DROUGHT MONITORING TASK FORCE

Drought Status Report
February 21, 2002

The Virginia Drought Monitoring Task Force held a conference call on February 15, 2002 to discuss the current moisture conditions in the Commonwealth. The Department of Environmental Quality compiled the following report from information provided by the State Climatologist, the Virginia Departments of Agriculture and Consumer Services, Health, Forestry, Emergency Management, Game and Inland Fisheries; the Virginia Cooperative Extension Service, Farm Service Agency-USDA, the National Weather Service, and the U. S. Geological Survey.

OVERVIEW

Dry conditions persist throughout the Commonwealth. While conditions have improved slightly in southeast Virginia and remained relatively stable in central and western Virginia, conditions have continued to deteriorate in northern Virginia and the Shenandoah Valley. Current drought conditions have been persistent since the fall of 1999 with minor periods of improved moisture conditions within that period. Three consecutive winters of below average precipitation have resulted in significant reductions in ground water recharge and ground water monitoring wells for near surface aquifers show the lowest ground water levels for the period of record. These historic low ground water levels have resulted in a condition where there is little ground water discharge available to support stream flows. Stream flows across the Commonwealth were less than the 90th percentile for stream flow exceedance on February 15 (historically 90% or more of the time stream flows have been greater than those measured for February 15). It is anticipated that average stream flows for February will be the lowest of historic record for most streams in the Commonwealth. Discharges from large reservoirs such as Smith Mountain Lake, Lake Anna, and Lake Moomaw have been reduced in an attempt to fill these reservoirs for future water demands. Low stream and reservoir levels are impacting recreational opportunities due to lack of access (water levels below boat ramps) and cancellation of stream trout stockings. Livestock producers began feeding hay two to three months earlier than usual due to poor pasture conditions. Winter small grain crops are making little progress due to dry conditions and should these conditions persist, impacts are expected on spring plantings. Many farm ponds that are used for livestock watering and irrigation are at very low levels or dry, especially in the Shenandoah Valley. Public water supplies, both ground water based and surface water based, are in relatively good condition with only a few cases of voluntary and mandatory water use restrictions. While little is known on private ground water based supplies, it is anticipated that individual domestic users, especially those that utilize water table aquifers, have been or will be impacted by low ground water levels. Forest fuel moisture conditions at the moment are not quite as dry as what they were in the fall. As the state returns to warmer daytime temperatures over the next month, forest fuels will dry out quickly resulting in the potential for significant forest fire threats.

CLIMATOLOGICAL CONDITIONS

NATIONAL WEATHER SERVICE

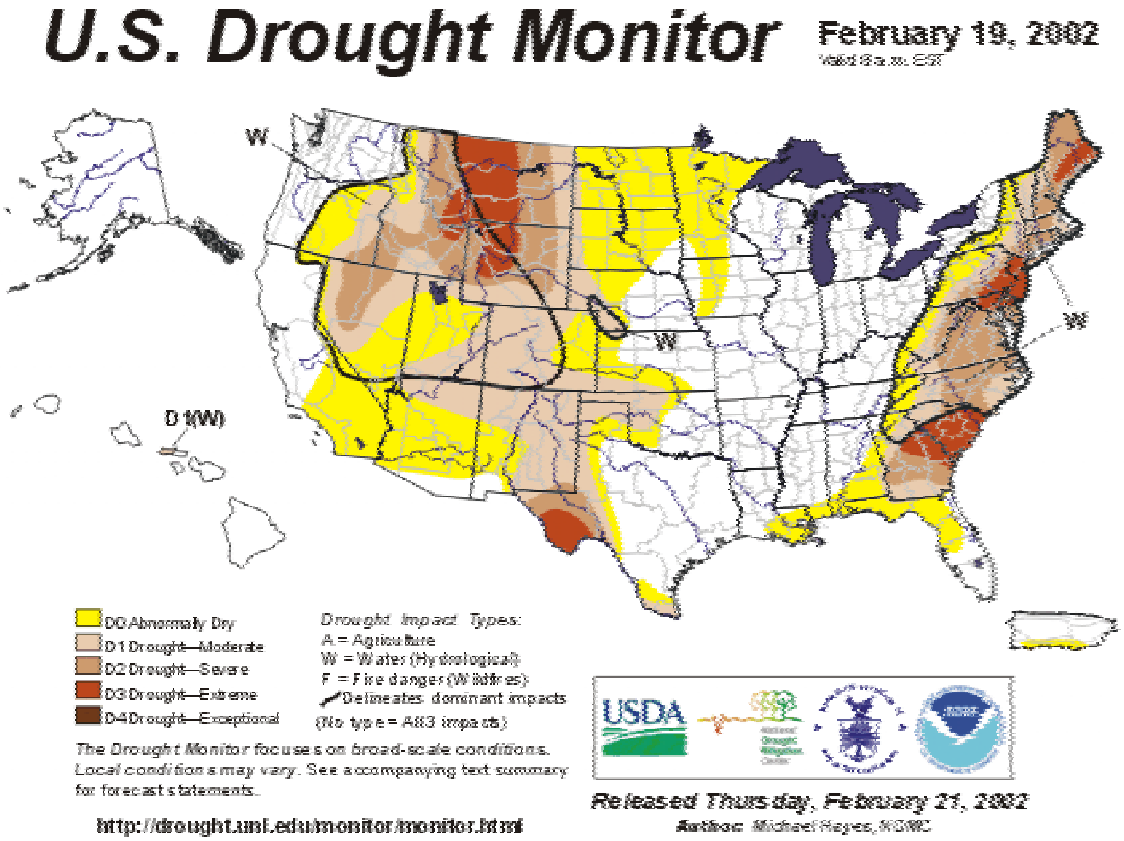
The precipitation received so far this winter has done little to allow the Commonwealth to recuperate from the dry/drought conditions of last summer/fall. Near average precipitation occurred during the December through mid-February time frame. The weather pattern during the last 2 weeks has been much more like spring, with periodic, mainly light/showery, precipitation events. That spring like pattern will hold for the remainder of this week, but a return to a more typical winter pattern will occur during the 7-15 day time frame.

For the next 7-10 days (2/19-3/1), there are 2 potential precipitation producers. The first is a cold front, which is forecast to cross the Commonwealth Wednesday and Wednesday night. Showers will accompany the front, but rainfall amounts will generally be one-quarter inch or less. The next precipitation chance appears to be mid to late week next week (2/26-27). If the system evolves as is currently forecast, more widespread rain is possible with this system. However, it's too early to be specific on amounts/areal coverage.

In the 10-15 day period (3/1-3/6), another rain event is possible around March 3rd, then cooler, and dry weather for the rest of the period.

