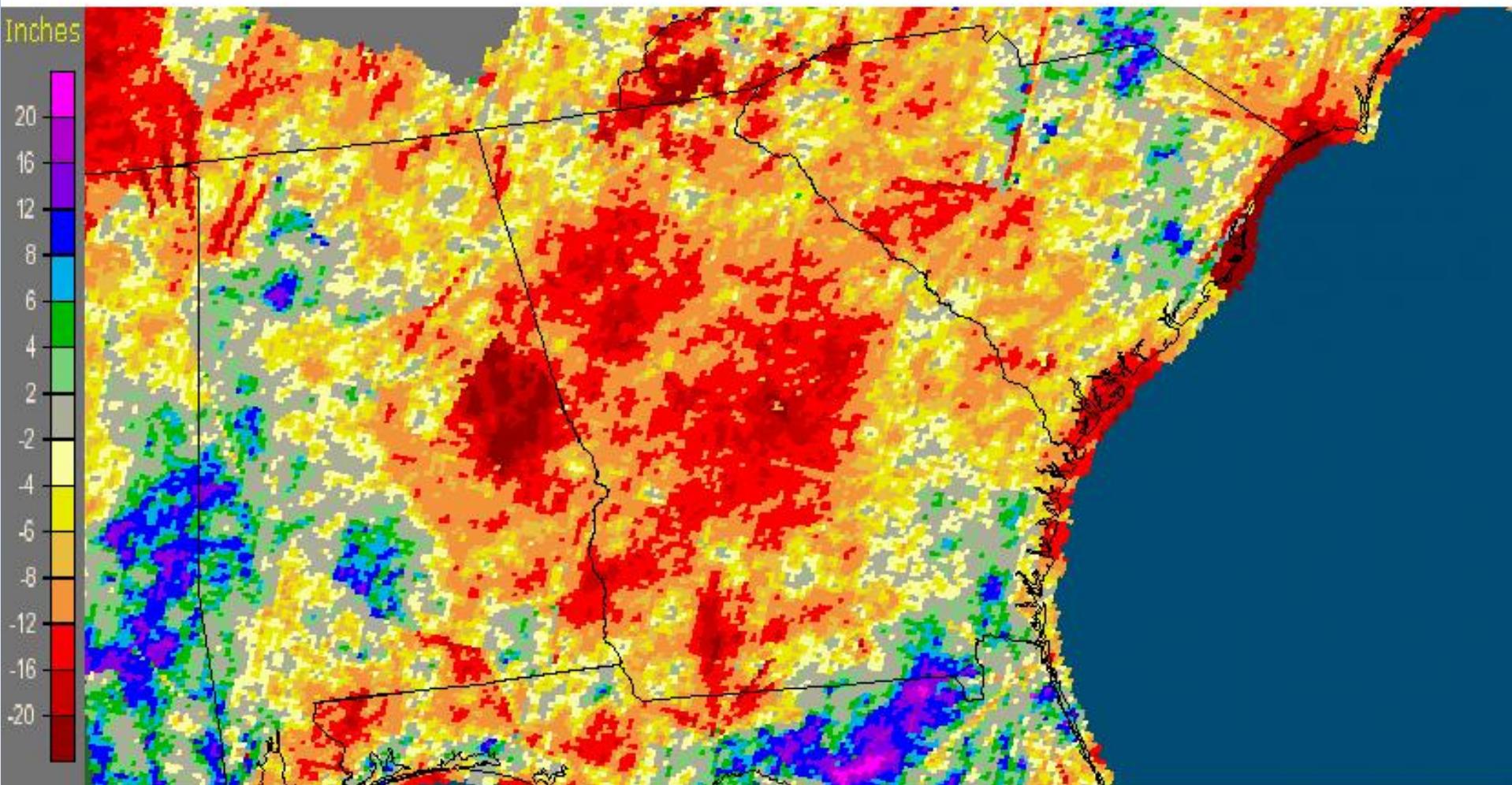


Georgia: Current 30-Day Departure from Normal Precipitation
Valid at 11/20/2012 1200 UTC- Created 11/20/12 14:07 UTC



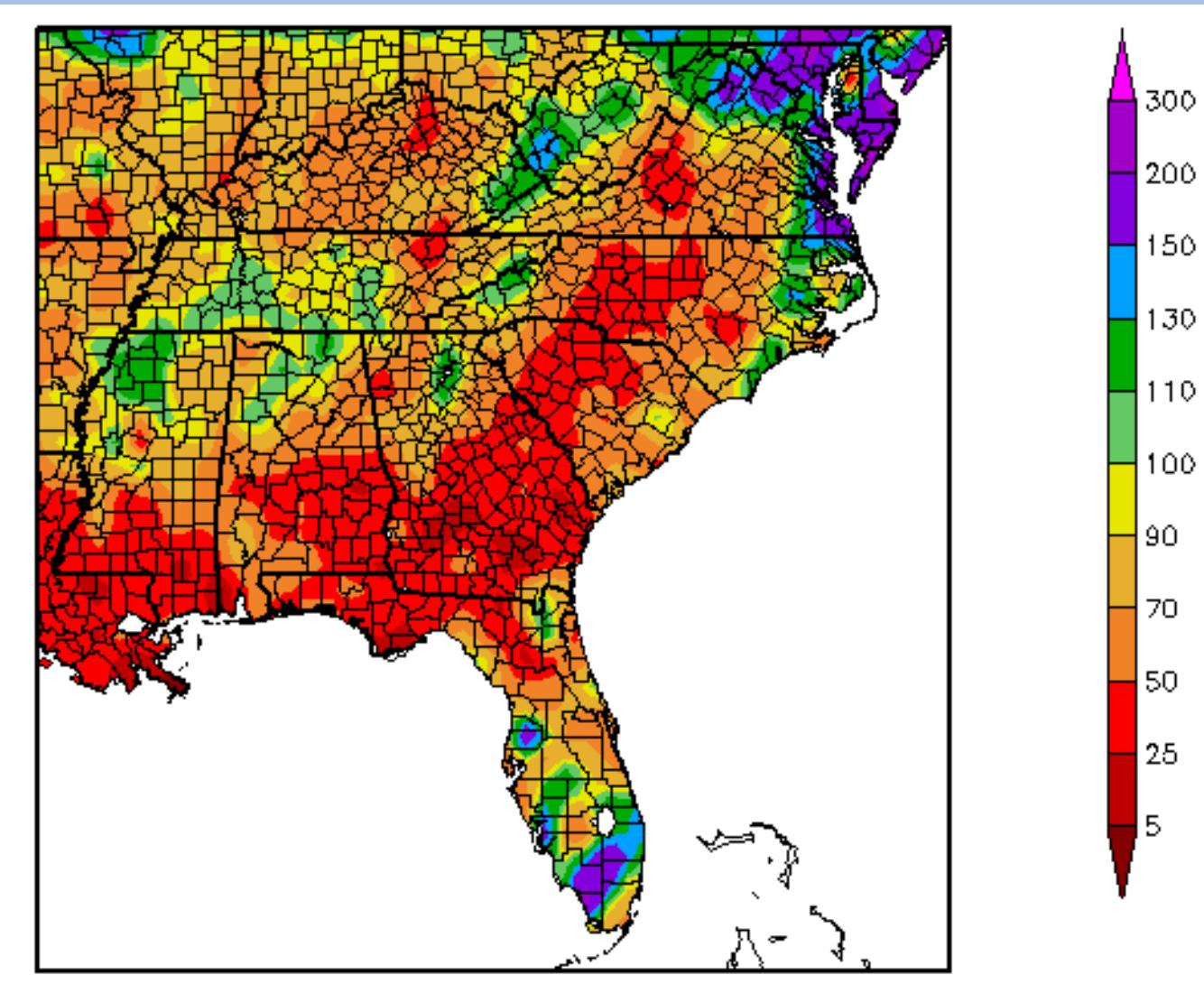
Year to Date Rainfall Deficits

Georgia: Current Year to Date Departure from Normal Precipitation
Valid at 11/20/2012 1200 UTC- Created 11/20/12 13:48 UTC



Precipitation, % of normal

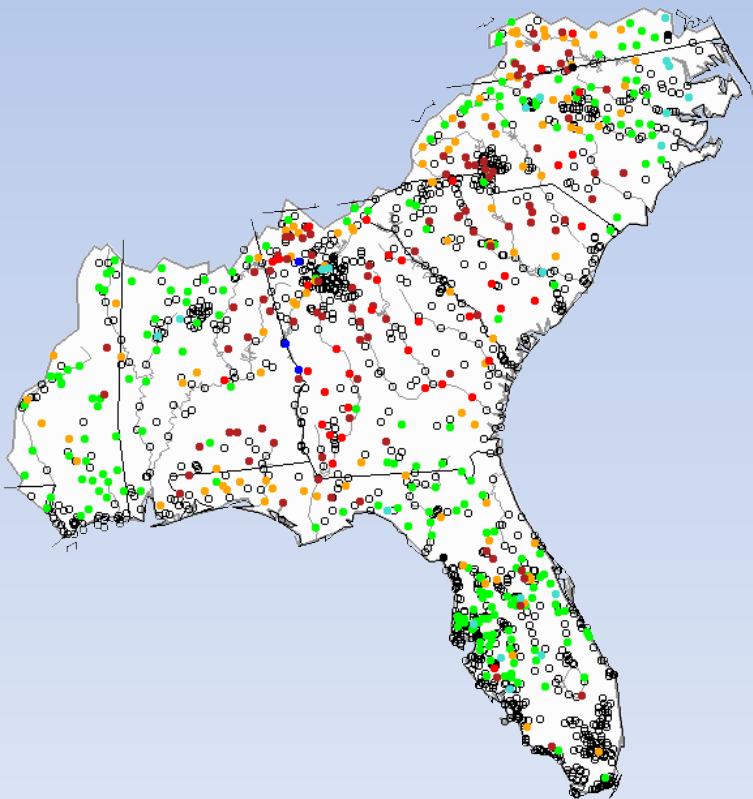
1 Oct 2012 to 18 Nov 2012



Realtime stream flow compared with historical monthly averages

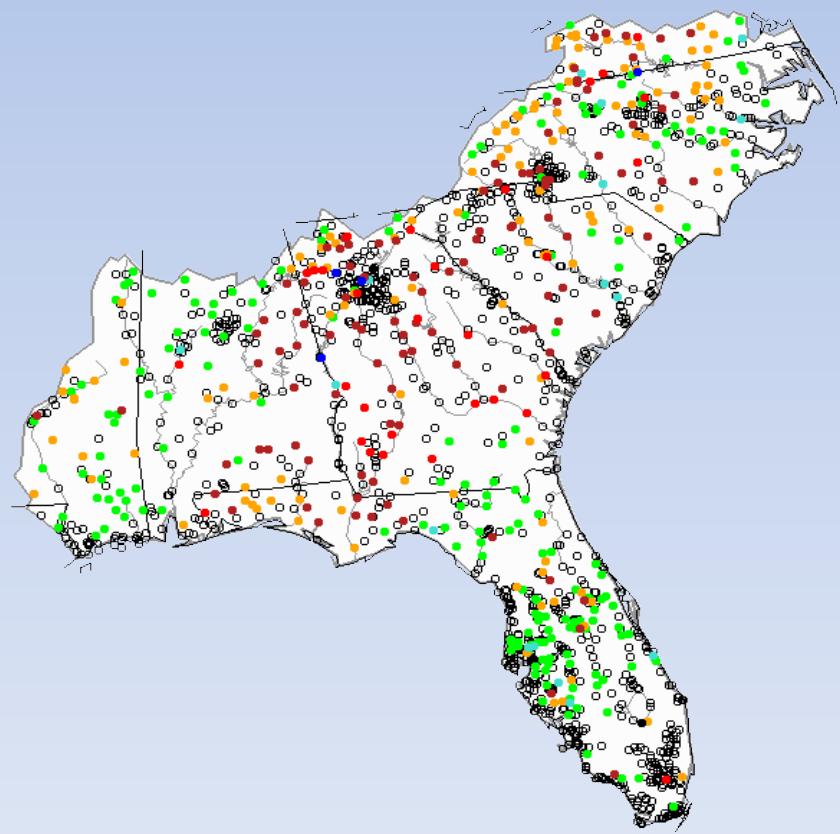
Previous Brief:

Monday, November 05, 2012 09:30ET



Current:

