

Local and Regional Water Supply Planning
Existing Water Source and Water Use Data Entry Template

Local or Regional Plan:	Local <input type="checkbox"/> Regional <input checked="" type="checkbox"/>
Political Locality(s):	Hampton Roads Southside sub-region includes Chesapeake, Norfolk, Portsmouth, Suffolk, and Virginia Beach
Locality FIPS Code(s):	
Planning Area Population:	
River Basin(s):	
River Sub-basin(s):	
Contact Name:	
Title:	
Mailing Address:	
City and Zip Code:	
Phone:	
Fax:	
E-mail:	

The following data entry spreadsheets will allow you to enter information regarding the existing water source (9 VAC 25-780-70) and existing water use (9 VAC 25-780-80) water supply planning criteria.



Office of Water Supply Planning
 629 East Main Street,
 P.O. Box 1105, Richmond, VA 23218
 URL: <http://www.deq.virginia.gov/watersupplyplanning/>

List all well information for community water systems using groundwater. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark well locations on associated map.															
COMMUNITY WATER SYSTEMS (MUNCIPAL & PRIVATE) USING GROUND WATER (9 VAC 25-780-70 B)															
PWSID	Water System Name	VDH Permitted System Capacity (gpd)	Calculated VDH Permitted System Capacity (MGD)	INDIVIDUAL WELL DATA:									GROUNDWATER MANAGEMENT AREA WELLS		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
				Well Name and ID #	Well Depth (feet)	Casing Depth (feet)	Screen Depth (Top & Bottom) or Water Zones	Well Diameter (inches)	Withdrawal Design Capacity: AVERAGE DAILY (gpd)	Withdrawal Design Capacity: AVERAGE DAILY (MGD)	Withdrawal Design Capacity: MAXIMUM DAILY (gpd)	Withdrawal Design Capacity: MAXIMUM DAILY (MGD)	DEQ Permitted Monthly Withdrawal (MGD)	DEQ Permitted Annual Withdrawal (MGD)	
Chesapeake															
3550051 (GW0043900)	City of Chesapeake - Northwest River System	NA	0.00	NWR-1 234-220	1408	1381	1172-1192, 1222-1242, 1252-1262, 1340-1360	8" to 36"	770,133	0.77	1,958,000	1.96	11.37	11.00	Conjunctive use system.
				NWR-2 234-221	1300	1251	1152-1172, 1188-1218, 1226-1231	12" to 30"	873,533	0.87	1,368,000	1.37			Note 1: Average daily is for the month of September 2006.
				NWR-3 234-222	1300	1289	1188-1218, 1242-1252, 1272-1282	12" to 30"	7,833	0.01	1,670,000	1.67			Note 2: A combined permit (GW0043900) for all seven (7) wells owned by the City of Chesapeake was issued on 11-1-2003. The annual permitted withdrawal from the four "NWR" wells is 1,824,999,936 g (5 mgd). The annual permitted withdrawal from the three "Western Branch" wells is 1,095,000,000 g (3 mgd) for WB-1 and 1,095,000,000 g (3 mgd) for WB-3 and WB-4 combined.
				NWR-4 234-223	1306	1299	1190-1205, 1215-1225, 1256-1261, 1274-1294	12" to 30"	522,300	0.52	3,002,000	3.00			
				WB-1 234-00188	855	620	590-620, 630-640, 665-690, 705-740, 750-780, 790-815, 825-845	10" to 20"	1,561,000	1.56	3,000,000	3.00			
				WB-2	Not Currently Permitted				0.00		0.00				
WB-3 234-00200	865	850	560-570, 580-620, 660-720, 724-734, 738-763, 780-790, 800-815, 840-860	12" to 24"	18,067	0.02	3,000,000	3.00							
WB-4 (ASR) 234-00208	755	745	560-620, 665-725	16" to 30"	13,033	0.01	3,000,000	3.00	ASR well used to inject surplus potable water from the Northwest River WTP.						
Chesapeake - Private System															
3550500 (GW0040800)	Indian River Water Co subsidiary of Aqua Virginia, Inc	162,000.00	0.16	234-00063	65	NI	50-60	6	NI		NI	0.30	0.24	VDH System Capacity 610 ERC = 0.162 MGD	
				234-00089	65	NI	50-60	6	NI	NI					
				234-00090	85	NI	55-60, 75-80	6	NI	NI					
				234-00181	94	NI	55-65, 78-88	8	NI	NI					
3550750 (GW0040100)	VDOC - Saint Brides Correctional Center	324,000.00	0.32	No. 1 234-00041	152	NI	110-140	6	NI		NI	0.70	0.53	VDH System Capacity 810 ERC = 0.324 MGD	
				No. 2 234-00042	105	NI	64-94	6	NI	NI					
				No. 3 234-00203	150	NI	120-150	8	NI	NI					
				234-00239	160	NI	115-125, 125-140	10	NI	NI					
3550705	Plantation Mobile Home Park	20,000.00	0.02	NI	650	NI	NI	4	NI		NI	NA	NA	VDH System Capacity 50 ERC = 0.02 MGD	
3550775	Sunray Artesian Water Supply	10,000.00	0.01	NI	670	665	NI	3	NI		NI	NA	NA	VDH System Capacity 25 ERC = 0.01 MGD	
3550800	Sunray Water Co	10,000.00	0.01	NI	NI	NI	NI	NI	NI		NI	NA	NA	VDH System Capacity 25 ERC = 0.01 MGD	

List all well information for community water systems using groundwater. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark well locations on associated map.															
COMMUNITY WATER SYSTEMS (MUNICIPAL & PRIVATE) USING GROUND WATER (9 VAC 25-780-70 B)															
PWSID	Water System Name	VDH Permitted System Capacity (gpd)	Calculated VDH Permitted System Capacity (MGD)	INDIVIDUAL WELL DATA:									GROUNDWATER MANAGEMENT AREA WELLS		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
				Well Name and ID #	Well Depth (feet)	Casing Depth (feet)	Screen Depth (Top & Bottom) or Water Zones	Well Diameter (inches)	Withdrawal Design Capacity: AVERAGE DAILY (gpd)	Withdrawal Design Capacity: AVERAGE DAILY (MGD)	Withdrawal Design Capacity: MAXIMUM DAILY (gpd)	Withdrawal Design Capacity: MAXIMUM DAILY (MGD)	DEQ Permitted Monthly Withdrawal (MGD)	DEQ Permitted Annual Withdrawal (MGD)	
Chesapeake - private (continued)															
3550620	Naval Support Activity - NW Annex	353,000.00	0.35	4	117	NI	60-90	6	50,400	0.05	NI		NA	NA	No DEQ permit - Navy claimed sovereign immunity from the Ground Water Management Act.
				6	90	NI	NI	6	39,200	0.04	NI				
				7	90	NI	NI	6	39,200	0.04	NI				
				8	124	NI	80-100	8	31,200	0.03	NI				
				9	124	NI	80-100	8	31,200	0.03	NI				
				10	124	NI	80-100	8	32,000	0.03	NI				
				A	104	NI	60-90	6	43,200	0.04	NI				
				B	104	NI	44-104	6	43,200	0.04	NI				
C	104	NI	44-104	6	43,200	0.04	NI								
Norfolk															
3710100 (GW0037500)	City of Norfolk	NA		Well 1 #161-200	949	427	435-515, 706-746, 820-880	12	4,000,000	4.00	NA		16.92	15.94	Conjunctive use system. VDH permitted system capacity = 92.5 mgd DEQ Permitted Withdrawals based on 2004 permit application. Wells are located in Suffolk and discharge into Norfolk's Western Reservoir System.
				Well #2 161-201	960	428	435-465, 515-535, 570-590, 612-622, 685-705, 759-779, 821-831, 851-881, 929-949	12	4,000,000	4.00	NA				
				Well #3 161-202	1065	432	438-458, 510-530, 551-586, 628-638, 662-677, 720-730, 843-873, 984-994, 1010-1020, 1025-1055	12	4,000,000	4.00	NA				
				Well #4 161-203	912	377	382-402, 416-456, 490-500, 572-582, 624-644, 784-824, 882-902	12	4,000,000	4.00	NA				
Portsmouth															
3740600	City of Portsmouth	NA	5.50	PW01 161-264	655	225	590-650	10	2,700,000	2.70	2,700,000	2.70	5.42	5.42	Conjunctive use system. VDH permitted system capacity = 38.5 mgd Operating under 1973 certificate. Permit application requests: 5.42 mgd for production wells; 2.3 mgd for drought wells. PW designates production wells; DW designates drought wells.
				PW02 161-265	691	450	546-575, 600-625, 634-645, 676-686	10	2,700,000	2.70	2,700,000	2.70			
				DW03 161-463	820	565	555-560, 570-645, 750-770, 790-815	12	3,200,000	3.20	3,200,000	3.20			
				DW04 161-396	670	360	505-555, 565-665	10	1,510,000	1.51	1,510,000	1.51			
				DW05 161-397	723	360	490-512, 526-580, 624-678, 698-718	10	1,510,000	1.51	1,510,000	1.51			

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Suffolk															
3800805	Main System, City of Suffolk (Western Tidewater Water Authority)	NA		EDR 161-00421	920	NA	380 (T) 884 (B)	24 16	NI			2800 GPM			<p>Conjunctive use system. VDH permitted system capacity = 10.7 mgd</p> <p>The DEQ permitted withdrawals apply to the 4 production wells listed.</p> <p>Western Tidewater Water Authority (WTWA) holds the groundwater permit. WTWA serves Suffolk and Isle of Wight.</p> <p>Everetts, City Farm and Wilroy Emergency Wells are being closed and abandoned.</p> <p>12.06 8.34</p> <p>These community water systems have been closed. City of Suffolk's Main System now serves these communities.</p>
		NA		Reid's Ferry 161-00371	1003	NA	620 (T) 973 (B)	24 14	NI			2805 GPM			
		NA		Fluoride Well 161-00380	610	NA	398 (T) 595 (B)	20"/8"	NI			750 GPM			
		NA		Crittenden 161-00478	1,005	Outer:+3 to 657 bgs Inner: 550-647 Blank 647-653 Relief Screen	665 - 735 760 - 775 795 - 810 910 - 940 965 - 995	24" Outer Casing 14" Screens	NI			NI			
		NA		Everetts (Emergency) 161-00372	993	NA	610-650, 670-680, 730-790, 820-885, 890-925, 950-990	14	NI			NI			
		NA		Carisbrooke (Emergency) loW system 146-00151	588	NA	542 (T) 582 (B)	6	NI			NI			
		NA		Windsor - (Emergency) 146-00250	820	NA	680 (T) 800 (B)	14	NI			NI			
		NA		Orbit - (Emergency) 146-00251	885	NA	555-585, 600-630, 640-670, 690-715, 725-740, 790-805, 835-865	14	NI			NI			
		NA		City Farm #2 (Emergency) 161-00330	1012	NA	850-875, 895-955, 967-1007	12	NI			NI			
		NI		Wilroy #2 (Emergency) 161-00347	995	NA	858-868, 882-942, 946-956, 970-990	10	NI			NI			
		NA		Prince View Point 161-00355	546	NA	536-546	3	NI			NI			
		NA		Lake Prince Meadows #1 161-00353	500	480	480-500	4	NI			NI			
		NA		Lake Prince Meadows #2 161-00354	500	480	481-500	4	NI			NI			
		NA		Brown	NI	NA	NI	NI	NI	NI		NI			
		NA		Eclipse	NI	NA	NI	4	NI			NI			
NA		Eclipse	550	530	530-540	4	NI			NI					
NA		Independent	NI	NA	NI	6	NI			NI					
NA		Dale Acres	NI	NA	NI	4	NI			NI					



Community Water Systems: Groundwater Sources
Southside Hampton Roads

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Suffolk (continued)															
3800310	Holland System, City of Suffolk	74,000.00	0.07	Ball Park Well 4 161-00441	475	465	465-475	4.5	NI		NI		0.05	0.04	Well no longer operational. In process of relocating.
				Ball Park Well 2 161-00541	490	450	450 - 480	8		43,835.00		55,428.00			
				Jolly Lane Well 2 161-00187	500	NA	NI	4	NI		NI				
				Jolly Lane Well 3 161-00188	500	NA	NI	6	NI		NI				
3800880	Whaleyville, City of Suffolk	68,400.00	0.07	Herman Court Well 2 161-00237	567	547	547-567	6	NI		NI		0.13	0.10	Herman Court and Mill Lane Wells are being closed. The permit is the aggregate capacity for wells 3&4.
				Mill Lane Well 1 161-00236	404	379	379-399	8	NI		NI				
				Robertson School Well 3 161-00469	300	260	260 - 290	8	72,384.00			94,098.00			
				Tower Well 4 161-00477	310	270	270 - 300	8	24,128.00			31,367.00			
Suffolk - Private															
3800080	Birdsong (formerly Byrdtown Subdivision)	16,800.00	0.02	161-00237	632	573	573-583	4	NI		NI		NA	NA	
3800290	Hobson Village	11,200.00	0.01	NI	524	514	514-524	4	NI		NI		NA	NA	
3800300	Hobson Mt. Lebanon	13,600.00	0.01	NI	550	NA	NI	4	NI		NI		NA	NA	
Existing Source Totals - for all CWS's using wells (MGD)			6.56							43,867		180,922	56.95	43.92	

List reservoir information for all community water systems using surface water reservoirs. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark reservoirs and intakes on associated map.

