

2012 USACE Drought Actions

*for Inland Waterway
Users Board 68*

Jim Walker

Navigation Branch Chief

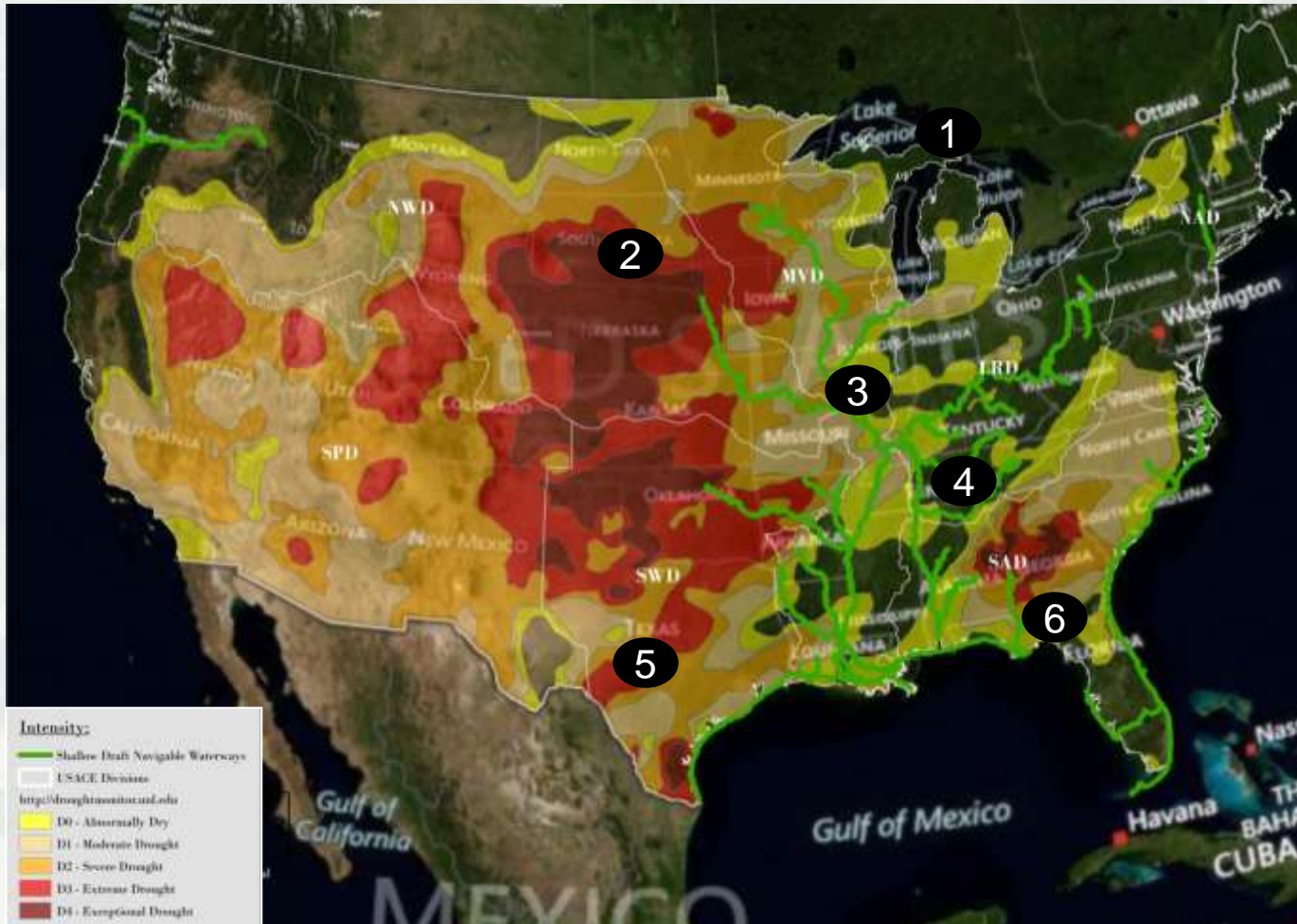
19 December 2012



US Army Corps of Engineers
BUILDING STRONG®



US Drought Monitor



Impacts:

