

DROUGHT MONITORING TASK FORCE

Drought Status Report

October 31, 2008

Statewide precipitation for the previous water year (October 1, 2007 through September 30, 2008) was in the normal range (85% of normal). Statewide precipitation for the period from October 1, 2006 through October 23, 2008 was below normal (79% of normal). Statewide precipitation for the period from January 1, 2008 through October 23, 2008 below normal (79% of normal). Precipitation greater than 85% of normal is considered to be in the normal range. Statewide precipitation for the current water year (from October 1 through October 23) was well below normal (25%), and precipitation was below normal in all drought evaluation areas. Welcomed precipitation was received in much of the state during the month of September (statewide precipitation of 117%), however the Big Sandy (47%), New River (71%) and Upper James (62%) drought evaluation regions received below normal precipitation during this period. The following drought evaluation regions are currently below normal for the period beginning October 1, 2006; Big Sandy (72%), New River (77%), Roanoke (78%), Upper James (79%), Middle James (82%), Shenandoah (84%), Northern Piedmont (80%), Chowan (82%) Northern Coastal Plain (78%) and York-James (73%), and Southeast Virginia (83%). Cumulative precipitation deficits for the period beginning October 1, 2006 generally increased one to five percentage points since the last report due to the unusually dry conditions during the first three weeks of October. The Northern Virginia and Eastern Shore drought evaluation areas are currently in the normal range of precipitation for this extended period. Appendix A contains precipitation tables for periods dating to October 1, 2006 provided by the Climatology Office of the University of Virginia. The long-range monthly climatologic outlook calls for equal chances of below normal, normal and above normal temperatures and precipitation for the Commonwealth through November of 2008. The long-range seasonal outlook calls for equal chances of below normal, normal and above normal temperatures for the Commonwealth through January 2009. The long-range seasonal outlook calls for equal chances of below normal, normal and above normal precipitation for most of the Commonwealth through January 2009, with the southern quarter of the state having the chance for below normal precipitation for the same period.

The latest NOAA drought monitor indicates significant some increases in drought conditions in the Commonwealth since the last report. About one half of the Commonwealth is currently experiencing drought conditions that range from abnormally dry to severe drought. The western half of the Commonwealth as well as a narrow strip along the North Carolina border is currently experiencing these drought conditions. The drought monitor is included as Appendix B. Appendix C contains information from the national drought monitor with only Virginia displayed. The NOAA seasonal drought outlook through December 2008 indicates that drought conditions are likely to persist in the areas of western Virginia currently experiencing drought. The seasonal drought outlook is included as Appendix D.

Seven day average streamflows for September 21 are generally below normal in the western half of the Commonwealth with conditions indicative of severe hydrologic drought (< 5th percentile) in the upper Roanoke River basin. While drought monitoring ground water levels data is scarce, ground water levels are generally well below normal levels in areas west of Interstate 95 and in the southern Coastal Plain. Ground water levels are in the range of normal levels on the Eastern Shore, the northern Coastal Plain, the northern Shenandoah Valley, and northern Virginia. Twelve dedicated drought monitoring wells are at levels indicative of normal ground water levels, three are at levels indicative of moderate hydrologic drought (10th to 24th percentiles), two are at levels indicative of severe hydrologic drought conditions (< 10th percentile), and three wells (two in the central area of the Coastal Plain and one in western Virginia) are at record low levels. Levels of large reservoirs in the eastern half of the Commonwealth have rebounded significantly during the last month but large reservoirs in the western portion of the Commonwealth continue to decline. Smith Mountain Lake is three feet below full pond despite active management of releases to slow the decline in reservoir levels and Lake Moomaw has less than 30% of the conservation pool storage remaining.

While the Virginia Department of Health has not reported any impacts to public water supplies that have compromised their ability to provide the needs of their customers', 46 systems have initiated voluntary water conservation requirements and 5 systems have initiated mandatory water conservation requirements. Water conservation requirements at public water supplies have decreased slightly since the last report when 46 systems were on voluntary restrictions and 9 systems required mandatory conservation. Appendix E contains a table of waterworks that includes systems that have initiated water conservation requirements.

The Virginia Department of Forestry reports very light fire activity over the last month due to precipitation related to the two topical systems.

The Department of Game and Inland Fisheries reports limited access at boat ramps on several rivers across the Commonwealth. Some facilities on the Nottoway, James, South Anna, Pamunkey and Staunton rivers are above the

water level. Boaters are advised to check the Department's web site at www.huntfishva.com prior to going out and for specific information on individual boat access points. Fortunately the primary recreational boating period ended with the Labor Day weekend. Significant rainfall is needed prior to any fall stocking of trout. Under normal conditions stocking would begin on October 1st but did not due to low streamflows. Hatchlings are likely to be small when stocked due to decreased feeding. Currently very few streams have adequate flow to support stocking. Brook trout spawn during the fall months and require stable flows in headwater streams. Continued drought conditions will result in decreased natural reproduction in some streams. Almost all other species of fish and aquatic insects reproduce during the spring/summer periods limiting the impact of fall drought cycles. Fall hunting seasons are under way and hunters have been reminded to pay particular attention to fire safety in consideration of the dry conditions. Fortunately water temperatures have been falling and the impact of reduced downstream flows will be mitigated by these lower temperatures. Cold water is capable of holding more oxygen and is less stressful to the aquatic community.

The overall intensity of drought impacts and the area of the Commonwealth impacted by drought have decreased significantly during the last month due to the influence of two tropical weather systems. Due to the time of the year it is not likely, though possible, that significant water supply drought impacts will occur before environmental and human demands seasonally decrease. Significant drought impacts are beginning to become measurable in the agriculture sector with 19 localities requesting drought disaster designations. The longer range concern is that lower than normal precipitation during the fall and winter of 2008-2009 will deepen the existing accumulated precipitation deficits and set the stage for significant drought impacts across all socio-economic sectors in the spring of 2009. The long range precipitation outlooks give no indication of improved precipitation probabilities through the end of the calendar year. While there is no immediate tropical activity on the horizon, the National Hurricane Center continues to predict a high probability of above normal tropical activity through the remainder of the hurricane season that has the potential to positively impact the existing precipitation deficits.

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

Report of the Climatology Office of the University of Virginia

Through this point, October rainfall amounts have varied considerably across the Commonwealth, but all regions have been well below normal for the period. Although October is still within the hurricane season, there has been virtually no tropical activity during the month.

Nonetheless, the growing season has effectively ended in all regions. Combined with the change to lower temperatures and decreased day length, moisture loss to evapotranspiration has dropped considerably. We are now entering the critical time of year when moisture replenishment becomes important. The longer-range outlooks from NOAA give no clear indication of expectations through the end of the year.

Report of the National Weather Service

Despite still having a fair portion of the Commonwealth in dry/drought conditions, we are going into the 2008-09 winter in much better shape than a year ago, when 100% of Virginia was in some sort of drought condition (85% in D2-D4 versus 17% currently). Thus, from a long term perspective, it should be easier for Virginia to come out of the 2008-09 cold season in decent or better shape water-wise than it was in 2007-08, provided at least normal precipitation occurs. There is currently no strong Pacific El Nino/La Nina signal going into this winter, therefore seasonal forecasts should be used with caution. The reliability of these forecasts tends to be pretty low in winter seasons with weak El Nino/La Nina signals.

The 6-10 outlook calls for above normal temperatures statewide and below normal precipitation statewide. The 8-14 day outlook calls for above normal temperatures and below normal precipitation statewide. While these predicted conditions will not result in any improvements in current drought impacts it is unlikely that drought impacts will intensify significantly in this short period.

Virginia Department of Agriculture and Consumer Services Status of Agricultural Drought

According to the USDA Crop Weather Report released on October 20, 2008, 43% of topsoil moisture ranged from short to very short. Most of Virginia was dry over the last few weeks, except for a few areas that experienced light to moderate showers.

As of October 20, 2008, twenty-nine localities have requested the Governor's assistance in obtaining federal disaster designation due to drought conditions. On October 15, 2008, the U.S. Secretary of Agriculture named eleven of the localities primary disaster areas due to drought and excessive heat: Amelia, Amherst, Bedford, Campbell, Dinwiddie, Halifax, Louisa, Nelson, Nottoway, Pittsylvania, and Prince Edward. Governor Kaine is in the process of preparing the official requests for disaster designation for an additional thirteen localities: Albemarle, Buckingham, Caroline, Fluvanna, Franklin, Goochland, Greene, Hanover, Henry, Isle of Wight, Lunenburg, Powhatan, and Rockbridge. The Farm Service Agency is in the process of preparing the loss assessment reports for an additional five localities: Brunswick, Charlotte, Mecklenburg, Scott and Surry.

Impact on Crops

Overall, VDACS staff reports that although water tables are still low, they have received few complaints from farmers. Farmers appear to be pleased with the dry weather which is allowing them to harvest their crops. The fall grasses appear good in most areas. Conditions continue to vary around the state, on a regional level as well as on a local level. Dry conditions have favored the fall harvest season and the fall planting season. Vegetable growers are finishing the harvesting of the crops for the season. The apple crop has done well. Most of the corn silage has been chopped and put in storage. The remaining corn standing in the fields is drying down rapidly for shell corn and/or ear corn. Soybeans continue to dry rapidly. In areas that received recent rains, more fall hay is being baled than normal.