COMMUNITY WATER SYSTEMS (MUNICIPAL & PRIVATE) USING SURFACE WATER RESERVOIRS (9 VAC 25-780-70 C)

Is your water system comprised of interconnected reservoirs? **Yes** **No**

If YES, designate which reservoirs and which intakes constitute a system. Report the drainage area and amount of storage available for water supply from each reservoir independently. Designed maximum daily withdrawal and the safe yield may be reported for the entire system or subsets of the system.

PWSID #	Water System Name	Reservoir Name	Reservoir watershed Basin/ Sub-basin	Reservoir watershed Drainage Area (square miles)	On-Stream Storage Available for Water Supply (gallons)	On-Stream Storage Available for Water Supply (MG)	DESIGN CAPACITY:				Associated Water Treatment Plant (gpd)	Associated Water Treatment Plant (MGD)	Reservoir Safe Yield (MGD)	VDH Permitted System Capacity (gpd)	VDH Permitted System Capacity (MGD)	Limitations on Withdrawal Permit	Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
							Average Daily Withdrawal (gpd)	Average Daily Withdrawal (MGD)	Maximum Daily Withdrawal (gpd)	Maximum Daily Withdrawal (MGD)							
Chesapeake																	
3550051	City of Chesapeake - Northwest River System	Water is stored at In-Town Lakes (Deep Creek area of Chesapeake)	Note: The In-Town Lakes are an emergency, short-term backup supply of water for the Lake Gaston Water Treatment Plant in the event that the raw water supply from the City of Norfolk is interrupted or compromised.														Purchase from 3710100 City of Norfolk.
3550052	City of Chesapeake - South Norfolk System																Purchase from 3710100 City of Norfolk
3550050	City of Chesapeake - Western Branch System																Purchase from 3740600 City of Portsmouth
Norfolk																	
3710100	City of Norfolk (Intown Reservoirs)	Lake Lawson	Lower Chesapeake	2.08	108,000,000	108.00	0	0.00	0	0.00	Moores Bridges WTP = 108 MGD	108.00	92.50	136,000,000	136.00	N/A	VDH Permitted Capacity is based on Total Water Treatment Plant Rated Capacity. Average Daily design capacity for withdrawal is calculated by dividing the maximum daily by a design basis factor of 1.5. Safe Yield Study (Gannett Fleming, 1996). The Safe Yield cited results from the blending of surface water and groundwater in a conjunctive use manner. Originally, Norfolk's Safe Yield was determined to be 97.5 mgd and was lowered to 92.5 after the sale of Stumpy Lake to the City of Virginia Beach.
		Lake Smith	Lower Chesapeake	3.35	295,000,000	295.00	0	0.00	0	0.00							
		Little Creek Reservoir	Lower Chesapeake	1.71	372,000,000	372.00	0	0.00	0	0.00							
		Lake Whitehurst	Lower Chesapeake	5.72	1,033,000,000	1,033.00	0	0.00	0	0.00							
		Lake Wright	Lower Chesapeake	0.96	130,000,000	130.00	38,670,000	38.67	58,000,000	58.00							
		Lake Taylor	Lower Chesapeake	2.00	26,000,000	26.00	0	0.00	0	0.00							
3710100	City of Norfolk (Western Branch Reservoirs)	Lake Prince	Nansemond River	30.50	3,613,000,000	3,613.00	20,000,000	20.00	40,000,000	40.00	Moores Bridges WTP = 108 MGD and 37th Street WTP = 28 MGD	28.00					
		Lake Burnt Mills	Nansemond River	25.30	3,176,000,000	3,176.00	0	0.00	0	0.00							
		Western Branch Reservoir	Nansemond River	10.40	6,447,000,000	6,447.00	74,670,000	74.67	112,000,000	112.00							
3710050	Norfolk Naval Base	NA	NA	NA		0.00		0.00									Norfolk Naval Base purchase from 3710100 City of Norfolk.

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COMMUNITY WATER SYSTEMS (MUNICIPAL & PRIVATE) USING SURFACE WATER RESERVOIRS (9 VAC 25-780-70 C)

Is your water system comprised of interconnected reservoirs? **Yes** **No**

If YES, designate which reservoirs and which intakes constitute a system. Report the drainage area and amount of storage available for water supply from each reservoir independently. Designed maximum daily withdrawal and the safe yield may be reported for the entire system or subsets of the system.

PWSID #	Water System Name	Reservoir Name	Reservoir watershed Basin/ Sub-basin	Reservoir watershed Drainage Area (square miles)	On-Stream Storage Available for Water Supply (gallons)	On-Stream Storage Available for Water Supply (MG)	DESIGN CAPACITY:						Reservoir Safe Yield (MGD)	VDH Permitted System Capacity (gpd)	VDH Permitted System Capacity (MGD)	Limitations on Withdrawal Permit	Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
							Average Daily Withdrawal (gpd)	Average Daily Withdrawal (MGD)	Maximum Daily Withdrawal (gpd)	Maximum Daily Withdrawal (MGD)	Associated Water Treatment Plant (gpd)	Associated Water Treatment Plant (MGD)					
Portsmouth																	
3740600	City of Portsmouth	Speights Run	Hampton Roads	13.00	46,100,000	461.00	NA	0.00	NA	0.00	NA	0.00	19.10	38,500,000	38.50		System safe yield is 24.7 MGD. The Portsmouth System includes reservoirs, groundwater withdrawals and emergency pumpover from Norfolk's Lake Prince.
		Lake Kilby	Hampton Roads	9.20	467,000,000	467.00	15,500,000	15.50	15,500,000	15.50	38,500,000	38.50					
		Lake Cohoon	Hampton Roads	33.40	1,963,000,000	1963.00	NA	0.00	NA	0.00	NA	0.00					
		Lake Meade	Hampton Roads	8.60	1,192,000,000	1192.00	32,000,000	32.00	32,000,000	32.00	NA	0.00					
3740500	Norfolk Naval Shipyard	NA	NA	NA		0.00		0.00		0.00				0.00			Norfolk Naval Shipyard purchase from 3740600 City of Portsmouth.
Suffolk																	
3800805	City of Suffolk - G. Robert House WTP	Crumps Mill Pond	James River	6.70	19,200,000	19.20	735,000	0.74	4,231,000	4.23	17,750,000	17.75	1.20	10,734,000	10.73	None	Safe yield does not include the purchase of 2.54 MGD finished water from Portsmouth system.
		Lone Star Lakes	James River	1.05	355,000,000	355.00	1,106,000	1.11	3,696,000	3.70						None	
Virginia Beach																	
3810900	City of Virginia Beach	Lake Gaston	NA	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA	0.00	Virginia Beach does not own or manage Lake Gaston as a reservoir. The City holds a permit to withdraw 60 MGD.	Lake Gaston water is blended with Norfolk's source water in Lake Prince Reservoir (PWSID 3710100). Virginia Beach does not operate a water treatment plant. Lake Gaston water is treated at Norfolk's WTPs.
		Stumpy Lake	NA	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA	0.00	Stumpy Lake water is treated by Norfolk's Water Treatment Plant (PWSID 3710100).	
3810195	Dam Neck - U.S. Navy	NA	NA	NA		0.00		0.00		0.00				0.00			Dam Neck, Little Creek, Oceana, and Fort Story purchase from 3710100 City of Norfolk.
3810340	Little Creek Amphibious Base - U.S. Navy	NA	NA	NA													
3810430	NAS Oceana - US Navy	NA	NA	NA													
3810210	Fort Story - US Navy	NA	NA	NA		0.00		0.00		0.00				0.00			
Existing Source Totals - for all CWS's using surface water reservoirs (MG or MGD)						19,657.20	182.68	265.43	192.25	185.23							



Water Purchases Outside Planning Area
Southside Hampton Roads

Office of Water Supply Planning
 629 East Main Street,
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List information regarding the amount of ground or surface water to be purchased from water supply systems outside the geographic boundaries of the planning area (9 VAC 25-780-70G). Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark and label on associated map.

AMOUNT OF GROUND OR SURFACE WATER TO BE PURCHASED FROM WATER SUPPLY SYSTEMS OUTSIDE THE GEOGRAPHIC BOUNDARIES OF THE PLANNING AREA (9 VAC 25-780-70G)

PWSID#, Community Water System Name	Source:		Amount to be Purchased:				Contract Limitations:				
	Ground Water Well Name & ID No.	Surface Water Reservoir & Sub-basin or Stream/River Name & Sub-basin	Maximum Daily (gpd)	Maximum Daily (MGD)	Average Annual (gpd)	Average Annual (MGD)	Supplier(s) Name(s) (PWSID #)	Contract or Agreement Terms	Recipient(s) or Area(s) Served	Contract Limits	Other
3810900 City of Virginia Beach	NA	Lake Gaston and Stumpy Lake	67,500,000	67.50	45,000,000	45.00	3710100 City of Norfolk	Norfolk treats and wheels Lake Gaston water for Virginia Beach in accordance with a cost of service contract.	City of Virginia Beach	February 1, 1998 to June 30, 2030	
Total Amount of Water To Be Purchased Outside the Planning Area (MGD):				67.50		45.00					

List information for the amount of ground or surface water available to be purchased from outside the geographic boundaries of the planning area from water supply systems with the capacity to draw more than 300,000 gallons per month (9 VAC 25-780-70H). Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark and label on associated map.

AMOUNT OF WATER AVAILABLE TO BE PURCHASED OUTSIDE THE PLANNING AREA, FROM ANY SOURCE WITH CAPACITY TO WITHDRAW MORE THAN 300,000 GALLONS PER MONTH OF SURFACE OR GROUND WATER (9 VAC 25-780-70H)

PWSID#, Community Water System Name	Source:		Amount Available to be Purchased:				Contract Limitations:				
	Ground Water Well Name & ID No.	Surface Water Reservoir & Sub-basin or Stream/River Name & Sub-basin	Maximum Daily (gpd)	Maximum Daily (MGD)	Average Annual (gpd)	Average Annual (MGD)	Supplier(s) Name(s) (PWSID #)	Contract or Agreement Terms	Recipient(s) or Area(s) Served	Contract Limits	Other
3550050 City of Chesapeake - Northwest System	NA	Lake Gaston	10,000,000	10.00	10,000,000	10.00	3810900 City of Virginia Beach	Contract is with the City of Virginia Beach for 10 MGD.	TBD	11/17/1987 - open ended	
Total Amount of Water Available for Purchase Outside the Planning Area (MGD):				10.00		10.00					



Source Water Assessments and Wellhead Protection
Southside Hampton Roads

Office of Water Supply Planning
 629 East Main Street,
 P.O. Box 1105, Richmond, VA 23218
 URL: <http://www.deq.virginia.gov/watersupplyplanning/>

Note findings and recommendations from source water assessment plans and/or wellhead protection programs. Reference sources and note any assumptions. If unable to find data or data not applicable, note accordingly. If applicable, mark program/plan areas on associated map.

