VIRGINIA DROUGHT MONITORING TASK FORCE

Drought Status Report

September 22, 2011

Statewide precipitation for the current water year, October 1, 2010 to September 23, 2011 is within the normal range (98% of normal). All drought evaluation regions are now reporting normal precipitation for the current water year. Normal precipitation is defined as the mean precipitation for a thirty year period of record. Precipitation greater than 85% and less than 115% of normal is considered to be in the normal range. Statewide precipitation is in the normal range (104%) for the calendar year. Appendix A contains precipitation tables for periods dating from July 1, 2010 through September 23, 2011 provided by the Climatology Office of the University of Virginia.

As of September 25, 2011 the National Weather Service Climate Prediction Center 6-10 day climatologic outlooks call for above normal precipitation for the Northern Virginia area and below normal temperatures for the entire Commonwealth. The 8-14 day outlooks call for above normal precipitation for all but Southwest Virginia and above normal temperatures for the entire Commonwealth. The one month outlook calls for equal chances of below normal, normal and above normal precipitation for the entire Commonwealth, and below normal temperatures for the entire Coastal Plain. The three month outlook calls for equal chances of below normal, normal and above normal precipitation and temperatures statewide.

The September 27, 2011 NOAA U.S. Drought Monitor indicates "abnormally dry" conditions exist in approximately 4% of the Commonwealth, comprised of Henry, Pittsylvania and Halifax Counties. The remainder of Virginia is reported as having no drought conditions (Appendix C). The Seasonal Drought Outlook for the United States from now through November 2011 forecasts "improvement" for the areas or Virginia currently listed as "abnormally dry" and "no drought posted or predicted" for the remainder of the state. (Appendix D).

The Virginia Department of Health (VDH) reports that 4 systems are under voluntary water conservation requirements and no systems are under mandatory water conservation requirements. The VDH report now excludes any systems that have non-drought related supply issues. Of the 43 systems listed in the VDH report, 16 are rated as having a "Better" overall water supply situation, 1 is rated as having a "Worse" overall water supply situation and all other systems are rated as being in a "Stable" situation (Appendix F).

Reports from the Climatology Office of the University of Virginia, the United States Geological Survey, the Virginia Department of Agriculture and Consumer Services and the Virginia Department of Environmental Quality follow.

Report of the Climatology Office of the University of Virginia

September 25, 2011

Most all locations across the Commonwealth have received large amounts of rainfall during September to date. This can be attributed primarily to frontal passages and a persistent upper-air low associated with the remnants of Tropical Storm Lee. Some small areas of Virginia have seen over five times the normal amount for this period. But, despite the overall wet conditions, some small isolated spots were significantly drier than normal.

Averaged over the Drought Regions, the Eastern Shore was driest, with only about normal for the month to date, while the wettest region, Northern Virginia, gathered over 230% of normal. Aggregated back to the beginning of the growing season, all regions show normal or above precipitation.

At this point, we are well into autumn, and have already begun the transition back to having most of our precipitation associated with winter storms and frontal passages. These generally will bring more widespread and spatially uniform moisture across large portions of Virginia. In addition, the tropics are still active and even one tropical system or its remnants can bring large amounts of additional widespread rainfall.

United States Geological Survey
Streamflow and Ground Water Levels

September 22, 2011

The remnants of Tropical Storm Lee brought extensive precipitation to most of Virginia. Streamflow conditions have improved and are in the normal to above normal range of flows across most of the Commonwealth (Appendix G). Drought conditions for streamflow have improved, but still persist in parts of the Roanoke and Chowan Basins (Appendix I).

Groundwater levels (Appendix H) have responded in a similar manner with water levels in wells in the northern parts of the Commonwealth in the normal range. Wells in the Coastal Plain continue to be in the normal to above normal range. Water levels in central Virginia continue to be in the below normal range and are following the spring/summer recession. Once leaf off occurs, groundwater levels are expected to improve as long as precipitation occurs.

Virginia Department of Agriculture and Consumer Services

September 2011

According to the USDA Crop Weather Report released on September 26, 2011, 90% of topsoil moisture ranged from adequate to surplus. Most regions around the state received some, and in some cases excessive, rainfall as a result of two storms: Hurricane Irene and Tropical Storm Lee. Drought conditions in many areas of the state have been greatly diminished and the moisture will make a

tremendous contribution to fall and winter grazing. As of September 27, 2011, Powhatan County is the only locality to formally request the Governor's assistance in obtaining federal agricultural disaster designation due to drought conditions. VDACS has requested that the USDA/Farm Service Agency prepare an official loss assessment report for Powhatan.

Although producers in Northern and Central Virginia and the Shenandoah Valley report sufficient moisture conditions, some areas such as the Northern Neck and Middle Peninsula received excessive rainfall as a result of Hurricane Irene and Tropical Storm Lee. Irrigation ponds and vegetable crops sustained significant damage. There is concern that wet conditions will delay strawberry plantings and could negatively impact the 2012 harvest.

With fall harvest underway, reports on the crop yields vary widely. Southwest and Southern Virginia reported that August was very hot and dry in that region and corn may be negatively impacted. Northern Virginia farmers reported that late August and September rainfall helped crops significantly and it is expected to be a good crop year. Other areas, such as some parts of Central and Eastern Virginia, reported that the late summer rains came too late to significantly improve some crop yields.

Virginia Department of Environmental Quality
Conditions of Major Reservoirs

Two large reservoirs statewide are at drought watch levels. Four large multi-purpose reservoirs are identified as drought indicators in the *Virginia Drought Assessment and Response Plan* (Plan); Smith Mountain Lake, Lake Moomaw, Lake Anna and Kerr Reservoir. Lake Moomaw and Lake Anna are currently at levels above their Drought Watch stages. Kerr Reservoir is 3.41 feet below its Drought Watch stage and Smith Mountain Lake is 0.81 feet below Drought Watch stage. Below is a summary of large reservoir conditions:

- On September 22, Lake Moomaw on the Jackson River was at 1568.52 feet, and was dropping at a rate of approximately 0.1 ft per day. Approximately 48% of conservation storage remains. Lake Moomaw is 3.52 ft above its Drought Watch level (1565 feet MSL).