In northwest Virginia, a few opportunities remain for another cutting of alfalfa and grass hay. Central Virginia farmers are enjoying a third cutting of hay now. Some areas, such as Augusta County, have been especially hard hit this year. Shenandoah farmers have donated trailer loads of round bales for Augusta farmers in need. There has been very limited rainfall in the south central area in the last month. However, hay and pastures responded well to rainfall from tropical storms in early September, which has provided for ample grazing.

In southern Virginia, corn silage harvest is way down from normal levels and the recent rain has not improved the late corn or late soybeans. Very little hay is being harvested in southern Virginia. One inspector reports that farmers are planting wheat without any fertilizer. Fertilizer is just too expensive at \$1000 per ton to purchase right now. Farmers are gambling that they will be able to get by applying nitrogen in the spring when it may be cheaper. Although, the yield on the wheat will be less because they did not fertilize when planting, the cost of the crop will also be less.

Inspectors in the Southwest report that the area is in good shape after receiving an additional six to seven inches of rain since the middle of September. The corn crop has turned out average and they are harvesting a little hay.

The Valley area reports that conditions have improved, but tonnage on late corn and soybeans is down. Pasture is variable depending on where you are.

The tobacco crop is maturing later than normal due to the drought and the subsequent rains, which caused the crop to turn green and to resume growing. As of this late date, a significant amount of flue-cured tobacco remains to be harvested, and we are already past the average frost date for the area. That is the big concern of the area tobacco producers. If the frost holds off, the crop yields will be high despite this year's summer drought.

Impact on Nursery/Horticulture

At this time, the nursery industry appears to be experiencing minimal impact from the recent dry spell. However, growers could encounter losses if the dry conditions persist.

Impact on Livestock Industry

Many pastures have recently improved because of a few rain showers. However, the stockpiling of fescue pastures for winter grazing will be minimal in some areas. Some localities have not seen as much fall rain, and pastures are drought stressed. Horse owners are very nervous about the cost of hay, grain, and fuel. Horses are not selling well and attendance at competitions is down significantly. Numbers of cull cattle and feeder cattle remain strong and, with a few exceptions, body condition is adequate.

Late September/early October rains have given the surface some moisture, but reports indicate that groundwater is still needed. Wind and 80 degree temperatures are now making the surface soil hard. This is slowing the germination of some fall grasses. In many areas fall grass planting remains un-germinated waiting on some much needed rain. Pastures that are heavily grazed are also in need of more rain.

Southern Virginia has received between four and six inches of rain since mid-September. The rain has caused a dramatic “greening up” of pastures in this area. However, there has not been any appreciable forage growth.

Impact on Dairy Industry

Overall, things appear to be stable at this point for the dairy industry. The state has received enough rain to prevent conditions from getting worse. However, most of the damage has been done. Dairy farms will be short on hay, silage and grain this year. Winter pasture will be more important than usual.

Virginia Department of Environmental Quality Condition of Major Reservoirs

Water surface elevations of major reservoirs in eastern Virginia are mostly normal but western reservoirs continue to hold lower than normal volumes of water.

Lake Moomaw on the Jackson River now has only 10% of its conservation storage remaining. The reservoir is seriously low, about 8% lower than it was at this time last year. The Corps of Engineers, in response to a request from the State reduced releases from 180 cfs to 140 cfs and then reduced releases further on October 27th to 100 cfs. Inflows are averaging about 40 cfs.

Smith Mountain Lake is 3.5 feet below full pond having lost a half of a foot in the past month. The lake is about a foot below the level that it was in October of 2007. Releases have been operating under a variance since mid July. A request has been made to FERC to allow a stakeholders group to continue to guide the reduced releases under a variance procedure.

Philpott Lake has fallen to 10 feet below the guide curve, having lost a foot in the past month. Energy production is being transferred from Lake Philpott to Kerr Reservoir in order to help the lake level recover. This means less water is being released to the Smith River. So far no adverse effects of the reduced release have been reported.

Due to careful management and moderate precipitation Kerr Reservoir remains near the guide curve at 297.5 feet. The project continues to release the minimum amount of water necessary to fulfill its energy contracts. October inflows are the fourth lowest in a 77 year period of record. Weekly conference calls are used to guide releases.

Lake Anna is in good shape, slightly less than full. The lake was overflowing as recently as September 27th.

United States Geological Survey Streamflow and Ground Water Levels

Stream gages are showing that statewide precipitation last week, cooler temperatures, and reduced evapotranspiration have allowed streamflows to improve slightly over conditions observed last month, especially in the southwestern portions of the State. However, because September and October statistically have the lowest normal range of streamflow, any increase in water use (natural or man-induced) can cause streamflows to drop to critical levels. Streamflows east of the Blue Ridge Physiographic Province are generally in the normal to below normal range of flow. Last month, most of these gages showed flows in the normal range of flow, primarily as the result of precipitation along the coast. Streamflows in the Blue Ridge and Valley and Ridge to the west are generally in the below normal, to well below normal ranges of flow. The greatest improvement is in the upper Roanoke Basin. Streamflow conditions in the Shenandoah Valley, which previously had flows in the normal range of flow, have worsened and now are similar to streamflow conditions in the southern Valley and Ridge Province.

Ground-water levels show similar drought conditions across the State. Ground-water levels in the Coastal Plain and northern Piedmont Physiographic Provinces generally are in the normal range of observed values. Ground-water levels in the central Piedmont and Valley and Ridge Physiographic Provinces generally are in the well below normal range of observed values.

Streamflow conditions based on daily values for September 21 are presented in Appendix F. Area summaries of 7-day average streamflows from the USGS drought watch web page show similar flow conditions and are presented in Appendix G. Ground water levels based on conditions on September 21 are presented in Appendix H.

APPENDIX A

Precipitation departures by Drought Evaluation Region.

PRELIMINARY PRECIPITATION SUMMARY

Prepared:
10/23/08

DROUGHT REGION	OBSERVED	Oct 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	0.72	2.14	-1.41	34%
2 New River	0.71	2.35	-1.65	30%
3 Roanoke	1.05	2.75	-1.70	38%
4 Upper James	0.51	2.41	-1.90	21%
5 Middle James	0.60	2.85	-2.25	21%
6 Shenandoah	0.29	2.37	-2.08	12%
7 Northern Virginia	0.25	2.58	-2.34	10%
8 Northern Piedmont	0.13	2.96	-2.83	5%
9 Chowan	0.60	2.66	-2.06	23%
10 Northern Coastal Plain	1.05	2.60	-1.56	40%
11 York-James	0.83	2.62	-1.79	32%
12 Southeast Virginia	0.76	2.72	-1.96	28%
13 Eastern Shore	0.47	2.38	-1.91	20%
Statewide	0.64	2.60	-1.96	25%

DROUGHT REGION	OBSERVED	Sep 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	1.90	5.60	-3.69	34%
2 New River	1.44	5.76	-4.32	25%
3 Roanoke	3.88	6.98	-3.10	56%
4 Upper James	1.39	5.91	-4.52	23%
5 Middle James	3.84	6.98	-3.14	55%
6 Shenandoah	1.52	6.04	-4.52	25%
7 Northern Virginia	4.42	6.65	-2.23	66%
8 Northern Piedmont	3.11	7.24	-4.13	43%
9 Chowan	4.15	7.09	-2.94	59%
10 Northern Coastal Plain	3.51	6.69	-3.18	52%
11 York-James	2.59	7.52	-4.93	34%
12 Southeast Virginia	3.81	7.15	-3.34	53%
13 Eastern Shore	1.90	5.99	-4.09	32%
Statewide	2.99	6.60	-3.61	45%

DROUGHT REGION	OBSERVED	Aug 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	5.45	9.43	-3.97	58%
2 New River	5.55	9.07	-3.52	61%
3 Roanoke	8.63	10.70	-2.08	81%
4 Upper James	5.14	9.24	-4.11	56%
5 Middle James	8.55	10.80	-2.24	79%
6 Shenandoah	4.69	9.37	-4.68	50%
7 Northern Virginia	6.38	10.50	-4.12	61%
8 Northern Piedmont	6.96	11.06	-4.10	63%
9 Chowan	7.36	11.40	-4.04	65%
10 Northern Coastal Plain	5.94	10.55	-4.61	56%
11 York-James	4.15	12.39	-8.24	33%
12 Southeast Virginia	5.84	12.27	-6.43	48%
13 Eastern Shore	4.82	9.86	-5.05	49%
Statewide	6.65	10.43	-3.78	64%

DROUGHT REGION	OBSERVED	Jul 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	9.12	13.91	-4.78	66%
2 New River	9.66	12.86	-3.20	75%
3 Roanoke	11.81	15.09	-3.28	78%
4 Upper James	9.52	13.28	-3.76	72%
5 Middle James	12.09	15.21	-3.12	79%
6 Shenandoah	9.05	13.13	-4.08	69%
7 Northern Virginia	9.71	14.27	-4.56	68%
8 Northern Piedmont	9.99	15.46	-5.47	65%
9 Chowan	10.48	15.91	-5.43	66%
10 Northern Coastal Plain	7.63	15.00	-7.37	51%
11 York-James	5.71	17.49	-11.78	33%
12 Southeast Virginia	10.46	17.34	-6.88	60%
13 Eastern Shore	8.60	13.86	-5.26	62%
Statewide	10.11	14.77	-4.65	68%