FINDINGS AND RECOMMENDATIONS FROM APPLICABLE SOURCE WATER ASSESSMENT PLANS OR WELLHEAD PROTECTION PROGRAMS
(9 VAC 25-780-70K)

Locality Name	Source Water Assessment Plan(s):		Wellhead Protection Program(s):	
	Date of Plan	Summary of Findings and Recommendations	Date of Program	Summary of Findings and Recommendations
Chesapeake				
City of Chesapeake	8/1/2002	A detailed source water assessment was conducted in 2001 by the Hampton Roads Planning District Commission. The Northwest River, Norfolk reservoir systems, Portsmouth reservoir system, and Lake Gaston were determined to have a high susceptibility to contamination. All of the groundwater wells were determined to have a low susceptibility to contamination. The SWAP report contains maps showing the source water assessment areas, and inventory of known land use activities of concern, and documentation of any known contamination.	NA	A separate wellhead protection program has not be established. The Source Water Assessment Plan addressed the susceptibility and protection of wells in the region.
Indian River Water Co subsidiary of Aqua Virginia, Inc	7/18/2002	The VDH assessment determined that the wells have a high susceptibility to contamination.	NI	
VDOC - Saint Brides Correctional Center	7/17/2002	The VDH assessment determined that Wells #1 and #2 have a high susceptibility to contamination. Well #3 has a low susceptibility and VDH did not assess Well #4.	NI	
Plantation Mobile Home Park	7/17/2002	The VDH assessment did not assess the wells' susceptibility to contamination. This system is under the Fluoride Consent Order.	NI	
Sunray Artesian Water Supply	7/17/2002	The VDH assessment determined that the wells have a high susceptibility to contamination.	NI	
Sunray Water Co	7/17/2002	The VDH assessment determined that the wells have a high susceptibility to contamination. This system is under the Fluoride Consent Order.	NI	
Naval Support Activity - NW Annex	7/31/2002	The VDH assessment determined that the wells have a low susceptibility to contamination.	NI	
Norfolk				
City of Norfolk	8/1/2002	A detailed source water assessment was conducted in 2001 by the Hampton Roads Planning District Commission. The surface water reservoirs were determined to have a high susceptibility to contamination. All of the groundwater wells were determined to have a low susceptibility to contamination. The SWAP report contains maps showing the source water assessment areas, and inventory of known land use activities of concern, and documentation of any known contamination.	NA	A separate wellhead protection program has not be established. The Source Water Assessment Plan addressed the susceptibility and protection of wells in the region.
Portsmouth				
City of Portsmouth	8/1/2002	A detailed source water assessment was conducted in 2001 by the Hampton Roads Planning District Commission. The surface water reservoirs were determined to have a high susceptibility to contamination. All of the groundwater wells were determined to have a low susceptibility to contamination. The SWAP report contains maps showing the source water assessment areas, and inventory of known land use activities of concern, and documentation of any known contamination.	NA	Portsmouth has not completed a separate well head protection plan. A separate wellhead protection program has not be established. The Source Water Assessment Plan addressed the susceptibility and protection of wells in the region.



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FINDINGS AND RECOMMENDATIONS FROM APPLICABLE SOURCE WATER ASSESSMENT PLANS OR WELLHEAD PROTECTION PROGRAMS
(9 VAC 25-780-70K)

Locality Name	Source Water Assessment Plan(s):		Wellhead Protection Program(s):	
	Date of Plan	Summary of Findings and Recommendations	Date of Program	Summary of Findings and Recommendations
Suffolk				
City of Suffolk	8/1/2002	A detailed source water assessment was conducted in 2001 by the Hampton Roads Planning District Commission. The Lone Star Lakes and Crumps Millpond were determined to have a high susceptibility to contamination. All of the groundwater wells were determined to have a low susceptibility to contamination. The SWAP report contains maps showing the source water assessment areas, and inventory of known land use activities of concern, and documentation of any known contamination.	NA	A separate wellhead protection program has not be established. The Source Water Assessment Plan addressed the susceptibility and protection of wells in the region.
Whaleyville, City of Suffolk		This system is under the Fluoride Consent Order.	NA	
Holland, City of Suffolk		This system is under the Fluoride Consent Order.	NA	
Birdsong (formerly Byrdtown Subdivision)	7/12/2002	The VDH assessment determined that Well #2 has a high susceptibility to contamination. This system is under the Fluoride Consent Order.	NI	
Hobson Artesian Well Assoc.	7/10/2002	The VDH assessment determined that the well has a high susceptibility to contamination. This system is under the Fluoride Consent Order.	NI	
Hobson Civic Water Corps	7/10/2002	The VDH assessment determined that the well has a high susceptibility to contamination. This system is under the Fluoride Consent Order.	NI	
Virginia Beach				
City of Virginia Beach	8/1/2002	A detailed source water assessment was conducted in 2001 by the Hampton Roads Planning District Commission. Lake Gaston and the City of Norfolk's reservoir system were determined to have a high susceptibility to contamination. Norfolk's groundwater wells were determined to have a low susceptibility to contamination. The SWAP report contains maps showing the source water assessment areas, and inventory of known land use activities of concern, and documentation of any known contamination.	NA	System does not have any wells.

Community Water Systems: Reservoir Sources
Southside Hampton Roads

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Include the following water use information for each community water system within the planning area. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark service areas on associated map. **Note the data reference year in Row 3 and fill out a separate spreadsheet for each data year.**

COMMUNITY WATER SYSTEMS USING GROUND AND SURFACE WATER: water withdrawal information (9 VAC 25-780-80 B1-B3)

YEAR: 2007					WITHDRAWAL:		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
PWSID	Water System Name	Source Name	Population Served	Number of Connections	Average Daily (MGD)	Maximum Daily (MGD)	
Municipal Systems							
Chesapeake							
3550051	City of Chesapeake - Northwest River System	Northwest River	102,434	35,322	4.60	8.70	
		Northwest River wells			3.10	4.90	
		Western Branch Well 1			1.40	1.90	
		Western Branch Well 3			0.00	0.00	
		Western Branch Well 4			0.13	2.00	
		Lake Gaston WTP (City of Norfolk, raw water purchase)			6.40	7.60	
3550052	City of Chesapeake - South Norfolk System	Purchase finished water from City of Norfolk	33,512	11,556	0.00	0.00	Withdrawal amount included as part of City of Norfolk (Average Daily Use - 2.63 mgd, Maximum Daily Use - 3.9 mgd)
3550050	City of Chesapeake -Western Branch System	Purchase finished water from City of Portsmouth	38,640	13,324	0.00	0.00	Withdrawal amount included as part of City of Portsmouth (Average Daily Use - 2.92 mgd, Maximum Daily Use - 3.9 mgd)
Chesapeake Totals			174,586		15.63		

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COMMUNITY WATER SYSTEMS USING GROUND AND SURFACE WATER: water withdrawal information (9 VAC 25-780-80 B1-B3)

YEAR: 2007					WITHDRAWAL:		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
PWSID	Water System Name	Source Name	Population Served	Number of Connections	Average Daily (MGD)	Maximum Daily (MGD)	
Municipal Systems							
Norfolk							
3710100	City of Norfolk	SW/GW	235,915	66,158	79.00	101.73	Population served only includes City of Norfolk. Population served by sales are listed separately under Chesapeake, Portsmouth, and Virginia Beach. Withdrawals include all water sales outside City of Norfolk system.
37100500	Norfolk Naval Base				NA		Norfolk Naval Base purchases water from the City of Norfolk. Included in City of Norfolk's withdrawals.
Norfolk Totals			235,915		79.00		
Portsmouth							
3740600	City of Portsmouth	Lake Kilby Water Treatment Facility	97,851	32,324	16.85	20.65	Bulk sales from Portsmouth to Suffolk - 2.54 MGD (minimal contractual amount). Chesapeake Direct residential sales (170 connections) to residents not in a Chesapeake public CWS service area. Chesapeake finished water sales provide water to Chesapeake Western Branch System (contractually obligated to purchase 3.0 mgd)
3740500	Norfolk Naval Shipyard	SWP	18,300	20	NA	NA	Water is purchased from City of Portsmouth.
Portsmouth Totals			97,851		16.85		

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COMMUNITY WATER SYSTEMS USING GROUND AND SURFACE WATER: water withdrawal information (9 VAC 25-780-80 B1-B3)

YEAR: 2007					WITHDRAWAL:		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
PWSID	Water System Name	Source Name	Population Served	Number of Connections	Average Daily (MGD)	Maximum Daily (MGD)	
Municipal Systems							
Suffolk							
3800805	Main System, City of Suffolk	GW/SW/SWP	64,600	22,983	4.99	10.75	Information provided is for CY 2007 Information from Monthly Water Production Reports and includes Surface Water and Groundwater withdrawn (Average Daily and Maximum Daily values do not include water purchased from the City of Portsmouth). Population served per Suffolk (3-28-11)
3800310	Holland, City of Suffolk	GW	462	171	0.039	0.056	CY 2007 Information from Monthly Chlorination Reports
3800880	Whaleyville, City of Suffolk	GW	460	170	0.041	0.092	CY 2007 Information from Monthly Chlorination Reports
Suffolk Totals			65,522		5.070		Total pop served is 65,626 per Suffolk (3-28-11), with 64,900 served by Main System.

Community Water Systems: Reservoir Sources
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COMMUNITY WATER SYSTEMS USING GROUND AND SURFACE WATER: water withdrawal information (9 VAC 25-780-80 B1-B3)

YEAR: 2007					WITHDRAWAL:		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
PWSID	Water System Name	Source Name	Population Served	Number of Connections	Average Daily (MGD)	Maximum Daily (MGD)	
Municipal Systems							
Virginia Beach							
3810900	City of Virginia Beach	Lake Gaston / Stumpy Lake	403,174	131,935	36.80	60.05	Population Served estimated as total population (Weldon Cooper) minus the DoD housing served by Norfolk and estimated population of the Pungo/Blackwater planning area (as identified by the City's Comprehensive Plan, adopted 2003). Pungo/Blackwater area does not public water service. Withdrawals based on amount withdrawn from Lake Gaston.
3810210	Fort Story - U.S. Army		2,642	376			Purchase water from the City of Norfolk. Population Served and Number of Connections from VDH report. Withdrawal amounts included with City of Norfolk.
3810210	Little Creek - U.S. Navy		9,782	844			
3810430	Oceana - U.S. Navy		7,300	1,788			
3810195	Dam Neck - U.S. Navy		2,600	925			
Virginia Beach Totals			403,174		36.80		
Municipal Community Water System Totals:			977,048	317,896	153.35		

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COMMUNITY WATER SYSTEMS USING GROUND AND SURFACE WATER: water withdrawal information (9 VAC 25-780-80 B1-B3)