Monday, November 19, 2012 09:30ET



<http://waterwatch.usgs.gov>

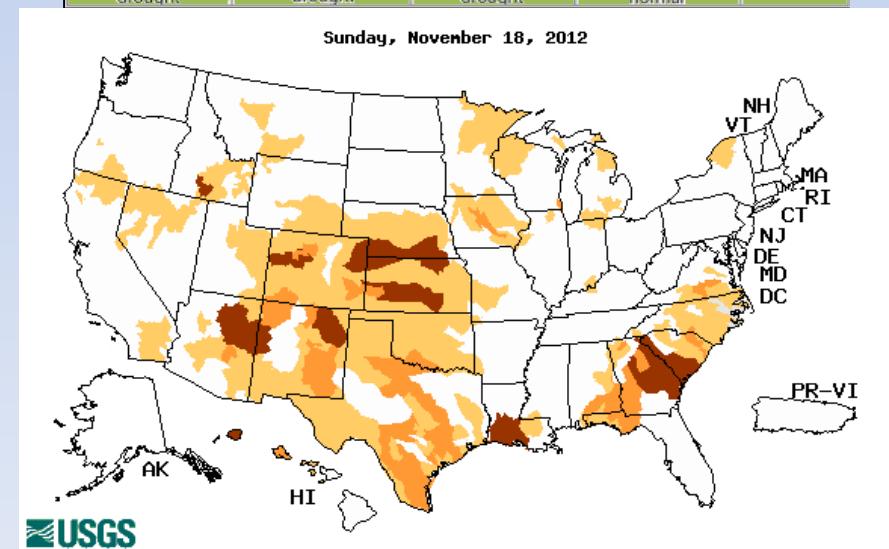
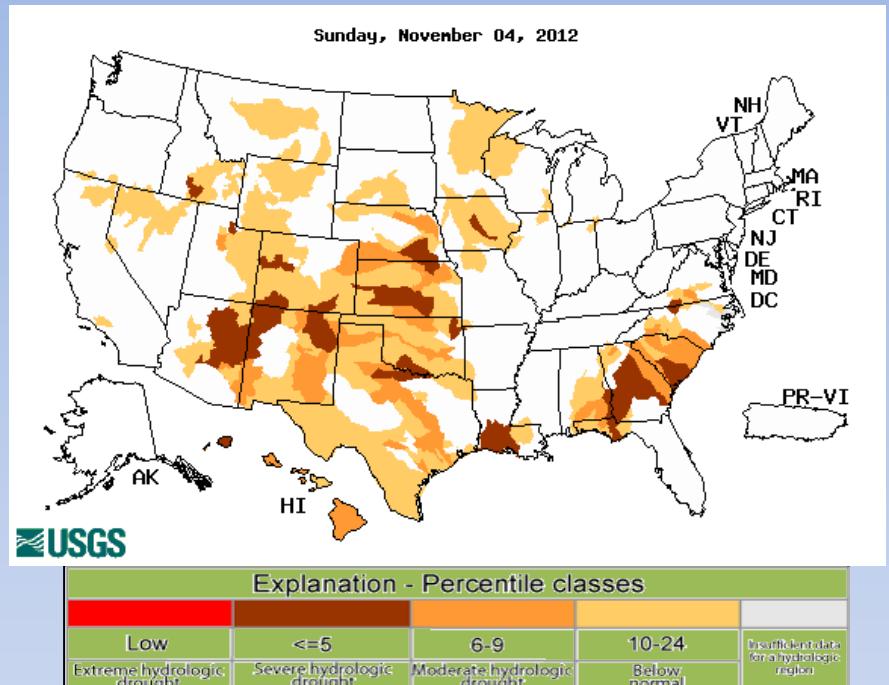
Below Normal 7-day Average Streamflows

Previous brief:

Below normal 7-day average streamflow as compared with historical streamflow for day shown

Current:

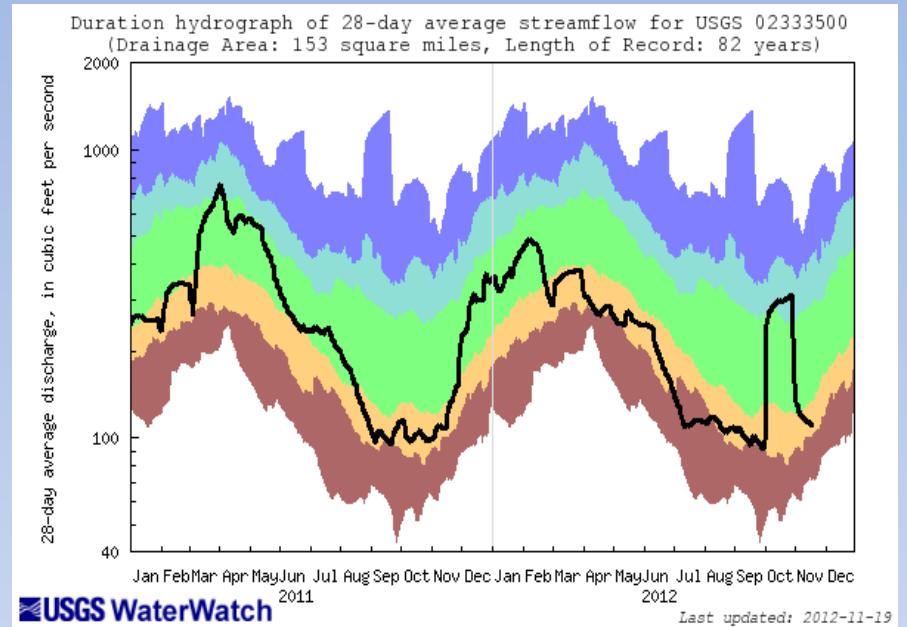
<http://waterwatch.usgs.gov>



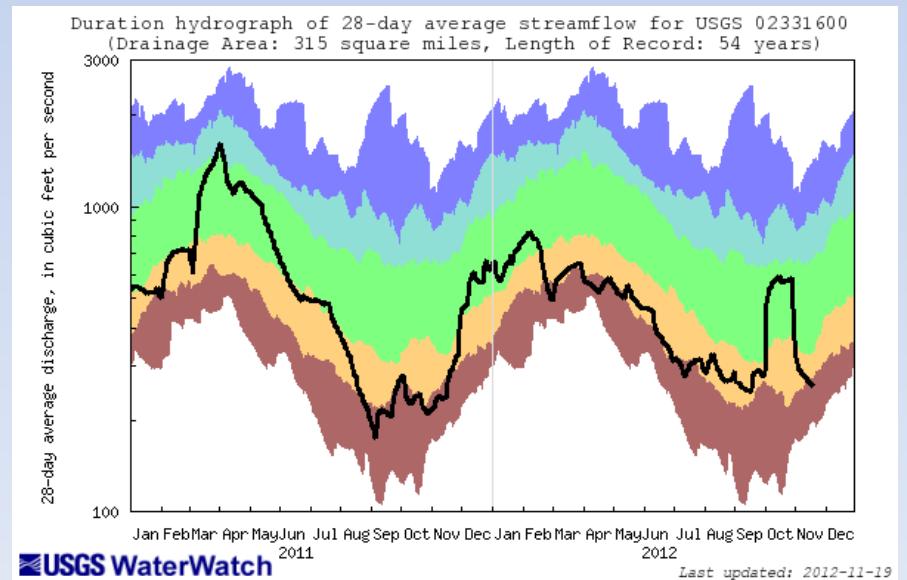
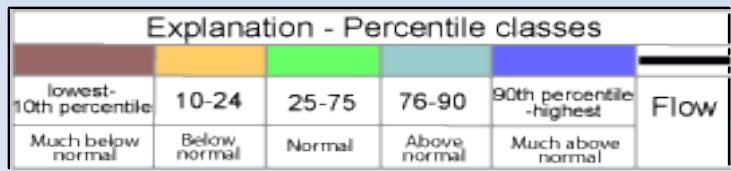
Lake Lanier Inflows

Chestatee near
Dahlonega
(02333500)

<http://waterwatch.usgs.gov>



Chattahoochee near
Cornelia (02331600)



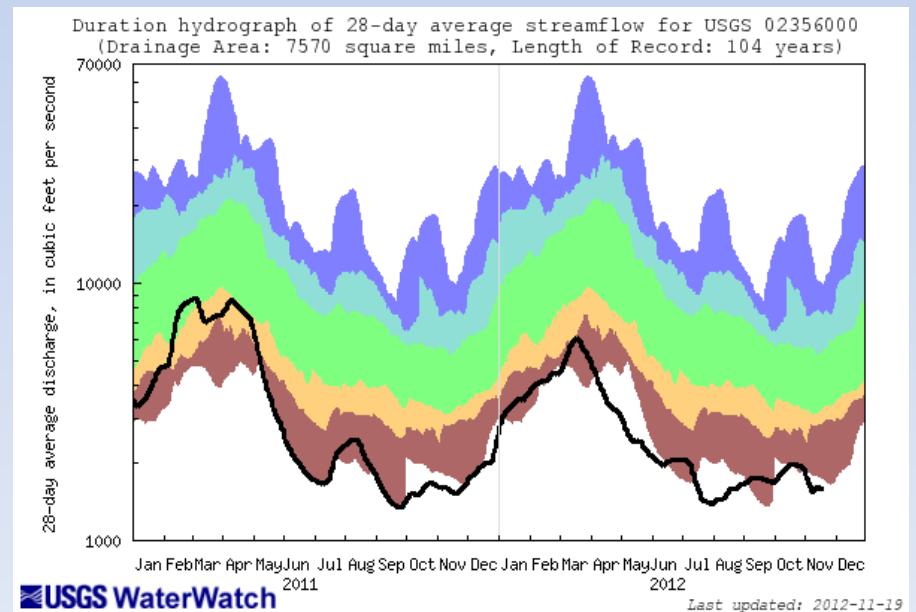
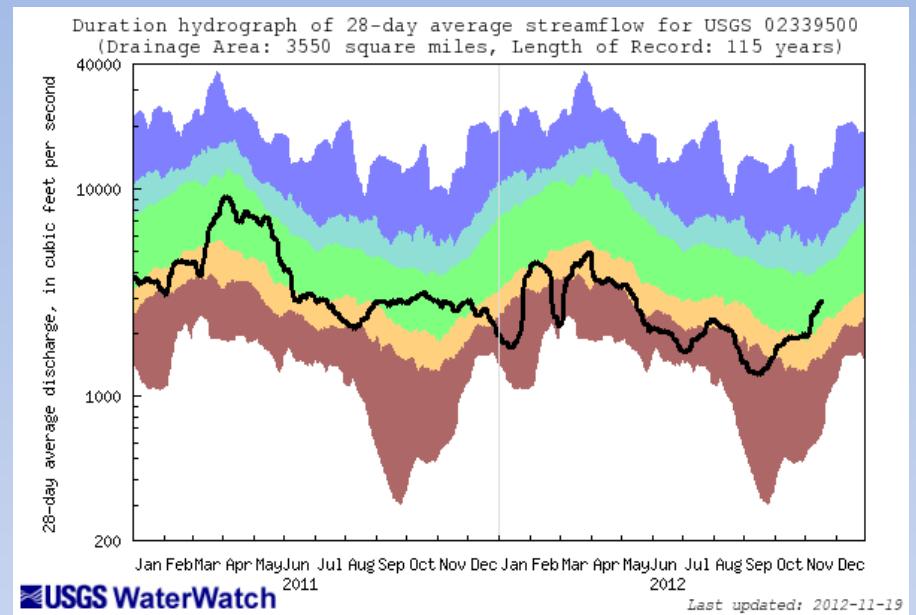
Current Streamflows

Chattahoochee at West Point (02339500)

<http://waterwatch.usgs.gov>

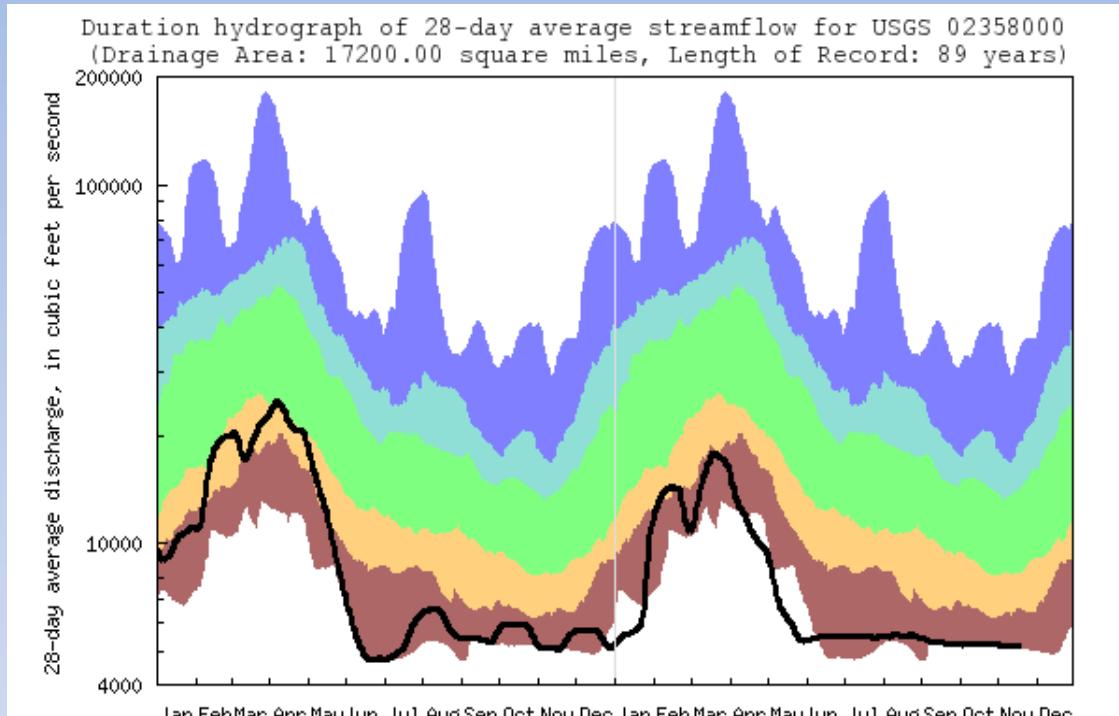
Flint at Bainbridge (02356000)

Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	



Streamflows

Apalachicola at
Chattahoochee
(02358000)

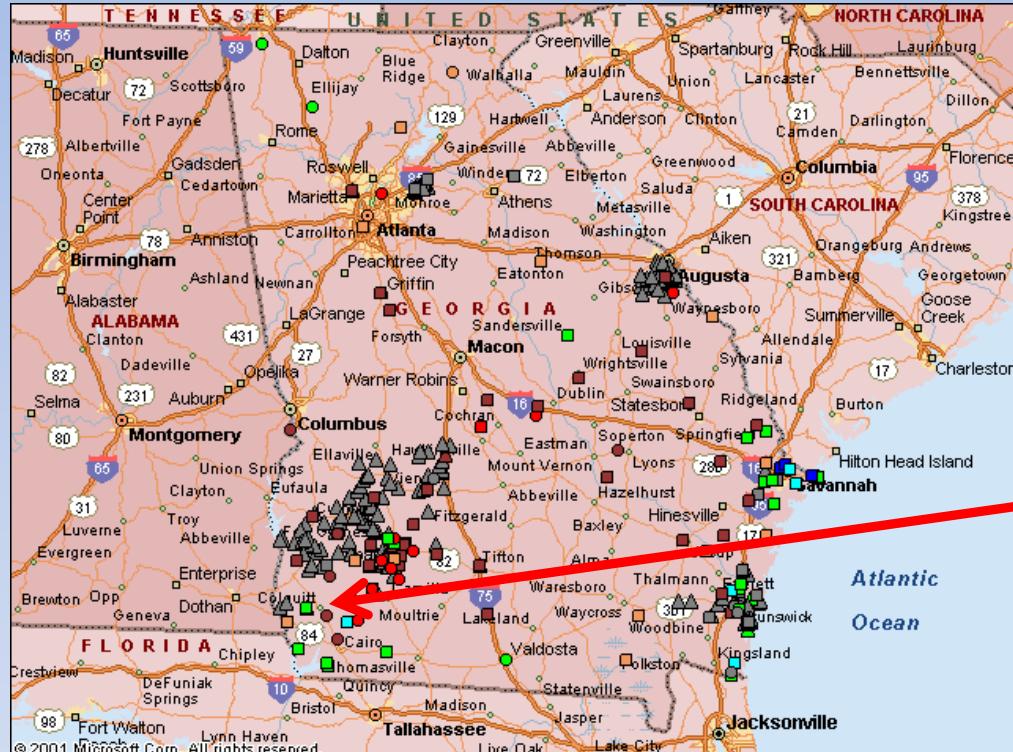


Last updated: 2012-11-19

Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

<http://waterwatch.usgs.gov>

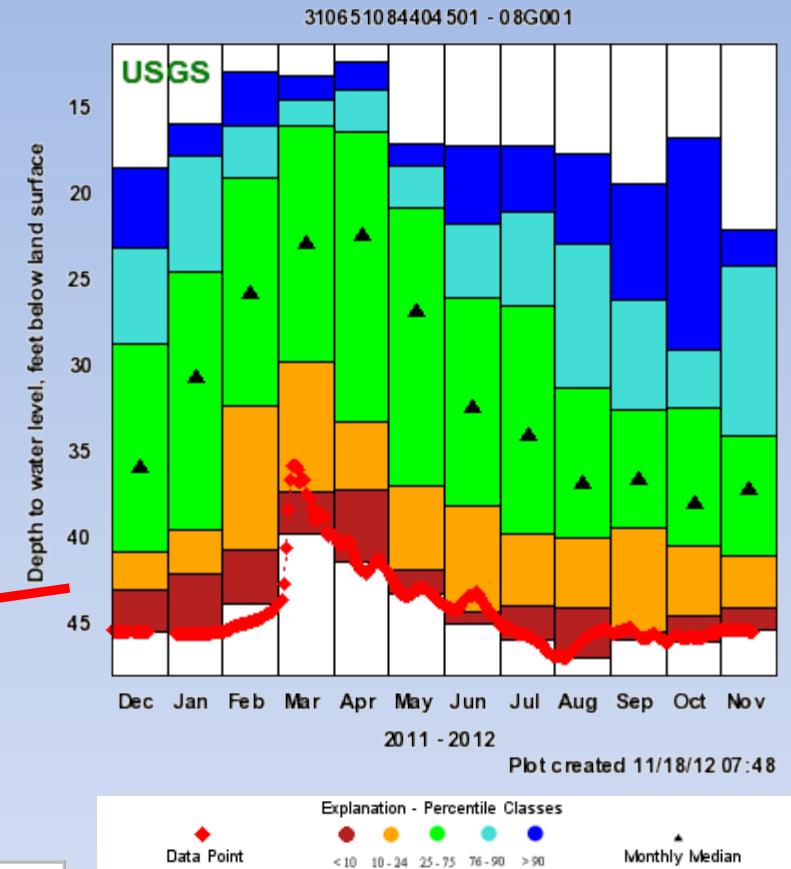
Groundwater Status



Explanation - Percentile classes (symbol color based on most recent measurement)

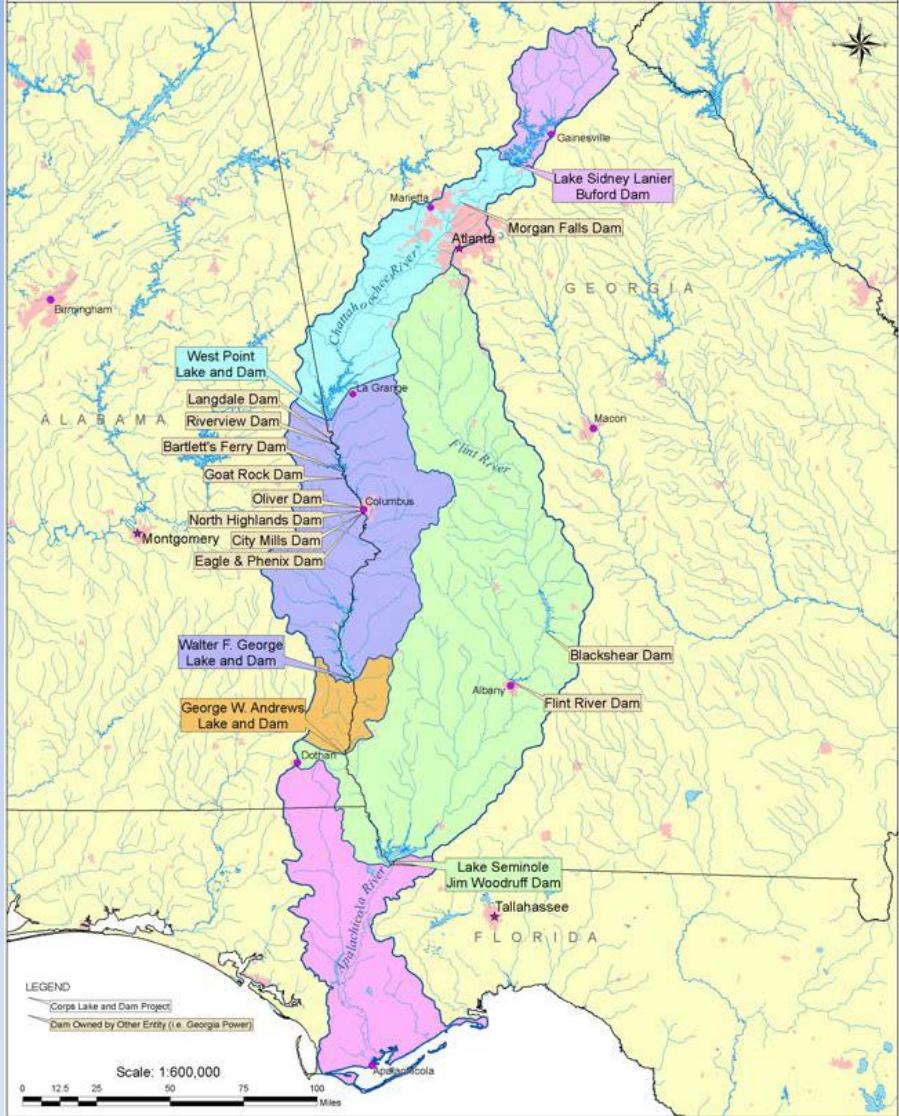
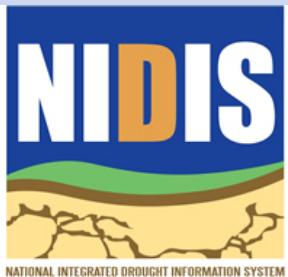
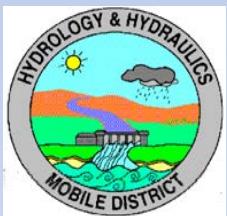
●	●	●
<10	10-24	
Low	Much Below Normal	Below Normal

- Real Time
- Continuous
- △ Periodic Measurements

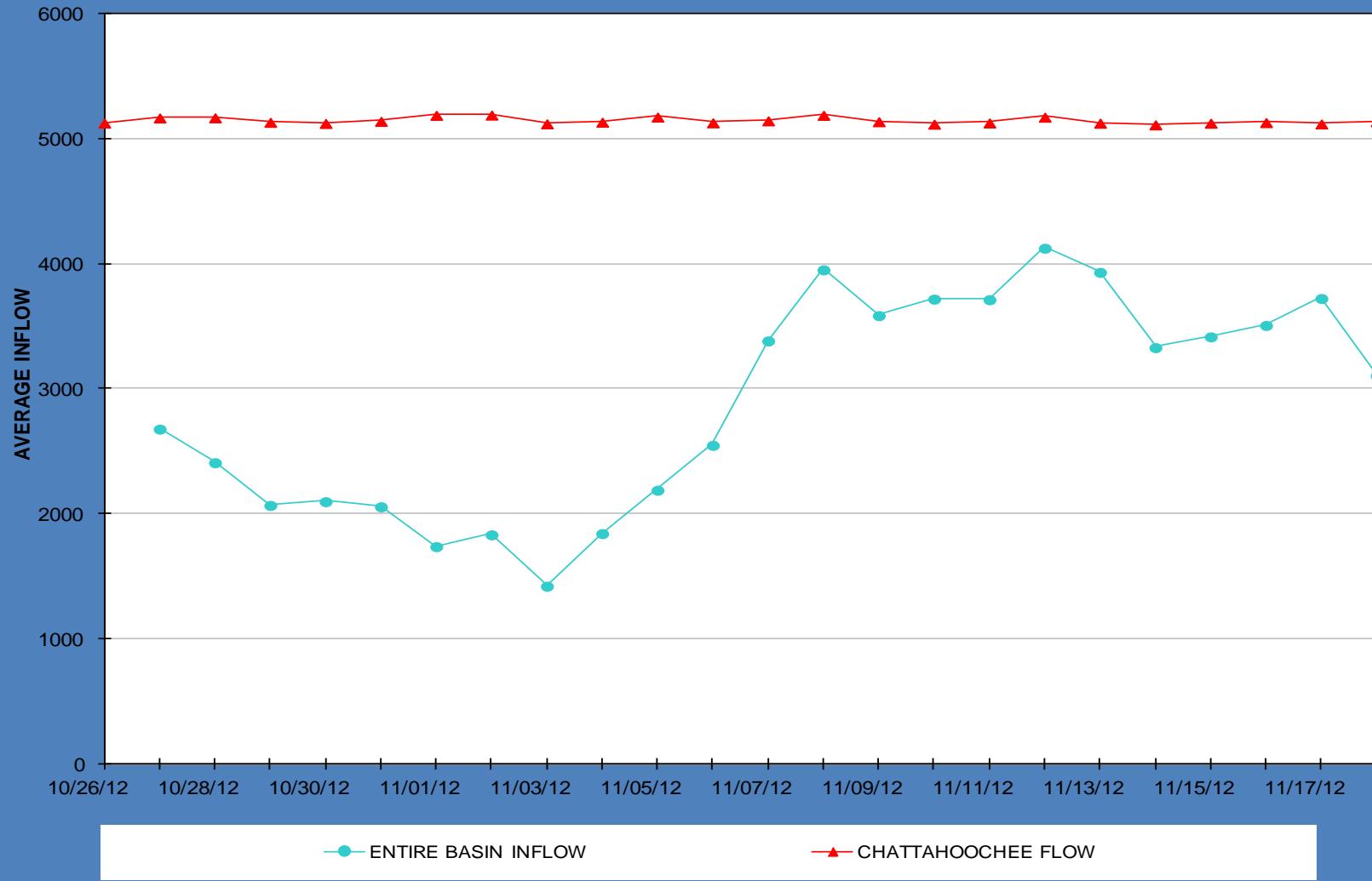


Miller County, GA
(Upper Floridan Aquifer)