DROUGHT REGION		OBSERVED	Jun 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	12.05	18.05	-6.00	67%
2	New River	12.50	16.71	-4.22	75%
3	Roanoke	14.36	18.98	-4.62	76%
4	Upper James	12.06	16.99	-4.93	71%
5	Middle James	14.01	18.72	-4.71	75%
6	Shenandoah	12.81	16.84	-4.02	76%
7	Northern Virginia	14.45	18.13	-3.68	80%
8	Northern Piedmont	15.02	19.47	-4.45	77%
9	Chowan	11.90	19.56	-7.65	61%
10	Northern Coastal Plain	11.11	18.56	-7.46	60%
11	York-James	7.58	20.90	-13.32	36%
12	Southeast Virginia	12.56	20.95	-8.38	60%
13	Eastern Shore	13.07	16.84	-3.77	78%
	Statewide	12.97	18.56	-5.58	70%

DROUGHT REGION		OBSERVED	May 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	14.50	22.87	-8.37	63%
2	New River	15.07	20.92	-5.85	72%
3	Roanoke	17.63	23.31	-5.68	76%
4	Upper James	14.74	21.27	-6.53	69%
5	Middle James	18.12	22.96	-4.84	79%
6	Shenandoah	17.06	20.68	-3.62	83%
7	Northern Virginia	22.71	22.47	0.24	101%
8	Northern Piedmont	20.64	23.69	-3.05	87%
9	Chowan	15.48	23.65	-8.17	65%
10	Northern Coastal Plain	17.17	22.72	-5.55	76%
11	York-James	10.01	25.17	-15.16	40%
12	Southeast Virginia	16.57	24.81	-8.23	67%
13	Eastern Shore	17.22	20.36	-3.15	85%
	Statewide	16.93	22.82	-5.88	74%

DROUGHT REGION		OBSERVED	Apr 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	18.72	26.63	-7.91	70%
2	New River	19.77	24.47	-4.70	81%
3	Roanoke	22.86	27.11	-4.25	84%
4	Upper James	19.46	24.67	-5.21	79%
5	Middle James	24.03	26.30	-2.27	91%
6	Shenandoah	22.15	23.60	-1.45	94%
7	Northern Virginia	28.75	25.77	2.98	112%
8	Northern Piedmont	26.21	26.98	-0.77	97%
9	Chowan	21.91	27.08	-5.16	81%
10	Northern Coastal Plain	21.44	25.81	-4.38	83%
11	York-James	16.75	28.47	-11.72	59%
12	Southeast Virginia	23.04	28.06	-5.01	82%
13	Eastern Shore	21.56	23.28	-1.72	93%
	Statewide	22.24	26.24	-3.99	85%

DROUGHT REGION		OBSERVED	Mar 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	22.52	30.88	-8.35	73%
2	New River	22.32	28.14	-5.82	79%
3	Roanoke	25.90	31.38	-5.48	83%
4	Upper James	21.94	28.46	-6.52	77%
5	Middle James	27.13	30.36	-3.23	89%
6	Shenandoah	24.66	26.80	-2.14	92%
7	Northern Virginia	31.48	29.43	2.05	107%
8	Northern Piedmont	28.83	30.79	-1.96	94%
9	Chowan	25.64	31.45	-5.80	82%
10	Northern Coastal Plain	24.75	30.09	-5.35	82%
11	York-James	21.43	33.16	-11.73	65%
12	Southeast Virginia	26.17	32.26	-6.09	81%
13	Eastern Shore	23.69	27.59	-3.90	86%
	Statewide	25.31	30.28	-4.96	84%

DROUGHT REGION		OBSERVED	Feb 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	25.00	34.46	-9.45	73%
2	New River	24.07	31.07	-7.00	77%
3	Roanoke	28.11	34.69	-6.59	81%
4	Upper James	23.84	31.31	-7.48	76%
5	Middle James	29.74	33.48	-3.74	89%
6	Shenandoah	26.61	29.21	-2.60	91%
7	Northern Virginia	34.14	32.10	2.04	106%
8	Northern Piedmont	31.23	33.76	-2.53	93%
9	Chowan	28.41	34.62	-6.21	82%
10	Northern Coastal Plain	27.25	33.23	-5.98	82%
11	York-James	25.12	36.69	-11.57	68%
12	Southeast Virginia	29.80	35.76	-5.96	83%
13	Eastern Shore	26.88	30.78	-3.90	87%
	Statewide	27.73	33.41	-5.67	83%

DROUGHT REGION		OBSERVED	Jan 1, 2008 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	27.27	38.19	-10.92	71%
2	New River	25.31	34.28	-8.97	74%
3	Roanoke	29.00	38.61	-9.61	75%
4	Upper James	25.10	34.59	-9.49	73%
5	Middle James	30.71	37.14	-6.43	83%
6	Shenandoah	27.59	32.06	-4.47	86%
7	Northern Virginia	35.52	35.38	0.13	100%
8	Northern Piedmont	34.12	37.28	-3.16	92%
9	Chowan	29.59	38.73	-9.13	76%
10	Northern Coastal Plain	28.47	36.98	-8.52	77%
11	York-James	26.53	40.83	-14.30	65%
12	Southeast Virginia	31.31	39.92	-8.61	78%
13	Eastern Shore	28.68	34.34	-5.66	84%
	Statewide	29.10	37.05	-7.94	79%

DROUGHT REGION		OBSERVED	Dec 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	30.18	41.83	-11.65	72%
2	New River	27.76	36.99	-9.23	75%
3	Roanoke	32.22	41.86	-9.64	77%
4	Upper James	28.07	37.54	-9.47	75%
5	Middle James	33.39	40.31	-6.92	83%
6	Shenandoah	30.54	34.65	-4.11	88%
7	Northern Virginia	38.55	38.48	0.07	100%
8	Northern Piedmont	37.03	40.56	-3.53	91%
9	Chowan	33.73	41.75	-8.01	81%
10	Northern Coastal Plain	31.21	40.26	-9.05	78%
11	York-James	30.64	44.22	-13.58	69%
12	Southeast Virginia	34.96	43.10	-8.13	81%
13	Eastern Shore	33.25	37.58	-4.33	88%
	Statewide	32.17	40.17	-7.99	80%

DROUGHT REGION		OBSERVED	Nov 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	31.88	45.11	-13.23	71%
2	New River	28.21	40.02	-11.82	70%
3	Roanoke	32.70	45.22	-12.52	72%
4	Upper James	28.47	40.90	-12.43	70%
5	Middle James	33.90	43.82	-9.92	77%
6	Shenandoah	31.64	37.70	-6.05	84%
7	Northern Virginia	40.14	41.89	-1.76	96%
8	Northern Piedmont	37.90	44.36	-6.46	85%
9	Chowan	34.18	44.86	-10.67	76%
10	Northern Coastal Plain	32.32	43.40	-11.08	74%
11	York-James	31.46	47.59	-16.13	66%
12	Southeast Virginia	35.53	46.17	-10.64	77%
13	Eastern Shore	34.09	40.52	-6.43	84%
	Statewide	32.97	43.40	-10.42	76%

DROUGHT REGION		OBSERVED	Oct 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	33.84	47.99	-14.15	71%
2	New River	31.92	43.19	-11.28	74%
3	Roanoke	36.32	48.93	-12.61	74%
4	Upper James	30.84	44.15	-13.31	70%
5	Middle James	37.52	47.66	-10.13	79%
6	Shenandoah	33.85	40.89	-7.03	83%
7	Northern Virginia	43.38	45.37	-1.99	96%
8	Northern Piedmont	40.90	48.35	-7.45	85%
9	Chowan	37.28	48.44	-11.16	77%
10	Northern Coastal Plain	37.70	46.91	-9.22	80%
11	York-James	35.30	51.12	-15.82	69%
12	Southeast Virginia	40.80	49.83	-9.03	82%
13	Eastern Shore	37.46	43.73	-6.27	86%
	Statewide	36.28	46.90	-10.61	77%

DROUGHT REGION		OBSERVED	Sep 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	35.09	51.45	-16.36	68%
2	New River	33.55	46.60	-13.05	72%
3	Roanoke	38.40	53.16	-14.77	72%
4	Upper James	33.10	47.65	-14.55	69%
5	Middle James	38.34	51.79	-13.45	74%
6	Shenandoah	35.80	44.56	-8.76	80%
7	Northern Virginia	44.55	49.44	-4.89	90%
8	Northern Piedmont	41.89	52.63	-10.74	80%
9	Chowan	38.24	52.87	-14.62	72%
10	Northern Coastal Plain	38.94	51.00	-12.07	76%
11	York-James	37.20	56.02	-18.82	66%
12	Southeast Virginia	41.53	54.26	-12.73	77%
13	Eastern Shore	39.02	47.34	-8.32	82%
	Statewide	37.70	50.90	-13.19	74%