YEAR: 2007					WITHDRAWAL:		Notes or Comments (This may include references to maps, data sources, data gaps, etc.)
PWSID	Water System Name	Source Name	Population Served	Number of Connections	Average Daily (MGD)	Maximum Daily (MGD)	
Municipal Systems							
Private Systems							
Chesapeake							
3550500	Indian River Water Co subsidiary of Aqua Virginia, Inc	GW	1,500	450	0.13	NI	References: "Population Served" and "Number of Connections" from VDH report. Water usage data from DEQ and VDH reports. Water usage in 2005 provided for Sunray because 2007 data not available. Average withdrawals for Plantation Mobile Home Park and Sunray Water Co estimated based on 75 gpcpd. No records were available from DEQ or VDH.
3550750	VDOC - Saint Brides Correctional Center	GW	3,291	44	0.23	NI	
3550705	Plantation Mobile Home Park	GW	95	50	0.007	NI	
3550775	Sunray Artesian Water Supply	GW	100	26	0.004	0.007	
3550800	Sunray Water Co	GW	60	23	0.005	NI	
3550620	Naval Support Activity - NW Annex	GW	2,200	1,229	0.11	0.17	
Chesapeake Totals			7,246		0.49		
Suffolk							
3800080	Birdsong (formerly Byrdtown Subdivision)	GW	71	30	0.007	0.011	Water usage in 2005 provided for Birdsong because 2007 data not available.
3800290	Hobson Village Waterworks	GW	70	28	0.005	NI	Average withdrawals for Hobson Village and Hobson Mt. Lebanon estimated based on 75 gpcpd. No records were available from DEQ or VDH.
3800300	Hobson Mt. Lebanon Waterworks	GW	102	34	0.008	NI	
Suffolk			243		0.02		
Private Community Water System Totals:			7,489	1,914	0.51		
Municipal and Private Community Water System Totals:			984,537	319,810	153.86		

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Community Water Systems Using Ground and Surface Water annual average and average monthly water use (9 VAC 25-780-80 B4)

YEAR	Chesapeake															Portsmouth			Norfolk			Locality or Region Total Water Use (MG/Mo)	Locality or Region Total Average Monthly by Month (MGD)					
	PWSID #3550051 Northwest System			PWSID #3550050 City of Chesapeake - Western Branch			PWSID #3550052 City of Chesapeake - South Norfolk			PWSID #3550620 Naval Support Activity - NW Annex			PWSID #3550050 VDOC - Saint Brides Correctional Center			PWSID #3550500 Indian River Water Co.			PWSID #3740600 City of Portsmouth					3710100 City of Norfolk				
	Source: GW & SW			Source SWP			Source SWP			Source: GW			Source: GW			Source: GW			Source: GW & SW					Source GW & SW				
	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)			Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)		
2007	304,186	304.19	9.812	88,820	88.82	2.865	57,170	57.17	1.844	3,425,500	3.43	0.111	6.86	0.221	3.30	0.106	371.60	11.987	371.60	11.987	617.45	19.918	1,452.81	46.86				
January	283,489	283.49	10.125	75,212	75.21	2.686	58,349	58.35	2.084	3,591,600	3.59	0.128	6.66	0.238	3.30	0.118	399.80	14.279	399.80	14.279	457.93	16.355	1,288.33	46.01				
February	309,407	309.41	9.981	85,610	85.61	2.762	72,156	72.16	2.328	3,108,800	3.11	0.100	7.24	0.234	3.87	0.125	434.00	14.000	434.00	14.000	561.71	18.120	1,477.11	47.65				
March	316,465	316.47	10.549	85,671	85.67	2.856	98,294	98.28	3.276	3,169,900	3.17	0.106	6.72	0.224	2.98	0.099	411.80	13.727	411.80	13.727	512.29	17.076	1,437.38	47.91				
April	354,309	354.31	11.429	97,979	97.98	3.161	67,226	67.23	2.169	3,317,300	3.32	0.107	7.35	0.237	3.64	0.117	442.20	14.265	442.20	14.265	559.03	18.033	1,535.05	49.52				
May	373,051	373.05	12.435	98,151	98.15	3.272	65,021	65.02	2.167	3,408,700	3.41	0.114	7.29	0.243	3.45	0.115	437.50	14.583	437.50	14.583	624.89	20.830	1,612.76	53.76				
June	393,975	393.98	12.709	103,911	103.91	3.352	106,697	106.70	3.442	3,837,100	3.84	0.124	7.50	0.242	2.90	0.094	468.10	15.100	468.10	15.100	667.62	21.536	1,754.54	56.60				
July	392,002	392.00	12.645	95,407	95.41	3.078	93,709	93.71	3.023	3,850,700	3.85	0.124	7.13	0.230	3.85	0.124	448.30	14.461	448.30	14.461	657.27	21.202	1,701.52	54.89				
August	369,806	369.81	12.327	91,168	91.17	3.039	90,805	90.81	3.027	3,803,300	3.80	0.127	6.84	0.228	2.78	0.093	427.40	14.247	427.40	14.247	648.17	21.606	1,640.76	54.69				
September	366,535	366.54	11.824	88,879	88.88	2.867	86,157	86.16	2.779	3,331,500	3.33	0.107	6.93	0.224	3.05	0.098	435.00	14.032	435.00	14.032	721.72	23.281	1,711.60	55.21				
October	317,590	317.59	10.586	78,982	78.98	2.633	82,838	82.84	2.761	2,711,000	2.71	0.090	6.22	0.207	3.58	0.119	408.90	13.630	408.90	13.630	555.37	18.512	1,456.19	48.54				
November	297,221	297.22	9.598	77,256	77.26	2.492	80,213	80.21	2.588	2,334,700	2.33	0.075	6.59	0.213	5.80	0.187	414.10	13.359	414.10	13.359	510.14	16.456	1,393.65	44.96				
December	Total Annual (MG)			1067.05			958.63			39.89			83.32			42.49			5098.70			7093.61			18461.72			
Average Monthly (MG/Mo)			339.84			88.92			79.89			3.32			6.94			3.54			424.89			591.13			1538.48	
Average Daily (MGD)			11.173			2.923			2.626			0.109			0.228			0.116			13.972			19.410			50.580	
NOTES or COMMENTS:			Source: City of Chesapeake			Source: City of Chesapeake			Source: City of Chesapeake			Source: TRO DEQ permit database			Source: DEQ permit database			Source: DEQ permit database			These figures represent treated water pumped to the City of Portsmouth and Western Branch system in Chesapeake. It does not include water distributed to Suffolk's Main System.			Treated water distributed to the City of Norfolk				

The monthly water use for the Plantation Mobile Home Park, Sunray Artesian Water Supply, and Sunray Water Company is not available.

Include the following water use information for each community water system within the planning area. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark service areas on associated map.
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Community Water Systems Using Ground and Surface Water annual average and average monthly water use(9 VAC 25-780-80 B4)

YEAR	Virginia Beach			Suffolk									Locality or Region Total Water Use (MG/Mo)	Locality or Region Total Average Monthly by Month (MGD)
	PWSID # 3810900 City of Virginia Beach			PWSID #3800805 City of Suffolk			PWSID #3800310 Holland			PWSID #3800880 Whaleyville				
	Source (SW)			Source GW and SW			Source GW			Source GW				
	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)	Monthly Readings (gallons)	Monthly Readings (MG)	Average Monthly (MGD)		
2007														
January	1,065,489,348	1065.49	32.288	194,468,000	194.47	6.273	1,220,383	1.22	0.039	1,093,425	1.09	0.035	1,262.27	38.64
February	912,797,116	912.80	32.600	188,021,000	188.02	6.715	1,282,817	1.28	0.046	1,013,806	1.01	0.036	1,103.11	39.40
March	977,596,356	977.60	32.587	174,762,000	174.76	5.637	1,077,900	1.08	0.035	1,121,484	1.12	0.036	1,154.56	38.29
April	1,058,714,712	1058.71	34.152	211,060,000	211.06	7.035	996,700	1.00	0.033	1,198,322	1.20	0.040	1,271.97	41.26
May	1,160,276,152	1160.28	37.428	227,379,000	227.38	7.335	1,228,560	1.23	0.040	1,142,759	1.14	0.037	1,390.03	44.84
June	1,174,885,096	1174.89	39.163	274,190,000	274.19	9.140	1,432,673	1.43	0.048	1,392,557	1.39	0.046	1,451.90	48.40
July	1,331,200,640	1331.20	41.600	297,067,000	297.07	9.583	1,691,567	1.69	0.055	2,251,981	2.25	0.073	1,632.21	51.31
August	1,205,082,604	1205.08	38.874	258,121,000	258.12	8.326	1,239,700	1.24	0.040	1,666,021	1.67	0.054	1,466.11	47.29
September	1,103,305,984	1103.31	39.404	258,026,000	258.03	8.601	1,140,500	1.14	0.038	1,157,446	1.16	0.039	1,363.63	48.08
October	1,223,132,592	1223.13	37.065	259,759,000	259.76	8.379	1,095,650	1.10	0.035	1,042,501	1.04	0.034	1,485.03	45.51
November	1,018,639,116	1018.64	33.955	226,307,000	226.31	7.544	945,240	0.95	0.032	895,555	0.90	0.030	1,246.79	41.56
December	1,005,158,680	1005.16	32.424	223,721,000	223.72	7.217	951,090	0.95	0.031	874,254	0.87	0.028	1,230.71	39.70
Total Annual (MG)		13236.28			2792.88			14.30			14.85		16058.31	
Average Monthly (MG/Mo)		1103.02			232.74			1.19			1.24		1338.19	
Average Daily (MGD)		36.066			7.652			0.039			0.041		43.995	
NOTES or COMMENTS:	Virginia Beach master meter readings. Military meters served by Norfolk are not included. UAW is included.			Source: Monthly Production Reports (January 2007 through December 2007) Values include water purchased from the City of Portsmouth			Source: Monthly Chlorination Reports (January 2007 through December 2007)			Source: Monthly Chlorination Reports (January 2007 through December 2007)				

The monthly water use for the Birdsong, Hobson Village Waterworks, and Hobson Mt. Lebanon Waterworks is not available.



Include the following water use information for each community water system within the planning area. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark service areas on associated map. **Note the data reference year in Row 6 and fill out a separate spreadsheet for each data year.**

Community Water Systems Using Ground and Surface Water: peak day use (9 VAC 25-780-80 B5)

Chesapeake														Norfolk		Portsmouth		Virginia Beach	
YEAR	PWSID #3550051 Northwest System		PWSID #3550050 City of Chesapeake - Western Branch		PWSID #3550052 City of Chesapeake - South Norfolk		PWSID #3550620 Naval Support Activity - NW Annex		PWSID #3710100 City of Norfolk		PWSID #3740600 City of Portsmouth		PWSID #3810900 City of Virginia Beach						
	Source: GW & SW		Source: GW		Source: GW		Source: GW		Source: GW & SW		Source GW & SW		Source: SW						
	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)					
2007																			
January		11.600		3.200		1.900	152,300	0.152		0.000		15.329	36,270,000	36.270					
February		12.500		2.800		2.400	303,300	0.303		0.000		16.827	34,970,000	34.970					
March		11.100		2.900		2.800	135,200	0.135		0.000		15.463	36,180,000	36.180					
April		13.100		3.100		3.900	153,900	0.154		0.000		15.775	38,910,000	38.910					
May		14.400		3.900		2.800	147,100	0.147		0.000		16.756	40,610,000	40.610					
June		14.400		3.700		2.200	151,500	0.152		0.000		17.531	40,460,000	40.460					
July		14.900		3.700		3.500	189,100	0.189		0.000		16.805	42,480,000	42.480					
August		14.400		3.300		3.500	163,900	0.164		0.000		16.077	40,020,000	40.020					
September		13.900		3.200		3.100	219,600	0.220		0.000		15.531	38,110,000	38.110					
October		13.600		3.200		2.900	184,200	0.184		0.000		15.762	35,080,000	35.080					
November		12.500		2.700		3.300	161,600	0.162		0.000		14.920	32,910,000	32.910					
December		11.900		2.600		3.200	105,000	0.105		0.000		15.911	31,220,000	31.220					
NOTES or COMMENTS:	Data Period: 1/1/07 to 12/31/07		*Purchased Water Data Period: 1/1/07 to 12/31/07		*Purchased Water Data Period: 1/1/07 to 12/31/07 ** Maples: 3/30/09 Valve found open between NW and WB, purchases running low**		Data Year: 2007 Source: TRO DEQ		NI		Includes sales to Chesapeake.		Data Year: 2009 Due to conversion to new SCADA system 2006-2008 peak day are not available.						