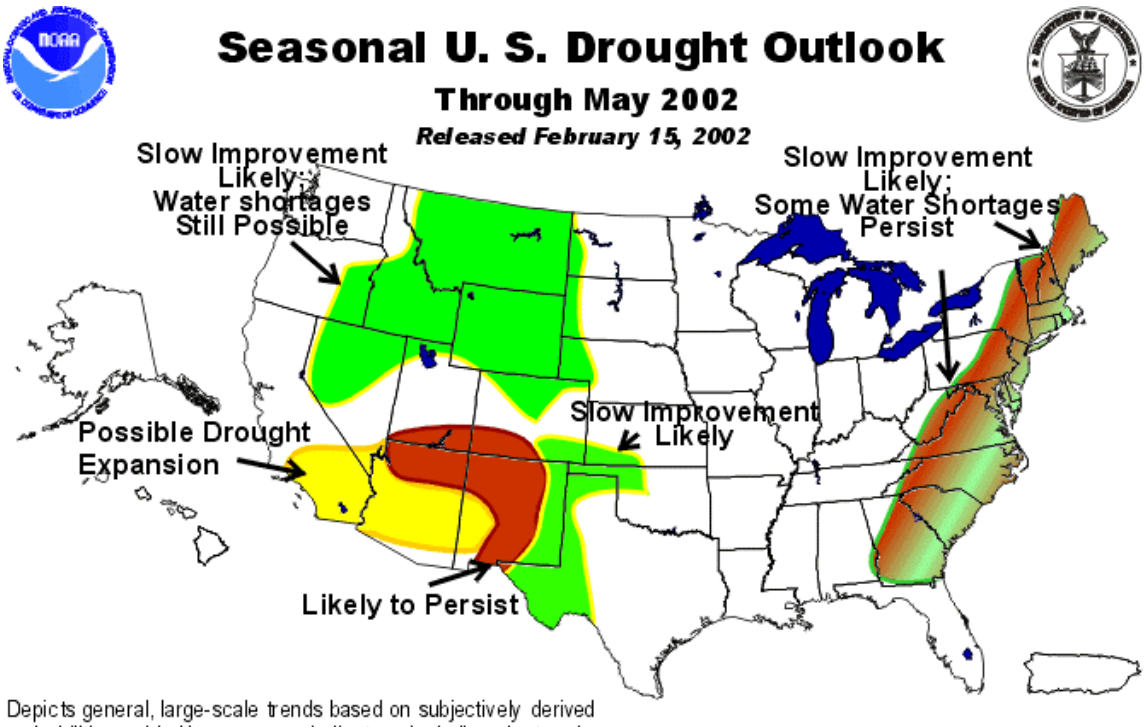
Present indications are that precipitation amounts across Virginia will average less than one inch during the next 2 weeks, which is below average by 25 to 50 percent.

The latest NOAA drought monitor and drought outlook follow.



National Drought Summary -- February 19, 2002

The East: Drought concerns continued to escalate along the East Coast during the past week. As a result of deteriorating drought conditions, an area of extreme drought (D3) now is located across most of New Jersey, southeastern Pennsylvania, northern Delaware, and northern Maryland. This includes both the Philadelphia and Baltimore metropolitan areas. Severe (D2) and moderate (D1) drought expanded to cover more of central Pennsylvania and eastern West Virginia. According to the USGS, streamflows are below normal at 87% of the gaging stations in Maryland and Delaware, and 100% of the groundwater observation wells in the two states are also below normal. In addition, streamflow entering into Chesapeake Bay is at the second lowest level for February since 1937. Precipitation in Washington, D.C., has only been 35% of normal (a deficit of 10.28 inches) since September 1, 2001. The New York City Delaware River Basin storage, meanwhile, has risen since the beginning of the year, although levels still remain in the “Drought” category, according to their terminology, and have not been this low in February since 1981.



Depicts general, large-scale trends based on subjectively derived probabilities guided by numerous indicators, including 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, so use caution if using this outlook for applications–such as crops–that can be affected by such events. Initial drought areas--shown schematically–are approximated from the Drought Monitor. For weekly updates on drought, see the latest Drought Monitor map and text.

Latest Seasonal Assessment - In mid-February, moderate to severe drought extended from Georgia to Maine, with drought reaching extreme levels in Maine and South Carolina. Storms during the past 30 days have eased dryness in some areas, such as northern New England, upstate New York, northern Georgia and the Carolinas, but dryness intensified over the mid-Atlantic region and southern New England. The latest forecast indications present a mixed picture for the East Coast. Occasional storms should provide slow overall improvement, but water shortages will continue in a few areas. With recent near-record low streamflows and reservoir levels for this time of year being reported over portions of the mid-Atlantic and New England states, it will take some time for the region to work its way out of drought conditions.

REPORT OF THE STATE CLIMATOLOGIST- February 19, 2002

Much of Virginia remains abnormally dry, with the exception of the Southeast. Unless there is a significant change in persistent jet-stream patterns, serious problems relating to agriculture and forestry in the Shenandoah Valley and Northern Virginia will develop very rapidly as temperatures warm in March and April.

Total precipitation since January 1 has been in the normal range for Southeastern, East-Central, and Southwestern Virginia. There is a sharp gradient in precipitation along the western Piedmont, with areas to the west and north receiving less than half of their normal precipitation since January 1. As a result, both the Shenandoah Valley and Northern Virginia are very dry in the near term. Visual inspection strongly suggests that the regional drought index values (-2.50-"moderate drought" for Northern Virginia, and -3.26-"severe drought" for the Shenandoah and surrounding mountains) do not reflect the seriousness of the current situation. The true level of deficit, which includes long-term shortages, is evinced by the large number of agricultural ponds in the Shenandoah that are dry or nearly so.

Table 1 gives precipitation anomalies at the 1, 2, 3, 6, 12, and 28-month intervals.

At the three-month interval, the deficits in Northern Virginia and the Shenandoah are largest, but overall values are also much lower statewide than in the more recent intervals. This is consistent with the observation that eastern and southeastern Virginia have been within the normal precipitation range in the last two months.

The lowest statewide average values occur in both the three and six-month ranges. On a percentile basis, the state is averaging around the 4th percentile for three-month precipitation and 3rd percentile at the six-month level. At the six-month level, again there is a substantial gradient in severity running through the western Piedmont. As a result, the actual situation in the Shenandoah, westernmost piedmont locations, and Northern Virginia is even worse than the already low statewide percentile.

This is the third successive year in which the intensively planted Shenandoah agricultural region has faced the early spring with substantial moisture deficits—but this year is worse than the last two. In the last two years, despite below-average rainfall on an annual basis in the Shenandoah, timely late-spring and early-summer precipitation prevented a major agricultural disaster. There is no guarantee that this will happen again, and the more extreme levels of already-existing shortfalls are ominous.