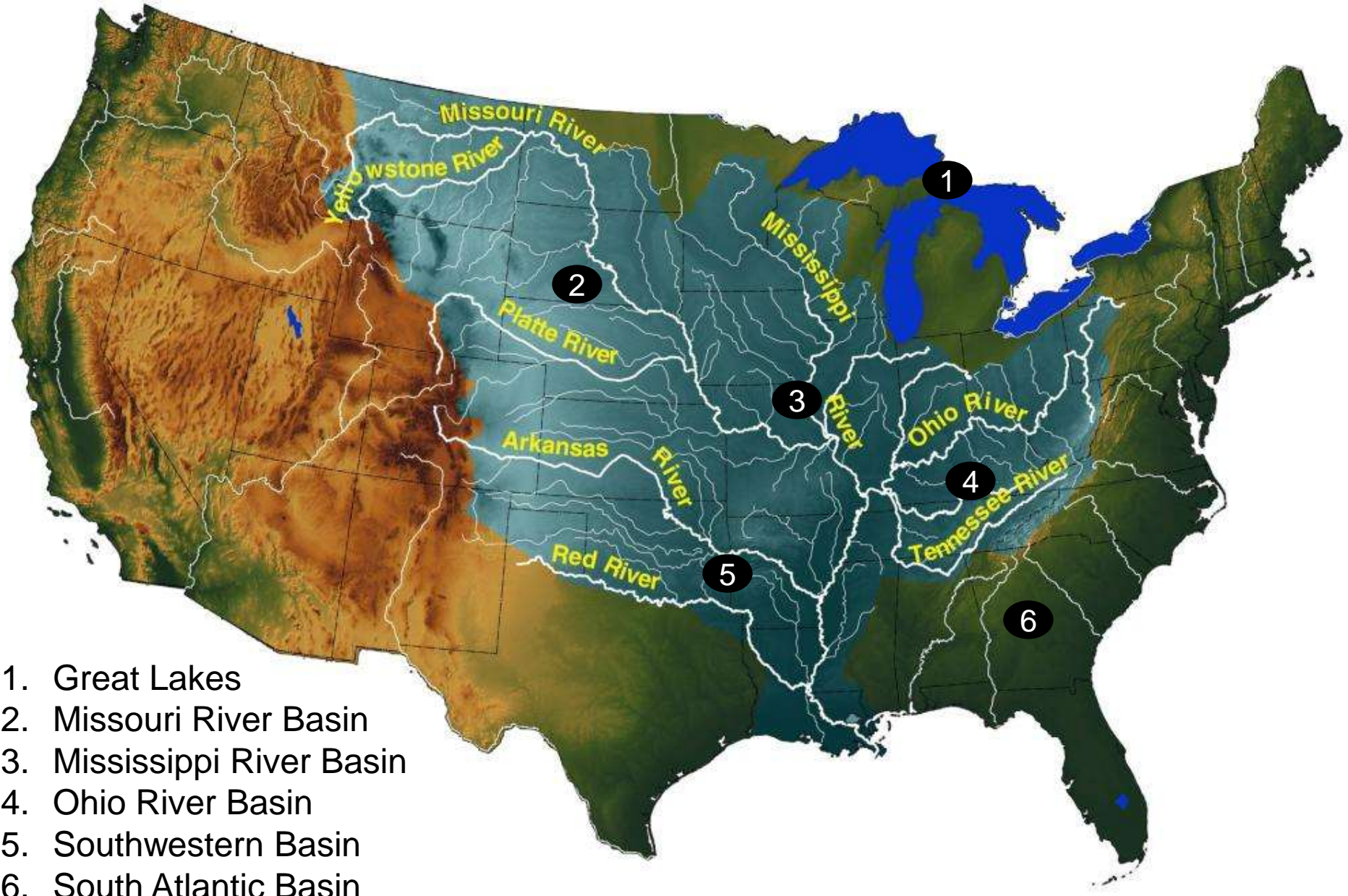
1. The area in the Western Great Lakes has dry to severe drought, while the rest of the Great Lakes Region is either dry or experiencing no drought.
2. Conditions in the Midwest improved 1.5% over the past week, with most of the improvement in the moderate drought category. The High Plains remained unchanged this past week.
 - The normal seasonal rainfall amounts from December – February for these regions is 1.5 inches.
 - Majority of regions need an additional 2 to 6 inches of rain above their seasonal norms to alleviate the drought conditions.
- 3 and 4. Adequate rainfall; does not have any major areas of drought.
5. Overall no change in the drought area, the areas that are experiencing drought became more intense in the extreme drought category
6. No significant change in the drought area with 50% of the area in moderate to exceptional drought.