The peak day water use for the Indian River, St. Brides Correctional Center, Plantation Mobile Home Park, Sunray Artesain Water Supply, and Sunray Water Company is not available.

Community Water Systems Using Ground and Surface Water: peak day use (9 VAC 25-780-80 B5)

Suffolk														
YEAR	PWSID #3800805 City of Suffolk WTP		PWSID #3800310 Jolly Lane (Holland)		PWSID #3800310 Ball Park (Holland)		PWSID #3800880 Mill Lane (Whaleyville)		PWSID #3800880 Herman Court (Whaleyville)		PWSID #3800805 City of Suffolk purchase from City of Portsmouth		PWSID #3800080 Birdsong Subdivision	
	Source GW and SW		Source GW		Source GW		Source GW		Source GW		Source GW		Source GW and SW	
	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)	Peak Day Readings (gpd)	Peak Day Readings (MGD)
2007														
January	6,360,000	6.360	43,700	0.044	1,440	0.001	17,053	0.017	25357	0.025		0.000		0.000
February	6,980,000	6.980	46,200	0.046	6,167	0.006	18,300	0.018	26180	0.026		0.000		0.000
March	8,130,000	8.130	41,100	0.041	3,360	0.003	12,800	0.013	25607	0.026		0.000		0.000
April	7,580,000	7.580	34,700	0.035	3,633	0.004	23,600	0.024	32987	0.033		0.000		0.000
May	10,150,000	10.150	43,760	0.044	7,580	0.008	24,900	0.025	25357	0.025		0.000		0.000
June	10,260,000	10.260	48,650	0.049	23,867	0.024	17,600	0.018	35867	0.036		0.000		0.000
July	10,620,000	10.620	48,833	0.049	40,500	0.041	21,300	0.021	83178	0.083		0.000		0.000
August	9,790,000	9.790	45,400	0.045	33,133	0.033	26,767	0.027	78166	0.078		0.000		0.000
September	9,440,000	9.440	42,967	0.043	6,200	0.006	15,400	0.015	27900	0.028		0.000		0.000
October	9,920,000	9.920	44,700	0.045	7,500	0.008	13,800	0.014	29845	0.030		0.000		0.000
November	8,090,000	8.090	28,300	0.028	9,900	0.010	9,225	0.009	23412	0.023	3,540,000.00	3.540		0.000
December	7,820,000	7.820	26,400	0.026	10,200	0.010	14,800	0.015	21916	0.022		0.000		0.000
NOTES or COMMENTS:	Peak Day = 7/10/2007 Peak Day of Production & Water Purchased from Portsmouth on same day		Peak Day = 7/14/07		Peak Day = 7/6/07		Peak Day = 8/18/07		Peak Day = 7/18/07		Exact Peak Date Unknown		Peak Day = 11,467 gpd	

The peak day water use for the Hobson Village Waterworks and Hobson Mt. Lebanon Waterworks is not available.



For each community water system included in the water plan, include an estimate of the disaggregated annual average amount of water used in categories of use appropriate for the system. Reference sources and note any assumptions regarding calculation. **Unable to find data or data not applicable, note accordingly in the Notes/Comments Column and highlight applicable cells. Note the data reference year in Row and fill out a separate spreadsheet for each data year.**

COMMUNITY WATER SYSTEMS (MUNICIPAL & PRIVATE): DISAGGREGATED ANNUAL AVERAGE WATER USE AMOUNTS (9 VAC 25-780-80 B9)																	Notes or Comments (This may include references to maps, data sources, data gaps, etc.)	Sales to Other CWS's: (Use included in receiving system)		
YEAR: 2007																		Amount Sold (gpd)	Amount Sold (MGD)	System Name
PWSID	Water System Name	System Total (MGD)	Residential (gpd)	Residential (MGD)	Commercial Institutional Light Industrial CIL (gpd)	Commercial Institutional Light Industrial CIL (MGD)	Heavy Industrial (gpd)	Heavy Industrial (MGD)	Military (gpd)	Military (MGD)	Other (gpd)	Other (MGD)	Production Processes (gpd)	Production Processes (MGD)	Unaccounted for Losses (gpd)	Unaccounted for Losses (MGD)				
Chesapeake Public CWS																				
3550051	City of Chesapeake - Northwest River System	15.630	7,400,000.00	7.400	3,000,000.00	3.000		0.000		0.000			4,460,000	4.460	770,000	0.770	City of Chesapeake purchases 6.45 mgd raw water from the City of Norfolk. Water Used In Production Process: Much higher than a conventional filtration plant. Both the LG and NWRWTPs have waste generated from (1) Backwashing filters and contactors; (2) Membrane Concentrate; (3) Centrate Production and (4) Miscellaneous Operations.		0.000	
3550052	City of Chesapeake - South Norfolk System	2.690	1,846,000.00	1.846	754,000.00	0.754		0.000		0.000				0.000		0.090	City of Chesapeake purchases 2.69 mgd finished water from the City of Norfolk		0.000	
3550050	City of Chesapeake - Western Branch System	2.983	2,059,000.00	2.059	841,000.00	0.841		0.000		0.000				0.000		0.083	City of Chesapeake purchases 2.983 mgd from the City of Portsmouth		0.000	
Chesapeake Public CWS use subtotal		21.303		11.305		4.595		0.000		0.000			4.460			0.943			0.000	
Chesapeake Private CWS																				
3550500	Indian River Water Co subsidiary of Aqua Virginia, Inc.	0.116	116,433.00	0.116		0.000		0.000		0.000			0.000			0.000	2006 usage, 2007 not reported		0.000	
3550750	VDOC - Saint Brides Correctional Center	0.228	228,296.00	0.228		0.000		0.000		0.000			0.000			0.000	2006 usage, 2007 not reported		0.000	
3550705	Plantation Mobile Home Park	0.007	7,000.00	0.007		0.000		0.000		0.000			0.000			0.000	No use data available from VDH - estimate based on 75		0.000	
3550775	Sunray Artesian Water Supply	0.004	4,269.00	0.004		0.000		0.000		0.000			0.000			0.000	2005 usage		0.000	
3550800	Sunray Water Co	0.005	5,000.00	0.005		0.000		0.000		0.000			0.000			0.000			0.000	
3550620	Naval Support Activity - NW Annex	0.109		0.000		0.000		0.000	109,287.67	0.109			0.000			0.000			0.000	
Chesapeake Private CWS use subtotal		0.470		0.361		0.000		0.000		0.109			0.000			0.000			0.000	
Norfolk Public CWS																				
3710100	City of Norfolk	30.590	11,100,000	11.100	5,200,000	5.200	2,040,000	2.040	4,790,000	4.790	550,000	0.550	1,860,000	1.860	5,050,000	5.050	Military use shown for Norfolk includes finished water sales as follows: 0.09 mgd sold to Navy Crane Island facility, 3.52 mgd sold to Norfolk Navy (Norfolk Naval Base), and 1.18 mgd sold to Virginia Beach Navy (Dam Neck, Fort Story, Camp Pendleton, Little Creek Amphibious Base, and NAS Oceana) Norfolk has additional contractual obligations: 1) 10.13 MGD raw City of Va Beach (emergency only) 2) Western Tidewater Water Authority (3 MGD raw in 2015 increasing to 15 MGD in 2038)	48,400,000	48.400	Norfolk's total raw water = 79.01 MGD (77.21 mgd from Western Reservoirs + 1.80 mgd from Lake Wright (Intown Res)) Sales include: 6.45 mgd raw water to Chesapeake's Northwest River System 2.69 mgd finished water to Chesapeake's South Norfolk System 3.0 mgd raw water to City of Portsmouth system Norfolk treats and wheels Lake Gaston water in accordance with a cost of service contract: 36.26 mgd finished water to City of Virginia Beach system in 2007. Data Source: Communication from Norfolk (4-8-11 and 4-21-11)
Norfolk Public CWS use subtotal		30.590		11.100		5.200		2.040		4.790		0.550	1.860		5.050				48.400	

For each community water system included in the water plan, include an estimate of the disaggregated annual average amount of water used in categories of use appropriate for the system. Reference sources and note any assumptions regarding calculation. Unable to find data or data not applicable, note accordingly in the Notes/Comments Column and highlight applicable cells. Note the data reference year in Row and fill out a separate spreadsheet for each data year.																					
COMMUNITY WATER SYSTEMS (MUNICIPAL & PRIVATE): DISAGGREGATED ANNUAL AVERAGE WATER USE AMOUNTS (9 VAC 25-780-80 B9)																					
USAGE CATEGORIES:																	Notes or Comments <small>(This may include references to maps, data sources, data gaps, etc.)</small>	Sales to Other CWS's: <small>(Use included in receiving system)</small>			
YEAR: 2007	System Total (MGD)	Residential (gpd)	Residential (MGD)	Commercial Institutional Light Industrial CIL (gpd)	Commercial Institutional Light Industrial CIL (MGD)	Heavy Industrial (gpd)	Heavy Industrial (MGD)	Military (gpd)	Military (MGD)	Other (gpd)	Other (MGD)	Production Processes (gpd)	Production Processes (MGD)	Unaccounted for Losses (gpd)	Unaccounted for Losses (MGD)	Amount Sold (gpd)		Amount Sold (MGD)	System Name		
PWSID	Water System Name																				
Portsmouth Public CWS																					
3740600	City of Portsmouth	11.288	5,195,000	5.195	3,100,000	3.100		0.000	984,334.00	0.984	0.00	0.000	300,000	0.300	1,708,666	1.709		Residential use includes 0.135 mgd of direct sales from the Portsmouth system to Chesapeake residents. Use for Portsmouth system includes water sold to Norfolk Naval Shipyard. The City of Portsmouth purchases 3.0 mgd of raw water from Norfolk. The City of Portsmouth does not keep track of billing categories such as commercial, institutional, military, and industrial. The City tracks customers based on meter sizes and billing frequency (monthly or bimonthly). Typically, the bimonthly accounts are residential accounts while the monthly accounts are non-residential.	5,561,000	5.561	Chesapeake - Western Branch System (2.983 mgd) Suffolk Main System (2.578 mgd)
Portsmouth Public CWS use subtotal		11.288		5.195		3.100		0.000		0.984		0.000		0.300		1.709		5.561			
Suffolk Public CWS																					
3800805	Main System, City of Suffolk	7.293	5,673,979	5.674	616,065	0.616		0.000		0.000		0.000		0.000	1,003,000	1.003		System Total MGD based on CY and includes purchase of 3.0 mgd from City of Portsmouth. Amounts for IOW, Industrial and water loss based on FY.	356,956	0.357	Sale of 0.357 mgd to WTWA to serve Isle of Wight Newport Development Service District. Use of this water is not included in Suffolk system use. See Isle of Wight use for disaggregated use.
3800310	Holland System, City of Suffolk	0.039	39,300	0.039		0.000		0.000		0.000		0.000		0.000	NI			Based on CY Chlorination Reports.			
3800880	Whaleyville System, City of Suffolk	0.041	40,685	0.041		0.000		0.000		0.000		0.000		0.000	NI			Based on CY Chlorination Reports.			0.000
Suffolk Public CWS use subtotal		7.373		5.754		0.616		0.000		0.000		0.000		0.000		1.003		0.357			
Suffolk Private CWS																					
3800080	Birdsong (formerly Byrdtown)	0.007	7,173	0.007		0.000		0.000		0.000		0.000		0.000		0.000		2005 use			0.000
3800290	Hobson Village Waterworks	0.005	5,000	0.005		0.000		0.000		0.000		0.000		0.000		0.000		No use data available from VDH - estimate based on 75			0.000
3800300	Hobson Mt. Lebanon Waterworks	0.008	8,000	0.008		0.000		0.000		0.000		0.000		0.000		0.000		No use data available from VDH - estimate based on 75			0.000
Suffolk Private CWS use subtotal		0.020		0.020		0.000		0.000		0.000		0.000		0.000		0.000		0.000			
Virginia Beach Public CWS																					
3810900	City of Virginia Beach	36.07	26,300,000	26.30	5,700,000	5.70		0.000		0.000	1,310,000	1.31		0.000	2,760,000	2.76		Military installation located in Virginia Beach are served by the City of Norfolk system. According to Norfolk, in 2007, Norfolk sold 36.26 mgd finished water to City of Virginia Beach system.			0.000
Virginia Beach Public CWS use subtotal		36.07		26.30		5.70		0.00		0.00	1.31			0.00		2.76		0.00			
Total Public CWS Use		106.62		59.65		19.21		2.04		5.77		1.86		6.62		11.46					
Total Private CWS Use		0.49		0.38		0.00		0.00		0.11		0.00		0.00		0.00					
Total Use By Category in MGD (for All Community Water Systems)		107.114		60.035		19.211		2.040		5.884		1.860		6.620		11.465					