Similar considerations extend to Northern Virginia, although the agricultural intensity is much lower because of increasing urbanization. The Potomac-driven water supplies are likely to remain adequate because of large upstream reservoir capacity, but local systems that are supplied from smaller tributaries and reservoirs must be monitored with extreme care at this time.

Climatologically, the jet-stream pattern that has exacerbated moisture shortages in western and northern Virginia is a split in the upper-atmospheric flow that continues to develop strong cyclonic storms to our north and west, while redeveloping coastal cyclones too far north and offshore to extend their precipitation much further west than the Virginia Tidewater. Recent medium-range forecast models at this time suggest a temporary break in this pattern, but they also revert back to the existing situation by early March.

TOTAL PRECIPITATION (INCHES) Data as of:
PRELIMINARY PRECIPITATION SUMMARY 2/15/02

Climatic Division	JAN 2002	JAN NORMAL	JAN DEPARTURE	JAN % DEPART.
Tidewater	4.7	3.62	1.1	130%
Eastern Piedmont	2.9	3.36	-0.5	86%
Western Piedmont	2.4	3.22	-0.8	75%
Northern	1.1	2.70	-1.6	41%
Central Mountain	1.1	2.56	-1.5	43%

Southwestern Mountain	3.2	3.05	0.2	105%
Statewide	2.7	3.21	-0.5	84%

Climatic Division	DEC 2001 - JAN 2002	DEC-JAN NORMAL	DEC-JAN DEPARTURE	DEC-JAN % DEPART.
Tidewater	6.5	6.9	-0.4	94%
Eastern Piedmont	5.0	6.6	-1.6	76%
Western Piedmont	5.4	6.5	-1.1	83%
Northern	2.8	5.7	-2.9	49%
Central Mountain	3.4	5.4	-2.0	63%
Southwestern Mountain	5.4	6.3	-0.9	86%
Statewide	4.9	6.4	-1.5	77%

Climatic Division	NOV 2001 - JAN 2002	NOV-JAN NORMAL	NOV-JAN DEPARTURE	NOV-JAN % DEPART.
Tidewater	6.8	10.0	-3.2	68%
Eastern Piedmont	5.3	10.0	-4.7	53%
Western Piedmont	5.9	9.8	-3.9	60%
Northern	3.8	9.1	-5.3	42%
Central Mountain	4.1	8.5	-4.4	48%
Southwestern Mountain	6.1	9.5	-3.4	64%
Statewide	5.5	9.2	-3.7	60%

Climatic Division	AUG 2001 - JAN 2002	AUG-JAN NORMAL	AUG-JAN DEPARTURE	AUG-JAN % DEPART.
Tidewater	16.7	21.4	-4.7	78%
Eastern Piedmont	10.9	21.4	-10.5	51%
Western Piedmont	12.4	21.7	-9.3	57%
Northern	11.8	20.1	-8.3	59%
Central Mountain	10.5	19.3	-8.8	54%
Southwestern Mountain	12.3	20.1	-7.8	61%
Statewide	12.6	19.9	-7.3	63%

Climatic Division	FEB 2001 - JAN 2002	FEB-JAN NORMAL	FEB-JAN DEPARTURE	FEB-JAN % DEPART.
Tidewater	38.9	43.65	-4.8	89%
Eastern Piedmont	33.5	43.27	-9.8	77%
Western Piedmont	33.7	44.76	-11.1	75%
Northern	33.9	40.75	-6.9	83%
Central Mountain	30.5	39.38	-8.9	77%
Southwestern Mountain	33.4	43.30	-9.9	77%
Statewide	35.1	42.21	-7.1	83%

Climatic Division	FOR THE 28-MONTH PERIOD: OCT 1999 - JAN 2002			
	OBSERVED	NORMAL	DEPARTURE	% DEPART.
Tidewater	91.4	100.47	-9.1	91%
Eastern Piedmont	81.7	100.34	-18.6	81%
Western Piedmont	80.2	103.37	-23.2	78%
Northern	79.8	94.21	-14.4	85%
Central Mountain	79.4	90.99	-11.6	87%
Southwestern Mountain	83.9	99.53	-15.6	84%
Statewide	83.1	96.72	-13.6	86%

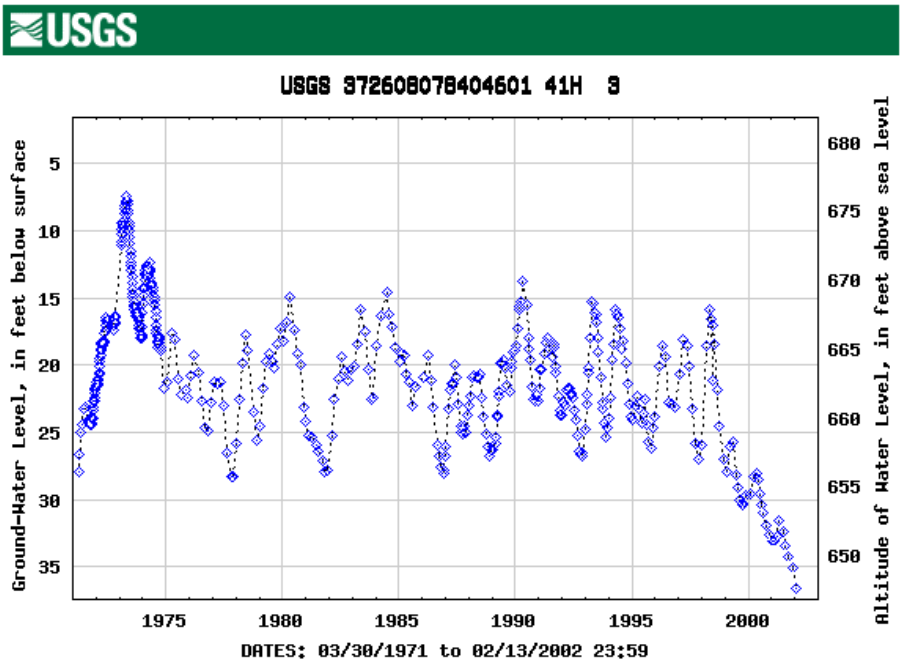
PROVISIONAL ASSESSMENT OF HYDROLOGIC CONDITIONS IN VIRGINIA, FEBRUARY 19, 2002
UNITED STATES GEOLOGICAL SURVEY

Streamflows across the State are well below the normal range of flow expected during winter months despite recent snow and rain. Streamflows are at levels expected during the late fall months when flows generally are at annual minimums. At some streamgages, record minimums for the month can be expected. Ground-water storage (as indicated by well levels) is well below conditions expected during winter months.