- On September 22, Kerr Reservoir was at 296.09 feet, approximately 3.41 ft below the Guide Curve, and was anticipated to drop to 295.50 ft by September 29, 2011. Drought Watch status is reached at greater than 3 ft below the Guide Curve.

- On September 22, Smith Mountain Lake was at elevation 792.19 ft, approximately 0.81 feet below Drought Watch level. The Drought Watch stage for Smith Mountain Lake is elevation 793 feet and below.

- On September 22, Lake Anna was at elevation 249.9 ft (1.9 ft above drought watch). The Drought Watch stage for Lake Anna Lake is elevation 248 feet and below.

APPENDIX A

Precipitation Departures by Drought Evaluation Region

PRELIMINARY PRECIPITATION SUMMARY

Prepared: 9/25/11

	DROUGHT REGION	OBSERVED	Sep 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	5.17	2.65	2.51	195%
2	New River	5.33	2.61	2.72	204%
3	Roanoke	5.05	3.24	1.81	156%
4	Upper James	4.54	2.68	1.86	169%
5	Middle James	5.57	3.17	2.40	176%
6	Shenandoah	4.89	2.81	2.08	174%
7	Northern Virginia	7.31	3.12	4.19	234%
8	Northern Piedmont	4.54	3.28	1.26	138%
9	Chowan	4.68	3.40	1.28	138%
10	Northern Coastal Plain	4.87	3.14	1.73	155%
11	York-James	6.21	3.76	2.45	165%
12	Southeast Virginia	5.26	3.40	1.86	155%
13	Eastern Shore	2.69	2.77	-0.08	97%
	Statewide	5.14	3.07	2.07	168%

	DROUGHT REGION	OBSERVED	Aug 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	7.71	6.48	1.22	119%
2	New River	7.68	5.92	1.75	130%
3	Roanoke	7.81	6.96	0.85	112%
4	Upper James	7.31	6.01	1.30	122%
5	Middle James	11.13	6.99	4.15	159%
6	Shenandoah	8.68	6.14	2.53	141%
7	Northern Virginia	12.00	6.97	5.03	172%
8	Northern Piedmont	9.52	7.10	2.41	134%
9	Chowan	13.58	7.71	5.88	176%
10	Northern Coastal Plain	13.96	7.00	6.96	200%
11	York-James	16.99	8.63	8.36	197%
12	Southeast Virginia	17.38	8.52	8.86	204%
13	Eastern Shore	12.28	6.64	5.64	185%
	Statewide	10.22	6.90	3.32	148%

	DROUGHT REGION	OBSERVED	Jul 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	13.13	10.96	2.17	120%
2	New River	11.50	9.71	1.79	118%
3	Roanoke	11.60	11.35	0.24	102%
4	Upper James	9.86	10.05	-0.19	98%
5	Middle James	16.18	11.40	4.79	142%
6	Shenandoah	11.39	9.90	1.49	115%
7	Northern Virginia	14.31	10.74	3.57	133%
8	Northern Piedmont	11.59	11.50	0.09	101%

9	Chowan	19.94	12.22	7.72	163%
10	Northern Coastal Plain	18.36	11.45	6.91	160%
11	York-James	25.63	13.73	11.90	187%
12	Southeast Virginia	25.72	13.59	12.13	189%
13	Eastern Shore	15.99	10.64	5.36	150%
	Statewide	14.54	11.24	3.30	129%

	DROUGHT REGION	OBSERVED	Jun 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	16.26	15.10	1.16	108%
2	New River	13.70	13.56	0.13	101%
3	Roanoke	14.27	15.24	-0.98	94%
4	Upper James	12.27	13.76	-1.50	89%
5	Middle James	19.61	14.91	4.71	132%
6	Shenandoah	14.68	13.61	1.06	108%
7	Northern Virginia	16.28	14.60	1.68	111%
8	Northern Piedmont	14.32	15.51	-1.19	92%
9	Chowan	23.11	15.87	7.25	146%
10	Northern Coastal Plain	22.30	15.01	7.29	149%
11	York-James	31.33	17.14	14.19	183%
12	Southeast Virginia	29.63	17.20	12.44	172%
13	Eastern Shore	22.27	13.62	8.65	164%
	Statewide	17.64	15.03	2.61	117%

	DROUGHT REGION	OBSERVED	May 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	21.60	19.92	1.68	108%
2	New River	19.54	17.77	1.76	110%
3	Roanoke	18.96	19.57	-0.61	97%
4	Upper James	17.35	18.04	-0.69	96%
5	Middle James	24.04	19.15	4.90	126%
6	Shenandoah	20.11	17.45	2.66	115%
7	Northern Virginia	20.27	18.94	1.33	107%
8	Northern Piedmont	19.41	19.73	-0.33	98%
9	Chowan	25.84	19.96	5.89	129%
10	Northern Coastal Plain	24.69	19.17	5.53	129%
11	York-James	33.23	21.41	11.82	155%
12	Southeast Virginia	32.08	21.06	11.02	152%
13	Eastern Shore	23.37	17.14	6.23	136%
	Statewide	22.01	19.29	2.72	114%

	DROUGHT REGION	OBSERVED	Apr 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	27.64	23.68	3.95	117%
2	New River	25.23	21.32	3.90	118%
3	Roanoke	23.45	23.37	0.08	100%
4	Upper James	24.78	21.44	3.33	116%
5	Middle James	28.03	22.49	5.55	125%
6	Shenandoah	27.37	20.37	6.99	134%
7	Northern Virginia	25.13	22.24	2.88	113%
8	Northern Piedmont	24.91	23.02	1.89	108%

9	Chowan	27.78	23.39	4.40	119%
10	Northern Coastal Plain	27.32	22.26	5.06	123%
11	York-James	34.47	24.71	9.76	140%
12	Southeast Virginia	33.71	24.31	9.40	139%
13	Eastern Shore	24.89	20.06	4.83	124%
	Statewide	26.66	22.71	3.95	117%