DROUGHT REGION	OBSERVED	Aug 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	36.27	55.28	-19.00	66%
2 New River	34.75	49.91	-15.16	70%
3 Roanoke	39.23	56.88	-17.66	69%
4 Upper James	34.54	50.98	-16.44	68%
5 Middle James	41.06	55.61	-14.55	74%
6 Shenandoah	38.57	47.89	-9.32	81%
7 Northern Virginia	46.41	53.29	-6.88	87%
8 Northern Piedmont	44.27	56.45	-12.18	78%
9 Chowan	40.25	57.18	-16.93	70%
10 Northern Coastal Plain	40.39	54.86	-14.48	74%
11 York-James	39.52	60.89	-21.37	65%
12 Southeast Virginia	45.00	59.38	-14.37	76%
13 Eastern Shore	41.51	51.21	-9.70	81%
Statewide	39.57	54.73	-15.15	72%

DROUGHT REGION	OBSERVED	Jul 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	40.76	59.76	-18.99	68%
2 New River	37.67	53.70	-16.03	70%
3 Roanoke	42.50	61.27	-18.77	69%
4 Upper James	36.88	55.02	-18.14	67%
5 Middle James	43.41	60.02	-16.61	72%
6 Shenandoah	40.57	51.65	-11.08	79%
7 Northern Virginia	48.87	57.06	-8.19	86%
8 Northern Piedmont	45.81	60.85	-15.04	75%
9 Chowan	43.31	61.69	-18.38	70%
10 Northern Coastal Plain	41.81	59.31	-17.51	70%
11 York-James	42.97	65.99	-23.02	65%
12 Southeast Virginia	48.31	64.45	-16.13	75%
13 Eastern Shore	43.60	55.21	-11.61	79%
Statewide	42.30	59.07	-16.76	72%

DROUGHT REGION	OBSERVED	Jun 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	43.51	63.90	-20.39	68%
2 New River	40.71	57.55	-16.84	71%
3 Roanoke	45.43	65.16	-19.74	70%
4 Upper James	40.63	58.73	-18.10	69%
5 Middle James	46.77	63.53	-16.76	74%
6 Shenandoah	43.84	55.36	-11.51	79%
7 Northern Virginia	50.81	60.92	-10.11	83%
8 Northern Piedmont	47.96	64.86	-16.90	74%
9 Chowan	45.52	65.34	-19.81	70%
10 Northern Coastal Plain	43.66	62.87	-19.22	69%
11 York-James	45.15	69.40	-24.25	65%
12 Southeast Virginia	51.53	68.06	-16.52	76%
13 Eastern Shore	48.86	58.19	-9.34	84%
Statewide	45.16	62.86	-17.69	72%

DROUGHT REGION	OBSERVED	May 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	45.26	68.72	-23.46	66%
2 New River	42.49	61.76	-19.27	69%
3 Roanoke	47.40	69.49	-22.09	68%
4 Upper James	42.66	63.01	-20.35	68%
5 Middle James	49.23	67.77	-18.54	73%
6 Shenandoah	46.03	59.20	-13.16	78%
7 Northern Virginia	52.08	65.26	-13.19	80%
8 Northern Piedmont	50.05	69.08	-19.03	72%
9 Chowan	48.41	69.43	-21.02	70%
10 Northern Coastal Plain	44.90	67.03	-22.13	67%
11 York-James	46.71	73.67	-26.96	63%
12 Southeast Virginia	53.50	71.92	-18.42	74%
13 Eastern Shore	50.60	61.71	-11.12	82%
Statewide	47.19	67.12	-19.92	70%

DROUGHT REGION		OBSERVED	Apr 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	49.72	72.48	-22.75	69%
2	New River	45.61	65.31	-19.70	70%
3	Roanoke	50.61	73.29	-22.68	69%
4	Upper James	46.16	66.41	-20.25	70%
5	Middle James	52.46	71.11	-18.65	74%
6	Shenandoah	49.61	62.12	-12.51	80%
7	Northern Virginia	55.80	68.56	-12.76	81%
8	Northern Piedmont	53.14	72.37	-19.23	73%
9	Chowan	52.84	72.86	-20.01	73%
10	Northern Coastal Plain	48.61	70.12	-21.51	69%
11	York-James	50.75	76.97	-26.22	66%
12	Southeast Virginia	58.01	75.17	-17.15	77%
13	Eastern Shore	55.15	64.63	-9.49	85%
	Statewide	50.83	70.54	-19.70	72%

DROUGHT REGION		OBSERVED	Mar 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	52.86	76.73	-23.87	69%
2	New River	49.65	68.98	-19.33	72%
3	Roanoke	54.30	77.56	-23.26	70%
4	Upper James	49.79	70.20	-20.41	71%
5	Middle James	55.51	75.17	-19.66	74%
6	Shenandoah	52.49	65.32	-12.83	80%
7	Northern Virginia	58.96	72.22	-13.26	82%
8	Northern Piedmont	55.57	76.18	-20.61	73%
9	Chowan	55.41	77.23	-21.82	72%
10	Northern Coastal Plain	51.42	74.40	-22.98	69%
11	York-James	52.47	81.66	-29.19	64%
12	Southeast Virginia	59.96	79.37	-19.41	76%
13	Eastern Shore	56.93	68.94	-12.02	83%
	Statewide	53.90	74.58	-20.67	72%

DROUGHT REGION		OBSERVED	Feb 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	54.26	80.31	-26.05	68%
2	New River	51.30	71.91	-20.61	71%
3	Roanoke	56.35	80.87	-24.52	70%
4	Upper James	52.24	73.05	-20.81	72%
5	Middle James	57.48	78.29	-20.81	73%
6	Shenandoah	54.54	67.73	-13.19	81%
7	Northern Virginia	61.80	74.89	-13.09	83%
8	Northern Piedmont	58.02	79.15	-21.13	73%
9	Chowan	57.58	80.40	-22.82	72%
10	Northern Coastal Plain	53.93	77.54	-23.62	70%
11	York-James	54.21	85.19	-30.98	64%
12	Southeast Virginia	62.22	82.87	-20.64	75%
13	Eastern Shore	59.71	72.13	-12.42	83%
	Statewide	55.99	77.71	-21.71	72%

DROUGHT REGION		OBSERVED	Jan 1, 2007 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	57.44	84.04	-26.60	68%
2	New River	54.26	75.12	-20.86	72%
3	Roanoke	60.23	84.79	-24.56	71%
4	Upper James	55.25	76.33	-21.08	72%
5	Middle James	61.06	81.95	-20.89	75%
6	Shenandoah	56.10	70.58	-14.47	79%
7	Northern Virginia	64.04	78.17	-14.13	82%
8	Northern Piedmont	60.53	82.67	-22.14	73%
9	Chowan	60.10	84.51	-24.41	71%
10	Northern Coastal Plain	58.17	81.29	-23.13	72%
11	York-James	56.82	89.33	-32.51	64%
12	Southeast Virginia	65.39	87.03	-21.63	75%
13	Eastern Shore	61.88	75.69	-13.81	82%
	Statewide	59.05	81.35	-22.29	73%

DROUGHT REGION	OBSERVED	Dec 1, 2006 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	59.43	87.68	-28.24	68%
2 New River	56.04	77.83	-21.79	72%
3 Roanoke	62.41	88.04	-25.64	71%
4 Upper James	57.24	79.28	-22.04	72%
5 Middle James	62.64	85.12	-22.48	74%
6 Shenandoah	57.22	73.17	-15.94	78%
7 Northern Virginia	65.71	81.27	-15.57	81%
8 Northern Piedmont	62.28	85.95	-23.67	72%
9 Chowan	62.27	87.53	-25.26	71%
10 Northern Coastal Plain	59.87	84.57	-24.70	71%
11 York-James	58.64	92.72	-34.08	63%
12 Southeast Virginia	67.84	90.21	-22.36	75%
13 Eastern Shore	64.63	78.93	-14.30	82%
Statewide	60.90	84.47	-23.56	72%