Current hydrologic drought conditions result from precipitation patterns over the past several years. The current Statewide drought began in the summer of 1997. Precipitation was well below normal during the summer and fall of 1997, allowing streamflows to decline to levels below the normal range of flows. Precipitation was well above normal during the winter of 1998, increasing groundwater storage and streamflow to levels above the normal range of flows. During the summer and fall of 1998, precipitation again was well below normal, causing a significant agricultural drought; however, streamflows never declined to below normal levels until late fall because of the unusually high ground-water storage. Ground-water storage was not replenished significantly during the winter of 1999 and new record minimums were recorded during the summer of that year. Hurricanes Dennis and Floyd brought significant precipitation during the fall of 1999 which boosted ground-water storage in the eastern half of the State. During the winters of 2000 and 2001, precipitation did not replenish the ground-water storage to the extent normally expected, and well levels have continued to decline. Precipitation patterns during the summers of 2000 and 2001 have allowed streamflows to maintain conditions near the normal range of flow.

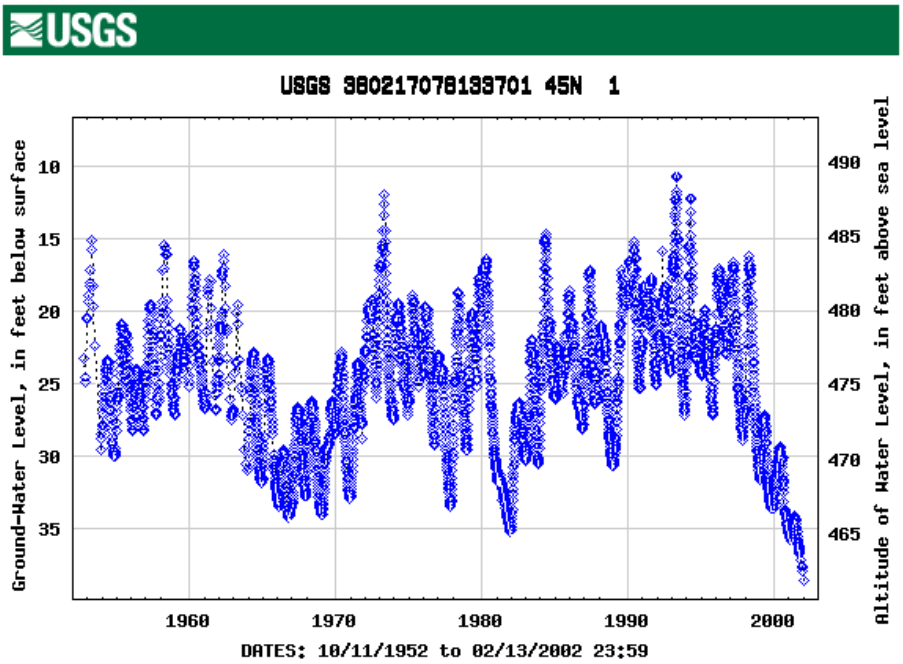
The following graphs and table gives flow duration and current flow conditions for selected U.S. Geological Survey and Virginia Department of Environmental Quality ground-water and surface-water gaging stations. Data are provisional and subject to revision. The normal range of flows is defined as flows in the middle two quartiles (between those flows equaled or exceeded 75 percent of the time and those flows equaled or exceeded 25 percent of the time).