	DROUGHT REGION	OBSERVED	Mar 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	34.31	27.93	6.37	123%
2	New River	31.65	24.99	6.66	127%
3	Roanoke	28.77	27.64	1.13	104%
4	Upper James	30.49	25.23	5.26	121%
5	Middle James	33.44	26.55	6.89	126%
6	Shenandoah	31.70	23.57	8.12	134%
7	Northern Virginia	30.01	25.90	4.11	116%
8	Northern Piedmont	30.42	26.83	3.59	113%
9	Chowan	31.90	27.76	4.15	115%
10	Northern Coastal Plain	31.32	26.54	4.78	118%
11	York-James	37.47	29.40	8.07	127%
12	Southeast Virginia	37.11	28.51	8.60	130%
13	Eastern Shore	28.13	24.37	3.76	115%
	Statewide	31.81	26.75	5.06	119%

	DROUGHT REGION	OBSERVED	Feb 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	36.60	31.51	5.09	116%
2	New River	33.45	27.92	5.53	120%
3	Roanoke	30.23	30.95	-0.72	98%
4	Upper James	31.98	28.08	3.90	114%
5	Middle James	34.83	29.67	5.16	117%
6	Shenandoah	33.35	25.98	7.37	128%
7	Northern Virginia	31.90	28.57	3.33	112%
8	Northern Piedmont	31.74	29.80	1.94	107%
9	Chowan	33.08	30.93	2.16	107%
10	Northern Coastal Plain	32.48	29.68	2.81	109%
11	York-James	38.74	32.93	5.81	118%
12	Southeast Virginia	38.72	32.01	6.71	121%
13	Eastern Shore	29.58	27.56	2.02	107%
	Statewide	33.36	29.88	3.48	112%

	DROUGHT REGION	OBSERVED	Jan 1, 2011 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	38.39	35.24	3.14	109%
2	New River	34.37	31.13	3.23	110%
3	Roanoke	31.40	34.87	-3.47	90%
4	Upper James	32.89	31.36	1.53	105%
5	Middle James	36.37	33.33	3.04	109%
6	Shenandoah	34.37	28.83	5.54	119%
7	Northern Virginia	33.67	31.85	1.82	106%
8	Northern Piedmont	33.22	33.32	-0.10	100%

9	Chowan	34.68	35.04	-0.36	99%
10	Northern Coastal Plain	34.04	33.43	0.62	102%
11	York-James	41.20	37.07	4.13	111%
12	Southeast Virginia	41.80	36.17	5.64	116%
13	Eastern Shore	32.44	31.12	1.33	104%
	Statewide	34.83	33.52	1.32	104%

	DROUGHT REGION	OBSERVED	Dec 1, 2010 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	42.94	38.88	4.06	110%
2	New River	38.14	33.84	4.29	113%
3	Roanoke	34.60	38.12	-3.52	91%
4	Upper James	35.85	34.31	1.53	104%
5	Middle James	39.06	36.50	2.56	107%
6	Shenandoah	36.85	31.42	5.43	117%
7	Northern Virginia	35.46	34.95	0.51	101%
8	Northern Piedmont	35.75	36.60	-0.85	98%
9	Chowan	37.93	38.06	-0.12	100%
10	Northern Coastal Plain	35.76	36.71	-0.94	97%
11	York-James	43.19	40.46	2.73	107%
12	Southeast Virginia	44.65	39.35	5.30	113%
13	Eastern Shore	35.57	34.36	1.22	104%
	Statewide	37.81	36.64	1.17	103%

	DROUGHT REGION	OBSERVED	Nov 1, 2010 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	46.27	42.16	4.11	110%
2	New River	41.19	36.87	4.31	112%
3	Roanoke	36.95	41.48	-4.53	89%
4	Upper James	38.36	37.67	0.68	102%
5	Middle James	41.39	40.01	1.38	103%
6	Shenandoah	38.88	34.47	4.40	113%
7	Northern Virginia	37.16	38.36	-1.20	97%
8	Northern Piedmont	38.03	40.40	-2.37	94%
9	Chowan	39.78	41.17	-1.38	97%
10	Northern Coastal Plain	37.78	39.85	-2.06	95%
11	York-James	44.76	43.83	0.93	102%
12	Southeast Virginia	46.37	42.42	3.95	109%
13	Eastern Shore	36.78	37.30	-0.52	99%
	Statewide	40.14	39.87	0.27	101%

	DROUGHT REGION	OBSERVED	Oct 1, 2010 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	48.68	45.04	3.64	108%
2	New River	43.11	40.04	3.06	108%
3	Roanoke	39.77	45.19	-5.43	88%
4	Upper James	40.58	40.92	-0.35	99%
5	Middle James	44.13	43.85	0.28	101%
6	Shenandoah	40.12	37.66	2.46	107%
7	Northern Virginia	39.81	41.84	-2.03	95%

8	Northern Piedmont	40.32	44.39	-4.07	91%
9	Chowan	42.33	44.75	-2.41	95%
10	Northern Coastal Plain	40.48	43.36	-2.87	93%
11	York-James	48.31	47.36	0.95	102%
12	Southeast Virginia	49.41	46.08	3.33	107%
13	Eastern Shore	39.43	40.51	-1.08	97%
	Statewide	42.59	43.37	-0.78	98%