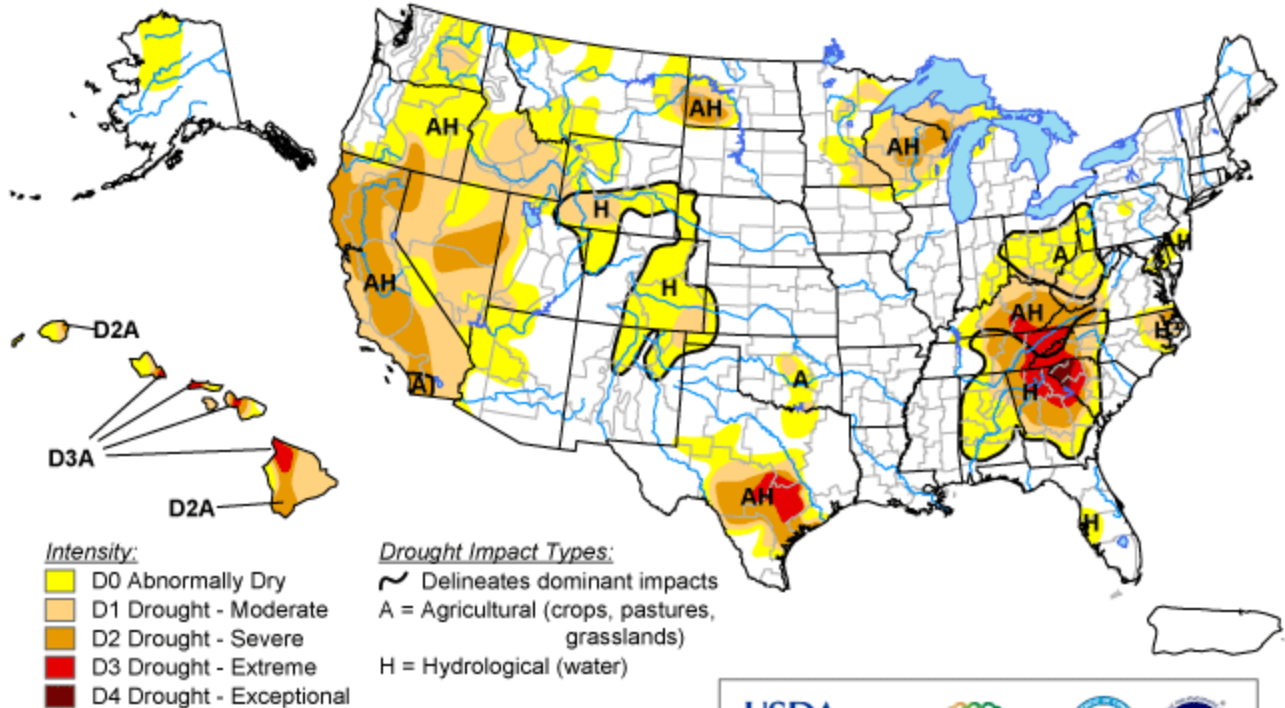
DROUGHT REGION	OBSERVED	Nov 1, 2006 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1 Big Sandy	62.19	90.96	-28.77	68%
2 New River	60.00	80.86	-20.86	74%
3 Roanoke	67.80	91.40	-23.60	74%
4 Upper James	61.03	82.64	-21.61	74%
5 Middle James	68.38	88.63	-20.25	77%
6 Shenandoah	61.37	76.22	-14.85	81%
7 Northern Virginia	71.50	84.68	-13.18	84%
8 Northern Piedmont	68.59	89.75	-21.16	76%
9 Chowan	69.64	90.64	-21.00	77%
10 Northern Coastal Plain	65.17	87.71	-22.54	74%
11 York-James	64.31	96.09	-31.78	67%
12 Southeast Virginia	75.46	93.28	-17.82	81%
13 Eastern Shore	69.51	81.87	-12.36	85%
Statewide	66.06	87.70	-21.63	75%

DROUGHT REGION		OBSERVED	Oct 1, 2006 NORMAL	- Oct 23, 2008 DEPARTURE	% OF NORM.
1	Big Sandy	67.16	93.84	-26.68	72%
2	New River	64.98	84.03	-19.05	77%
3	Roanoke	73.84	95.11	-21.27	78%
4	Upper James	67.96	85.89	-17.94	79%
5	Middle James	76.07	92.47	-16.40	82%
6	Shenandoah	66.61	79.41	-12.79	84%
7	Northern Virginia	76.29	88.16	-11.88	87%
8	Northern Piedmont	75.12	93.74	-18.62	80%
9	Chowan	77.34	94.22	-16.87	82%
10	Northern Coastal Plain	71.25	91.22	-19.97	78%
11	York-James	72.31	99.62	-27.31	73%
12	Southeast Virginia	80.53	96.94	-16.41	83%
13	Eastern Shore	76.44	85.08	-8.64	90%
	Statewide	72.30	91.20	-18.89	79%

APPENDIX B

U.S. Drought Monitor

October 28, 2008
Valid 8 a.m. EDT



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, October 30, 2008
Author: David Miskus, JAWF/CPC/NOAA

APPENDIX C

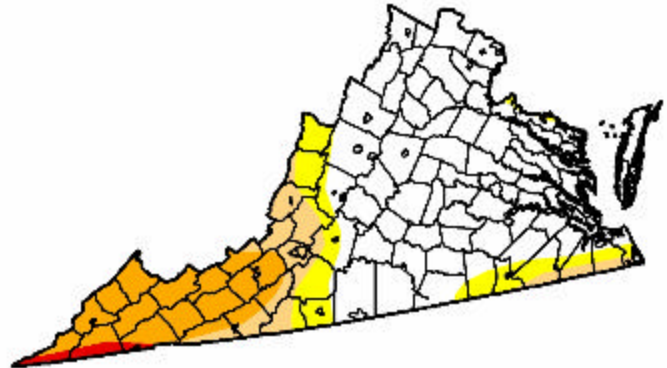
U.S. Drought Monitor Virginia

October 28, 2008

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	64.4	35.6	25.5	16.8	1.5	0.0
Last Week (10/21/2008 map)	57.6	42.4	28.3	17.2	1.5	0.0
3 Months Ago (08/05/2008 map)	54.0	46.0	23.6	3.9	0.0	0.0
Start of Calendar Year (01/01/2008 map)	8.0	92.0	74.8	27.3	9.2	6.3
Start of Water Year (10/07/2008 map)	57.8	42.2	25.1	1.6	0.0	0.0
One Year Ago (10/30/2007 map)	11.1	88.9	54.9	10.6	6.9	3.6



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

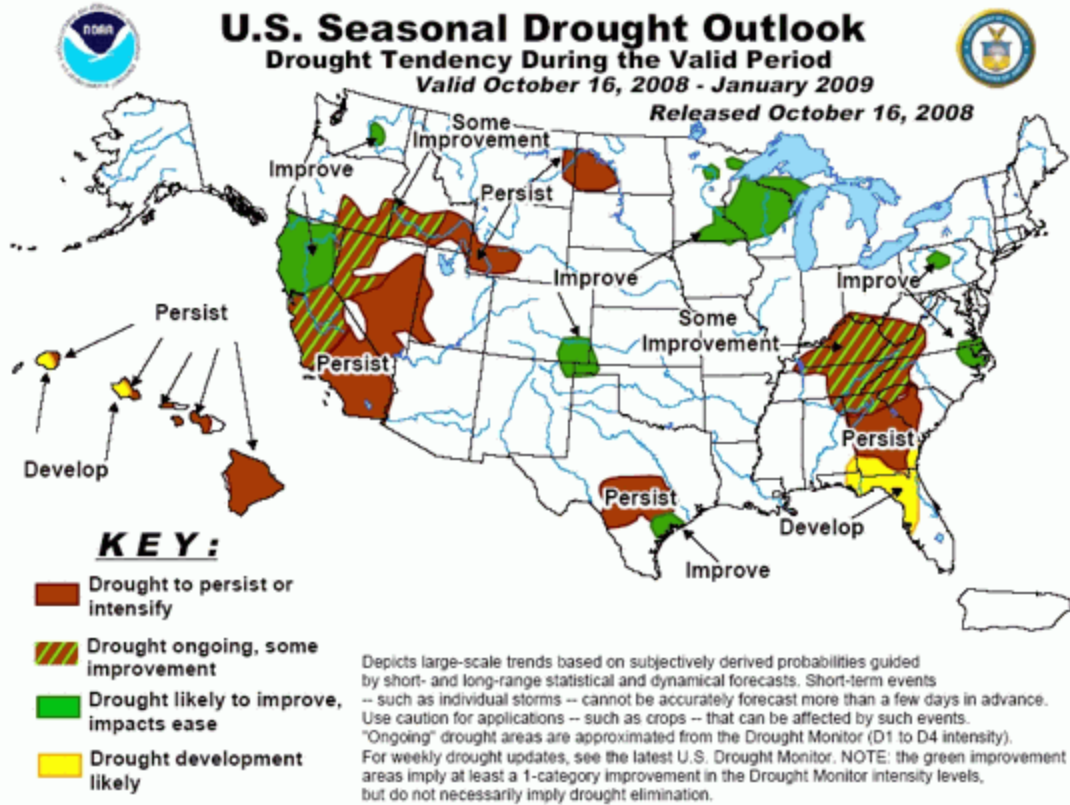
<http://drought.unl.edu/dm>



Released Thursday, October 30, 2008

Author: David Miskus, JAWF/CPC/NOAA

APPENDIX D



APPENDIX E

Condition of Public Water Supplies

October 17, 2008

ODW Drought Situation Report			Restriction totals		
Date:	10/17/08		Mandatory	5	
			Voluntary	46	
			Total	51	
			N-None	B-Better	
			M-Mandatory	S-Stable/Same	
			V-Voluntary	W-Worse	
PWSID	Waterworks	Source Name	Restrictions	Situation	Population Served
1105200	Town of Jonesville	Wynn Spring #1 and Slemp Spring	N	W 10/15/08: Combined springs flowrates are about 280 gpm. WTP operating at 280 gpm for 15 hrs/day. In June 08, the springs' flow rate was 320 gpm.	
1105400	Lee County PSA	Blue Springs	N	W 10/15/08: Spring flow at about 130 gpm or 187,000 gpd. On 09/17/08 the flow was about 200,000 gpd. There is still flowby at the source. STILL ABLE TO MEET DEMAND.	
1105400	Lee County PSA	KVS Quarry	N	W 10/15/08: Water level in quarry is currently at 223 inches below catwalk . On 09/17/08 the level was at 206 inches below catwalk. The water level is much lower than this time last year. Last year they installed a floating raw water pump system to alleviate effects of lowering water level. STILL ABLE TO MEET DEMAND.	
1195050	Town of Appalachia	reservoir	M	W 10/15/08: down 7'-10" from overflow; 58.6 MG, 129 days ± 10 left. Level was down 7.4' from overflow on 9/17/08. Still using auxiliary river source. NO WATER SUPPLY PROBLEMS EXPECTED.	
1195100	Town of Big Stone Gap	Big Cherry Reservoir	M	W 10/15/08: Reservoir down 9 ft from overflow. 307 MG, 102 days left. Reservoir down 7 ft from overflow on 9/17/08. 3 ft higher than on 09/16/07.	