BUCKINGHAM COUNTY WELL



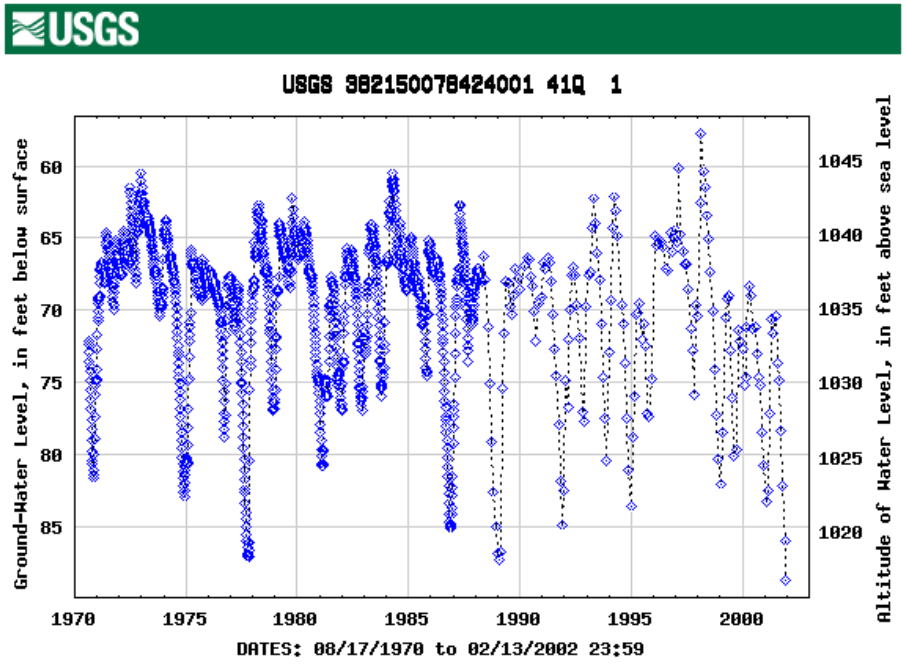
Provisional Data Subject to Revision

LOUISA COUNTY WELL



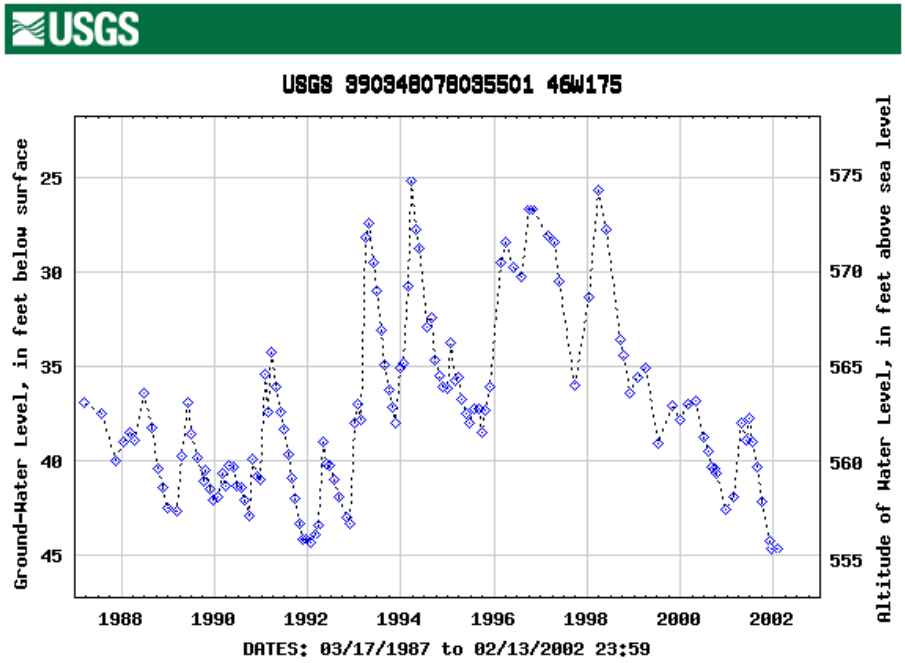
Provisional Data Subject to Revision

ROCKINGHAM COUNTY WELL



Provisional Data Subject to Revision

CLARKE COUNTY WELL



Provisional Data Subject to Revision

	MINIMUM DAILY FLOW, PERIOD OF RECORD (CFS)	MINIMUM FEB FLOW, PERIOD OF RECORD (CFS)	7Q2 (CFS)	7Q10 (CFS)	PERCENT OF TIME FLOW EQUALED OR EXCEEDED FOR FEB DAILY MEAN FLOWS (CUBIC FEET PER SECOND)			CURRENT CONDITIONS FLOW (CFS)/ DURATION (PERCENT)
					75%	50%	25%	15 Feb, 2002
SHENANDOAH RIVER BASIN								
South River near Waynesboro, Va.	17	20	30	24	98	143	219	22/>95
South Fork Shenandoah River at Front Royal, Va.	107	217	344	235	961	1,565	2,573	309/>95
North Fork Shenandoah River at Cootes Store, Va.	0.2	1.5	3.2	0.77	69	149	302	12/>95
North Fork Shenandoah River near Strasburg, Va.	35	60	-	-	322	571	960	96/>95
POTOMAC RIVER BASIN								
Goose Creek near Leesburg, Va.	0.4	10	12	2.5	205	338	579	41/>95
RAPPAHANNOCK RIVER BASIN								
Rappahannock River at Remington, Va.	2.9	58	50	11	467	719	1,072	145/>95
Rapidan River near Culpeper, Va.	2.2	44	-	-	344	554	831	112/>95
YORK RIVER BASIN								
Pamunkey River near Hanover, Va.*	47	178	-	-	732	1,090	1,792	169/>95
Mattaponi River near Beulahville, Va.	.78	119	48	14	487	730	1,145	114/>95

	MINIMUM DAILY FLOW, PERIOD OF RECORD (CFS)	MINIMUM FEB FLOW, PERIOD OF RECORD (CFS)	7Q2 (CFS)	7Q10 (CFS)	PERCENT OF TIME FLOW EQUALED OR EXCEEDED FOR FEB DAILY MEAN FLOWS (CUBIC FEET PER SECOND)			CURRENT CONDITIONS FLOW (CFS)/ DURATION (PERCENT)
					75%	50%	25%	15 Feb, 2002
JAMES RIVER BASIN								
Jackson River near Bacova, Va.	13	25	26	20	102	170	277	34/>95
Potts Creek near Covington, Va.	15	17	24	17	112	202	351	54/93
Cowpasture River near Clifton Forge, Va.	40	60	73	54	312	564	963	135/>95
Craig Creek at Parr, Va.	25	41	43	31	257	545	768	90/>95
James River at Buchanan, Va.*	257	317	378	271	1,627	2,770	4,632	615/>95
Maury River near Buena Vista, Va.	22	81	89	62	428	737	1291	114/>95
Hardware River below Briery Run near Scottsville, Va	0.1	23	24	7.5	88	133	198	19/>95
Rivanna River at Palmyra, Va.	5.2	82	-	-	451	693	1,121	89/>95
James River at Cartersville, Va.	330	1,260	1,120	584	5,219	7,932	12,752	1,290/>95
Appomattox River at Farmville, Va.	6.3	54	52	21	202	291	464	83/>95
Appomattox River at Mattoax, Va.	13	111	86	30	504	758	1,292	230/>95
Chickahominy River near Providence Forge, Va.	0.07	50	16	4.0	223	362	521	110/95
CHOWAN RIVER BASIN								
Nottoway River near Sebrell, Va.	14	201	82	24	1,171	2,146	3,270	573/93
Blackwater River near Franklin, Va.	0.07	22	-	-	608	1051	1,588	370/90
Meherrin River near Lawrenceville, Va.	4.2	40	52	16	341	525	861	122/>95

	MINIMUM DAILY FLOW, PERIOD OF RECORD (CFS)	MINIMUM FEB FLOW, PERIOD OF RECORD (CFS)	7Q2 (CFS)	7Q10 (CFS)	PERCENT OF TIME FLOW EQUALED OR EXCEEDED FOR FEB DAILY MEAN FLOWS (CUBIC FEET PER SECOND)			CURRENT CONDITIONS FLOW (CFS)/ DURATION (PERCENT)
					75%	50%	25%	15 Feb, 2002
Roanoke River at Roanoke, Va.*	19	27	58	35	244	388	634	89/>95
Pigg River near Sandy Level, Va.	25	124	96	47	267	348	491	130/>95
Roanoke River at Randolph, Va.*	179	522	847	426	2,004	2,985	4,788	780/>95
Dan River at Paces, Va.	244	804	-	-	2,053	2,771	4,162	1,020/>95
Hyco River near Denniston, Va.*	2.5	19	-	-	131	254	569	23/>95
KANAWHA RIVER BASIN								
New River at Allisonia, Va.	453	662	1,040	725	2,455	3,584	5,269	1,590/93
Little River at Graysontown, Va.	47	60	109	69	261	378	537	145/93
Walker Creek at Bane, Va.	24	40	44	33	212	391	702	127/90
BIG SANDY RIVER BASIN								
Russell Fork at Haysi, Va.	0.2	7	8.7	1.0	204	365	674	187/82
TENNESSEE RIVER BASIN								
South Fork Holston River near Damascus, Va.	40	86	99	73	387	614	990	264/90
North Fork Holston River near Saltville, Va.	2.0	32	34	24	218	369	623	147/87
Clinch River at Cleveland, Va.	37	65	81	54	566	932	1,574	367/87
Powell River near Jonesville, Va.	18	40	42	24	393	659	1,182	487/70

* indicates some regulation

FISHERIES AND RECREATIONAL IMPACTS

VIRGINIA DEPARTMENT OF GAME AND INLAND FISHERIES

Cancellations of scheduled trout stockings are now occurring on a regular basis in the northwestern portion of the state (Shenandoah Valley). The heaviest scheduled stockings don't begin until March 1st; however, if significant sustained rainfalls do not occur, cancellations and programmatic changes will be necessary on a statewide basis.

Rivers such as the Shenandoah, Rappahannock and James are extremely low and recreational floating and fishing are being curtailed. Lake Moomaw is down over 20 feet and only one ramp is open. Even with normal rainfall it may not refill this year. If the reservoir drops another five feet there will be no access.