USACE – ACF Operations



7-DAY MOVING AVERAGE INFLOW VERSUS 1-DAY CHATTAHOOCHEE FLOW

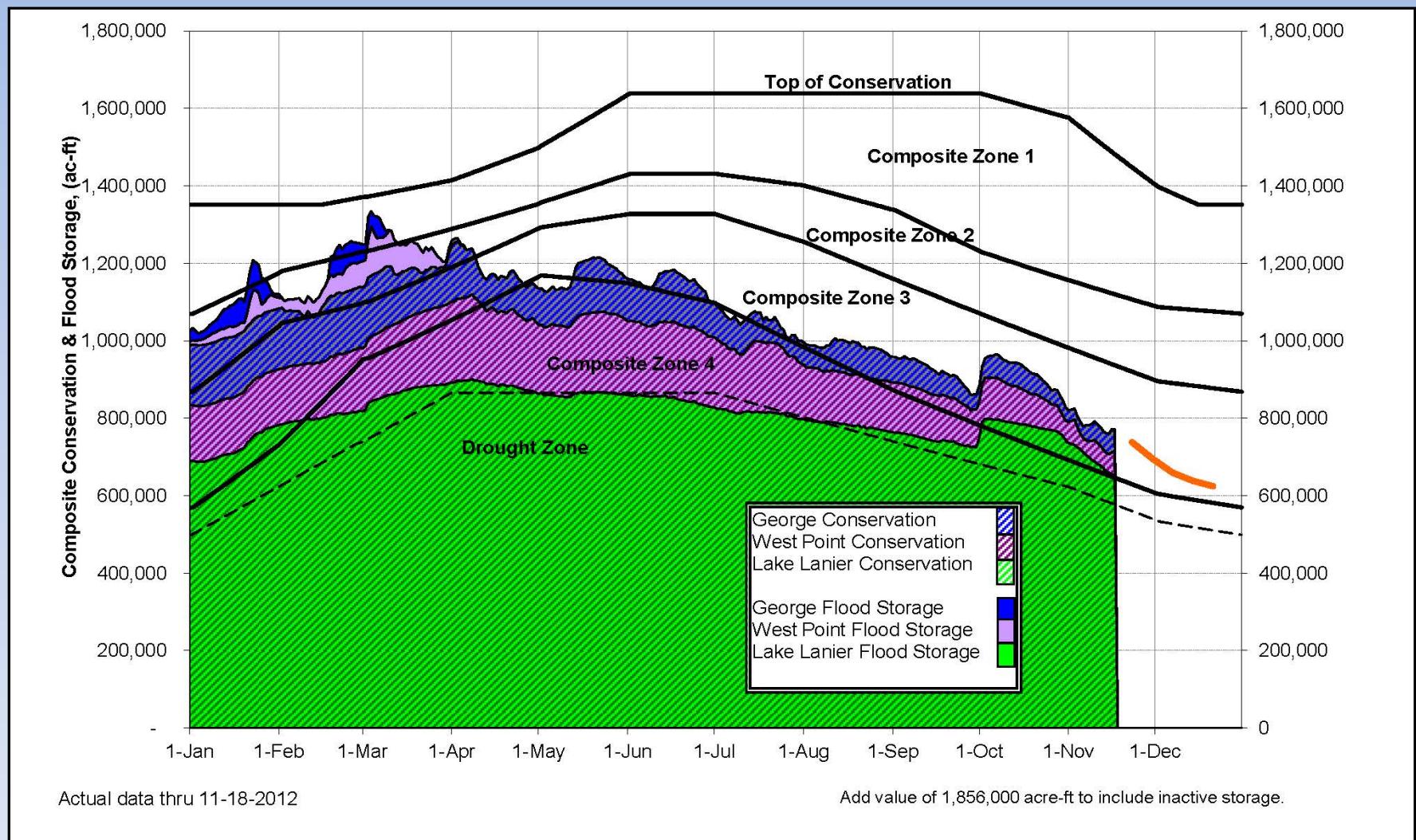


Average Inflow by Month

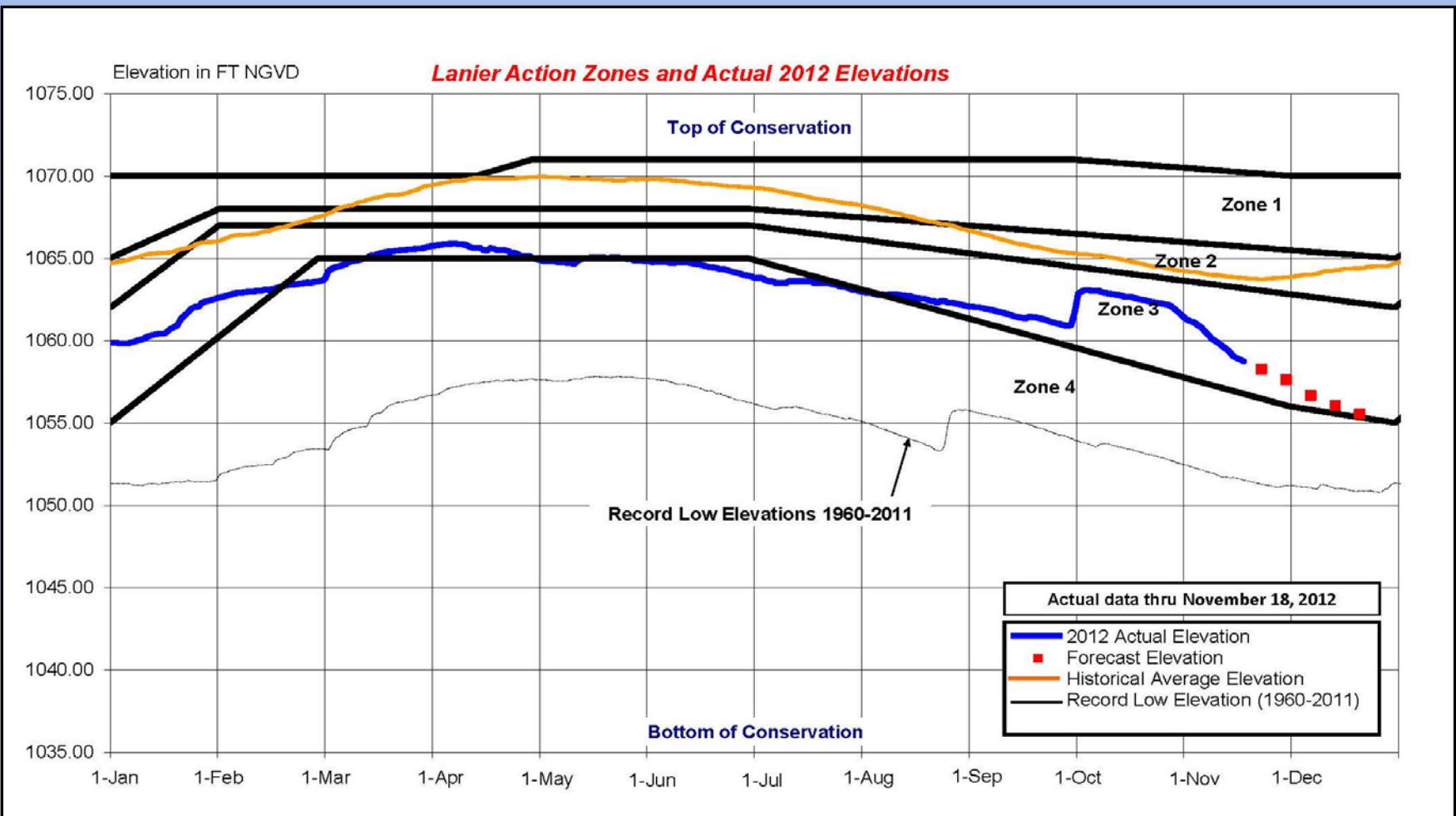
Average Daily Inflow to Lakes By Month															
2012	BUFORD LOCALS			WEST POINT LOCALS			GEORGE LOCALS			WOODRUFF LOCALS			ACF TOTAL		
	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL (CFS)	2011 (CFS)	%
JAN	2556	2294	90%	4059	2958	73%	5846	3642	62%	14887	4260	29%	27347	13154	48%
FEB	2837	1350	48%	4957	1982	40%	7407	3935	53%	18838	5215	28%	34039	12482	37%
MAR	3249	1870	58%	5865	3388	58%	9578	2178	23%	21180	8785	41%	39873	16221	41%
APR	2699	1206	45%	4289	642	15%	6312	1622	26%	17241	4406	26%	30541	7877	26%
MAY	2067	1056	51%	3048	788	26%	3070	953	31%	11544	2812	24%	19728	5608	28%
JUN	1571	558	36%	2143	204	10%	2206	811	37%	9235	2664	29%	15155	4237	28%
JUL	1338	694	52%	2109	411	20%	2709	575	21%	9597	1732	18%	15753	3412	22%
AUG	1186	690	58%	1342	198	15%	1711	829	48%	7748	2774	36%	11987	4492	37%
SEP	1084	440	41%	1369	-215	-16%	1333	97	7%	6376	2623	41%	10163	2945	29%
OCT	1194	1872	157%	1505	208	14%	1726	185	11%	6650	2765	42%	11075	5029	45%
NOV	1478	686	46%	2363	-108	-5%	2538	233	9%	6882	2385	35%	13260	3195	24%
DEC	2003		0%	2874		0%	3969		0%	10065		0%	18911	0	0%
YTD	2065	1156	56%	3242	951	29%	4034	1369	34%	11687	3675	31%	20653	6554	32%
2012	BUFORD INFLOWS			WEST POINT INFLOWS			GEORGE INFLOWS			WOODRUFF INFLOWS			ACF TOTAL		
	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL AVG (CFS)	2012 AVG (CFS)	% NORMAL	HISTORICAL (CFS)	2012 (CFS)	%
JAN	2556	2294	90%	5798	3695	64%	12322	6883	56%	26373	10747	41%	47050	23619	50%
FEB	2837	1350	48%	6816	2695	40%	14873	5779	39%	32919	10196	31%	57445	20020	35%
MAR	3249	1870	58%	7889	4001	51%	17528	6316	36%	38281	17072	45%	66948	29260	44%
APR	2699	1206	45%	6508	2205	34%	13190	4380	55%	32317	9536	30%	54714	17328	32%
MAY	2067	1056	51%	5036	1901	38%	8659	2656	31%	20188	4986	25%	35950	10599	29%
JUN	1571	558	36%	3861	1274	33%	6621	2258	34%	16098	5022	31%	28152	9113	32%
JUL	1338	694	52%	3927	1552	40%	6843	2843	42%	16196	5087	31%	28303	10176	36%
AUG	1186	690	58%	3390	1377	41%	5987	2371	40%	13748	4684	34%	24312	9121	38%
SEP	1084	440	41%	3459	953	28%	5257	1622	31%	11783	4705	40%	21583	7719	36%
OCT	1194	1872	157%	3325	1351	41%	5402	2146	40%	11967	4923	41%	21889	10292	47%
NOV	1478	686	46%	4016	3257	81%	6870	3115	45%	13702	4922	36%	26065	11979	46%
DEC	2003		0%	4695		0%	9936		0%	20116		0%	36750	0	0%
YTD	2065	1156	56%	4893	2206	45%	9457	3670	39%	21141	7444	35%	37430	13269	35%