NOAA reports 62% of the Continental US remains in Drought Intensity (D1-D4), Moderate to Exceptional



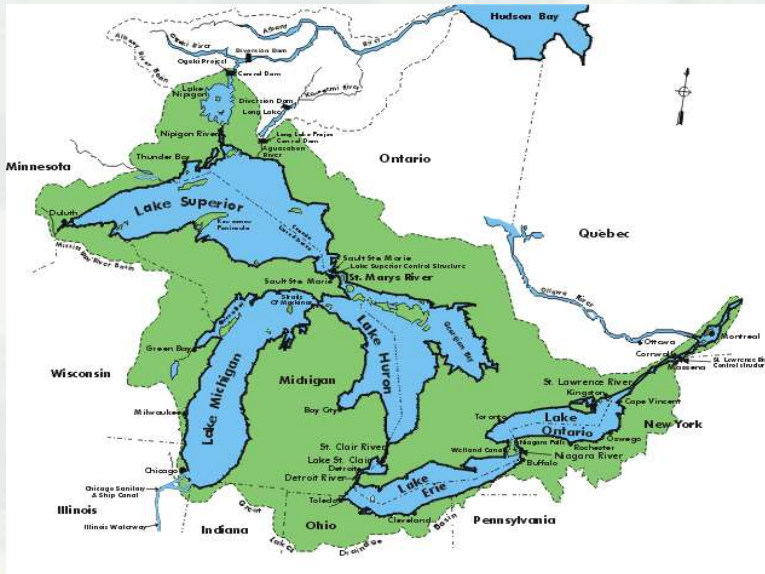
BUILDING STRONG®

National Watersheds Affected by Drought

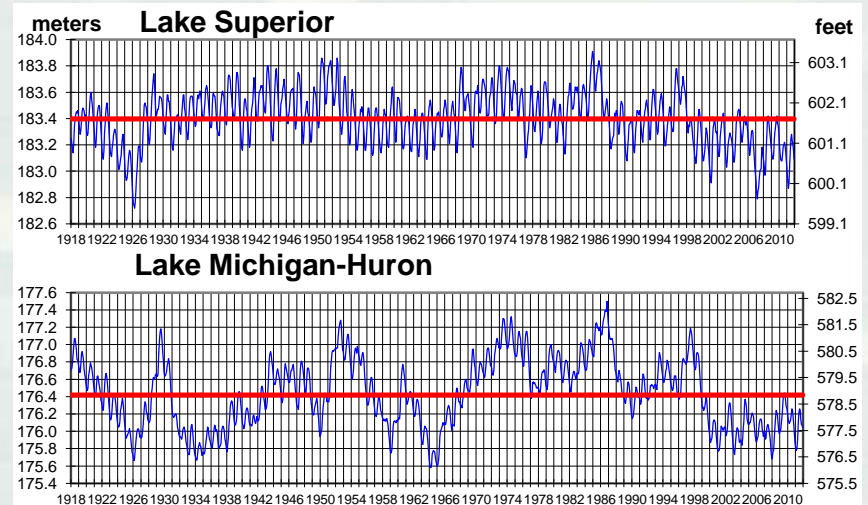


1. Great Lakes
2. Missouri River Basin
3. Mississippi River Basin
4. Ohio River Basin
5. Southwestern Basin
6. South Atlantic Basin

1. Drought Status – Great Lakes



Period of Record Water Levels (1918 – 2011)



- **SITUATION:** All the Great Lakes are below their long term averages, but above cyclical record lows. The current cyclical low began in late 1990s.
 - The most probable forecast has Lake Michigan-Huron tying the record low in December and setting new record lows in Jan, Feb and March.
 - Basin-wide precipitation for the month to date is below average (83%).
- **IMPACT:** Commercial industry is shipping with lighter loads. 16 commercial harbors and the St. Marys River require dredging.
- **ACTION:** Dredging to deeper depths as drought compensation authorized, but not presently funded