Smith Mountain Lake is at a critical level for providing springtime downstream flows for fish reproduction, hatchery operations and recreational boating. Additionally, without adequate rainfall recreation in the reservoir will be severely impacted. Several boat ramps are currently closed.

Kerr Reservoir has some ramps that are not accessible and there is concern that fish such as striped bass may not move into the rivers to spawn.

On the positive side, the low reservoir levels have allowed for boat ramp maintenance and habitat development to occur.

PUBLIC WATER SUPPLY SYSTEMS

VIRGINIA DEPARTMENT OF HEALTH

Public water supply conditions have remained relatively stable since the last report with some improvement in the central and southeast portions of the Commonwealth. Conditions have continued to deteriorate in the Shenandoah Valley with several systems on mandatory or voluntary restrictions. Ground water based public water supplies have shown few adverse impacts due to ground water level declines. Detailed reports of public water supply conditions in the six field offices follow.

SOUTHEAST VIRGINIA FIELD OFFICE

	Updated 2-19-02		N-No	B-Better
			M-Mandatory	S-Stable/Same
			V-Voluntary	W-Worse
PWSID	**Waterworks**	**Source Name**	**Restrictions**	**Situation**
3700500	Newport News	Little Creek, Diascund, Skiffes Creek, Harwoods Mill and Lee Hall Reservoirs	N	As of 02/11/02, reservoirs were 83% full and rising. RO plant at 2.0 mgd. No Restrictions-Situation much Better than previous report.(B)
3830850	Williamsburg	Waller Mill Reservoir	N	As of 02/11/02, Waller Mill reservoir is 18½ inches below the primary spillway and is rising slowly (in the previous report it was 20 inches below the primary spillway and stable). Williamsburg is still purchasing 2 mgd of raw water from Newport News. No restrictions. Situation is Better(B)

3650150	Ft. Monroe	Big Bethel Reservoir System	N	The water plant was shut down in mid-December for replacement of valves, and switched to being supplied by Newport News water. Plant is scheduled to be back on line early next month (March 02).
3095490	James City Service Authority Central System		N	No significant impact on water levels in wells.
3670800	Virginia-American, Hopewell	Appomattox River/James River	N	Both rivers continue to be low. No problems with water quantity as yet. TDS, sodium, and alkalinity are still at increased levels. Situation is Stable.(S)
3183550	Jarratt	Nottoway River	N	As of 2/19/02, the Nottoway River is about 1.25 feet lower than usual. This is Better than last report. No quantity problems noted yet.(B)
3595250	Emporia	Meherrin River	N	As of 2/19, the reservoir levels have returned to "normal". No recent restrictions to power plant (see item 3, below). Situation is Better.
3710100	Norfolk		N	As of 02/19, reservoirs are at 83.9% of total capacity(minor improvement). Historic level at this time of year is 92.2% full. Pumping from Lake Gaston, at rate of 27.0 mgd. Wells are OFF Not currently considering conservation measures, but that could change with continued dry weather.
3740600	Portsmouth		V	As of 19 Feb., reservoirs are at "78% of useful capacity". Median capacity for this time of year is 89%, average capacity is 89% (period of 1969-2000). Emergency wells are OFF. City Council voted to establish Voluntary Conservation at meeting of 11/27/01. The restrictions took effect on 11/30/01.(S)

3550050	Chesapeake - Western Branch system	Western Branch system	V	This portion of the city is consecutive to (receives water from) the city of Portsmouth. Because Portsmouth decided to go on voluntary restrictions, Chesapeake has decided to follow Portsmouth's lead, for ALL residents of the city. City Council voted to establish Voluntary Conservation at the meeting on 11/27/01. The restrictions took effect on 11/30/01.
3550052	Chesapeake - South Norfolk system	South Norfolk system	V	This portion of the city is consecutive to (receives water from) the city of Norfolk. Because Portsmouth decided to go on voluntary restrictions, Chesapeake has decided to follow Portsmouth's lead, for ALL residents of the city. City Council voted to establish Voluntary Conservation at the meeting on 11/27/01. The restrictions took effect on 11/30/01.(S)
3550051	Chesapeake - NW River system	NW River system	V	Chlorides are increasing in river water, and well water levels have dropped about 20 feet. Neither condition is currently impacting water quantity or quality. Because a portion of the city (a separate system from the NW River system) is served from Portsmouth, Chesapeake has decided to follow Portsmouth's lead, for ALL residents of the city. City Council voted to establish Voluntary Conservation at the meeting on 11/27/01. The restrictions took effect on 11/30/01.(S)

3800805	City of Suffolk	Central System	V	As of 2/19, reservoir system is near 100% in Crumps Mill and 79% in Lone Star Lakes. They are purchasing finished water from Portsmouth, which enters the central system in downtown Suffolk. As such, this system has followed the lead of of the Portsmouth system and has adopted Voluntary Conservation.(S)
3800787	City of Suffolk	Route 17 Corridor	V	This system is consecutive to (purchases water from) the Portsmouth system. As such, this system has followed the lead of the Portsmouth system, and has adopted Voluntary Conservation. If Portsmouth goes to Mandatory Conservation, Suffolk will probably switch the supply source to their Central System (groundwater).(S)
	Notes:			
	1. Systems listed for the first time are shown **in bold**.			
	2. As of this date, SEVFO has not received any reports of impacts to groundwater systems.			
	3. (Note added on 11/28/01) While there have been no lasting drought-related impacts to the waterworks at the City of Emporia, there have been impacts at the power plant located immediately across the reservoir from the water plant. When the power plant operates at full capacity, it withdraws sufficient water to cause the water level in the reservoir to drop, to the point where water stops going over the dam. This in turn has an impact on the water plant. The water plant and power plant have a "gentlemen's agreement" that, at such times, the water plant notifies the power plant and the power plant shuts down. This allows the water level in the reservoir to build back up. Currently, the power plant is operating about 10 to 12 hours per day. (Update as of 2/19/02) No recent restrictions on power plant operations.			

CULPEPER FIELD OFFICE

			N-No	B-Better
	Updated 2-19-02		M-Mandatory	S-Stable/Same
			V-Voluntary	W-Worse
PWSID	**Waterworks**	**Source Name**	**Restrictions**	**Situation**
6033425	Lake Caroline	Lake Caroline	N	Lake Caroline is 2 feet below normal. No conservation measures in place. (B)
6177280, 6177300	Spotsylvania County	Ni River Res., Motts Run	V	Spotsylvania County declared a water emergency in mid November and instituted voluntary conservation. Ni River Reservoir is over 6.5 feet below normal. Motts Run Reservoir is 10 feet below normal and is releasing water occasssionally to Rappahannock River for withdrawal by Motts Run WTP. (W)
6630050	City of Fredericksburg	Mott's Run	V	City of Fredericksburg (consecutive system to Spotsylvania County) has asked for voluntary conservation based on Spotsylvania County's action.(S)
6179100, 6179775	Stafford County	Smith Lake, Abel Lake	V	Stafford County has asked residents to voluntarily conserve water. Smith Lake is 12 feet below normal and Abel Lake is over 5 feet below normal. Dept. of Utilities is scheduled to ask Board of Supervisors(on 3/5/02) to consider "limiting non-essential water usage"..They will put out a press release accordingly...(W)
6061200	Fauquier County	Marshall Waterworks	N	Low water levels in existing wells resulted in water hauling to system in January 2002. New well brought on-line in late January has alleviated shortage problem.

	Notes:			
	1. PD 8 - No surface water or groundwater supply problems or conservation plans in effect at this time.			
	3. PD 9 - No surface water problems known at this time.			
	4. PD 16 - No groundwater problems known at this time.			

LEXINGTON FIELD OFFICE

	Updated 2-19-02		N-No	B-Better
			M-Mandatory	S-Stable/Same
			V-Voluntary	W-Worse

PWSID	Waterworks	Source Name	Restrictions	Situation
2770650	Roanoke City - Carvins Cove	Carvins Cove Reservoir/Tinker Creek/Catawba Creek	M	W: Reservoir level 22.0' below spillway - situation steadily worsening. Roanoke City Partial Mandatory restrictions imposed whenever reservoir level is between 22 and 26 feet. (Stage 3)
2015150	Craigsville		M	S: Craigsville spring production off-well production off-pursuing emergency construction to connect to Augusta springs-plans and specifications for 6700 feet of interconnecting water line have been approved, and construction started.
2015575	South River S.D. (ACSA)	Coles Run	N	S: Coles Run reservoir level down 5-6 feet-no impact on system due to multiple sources.
2091150	Monterey		N	S: Monterey well production off. New well construction completed, testing operation of components.
2790600	Staunton		N	S: Staunton-middle river flow reduced.

2187406	Front Royal		V	B: Operating under voluntary water conservation per VWPP requirements. Conservation controls implemented at 30% (voluntary), 17% (mandatory), 15% (emergency), and 13% (rationing) of mean stream flow based on 14-day running average. At present, 14-day running average stream flow is 19% of mean stream flow.
2003250	Albemarle County / Crozet	Beaver Creek Reservoir	N	W: Beaver Creek Reservoir is currently down nearly 8 feet from normal "full". This low level has exceeded the all time low water level on record.
2003600	Charlottesville/Albermarle County	Sugar Hollow (Observatory WTP)	N	S: The Sugar Hollow reservoir (Observatory WTP) is 25 feet below normal levels and remains out of service. Ragged Mountain reservoir is 5.5 feet below normal. Overall source water availability is at 76.8% of "full available capacity" (this includes both the South Rivanna system and the Suggar hollow/Ragged Mountain system). Mandatory conservation is being considered if the situation does not improve.
2003725	Charlottesville/Albermarle County	South Rivanna (South Rivanna WTP)	N	B: Their main reservoir-South Rivanna (South Rivanna WTP) is full and silghtly overflowing.

2065250	Fluvanna Correctional Center	Mechunk Creek	N	W: The Fluvanna Correctional Center is still unable to withdraw raw water from Mechunk Creek. Their raw water storage impoundment has approximately 30 days of available water remaining. DOC has requested an amendment to their water withdrawal permit from DEQ - they are currently in a 30 day waiting period following public notice. Assuming no public objections to the permit amendment request, they hope to be able to begin pumping water from Mechunk Creek on March 2, 2002.
2125650	Schulyer	Johnson's Branch	N	S: The Johnson's Branch flow is stable since our last report. While not back to normal flows there is ample water to meet daily demands.

DANVILLE FIELD OFFICE

	Updated 2-13-02			
			N-No M-Mandatory V-Voluntary	B-Better S-Stable/Same W-Worse
PWSID	**Waterworks**	**Source Name**	**Restrictions**	**Situation**
5007030	Amelia Academy	Well No.1(bored)	N	B-No reported problems since October
5009050	Town of Amherst	Buffalo River	N	S
5009250	Amherst County Service Authority	Graham Creek Res., Harris Creek	N	S - Reservoir full
5019250	Eagle Eyrie		N	S
5019400	High Point Subdivision	Smith Mountain Lake	N	S
5025450	Town of Lawrenceville	Great Creek	N	S-Great Creek Reservoir full
5029085	Buckingham County Waterworks	Troublessome Creek Reservoir	N	B-Reservoir full
5031050	Town of Altavista	Staunton River, Reed Creek	N	S
5031150	CCUSA	Otter River	N	S - River is 10" down
5031175	Town of Brookneal	Phelps Creek Reservoir	N	S
5031200	Dan River, Inc. -	Falling River	N	S

	Brookneal Plant			
5067840	Town of Rocky Mount	Blackwater Creek	N	S
5083550	Town of Halifax	Banister River	N	S
5089376	Fieldcrest Cannon WTP	Smith River	N	S - flow subject to release from Philpott Dam
5089487	Marrowbone Cr. WTP	Marrowbone Creek	N	S- flow over check dam 3 7/8" which is higher than last report
5089852	Upper Smith River WTP	Smith River	N	S - flow subject to release from Philpott Dam
5111450	Town of Kenbridge	Flat Rock Creek & reservoir	N	B-Reservoir full
5111800	Town of Victoria	Nottoway Falls & Lunenburg Lake	N	B-Reservoir full
5117310	Town of Clarksville	Kerr Lake	N	S
5117800	Town of South Hill	Meherrin River	N	S
5135160	Town of Crewe	Lazerretto Creek/Crystal Lake	N	B-Reservoir full
5141640	Town of Stuart	South Mayo River	N	S
5143114	Town of Chatham	Cherrystone Creek	N	B - stream level is up
5143210	Town of Gretna	Georges Creek	N	S - Reservoir is full.
5515050	City of Bedford	Stoney Creek Reservoir	N	S - Reservoir full
5590100	City of Danville	Dan River, Schofield Dam	N	*S* -
5680200	City of Lynchburg	Pedlar Reservoir	N	Pedlar Reservoir is about 170" down.
5690400	City of Martinsville	Beaver Creek Reservoir	N	S- reservoir level down 6.1 feet
5780600	Town of South Boston	Dan River	N	S

EAST CENTRAL FIELD OFFICE

	Updated 2-19-02		N-No	B-Better
			M-Mandatory	S-Stable/Same
			V-Voluntary	W-Worse
PWSID	**Waterworks**	**Source Name**	**Restrictions**	**Situation**
4041845	Swift Creek WTP	Swift Creek Reservoir	N	S - The reservoir level is currently 3.4 feet below the top of the dam, the same as it was on December 1, 2001
				The WTP output is still being held to a maximum of 6.0 MGD, which is one-half of its treatment capacity.
4041035	Appomattox River Water Authority	Lake Chesdin	N	B -The reservoir level is currently 0.5 inches below the top of the dam. There are no drought related restrictions on the production of the WTP.