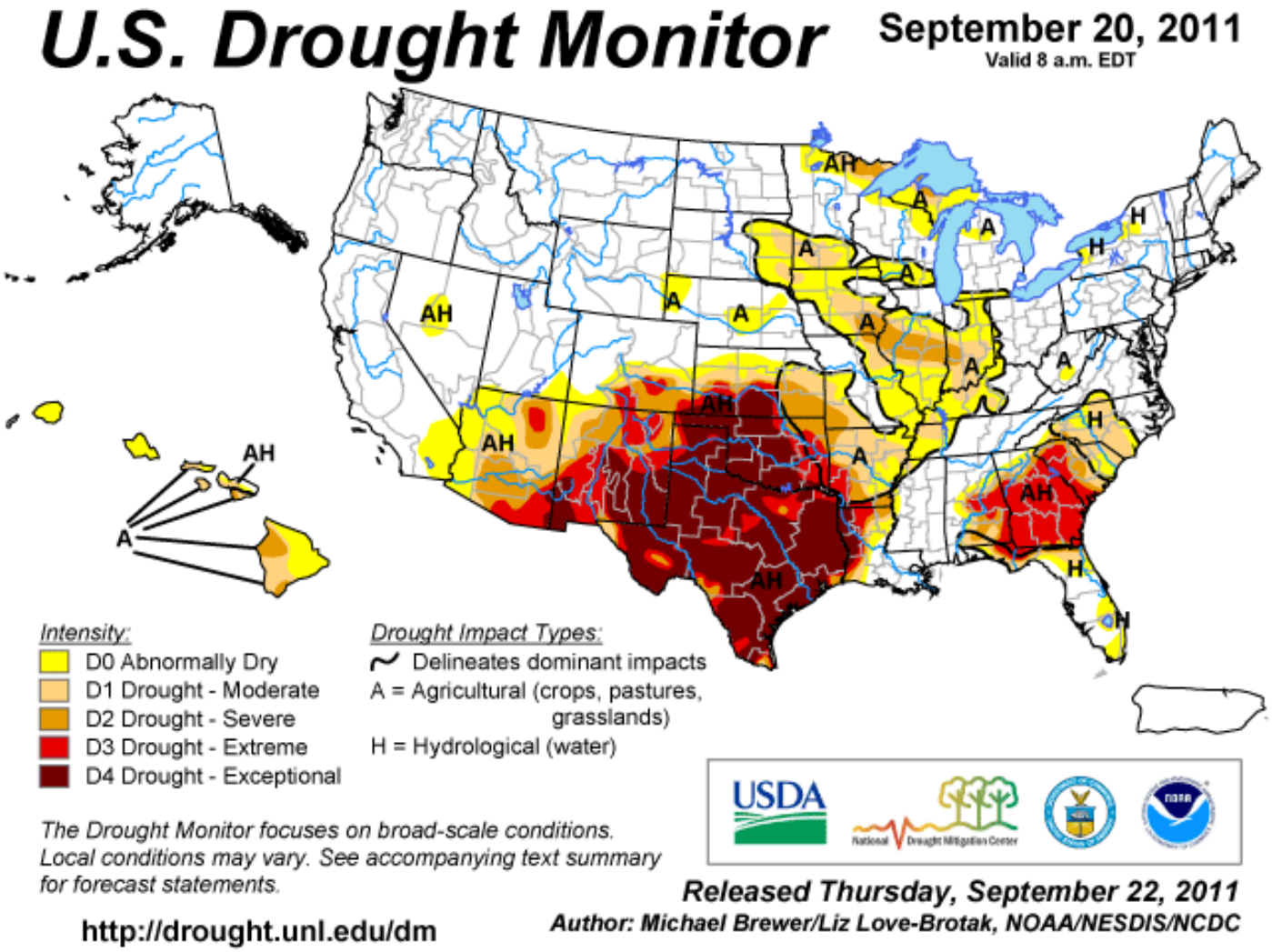
	DROUGHT REGION	OBSERVED	Sep 1, 2010 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	51.00	48.50	2.49	105%
2	New River	47.06	43.45	3.61	108%
3	Roanoke	46.02	49.42	-3.40	93%
4	Upper James	46.09	44.42	1.67	104%
5	Middle James	50.24	47.98	2.26	105%
6	Shenandoah	45.12	41.33	3.79	109%
7	Northern Virginia	46.22	45.91	0.31	101%
8	Northern Piedmont	46.61	48.67	-2.06	96%
9	Chowan	50.63	49.18	1.45	103%
10	Northern Coastal Plain	48.16	47.45	0.72	102%
11	York-James	57.58	52.26	5.32	110%
12	Southeast Virginia	62.69	50.51	12.19	124%
13	Eastern Shore	43.99	44.12	-0.13	100%
	Statewide	48.63	47.37	1.26	103%

	DROUGHT REGION	OBSERVED	Aug 1, 2010 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	56.13	52.33	3.80	107%
2	New River	52.30	46.76	5.54	112%
3	Roanoke	52.46	53.14	-0.69	99%
4	Upper James	49.07	47.75	1.32	103%
5	Middle James	54.42	51.80	2.63	105%
6	Shenandoah	47.82	44.66	3.16	107%
7	Northern Virginia	50.49	49.76	0.73	101%
8	Northern Piedmont	50.02	52.49	-2.47	95%
9	Chowan	54.90	53.49	1.41	103%
10	Northern Coastal Plain	52.50	51.31	1.20	102%
11	York-James	59.28	57.13	2.15	104%
12	Southeast Virginia	65.88	55.63	10.26	118%
13	Eastern Shore	48.77	47.99	0.78	102%
	Statewide	52.99	51.20	1.80	104%

	DROUGHT REGION	OBSERVED	Jul 1, 2010 NORMAL	- Sep 23, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	59.86	56.81	3.05	105%
2	New River	55.15	50.55	4.59	109%
3	Roanoke	55.71	57.53	-1.82	97%
4	Upper James	52.72	51.79	0.93	102%
5	Middle James	56.29	56.21	0.08	100%
6	Shenandoah	51.20	48.42	2.78	106%
7	Northern Virginia	53.95	53.53	0.42	101%

8	Northern Piedmont	52.35	56.89	-4.54	92%
9	Chowan	56.59	58.00	-1.41	98%
10	Northern Coastal Plain	53.96	55.76	-1.79	97%
11	York-James	62.64	62.23	0.42	101%
12	Southeast Virginia	69.61	60.70	8.92	115%
13	Eastern Shore	50.86	51.99	-1.13	98%
	Statewide	55.77	55.54	0.23	100%

APPENDIX B


U.S. Drought Monitor
September 20, 2011
Valid 8 a.m. EDT
Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
D2 Drought - Severe
D3 Drought - Extreme
D4 Drought - Exceptional
Drought Impact Types:
Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://drought.unl.edu/dm
USDA
Released Thursday, September 22, 2011
Author: Michael Brewer/Liz Love-Brotak, NOAA/NESDIS/NCDC