Non-Agricultural, Self-Supplied Users of Surface Water
Southside Hampton Roads

Office of Water Supply Planning
 629 East Main Street,
 P.O. Box 1105, Richmond, VA 23218
 URL: <http://www.deq.virginia.gov/watersupplyplanning/>

List non-agricultural surface water source and use information for all self-supplied users of more than 300,000 gallons per month. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark users on associated map. **Note the data reference year in Column I, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, NON-AGRICULTURAL USERS USING MORE THAN 300,000 GAL/MONTH OF SURFACE WATER (9 VAC 25-780-70 E, - 80 B6, and - 80 C)									
Water User Name	Waterbody Source Name	Use Category	DESIGN CAPACITY:				Limitations on Withdrawal Permit(s)	WATER USE:	Notes or Comments (Include service area user falls within and references to any maps, data sources, data gaps, etc.)
			Average Daily Withdrawal (gpd)	Average Daily Withdrawal (MGD)	Maximum Daily Withdrawals (gpd)	Maximum Daily Withdrawals (MGD)		Estimated Annual Average (MGD) Year 2007	
Within Community Water System (Municipal & Private) Service Areas									
Chesapeake									
Chesapeake Energy Center	Southern Branch Elizabeth River	Pf	NA	0.000	NA	633.600	NA	520.750	Non-consumptive use
Norfolk									
Sewells Point Golf Club	Irrigation Pond Hole #2	Com	NA	0.000	NA	0.000	NA	0.054	
Eagle Haven Golf Course, NAB Little Creek	Lake #3 and #4	Com	NA	0.000	NA	0.000	NA	0.032	
Norfolk Total								0.086	
Portsmouth									
Elizabeth Manor Golf Course	Pond	Com	NI	0.000	NI	0.000	NI	0.039	
Virginia Beach									
Cavalier Golf & Yacht Club	Irrigation Lake	Com	NI	0.000	NI	0.000	NI	0.045	
Hell's Point Golf Course	Irrigation Lake	Com	NI	0.000	NI	0.000	NI	0.102	
Heron Ridge Golf Course	Irrigation Lake	Com	NI	0.000	NI	0.000	NI	0.148	
Princess Anne Country Club	Pond Withdrawal	Com	NI	0.000	NI	0.000	NI	0.060	
TPC of Virginia Beach LLC (now Virginia Beach National Golf Course)	Irrigation Lake First Tee	Com	NI	0.000	NI	0.000	NI	0.167	
	Irrigation Lake TPC Pump House	Com	NI	0.000	NI	0.000	NI		
Cypress Point Golf Course	Retention Pond	Com	NI	0.000	NI	0.000	NI	0.073	
Redwing Golf Course	Redwing Lake	Com	NI	0.000	NI	0.000	NI	0.119	
Virginia Beach Total								0.714	
Suffolk									
Cedar Point Golf Course	6.5 Acre Lake	Com	NI	0.000	NI	0.000	NI	0.074	
Within Community Water System Service Area Totals (MGD):				0.000		633.600		521.663	
Outside Community Water System (Municipal & Private) Service Areas									
None				0.000		0.000			
Outside Community Water System Service Area Totals (MGD):				0.000		0.000		0.000	
Self-Supplied Nonagricultural Users of Surface Water Totals (MGD):				0.000		633.600		521.663	



Non-Agricultural, Self-Supplied Users of Ground Water
Southside Hampton Roads

Office of Water Supply Planning
 629 East Main Street,
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List non-agricultural groundwater source and use information for all self-supplied users of more than 300,000 gallons per month. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark users on associated map. **Note the data reference year in Column M, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, NON-AGRICULTURAL USERS USING MORE THAN 300,000 GAL/MONTH OF GROUND WATER (9 VAC 25-780-70 F, - 80 B6, and - 80 C)

Water User Name	Use Category	DESIGN CAPACITY:				INDIVIDUAL WELL DATA:						WATER USE:	Notes or Comments (Include service area user falls within and references to any maps, data sources, data gaps, etc.)
		Average Daily Withdrawals (gpd)	Average Daily Withdrawals (MGD)	Maximum Daily Withdrawals (gpd)	Maximum Daily Withdrawals (MGD)	Well Name and ID #	Well Depth (feet)	Casing Depth (feet)	Screen Depth (Top & Bottom) or Water Zones	Well Diameter (inches)	Limitations on Withdrawal Permit(s)	Estimated Annual Average (MGD) YEAR 2007	
Within Community Water System (Municipal & Private) Service Areas													
Chesapeake													
Bayshore Concrete Products	Man	NI	0.000	NI	0.000	234-212	45	NI	0-45	NI	GW0036500 = 0.023 mgd (8.40 Mgal/year; 0.91 Mgal/month)	0.013	active permit, expired 2005, application GW0050200
		NI	0.000	NI	0.000	234-213	95	NI	83-95	4			
		NI	0.000	NI	0.000	234-214	86	NI	76-86	4			
		NI	0.000	NI	0.000	234-272	95	NI	NI	NI			
Cahoon Plantation Golf Course	Com	NI	0.000	NI	0.000	234-234	110	NI	0-110, 91-110	4, 9	GW0041900 = 0.17 mgd (62 Mgal/year; 15.5 Mgal/month)	0.051	permit expires 10/2010, owner will not renew
		NI	0.000	NI	0.000	234-235	111	NI	0-160, 101-111	4, 8			
		NI	0.000	NI	0.000	234-236	118	NI	0-118, 104-118	4, 9			
		NI	0.000	NI	0.000	234-237	110	NI	0-110, 90-110	4			
Chesapeake Total											0.064		
Norfolk													
J H Miles and Company - Norfolk Processing Plant	Man	NI	0.000	NI	0.000	217-064	900	900	790-890	10	GW0053600 = 82 Mgal per year; 10.025 Mgal per month	0.153	
Capital Concrete Incorporated - Stapleton Street Plant	Man	NI	0.000	NI	0.000	217-085	105	95	95-105	8	GW0034400 = 14.1 Mgal/yr; 0.04 mgd	0.019	
		NI	0.000	NI	0.000	217-097	104	94	94-104	8			
Titan Virginia Ready-Mix LLC Campostella Ready-Mix Plant	Man	NI	0.000	NI	0.000	217-094	95	NI	NI	6	GW0044300 = 9.10 Mgal per yr; 1,100,000 gal per month	0.019	Well out of service
		NI	0.000	NI	0.000	217-095	95	NI	NI	6			
		NI	0.000	NI	0.000	217-096	42	NI	NI	6			
US Navy - Norfolk Naval Base, Sewells Point Golf Course	Com	NI	0.000	NI	0.000	217-087	40	22	22-28	4	GW0040400 = 14.00 Mgal per yr; 1,800,000 gal per month	0.078	
		NI	0.000	NI	0.000	217-091	40	28	28-38	4			
		NI	0.000	NI	0.000	217-089	40	28	28-38	4			
		NI	0.000	NI	0.000	217-088	40	28	28-38	4			
NI	0.000	NI	0.000	217-090	40	22	22-28	4					
Norfolk Total											0.269		
Portsmouth													
Titan Virginia Ready-Mix, L.L.C. Port Norfolk Plant	Man	13,000	0.013	50,000 GPmin	0.000	Well #1 220-12	697	NI	NI	4	GW0044100 = 0.014 mgd (5 Mgal/yr; 0.526 Mgal/month)	0.011	active permit, expires 2011
Cintas Corporation / Omni Services, Inc.	Man	55,000	0.055	230 GPmin	0.000	RUS 220-51	700	680	680-700	6	GW0037400 = 0.065 mgd (23.6 Mgal/year; 2.3 Mgal/month)	0.058	active permit, expires 11/2010
National Linen & Uniform Service	Com	67,586	0.068	175 Gpmin	0.000	Well #1 200-49	700	644	655-665 665-695	10		0.020	inactive permit, expired in 2005, GW0033700 = 43.00 Mgal/yr; 4.70 Mgal/month
				250 Gpmin	0.000	Well #2 200-50	700	644	644-655 655-685 685-695	10			
Elizabeth Manor Golf and Country Club	Com	19,089	0.019	30 Gpmin	0.000	New Well #1 220-58	42	4	32-42	7.5	GW0040300 = 0.052 mgd (18.9 Mgal/yr; 4.2 Mgal/month)	0.097	active permit, expired in 2007
				30 GPmin	0.000	New Well #2 220-59	42	4	32-42	7.5			
				NI	0.000	220-56	45	4	32-42	7.5			



Non-Agricultural, Self-Supplied Users of Ground Water
Southside Hampton Roads

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List non-agricultural groundwater source and use information for all self-supplied users of more than 300,000 gallons per month. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark users on associated map. **Note the data reference year in Column M, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, NON-AGRICULTURAL USERS USING MORE THAN 300,000 GAL/MONTH OF GROUND WATER (9 VAC 25-780-70 F, - 80 B6, and - 80 C)

Water User Name	Use Category	DESIGN CAPACITY:				INDIVIDUAL WELL DATA:						WATER USE:	Notes or Comments (Include service area user falls within and references to any maps, data sources, data gaps, etc.)
		Average Daily Withdrawals (gpd)	Average Daily Withdrawals (MGD)	Maximum Daily Withdrawals (gpd)	Maximum Daily Withdrawals (MGD)	Well Name and ID #	Well Depth (feet)	Casing Depth (feet)	Screen Depth (Top & Bottom) or Water Zones	Well Diameter (inches)	Limitations on Withdrawal Permit(s)	Estimated Annual Average (MGD) YEAR 2007	
Portsmouth													
BASF	Man	299,667	0.300	1,000 Gpmin	0.000	North Well/WE-3 220-00003	714	20	642-714	10	GW0034300 = 0.42 mgd (153.30 Mgal/yr; 16.80 Mgal/month)	0.244	active permit, expires in 2013
				1,000 GPmin	0.000	South Well WE-4 220-00009	710	20	636-660 664-672 692-708	10			
Cogentrix Virginia Leasing Corporation	Pf	1,363,528	1.364	1,000 GPmin	0.000	Well A 220-40	1290	150	820-865 895-910 940-965 1005-1020	20	GW0036300 = 2.6 mgd (949 Mgal/yr; 124 Mgal/month)	1.659	active permit, expired in 2006, GW00515 - current application for same amounts
				5,000 Gpmin	0.000	Well B 220-41	800	150	665-685 730-745 750-775	18			
				3,000 Gpmin	0.000	Well C 220-42	600	150	180-192 585-605 620-635	18			
				1,000 GPmin	0.000	Well D 220-43	1000	150	820-865 895-910 940-965 1005-1020	20			
				500 Gpmin	0.000	Well E 220-44	800	150	665-685 730-745 750-775	18			
				300 GPmin	0.000	Well F 220-245	600	150	180-192 585-605 620-635	18			
				NI	0.000	Well EF 220-063	NI	NI	NI	NI			
Tidewater Area Central Hospital Laundry, Inc. (Shared Hospital Services)	Com	44,373	0.044	200 Gpmin	0.000	2001 Well 220-60	660	630	630-650	6	GW0048400 = 0.12 mgd (43 Mgal/yr; 5.1 Mgal/month)	0.057	active permit, expires 2016
Portsmouth Total											2.146		
Virginia Beach													
Servitex Division of AlSCO	Com	NI	0.000	NI	0.000	228-00439	75	NA	65-75, 98-105	4	GW0047700 = 0.051 mgd (18.7 Mgal/yr; 2.0 Mgal/month)	0.027	active permit, expires 2015
		NI	0.000	NI	0.000	228-00467	NI	NA	NI	NI			
		NI	0.000	NI	0.000	228-00476	NI	NA	NI	NI			
Bayville Golf Club	Com	NI	0.000	NI	0.000	228-00396	80	NA	NA	NA	GW0048100 = 0.044 mgd (16.1 Mgal/yr; 3.275 Mgal/month)	0.041	active permit, expires 2018, 10 year max = 103 Mgal
		NI	0.000	NI	0.000	228-00403	80	NA	65-80	4			
Broad Bay Country Club	Com	NI	0.000	NI	0.000	228-00333	150	NA	78-84,119-134	8	GW0049000 = 0.071 mgd (26 Mgal/yr; 3.3 Mgal/month)	0.031	active permit, expires 2018, 10 year max = 190.1 Mgal
		NI	0.000	NI	0.000	228-00334	150	NA	94-114	8			
		NI	0.000	NI	0.000	228-00335	150	NA	104-124	8			
		NI	0.000	NI	0.000	228-00336	150	NA	124-144	8			
		NI	0.000	NI	0.000	228-00337	150	NA	30-90,110-140	8			
NI	0.000	NI	0.000	228-00338	150	NA	30-120	8					