4075735	James River Correctional Center		N	B - The water level in Beaverdam Creek is currently 4 inches above the dam. No water has been pumped from the James River since 12/14/01.
4075630	Pagebrook (Goochland)		N	S - Sydnor is still having water hauled every Monday and Friday.
4073311	Gloucester	Beaverdam Reservoir	N	B -The Beaverdam Reservoir water overflow elevation is 40.5. The reservoir is full and overflowing. Note that about a million gallons of water is allowed to flow through the reservoir every day
4760100	City of Richmond	James River	N	S - The James River is still low, but Richmond is having no problems with water withdrawals. We are not aware of any use restrictions in place in the Richmond area. The recent rains may reduce demand somewhat.

ABINGDON FIELD OFFICE

	Updated 2-19-02		N-No	B-Better
			M-Mandatory	S-Stable/Same
			V-Voluntary	W-Worse
PWSID	**Waterworks**	**Source Name**	**Restrictions**	**Situation**
1195050	Appalachia		N	Reservoir is full.
1195100	Big Stone Gap		N	Both reservoirs are full.
1195950	Wise		N	264 days left, no alternate source in use, no conservation measure.
1720076	Norton		N	Both reservoirs are full.
	Note:			
	1. The only foreseeable problems are in Planning District 1. The reservoirs in Wise Co. are below the full levels and are dropping. However, the levels are better than they were in each of the previous 3 years.			

VIRGINIA AGRICULTURAL SITUATION

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Virginia farmers with livestock and winter crops are being impacted significantly by current dry conditions. Several localities have come forward in the past several months with requests to the Governor of Virginia to seek federal disaster designation because of agricultural losses and related problems created by extended dry weather. In response to those requests for help, the USDA Farm Service Agency completed damage assessment reports for Goochland and Prince Edward Counties and the Governor of Virginia has sent secretarial disaster designation requests to the Secretary of Agriculture. Requests from Buckingham, Cumberland and Louisa Counties are now being processed. On behalf of Governor Warner, the Virginia Department of Agriculture and Consumer Services is coordinating the development of damage assessment reports on these three localities with the USDA Farm Service Agency. The Department will continue to work with USDA to expedite the process for preparing official reports on each county. If the counties have suffered at least a 30% loss in production of a major crop they will also be submitted to the Secretary of Agricultural for emergency drought declaration.

The milder winter weather that Virginia has experienced this year would normally benefit farmers by increasing winter growth of pastures. However, with the continued shortage of precipitation, pasture conditions have gotten worse. During the fall of 2001, farmers began feeding their cattle hay much sooner than normal because pastures were in such dry condition. It is not known how long current hay supplies will last. If dry conditions continue, it is expected that farmers will be forced to move more cattle to market due to the lack of feed in the form of pastures or hay. Some cattle buyers are reportedly limiting their purchases because of dry conditions. Farmers are faced with diminishing water supplies, small farm ponds are dry or are going dry, and some on-farm streams have stopped running. Well drilling has increased in different areas of the state and drillers have to go deeper to find ample water. Some farmers in the Shenandoah Valley are already hauling water to their livestock.

VIRGINIA COOPERATIVE EXTENSION SERVICE

Virginia agriculture continues to be affected by droughty conditions. Small grains and forage grasses are depressed because of lack of moisture. Farmers in some parts of the state are reducing herd numbers as a result of significant reduction in forage and lack of drinking water for animals. Some farmers are hauling water to livestock. Hay feeding began 2-3 months earlier than normal for lack of pasture. Recent moisture has been generally light to moderate, improving topsoil moisture somewhat; however, subsoil moisture has not been replenished significantly.

Stream flows are critically low over much of the state. Many ponds are either very low or dry. This will create critical conditions for crops that need irrigation. Dry wells are reported in numerous counties across the state; Fluvanna County reports that 80 wells have been re-drilled since September 1, 2001.

The Warsaw Agriculture Research and Extension Center (AREC) reports the following departures from normal rainfall:

- September, 2001 - .93 inches
- October, 2001 -2.25 inches
- November, 2001 -2.90 inches
- December, 2001 -1.22 inches
- January, 2002 - .54 inches

Rainfall through February 15, 2002 at the AREC has been .68 inches.

Following is educational information provided by Agriculture & Natural Resource Extension Agents to agricultural producers relative to coping with drought:

Livestock producers are encouraged to use the Standardized Performance Analysis that measures the production and financial performance of their enterprise. This tool is especially helpful during a drought year.

Agents stress the importance of good management of cropping systems (field selection, Integrated Pest Management Practices, etc.) to reduce the affects of drought.

Agents have helped beef and dairy producers develop rations using alternative feeds such as corn gluten, hominy, crop residues, soybean hay and grass hays. Another recommendation is the use of soybean and peanut hulls mixed with grains and fed with low quality fiber sources i.e. corn fodder to provide appropriate nutrition.

The Virginia Tech Forage Testing Lab has been used for diagnostic work to determine if drought stressed crops can be fed to animals or if they are too high in nitrates/nitrites.

Drought and irrigation management has been included in field days.

Recommendations have been made on reseeding pastures and hayfields. Fewer nutrients are required as a result of drought; they are retained in the soil. Pasture renovation programs have been conducted (fall fertilization to maintain sod). Also, summer perennial grasses are recommended in the mix of pasture systems to enhance summer performance.

Agents are recommending rotational grazing to maintain pastures.

Agents have recommended that farmers take inventory of feed and recommended purchasing the amounts needed for the winter months. Agents have run rations to help farmers predict feed needs.

Recommendations have been made to cull low producing cattle. Grouping and feeding cattle according to their nutrient requirements is recommended.

Agents have recommended selecting grazing varieties of rye that are more suitable for late fall and winter grazing. Also, over seeding pastures and hay fields with winter grains enhances early spring grazing and hay production.

Agents recommend no-till planting to reduce loss of moisture in soil.

FOREST FIRE SITUATION IN VIRGINIA - FEBRUARY 19, 2002
VIRGINIA DEPARTMENT OF FORESTRY

The lack of significant precipitation over the winter has resulted in the potential for a very severe spring wildfire season. The spring wildfire season is already underway and the agency has responded to 351 wildfires that have burned 1625 acres since January 1 of this year. Typically the spring fire season is longer and more severe than the fall season. This knowledge coupled with the severity of last fall's fire season is cause for serious concern. The agency has established private helicopter/bucket contracts in three locations starting in March, and has maintained communications with the National Guard should additional air or personnel resources be needed. Fuel moisture conditions at the moment are not quite as dry as what they were in the fall, but as the state returns to warmer daytime temperatures over the next month, they will dry out quickly.