2. Drought Status – Missouri River Basin



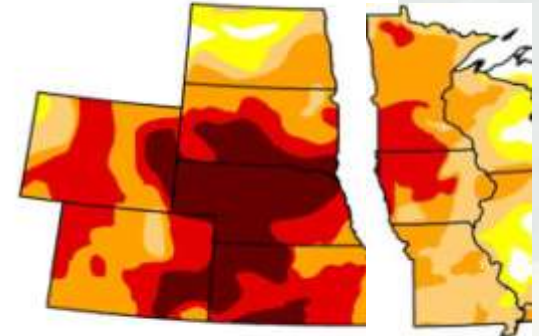
U.S. Drought Monitor High Plains

December 4, 2012
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D1-D4	D1-D4	D5-D6	D6-D7	D7
Current	1.25	88.80	93.40	96.41	98.39	98.91
Last Week (11/27/2012 map)	1.25	88.80	93.40	96.41	98.39	98.91
5 Months Ago (6/10/2012 map)	0.84	99.08	92.43	81.84	61.21	24.54
Start of Calendar Year (1/1/2011 map)	61.88	36.34	18.12	7.22	2.07	0.04
Start of Water Year (10/1/2011 map)	0.00	100.00	96.91	83.80	64.38	24.36
One Year Ago (11/10/2011 map)	60.83	38.07	22.83	11.20	3.18	0.53

Intensity:

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



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

<http://droughtmonitor.unl.edu>

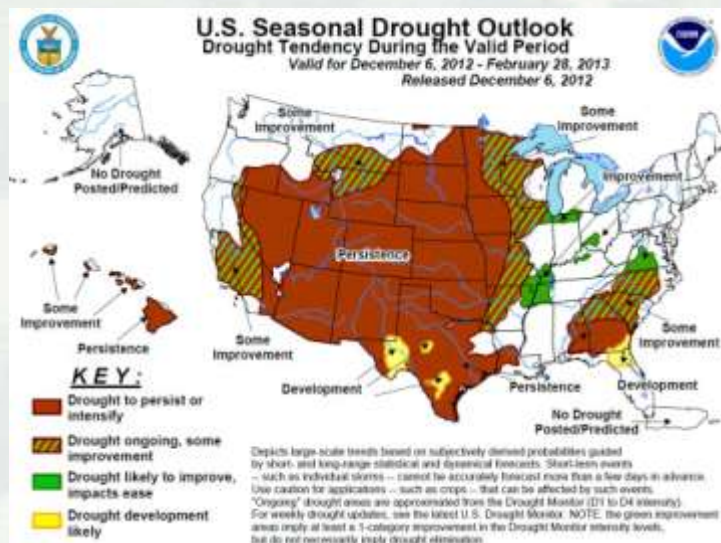


Released Thursday, December 6, 2012
Richard Tinker, NOAA/CPC

- **SITUATION:** Significant drought following the Great Flood of 2011.
 - 20% of 12-year drought storage used in 2012.
 - Releases at Gavins Point - holding at 14,000 cfs as new minimum instead of 12,000 cfs, as several water intakes are within inches of critical shutdown.
- **IMPACT:** Probable impact to 2013 Missouri River Navigation Season – both flow and duration
- **ACTION:** Continue to operate the basins reservoirs under the Missouri River Mainstem Reservoir System Master Water Control Manual



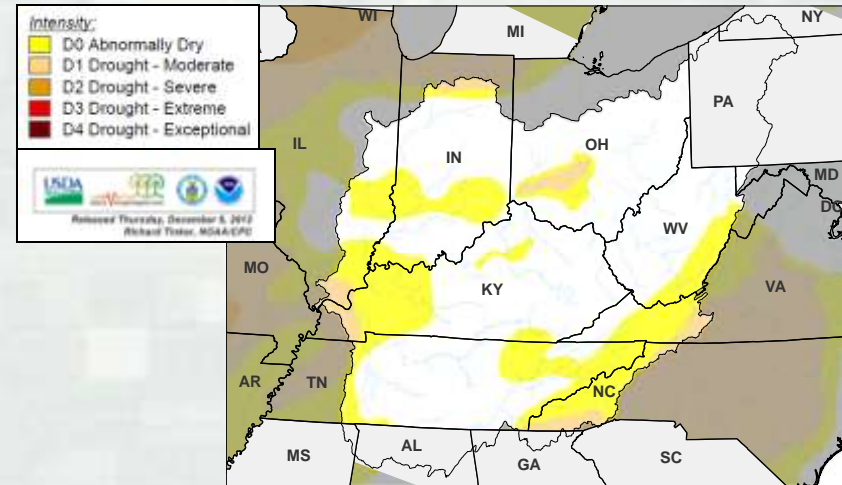
3. Drought Status – Mississippi River Basin