APPENDIX C

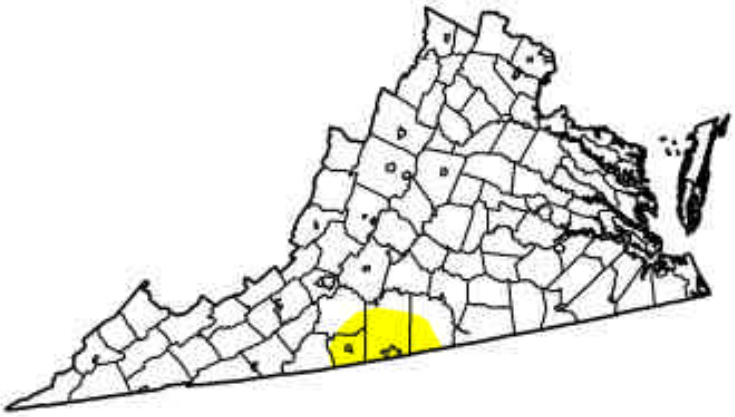
U.S. Drought Monitor

September 27, 2011
Valid 7 a.m. EST

Virginia

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	95.83	4.17	0.00	0.00	0.00	0.00
Last Week (09/20/2011 map)	95.48	4.52	1.47	0.00	0.00	0.00
3 Months Ago (06/28/2011 map)	66.14	33.86	19.26	0.82	0.00	0.00
Start of Calendar Year (12/28/2010 map)	81.67	18.33	0.00	0.00	0.00	0.00
Start of Water Year (09/28/2010 map)	13.71	86.29	49.67	28.15	0.79	0.00
One Year Ago (09/21/2010 map)	10.90	89.10	50.31	31.33	0.79	0.00



Intensity:

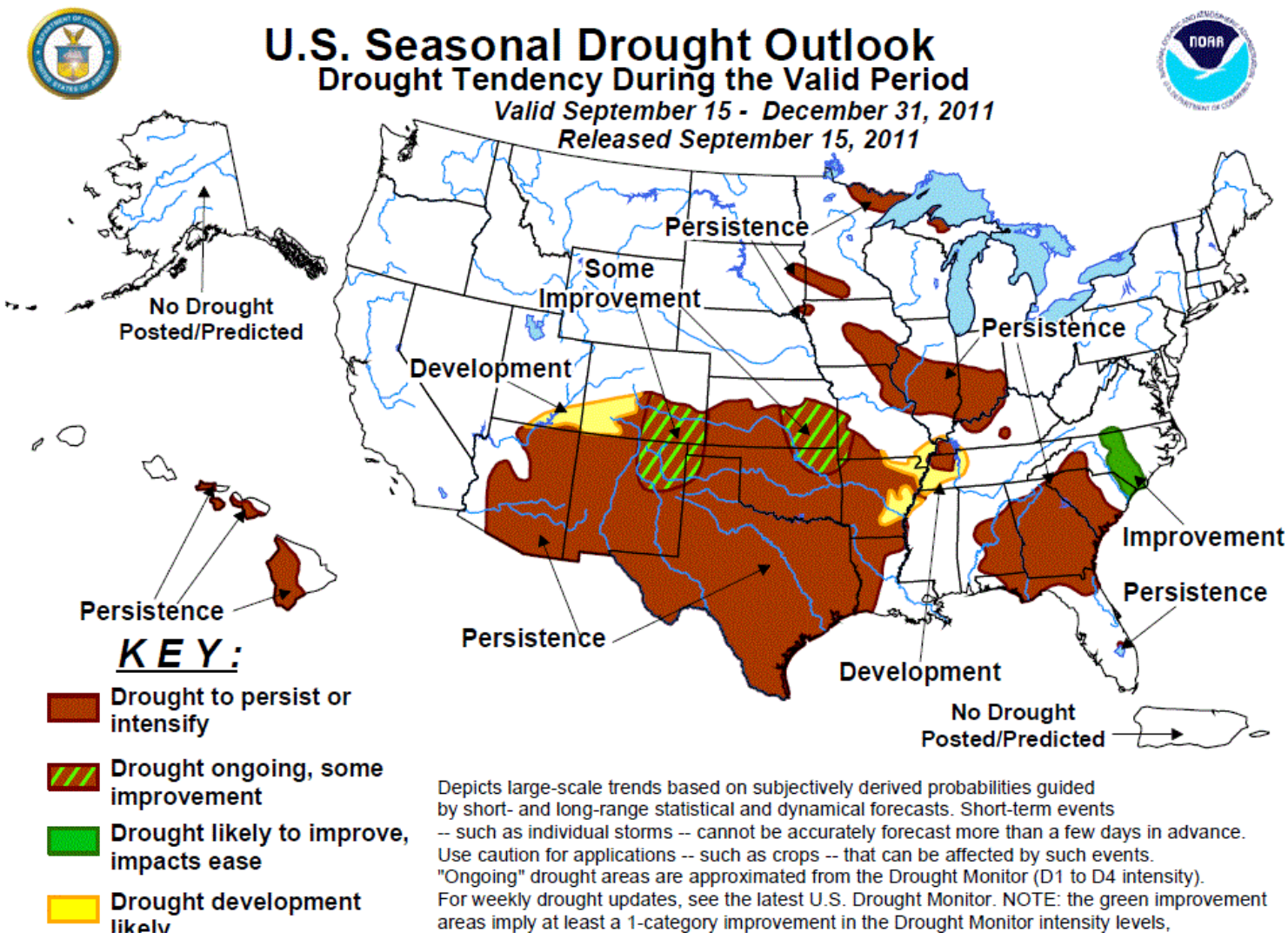
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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

http://drought.unl.edu/dm

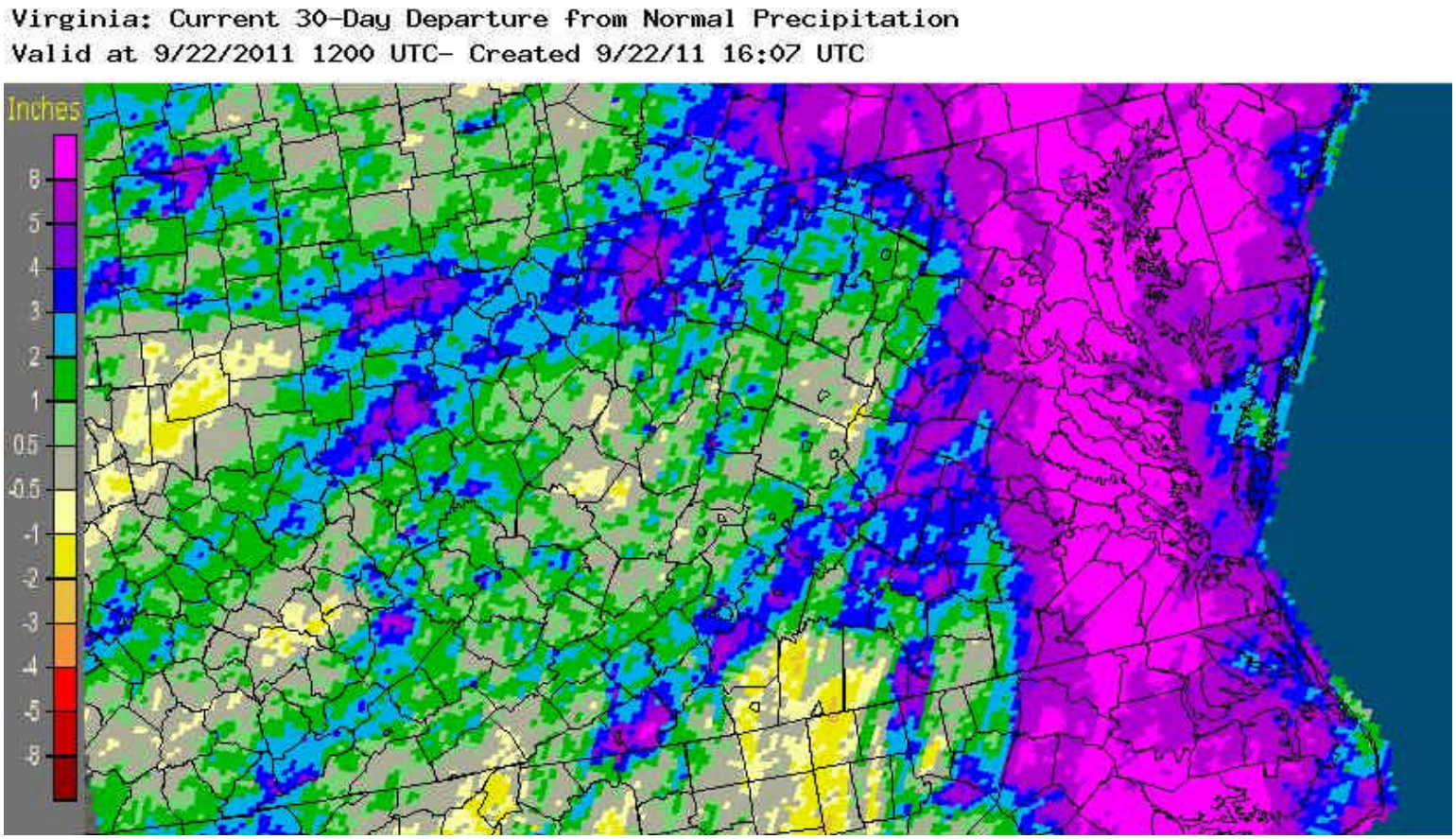
Released Thursday, September 29, 2011
Michael Brewer, National Climatic Data Center, NOAA

APPENDIX D


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid September 15 - December 31, 2011
Released September 15, 2011
NOAA
No Drought
Posted/Predicted
Persistence
Some
Improvement
Development
Persistence
Persistence
Persistence
Development
Improvement
Persistence
No Drought
Posted/Predicted
KEY:
Drought to persist or intensify
Drought ongoing, some improvement
Drought likely to improve, impacts ease
Drought development likely
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels,

APPENDIX E

30-Day Departure from Normal Precipitation
Valid September 1, 2011



APPENDIX F
Condition of Public Water Supplies
August 25, 2011

ODW Drought Situation Report

Date: **9/22/11**

	Restriction totals	Population Totals
Mandatory	0	0
Voluntary	4	56,682
Total	**4**	56,682

16 systems are in Better Condition

1 system in Worse Condition

N-None
M-Mandatory
V-Voluntary

B-Better
S-Stable/Same
W-Worse

PWSID	Waterworks	Source Name	Restrictions	Situation	Population Served
3053280	DCWA Central (Dinwiddie County)	Appomattox River Water Authority (ARWA)	N	B-9/19/2011 - Call for voluntary restrictions lifted as of 9/9/2011 due to increase in lake level.	6,800
3081550	GCWSA - Jarratt	Nottoway River	N	S - 9/19/2011 - River level sufficient to allow plant operation at 1.9 mgd. Gage at Stony Creek indicates 3.18 feet.	7,190
3149700	Puddledock Road	ARWA	N	B-9/19/2011 - Call for voluntary restrictions lifted as of 9/9/2011 due to increase in lake level.	9,723

3550051	Chesapeake	Northwest River, City of Norfolk Raw Water (Lake Gaston)	N	B -09/20/2011 Total rainfall for September 2.35 inches. The water levels are back to normal. Continuing to purchase raw water from Norfolk (7.0 MGD average).	108,657
3570150	Colonial Heights	Purchased from Appomattox River Water Authority	V	S - 09/19/2011 - Consecutive system to ARWA - decided to go to Voluntary restriction on own. ARWA lifted call for restrictions based on increase in lake level.	17,286
3595250	Emporia	Meherrin River	N	S - 09/19/2011 - Reservoir level sufficient for normal operation.	5,600
3670800	Virginia-American Water Company (Hopewell)	Appomattox & James Rivers	N	S - 09/19/2011 - Level at intakes sufficient to supply plant.	28000 - Primary / 45463 - Total
3700500	Newport News	Chickahomony River, Skiffs Creek, Diascand, Little Creek, Harwoods Mill, Lee Hall	N	B - 9/18/11 * Reservoir Status: 97.5 % Full * 36.7 Million Gallons Delivered	415,000
3710100	Norfolk	Lake Prince, Lake Burnt Mills, Western Branch reservoir, Nottoway River, Blackwater River, 4 western wells; Little Creek reservoir, Lakes Smith, Lawson, Whitehurst, and Wright. Lake Gaston.	N	B - 9/19/2011 - Reservoirs at 100% storage capacity (from 86.3% on 8/22). Historical average is 85.3%. 7.8 MGD being pumped from Lake Gaston (from 48.9 MGD on 8/22) .	261,250 - Primary / 755,617 - Total

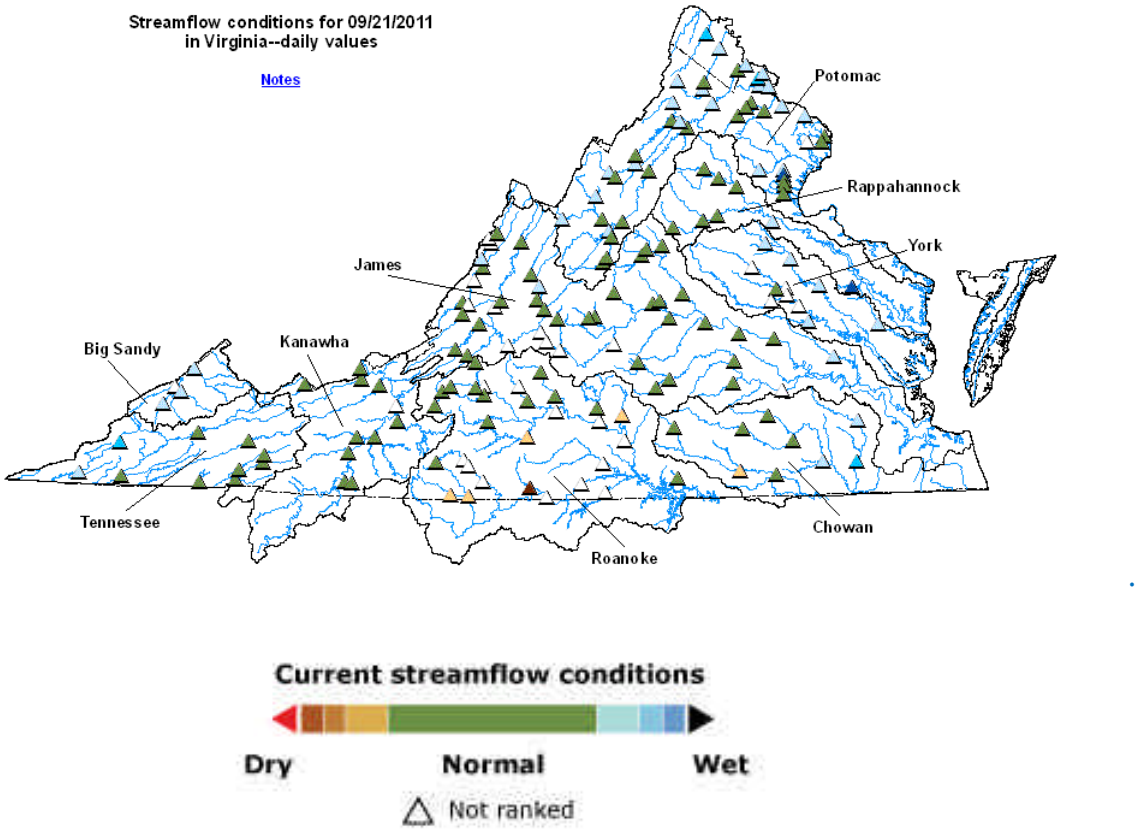
3730750	Petersburg	ARWA	V	S - 9/20/2011 - Generally follow ARWA recommendations on restrictions; however have not lifted voluntary restrictions in City yet.	33,740
3740600	Portsmouth	Lakes Cohoon, Meade, Kilby, and Speights Run	N	B - 9/16/11 - Reservoirs at 100% storage capacity (from 69% on 8/19). Historical average is 88%. Emergency wells are off.	100,400 - Primary / 120,400 - Total
3800805	Suffolk	Lone Star Lakes, Cumps Mill Pond	N	B - 9/19/2011 - Current lake levels Southern Lakes 75%, Lone Star 98.82% and Crumps Mill 90.48%. Total rainfall from 9/12/2011 through 9/18/2011 is 2.13 inches.	66,631
3830850	Williamsburg	Waller Mill Reservoir	N	B - 9/20/11: 9" above primary spillway - about 97% of usable capacity.	16,400
4041035	Appomattox River Water Authority	Surface water; Lake Chesdin	N	S	200,000
4041845	Chesterfield Co Central Water System	Surface water; Swift Creek reservoir; purchases finished water	N	S	286,000
4057800	Tappahannock, Town Of	Groundwater wells	N	S	2,100
4073311	Gloucester Co Water Treatment Plant	Surface water, Beaverdam reservoir; 2 deep groundwater wells	N	B	12,000
4075283	Eastern Goochland Central Water System	Purchased surface water	N	S	2,500
4085398	Hanover Suburban Water System	Surface water; North Anna River; some groundwater wells; purchases finished water	N	S	71,000

4087125	Henrico County Water System	Surface water; James River	N	S	289,000
4101900	West Point, Town Of	Groundwater wells	N	S	3,000
4127110	Delmarva Properties	Groundwater wells	N	S	7,700
4145675	Powhatan Courthouse	Groundwater wells	N	S	2,600
4193280	Colonial Beach, Town Of	Groundwater wells	N	S	3,300
4760100	Richmond, City Of	Surface water; James River	N	S	197,000
5009050	Town of Amherst	Buffalo River	N	S- Several inches of rain in the past couple of days per Operator	5,076
5009250	Amherst County Service Authority	Graham Creek Reservoir	N	S	13,338
5011050	Town of Appomattox	Wells	N	S- Several inches of rain in the past few days	1,761
5141640	Town of Stuart	South Mayo River	N	B - Waterworks can be removed from this list.	1,500
5143114	Town of Chatham	Cherrystone Creek	V	B - Town requested voluntary conservation on 8/24/2011. Still in effect, Cherrystone Creek Reservoir has increased in level ~18 inches and near normal spillway	2,500
5143210	Town of Gretna	Georges Creek Reservoir	N	S - Reservoir full	2,500
5690400	City of Martinsville	Beaver Creek Reservoir	N	W - Reservoir down ~1.8 foot on 9/13 which is not severe but continuing to drop	16,000
6033085	Caroline Utility System	Groundwater wells	N	B - Mandatory water use restriction of Emergency Level 4 on 7/21/11 due to high	3,600 Primary / 6,600 - Total