Data compiled on: 19-Nov-12

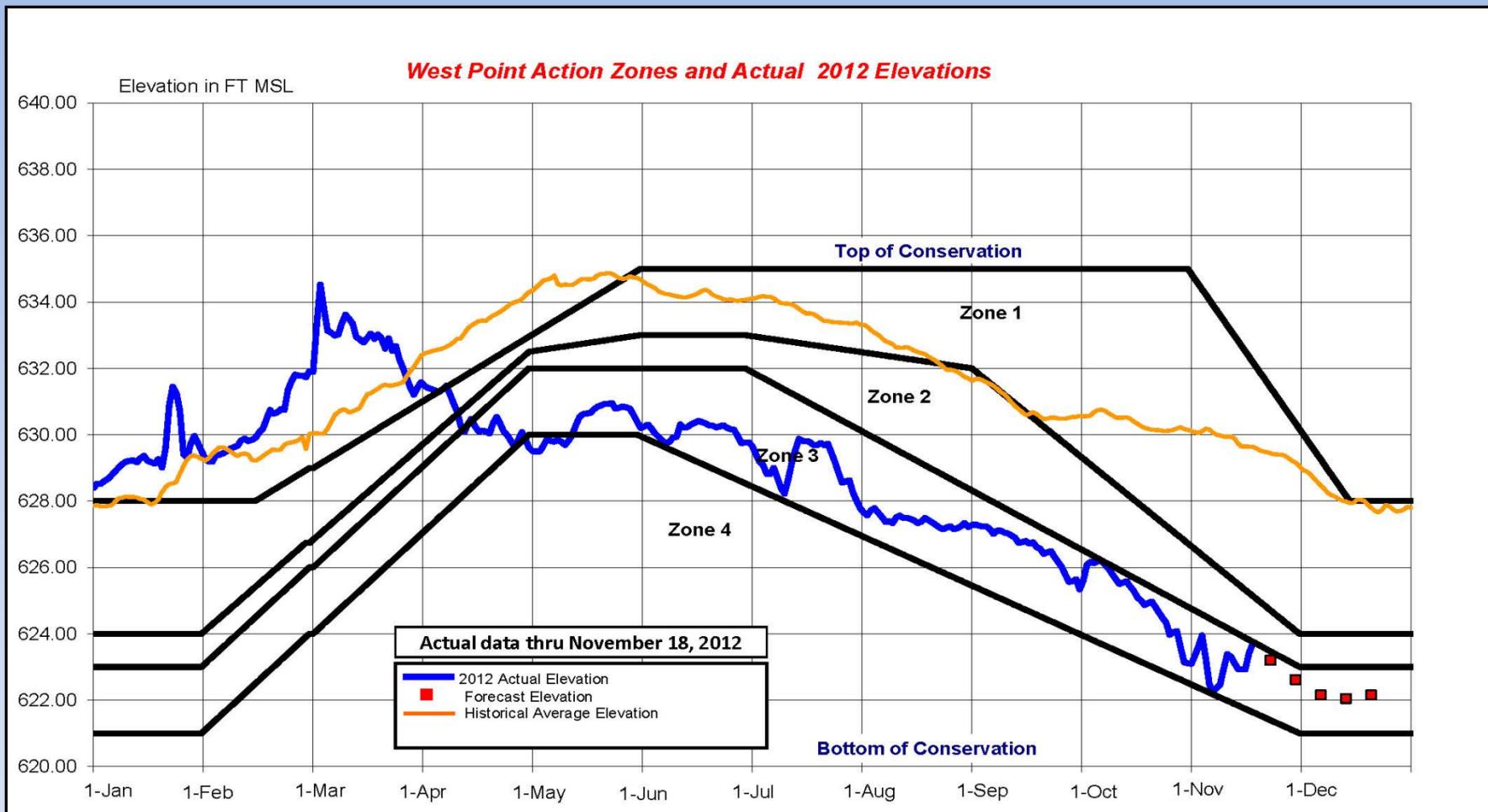
2012 ACF Basin Composite Conservation & Flood Storage