- **SITUATION:** Drought significantly impacting middle Mississippi River navigation, St. Louis to Cairo.
 - Missouri River navigation season ended 1 Dec.
 - Rock pinnacles at Thebes are the controlling depth and width reach
- **IMPACT:** Tow size and draft reductions impacting cargo shipments
- **ACTIONS:** Expedited rock blasting and removal contracts and dredging underway. Being accomplished within FY13 funding.
 - Phase 2 additional rock removal and dredging planning underway for response to persistent drought. Additional funding required to implement.



4. Drought Status – Ohio River Basin

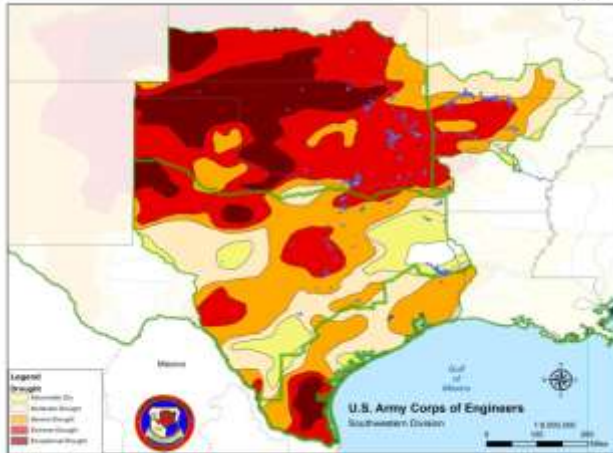


- SITUATION: Recent rain that fell in the Ohio Valley alleviated low water conditions on the lower Ohio and lower Mississippi Rivers.
 - Dam wickets at L/Ds 52 and 53 are down and open river conditions exist at most locations on the lower Ohio.
 - Without additional rainfall, L/D 52 is projected to next raise dam wickets Christmas week.
- IMPACT: Normal seasonal operations underway
- ACTION: Given Upper Mississippi low flow conditions, targeted augmentation from Kentucky – Barkley is likely to resume in early January.



5. Drought Status – Southwestern Basin

U.S. Drought Monitor



Released:
04 Dec 12



- **SITUATION:** Significant drought impacts to water supply, water quality, and other project purposes but minimal impact to navigation.
- **IMPACT:** Drought halted MKARNS navigation in the critical reach between Montgomery Point lock and the lower Mississippi River. Montgomery Point lock closure for maintenance repairs was scheduled based on navigable pass historically being open in December.
- **ACTION:** Continue surveys of navigation channel, be prepared for maintenance dredging if it is needed.



6. Drought Status – South Atlantic Division

U.S. Drought Monitor

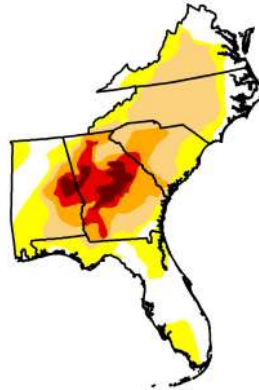
December 4, 2012
Valid 7 a.m. EST

Southeast

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	24.29	75.71	49.33	21.27	9.79	3.43
Last Week (11/27/2012 map)	31.74	68.26	46.75	19.13	8.87	3.43
3 Months Ago (09/04/2012 map)	65.39	34.61	17.90	11.57	8.47	3.46
Start of Calendar Year (12/27/2011 map)	40.38	59.62	43.05	28.62	16.71	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 (11/29/2011 map)	46.23	53.77	42.25	30.92	19.10	0.00

Intensity:

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



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, December 6, 2012
Richard Tinker, NOAA/CPC

Apalachicola-Chattahoochee-Flint (ACF)