Non-Agricultural, Self-Supplied Users of Ground Water
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List non-agricultural groundwater source and use information for all self-supplied users of more than 300,000 gallons per month. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark users on associated map. **Note the data reference year in Column M, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, NON-AGRICULTURAL USERS USING MORE THAN 300,000 GAL/MONTH OF GROUND WATER (9 VAC 25-780-70 F, - 80 B6, and - 80 C)

Water User Name	Use Category	DESIGN CAPACITY:				INDIVIDUAL WELL DATA:						WATER USE:	Notes or Comments (Include service area user falls within and references to any maps, data sources, data gaps, etc.)
		Average Daily Withdrawals (gpd)	Average Daily Withdrawals (MGD)	Maximum Daily Withdrawals (gpd)	Maximum Daily Withdrawals (MGD)	Well Name and ID #	Well Depth (feet)	Casing Depth (feet)	Screen Depth (Top & Bottom) or Water Zones	Well Diameter (inches)	Limitations on Withdrawal Permit(s)	Estimated Annual Average (MGD) YEAR 2007	
Virginia Beach													
Cavalier Golf and Yacht Club	Com	NI	0.000	NI	0.000	228-00391	103	NA	52-68, 78-92	6	GW0046600 = 0.063 mgd (23 Mgal/yr; 5.5 Mgal/month)	0.094	active permit, expires 2013
		NI	0.000	NI	0.000	228-00392	72	NA	52-72	6			
Princess Anne Country Club	Com	NI	0.000	NI	0.000	228-00441	90	NA	70-90	6	GW0046700 = 0.072 mgd (26.43 Mgal/yr; 6.3 Mgal/month)	0.130	active permit, expires 2014
		NI	0.000	NI	0.000	228-00442	90	NA	80-90	4			
		NI	0.000	NI	0.000	228-00443	97	NA	77-97	6			
		NI	0.000	NI	0.000	228-00444	90	NA	80-90	4			
		NI	0.000	NI	0.000	228-00453	90	NA	80-90	4			
Titan Virginia Ready-Mix LLC Oceana Plant	Man	NI	0.000	NI	0.000	228-00394	142	NA	132-142	NI	GW0044500 = 0.008 mgd (3.1 Mgal/yr; 0.317 Mgal/month)	0.013	active permit, expires 2011
TPC Golf Course	Com	NI	0.000	NI	0.000	228-00414	80	NA	66-81	4	GW0041400 = 0.22mgd (82 Mgal/yr; 9.3 Mgal/month)	0.079	active permit, expired in 2008
		NI	0.000	NI	0.000	228-00415	80	NA	60-75	4			
		NI	0.000	NI	0.000	228-00416	82	NA	61-71	4			
		NI	0.000	NI	0.000	228-00417	80	NA	70-85	4			
		NI	0.000	NI	0.000	228-00435	78	NA	68-78	10			
Oceana Golf Course	Com	NI	0.000	NI	0.000	228-00030	85	NA	NI	NI	GW0040500 = 0.3 mgd (108 Mgal/yr; 11.73 Mgal/month)	0.072	active permit, expired in 2008
		NI	0.000	NI	0.000	228-00406	85	NA	75-85	4			
		NI	0.000	NI	0.000	228-00407	110	NA	100-110	2			
		NI	0.000	NI	0.000	228-00409	80	NA	60-80	4			
		NI	0.000	NI	0.000	228-00410	82	NA	62-82	4			
Bow Creek Golf Course	Com	NI	0.000	NI	0.000	228-00472	NI	NA	NI	NI	Applied for GW permit, GW0054600 = 0.024 mgd	0.016	
		NI	0.000	NI	0.000	228-00473	NI	NA	NI	NI			
		NI	0.000	NI	0.000	228-00474	NI	NA	NI	NI			
		NI	0.000	NI	0.000	228-00475	NI	NA	NI	NI			
Kempsville Greens Golf Course	Com	NI	0.000	NI	0.000	228-00437	75	NA	65-75	4	GW0044000 = 0.029 mgd (10.46 Mgal/yr; 2.3 Mgal/month)	0.013	active permit, expires 2012
		NI	0.000	NI	0.000	228-00438	82	NA	72-82	4			
Virginia Beach Total											0.516		
Suffolk													
Ciba Specialty Chemicals - Suffolk Plant	Man	NI	0.000	NI	0.000	161-0004	884	NA	546-556, 584-604, 640-650, 854-874	12	GW0038100 = 0.088 mgd (32.2 MG/year; 3.6 MG/month)	0.066	active permit, expired in 2008, GW0054300 new application
SPSA Regional Landfill	Man	NI	0.000	NI	0.000	161-00425	650	NA	NA	NA	GW0040700 = 0.029 mgd (10.5 MG/year; 1.4 MG/month)	0.034	expired in 2007, two applications GW0048600 = 0.082 mgd for Cell VI, GW00553 = 0.046 mgd for Cell VII
		NI	0.000	NI	0.000	161-00449	17	NA	NA	NA			
		NI	0.000	NI	0.000	161-00450	21	NA	NA	NA			
		NI	0.000	NI	0.000	161-00451	17	NA	NA	NA			
		NI	0.000	NI	0.000	161-00452	21	NA	NA	NA			
Suffolk Total											0.100		
Within CWS Service Area Totals (MGD):			1.862	0.000							3.095		
Outside Community Water System (Municipal & Private) Service Areas													



Non-Agricultural, Self-Supplied Users of Ground Water
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List non-agricultural groundwater source and use information for all self-supplied users of more than 300,000 gallons per month. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark users on associated map. **Note the data reference year in Column M, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, NON-AGRICULTURAL USERS USING MORE THAN 300,000 GAL/MONTH OF GROUND WATER (9 VAC 25-780-70 F, - 80 B6, and - 80 C)

Water User Name	Use Category	DESIGN CAPACITY:				INDIVIDUAL WELL DATA:						WATER USE:	Notes or Comments (Include service area user falls within and references to any maps, data sources, data gaps, etc.)
		Average Daily Withdrawals (gpd)	Average Daily Withdrawals (MGD)	Maximum Daily Withdrawals (gpd)	Maximum Daily Withdrawals (MGD)	Well Name and ID #	Well Depth (feet)	Casing Depth (feet)	Screen Depth (Top & Bottom) or Water Zones	Well Diameter (inches)	Limitations on Withdrawal Permit(s)	Estimated Annual Average (MGD) YEAR 2007	
Suffolk													
Albert G Horton, Jr Veterans Cemetery	Com	NI	0.000	NI	0.000	161-00461	477	NA	429 (T) 469 (B)	4.5	GW0046800 = 0.018 mgd (6.7 MG/year; 1.6 MG/month)	0.013	active permit, expires in 2014
		NI	0.000	NI	0.000	161-00465	520	NA	440 (T) 480 (B)	4.5			
		NI	0.000	NI	0.000	161-00472	500	NA	450 (T) 490 (B)	8			
Outside CWS Service Area Totals (MGD):			0.000		0.000							0.013	
Self-Supplied Nonagricultural Users of Ground Water Totals (MGD):			1.862		0.000							3.108	
Self-Supplied Nonagricultural Users Totals (surface and groundwater in MGD):			1.862		633.600							524.771	



Agricultural, Self-Supplied Users
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List data for all agricultural users who utilize more than 300,000 gallons per month of ground or surface water. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark and label on associated map. **Note the data reference year in Column F, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, AGRICULTURAL USERS > 300,000 GAL/MONTH OF GROUND OR SURFACE WATER (9 VAC 25-780-70 I, -80B7, and -80D)

User Name	SOURCE TYPE:		USE TYPE:		WATER USE:		Notes or Comments (Include service area user falls within and any references to maps, data sources, data gaps, etc.)
	Ground Water Well Name & ID No.	Surface Water Reservoir & Sub-basin or Stream/River Name & Sub-basin	Irrigation	Nonirrigation	Estimated Annual Average (MGD) Year 2007		
			(Place an "X" in appropriate column cell)		Surface Water (MGD)	Ground Water (MGD)	
Within Community Water System (Municipal & Private) Service Areas							
Suffolk							
Williams Cattle Co LLC	NA	Four Farm Ponds	X		0.054	NA	
	NA	Worrell Farm Pond	X		0.000	NA	
	NA	Travis Pond (Powell Farm)	X		0.004	NA	
	NA	Murphys Mill Pond	X		0.000	NA	
Suffolk Total					0.058	0.000	
Within Community Water System Service Area Water Use Totals (MGD):					0.058	0.000	
Outside Community Water System (Municipal & Private) Service Areas							
Chesapeake							
Greenbrier Farms Nursery GW0064200	234-242	Eason Farm Pond	X		0.000	0.019	GW permit = 0.24 mgd (88.2 MG/year; 12.1 MG/month)
	234-243	Main Farm Canal			0.191	0.02	
	234-246	Mills Farm Pond			0.000	0	
	234-247	Moalco Farm Pond			2.246	0	
	234-248	Squires Farm Pond			0.000	0	
	234-249	Waters Farm Pond			0.000	0	
	234-250	Weyerhauser Farm Pond			0.000	0	
	234-251	Willis Farm Pond			0.000	0.011	
	234-252					0.024	
	234-253					0.022	
	234-254					0.018	
	234-255					0	



**Agricultural, Self-Supplied Users
Southside Hampton Roads**

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List data for all agricultural users who utilize more than 300,000 gallons per month of ground or surface water. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. If applicable, mark and label on associated map. **Note the data reference year in Column F, Row 4 and fill out a separate spreadsheet for each data year.**

SELF-SUPPLIED, AGRICULTURAL USERS > 300,000 GAL/MONTH OF GROUND OR SURFACE WATER (9 VAC 25-780-70 I, -80B7, and -80D)