1195950	Town of Wise	reservoir	N	W 10/15/08: Reservoir down 8' - 0.25", 131 MG left, 218 days left @ 0.6 MGD. Down 6' -8" on 09/18/08. Still using auxiliary mine well source daily. NO WATER SUPPLY PROBLEMS EXPECTED.	
1720076	City of Norton	reservoirs	N	W 10/15/08: Upper reservoir down 11 ft, 38.8 MG left. Lower reservoir down 15 ft, 28.2 MG left. from overflow. Total: 67 MG left. 75.3 MG was left on 09/17/08. 14 MG more in reservoirs now than on 10/17/07. 75.3 MG was left on 09/17/08. Still buying water from Wise County PSA and Big Stone Gap. NO WATER SUPPLY PROBLEMS EXPECTED.	
2017095	Bath County Regional Water - BCSA	2 drilled wells	V	W - Voluntary conservation requested on 8/26/08. Well capacity has dropped 20%	1,420
2023720	Town of Troutville	Five Drilled Wells	N	S - Town reported the pumping rate of their No. 3 well dropped from 123 gpm to 40 gpm. The pumping rates of the other four wells are the same.	500
2043125	Berryville, Town of	Shenandoah River	V	S - Voluntary conservation requested on 11 December 2007.	2,965
2065250	Fluvanna Correctional Center for Women	Mechunk Creek and on-site Raw Water Reservoir	V	S - Reservoir is 80% full (~32 MG stored). Moderate Drought Condition continues to conserve water.	1,650
2125325	NCSA - Lovingston	Black Creek Reservoir	V	S - Voluntary conservation requested on 8/20/08. Reservoir is ~3.5 feet below overflow.	2,500
2125650	NCSA - Schuyler	Johnson's Branch	V	B - Voluntary conservation requested on 8/20/08. Spring fed branch flow has improved.	500
2125910	NCSA - Wintergreen	Lake Monacan	V	B - Voluntary conservation requested on 8/20/08. Lake is at 98% of full. Recent rains have helped	6,600
2560100	Town of Clifton Forge	Smith Creek	V	S - Voluntary conservation has been requested. This has not been implemented as a result of limited or low source water quantity, but rather at the request of the Governor's letter requesting conservation	4,679
2660345	City of Harrisonburg	North River, Dry River/Switzer Reservoir (Rawley Springs)	V	S - Voluntary conservation has been requested. This has not been implemented as a result of limited low source water quantity, but rather at the request of the Governor's letter requesting conservation.	44,500

3053280	DCWA Central (Dinwiddie County)	Appomattox River Water Authority (ARWA)	V	S - Voluntary restrictions began on 7/29/08.	6,800
3081550	GCWSA - Jarratt	Nottoway River	N	S - 10/14/08 - Waterworks production rate still reduced due to lower demand; river level, sufficient to allow plant operation at 2.0 mgd	7,190
3093120	Isle of Wight County	Suffolk	V	B - 10/15/08 - Follows Suffolk's lead on conservation.	1,284
3550050	Chesapeake - Western Branch system	City of Portsmouth	V	S -10/14/08 This portion of the city is consecutive to (receives water from) the city of Portsmouth. City Council voted to go to voluntary conservation city-wide - it took effect on 24 Oct 2007. Still following Portsmouth's lead on conservation.	36,444
3550051	Chesapeake	Northwest River, City of Norfolk Raw Water (Lake Gaston)	V	W - as of 10/15/08 City Council voted to go to voluntary conservation city-wide - took effect on 24 Oct 2007. Chlorides are used as an indicator of drought, the higher the levels the more concentrated the contaminant in a lesser amount of surface water. The chlorides are currently in the 500-600 mg/l range with a high value of 1456 mg/l.	101,428
3550052	Chesapeake - South Norfolk system	City of Norfolk	V	S -10/14/08-This portion of the city is consecutive to (receives water from) the city of Norfolk. City Council voted to go to voluntary conservation city-wide - it took effect on 24 Oct 2007. Still following Norfolk's lead on conservation.	38,611
3570150	Colonial Heights	ARWA	V	S - Lifted mandatory restrictions on 12/1/07. Voluntary restrictions currently in place.	17,286
3595250	Emporia	Meherrin River	N	S - 10/15/08 - Water is going over the dam. Powerplant on river continues to operate with no shutdowns.	5,600
3670800	Virginia-American Water Company (Hopewell)	Appomattox & James Rivers	N	S - 10/15/08 - Intake levels at plant are still sufficient to supply plant. Alkalinity and pH values still decreased.	25000 - Primary / 42463 Total including Consecutive System (Ft. Lee)

3700500	Newport News	Chickahomony River, Skiffs Creek, Diascand, Little Creek, Harwoods Mill, Lee Hall	N	B -- 10/14/8 - Total reservoir capacity at 76% (about normal for this time of year) Little Creek is the main source that is low. Up a few percentages since last report.	406,000
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.	V	B - As of 10/13/08, reservoirs at 85.7% (up from 82.5% on 09/18). Historic reservoir capacity is 82.8% at this time of year. Avg. pumping from Lake Gaston = 35.7 MGD. Called for voluntary conservation 11/1/07.	261,250 - Primary / 755,617 - Total including consecutive systems (Va Beach + military bases).
3740600	Portsmouth	Lakes Cohoon, Meade, Kilby, and Speights Run	V	B - As of 10/14/08, reservoirs at 86% (up from 79% on 09/15). Median reservoir capacity is 91% for the month and historical average capacity is 85% (period of 1969-2006). One emergency well is off. The city was at 70% reservoir capacity during the drought at this date last year and had begun emergency raw water purchases from Norfolk. Called for voluntary conservation on 10/10/07.	100,400 - Primary / 120,400 Total including consecutive systems (military bases)
3800805	Suffolk	Lone Star Lakes, Cumps Mill Pond	V	B - Will follow Portsmouth's lead and the region as far as conservation. As of 10/14/08-Reservoir levels: Southern Lakes at 41% capacity, for the Northern Lakes at 85.1% and Crumps Mill Pond at 68.2% The Southern Lakes are for emergency use only. Overall they are at 63% capacity for the reservoirs for the period (July -Sept 2008). Operator states that for the same time period last year (July -Sept 2007) the overall capacities for the reservoirs was 48.8 %.Still purchasing water from Portsmouth per their contract, no drought measure taken to date.	62,562
3810900	Virginia Beach	Norfolk	V	B - 10/15/08 - Obtains water from Norfolk. Called for voluntary conservation on 9/19/07.	423,743

3830850	Williamsburg	Waller Mill Reservoir	N	S- Reservoir 21 inches below spill way. About 74% usable capacity. Lowering about 1/4 inch per day.	16,400
4041035	APPOMATTOX RIVER WATER AUTHORITY	Surface water; Lake Chesdin	N	B- Wholesaler to Chesterfield County, Prince George County, Dinwiddie County; Cities of Petersburg and Colonial Heights. Reservoir is at full level.	200,000
4041845	CHESTERFIELD CO CENTRAL WATER SYSTEM	Surface water; Swift Creek reservoir; purchases finished water	N	B- Purchases water from the City of Richmond and the Appomattox River Water Authority. Reservoir is at full level.	263,000
4057800	TAPPAHANNOCK, TOWN OF	Groundwater wells	N	S	2,100
4073311	GLOUCESTER CO WATER TREATMENT PLT	Surface water, Beaverdam reservoir; 2 deep groundwater wells	N	S- Reservoir at 100%.	8,870
4075283	EASTERN GOOCHLAND CENTRAL WATER SYSTEM	Purchased surface water	N	S- purchases water from Henrico County	2,500
4075735	JAMES RIVER CORRECTIONAL CTR	Surface water; James River	V	B- Conservation at all DOC facilities	9,300
4085398	HANOVER SUBURBAN WATER SYSTEM	Surface water; North Anna River; some groundwater wells; purchases finished water	N	B	71,000
4085770	SPRING MEADOWS-MEADOW GATE	Groundwater wells	N	S- A replacement well will be drilled shortly and other improvements are proposed in the PER.	2,300
4087125	HENRICO COUNTY WATER SYSTEM	Surface water; James River	N	B- Similar to City of Richmond	289,000
4101900	WEST POINT, TOWN OF	Groundwater wells	N	S	3,000
4127110	DELMARVA PROPERTIES	Groundwater wells	V	S- New Kent Co. encourages conservation at all county owned waterworks.	7,700
4145675	POWHATAN COURTHOUSE	Groundwater wells	N	S	2,600