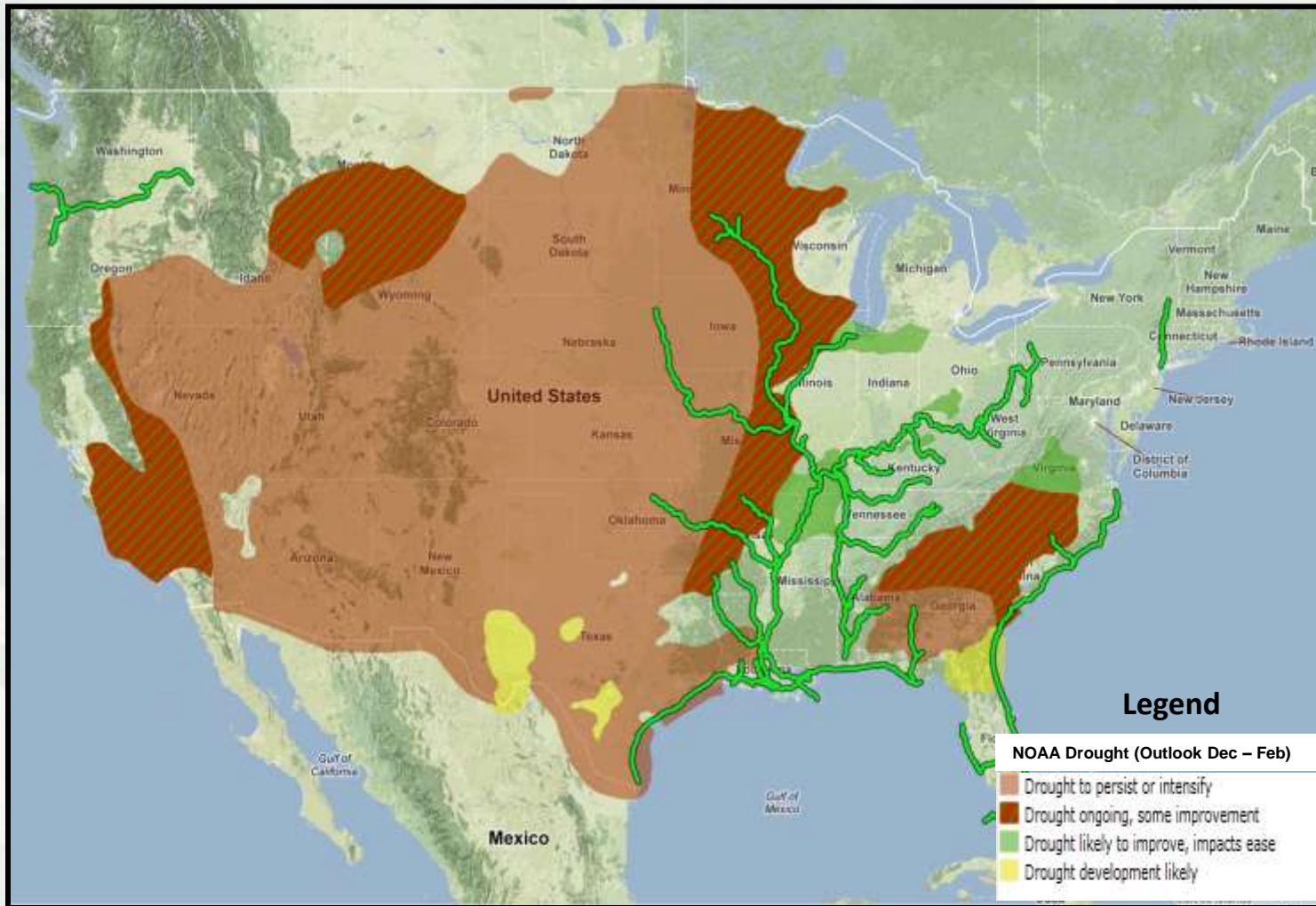
Savannah River Basin (SRB)

- **SITUATION:** Significant drought impacts led to minimal water releases impacting water supply/quality, hydropower and other project purposes.
- **IMPACT:** Minimal impact to navigation.
- **ACTION:** Continue surveys of navigation channel and reporting conditions.



Seasonal Drought Outlook

DEC 2012 – FEB 2013 Precipitation



Summary

- The Missouri River remains a concern with normal precipitation expected through winter in an area already experiencing drought.
- Improvement is expected for the Ohio, Middle and Lower Mississippi as seasonal to above seasonal norms are restored.
- Persistent drought remains in much of the Central and Western US due to normal precipitation being low during this time of year.
- The Northwest Coast received adequate rainfall to remain above drought conditions.