User Name	SOURCE TYPE:		USE TYPE:		WATER USE:		Notes or Comments (Include service area user falls within and any references to maps, data sources, data gaps, etc.)
	Ground Water Well Name & ID No.	Surface Water Reservoir & Sub-basin or Stream/River Name & Sub-basin	Irrigation	Nonirrigation	Estimated Annual Average (MGD) Year 2007		
			(Place an "X" in appropriate column cell)		Surface Water (MGD)	Ground Water (MGD)	
Chesapeake (continued)							
1800 Beef Cows (USDA NASS data for Chesapeake)	Assume 50% of users have well	Assume 50% of user have pond		X	0.011	0.011	Water Factor = 12 gpd/cow
3200 Horses (USDA NASS data for Chesapeake)	Assume 50% of users have well	Assume 50% of user have pond		X	0.019	0.019	Water Factor = 12 gpd/horse
Chesapeake Total					2.467	0.144	
Suffolk							
Bennetts Creek Nursery	Well #1	Farm Pond - 120 acre field	X		0.032	NA	
	Well #2	Farm Pond - 50 acre field	X			0.040	
8200 Cattle (USDA NASS data for Suffolk)	Assume 50% of users have well	Assume 50% of user have pond		X	0.049	0.049	Water Factor = 12 gpd/cow
1500 Horses (USDA NASS data for Suffolk)	Assume 50% of users have well	Assume 50% of user have pond		X	0.009	0.009	Water Factor = 12 gpd/horse
Suffolk Total					0.090	0.098	
Virginia Beach							
500 Beef Cows (USDA/NASS Data for Virginia Beach)	Assume 50% of users have well	Assume 50% of user have pond			0.003	0.003	Water Factor = 12 gpd/cow
2600 Horses (USDA/NASS Data for Virginia Beach)	Assume 50% of users have well	Assume 50% of user have pond			0.016	0.016	Water Factor = 12 gpd/horse
Virginia Beach Total					0.019	0.019	
Outside Community Water System Service Area Water Use Totals (MGD):					2.576	0.261	
Estimated Total Agricultural Usage By Source (MGD):					2.634	0.261	



Self-Supplied, Individual Well Users
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Estimate well use information for small, self-supplied users on individual wells. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly. **Note the data reference year in Row 7.**

ESTIMATED NUMBER OF RESIDENCES AND BUSINESSES THAT ARE SELF-SUPPLIED BY INDIVIDUAL WELLS WITHDRAWING LESS THAN 300,000 GALLONS PER MONTH (9 VAC 25-780-70J); ESTIMATED WATER USE BY SELF-SUPPLIED USERS ON INDIVIDUAL WELLS (9 VAC 25-780-80 B8 and -80 E)

ESTIMATING SMALL SELF-SUPPLIED USERS							ESTIMATING SMALL SELF-SUPPLIED WATER USE										
Locality	Step 1: Estimate Total Population of Individual Self-Supplied Well Users			Step 2: Estimate Number of Residences and Businesses on Individual Wells			Step 3: Estimate Total Self-Supplied Water Use <u>OUTSIDE</u> COMMUNITY WATER SYSTEM SERVICE AREA					Step 4: Estimate Total Self-Supplied Water Use <u>INSIDE</u> COMMUNITY WATER SYSTEM SERVICE AREA					
	Locality Population	Total Population Served by Community Water System(s)	Estimated Population Served by Individual Wells	Locality Specific Population Per Household Factor	Estimated Number of RESIDENCES on Wells (Column D ÷ Column E)	Estimated Number of BUSINESSES on Wells	Estimated Population Served by Individual Wells	Per Capita Water Use Factor (gal/person/day)	Average Annual Residential Use (gpd) (Column H x Column I)	Average Annual Business Use (gpd) (SSU Business Data)	Estimated Average Annual Use (MGD)	# of Self-Supplied Residences Within Service Area	Locality Specific Population Per Household Factor	Per Capita Water Use Factor (gal/person/day)	Average Annual Residential Use (gpd) (Columns M x N x O)	Average Annual Business Use (gpd) (SSU Business Data)	Estimated Annual Average Use (MGD)
	YEAR 2007	YEAR 2007															
City of Chesapeake	215,906	182,306	33,600	2.79	12,043	10	33,600	75	2,520,000	10,125	2.530	0	2.79	75	0	22,160	0.022
City of Norfolk	235,915	235,915	0		-	0	0		0		0.000	0			0	0	0.000
City of Portsmouth	97,851	97,848	3	2.51	1	0	3	75	188	0	0.000	1	2.51	75	188	0	0.000
City of Suffolk	86,033	65,869	20,164	2.69	7,496	11	20,164	75	1,512,300	37,500	1.550	0	2.69	75	0	24,890	0.025
City of Virginia Beach	430,349	425,498	4,851	2.70	1,797	28	4,851	75	363,825	83,120	0.447	0	2.70	75	0	217,160	0.217
Planning Area Totals:	1,066,054	1,007,436	58,618		21,337	49	58,618		4,396,313	130,745	4.527	1			188	264,210	0.264

Notes or Comment Total population based on Weldon Cooper estimate for July 2007.
 Population served includes publicly-owned and privately-owned systems.
 Population served in Virginia Beach = 403,174 (City system) + 2642 (Fort Story) + 9,782 (Little Creek) + 7,300 (Oceana) + 2600 (Dam Neck)
 Population served in Chesapeake = 102,434 (NW system) + 33,512 (South Norfolk) + 38,640 (Western Branch) + 474 (Portsmouth direct sales) + 7,246 private CWS = 182,306
 Locality Population in Suffolk of 86,033 = 65,522 public CWS pop served + 243 private CWS pop served + 20,164 residential SSU pop. Suffolk provided updated res SSU pop and public CWS pop on 3-28-11 per DUC review of Chapter 2 draft.
 Information on estimated number of businesses served by wells and average annual business use reflects table SSU Business Data.



Estimate well use information for small, self-supplied business users on individual wells. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly.
 Record the data reference year, from your data sources, in Row 5. **Fill out a separate sheet for each locality in your region.**

ESTIMATED WATER USE BY SELF-SUPPLIED BUSINESS USERS ON INDIVIDUAL WELLS (9 VAC 25-780-80 B8 and -80 E)

HR Southside sub-region					Use this spreadsheet to fill out columns K and Q on the main "70J, 80B8, 80E SSU" spreadsheet				
Year: 2007									
ESTIMATING SMALL SELF-SUPPLIED BUSINESS WATER USE									
Step 3 (continued from 70J spreadsheet): Estimated Self-Supplied Business Water Use OUTSIDE COMMUNITY WATER SYSTEM SERVICE AREA					Step 4 (continued from 70J spreadsheet): Estimated Self-Supplied Business Water Use INSIDE COMMUNITY WATER SYSTEM SERVICE AREA				
Business Name	Estimated Population Served by Each Business	Per Capita Water Use Factor (gal/person/day)	Estimated Average Annual Business Use (gallons/day) (Column B x Column C)	Estimated Average Annual Business Use (MGD)	Business Name	Estimated Population Served by Each Business	Per Capita Water Use Factor (gal/person/day)	Estimated Average Annual Business Use (gallons/day) (Column G x Column H)	Estimated Average Annual Business Use (MGD)
Chesapeake									
Lone Star Café (Mad Dogs)	25	50	1,250	0.001	ATLANTIC YACHT BASIN, INC.	44	15	660	0.001
TRIPLE R RANCH, INC.	300	15	4,500	0.005	MARLIN CLUB	120	50	6,000	0.006
SOVEREIGN GRACE CHURCH	25	15	375	0.000	NORTHWEST RIVER PARK	800	5	4,000	0.004
CITY OF NORFOLK NURSERY	NI		4,000	0.004	NALF FENTRESS FIELD	50	50	2,500	0.003
					CHESAPEAKE GOLF CLUB	NI		1,000	0.001
					SOUTHERN CONCRETE - MONEY POINT PLANT	NI		8,000	0.008
Chesapeake Total			10,125	0.010				22,160	0.022
Suffolk									
Two Wheel Café	200	50	10,000	0.010	Davis Lakes and Campground	180	50	9,000	0.009
Pruden Center for Industry and Technology	450	35	15,750	0.016	Green Pines Apartments East	35	100	3,500	0.004
Suffolk Youth Athletic Assoc.	100	100	10,000	0.010	Holiday Inn	44	130	5,720	0.006
Tidewater Agri Research and Extension Center	50	35	1,750	0.002	Miller Mart (2872 Pruden Blvd)	25	10	250	0.000
			0	0.000	Nansemond Swim Club Inc	100	10	1,000	0.001
					Southwestern Elementary	442	10	4,420	0.004
			0	0.000	Lancaster Farms, Inc	NI		1,000	0.001
Suffolk Total			37,500	0.038				24,890	0.025



Estimate well use information for small, self-supplied business users on individual wells. Reference sources and note any assumptions regarding calculations. If unable to find data or data not applicable, note accordingly.
 Record the data reference year, from your data sources, in Row 5. **Fill out a separate sheet for each locality in your region.**

ESTIMATED WATER USE BY SELF-SUPPLIED BUSINESS USERS ON INDIVIDUAL WELLS (9 VAC 25-780-80 B8 and -80 E)

HR Southside sub-region					Use this spreadsheet to fill out columns K and Q on the main "70J, 80B8, 80E SSU" spreadsheet				
Year: 2007									
ESTIMATING SMALL SELF-SUPPLIED BUSINESS WATER USE									
Step 3 (continued from 70J spreadsheet): Estimated Self-Supplied Business Water Use OUTSIDE COMMUNITY WATER SYSTEM SERVICE AREA					Step 4 (continued from 70J spreadsheet): Estimated Self-Supplied Business Water Use INSIDE COMMUNITY WATER SYSTEM SERVICE AREA				
Business Name	Estimated Population Served by Each Business	Per Capita Water Use Factor (gal/person/day)	Estimated Average Annual Business Use (gallons/day) (Column B x Column C)	Estimated Average Annual Business Use (MGD)	Business Name	Estimated Population Served by Each Business	Per Capita Water Use Factor (gal/person/day)	Estimated Average Annual Business Use (gallons/day) (Column G x Column H)	Estimated Average Annual Business Use (MGD)
Virginia Beach									
BLUE PETES RESTAURANT	340	50	17,000	0.017	COLLEGE PARK SKATING CENTER	360	15	5,400	0.005
CAPT GEORGE'S MARINA	75	50	3,750	0.004	KNIGHTS OF COLUMBUS	25	15	375	0.000
FALSE CAPE STATE PARK	85	50	4,250	0.004	SEACREST	120		0	0.000
FALSE CAPE STATE PARK BARBOUR HILL	25	50	1,250	0.001	DAIRY QUEEN	150	50	7,500	0.008
SMOKIES RESTAURANT	25	50	1,250	0.001	INDIAN COVE CAMPGROUND TES	700	50	35,000	0.035
NORTH LANDING BEACH RIVERFRONT CAMPGRND	408	50	20,400	0.020	MARGIE & RAYS	50	50	2,500	0.003
MUNDEN POINT PARK	800	5	4,000	0.004	PUNGO PIZZA AND ICE CREAM	50	50	2,500	0.003
NORTH BAY SHORE CAMPGROUND TES	250	50	12,500	0.013	STUMPY LAKE GOLF COURSE SNACK	175	15	2,625	0.003
PUNGO GRILL	250	50	12,500	0.013	THALIA ACRES INN	162	130	21,060	0.021
BACK-BAY CHRISTIAN ACADEMY	50	16	800	0.001	CREEDS ELEMENTARY SCHOOL	326	10	3,260	0.003
CHARITY PRE-SCHOOL	42	10	420	0.000	KEMPSVILLE MENNONITE CHURCH	44	10	440	0.000
HENLEY FARM	NI		5,000	0.005	HOLIDAY TRAV-L-PARK	2,195	50	109,750	0.110
					RED WING GOLF COURSE	250	15	3,750	0.004
					CYPRESS POINT GOLF COURSE	NI		2,000	0.002
					VIRGINIA BEACH KOA HELLS POINT GOLF COURSE	NI		15,000	0.015
			6,000	0.006					
Virginia Beach Total			83,120	0.083				217,160	0.217
Southside : Outside Service Area Totals	3,500		130,745	0.131	Southside : Within Service Area Totals	6,447		264,210	0.264

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