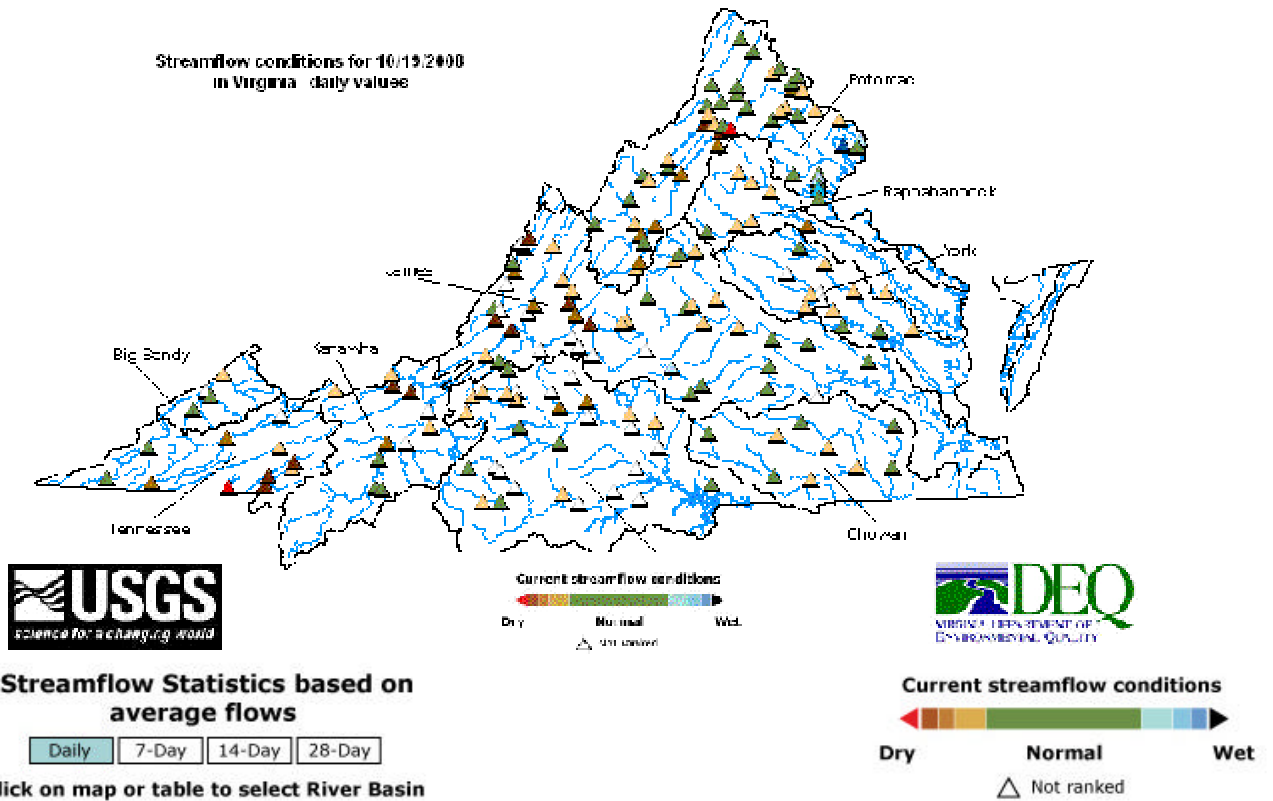
4193280	COLONIAL BEACH, TOWN OF	Groundwater wells	N	S	3,300
4760100	RICHMOND, CITY OF	Surface water; James River	N	B- water levels in the James River are normal; under James River Regional Flow Management Plan; counties of Henrico, Chesterfield, Goochland, and Hanover counties purchase water from the City.	197,000
5515050	City of Bedford	Stoney Creek Reservoir and Wells 1 to 5	N	S - good levels	6,946
5143210	Town of Gretna	Georges Creek Res	N	S	2,500
5031150	CCUSA	Surface - Big Otter River	N	S - Current stream flow 19 cfs.	20,000
5025450	Town of Lawrenceville	Great Creek Reservoir	N	B- water is 1" below the spillway	4,806
5025480	Lane View Subdivision	Wells	V	S	39
5025500	Brunswick Estates	Wells	V	S	70
5025550	Nottoway Acres Subdivision	Wells	V	S	58
5025570	Pleasant Grove Subdivision	Wells	V	S	85
5025625	Siouan Shores Subdivision	Wells	V	S	95
5025650	Sunnybrook Subdivision	Wells	V	S	53
5117096	Anchor Cove Subdivision	Wells	V	S	93
5117125	Buckhead Subdivision	Wells	V	S	66
5117350	Fox Run Subdivision	Wells	V	S	226
5117371	Great Creek Landing	Wells	V	S	270
5117375	Hawk's Nest Point	Wells	V	S	25
5117378	Hicks Hill Subdivision	Wells	V	S	35
5117379	Holly Grove Estates	Wells	V	S	25
5117390	Joyceville Subdivision	Wells	V	S	175
5117419	Long Branch Shores	Wells	V	S	85

5117450	Merrymount Subdivision	Wells	V	S	118
5117833	Tanglewood Shores	Wells	V	S	50
5117846	Timbuctu Subdivision	Wells	V	S	132
5029085	Buckingham County	Troublesome Creek Reservoir	N	W- water is even with spillway just a trickle overflow	5,751
5037300	Town of Keysville	Keysville Reservoir	N	S	800
5083550	Town of Halifax	Bannister River Reservoir	N	S	1,389
5780600	Town of South Boston	Dan River	N	S	9,726
5141640	Town of Stuart	South Mayo River	N	S	1,500
5147170	Town of Farmville	Appomattox River	N	S	7,011
5011050	Town of Appomattox	Wells	V	S - Operation reports show water levels rising in the wells. The town is actively looking for additional water sources.	1,708
5135160	Town of Crewe	Crystal Lake	N	s - good levels	3,500
5111450	Town of Kenbridge	Flat Rock Creek and Offstream Reservoir	N	S - good levels	1,400
5067785	Ridgscreech	Wells	N	s	52
5067265	Hales Point	Wells	N	s	46
5067937	Stripers Landing	Wells	N	s	125
5009050	Town of Amherst	Buffalo Creek	N	S - Creek is flowing over dam.	
5009250	ACSA	Graham Creek Reservoir	N	B - Switched from the Graham Creek Reservoir to Harris Creek.	
5680200	City of Lynchburg	James River	N	S - Using the James River, Abert Intake.	76,000
6033425	Lake Caroline WTP	Lake Caroline	N	W - Lake is down 4 inches.	3,370
6047070	Emerald Hill Elementary School	Groundwater	N	S - Well EHS -3 is onstream at a reliable production rate of 12 gpm. Well 1 has been reworked for improved production. Water hauling is no longer needed.	977
6047500	Town of Culpeper	Lake Pelham	N	S - On Wednesday, October 15, 2008, Lake Pelham surface level was 1" below the overflow.	14,200
6061200	Marshall	Groundwater	M	S - The WSA Alert Messaging Service maintains the Water Use Restriction Notice as of 10/15/2008.	2,134

6061600	Town of Warrenton	Reservoir on Cedar Run and groundwater	N	S - On Wednesday, 10/15/08, Warrenton Reservoir is at a surface elevation of 440.4 ft. Yesterday, water was transferred from Airlie Reservoir, which was at a surface level 66 1/2" below the catwalk (nearly full).	11,160
6107150	Town of Hamilton	Groundwater	M	S -10/16/08 No water supply problems. Town Council voted to maintain Mandatory water use restrictions until new Well 14 is placed in service.	2,000
6107200	Town of Hillsboro	Spring/Well	N	S - Flow from spring and new well have been adequate to meet current demand. A leak survey revealed 10 potential leaks in the distribution system.	58
6107221	Lenah Farms	Groundwater	V	S - 10/16/08 Voluntary water use restrictions in place; however there is no problem with water supply.	825
6107601	LCSA Raspberry Falls Subdivision	Groundwater	V	S - 10/16/08 Well #1 taken out of service due to high Total Coliform levels. Voluntary conservation in place beginning 3/11/08 due to concerns about possible GUDI sources.	394
6107400	Town of Lovettsville	Groundwater	V	S -10/16/08 Voluntary water use restrictions remain in place; however there is no problem with water supply.	1,280
6107450	Town of Middleburg	Groundwater	V	S - 10/16/08 - Voluntary water use restrictions remain in place. Mandatory water use restrictions were replaced on 4/10/08.	590
6107600	Town of Purcellville	Hirst Reservoir and groundwater	V	W - 10/16/08 Reservoir level is below expected range (front lake = 3.3' of 5.3', back lake = 2.1' of 5.0'). Approximately 87 days of storage available. Voluntary water conservation remain in place.	6,300
6107650	Town of Round Hill	Groundwater	V	S - 10/16/08 - No water supply concerns. Voluntary water use restrictions replace mandatory water use restrictions on 4/1/08.	3,156
6113200	Town of Madison	White Oak Run	N	S -- Stream flow remains adequate to meet normal demands.	778
6137300	Rapidan Service Authority - Rt. 15	Purchase treated surface water from Town of Orange (Rapidan River)	N	S - Town of Orange raw water availability is well above minimum.	273