				temperatures. Restrictions lifted 9/14/11. (Updated 9/21/11)	
6047500	Town of Culpeper	Surface water - Lake Pelham	N	S -As of 9/19, Lake Pelham surface was 4.5 inches above invert of overflow	14,200
6059501	Fairfax Water	Surface Water - Potomac River and Occoquan Reservoir	N	S	823,216 - Primary / 1.8M - Total
6061600	Town of Warrenton	Surface (Cedar Run) and groundwater	N	B - Warrenton Reservoir surface elevation is 443 ft on 9/21 (1.8 foot increase since last report) vs 445.3 ft full.	11,225
6107150	Town of Hamilton	Groundwater	N	B - Waterworks can be removed from this list.	2,000
6107300	Town of Leesburg	Surface Water - Potomac River	N	S - Potomac River flow is sufficient - 4,490 CFS	46,300
6107600	Town of Purcellville	Surface water/groundwater	N	B - Reservoir Full	6,300
6107650	Town of Round Hill	Groundwater	V	S - No Source Problems	3,156
6137500	Town of Orange	Surface: Rapidan River	N	S - 14-day running average of flow is 795 cfs.	4,500
6137999	Wilderness	Surface - Rapidan River	N	S - Sufficient flowrate	11,681
6600100	City of Fairfax	Surface Water	N	B - Sufficient flow in Goose Creek	24,000

APPENDIX G

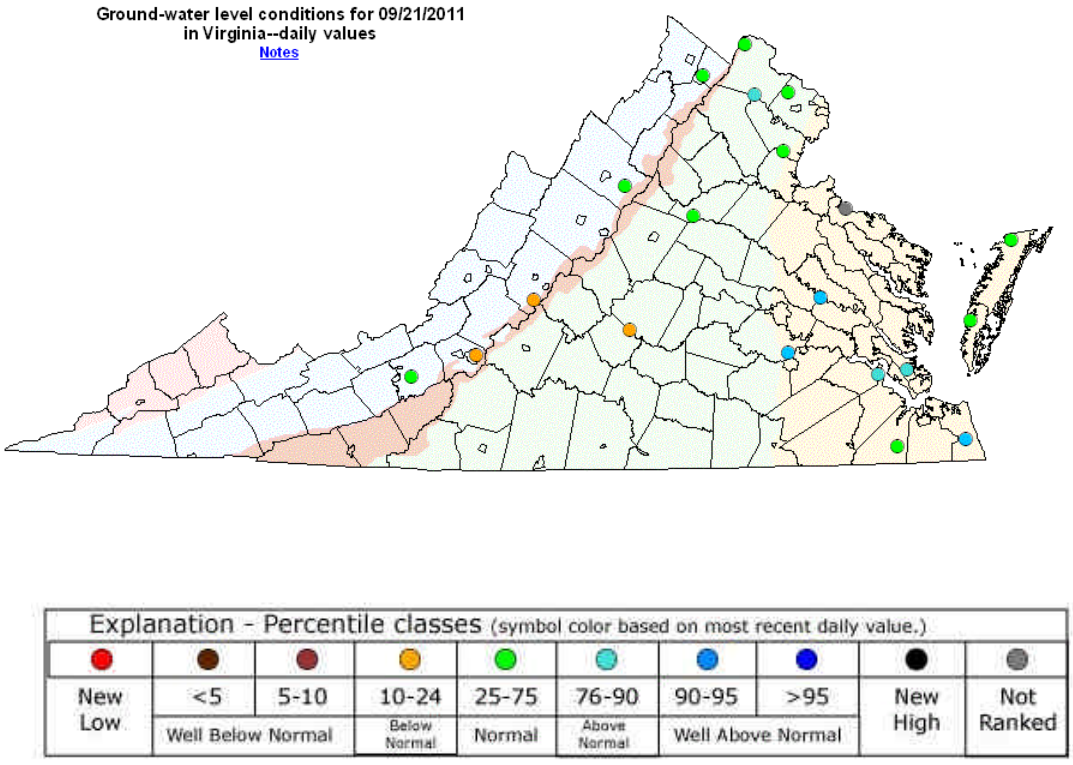
USGS Streamflow Conditions for September 21, 2011



Streamflow conditions in Virginia for September 21, 2011

APPENDIX H

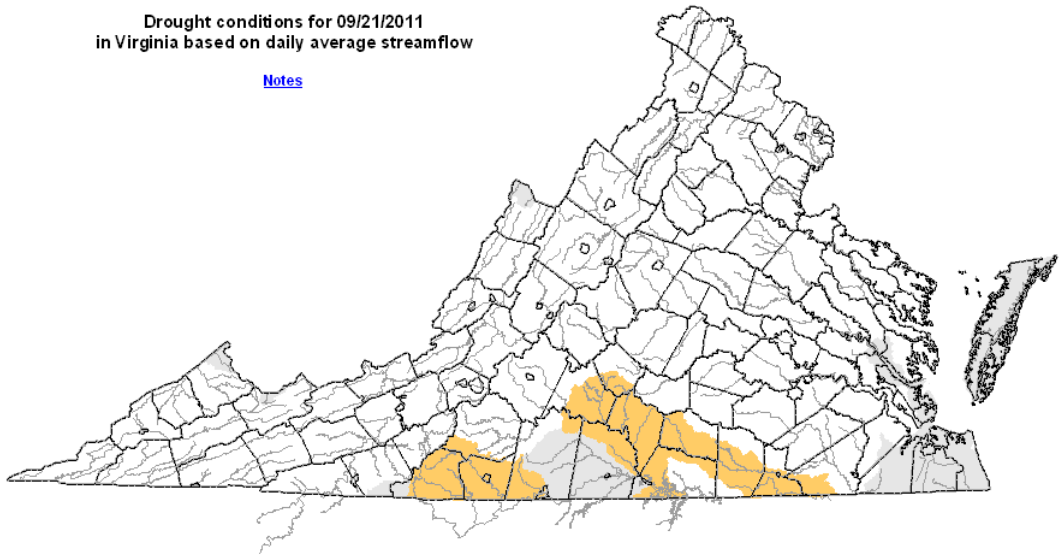
Groundwater Level Conditions
September 21, 2011



Groundwater-level conditions in Virginia for September, 2011

APPENDIX I

Drought Conditions Based on Daily Average Streamflow
September 21, 2011



Drought conditions for September 21, 2011 in Virginia.