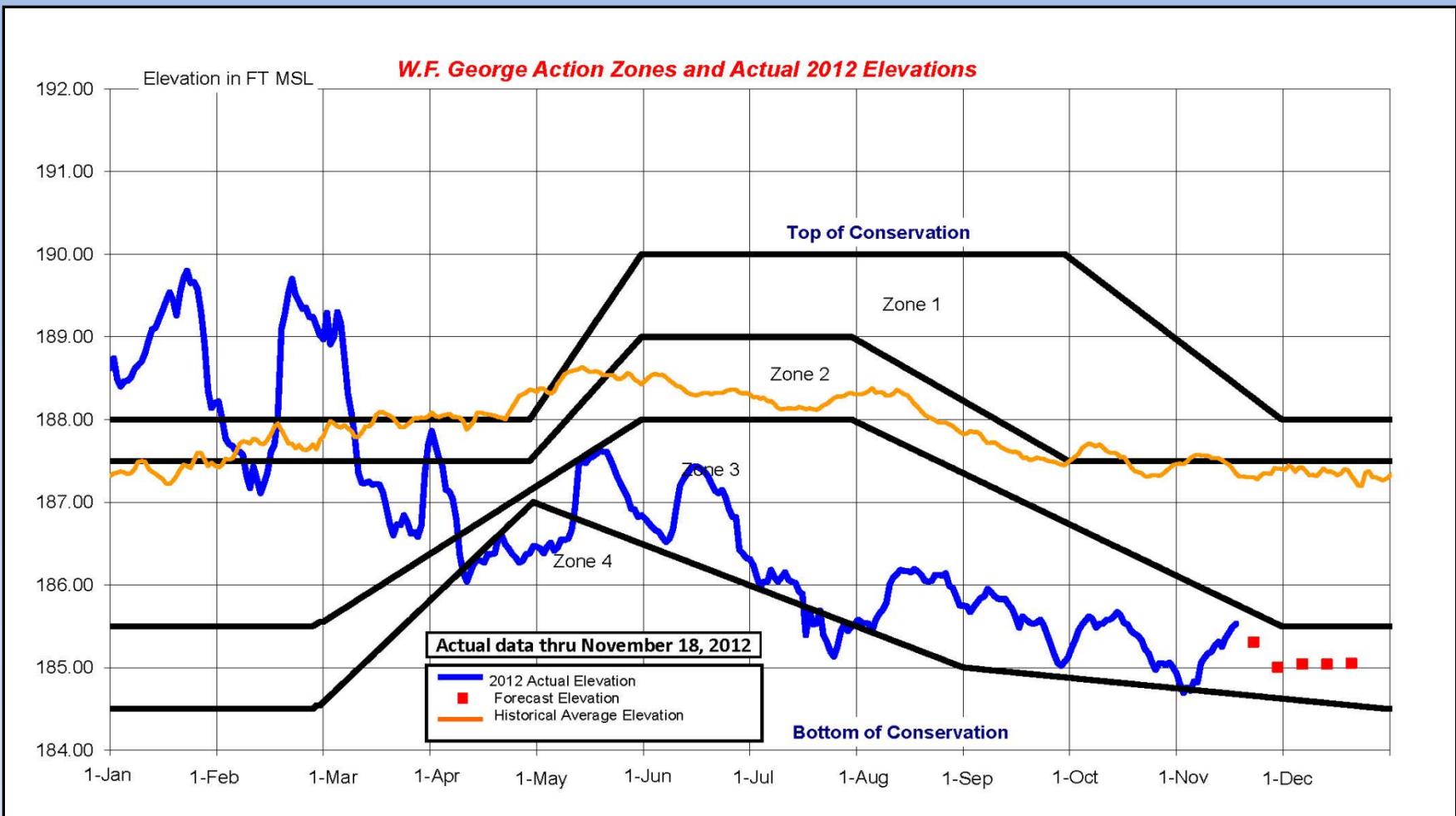
Lake Lanier



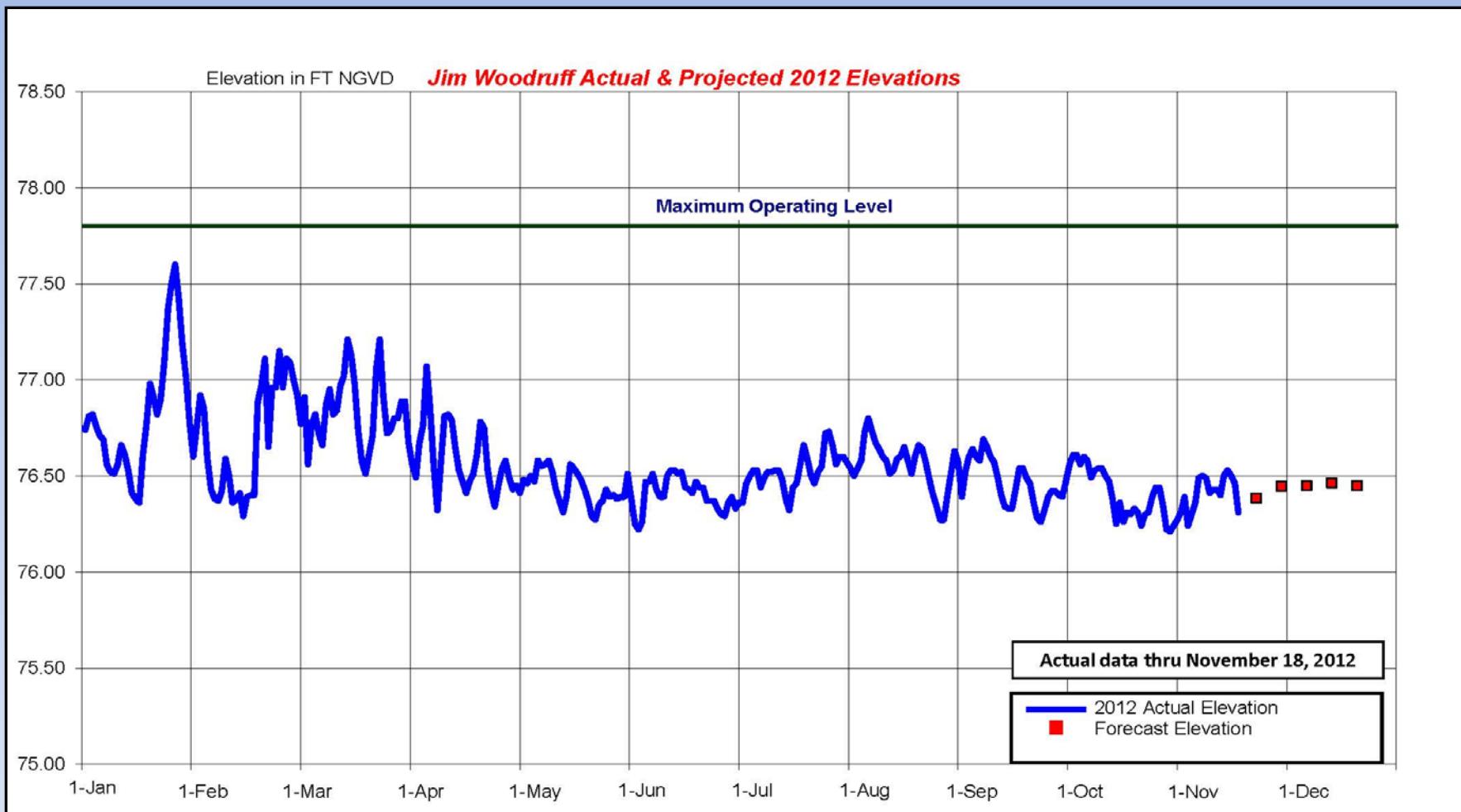
West Point Lake



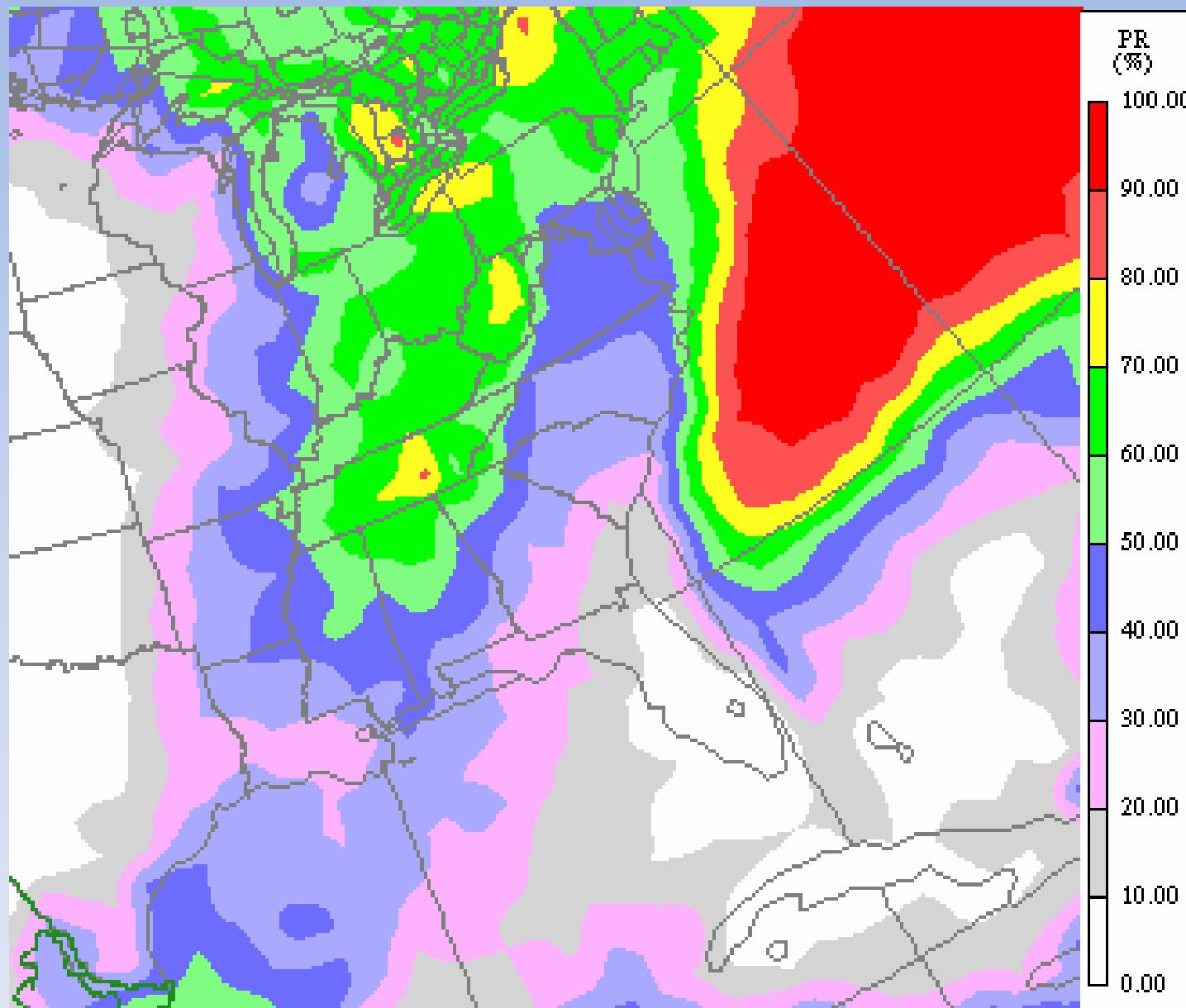
W.F. George Reservoir



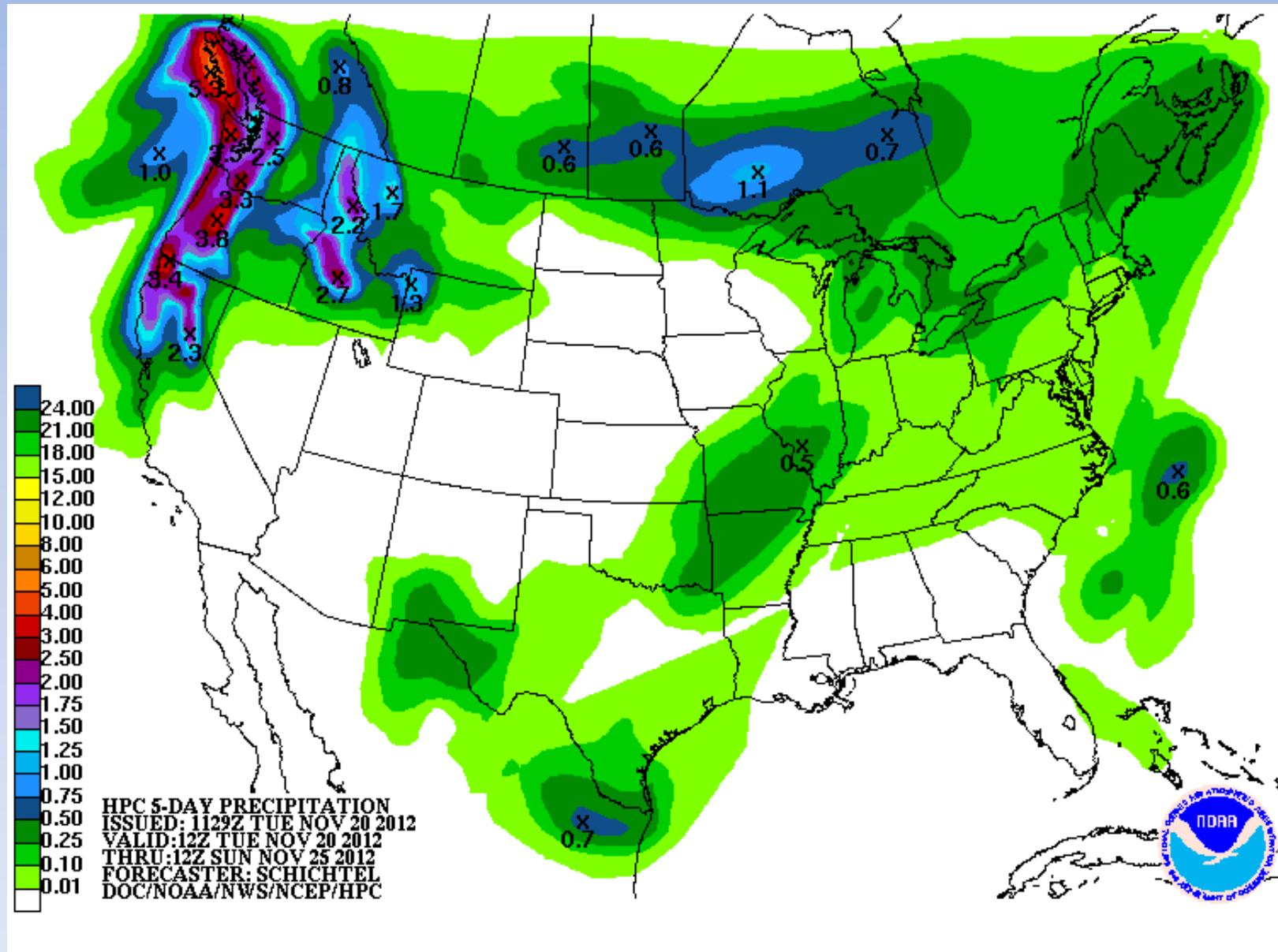
Woodruff



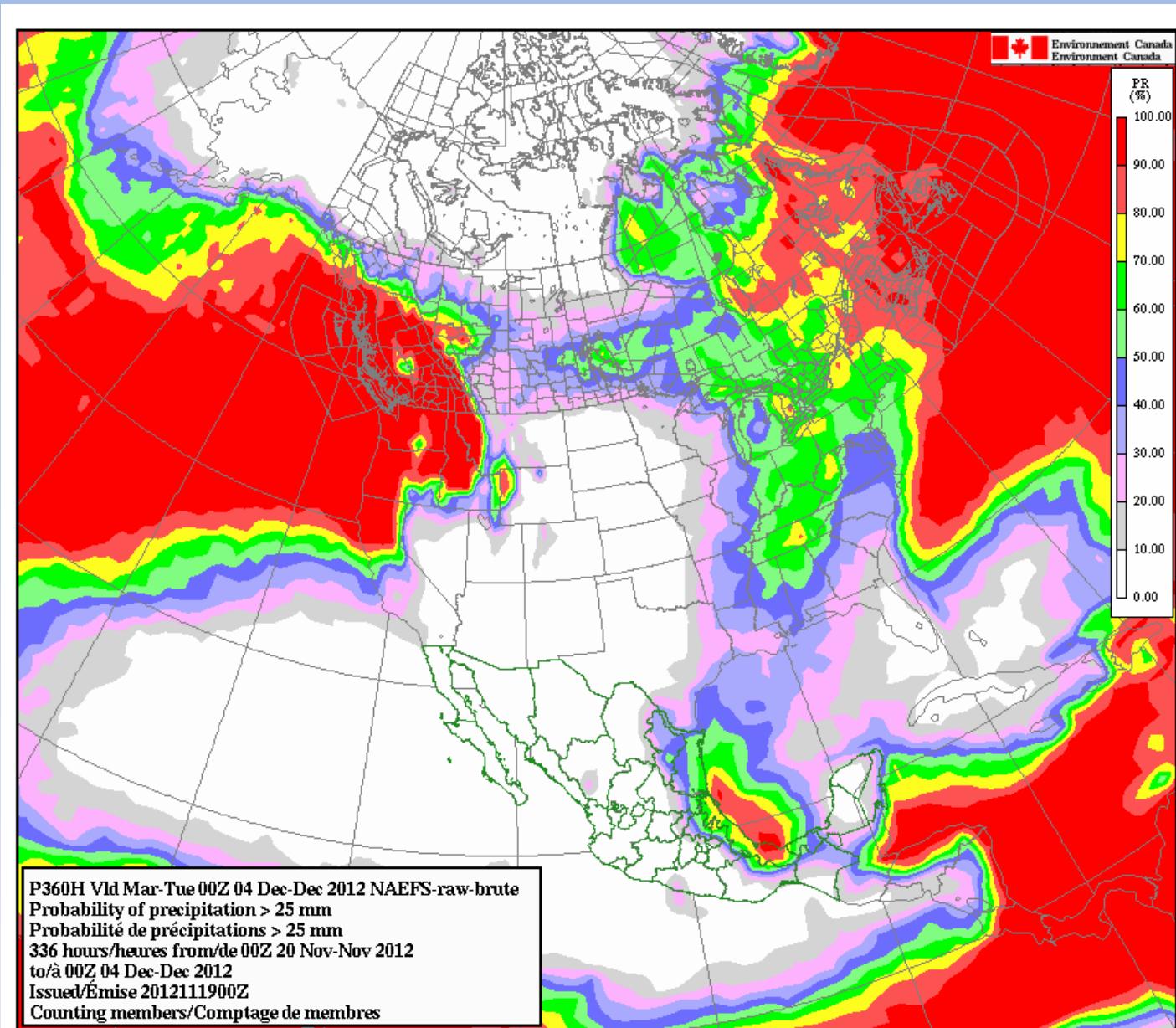
Probability of >1 in over next 15 days



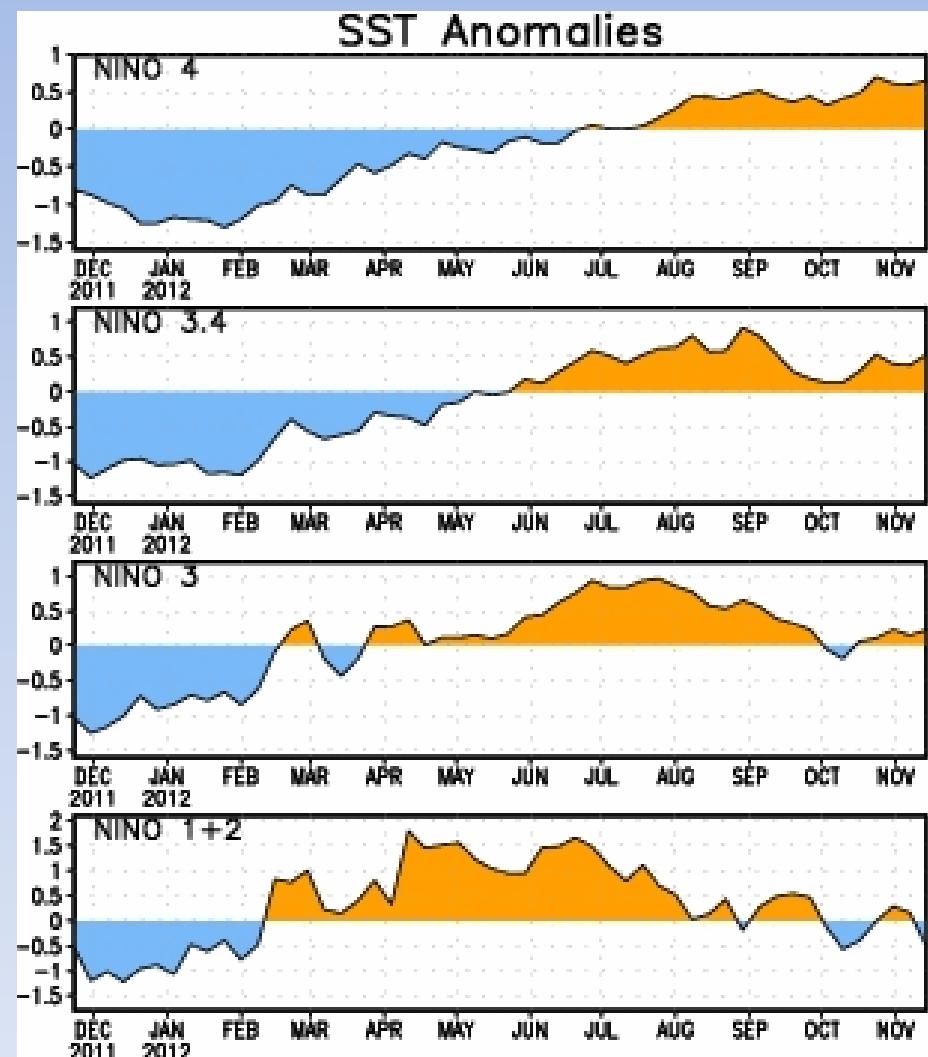
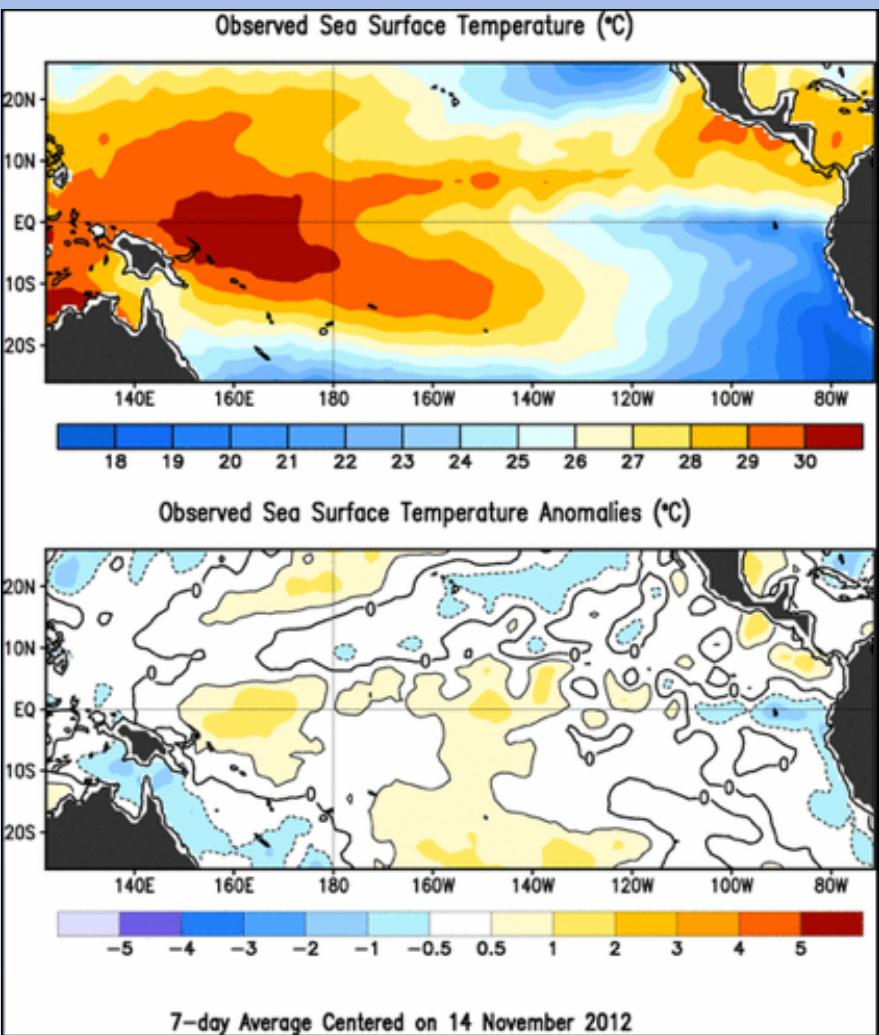
5-Day Precipitation Forecast



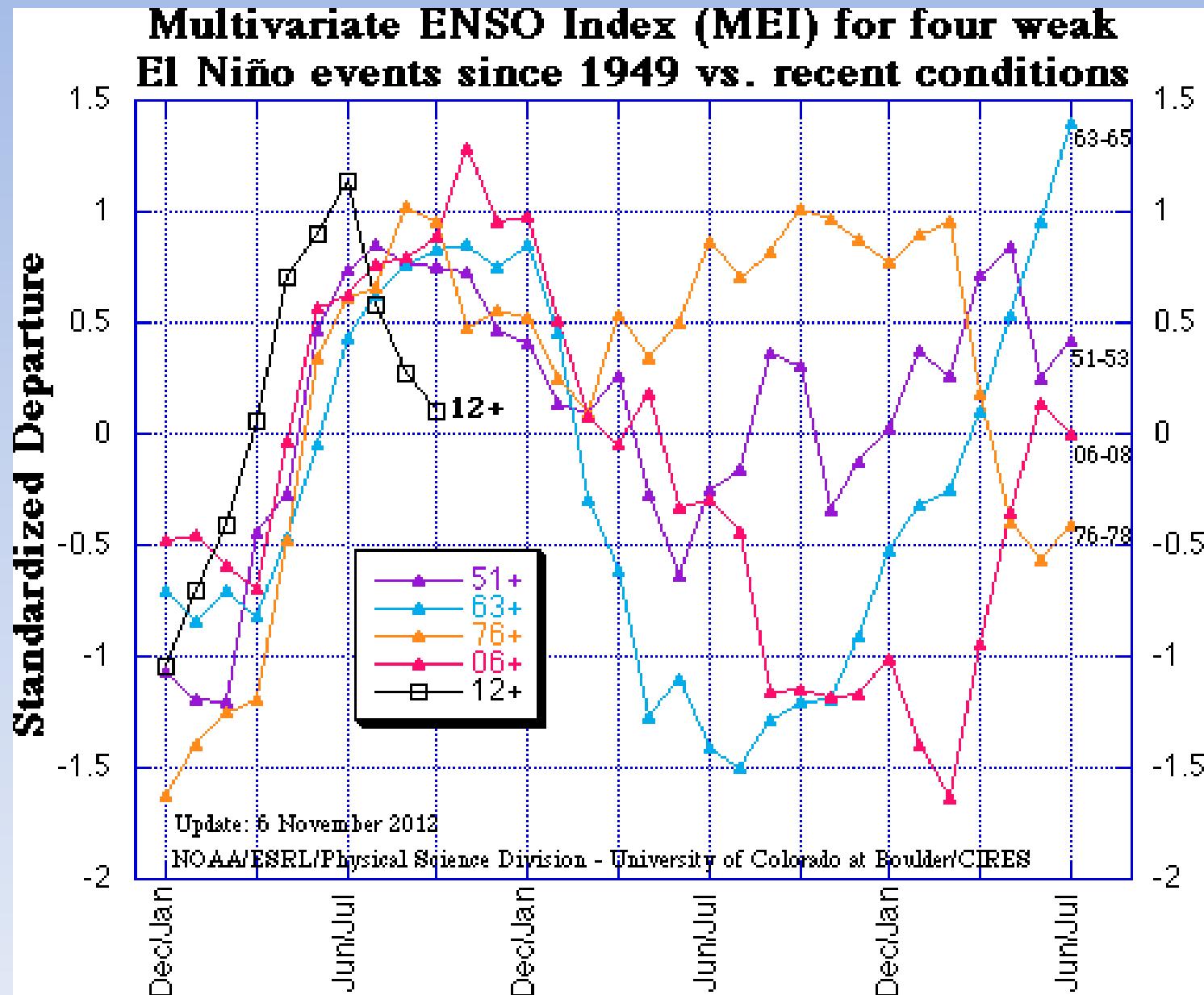
15-day Forecast



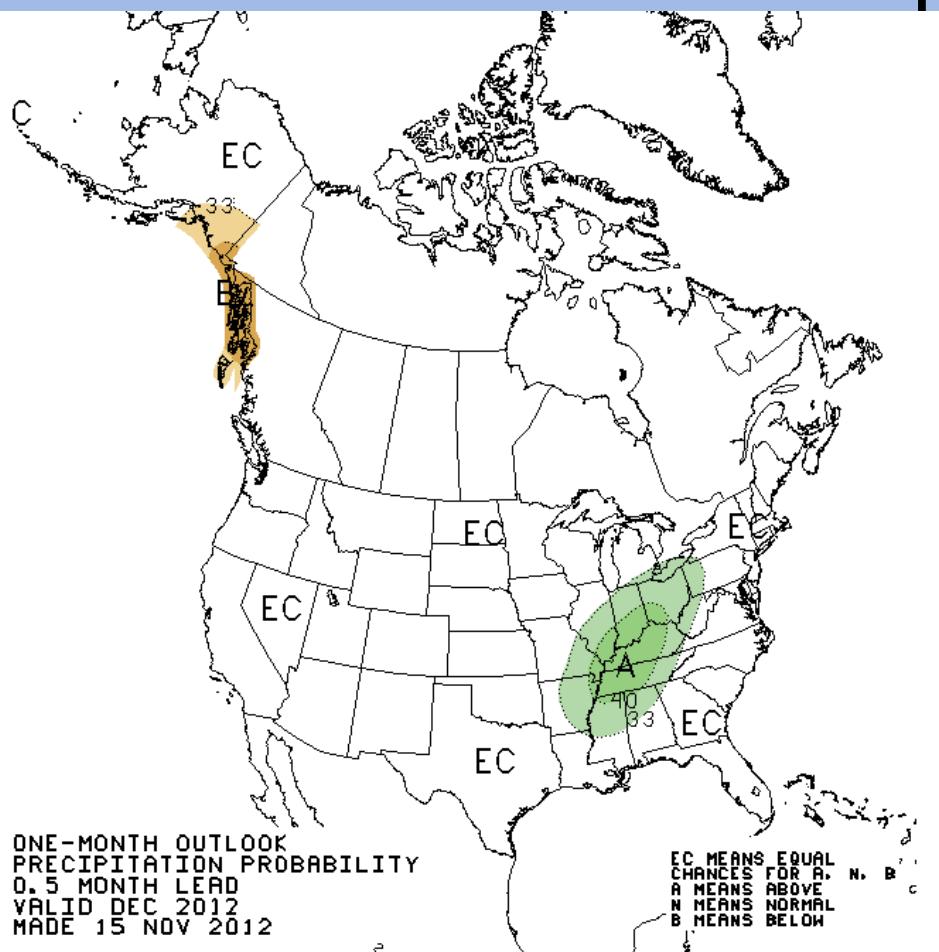
7-day average Pacific Ocean SST Anomalies



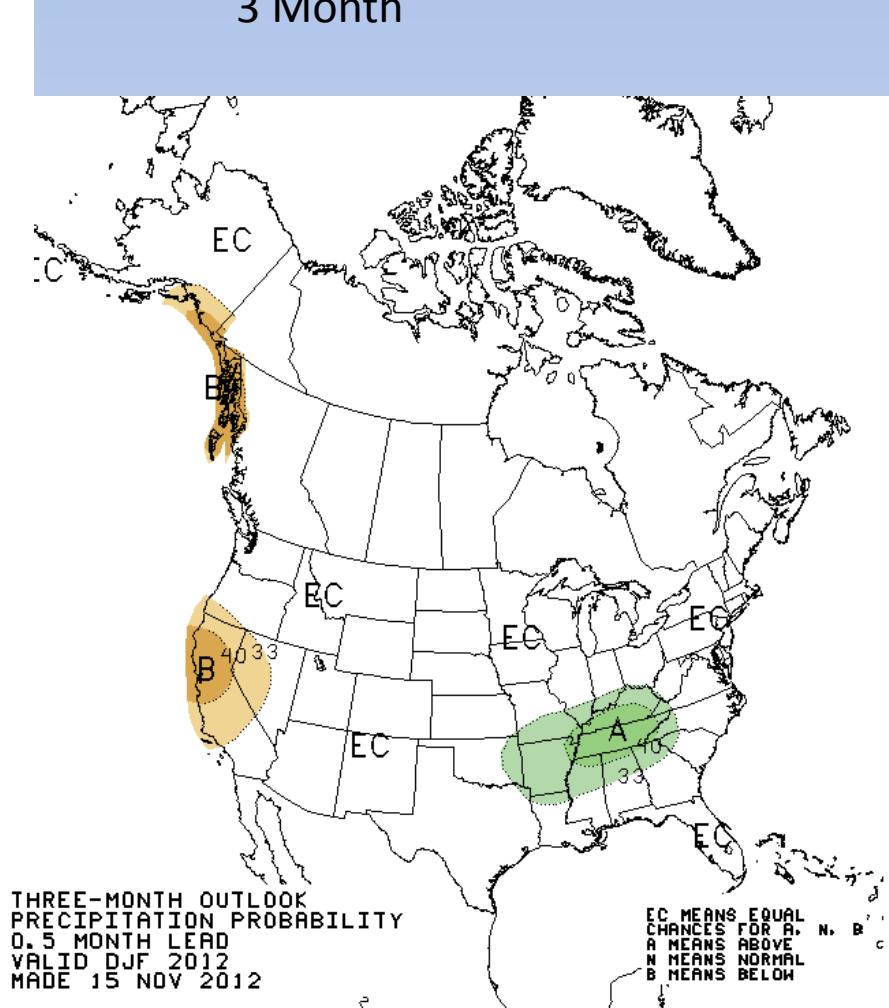
Multivariate ENSO Index



1-3 Month Precipitation Outlook



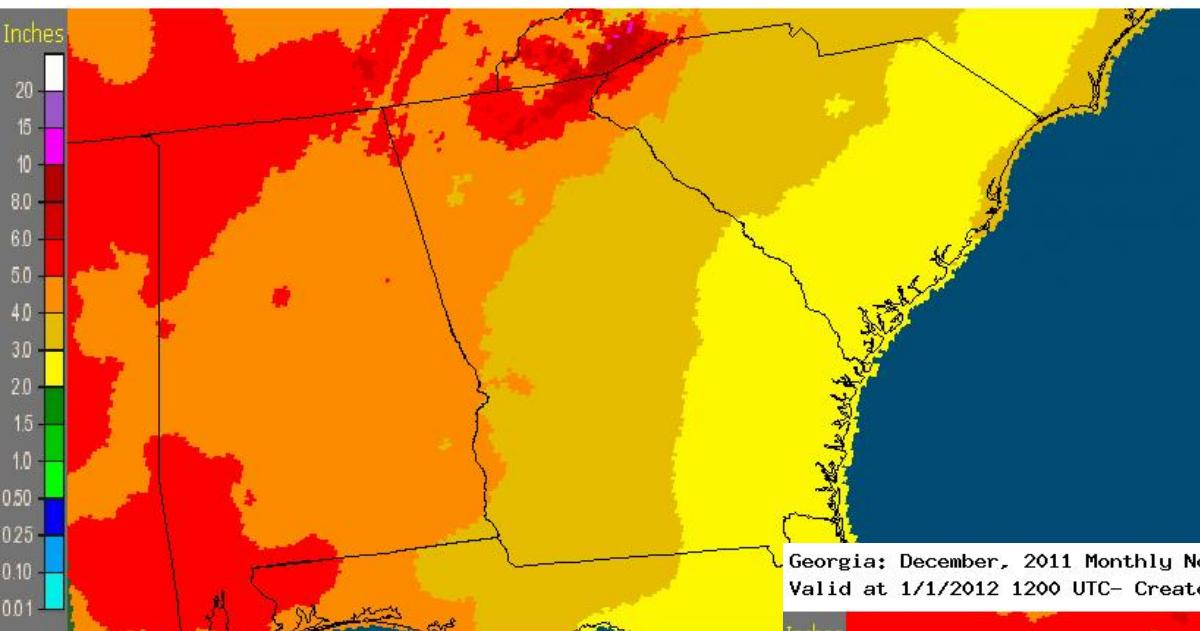
1 Month



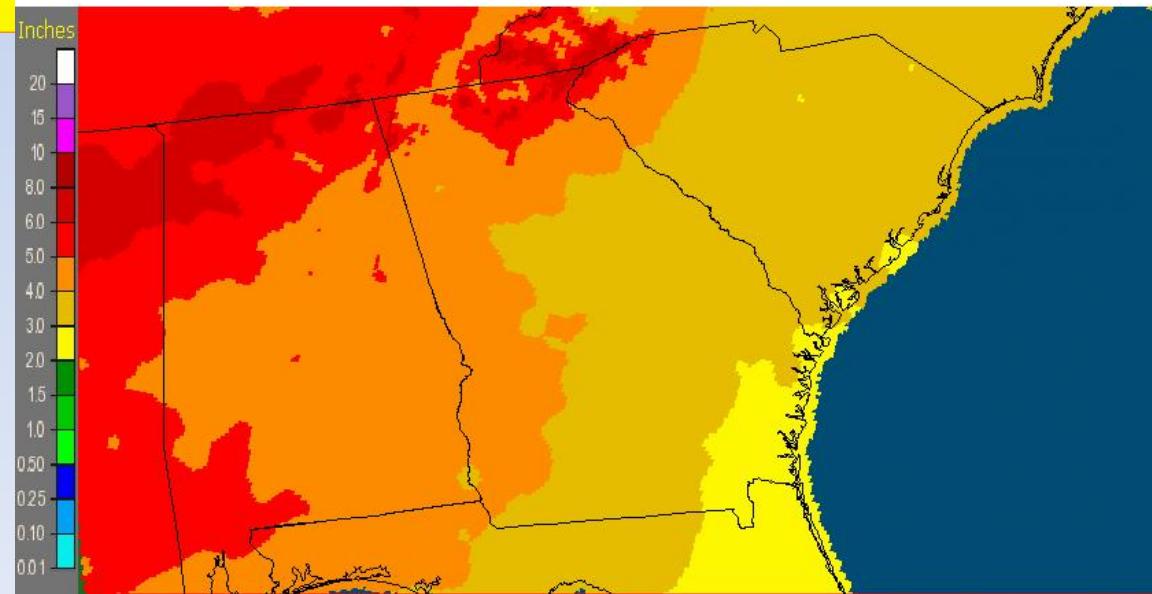
3 Month

Fall Rainfall Climatology

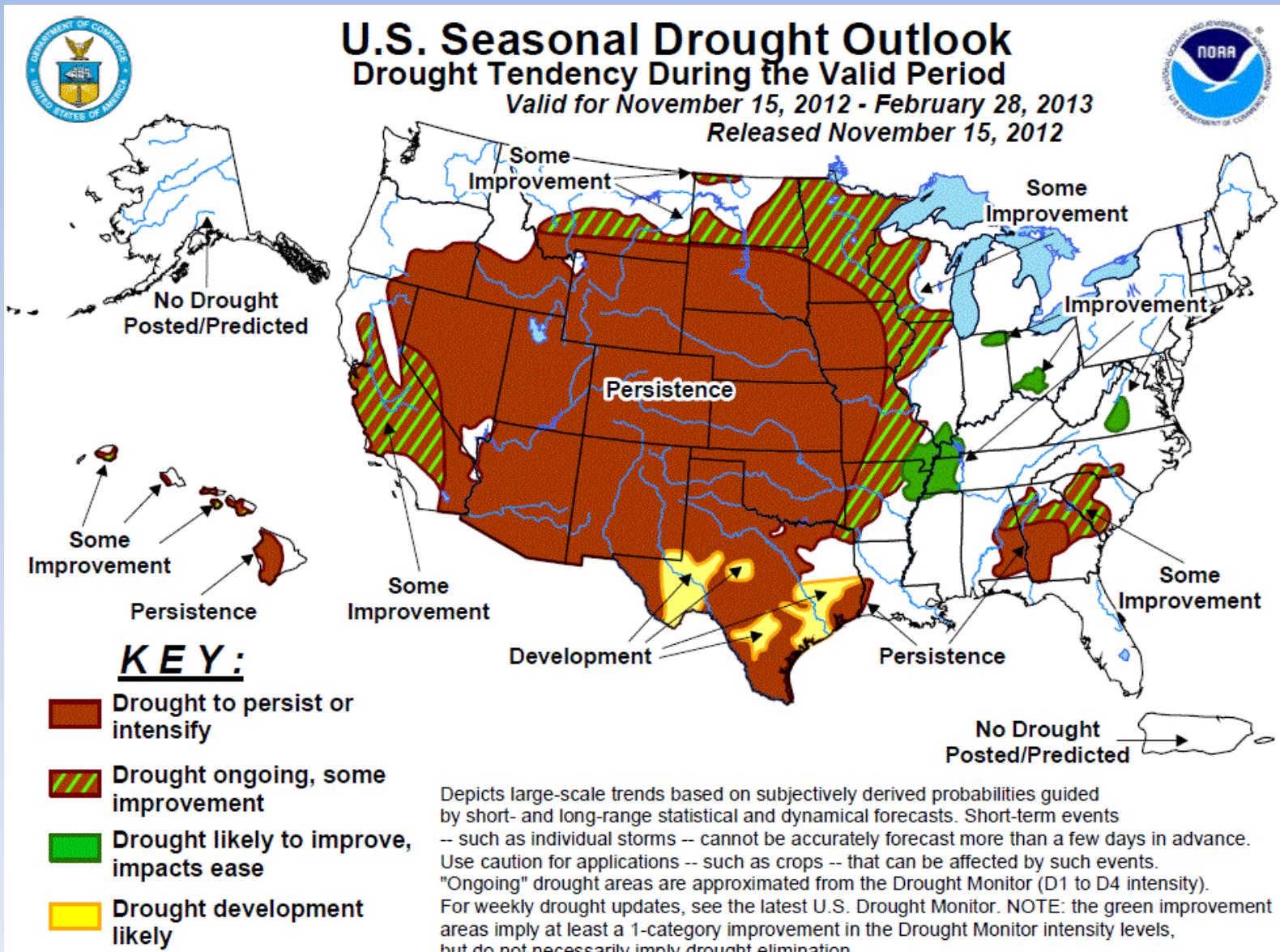
Georgia: November, 2011 Monthly Normal Precipitation
Valid at 12/1/2011 1200 UTC—Created 12/3/11 21:39 UTC



Georgia: December, 2011 Monthly Normal Precipitation
Valid at 1/1/2012 1200 UTC—Created 10/15/12 23:58 UTC



U.S. Drought Outlook



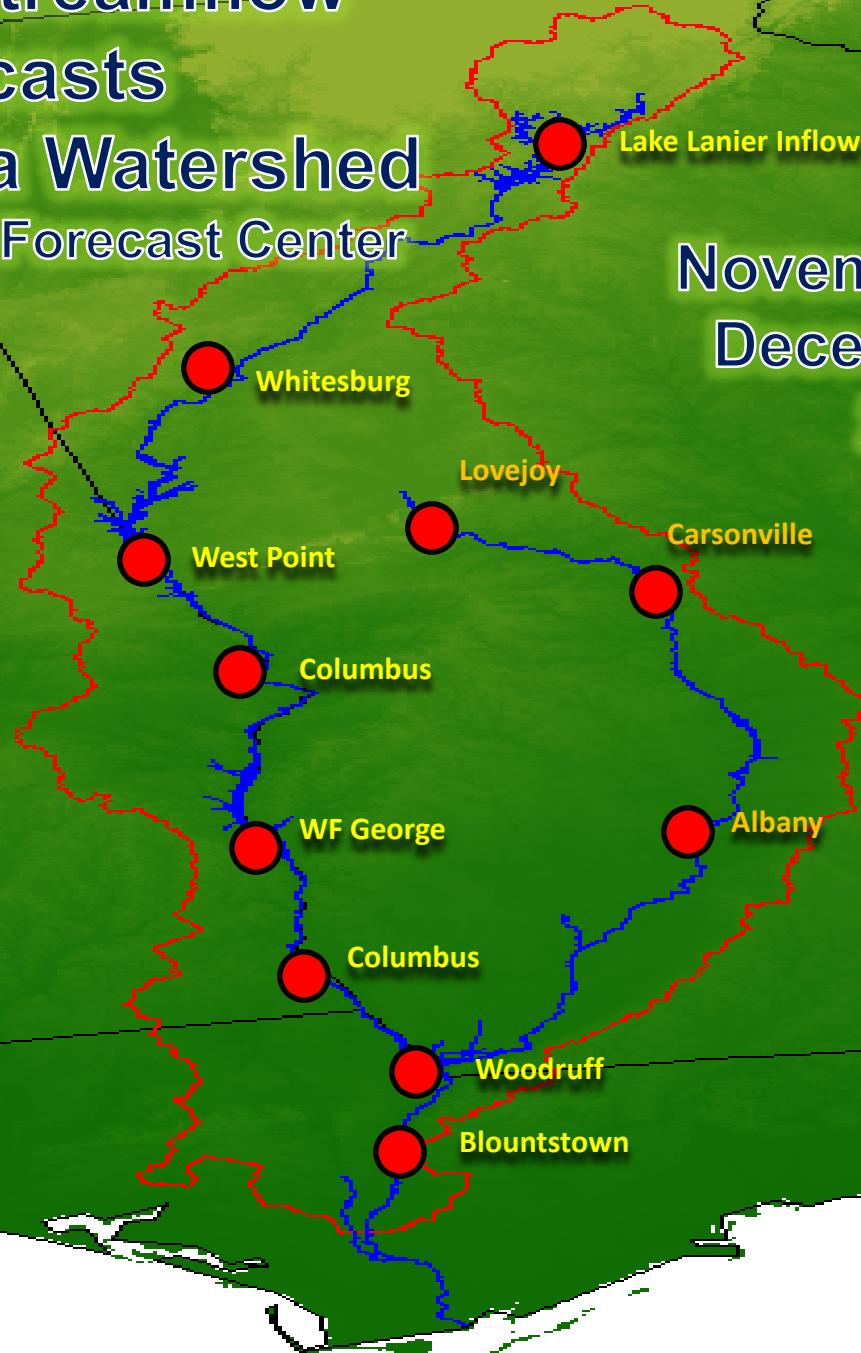
1-Month Streamflow Forecasts

Apalachicola Watershed

Southeast River Forecast Center

November 19th –
December 18th
2012

- Above Normal
- Near Normal
- Below Normal



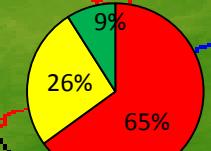
3-Month Mean Daily Streamflow Forecasts Apalachicola Watershed

Southeast River Forecast Center

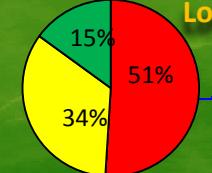
Lake Lanier Inflows

November 15th 2012 –
February 15th 2013

- Above Normal
- Near Normal
- Below Normal

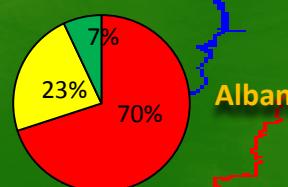


Whitesburg



Lovejoy

Carsonville



Albany

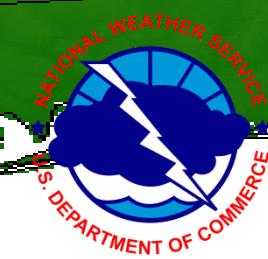
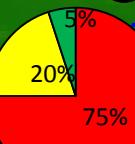
Columbus

WF George

Columbus

Woodruff

Blountstown



Summary

- Drought conditions continue in the central part of the basin as a result of below normal rainfall
- Streamflows remain below normal except for West Point, where flows result from releases from Lake Lanier
- Ground water levels in S Georgia remain at historic low levels
- Basin inflows remain below outflows, so reservoir levels are all declining

Summary

- The 2-week outlook is for less than 1 inch of precipitation, which would further stress the water resources of the basin
- ENSO conditions remain neutral, so a total of 3 to 5 inches of rainfall are expected for the basin in December, even if rainfall in November is expected to be well below those levels
- Streamflow forecasts at 1 and 3 months are all suggest that drought conditions will persist

References

Speakers

David Zierden, FSU

Chris Smith, USGS

Bailey Crane, USACE

Victor Murphy, NWS

Jeff Dobur, SERFC

Moderator

Keith Ingram, SECC

Additional information

General drought information

<http://drought.gov>

<http://www.drought.unl.edu>

General climate and El Niño information

<http://agroclimate.org/climate/>

Streamflow monitoring & forecasting

<http://waterwatch.usgs.gov>

<http://www.srh.noaa.gov/serfc/>

Groundwater monitoring

<http://groundwaterwatch.usgs.gov>

Thank you!

Next briefing – 4 December 2012, 1:00 pm EST

Slides from this briefing will be posted at

<http://drought.gov/drought/regional-programs/acfrb/acfrb-home>

Please send comments and suggestions to:

ktingram@ufl.edu