6137400	Town of Gordonsville	Purchase treated surface water from RSA and Town of Orange	N	S--No water use restrictions are in place.	1,800
6137500	Town of Orange	Rapidan River	V	S - 9/17/08 - Fourteen day running average of Rapidan River flow is 97 cfs (withdrawal restrictions are imposed below 44 cfs). Offstream raw water reservoir is full.	4,500
6137999	Rapidan Service Authority - Wilderness and Lake of the Woods	Rapidan River	N	Rapidan River flow has been steady at an adequate level.	11,331
6153260	Woodbridge Mobile Home Park	Groundwater	M	S -- 10/16/08 No recent water outages, regular low water pressure continues. Waterworks may continue to have low pressure due to inadequate sources and leaks in the distribution system. This problem is indirectly related to drought as source problems existed previously. A wellsite inspection was conducted 10/7/08 for a new well to serve the park, and potentially alleviate their water supply concerns.	320
6177280 and 6177300	Spotsylvania County	Rappahanock River, Motts Reservoir, Hunting Run Reservoir, Ni Reservoir	N	W - River flow averaging 150cfs over past week and Motts and Ni reservoirs are down 12 and 7 inches, resp.	79,315
6179100 and 6179775	Stafford County	Smith Lake and Abel Lake	N	W - Smith Lake is down 2", Abel is down 11" and dropping about 1/2" per day. In June 2008, water supply emergency from 2007 was rescinded with county wide conservation requested.	93,669
Notes of interest:					
(1) Metropolitan Washington Council of Governments lifted the drought Watch, returning to Normal status, lifting a region-wide voluntary conservation advisory, on 4/1/08, covering DC, Maryland, and Northern Virginia.					
(2) Interstate Commission on the Potomac River Basin (ICPRB) gathers meteorological, drought, and water supply data from all of the major water suppliers in the Metro Washington area and determines the need for upstream reservoir releases, if any, to augment the flow in the Potomac River for water supply withdrawal. ICPRB has predicted that likelihood of releases from upstream reservoirs is slightly below normal.					

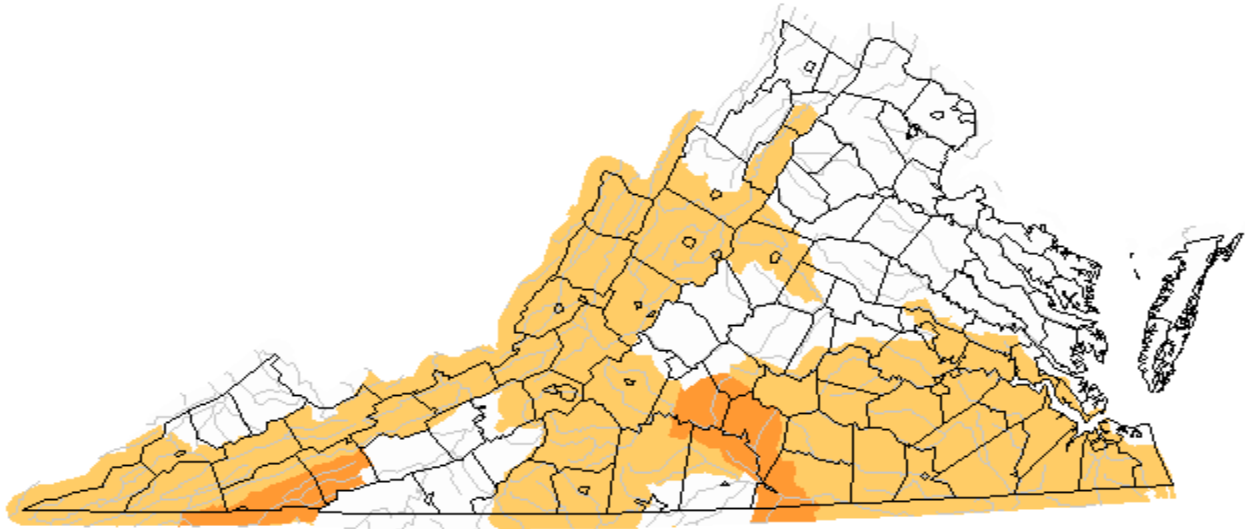
APPENDIX F



APPENDIX G

Drought Watch -- USGS State Information on Drought Map of below normal 7-day average streamflow

Wednesday, October 29, 2008

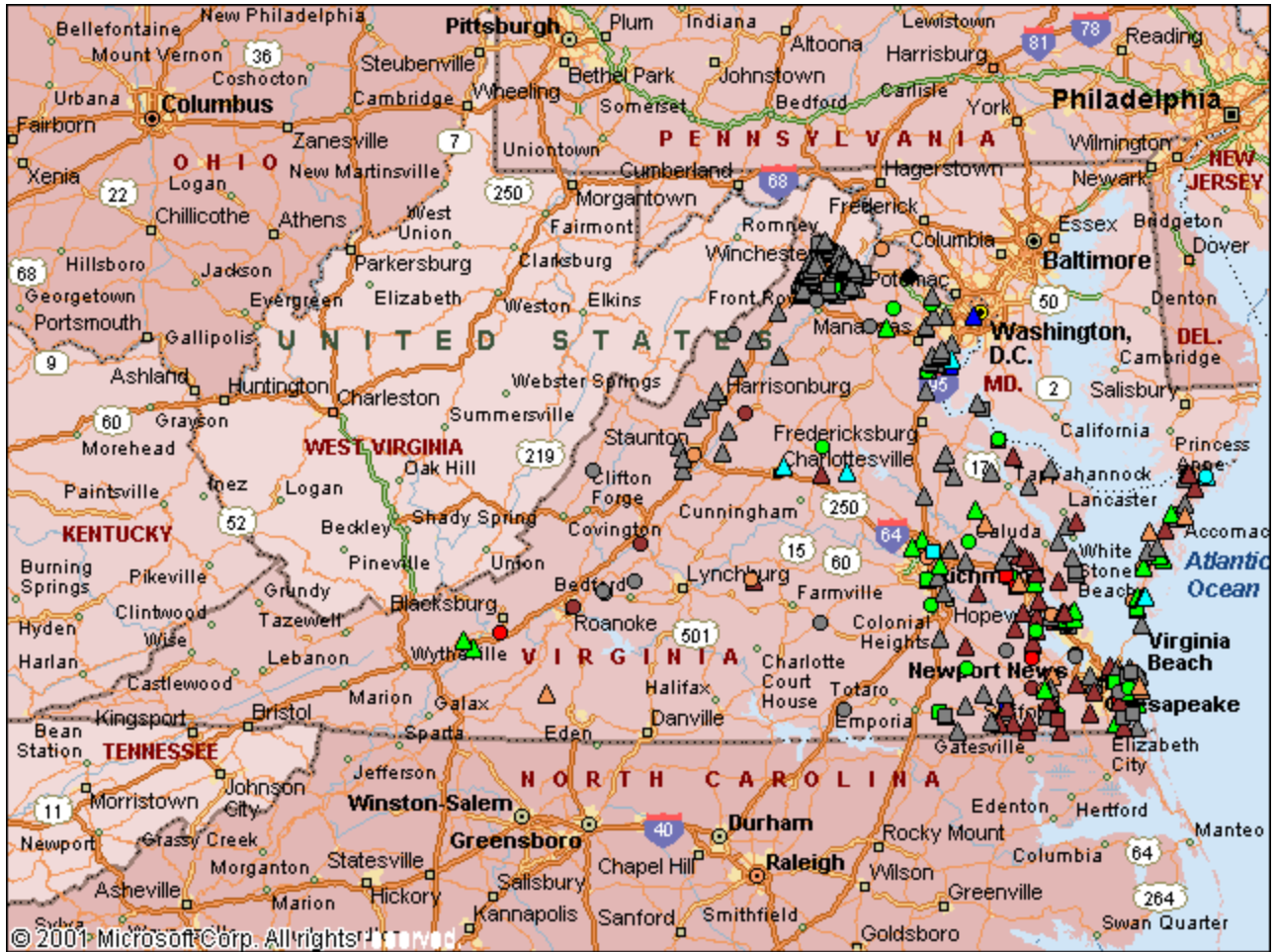


Explanation - Percentile classes				
LOW	≤5	6-9	10-24	Insufficient data for hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

APPENDIX H

Virginia Climate Response Network

October 31, 2008



Explanation - Percentile classes							
	●	●	●	●	●	●	●
New Low	<10	10-24	25-75	76-90	>90	New High	Not Ranked
Low	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal		