

Attachment 1A
MEETING AND ANNUAL RETREAT SUMMARY
DIRECTORS OF UTILITIES COMMITTEE
January 5, 2011
Newport News

1. Summary of December 1, 2010 Joint Meeting of the Directors of Utilities and Health Directors Committee

The Summary of the December 1, 2010 joint meeting of the Directors of Utilities and Health Directors Committee was approved.

2. Staff Reports

- A. Capacity Team Update: The Capacity Team is preparing to brief the Directors of Utilities Committee in February 2011 on the Team's recommended approach for implementing a Hampton Roads Regional Private Property Infiltration and Inflow (I/I) Abatement Program. The team is exploring two options: (a) development of locality-specific ordinances; and (b) development of a regional program coordinated between localities and HRSD. Prior to the Committee briefing, the Team's recommendation will be presented to the HRSD Commission for information and comment on January 25, 2011; DEQ will also be consulted that week. The Directors of Utilities Committee will evaluate the two options and provide a recommendation to the Commission in a briefing tentatively scheduled for March 2011.
- B. Regional Water Supply Plan: HRPDC staff is compiling comments and revisions to sections of the Regional Water Supply Plan as they are completed. Section 3 "Existing Resources" was distributed for review at the meeting (electronic copies will also be distributed via email). Staff anticipates the pre-final plan will be ready for public hearings and locality council approvals in March 2011. HRPDC staff will confirm public review procedures, advertisement and notification deadlines, and council approval requirements and coordinate preparations through the Committee.
- C. USGS Groundwater Program: The proposed USGS Virginia Coastal Plain Groundwater Model (VCPGM) work plan for FY 2011 was discussed; there were no objections to executing the contract. USGS will contribute \$33,600 and HRPDC would contribute \$36,420 to fund the project.

Handout:

HRPDC – Virginia Coastal Plain Groundwater Modeling FY2011 Work Plan

ACTION: The proposed USGS VCPGM FY 2011 work plan was approved.

3. Annual Committee Retreat

FY 2011-2012 Budget

The Committee discussed the proposed FY 2011-12 Regional Water Program Budget, which reflects a 5% overall reduction from the previous year's budget, and the proposed FY 2011-12 Regional Wastewater Program Budget, which reflects program-specific funding reductions equal to 13% of the total program. There was consensus on the proposed budgets by all present.

Handout:

FY 2011-12 and FY 2010-11 water and wastewater program budgets

Review of Program Progress – FY 2010-2011 and Committee Direction for FY 2011-2012

HRPDC staff reviewed FY 2010-2011 activities undertaken through the committee process. The Committee discussed priorities to address during FY 2011-2012 and largely agreed with the work plan proposed by HRPDC staff.

The following comments were offered on the proposed work plan:

Groundwater – USGS contracts

- The proposed evaluation of subsidence and relative sea-level rise may be duplicative of the recently published study by the Virginia Institute of Marine Science.
- It should be a priority to revise or recalibrate the Virginia Coastal Plain Groundwater Model for application in DEQ regulatory program.

Water Technical Assistance

- Although some localities have legislative liaisons, the Committee appreciates updates on legislative and regulatory issues from HRPDC and would like staff to continue providing such information.

Water Priority Projects

- The administration of the UASI grant and management of the contract is anticipated to be time consuming for HRPDC staff. Staff will be requesting feedback from the Committee on the forthcoming RFP. The Committee's assistance with coordinating participation in the training exercise will likely be necessary.
- Regarding the collection of water use data by billing categories, the Committee agreed that it would be valuable to collect better information on demand per end use. HRPDC staff will develop simplified water use categories and provide a template for localities to use to transmit data based on billing information

from the previous year. HRPDC will use this information in future analyses of use sector demands, conservation programs, and other planning studies.

The Committee agreed to the following amendments to the work plan:

Groundwater – USGS contracts

- Prioritize the revision or recalibration of the Virginia Coastal Plain Groundwater Model for use in evaluating groundwater permit applications.
- Eliminate the proposed project to evaluate subsidence and relative sea level rise.

HR WET

- Develop and implement a training program for FOG inspectors in consultation with the localities' technical staff.

Handouts:

USGS Groundwater Program

Water and Wastewater Programs – Retreat

Work Proposal: Determination of Sea-Level Rise in the Virginia Coastal Plan and Development of Planning Tools

ACTIONS: The proposed FY 2011-12 water and wastewater program budgets were approved.

The proposed FY 2011-12 work plan was amended per discussion and approved.

4. Other Business

HRSD indicated that, in February 2011, they will begin inquiring with the localities as to staff contacts who can work with HRSD to resolve illegal connections.

HRSD will hold the quarterly conference call with EPA for the Consent Decree on January 19, 2011.

HRSD will hold the annual public meeting for the Consent Decree on January 25, 2011.

ACTION: No action taken.

Committee Meeting Sign-In Sheet

Locality/Agency	Representative	Representative	Representative	Representative
HRSD	Ted Henifin			
Chesapeake	Jim Walski			
Franklin				
Gloucester	Martin Schlesinger			
Hampton	Lynn E. Allsbrook	Jason Mitchell		
Isle of Wight	Frank Halton			
James City County	Larry Foster			
Newport News	Reed Fowler	Eileen Leininger	Everett Skipper	
Norfolk	Kristen Lentz			
Poquoson	Bob Speechley	Ellen Roberts		
Portsmouth	Bryan Foster			
Smithfield	Bill Hopkins			
Southampton				
Suffolk				
Surry	John Edwards			
Virginia Beach				
Williamsburg				
Windsor				
York				
HRPDC	Whitney Katchmark	Jennifer Tribo	Tiffany Smith	
HRPDC	Julia Hillegass	Katie Rider	Lisa Hardy	
New Kent				
DEQ				
EPA				
USGS				
VDH				
VDH				
VDH				
AECOM				
AquaLaw				
Brown & Caldwell				
CH2M-Hill				
Christian Barton				
Hurt & Proffitt, Inc.				
McGuire Woods				
Prism C.E.	Aaron Tenney			
Remsa, Inc.	Joe Duffy	Scott Bellows		
Troutman Sanders				
URS				

HRPDC - Virginia Coastal Plain Groundwater Modeling FY2011 Work Plan

Work Period:

January 1, 2011 through June 30, 2011

Questions to be Answered:

- 1) What will groundwater levels be in the Coastal Plain aquifer system in 30 and 50 years under various withdrawal scenarios?
- 2) How will groundwater levels respond to changes in pumping rates at the IP mill in Franklin?
- 3) What loss of non-recoverable storage will occur in the aquifer system under likely future groundwater withdrawals?

Work Plan:

The questions will be answered by performing simulations with the recently revised Virginia Coastal Plain Groundwater Model (VCPGM). The study will focus on 3 of the confined aquifers; the Piney Point, Aquia, and Potomac. Analyses performed for each model run will include:

- Determination of 80% criterion violation areas and dewatered aquifer areas.
- Calculation of the percentage loss of non-recoverable storage in the aquifer system.
- Calculation of water budgets for the aquifers of interest.

Tasks:

To answer the study questions, the following tasks will be performed for each of the 3 questions, using different data and model runs for each question.

- Task 1: Refine the list of model conditions to be simulated as shown in Table 1.
- Task 2: Develop pumping data to express the desired scenarios.
- Task 3: Construct model input files.
- Task 4: Perform model simulations.
- Task 5: Analyze output.
- Task 6: Prepare maps, tables, figures, and slides to document findings.

Deliverables:

- 1) Slide presentation – fully annotated
- 2) Begin the documentation of these simulations of aquifer system response to pumping with the updated VCPGM.

Funding:

HRPDC:	\$36,420
USGS:	<u>\$33,600</u>
Total	\$70,020

Table 1 – Model Scenarios to be Simulated

Run #	Time Component			Groundwater Withdrawal Rates					
	Steady State	Transient (Year)		IP - Franklin Withdrawals (% of 2008 rates)			Other Water Use		
		2040	2060	100%	50%	0%	None	Business as usual (+3%/yr)	Total Permitted
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

*  - cell shading indicates which options are in effect for each model run

**REGIONAL WATER PROGRAM BUDGET WORKSHEET
INITIAL DRAFT REGIONAL WATER PROGRAM FY 11 - 12 BUDGET W/ 5% REDUCTIONS - 12/27/10**

Water Utility	Total Metered Accounts	Population Percent	Population 2008 Final Estimate	Groundwater Management										Totals
				Program	Admin	Base	Pro Rata	USGS	Regulatory Assistance	Priority Projects	HR SWAP	Water Quality Advertise	H2O Envelopes	
				\$145,689.00	\$16,082.00	\$108,302.00	\$119,411.00	\$30,874.00	\$58,953.00	\$18,755	\$7,500.00	\$20,000.00	\$525,566.00	
Project Totals														
Chesapeake	61,713	12.80%	217,547	\$18,646.52	\$2,058.31	\$3,000.00	\$8,318.58	\$15,283.24	\$3,951.52	\$7,545.31	\$2,400.42	\$2,559.77	\$64,723.59	
Franklin	3,500	0.73%	8,386	\$1,057.52	\$116.74	\$3,000.00	\$320.66	\$866.78	\$224.11	\$427.93	\$136.14	\$54.44	\$6,349.48	
Gloucester	4,499	0.93%	36,161	\$1,359.37	\$150.05	\$3,000.00	\$1,382.73	\$1,114.18	\$288.07	\$550.07	\$175.00	\$69.98	\$8,276.06	
Hampton	0	0.00%	144,479	-	-	\$3,000.00	\$5,524.60	-	-	-	-	-	\$8,524.60	
Isle of Wight	2,395	0.50%	34,687	\$723.65	\$79.88	\$3,000.00	\$1,326.36	\$593.12	\$153.35	\$292.82	\$93.16	\$37.25	\$6,398.94	
James City City	19,520	4.05%	62,631	\$5,897.95	\$651.05	\$3,000.00	\$2,394.89	\$4,834.13	\$1,249.88	\$2,386.60	\$759.26	\$303.62	\$22,287.05	
Newport News	127,246	26.38%	193,212	\$38,447.25	\$4,244.03	\$3,000.00	\$7,388.06	\$31,512.50	\$8,147.63	\$15,557.67	\$4,949.43	\$1,979.25	\$120,503.81	
Norfolk	64,347	13.35%	236,106	\$19,442.38	\$2,146.16	\$3,000.00	\$9,028.24	\$15,935.55	\$4,120.17	\$7,867.35	\$2,502.88	\$1,000.88	\$67,712.65	
Poquoson	0	0.00%	11,815	-	-	\$3,000.00	\$451.78	-	-	-	-	-	\$3,451.78	
Portsmouth	32,750	6.79%	97,626	\$9,895.38	\$1,092.31	\$3,000.00	\$3,733.03	\$8,110.55	\$2,097.00	\$4,004.16	\$1,273.86	\$509.41	\$35,074.13	
Southampton	960	0.20%	19,341	\$290.06	\$32.02	\$3,000.00	\$739.56	\$237.74	\$61.47	\$117.37	\$37.34	\$14.93	\$4,570.32	
Smithfield	2,798	0.58%	0	\$845.41	\$93.32	-	-	\$692.93	\$179.16	\$342.10	\$108.83	\$43.52	\$2,421.32	
Suffolk	24,813	5.15%	82,344	\$7,497.22	\$827.59	\$3,000.00	\$3,148.68	\$6,144.95	\$1,588.79	\$3,033.75	\$965.14	\$385.95	\$27,621.28	
Surry	0	0.00%	0	-	-	-	-	-	-	-	-	-	-	
Virginia Beach	133,005	27.58%	432,696	\$40,187.33	\$4,436.11	\$3,000.00	\$16,545.47	\$32,938.72	\$8,516.38	\$16,261.79	\$5,173.44	\$2,068.82	\$134,644.93	
Williamsburg	4,167	0.86%	13,410	\$1,259.05	\$138.98	\$3,000.00	\$512.77	\$1,031.96	\$266.82	\$509.48	\$162.08	\$64.82	\$7,118.80	
York County	463	0.10%	65,029	\$139.89	\$15.44	\$3,000.00	\$2,486.58	\$114.66	\$29.65	\$56.61	\$18.01	\$7.20	\$5,887.25	
HRSD							\$3,000.00			\$7,000.00			\$10,000.00	
Total	482,176	100.00%	1,655,470	\$145,689.00	\$16,082.00	\$45,000.00	\$66,302.00	\$119,411.00	\$30,874.00	\$65,953.00	\$18,755.00	\$7,500.00	\$535,566.00	

Note: All Amounts allocated according to local share of residential water connections (Basis: Local reporting)
Mitigation allocation according to base buy-in of \$3,000 plus pro rata share of regional population - 2008 Final Estimate.
Surry County is not participating. Accounts reported as of 07/10.

5% reduction in the total program equals \$28,039.
USGS contract was cut by \$28,039.

Last Year's Budget for comparison

REGIONAL WATER PROGRAM BUDGET WORKSHEET
REVISED FINAL FY 10 - 11 BUDGET

Water Utility	Total Metered Accounts	Percent	Population 2006 Final Estimate	HR WET		Groundwater Management													
				Program	Admin	Base	Pro Rata	USGS	Regulatory Assistance	Priority Projects	HR SWAP	Water Quality Advrtise	H2O Envelopes	Totals	Water Supply				
Chesapeake	Franklin	Gloucester	Hampton	Isle of Wight	James City City	Newport News	Norfolk	Poquoson	Portsmouth	Southampton	Smithfield	Surfok	Surry	Virginia Beach	Williamsburg	York County	HRSD	Total	
				13.21%	\$18,260.45	\$2,015.69	\$3,000.00	\$8,363.21	\$18,481.17	\$3,869.70	\$7,389.08	\$2,350.72	\$940.04	\$2,506.77	\$67,176.85	\$12,533.86			\$553,605.00
				0.52%	\$1,058.31	\$116.82	\$3,000.00	\$326.76	\$1,071.11	\$224.27	\$428.25	\$136.24	\$54.48	\$145.28	\$6,561.53	\$726.42			\$20,000.00
				2.22%	\$1,293.86	\$142.82	\$3,000.00	\$1,404.53	\$1,309.50	\$274.19	\$523.56	\$166.56	\$66.61	\$177.62	\$8,359.27	\$888.10			\$20,000.00
				8.90%	\$75.20	\$74.53	\$3,000.00	\$5,634.76	\$683.37	\$143.09	\$273.22	\$86.92	\$34.76	\$92.69	\$8,634.76	\$-			\$20,000.00
				0.46%	\$33,090	\$33,090	\$3,000.00	\$1,285.54	\$683.37	\$143.09	\$273.22	\$86.92	\$34.76	\$92.69	\$8,634.76	\$-			\$20,000.00
				3.66%	\$5,628.33	\$610.25	\$3,000.00	\$2,316.80	\$5,595.15	\$1,171.55	\$2,237.04	\$711.68	\$284.60	\$758.92	\$22,214.31	\$3,794.61			\$20,000.00
				11.16%	\$39,363.63	\$4,345.18	\$3,000.00	\$7,064.43	\$39,839.33	\$8,341.81	\$15,928.44	\$5,067.39	\$2,026.42	\$5,403.78	\$130,380.30	\$27,016.88			\$20,000.00
				14.37%	\$20,148.78	\$2,224.14	\$3,000.00	\$9,099.34	\$20,392.33	\$4,269.87	\$8,153.20	\$2,593.82	\$1,037.25	\$2,766.00	\$73,684.73	\$13,830.00			\$20,000.00
				0.73%	\$11,865	\$-	\$3,000.00	\$460.95	\$-	\$-	\$-	\$-	\$-	\$-	\$3,460.95	\$-			\$20,000.00
				6.03%	\$9,848.37	\$1,087.12	\$3,000.00	\$3,819.62	\$9,967.41	\$2,087.04	\$3,985.14	\$1,267.81	\$506.99	\$1,351.97	\$36,921.47	\$6,759.86			\$20,000.00
				1.10%	\$311.45	\$34.38	\$3,000.00	\$696.69	\$315.21	\$66.00	\$126.03	\$40.09	\$16.03	\$42.75	\$4,648.64	\$213.77			\$20,000.00
				0.00%	\$846.05	\$93.39	\$-	\$-	\$866.27	\$179.29	\$342.35	\$108.91	\$43.55	\$116.14	\$2,585.97	\$580.72			\$20,000.00
				4.90%	\$7,559.38	\$834.45	\$3,000.00	\$3,100.01	\$7,650.76	\$1,601.96	\$3,058.90	\$973.14	\$389.15	\$1,037.74	\$29,205.51	\$5,188.71			\$20,000.00
				0.00%	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-			\$20,000.00
				26.50%	\$39,415.54	\$4,350.92	\$3,000.00	\$16,776.07	\$39,891.97	\$8,352.83	\$15,949.48	\$5,074.09	\$2,029.09	\$5,410.91	\$140,250.91	\$27,054.57			\$20,000.00
				0.82%	\$1,239.74	\$136.85	\$3,000.00	\$516.27	\$1,254.72	\$262.72	\$501.66	\$159.60	\$63.82	\$170.19	\$7,305.58	\$850.95			\$20,000.00
				3.85%	\$140.00	\$15.45	\$3,000.00	\$2,437.00	\$141.69	\$29.67	\$56.65	\$18.02	\$7.21	\$19.22	\$5,864.92	\$96.09			\$20,000.00
				100.00%	\$145,689.00	\$16,082.00	\$45,000.00	\$66,302.00	\$147,450.00	\$30,874.00	\$65,953.00	\$18,755.00	\$7,500.00	\$20,000.00	\$563,605.00	\$100,000.00			\$20,000.00

Note: All Amounts allocated according to local share of residential water connections (Basis: Local reporting)
 Mitigation allocation according to base buy-in of \$3,000 plus pro rata share of regional population - 2006 Final Estimate.
 Surry County is not participating. Accounts reported as of 07/07.

**REGIONAL WASTEWATER PROGRAM BUDGET
INITIAL DRAFT FY 2011 - 2012 BUDGET WITH REDUCTIONS**

Locality	Sewer Accounts July 2010	Percent	Technical Support	SSORS Consultant	Wastewater Subtotal	HR FOG DIRECT	SUBTOTAL	HR FOG Technical	HR FOG Admin	HR FOG Consult	HR FOG Subtotal	PROGRAM TOTAL
			\$84,000.00	\$35,642.96	\$119,642.96	\$50,000.00	\$48,689.00	\$16,082.00	\$50,000.00	\$164,771.00	\$284,413.96	
Chesapeake	59,909	6.45%	\$ 5,419.15	\$ 2,299.46	\$7,718.61	\$ 3,225.68	\$10,944.29	\$ 3,141.11	\$ 1,037.51	\$ 3,225.68	\$7,404.30	\$18,348.59
Franklin	3,500	0.38%	\$ 316.60	\$ 134.34	\$450.94	\$ 188.45	\$639.39	\$ 183.51	\$ 60.61	\$ 188.45	\$432.57	\$1,071.96
Gloucester	1,255	0.14%	\$ 113.52	\$ 48.17	\$161.69	\$ 67.57	\$229.27	\$ 65.80	\$ 21.73	\$ 67.57	\$155.11	\$384.37
Hampton	46,677	5.03%	\$ 4,222.23	\$ 1,791.58	\$6,013.81	\$ 2,513.23	\$8,527.04	\$ 2,447.33	\$ 808.36	\$ 2,513.23	\$5,768.92	\$14,295.96
Isle of Wight	2,236	0.24%	\$ 202.26	\$ 85.82	\$288.08	\$ 120.39	\$408.48	\$ 117.24	\$ 38.72	\$ 120.39	\$276.35	\$684.83
James City City	17,850	1.92%	\$ 1,614.65	\$ 685.13	\$2,299.77	\$ 961.10	\$3,260.87	\$ 935.90	\$ 309.13	\$ 961.10	\$2,206.12	\$5,467.00
Newport News	49,205	5.30%	\$ 4,450.90	\$ 1,888.61	\$6,339.51	\$ 2,649.35	\$8,988.86	\$ 2,579.88	\$ 852.14	\$ 2,649.35	\$6,081.36	\$15,070.23
Norfolk	62,345	6.71%	\$ 5,639.50	\$ 2,392.96	\$8,032.46	\$ 3,356.84	\$11,389.30	\$ 3,268.83	\$ 1,079.70	\$ 3,356.84	\$7,705.37	\$19,094.67
Poquoson	4,772	0.51%	\$ 431.66	\$ 183.16	\$614.82	\$ 256.94	\$871.76	\$ 250.20	\$ 82.64	\$ 256.94	\$589.78	\$1,461.54
Portsmouth	32,750	3.53%	\$ 2,962.44	\$ 1,257.03	\$4,219.47	\$ 1,763.36	\$5,982.83	\$ 1,717.12	\$ 567.17	\$ 1,763.36	\$4,047.65	\$10,030.48
Smithfield	2,936	0.32%	\$ 265.58	\$ 112.69	\$378.27	\$ 158.08	\$536.35	\$ 153.94	\$ 50.85	\$ 158.08	\$362.87	\$899.22
Southampton	1,350	0.15%	\$ 122.12	\$ 51.82	\$173.93	\$ 72.69	\$246.62	\$ 70.78	\$ 23.38	\$ 72.69	\$166.85	\$413.47
Suffolk	20,411	2.20%	\$ 1,846.30	\$ 783.43	\$2,629.73	\$ 1,098.99	\$3,728.72	\$ 1,070.17	\$ 353.48	\$ 1,098.99	\$2,522.64	\$6,251.36
Surry	0	0.00%	\$ -	\$ -	\$0.00	\$ -	\$0.00	\$ -	\$ -	\$ -	\$0.00	\$0.00
Virginia Beach	130,284	14.03%	\$11,785.01	\$ 5,000.63	\$16,785.64	\$ 7,014.89	\$23,800.53	\$ 6,830.96	\$ 2,256.27	\$ 7,014.89	\$16,102.11	\$39,902.64
Williamsburg	2,853	0.31%	\$ 258.07	\$ 109.51	\$367.58	\$ 153.61	\$521.19	\$ 149.59	\$ 49.41	\$ 153.61	\$352.61	\$873.80
York County	19,500	2.10%	\$ 1,763.90	\$ 748.46	\$2,512.36	\$ 1,049.94	\$3,562.30	\$ 1,022.41	\$ 337.70	\$ 1,049.94	\$2,410.05	\$5,972.35
Subtotal	457,833	49.30%	\$41,413.89	\$17,572.78	\$58,986.67	\$24,651.12	\$83,637.79	\$24,004.77	\$ 7,928.79	\$24,651.12	\$56,584.68	\$140,222.48
HRSD	470,792	50.70%	\$42,586.11	\$18,070.18	\$60,656.29	\$25,348.88	\$86,005.17	\$24,684.23	\$ 8,153.21	\$25,348.88	\$58,186.32	\$144,191.48
Total	928,625	100.00%	\$84,000.00	\$35,642.96	\$119,642.96	\$50,000.00	\$169,642.96	\$48,689.00	\$16,082.00	\$50,000.00	\$114,771.00	\$284,413.96

Note: All Amounts allocated according to local share of total regional sewer accounts. Accounts reported as of 07/10.

HR FOG Consultant funds will support the online training and certification program.

In FY10-11, \$102,000 was budgeted to create the online training program.

In FY11-12, the budget was reduced to \$50,000 for maintenance and tweaks to the program.

The total budget reduction is 13% if the SSORS contract is funded at \$34,643.

The total budget reduction is 16% if the SSORS contract remains at \$25,000.

326000 16%
102292
50000
52292
\$10,642.96
\$41,649.04 13%

Last Year's Budget for Comparison

**REGIONAL WASTEWATER PROGRAM BUDGET
FINAL FY 2010 - 2011 BUDGET - NEW FOG PROGRAM ONLY**

Locality	Sewer Accounts July 2009	Percent	Technical Support	SSORSCONSultant	Wastewater Subtotal	HR FOG DIRECT	SUBTOTAL	HR FOG Technical	HR FOG Admin	HR FOG Consult	NEW FOG FUNDING ONLY	HR FOG Subtotal	PROGRAM TOTAL	Consultant
Chesapeake	61,929	6.67%	\$ 5,600.95	\$ 1,666.95	\$ 7,267.90	\$ 3,333.90	\$10,601.79	\$ 3,246.48	\$ 1,072.31	\$ 6,820.62	\$11,139.42	\$11,139.42	\$21,741.21	\$ 13,335.59
Franklin	3,475	0.37%	\$ 314.28	\$ 93.54	\$407.82	\$ 187.07	\$594.89	\$ 182.17	\$ 60.17	\$ 382.72	\$625.06	\$625.06	\$1,219.96	\$ 748.30
Gloucester	1,221	0.13%	\$ 110.43	\$ 32.87	\$143.29	\$ 65.73	\$209.03	\$ 64.01	\$ 21.14	\$ 134.48	\$219.63	\$219.63	\$428.65	\$ 262.93
Hampton	46,677	5.03%	\$ 4,221.53	\$ 1,256.41	\$5,477.94	\$ 2,512.82	\$7,990.76	\$ 2,446.93	\$ 808.22	\$ 5,140.82	\$8,395.98	\$8,395.98	\$16,386.74	\$ 10,051.27
Isle of Wight	2,189	0.24%	\$ 197.98	\$ 58.92	\$256.90	\$ 117.84	\$374.74	\$ 114.75	\$ 37.90	\$ 241.09	\$393.74	\$393.74	\$768.48	\$ 471.37
James City City	21,100	2.27%	\$ 1,908.31	\$ 567.95	\$2,476.26	\$ 1,135.90	\$3,612.17	\$ 1,106.12	\$ 365.35	\$ 2,323.87	\$3,795.34	\$3,795.34	\$7,407.51	\$ 4,543.60
Newport News	48,709	5.24%	\$ 4,405.31	\$ 1,311.10	\$5,716.42	\$ 2,622.21	\$8,338.62	\$ 2,553.45	\$ 843.41	\$ 5,364.62	\$8,761.48	\$8,761.48	\$17,100.11	\$ 10,488.84
Norfolk	65,307	7.03%	\$ 5,906.46	\$ 1,757.87	\$7,664.33	\$ 3,515.75	\$11,180.08	\$ 3,423.57	\$ 1,130.81	\$ 7,192.66	\$11,747.03	\$11,747.03	\$22,927.11	\$ 14,062.99
Poquoson	4,758	0.51%	\$ 430.32	\$ 128.07	\$558.39	\$ 256.14	\$814.53	\$ 249.43	\$ 82.39	\$ 524.03	\$855.84	\$855.84	\$1,670.38	\$ 1,024.57
Portsmouth	32,380	3.49%	\$ 2,928.49	\$ 871.58	\$3,800.07	\$ 1,743.15	\$5,543.22	\$ 1,697.45	\$ 560.67	\$ 3,566.21	\$5,824.32	\$5,824.32	\$11,367.54	\$ 6,972.60
Smithfield	2,912	0.31%	\$ 263.37	\$ 78.38	\$341.75	\$ 156.77	\$498.51	\$ 152.65	\$ 50.42	\$ 320.72	\$523.79	\$523.79	\$1,022.31	\$ 627.06
Southampton	1,350	0.15%	\$ 122.10	\$ 36.34	\$158.43	\$ 72.68	\$231.11	\$ 70.77	\$ 23.38	\$ 148.68	\$242.83	\$242.83	\$473.94	\$ 290.70
Suffolk	20,319	2.19%	\$ 1,837.68	\$ 546.93	\$2,384.61	\$ 1,093.86	\$3,478.46	\$ 1,065.18	\$ 351.83	\$ 2,237.96	\$3,654.86	\$3,654.86	\$7,133.32	\$ 4,375.43
Surry	0	0.00%	\$ -	\$ -	\$0.00	\$ -	\$0.00	\$ -	\$ -	\$ -	\$0.00	\$0.00	\$0.00	\$ -
Virginia Beach	129,978	13.99%	\$11,755.39	\$ 3,498.63	\$15,254.02	\$ 6,997.26	\$22,251.28	\$ 6,813.79	\$ 2,250.60	\$14,315.27	\$23,379.66	\$23,379.66	\$45,630.94	\$ 27,989.04
Williamsburg	2,845	0.31%	\$ 257.31	\$ 76.58	\$333.88	\$ 153.16	\$487.04	\$ 149.14	\$ 49.26	\$ 313.34	\$511.74	\$511.74	\$998.78	\$ 612.63
York County	19,240	2.07%	\$ 1,740.09	\$ 517.88	\$2,257.98	\$ 1,035.77	\$3,293.75	\$ 1,008.61	\$ 333.14	\$ 2,119.02	\$3,460.78	\$3,460.78	\$6,754.52	\$ 4,143.08
Subtotal	464,389	50.00%	\$42,000.00	\$12,500.00	\$54,500.00	\$25,000.00	\$79,500.00	\$24,344.50	\$ 8,041.00	\$51,146.00	\$83,531.50	\$83,531.50	\$163,031.50	\$ 100,000.00
HRSD	464,389	50.00%	\$42,000.00	\$12,500.00	\$54,500.00	\$25,000.00	\$79,500.00	\$24,344.50	\$ 8,041.00	\$51,146.00	\$83,531.50	\$83,531.50	\$163,031.50	\$ 100,000.00
Total	928,778	100.00%	\$84,000.00	\$25,000.00	\$109,000.00	\$50,000.00	\$159,000.00	\$48,689.00	\$16,082.00	\$102,292.00	\$167,063.00	\$167,063.00	\$326,063.00	\$ 200,000.00

Note: All Amounts allocated according to local share of total regional sewer accounts. Accounts reported as of 07/09. HRSD assumed to equal local accounts for budget allocation purposes. Surry County is not participating. Letter Ballot on 2/22/10. FOG Budget verified 7/7/10.

USGS Groundwater Program

Current Year: 2010-11

Budget	\$ 147,450.00
Groundwater network	\$ (27,370.00)
Chloride monitoring	\$ (47,240.00)
	<u>\$ 72,840.00</u>
proposed Yield Modeling	\$ (36,420.00)
	<u>\$ 36,420.00</u>

Next Year: 2011-12

Budget	\$ 119,411.00
Groundwater network	\$ (27,370.00)
Chloride monitoring	\$ (47,240.00)
	<u>\$ 44,801.00</u>
proposed Subsidence Study	\$ (72,840.00)
	<u>\$ (28,039.00)</u>
current year carryover	\$ 36,420.00
	<u>\$ 8,381.00</u>

Joint DEQ/PDC model translation and recalibration

\$118,000 - \$145,000

PDC half = \$59,000 to \$72,000

Water and Wastewater Programs – Retreat

Summary of FY 2010-11 projects and tasks:

HR WET

1. Admin and staff support for HR WET
2. HR WET advertising
3. Website
4. Mini-grants
5. Giveaways
6. Trailer Maintenance
7. Displays
8. HR Green

Groundwater Mitigation

1. mitigation claims – none filed
2. reviewed draft regulations, attended RAP, developed comment letter sent to DEQ
3. managed USGS contract and confirmed method for using new model for permit evaluations and mitigation claims
4. analysis of USGS work on water budget and thin aquifers
5. part of water supply plan funded with this task – long term availability of groundwater and estimates of domestic use are significant planning issues
6. attend quarterly USGS / DEQ meetings and quarterly GW Steering Committee meetings
7. discuss technical issues related to permit program with DEQ and foster partnership and information sharing; for example - updates on International Paper's permit

Groundwater – USGS contracts

1. Water Level Network
2. Chloride Monitoring Network
3. Completed documentation for VCP model use
4. Evaluated vertical heads in VCP model
5. Evaluated VCP model performance in thin aquifers
6. Estimated water budget with VCP model

Water Technical Assistance

1. represented region on Pesticide TAC (July – August)
2. drafted FCC Bandwidth comment letter
3. collaborated with EM on utility critical infrastructure, FRAC cards
4. developed DUC agendas
5. VDH coordination and joint meeting agendas
6. provided utility data for Sustainability grant and Gloucester Comp Plan
7. attend State Water Commission meetings
8. Legislative tracking

Water Priority Projects

1. water supply plan
2. RFP development for UASI grant
3. update Water Quality Response Plan POCs in February
4. collect Water and Sewer Rates in July
5. Help to Others - staff support to program
6. Researched and collaborated with HRPDC planning staff regarding climate change impacts to water supply
7. Committee researched and discussed regional billing systems for water and wastewater

Water Quality Advertising

1. Short, annual ad campaign on WQ Reports

Source Water Protection

1. Map updates were part of water supply plan
2. Source education via HR WET

Help To Others (H2O)

1. Legal support to program

Wastewater

1. SSO Consent Decree coordination
2. Host and manage SSORS
3. Admin and staff support for HR FOG
4. brief DUCs on Water Quality issues (analyzed draft Bacteria TMDL for Elizabeth River and submitted comments on SSO impacts)
5. Peninsula grit and grease disposal

HR FOG Program

1. Website
2. Informational materials for Restaurants
3. Giveaways
4. Advertising
5. Minigrants
6. Displays
7. HR Green

Proposed FY 2011-12 projects and tasks:**HR WET**

1. Admin and staff support for HR WET
2. HR WET advertising
3. Mini-grants
4. Giveaways
5. Trailer Maintenance
6. Displays
7. Develop messages under HR Green umbrella
8. Web updates and enhancement
9. Targeted informational materials
10. Focus on value of water and sources of water

Groundwater Mitigation

1. mitigation claims
 - a. initial setup of model input files
 - b. number of claims depends on drought conditions
2. review draft regulations and TAC might reconvene
3. manage and analyze USGS work on water budget
4. simulate water level impacts of IP permit, if permit conditions change
5. part of water supply plan funded with this task
6. quarterly USGS / DEQ meetings and quarterly GW Steering Committee meetings
7. develop maps of the Area of Impacts for localities' permits with new model

Groundwater – USGS contracts

1. Water Level Network
2. Chloride Monitoring Network
3. additional analysis of long-term groundwater yield using VCP model
4. fund USGS evaluation of subsidence and relative sea level rise
5. fund model update or recalibration if DEQ will jointly fund effort

Water Technical Assistance

1. draft comment letters for emerging regulatory issues
2. collaborate with Emergency Management on Utility issues
3. develop DUC agendas
4. VDH coordination and joint meeting agendas

Water Priority Projects

1. water supply plan
 - a. revise after localities review; revise if required by SWCB
 - b. develop briefs for localities / public meetings
2. UASI grant management and liaison between contractor and localities
3. update Water Quality Response Plan POCs in February

4. collect Water and Sewer Rates in July and expand data collected to include water use by category based on billing
5. Help to Others
 - a. Kickoff meeting
 - b. Website development
 - c. Confirm locality allocation tracking responsibility
 - d. Design / order bill inserts and posters for agencies
6. provide input to planning report on climate change impacts to water supply

Water Quality Advertising

1. Short, annual ad campaign on WQ Reports

Source Water Protection

1. develop metadata for maps in water supply plan
2. integrate watershed protection into Green Infrastructure and TMDL programs to increase planning and potential land acquisition or easements

Help To Others (H2O)

1. Legal support to program
2. Contribution envelopes
3. Promotional materials

Wastewater

1. SSO Consent Decree coordination
2. host and manage SSORS
3. admin and staff support for HR FOG
4. brief committees on Water Quality issues, i.e. Bacteria study
5. Peninsula grit and grease facility
6. foster communication between wastewater and stormwater utilities regarding I/I reductions, TMDLs, etc.
7. management and maintenance of online training database

HR FOG

1. develop messages under HR Green umbrella
2. web updates and enhancement
3. targeted informational materials

Determination of Sea-Level Rise in the Virginia Coastal Plain and Development of Planning Tools
Work Proposal

Date : December 14, 2010
Prepared By: U.S. Geological Survey – Virginia Water Science Center (USGS-VWSC)
Cooperator: Hampton Roads Planning District Commission (HRPDC)
Project Period : January 1, 2011 to February 28, 2013

Introduction

Land surface elevations are declining relative to sea level in the Coastal Plain of Virginia, with the highest rates of decline seen in the Hampton Roads region. The decline of land elevations relative to mean sea-level has been documented for over 80 years in Norfolk and is at least partially attributable to observed global sea-level rise during that time. (Together, land subsidence and global sea-level rise are called ‘relative sea-level rise’). However, the global sea-level rise rate of 1.8 mm/yr can account for only roughly half of the 4-5 mm/year of relative sea-level rise observed in the Hampton Roads area.

Prior studies and more recent work by the USGS-VWSC in collaboration with HRPDC indicate that rates of relative sea-level rise above 1.8 mm/year are likely caused by groundwater withdrawals from the Virginia Coastal Plain aquifer system. Land subsidence commonly occurs when pumping lowers water pressures in thick sedimentary deposits, as it has in Virginia’s Coastal Plain. Unlike sea-level rise, groundwater pumping can be managed and controlled, which potentially provides a method of reducing relative sea-level rise.

It is important to understand rates of relative sea-level rise because the majority of Hampton Roads communities are in low-lying areas that are at clear and substantial long-term risk of flooding and inundation from relative sea-level rise. Much of the Hampton Roads area is less than 5 feet above sea level and when hurricanes or other major storm events cause flooding, relative sea-level rise will increase the area that is flooded.

Long-term planning can do much to mitigate the societal and financial impacts of relative sea-level rise. The plan of study described here will lead to an understanding of sea-level rise in Hampton Roads that can be used in planning efforts to prevent and prepare for relative sea-level rise.

Objectives

The objectives of this study are as follows:

- 1) Compile existing data that describe historical rates of sea-level rise in Hampton Roads and determine what additional data should be collected to track future sea-level rise.
- 2) Compile existing predictions of future global sea-level rise.

- 3) Extend the new Virginia Coastal Plain Groundwater Model (VCPGM) by adding land subsidence simulation capabilities.
- 4) Run groundwater withdrawal scenarios using the model to simulate future land subsidence.
- 5) Develop a spatially detailed understanding of future relative sea-level rise in the Hampton Roads area by combining predictions of global sea-level rise and land subsidence.

Work Plan

The study will be phased over several years to facilitate scheduling of USGS resources and cooperator funding. A technical advisory committee will be formed and hold regular meetings/conference calls to inform and guide the study so that study results will have the most use and value to HRPDC in its planning efforts.

Task 1: Subsidence data compilation and review

- compile existing studies and publications on relative sea-level rise in Hampton Roads
- review capabilities of various geodetic survey methods, including extensometers, GPS CORS, LIDAR, and InSAR
- communicate with agencies and experts about the availability, cost, and analysis requirements of various datasets and measurement methods
- build a database of existing high resolution geodetic data

Task 2: Global sea-level rise data compilation and review

- compile, where possible, sea-level rise data for Hampton Roads area that excludes the land subsidence component
- compile, in cooperation with the USGS National Research Program, the most up-to-date predictive studies of global sea-level rise
- develop a list of global sea-level rise scenarios to be used in the final set of tasks

Task 3: Addition of subsidence simulation to the VCPGM

- gather compressibility coefficient data for use in the VCP groundwater model
- build input data sets for the MODFLOW-SUB package
- modify existing model input

Task 4: Simulation of land subsidence

- update the VCP groundwater model with the most recent groundwater withdrawal data
- project population growth and groundwater use in consultation with state agencies
- choose groundwater withdrawal scenarios to simulate
- preparing model input files

- run VCP groundwater model simulations
- process model output

Task 5: Mapping and analysis

- combine global sea-level rise predictions with spatially detailed land-subsidence data
- construct subsidence and land elevation maps
- construct shoreline maps

Task 6: Report writing

Schedule

		Federal Fiscal Year	2011								2012								2013									
Task	Month		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Task 1: Subsidence data compilation & review			■	■	■	■	■																					
Task 2: Sea-level rise data compilation & review			■	■	■	■	■																					
Task 3: Addition of subsidence simulation								■	■	■	■																	
Task 4: Simulation of land subsidence												■	■	■	■	■	■	■	■	■	■	■						
Task 5: Mapping and analysis																							■	■	■	■	■	
Task 6: Report Writing	VACPGM report																											
	Relative sea-level rise report																										■	

Deliverables

Public presentations of study results will be made annually during a HRPDC Utility Directors meeting and to other meetings as requested by the cooperator.

USGS reports will be prepared. Report 1 will document updates and changes to VCP groundwater model and present results of the simulation scenarios. A draft of this report will be completed in Year 2 of the study. Report 2 will document results of the relative sea-level rise analysis and a draft of this report will be completed in Year 3 of the study.

1 Hampton Roads Model Infiltration and Inflow Ordinance¹

2 Section 1. Purpose.

3 The purpose of this Ordinance is to prevent the infiltration and inflow of groundwater,
4 stormwater, and water from other sources emanating from private property, as set forth in
5 the Ordinance, into the City's public sewer system.² The provisions of this Ordinance are
6 intended to comply with the Special Order by Consent between the State Water Control
7 Board and the Cities of Virginia Beach, Chesapeake, Hampton, Newport News, Poquoson,
8 Portsmouth, Suffolk and Williamsburg; the Counties of Gloucester, Isle of Wight and York;
9 the Town of Smithfield; the Hampton Roads Sanitation District and the James City Service
10 Authority, effective September 26, 2007, and to support Management, Operations, and
11 Maintenance programs of the City. Such Order requires, among other things, that the City
12 establish a Private Property Infiltration and Inflow Abatement Program requiring, to the
13 extent allowed by law, the correction of identified private system deficiencies.

14 Section 2. Findings.

15 (a) When stormwater and groundwater enters the public sewer system as a
16 result of infiltration or inflow, it must be transported and treated like sanitary wastewater.
17 Wet weather increases the amount of inflow and infiltration into the public sewer system,
18 which consumes valuable capacity from the wastewater collection, conveyance and
19 treatment systems of the City and Hampton Roads Sanitation District and can overload the
20 capacity of the system to transport wastewater. When the public sewer system has
21 reached capacity or becomes overloaded, sanitary sewer overflows may result.

22 (b) Sanitary sewer overflows pose health and environmental risks by releasing
23 untreated wastewater onto streets, into homes and businesses, and into waterways. As
24 wastewater overflows into creeks, rivers, lakes, and streams, it contaminates bodies of
25 water fed by the waterways and harms the plants and animals coming in contact with the
26 polluted water. Sanitary sewer overflows also contribute to beach advisories and closures
27 due to contamination.

28 (c) Sanitary sewer overflows not only cause public health and environmental
29 risks, but are in violation of the federal Clean Water Act, the Virginia Water Control Law,
30 and their associated regulations.

31 (d) It is anticipated that the City will expend approximately \$[] Million by [year]
32 for capital projects to repair and rehabilitate the public sewer system infrastructure and to
33 expand the capacity of the system. However, repair and rehabilitation of publicly-owned
34 infrastructure are not, standing alone, sufficient to accomplish the necessary reduction in
35 the number of sanitary sewer overflows. Because infiltration and inflow from private
36 property sources, such as broken sewer laterals, roof drains and area drains, accounts for

37 a significant proportion³ of the water entering the public sewer system, it is necessary to
38 reduce the amount of infiltration and inflow from private property sources in order to
39 preserve system capacity to convey and treat wastewater and to avoid unnecessary
40 expenditures for the purpose of expanding the capacity of the public sewer system.

41 **Section 3. Definitions.**⁴

42 The following words and terms used in this article⁵ shall have the following
43 meanings, unless the context clearly indicates otherwise:

44 *Certificate of Compliance.* A certificate issued by the Director certifying that the
45 private sewer facilities located on a parcel of property are in compliance with the
46 requirements of this article.

47 *Director.* The director of public utilities or other designee of the City with
48 responsibility for administering and enforcing sewer use standards.

49 *Enforcement response plan.* A plan that sets forth the process and procedures for
50 enforcement of this article by the City.

51 *Infiltration.* The introduction of groundwater into the public sanitary sewer system.
52 Infiltration includes, but is not limited to, frequent seepage of groundwater through defective
53 or cracked pipes, pipe joints, connections, or manhole walls. Infiltration does not include,
54 and is distinguished, from inflow.

55 *Inflow.* Water, other than wastewater, that enters a sanitary sewer system (including
56 service connections) from sources such as, but not limited to, roof leaders, cellar drains,
57 yard drains, area drains, drains from springs and swampy areas, manhole covers,
58 cleanouts, cross connections between storm sewers and sanitary sewers, catch *basins*,
59 storm waters, surface runoff, street wash waters or drainage. Inflow does not include, and
60 is distinguished from, infiltration.

61 *Person.* The word "person" shall include a firm, partnership, association of persons,
62 corporation, organization or any other entity owning property subject to the provisions of
63 this ordinance.

64 *Private sewer facilities.* Sewer pipes, manholes, private laterals and their
65 appurtenances, pump stations and related infrastructure that is owned and operated by a
66 private party.

67 *Private sewer lateral or private lateral.* An underground pipe located on private
68 property that connects a residence, business or other building or structure to the public
69 sewer system, and any appurtenances thereto excluding interior plumbing.

70 *Property owner or owner* includes a tenant in common, joint tenant or tenant by the
71 entireties.

72 *Public sewer system or sanitary sewer system.* The wastewater collection and
73 transmission system comprised of all portions of the City of _____ or
74 Hampton Roads Sanitation District's collection systems, including manholes, gravity
75 sewers, force mains, lift stations, pump stations and associated appurtenances. Building
76 sewer laterals and other private sewer facilities located on private property are not
77 considered part of the City's sanitary sewer system.

78 *Sanitary sewer overflow.* The unauthorized intentional or unintentional spill, release,
79 or discharge to waters of the State of untreated wastewater from any portion of a sanitary
80 sewer system before the headworks of a Wastewater Treatment Facility.

81 *Special Order by Consent or Regional Consent Order.* The regulatory order
82 between the Virginia Water Control Board and localities within the Hampton Roads region,
83 including the City of _____, effective September 26, 2007.

84 *Storm sewer system.* The system of roads, streets, catch basins, curbs, gutters,
85 ditches, pipes, lakes, ponds, channels, storm drains and other facilities located within the
86 City of _____ that are designed or used for collecting, storing or
87 conveying stormwater or through which stormwater is collected, stored or conveyed.

88 *Virginia Uniform Statewide Building Code* includes the model codes incorporated by
89 reference therein, including, without limitation, the International Plumbing Code.

90 *Wastewater.* A combination of liquid and water-carried wastes from the sanitary
91 conveniences of residences, commercial buildings, industrial uses, or institutions. The
92 terms does not include stormwater, surface water or groundwater.

93 **Section 4. Inspections and testing; right of entry.** ⁶

94 (a) The Director is hereby authorized to conduct inspections of private sewer
95 facilities to perform testing, including, without limitation, smoke testing, pressure testing,
96 plumbing inspections, flow metering, dye testing, closed-circuit television (CCTV)
97 inspection, or any combination thereof, for the purpose of determining compliance with the
98 provisions of this article or verifying that corrective action has been taken to correct defects
99 or abate infiltration and inflow. Such inspections may include, but shall not be limited to,
100 systematic inspections authorized by subsection (b). The Director shall have the right of
101 entry upon the exterior of any such property at all reasonable times for purposes of
102 conducting such inspections. The owner or occupant of such building or structure, or his or
103 her designee, shall be entitled to accompany the director during such inspection subject to
104 appropriate safety provisions. The Director shall give the property owner/occupant/manager

105 advance notice, in writing, of such inspection at the earliest practicable time and in any
106 event not less than forty-eight (48) hours before City personnel enter private property to
107 conduct an inspection or test, unless City personnel are responding to a customer request
108 to test or inspect private sewer facilities or sewage is exposed on the property in a manner
109 that creates a potential public health hazard. In such cases, the Director shall endeavor to
110 provide advance notice of such inspection at the earliest practicable time.

111 (b) The Director is hereby authorized to determine and implement a schedule of
112 systematic inspections on properties within areas identified as Sanitary Sewer Evaluation
113 Survey basins pursuant to the provisions of the Special Order by Consent. Such
114 inspections shall be performed in accordance with the provisions of subsection (a)
115 provided, however, that such inspections shall not be performed upon any property that is
116 the subject of a valid Certificate of Compliance unless requested by the property owner or
117 the Director has reasonable cause to believe that the private sewer facilities located upon
118 the property are allowing infiltration and/or inflow into the public sewer system.

119 (c) The Director may contract for the performance of the inspections authorized
120 by this section in accordance with the provisions of Section _____ of the Virginia
121 Code.⁷

122 (d) Upon completion of all required repairs, or upon completion of an inspection
123 at which it is determined that no repairs are required, the Director shall issue a Certificate of
124 Compliance. Once issued, a Certificate of Compliance shall be valid for a period of ____
125 ____ years; provided, however, that if the Director later determines that any component
126 of a private sewer facility on property for which there is a valid Certificate of Compliance is
127 defective, or that a prohibited connection to the public sewer system has been made on
128 such property, the Certificate of Compliance shall be rescinded by the Director.

129 **Section 5. Point of sale inspections.**⁸

130 (a) Except as otherwise provided herein, the owner of real property offered for
131 sale, exchange, or lease with the option to purchase shall disclose to prospective
132 purchasers, in writing and prior to the execution of the purchase agreement by the
133 prospective purchaser: (1) whether a valid Certificate of Compliance has been issued for
134 the property and, if so, the date of its issuance; or (2) whether no valid Certificate of
135 Compliance for the property has been issued. In the event there is no valid Certificate of
136 Compliance for the property, such disclosure shall also inform the prospective purchaser
137 that the property is subject to inspection by the Director pursuant to the provisions of
138 Section 4 of this article and that, as a result of such inspection, repairs of defective
139 components of the sewer facilities or the removal of prohibited connections on the property,
140 or both, may be required.

141 (b) The provisions of this section shall not apply to property transfers arising out
142 of inheritance, gift or other conveyance where no bona fide sale for valuable consideration
143 is intended or completed, or to transfers solely between tenants by the entireties, joint
144 tenants or tenants in common.

145 **Section 6. Infiltration and inflow; repair of defective private sewer facilities.**
146

147 (a) Upon receiving notice from the City that any component of a private sewer
148 facility has been found to be defective, the owner of such property shall correct the defect
149 by repairing or replacing such component in accordance with the provisions of the Virginia
150 Uniform Statewide Building Code and, if applicable, the standards and specifications of the
151 Department of Public Utilities, within such reasonable time as is prescribed in the notice.
152 As used in this section, private sewer facilities shall be deemed defective if they allow the
153 discharge of sewage on the property or infiltration of groundwater into the public sewer
154 system. Defects include, but are not limited to:

- 155 (1) Pipe or joint deterioration;
- 156 (2) Root intrusion into a pipe that separates a pipe joint or creates or
157 enlarges an existing crack in the pipe;
- 158 (3) Misaligned pipe segments, sag, or lack of positive gradient; or
- 159 (4) Lack of a necessary cleanout cap, manhole cover or other component
160 of a private sewer facility.

161 (b) Except as authorized in writing by the Director or as necessary to perform
162 work authorized by permit, no person shall:

- 163 (1) Connect, or cause or allow to be connected, to the public sewer
164 system any device, including, without limitation, any roof drain,
165 foundation drain, area drain, or other device intended to convey
166 surface runoff, roof runoff, subsurface drainage, groundwater or other
167 inflow to the public sewer system; or
- 168 (2) Remove, or cause or allow to be removed, any manhole cover,
169 cleanout cap or other component of a private sewer facility.

170 **Section 7. Violations and enforcement.**

171 (a) A violation of any of the provisions of this article shall be punishable by a fine
172 in an amount not to exceed one thousand dollars (\$1,000.00) per violation. Each day
173 during which a violation is found to have existed shall constitute a separate offense. The
174 court may, at its discretion, order such fines to be paid into the treasury of the City for the

175 purpose of abating, preventing or mitigating environmental pollution. In addition thereto,
 176 the City may bring legal action to enjoin the continuing violation of any of the provisions of
 177 this article, or may issue orders as authorized in Section 8.⁹

178 (b) The Director may terminate public water service or, if a property is not
 179 connected to the public water system, sewer service to any such property upon the
 180 following grounds; provided that, except as set forth in subdivision (1), he shall not
 181 terminate service without first providing the property owner written notice of the proposed
 182 termination. The notice shall state the reason or reasons for said termination or revocation,
 183 and shall allow a reasonable time, as determined by the Director, for the property owner to
 184 take such action as is necessary for compliance:

185 (1) Wastewater discharges resulting from an unlawful connection of the
 186 private sewer facilities on the property to the public sewer system or a
 187 defective lateral or other private sewer component on the property
 188 constitute an imminent hazard to the public, to the environment, or to
 189 any portion of the public sewer system. In such cases, service may be
 190 terminated without prior notice, but the Director shall endeavor to
 191 provide such notice at the earliest practicable time, and service shall
 192 be restored at such time as the conditions causing such hazard have
 193 been abated;

194 (2) The property owner unreasonably refuses to allow access to the
 195 exterior of the property for purposes of inspections required or allowed
 196 by this article; or

197 (3) The property owner willfully fails or refuses to comply with an order
 198 issued pursuant to Section 8.

199 The enumeration of grounds for termination of service set forth in this section shall not be
 200 construed as exclusive, but shall be in addition to those set forth in this chapter or chapter

201 _____.¹⁰

202 (c) In the event a property owner fails or refuses to correct a defect allowing
 203 inflow and/or infiltration into the public sewer system within the time prescribed in the notice
 204 provided for in subsection (a) of Section 6, or refuses to abate a condition resulting in inflow
 205 and/or infiltration into such system, the Director may install a flow meter at the expense of
 206 the property owner, at the connection of the property's lateral to the public sewer system,
 207 and the property owner shall be billed based upon the readings of the flow meter until such
 208 time as the violation has been corrected or abated.

209 (d) Any person who, intentionally or otherwise, commits any of the acts prohibited
 210 by this article or who fails to perform any of the acts required by this division shall be liable

211 to the City in an action at law for all costs of containment, cleanup, and abatement of any
212 sanitary sewer overflow occurring as a result of such violation, as well as the costs of any
213 damages or regulatory fines imposed upon the city, that are caused by such violations.
214 Such costs shall be collectible by the City in accordance with the provisions of section __.

215 (e) The remedies set forth in this section shall be cumulative, not exclusive; and
216 except as expressly provided in subsection (c) of Section 8, it shall not be a defense to any
217 action, civil or criminal, that one or more of the remedies set forth herein has been sought
218 or granted or that any action to enforce the provisions of this ordinance is pending.
219

220 **Section 8. Civil penalties; schedule.¹¹**

221 (a) Except for violations specified in subsection (e), and without limiting the
222 remedies which may be obtained under this article, the City may issue an order assessing
223 a civil penalty or other monetary assessment in accordance with the provisions of this
224 section.

225 (b) No order assessing a civil penalty for a violation shall be issued until after the
226 alleged violator has been provided an opportunity for a hearing before the Director, except
227 with the consent of the alleged violator. The notice of the hearing shall be served
228 personally or by registered or certified mail, return receipt requested, on the alleged violator
229 or his authorized representative at least thirty (30) days prior to the hearing. The notice
230 shall specify the time and place for the hearing, facts and legal requirements related to the
231 alleged violation, and the amount of any proposed civil penalty. At the hearing the alleged
232 violator may present evidence, including witnesses, regarding the occurrence of the alleged
233 violation and the amount of the penalty, and may examine any witnesses for the City . A
234 verbatim record of the hearing shall be made. Within thirty (30) days after the conclusion of
235 the hearing, the Director shall make findings of fact and conclusions of law and issue the
236 order.

237 (c) No order issued by the locality shall assess civil penalties in excess of Thirty-
238 Two Thousand, Five Hundred Dollars (\$32,500) per violation, not to exceed One Hundred
239 Thousand Dollars (\$100,000) per order, or such other amount as may be allowed under
240 Section 62.1-44.15 of the Virginia Code or any successor statute, except with the consent
241 of the violator. The actual amount of any civil penalty assessed shall be based upon the
242 severity of the violation, the extent of any potential or actual environmental harm or facility
243 damage, the compliance history of the violator, any economic benefit realized from the
244 noncompliance, and the ability of the violator to pay the penalty. In addition to civil
245 penalties, the order may include a monetary assessment for actual damages to sewers,
246 treatment works and appurtenances and for costs, attorney fees and other expenses
247 resulting from the violation. Any civil penalty or other monetary assessment included in
248 any such order shall be payable as set forth in the order. Any unpaid balance at the time

249 payment of the civil penalty or other monetary assessment is due may be collected in an
 250 action at law against the violator or included in the violator's bill for sewer services and
 251 collected in accordance with Section _____ of the City Code.¹²

252 (d) Any order issued by the City, whether or not such order assesses a civil
 253 penalty, shall inform the alleged violator of his right to judicial review of any final order by
 254 appeal to the Circuit Court on the record of proceedings before the Director. To commence
 255 an appeal, the alleged violator shall file a petition in Circuit Court within thirty (30) days of
 256 the date of the final order, and failure to do so shall constitute a waiver of the right to
 257 appeal. With respect to matters of law, the burden shall be on the party seeking review to
 258 designate and demonstrate an error of law subject to review by the court. With respect to
 259 issues of fact, the duty of the court shall be limited to ascertaining whether there was
 260 substantial evidence in the record to reasonably support such findings.¹³

261 (e) Any violation listed in the following schedule shall subject the violator to a civil
 262 penalty in the amount specified therein in lieu of any other the civil penalty authorized
 263 herein; provided, however, that the total amount for a series of specified violations arising
 264 from the same operative set of facts shall not exceed three thousand dollars (\$3,000). The
 265 City may issue a civil summons ticket for a violation. Any person summoned or issued a
 266 ticket for a violation may make an appearance in person or in writing by mail to the City
 267 Treasurer prior to the date fixed for trial. Any person so appearing may enter a waiver of
 268 trial, admit liability and pay the civil penalty established for the violation. If a person
 269 charged with a violation does not elect to enter a waiver of trial and admit liability, the
 270 violation shall be tried in the General District Court in the same manner and with the same
 271 right of appeal as provided for by law. In any such trial, the City shall have the burden of
 272 proving by a preponderance of the evidence the liability of the alleged violator. An
 273 admission of liability or finding of liability under this section shall not be deemed an
 274 admission at a criminal proceeding, and no civil action authorized by this section shall
 275 proceed while a criminal action is pending. Any civil penalties imposed pursuant to this
 276 subsection shall be paid into the treasury of the City for the purpose of abating, preventing
 277 or mitigating environmental pollution.

278	<u>Violation</u> ¹⁴	<u>Section</u>	<u>Civil Penalty Amount</u>
279	Private cleanout cap missing	6 (a)	\$100 for initial summons; \$150 for each
280	or broken		subsequent summons
281			
282	Roof leader connection	6 (b)	\$100 for initial summons; \$150 for each
283	from roof area of < 3,000 sq. ft.		subsequent summons
284			
285			
286	Sump pump connection with max.	6 (b)	\$100 for initial summons; \$150 for each
287	capacity of < 10 gal. per minute		subsequent summons
288			

289 **Section 9. Fees.**¹⁵

290 For inspections performed pursuant to this article, there shall be a fee in the
291 following amounts:

- 292 (a) For systematic inspections pursuant to Section 4(b), \$_____.
- 293 (b) For point of sale inspections pursuant to Section 5(a), \$_____.
- 294 (c) For all other inspections, except as provided in subsection (d), \$_____.
- 295 (d) For re-inspections, \$_____, provided that if all defects or unlawful
296 connections noted in the prior inspection have been corrected, there shall be no fee.¹⁶

297 **OR**

298 There shall be no fee for any inspections, other than for the second or any
299 additional re-inspection of the same private sewer facilities previously inspected pursuant to
300 this article. **The fee for such re-inspections shall be \$_____.**¹⁷

301 **Section 10. Severability.**

302 The provisions of this article shall be severable, such that in the event one (1) or
303 more of the provisions of this article shall be adjudged to be invalid or unenforceable, the
304 validity and enforceability of the remaining provisions of this article shall be unaffected by
305 such adjudication.¹⁸

NOTES

1. The Model Ordinance is structured as a stand-alone ordinance. As some localities already have Sewer Use and/or FOG ordinances in their codes, the locality's attorney will need to determine how best to integrate this ordinance into the locality's existing code.
2. While the term "city" is used throughout the Model Ordinance, towns and counties will need to use the correct term in their respective localities' ordinances.
3. Localities may wish to include statistics on the number of reportable SSOs they have had as a means of highlighting the problem. In addition, they may wish to replace the phrase "a significant proportion" with an actual percentage, if known, in describing the proportion on water entering into the public sewer system from infiltration and inflow.
4. The definitions in this section may already appear in one or more of the locality's existing ordinances. The local government's attorney should determine whether these definitions should be included in the locality's ordinance.
5. While "article" is used throughout the Model Ordinance, the term used in each individual locality's ordinance will depend upon the structure of, and terminology used in, its existing code.
6. The right of entry language should be reviewed by the locality's attorney. While a great many existing ordinances throughout the country contain similar language, it should be kept in mind that private property inspections may involve significant Fourth Amendment considerations, to which state statutes, including Virginia Code §15.2-2122(5), are subordinate. A useful starting point for research is Chapter 22 of the 2009 edition of the Handbook of Virginia Local Government Law.
7. Each locality's attorney may wish to satisfy himself/herself of the locality's authority to hire outside contractors to perform inspections. Subsection (c) is included in Section 4 of this Model Ordinance as an alternative in the event that future legislation is deemed necessary for the use of contracted inspectors.
8. Point of sale inspection provisions must be authorized by General Assembly legislation.
9. The section number reference here and elsewhere in the Model Ordinance must be changed to reflect the numbering used by individual localities in their respective codes.
10. The blank spaces should be filled in with the sections on nonpayment and any other grounds for service termination set forth in the locality's code.
11. The legislation enacted by the 2010 General Assembly in House Bill No. 82, codified as subdivision (10) (d) of Virginia Code Section 15.2-2122, effective July 1, 2010, allows civil penalties to be adopted to address violations not only of infiltration and inflow

ordinances, but for violations of sewer use and FOG ordinances as well. Accordingly, localities with such ordinances should consider structuring their codes so that one set of provisions on civil penalties addresses all of the related ordinances.

12. The blank spaces should be filled in with the sections on nonpayment of sewer bills set forth in the locality's code.

13. The enabling legislation allows, but does not require, ordinances to give violators the right to "seek reconsideration or review within the locality" (e.g., by asking the Director or City Manager/County Executive to reconsider or review the decision of the director). Localities that wish to include this option should refer to Virginia Code Section 15.2-2122 (10) (c) and include appropriate provisions in their ordinance).

14. Any additional violations of the ordinance intended for similar treatment should be included in the schedule set forth in this section.

15. This section contains alternative provisions.

16. If the first alternative is selected, it should be noted that Virginia Code Section 15.2-107 requires a public notice and public hearing before its adoption.

17. If the second alternative is selected and the locality does not intend to charge fees for any inspections or re-inspections, the language in bold type should be deleted. Alternatively, the entire section may be omitted, as no fees may be charged without the authority to do so being set forth in an ordinance.

18. It is very likely that each locality's code already contains an existing severability provision. The locality's attorney should determine whether such provision would apply to this ordinance and if so, it may safely be deleted.

Hampton Roads Model Infiltration and Inflow Enforcement Response Plan

I. Purpose

The purpose of this Enforcement Response Plan is to establish general responsibilities for enforcement of the Non-Public Infiltration and Inflow (I/I) Abatement Ordinance. It is the intention of the Department of Public Utilities/Works to move quickly and responsibly in all enforcement actions. The following guidelines will help ensure that issues requiring enforcement are handled fairly and uniformly for all non-public owners.

II. General Responsibilities

A. *Non-Public I/I Abatement Inspectors* – Inspectors will be responsible for conducting compliance monitoring and non-public inspections. Inspectors will:

1. Determine compliance with Locality Municipal Code relating to the Non-Public I/I Abatement Program through on-site inspections and testing and prepare inspection reports. Inspectors will follow Non-Public I/I Abatement Program Inspection Form and Instructions.
2. Provide Compliance Assistance as appropriate.
3. Issue Notices of Non-Compliance (NONC).
4. Issue Notices of Violation (NOV).
5. Develop compliance inspection schedules.
6. Issue civil summons for minor violations.
7. Initiate Civil Penalties procedures.
8. Initiate process for Repayment for Cost of Mitigation.

B. *Non-Public I/I Abatement Program Manager or designee* – The Non-Public I/I Abatement Program Manager or designee will be responsible for ensuring that fair and consistent implementation of I/I Abatement control requirements are conducted in compliance with the I/I Abatement Ordinance. The Manager or designee will:

1. Review all violations.
2. Review all documents prepared by Inspectors.
3. Recommend appropriate response(s) to violations when required including major civil penalties.
4. Assess civil penalties up to \$1000 in consultation with the City Attorney's Office.
5. Promptly notify the Director of the Department of Public Utilities of significant instances of non-compliance.

6. Conduct compliance meetings.
 7. Ensure consistent enforcement of the Code of Ordinances relating to the Non-Public I/I Abatement Program.
 8. Consult with City Attorney on all legal issues.
 9. Coordinate enforcement with other governmental agencies as appropriate.
 10. Maintains program recordkeeping.
- C. *Director of the Department of Public Utilities/Works or Designee* – Director of the Department of Public Utilities will be responsible for the appropriate application of enforcement to violations. The Director will:
1. Conduct appeals of enforcement actions
 2. Approve charging of major civil penalties.
 3. Approve charging of Repayment for Cost of Mitigation
 4. Consult with City Attorney on legal issues.
- D. *City Attorney* – The City Attorney’s office will:
1. Provide such legal assistance, as deemed appropriate.

III. **Enforcement Actions**

Enforcement actions described below will be initiated in an escalating manner as described in the Violation Recognition Guide.

- A. *Compliance Assistance* – The inspectors will assist any non-public owner in achieving compliance with the Non-Public I/I Abatement Ordinance. The assistance may include, but is not limited to: providing copies of the regulations applicable to the non-public owner, education, and issuance of compliance schedule.
- B. *Notice of Non-Compliance (NONC)* – This is an informal written notice to the non-public owner, issued at the time of the inspection, identifying corrections that need to be made in order to comply with the Non-Public I/I Abatement Ordinance.
- C. *Notice of Violation (NOV)* – This is a formal written notice to the non-public owner that it has committed a violation of the local Non-Public I/I Abatement ordinance. The NOV will require corrective actions within a specified time frame to achieve compliance. The text of the NOV will include a statement that additional enforcement actions may be pursued if corrective actions are not achieved as required.

- D. *Issuance of Civil Penalty* – The Locality may issue either minor or major civil penalties based on the Violation Recognition Guide to a non-compliant non-public owner.
- E. *Severance of Service.* The Locality may suspend the water and/or wastewater service of a non-public owner in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons or the environment and/or for specified violation of the Non-Public I/I Abatement Ordinance.
- F. Injunction

IV. Dispute Resolution Process

- A. *Hearing* – No order assessing a civil penalty for a violation shall be issued until after the alleged violator has been provided an opportunity for a hearing before the Director, except with the consent of the alleged violator. (Line 271-283 in Ordinance)
- B. *Appeal Process* - Any order issued by the City/County, whether or not such order assesses a civil penalty, shall inform the alleged violator of his right to judicial review of any final order by appeal to the Circuit Court on the record of proceedings before the Director. (Line 300-309 in ordinance)

V. Compliance Schedules and Appropriate Response

Compliance Schedule/Appropriate Response – The compliance schedule will be based upon the violation and must be approved by the Non-Public I/I Program Manager or designee. The following factors should be taken into consideration when determining the appropriate enforcement action and compliance schedule:

1. Recommendation of the Violation Recognition Guide
2. Magnitude and duration of the violation
3. Compliance history and good faith of the non-public owner
4. Actual or potential danger to public health and/or the environment
5. Actual or potential damage to the public sewer system
6. Other appropriate factors

VI. Violation Recognition Guide

Abbreviation	Enforcement Description
CPI	<i>Civil Penalty, Tier I - \$100</i>
CPII	<i>Civil Penalty, Tier II - \$150</i>
NONC	<i>Notice of Non-Compliance</i>
NOV	<i>Notice of Violation</i>
RCM	<i>Repayment of Cost of Mitigation</i>
TS	<i>Termination of Water and/or Wastewater Service</i>

Type of Violation		Private cleanout cap missing or broken	Evidence of roof leader connections	Evidence of sump pump connections	Evidence of additional illicit connections	Evidence of non compliant private sewers (pipes, manholes, laterals)	Other unusual or suspected infiltration and inflow that violates ordinance	Failure to make repairs or take corrective action
Enforcement Action	1st Notice	NONC	NONC	NONC	NONC	NONC	NONC	NOV, CPI, RCM as appropriate
	2nd Notice	NOV, CPI	NOV, CPI	NOV, CPI	NOV, CPI	NOV, CPI	NOV, CPI	NOV, CPII, RCM as appropriate
	3rd Notice	NOV, CPII	NOV, CPII	NOV, CPII	NOV, CPII	NOV, CPII	NOV, CPII	TS, RCM as appropriate
	4th Notice	TS	TS	TS	TS	TS	TS	

Hampton Roads Model Infiltration and Inflow Sewer Inspection Form Instructions

Certificate of Compliance or Non-Compliance

Date: Enter the date on which the inspection is performed **Time:** Enter time at which inspection is performed

Purpose of Inspection: Check box for type of inspection to be performed.

Date of Last Inspection: Enter data on which the last inspection was performed.

Flow Information: Record information of downstream manhole or Pump Station service area.

Information

1. Property Type: Check appropriate property type, if "Other" please specify.

2. Ownership: Check appropriate property ownership, if "Other" please specify.

3. Owner Name: Enter the name of property owner.

4. Owner Contact Address: Enter the owner of the property named in #3's current contact address.

5. City: Enter the owners contact City. **6. State:** Enter the owner's contact state **7. Zip:** Enter the owners contact zip code.

8. Email: Enter the owner's email address.

9. Phone #: Enter the owner's telephone number.

10. Property Contact Name: Enter the name of property contact (building manager/tenant) or check box for "Same as #3" if applicable

11. Property Street Address: Enter the address at which the inspection is performed or check box for "Same as #4" if applicable

Inspection

Inspector Name: Enter name of inspector.

Inspector Accompanied By: Enter name of any additional Public Utility team members involved during inspection.

Observations and Comments:

Enter general observations and comments.

YES

NO

1. Private lateral cleanout never installed or unable to locate?

A sewer cleanout is a point of access where the sewer lateral can be serviced. It usually is 4" in diameter and has a tight-fitting steel or plastic cap over it. Two cleanouts may be installed at each house or building. One may be located just outside of the building (plumbing cleanout), and one may be located at the property line (property line cleanout). Visually inspect front or rear yard for a sewer cleanout box. A cleanout looks like the end of a pipe with a cap on it.

EXAMPLES:



2. City/County lateral cleanout never installed or cannot be located?

Same description as above.

3. Cleanout cap missing or broken?

a. Public

b. Private

All cleanouts must be properly capped with a tight-fitting steel or plastic cap. Please take notice to differentiate whether cleanout cap is public or private. One may be located at the property line (public cleanout) and one may be located just outside of the building (private cleanout)



4. Evidence of roof leader connections?

Roof drains and leaders direct storm water from roof gutters to the ground through pipes and downspouts. Roof drains should not be connected to the sanitary sewer but should discharge to the ground outside of a building. If roof drains are connected to the sanitary sewer, they should be disconnected by plugging any open connections to the sanitary sewer using a non-shrink permanent material, and redirected onto the ground outside the building. Inspect all roof leaders and determine connection. If connection cannot be determined ask property owner where connections are located. Smoke or dye testing may be used if connections don't discharge to ground.

5. Evidence of sump pump connected to sanitary sewer?

Sump pumps are designed to capture surface or ground water that enters basements or crawl spaces and pump it away from the house. The basic sump system includes drain tile, a sump pit, a sump pump, a float or switch, and a drain line. The sump pit extends below the slab and collects surface water that enters the basement/crawl space or groundwater that rises to the slab. Sump pumps should not be connected to the sanitary sewer. Sump pumps should drain into the City's storm sewer system through one of two methods: a direct connection (a pipe from the house to the main storm sewer line), if available, or directly onto the ground (preferably 20 feet from the house and not into a neighbor's yard). Ask the homeowner if a basement is present and if a sump pump is used. If owner indicates that a sump pump is present, ask the owner if you can enter property to inspect it. Try to determine sump pump discharge location.

6. Evidence of additional illicit connections?

Illegal connections per City Ordinances also include foundation drains, outdoor shower drains, swimming pool drain lines, condensation lines from air conditioning, refrigeration and dehumidifier units. Ask homeowner about various drains on property; perform visual inspection where appropriate. Use smoke or dye testing if applicable.

7. Evidence of non compliant private sewer systems?**Pipes****Manholes****Laterals**

Use field testing methods listed on inspection form to determine damaged laterals, manholes, sewer, etc.

8. Other: _____

Specify any other unusual or suspected infiltration and inflow on the property that violates ordinance. Note any additional unaccounted for flow if observed. (Example – rainfall harvesting, etc)

Field Testing Method: Check appropriate field testing method, if "Other" please specify.

Field Testing Contractor: Record name of contractor.

Observations and Comments:

Enter any observations from field testing. Appropriate NASSCO standards should be observed where applicable.

REQUIRED RESPONSE: If the answer to any of questions 3b-8 is "YES", the property has failed inspection and improvements are required. A statement of the plan of action to be taken with the completion date needs to be provided below. Attach additional sheets to explain improvements required if necessary.

PASS FAIL

If a property fails inspection they are issued a Notice of Non Compliance (NONC).

Review inspection form for completeness and review questions 3b-8 to determine if property has passed or failed. Check appropriate "Pass" or "Fail" box. Refer to Violation Recognition Guide (VRG) for issuance of fees and NONC.

Improvements should be made by next inspection, on: Record date for next inspection

Please call _____ for an additional inspection. Provide telephone number for relevant department within City / County.

Improvements Required:

Clearly define all improvements necessary to pass inspection. Specify outcomes, not means and methods. Refer property owner to appropriate plumbing company, etc if necessary.

Additional Information Attached.

Check box if additional sheets are attached.

Additional Information:

Record any additional information on inspection, enforcement, conversation with property owner, etc. Check appropriate box on Page 4 if this page is used.

**Hampton Roads Regional
Private Property Infiltration/Inflow (I/I) Abatement**

Program Outline

1. Localities shall use available data from Regional Technical Standards (RTS) compliant flow monitoring and Sanitary Sewer Evaluation Survey (SSES) field investigations to identify areas (basins or areas within basins) where I/I from private sources is known or suspected to be significant. The data used to support this determination may include smoke testing, flow monitoring, closed circuit television (CCTV) and night flow isolation. Additional information such as pipe age, materials of construction, etc. may be used to support the determination. Localities shall provide the relevant data to HRSD along with their request that HRSD performs or causes to be performed private property I/I abatement activities. Priority shall be given to addressing private property I/I in SSES basins; especially SSES basins where the public side rehab is not expected to reduce the forecasted 10 year peak flow to the peak flow threshold.
2. HRSD may make additional investigations to define the nature and extent of private property I/I contributions and will define the scope of the abatement activities. HRSD will make an initial estimate of the peak flow reduction that is expected to result from the planned private property I/I abatement activities. HRSD will collaborate with the affected Localities to define the scope of the abatement activities and estimate the peak flow reduction not later than May 31, 2012. HRSD and the Locality may each rely upon the estimate of peak flow reduction resulting from the planned private property I/I abatement activities for planning of HRSD and Locality capacity improvements.
3. The Locality shall develop an estimate of the peak flow commitment resulting from rehab of the publicly owned infrastructure. The Locality shall implement the rehabilitation in accordance with the approved Rehab Plan to achieve that peak flow commitment. The Locality shall be responsible for rehab work up to and including the publicly owned clean out (where these exist) or other public/private system transition point

and the publicly owned lateral/infrastructure. Upon completion of the public side rehab work, the Locality shall perform RTS compliant flow monitoring to measure the effectiveness of the Locality's rehab work and determine whether the Locality's peak flow commitment was achieved. If the peak flow commitment was not achieved, the Locality is obligated to perform further rehab work until the Locality peak flow commitment is achieved or it is determined that additional rehab work is not feasible. The Locality shall collaborate with HRSD to confirm the decision that additional public side rehab work is not feasible. Localities may consider and, where practical, implement storage as an alternative to additional public side rehab to achieve the peak flow commitment.

4. After the Locality has demonstrated the achievement of the Locality peak flow commitment, HRSD shall perform or cause to be performed private property I/I abatement in those basins identified by Localities. The private property I/I abatement work managed or enforced by HRSD will be external from the building envelope to the Right of Way line where there is a clean out. If a clean out does not exist at the Right of Way, the Locality shall construct or caused to be constructed one for any property where private property I/I abatement work is planned. In addition, wherever Localities rehab the publicly owned laterals and a clean out does not exist, the Locality shall install one.

After HRSD managed private property I/I abatement work is performed, HRSD, in conjunction with the Locality, shall collect RTS compliant flow monitoring data at the basin level to estimate the remaining peak flow. If the estimated peak flow reduction from private property I/I abatement is not achieved, HRSD shall perform additional private property I/I abatement to achieve the estimated reduction or render a determination that additional private side rehab work is not feasible or cost effective. HRSD may consider and, where practical, implement storage in lieu of conducting additional private property I/I abatement activities in order to achieve the same peak flow reduction.

5. For basins where the private property I/I flow contribution is estimated to be greater than or equal to 80% (as estimated by percentages of commercial/industrial sewer area or flow data), HRSD managed work

on the private side infrastructure will precede or be conducted in parallel with Locality led work on the publicly owned infrastructure.

6. In areas where HRSD managed private property I/I abatement work will be performed, public outreach and communication will be conducted by HRSD in consultation with the affected Localities.
7. HRSD and/or Localities may identify areas outside of SSES basins for private property I/I abatement work through MOM related activities or via other means. HRSD may elect to address such commercial/industrial (i.e., non single family residential) I/I sources in areas outside of SSES basins.

DRAFT



Virginia
Regulatory
Town Hall

townhall.virginia.gov

Notice of Intended Regulatory Action (NOIRA) Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) citation	9 VAC 25-740-10 et seq.
Regulation title	Water Reclamation and Reuse Regulation
Action title	Amendment to the Water Reclamation and Reuse Regulation to promote enhance program implementation
Date this document prepared	October 7, 2010

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2010) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Purpose

Please describe the subject matter and intent of the planned regulatory action. Also include a brief explanation of the need for and the goals of the new or amended regulation.

The primary purpose of this regulatory action is to amend the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.), which became effective October 1, 2008. Since its implementation, both the Department of Environmental Quality (DEQ) and the public have identified needed changes to the regulation that would improve the State Water Control Board's ability to implement a more effective water reclamation and reuse regulatory program. Two items that will be addressed among other changes to improve implementation of the regulation are (i) the inflexibility of the regulation to accept deviations from design or operational requirements that may discourage projects capable of producing or distributing reclaimed water suitable for reuse in a manner protective of the environment and public health; and (ii) the lack provisions to authorize temporary water reclamation and reuse without a permit during periods of significant drought to conserve potable water supply.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter number(s), if applicable, and (2) promulgating entity, i.e., agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

The legal basis for the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.) is the State Water Control Law (Law) (Chapter 3.1 of Title 62.1 of the Code of Virginia). § 62.1-44.15 authorizes the State Water Control Board (Board) to promulgate regulations necessary to carry out its powers and duties.

Specific to water reclamation and reuse, § 62.1-44.2 establishes the purpose of the Law, among other things, to promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health. More specifically, § 62.1-44.15(10) and § 62.1-44.15(15), give authority to the Board to adopt regulations as it deems necessary to enforce the general water quality management program, and to promote and establish requirements for the reclamation and reuse of wastewater that are protective of state waters and public health as an alternative to directly discharging pollutants into state waters.

Need

Please detail the specific reasons why the agency has determined that the proposed regulatory action is essential to protect the health, safety, or welfare of citizens. In addition, delineate any potential issues that may need to be addressed as the regulation is developed.

Amendments to the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.) are needed primarily to address issues that would improve the Board's ability to effectively promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health. Other amendments to allow (i) design or operational deviations for facilities still capable of producing or distributing reclaimed water in a manner protective of the environment and public health, and (ii) temporary authorization of water reclamation and reuse without a permit during periods of significant drought, are needed to promote and encourage water reclamation and reuse. These amendments meet the purpose of State Water Control Law and are within the authority of the Board to establish pursuant to §§ 62.1-44.2 and 62.1-44.15(15) of the Code of Virginia.

Substance

Please detail any changes that will be proposed. For new regulations, include a summary of the proposed regulatory action. Where provisions of an existing regulation are being amended, explain how the existing regulation will be changed.

The following will be addressed as part of this regulatory action:

1. Amendments to the Water Reclamation and Reuse Regulation (9 VAC 25-740-10 et seq.)
 - a. Add provisions to allow design or operational deviations for facilities still capable of producing or distributing reclaimed water in a manner protective of the environment and public health.
 - b. Add provisions for an emergency authorization to reclaim and reuse wastewater without a permit during periods of significant drought.
 - c. Add a requirement for an auxiliary or backup plan for conjunctive wastewater treatment works and reclamation systems that rely primarily or completely on water reuse for elimination of wastewater.

- d. Modify and add requirements to manage pollutants of concern from significant industrial users for reclamation systems and satellite reclamation systems that will produce Level 1 reclaimed water, and for reclamation systems that are part of an indirect potable reuse project.
- e. Add UV disinfection standards to Level 1 and Level 2 reclaimed water standards and include associated monitoring requirements.
- f. Add or modify several terms and their associated definitions related to the use of these terms within the context of the regulation.
- g. Modify language to clarify service agreement or contract requirements for end users of reclaimed water, and alternative permitting options for reclaimed water distribution systems.
- h. Modify activities excluded from the requirements of the regulation related to alternative onsite sewage systems permitted by the Virginia Department of Health, utilization of harvested rainwater and storm water, and intentional indirect reuse of reclaimed water.
- i. Add the Water Withdrawal Reporting Regulation (9 VAC 25-200) to the list of other Board regulations with which the Water Reclamation and Reuse Regulation has a relationship.
- j. Modify the point of compliance (POC) for reclaimed water standards to include POCs for certain system storage facilities and reclaimed water distribution systems, in addition to POCs required for reclamation systems and satellite reclamation systems.
- k. Add reclaimed water monitoring requirements for system storage that is either seasonal or greater than 24 hours with exceptions.
- l. Add reclaimed water monitoring to maintenance requirements for reclaimed water distribution systems included in the Reclaimed Water Management plan.
- m. Modify reuses listed in regulation to include “irrigation to establish erosion control” and move “ship ballast” to industrial reuses requiring a minimum of Level 1 reclaimed water.
- n. Modify the description of unlisted reuses and add all reuses of reclaimed industrial wastewater that will require reclaimed water standards and monitoring requirements developed on a case-by-case basis.
- o. Add permit application, design, construction, and operation requirements that are specific to indirect potable reuse projects.
- p. Add a provision that allows reclaimed water agents to inspect end users’ reuses and storage facilities as part of the service agreement or contract between the reclaimed water agent and an end user.
- q. Add a requirement to place valves and outlets on reclaimed water distribution system pipelines that allow access or isolation of pipe sections for maintenance activities.
- r. Modify cross-connection and backflow prevention requirements for reclaimed water distribution systems to be consistent with regulations of other state agencies (e.g., Uniform State Building Code).
- s. Clarify that the requirement for reclaimed water distribution systems to maintain reclaimed water standards for intended reuses does not apply to Corrective Action Thresholds, which are operational standards for only reclamation systems and satellite reclamation systems.

- t. Modify Class I reliability requirements for Level 1 reclamation systems and satellite reclamation systems to include associated pump stations not addressed by the Sewage Collection and Treatment Regulations, 9 VAC 25-790.
- u. Add requirement prohibiting application of reclaimed water during winds that would cause overspray or aerosol drift into or beyond buffer zones of setbacks. This requirement is consistent with the prohibition of reclaimed water runoff from irrigation sites.
- v. Make minor changes to:
 - (1) Clarify or make more specific the language of the regulation,
 - (2) Eliminate redundancy,
 - (3) Relate separate sections or subdivisions of the regulation, and
 - (4) Correct grammatical and typographical errors.

2. Other

- a. Other amendments to the Water Reclamation and Reuse Regulation may be considered by the Board based on comments received in response to the NOIRA or discussions of the regulatory advisory panel (RAP). If recommended by the RAP, the Board may also consider amendments to the Fees for Permits and Certificates regulation (9 VAC 25-20-10 et seq.).
- b. The Board is studying the possible reuse of reclaimed water for ground water recharge. The Board will discuss its findings with the RAP and may include additional amendments to address this reuse in the proposed regulatory action.

Alternatives

Please describe all viable alternatives to the proposed regulatory action that have been or will be considered to meet the essential purpose of the action. Also, please describe the process by which the agency has considered or will consider other alternatives for achieving the need in the most cost-effective manner.

The Board could take no regulatory action at this time and address implementation deficiencies of the Water Reclamation and Reuse Regulation in guidance. This would diminish the ability of the Board to effectively promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health, and would result in confusion to the public. Other amendments as discussed under "Need" of this document can not be addressed in guidance without a legal basis established in law or regulation, thereby precluding further opportunities to promote and encourage water reclamation and reuse contrary to the purpose of State Water Control Law stated in § 62.1-44.2.

Public participation

Please indicate the agency is seeking comments on the intended regulatory action, to include ideas to assist the agency in the development of the proposal and the costs and benefits of the alternatives stated in this notice or other alternatives. Also, indicate whether a public hearing is to be held to receive comments on this notice.

The agency is seeking comments on the intended regulatory action, including but not limited to 1) ideas to assist in the development of a proposal, 2) the costs and benefits of the alternatives stated in this background document or other alternatives, 3) potential impacts of the regulation and 4) impacts of the

regulation on farm and forest land preservation. The agency is also seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include 1) projected reporting, recordkeeping and other administrative costs, 2) probable effect of the regulation on affected small businesses, and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

The Board is seeking information on (1) the continued need for the regulation; (2) the complexity of the regulation; (3) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (4) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation.]

Anyone wishing to submit written comments may do so by mail, email or fax to Ms. Valerie Rourke, Department of Environmental Quality, 629 East Main Street, P.O. Box 1105, Richmond, Virginia 23218; phone: (804)698-4158; e-mail: Valerie.Rourke@deq.virginia.gov; fax: (804)698-4116. Comments may also be submitted through the Public Forum feature of the Virginia Regulatory Town Hall web site at: www.townhall.virginia.gov. Written comments must include the name and address of the commenter. In order to be considered comments must be received by DEQ by the close of the public comment period.

Public Hearing at Proposed Stage

A public hearing will be held after publication of the proposed stage of the regulatory action.

Regulatory Panel

Please indicate, to the extent known, if advisers (e.g., regulatory advisory panel or negotiated rulemaking panel) will be involved in the development of the proposed regulation. Indicate that 1) the agency is not using a panel in the development of the proposal; 2) the agency is using a panel in the development of the proposal; or 3) the agency is inviting comment on whether to use a panel to assist the agency in the development of a proposal.

The Board is using a panel to develop a proposal. Persons interested in assisting in the development of a proposal should notify the department contact person by the end of the comment period and provide their name, address, phone number, email address and the organization you represent (if any). The primary function of the panel is to develop recommended regulation amendments for Board consideration through the collaborative approach of regulatory negotiation and consensus. Multi-applications from a single company, organization, group or other entity count as one for purposes of making the decision specified in the preceding sentence. Notification of the composition of the panel will be sent to all applicants.

Family impact

Assess the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

Town Hall Agency Background Document

Form: TH- 01

It is not anticipated that this regulation will have a direct impact on the institution of the family or family stability.

November 2, 2005

Final Regulations

TITLE 9. ENVIRONMENT**STATE WATER CONTROL BOARD**

Title of Regulation: 9 VAC 25-780. Local and Regional Water Supply Planning (adding 9 VAC 25-780-10 through 9 VAC 25-780-190).

Statutory Authority: §§ 62.1-44.15 and 62.1-44.38:1 of the Code of Virginia.

Effective Date: November 2, 2005.

Agency Contact: Scott Kudlas, Department of Environmental Quality, P.O. Box 1105, Richmond, VA 23218, telephone (804) 698-4456, FAX (804) 698-4347, or e-mail scott.kudlas@deq.virginia.gov.

Summary:

The regulation establishes a planning process and criteria that all local governments will use in the development of local or regional water plans. These plans will be reviewed by the Department of Environmental Quality and a determination will be made by the State Water Control Board on whether the plans comply with this regulation. Within five years of a compliance determination by the board, the plans will be reviewed to assess adequacy and significant changes will require the submission of an amended plan and review by the board. All local programs will be reviewed, revised and resubmitted to the Department of Environmental Quality every 10 years after the last approval.

Summary of Public Comments and Agency's Response: A summary of comments made by the public and the agency's response may be obtained from the promulgating agency or viewed at the office of the Registrar of Regulations.

CHAPTER 780.**LOCAL AND REGIONAL WATER SUPPLY PLANNING.****9 VAC 25-780-10. Application.**

A. All counties, cities and towns (hereinafter "local governments") in the Commonwealth of Virginia shall submit a local water supply plan or shall participate in a regional planning unit in the submittal of a regional water supply plan to the board in accordance with this chapter.

B. The provisions of this regulation shall not affect any water supply project for which a permit application was submitted prior to January 1, 2003, to any state or federal agency. The provisions of this regulation shall not affect any water supply project for which an application for grant, loan or other funding has been made to a state or federal agency prior to January 1, 2003. All projects shall remain subject to applicable federal and state regulatory requirements.

C. Nothing in this chapter shall be construed as altering or authorizing any alteration of any existing surface, ground water or common law water rights of any property owner within the Commonwealth, except as required by federal or state law.

D. The review required by 9 VAC 25-780-140 shall not be a prerequisite for applying for a permit from the Commonwealth of Virginia for a water supply project.

9 VAC 25-780-20. Purpose of chapter.

The purpose of this chapter is to establish a comprehensive water supply planning process for the development of local, regional, and state water supply plans. This process shall be designed to (i) ensure that adequate and safe drinking water is available to all citizens of the Commonwealth; (ii) encourage, promote, and protect all other beneficial uses of the Commonwealth's water resources; and (iii) encourage, promote, and develop incentives for alternative water sources, including but not limited to desalinization.

This chapter establishes the required planning process and criteria that local governments shall use in the development of the local and regional plans.

9 VAC 25-780-30. Definitions.

Unless otherwise defined in this chapter or unless the context clearly indicates otherwise, the terms used in this regulation shall have the meanings ascribed to them by the State Water Control Law, Chapter 3.1 (§ 62.1-44.2 et seq.) of Title 62.1 of the Code of Virginia; the Ground Water Management Act of 1992, Chapter 2.5 (§ 62.1-254 et seq.) of Title 62.1 of the Code of Virginia; the Virginia Water Protection Permit Regulation, 9 VAC 25-210 (2004); and the Surface Water Management Area Regulation, 9 VAC 25-220 (2004), including any general permits issued thereunder.

"Beneficial use" means both in-stream and off-stream uses. In-stream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. Off-stream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural, electric power generation, and commercial and industrial uses.

"Board" means the State Water Control Board.

"Community water system" means a waterworks that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents, and is regulated by the Virginia Department of Health Waterworks Regulation (12 VAC 5-590).

"Conservation" means practices, techniques, and technologies that improve the efficiency of water use.

"Department" means the Department of Environmental Quality.

"Local government" means a city, incorporated town or county.

"Local program" means the combined water plan, resource conditions, and drought response and contingency plan developed in compliance with this regulation. The term "local program" will be used in this regulation to mean either local or regional programs. The term "program" implies the institution of a continuous planning process for maintenance of these documents.

Final Regulations

November 2, 2005

"Planning area" means the geographical area as defined by local government boundaries that is included in a local or regional water supply plan.

"Planning period" means the 30- to 50-year time frame used by the locality to project future water demand in accordance with 9 VAC 25-780-100 B.

"Regional planning unit" means a collection of local governments who have voluntarily elected to develop and submit a regional water plan. A regional planning unit may be composed of all local governments located within the bounds of a planning district, any subset of local governments within the bounds of a planning district, or any group of local governments within multiple planning districts.

"Regional water plan" means a water plan developed and submitted by two or more cities or counties or both. A town and an adjacent county may develop a regional water plan. Two or more towns may develop and submit a regional water plan where the plan results in the proposed development of future water supply projects that supply the water supply demands of the affected towns. Such plans developed by two or more towns may be included in regional water plans developed and submitted by counties or cities. Regional water plans shall be developed and submitted in conjunction with all public service authorities operating community water systems within the regional planning unit, if applicable.

"Self-supplied user" means any person making a withdrawal of surface water or ground water from an original source (e.g., a river, stream, lake, aquifer, or reservoir fed by any such water body) for their own use. Self-supplied users do not receive water from a community water system.

"Service area" means the geographical area served by a community water system.

"Technical evaluation committee" means a committee of state agencies, including but not limited to the Department of Health, the Department of Conservation and Recreation, the Marine Resources Commission, the Department of Historic Resources, and the Department of Game and Inland Fisheries, convened by the Department of Environmental Quality in accordance with subdivision 8 of 9 VAC 25-780-60 to provide comments on the impacts to or conflicts among in-stream and off-stream uses resulting from proposed alternatives for meeting projected water demands.

"Unaccounted for losses" means the difference between a community water system's billing records for volumes of water distributed and production records for volumes of water treated.

"Water demand management" means plans for water conservation, reuse, and reducing unaccounted for water losses contained in a local program.

"Water plan" means a document developed in compliance with this regulation. The term "water plan" will be used in this regulation to mean either local or regional water plans.

"Water sources" means wells, stream intakes, and reservoirs that serve as sources of water supplies.

9 VAC 25-780-40. Program development.

Local governments shall develop programs for local or regional water plans that are necessary to comply with this chapter. Local governments shall consult and coordinate with all community water systems in the planning area during the preparation of local or regional programs. Community water systems within the planning area shall cooperate and participate with the locality during preparation of the local program. Counties, cities, and towns are encouraged to develop regional programs. Local programs shall be designed to (i) ensure that adequate and safe drinking water is available, (ii) encourage and protect all beneficial uses, (iii) encourage and promote alternative water sources, and (iv) promote conservation.

9 VAC 25-780-50. Preparation and submission of a program.

A. Local governments must adopt a local program as defined in this section, including any revisions to comprehensive plans, water supply plans, water and sewer plans, and other local authorities necessary to implement this chapter. A local public hearing consistent with § 15.2-1427 of the Code of Virginia is required during the development of the local program. The public hearing may be combined with other public hearings that may be required.

B. All local governments shall submit a local program to the department in accordance with the following schedule:

1. Local governments with populations in excess of 35,000 persons based on the most recent U.S. Census shall do so no later than November 2, 2008.
2. Local governments with populations in excess of 15,000 persons but no more than 35,000 persons based on the most recent U.S. Census shall do so no later than November 2, 2009.
3. Local governments with populations less than or equal to 15,000 persons based on the most recent U.S. Census shall do so no later November 2, 2010.
4. Notwithstanding the above, local governments may elect to participate in the submittal of regional water supply plans. By November 2, 2008, local governments participating in a regional plan shall provide notice to the department of the intent to participate in a regional plan and shall include the names of the other participating localities. Such regional plans shall be submitted no later November 2, 2011.

Nothing in this section shall be construed as limiting the submittal of local or regional water supply plans before the date when such plans are due.

C. Local programs shall contain the elements listed below. This information may be derived from existing, readily available information and additional detailed studies shall not be required.

1. A description of existing water sources in accordance with the requirements of 9 VAC 25-780-70;
2. A description of existing water use in accordance with the requirements of 9 VAC 25-780-80;

November 2, 2005

Final Regulations

3. A description of existing water resource conditions in accordance with the requirements of 9 VAC 25-780-90;

4. An assessment of projected water demand in accordance with the requirements of 9 VAC 25-780-100;

5. A description of water management actions in accordance with the requirements of 9 VAC 25-780-110 and 9 VAC 25-780-120;

6. A statement of need in accordance with the requirements of 9 VAC 25-780-130;

7. An alternatives analysis that identifies potential alternatives to address projected deficits in water supplies in accordance with the requirements of 9 VAC 25-780-130;

8. A map or maps identifying important elements of the program that may include existing environmental resources, existing water sources, significant existing water uses, and proposed new sources;

9. A copy of the adopted program documents including any local plans or ordinances or amendments that incorporate the local program elements required by this chapter;

10. A resolution approving the plan from each local government that is party to the plan; and

11. A record of the local public hearing, a copy of all written comments and the submitter's response to all written comments received.

D. All local programs shall be reviewed no later than five years after a compliance determination by the board in accordance with 9 VAC 25-780-140 F. Revised plans shall be submitted when this review indicates that circumstances have changed or new information has been made available that will result in water demands that will not be met by alternatives contained in the water plan. These circumstances may be caused by changes in demands, the availability of the anticipated source, cumulative impacts, in-stream beneficial uses, or other factors. In the case where the review by the local government or regional planning unit indicates that the circumstances have not changed sufficiently to warrant a revision of the water plan after five years, the locality shall notify the department that the existing plan is still in effect.

E. Notwithstanding subsection D of this section, all local programs shall be reviewed, revised and resubmitted to the department every 10 years after the date of last approval.

9 VAC 25-780-60. State role in program preparation.

To assist local governments in the development of local programs, the board will:

1. Provide technical and financial assistance;

2. Provide guidance on compliance options;

3. Facilitate acquisition of existing resource conditions (the department shall prepare and post on its website a list of readily available sources for the items identified in 9 VAC 25-780-90 B);

4. Facilitate acquisition of existing use information that has been reported to the department;

5. Facilitate acquisition of water management information (the department shall prepare and post on its website a list of acceptable practices that are used with regard to the topics in 9 VAC 25-780-110);

6. Identify acceptable methods for the projection of future water demands as per 9 VAC 25-780-100;

7. Provide any information regarding known conflicts relating to the development of alternatives;

8. At the request of the applicant, convene a technical evaluation committee meeting; and

9. Provide notice of local public hearings on the local program upon notification by the locality.

9 VAC 25-780-70. Existing water source information.

A. A water plan shall include current information on existing water sources.

B. A water plan shall include, for community water systems using ground water, the name and identification number of the well or wells, the well depth, the casing depth, the screen depth (top and bottom) or water zones, the well diameter, the design capacity for the average daily withdrawal and maximum daily withdrawal, the system capacity permitted by Department of Health, and the annual and monthly permitted amounts contained in ground water withdrawal permits for all wells located within ground water management areas.

C. A water plan shall include, for community water systems using surface water reservoirs, the name of the reservoirs, the sub-basins in which the reservoirs are located, the drainage area, the amount of on-stream storage available for water supply, the design capacity for average daily and maximum daily withdrawals from the reservoirs, the safe yield of the reservoirs, the capacity of any associated water treatment plant, the Department of Health permitted capacity of the systems, and any limitations on withdrawal established by permits issued by the board. For a community water system that operates a system of interconnected reservoirs, the reporting of the design capacity for withdrawals, designed average daily withdrawal, the designed maximum daily withdrawal and the safe yield may be for the entire system or may be reported as subsets of the system. The plan shall designate which reservoirs and which intakes constitute a system for the purposes of this paragraph. The plan must report the drainage area and amount of storage available for water supply from each reservoir independently.

D. A water plan shall include, for community water systems using stream intakes, the name of the stream or river, the drainage area of the intake, the sub-basin in which the intake is located, the design capacity for average daily and designed maximum daily withdrawal from the stream, the safe yield, the lowest daily flow of record the design capacity of the pump station, the design capacity of the water treatment plant, the capacity of the system permitted by the Department of Health, and any limitation on withdrawals established by permits issued by the board.

Final Regulations

November 2, 2005

E. To the extent that information is available, a water plan shall include a list of all self-supplied users of more than 300,000 gallons per month of surface water for nonagricultural uses, the name of the water body utilized, the design capacity for the average daily and maximum daily withdrawal, and any limitation on withdrawals established by permits issued by the board, the Department of Health or any other agency.

F. To the extent that information is available, a water plan shall include, for all self-supplied users of more than 300,000 gallons per month of ground water for nonagricultural uses, the name and identification number of the well or wells, the well depth, the casing depth, the screen depth (top and bottom) or water zones, the well diameter, the design capacity for the average daily and maximum daily withdrawal and any limitation on withdrawal established by permits issued by the board.

G. A water plan shall include the amount of ground or surface water to be purchased from water supply systems outside the geographic boundaries of the planning area on a maximum daily and average annual basis, any contractual limitations on the purchase of the water including but not limited to the term of any contract or agreement, the recipient(s) or areas served by the water purchased, and the name(s) of the supplier(s).

H. A plan shall include the amount of water available to be purchased outside the planning area from any source with the capacity to withdraw more than 300,000 gallons per month of surface and ground water, reported on a maximum daily and average annual basis and any contractual limitations on the purchase of the water including but not limited to the term of any contract or agreement, the geographic region(s) that receive the water purchased, and the name(s) of the supplier(s).

I. A water plan shall include, to the extent possible, a list of agricultural users who utilize more than 300,000 gallons per month, an estimate of total agricultural usage by source, whether the use is irrigation or nonirrigation, and whether the source is surface or ground water.

J. A water plan shall include an estimate of the number of residences and businesses that are self-supplied by individual wells withdrawing less than 300,000 gallons per month and an estimate of the population served by individual wells.

K. When available, a water plan shall include a summary of findings and recommendations from applicable source water assessment plans or wellhead protection programs.

9 VAC 25-780-80. Existing water use information.

A. A water plan shall include, at a minimum, current information documenting existing water use as listed below. Water use information shall be obtained from Department of Health waterworks permit compliance reports, the department ground water permit compliance reports or department water use reports. Information shall be reported for the most recent previous annual compilation of such data that is available on the date of submission of the water plan.

B. A water plan shall include the following information for community water systems:

1. The population within the planning area served by each community water system.

2. The number of connections within the planning area for each community water system.

3. The average and maximum daily withdrawal for each community water system within the planning area.

4. The amount of water used within the planning area on an annual average basis, and on an average monthly basis for each community water system expressed in terms of million gallons per day.

5. The peak day water use by month for each community water system within the planning area.

6. An estimate of the water used on an average annual basis by self-supplied nonagricultural users of more than 300,000 gallons per month of surface and ground water within the service area of each community water system.

7. An estimate of the amount of water used on an average annual basis by self-supplied agricultural users of more than 300,000 gallons per month of surface and ground water within the service area of each community water supply.

8. An estimate of the number of self-supplied users of less than 300,000 gallons per month of ground water and an estimate of the total amount of water used by them on an annual average basis within the service area of each community water supply.

9. For each community water system included in the water plan, the plan shall include an estimate of the disaggregated amounts of water used in categories of use appropriate for the system. Typical categories may include:

a. Residential use;

b. Commercial institutional and light industrial (CIL) use;

c. Heavy industrial use;

d. Military water use;

e. Water used in water production processes;

f. Unaccounted for losses;

g. Sales to other community water systems and the names of such systems; or

h. Subtotals of the above categories for all community water systems

10. To the extent that information is available pursuant to 9 VAC 25-780-60 and other sources, for each community water system included in the water plan using stream intakes, the plan shall include a qualitative description of existing in-stream beneficial uses within the planning area or outside the planning area that may be affected by the point of stream withdrawal.

C. A water plan shall include an estimate of the water used on an average annual basis by self-supplied nonagricultural user of more than 300,000 gallons per month of surface and

November 2, 2005

Final Regulations

ground water outside the service areas of community water systems.

D. A water plan shall include an estimate of the amount of water used on an average annual basis by self-supplied agricultural users of more than 300,000 gallons per month of surface and ground water outside the service areas of community water systems.

E. A water plan shall include an estimate of the number of self-supplied users of less than 300,000 gallons per month of ground water and an estimate of the total amount of water used by them on an annual average basis outside the service areas of community water systems.

9 VAC 25-780-90. Existing resource information.

A. A program shall include a description of existing geologic, hydrologic, and meteorological conditions within the planning area, and in proximity to the point of withdrawal if it is outside the planning area.

B. A program shall include a description of existing environmental conditions that pertain to, or may affect, in-stream flow, in-stream uses, and sources that provide the current supply. This description of conditions may be provided in a distinct section of the plan document or as a part of the existing water sources information required pursuant to 9 VAC 25-780-70. This information may be derived from existing, readily available information and additional detailed studies shall not be required. The description of conditions shall include the following items, as they are applicable:

1. State or federal listed threatened or endangered species or habitats of concern;
2. Anadromous, trout and other significant fisheries;
3. River segments that have recreational significance including state scenic river status;
4. Sites of historic or archaeological significance;
5. Unusual geologic formations or special soil types;
6. Wetlands;
7. Riparian buffers and conservation easements;
8. Land use and land coverage including items such as percentage of impervious cover within a watershed and areas where new development may impact water quality of the source;
9. The presence of impaired streams and the type of impairment;
10. The location of point source discharges; and
11. Potential threats to the existing water quantity and quality, other than those from above.

9 VAC 25-780-100. Projected water demand information.

A. A water plan shall include projections of future water demand as listed below. Population in aggregate and disaggregate formulations should be estimated according to information from the U.S. Census Bureau, Bureau of

Economic Analysis, the Virginia Employment Commission, or other accepted source of population information, including but not limited to, local or regional sources. Demand projection methodologies should be consistent with those outlined in the American Water Works Association or American Society of Civil Engineers manuals. Sources of information and methodologies used in projecting future water demand shall be documented.

B. A water plan shall estimate water demand within the planning area for a minimum of 30 to a maximum of 50 years into the future. While not required, localities are encouraged to plan for the maximum planning period to ensure that the most appropriate and sustainable alternatives are identified.

C. A water plan shall include an estimated future water use projected at the beginning of each decade (2010, 2020, 2030, etc.) within the planning period.

D. A water plan shall include the following projections for community water systems:

1. An estimate of population within the planning area served by each community water system;
2. A map depicting the proposed service area of each existing or proposed community water system;
3. Estimated water demand for each existing or proposed community water system on both an annual average and peak monthly basis;
4. Estimated water demand for each existing or proposed community water system disaggregated into categories of use appropriate for the system. Typical categories may include:
 - a. Residential use;
 - b. Commercial institutional and light industrial (CIL) use;
 - c. Heavy industrial use;
 - d. Military water use;
 - e. Water used in water production processes;
 - f. Unaccounted for losses;
 - g. Sales to other community water systems and the names of such systems; or
 - h. Subtotals of the above categories for all community water systems; and
5. Total projected water demand for all existing or proposed community water systems disaggregated into the categories used in subdivision 4 of this subsection.

E. A water plan shall include a projection of water demand within the planning area on an annual average basis for each existing and any proposed self-supplied nonagricultural user of more than 300,000 gallons per month of surface and ground water located outside the service areas of community water systems.

F. A water plan shall include a projection of the amount of water use on an annual average basis for each existing and any projected self-supplied agricultural user of more than

Final Regulations

November 2, 2005

300,000 gallons per month of surface and ground water located outside the service areas of community water systems.

G. A water plan shall include a projection of the number of self-supplied users of less than 300,000 gallons per month of ground water and a projection of the amount of water used on an annual average basis outside the service areas of community water systems.

H. A water plan shall include, if available, any cumulative demand, use conflict, or in-stream flow information developed pursuant to 9 VAC 25-780-140 G.

I. A water plan shall explain how the projected needs of domestic consumption, in-stream uses, and economic development have been accounted for in the demand projection for the planning period.

9 VAC 25-780-110. Water demand management information.

A. As part of a long-term strategy, a water plan shall address conservation as a part of overall water demand management in accordance with the following requirements:

1. A water plan shall include information that describes practices for more efficient use of water that are used within the planning area. The type of measures to be described may include, but are not limited to, the adoption and enforcement of the Virginia Uniform Statewide Building Code sections that limit maximum flow of water closets, urinals and appliances; use of low-water use landscaping; and increases in irrigation efficiency.

2. A water plan shall include information describing the water conservation measures used within the planning area to conserve water through the reduction of use. The types of measures to be described may include, but are not limited to, technical, educational and financial programs.

3. A water plan shall include information that describes, within the planning area, the practices to address water loss in the maintenance of water systems to reduce unaccounted for water loss. The types of items to be described may include, but are not limited to: leak detection and repair and old distribution line replacement.

B. Current conservation practices, techniques, and technologies shall be considered in projecting water demand pursuant to 9 VAC 25-780-100 D.

9 VAC 25-780-120. Drought response and contingency plans.

A program that includes community water systems and self-supplied users who withdraw more than an average of 300,000 gallons per month of surface water and ground water shall contain drought response and contingency plans in accordance with the following requirements:

1. Drought response and contingency plans shall be structured to address the unique characteristics of the water source that is being utilized and the nature of the beneficial use of water.

2. Drought response and contingency plans shall contain, at a minimum, the following three graduated stages of responses to the onset of drought conditions:

a. Drought watch stage responses are generally responses that are intended to increase awareness in the public and private sector to climatic conditions that are likely to precede the occurrence of a significant drought event. Public outreach activities shall be identified to inform the population served by a community water system of the potential for drought conditions to intensify and potential water conservation activities that may be utilized.

b. Drought warning stage responses are generally responses that are required when the onset of a significant drought event is imminent. Voluntary water conservation activities shall be identified with the goal of reducing water use by 5-10%.

c. Drought emergency stage responses are generally responses that are required during the height of a significant drought event. Mandatory water conservation activities shall be identified with the goal of reducing water use by 10-15%.

3. Drought response and contingency plans shall include references to local ordinances, if adopted, and procedures for the implementation and enforcement of drought response and contingency plans.

9 VAC 25-780-130. Statement of need and alternatives.

A. A water plan shall determine the adequacy of existing water sources to meet current and projected demand by preparing a clear statement of need that is derived from an evaluation of the information required by 9 VAC 25-780-70 through 9 VAC 25-780-110. The statement of need shall contain, at a minimum, a determination of whether the existing source(s) is adequate to meet current and projected demands.

B. If the determination is that the existing source is inadequate to meet projected demands during the planning period, the program shall include an alternative analysis of potential sources that includes the following information:

1. A description of potential water savings from water demand management actions including an estimated volume for each action;

2. A description of potential sources for new supplies including an estimated volume from each source; and

3. A description of potential resource issues or impacts, identified in accordance with 9 VAC 25-780-140 G, known for each potential new source that any future water project will need to consider in its development.

C. Potential alternatives considered shall include water demand management alternatives as well as more traditional means of increasing supply, i.e., wells, reservoirs, impoundments and stream intakes. Where appropriate, the program shall consider nontraditional means of increasing supplies such as interconnection, desalination, recycling and reuse. The analysis of potential alternatives may include a

November 2, 2005

Final Regulations

combination of short-term and long-term alternatives. The result of this analysis shall be provided as part of the submission required by 9 VAC 25-780-50 C 7.

9 VAC 25-780-140. Review of local programs.

A. The board shall review all programs to determine compliance with this regulation and consistency with the State Water Resources Plan. The board will review adopted elements of a local program according to review policies adopted by the board. Copies of the adopted local program documents and subsequent changes thereto shall be provided to the board.

B. To assist in the review of the program, the board shall provide the Department of Health and other agencies listed in 9 VAC 25-780-150 B along with any other agency the board deems appropriate, 90 days to evaluate the program. Comments must be received from the Department of Health or other agency by the deadline stipulated in the written notification from the board.

C. The board will assess the compliance of submitted programs with these regulations. The board shall prepare a tentative statement of findings on whether the program has demonstrated compliance with the following:

1. All elements of a local program identified in 9 VAC 25-780-50 have been submitted;
2. The program was developed through a planning process consistent with this chapter;
3. The results of any evaluation conducted pursuant to subsection G of this section have been appropriately accommodated;
4. The existing sources information complies with 9 VAC 25-780-70;
5. The existing water use information complies with 9 VAC 25-780-80;
6. The existing resources information complies with 9 VAC 25-780-90;
7. The projected water demand is based on an accepted methodology and complies with 9 VAC 25-780-100;
8. The water demand management information complies with 9 VAC 25-780-110;
9. The drought response and contingency plan complies with 9 VAC 25-780-120;
10. The statement of need complies with 9 VAC 25-78-130 A;
11. When required, the alternatives comply with 9 VAC 25-780-130;
12. The local program is consistent with 9 VAC 25-390-20, § 62.1-11 of the Code of Virginia and Chapter 3.2 (§ 62.1-44.36 et seq.) of Title 62.1 of the Code of Virginia.

D. If the board's tentative decision is to find the local program in compliance with subsection C of this section, the board

shall provide public notice of its findings pursuant to 9 VAC 25-780-150.

E. If the tentative decision of the board is to find the local program in noncompliance with subsection C of this section, the board shall identify (i) the reason for the finding of noncompliance, (ii) what is required for compliance, and (iii) the right to an informational proceeding under Article 3 (§ 2.2-4018 et seq.) of Chapter 40 of the Virginia Administrative Process Act.

F. The board shall make a final decision on whether the local program is in compliance with this chapter after completing review of the submitted program, any agency comments received, and any public comment received from a public meeting held pursuant to 9 VAC 25-780-160.

G. In conjunction with the compliance determination made by the board, the state will develop additional information and conduct additional evaluation of local or regional alternatives in order to facilitate continuous planning. This additional information shall be included in the State Water Resources Plan and used by localities in their program planning. This information shall include:

1. A cumulative demand analysis, based upon information contained in the State Water Resources Plan and other sources;
2. The evaluation of alternatives prepared pursuant to 9 VAC 25-780-130 B and C;
3. The evaluation of potential use conflicts among projected water demand and estimates of requirements for in-stream flow; and
4. An evaluation of the relationship between the local plan and the State Water Resources Plan.

H. The board may facilitate information sharing and discussion among localities when potential conflicts arise with regard to demands upon a source.

I. A local program's information shall be included in the State Water Resource Plan when determined to be in compliance by the board.

9 VAC 25-780-150. Public notice and public comment period.

A. The board shall give public notice on the department website for every tentative and final decision to determine local program compliance.

B. The board shall give public notice to the Department of Health, the Department of Conservation and Recreation, the Marine Resources Commission, the Department of Historic Resources, and the Department of Game and Inland Fisheries for every tentative and final decision on program compliance. The agencies shall have 90 days to submit written comment. At the request of the applicant, the board will convene a technical evaluation committee meeting to facilitate receipt of these comments.

C. The board shall provide a comment period of at least 30 days following the date of the public notice for interested persons to submit written comments on the tentative or final

Final Regulations

November 2, 2005

decision. All written comments submitted during the comment period shall be retained by the board and considered during its final decision.

D. Commenters may request a public meeting when submitting comments. In order for the board to grant a public meeting, there must be a substantial public interest and a factual basis upon which the commenter believes that the proposed program might be contrary to the purposes stated in 9 VAC 25-780-20.

E. The contents of the public notice of a proposed program compliance determination shall include:

1. Name(s) and address(es) of the locality(ies) that submitted the local or regional water plan;
2. Brief synopsis of the proposed plan including any identified future alternatives;
3. The name(s) of the principal water supply sources;
4. A statement of the tentative determination to certify or deny consistency with the regulation;
5. A brief description of the final determination procedure;
6. The address, e-mail address and phone number of a specific person at the state office from whom further information may be obtained; and
7. A brief description on how to submit comments and request a public meeting.

9 VAC 25-780-160. Public meetings.

A. Public notice of any public meeting held pursuant to 9 VAC 25-780-150 shall be circulated as follows:

1. Notice shall be published on the department website;
2. Notice shall be published once in a newspaper of general circulation in the county, city, or town where the local or regional water plan is in effect; and
3. Notice of the public meeting shall be sent to all persons and government agencies that requested a public meeting or have commented in response to the public notice.

B. Notice shall be effected pursuant to subdivisions A 1 through 3 of this section at least 30 days in advance of the public meeting.

C. The content of the public notice of any public meeting held pursuant to this section shall include at least the following:

1. Name and address of the localities who prepared the program;
2. The planning area covered by the program;
3. A brief reference to the public notice issued for the comment period including the date of issuance unless the public notice includes the public meeting notice;
4. Information regarding the time and location for the public meeting;
5. The purpose of the public meeting;

6. A concise statement of the relevant water resources planning, water quality, or fish and wildlife resource issues raised by the persons requesting the public meeting;

7. Contact person and the address, e-mail address and phone number of the department office at which the interested persons may obtain further information or request a copy of the draft statement of findings prepared pursuant to 9 VAC 25 780-140 D; and

8. A brief reference to the rules and procedures to be followed at the public meeting.

9 VAC 25-780-170. Appeals.

All appeals taken from actions of the board or the director relative to the provisions of this chapter shall be governed by the Virginia Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia).

9 VAC 25-780-180. Enforcement.

Enforcement of this chapter will be in accordance with §§ 62.1-44.15, 62.1-44.23, and 62.1-44.32 of the Code of Virginia.

9 VAC 25-780-190. Delegation of authority.

The executive director, or his designee, may perform any action of the board provided under this chapter, except as limited by § 62.1-44.14 of the Code of Virginia.

Code of Virginia

§ 15.2-1427. Adoption of ordinances and resolutions generally; amending or repealing ordinances.

A. Unless otherwise specifically provided for by the Constitution or by other general or special law, an ordinance may be adopted by majority vote of those present and voting at any lawful meeting.

B. On final vote on any ordinance or resolution, the name of each member of the governing body voting and how he voted shall be recorded; however, votes on all ordinances and resolutions adopted prior to February 27, 1998, in which an unanimous vote of the governing body was recorded, shall be deemed to have been validly recorded. The governing body may adopt an ordinance or resolution by a recorded voice vote unless otherwise provided by law, or any member calls for a roll call vote. An ordinance shall become effective upon adoption or upon a date fixed by the governing body.

C. All ordinances or resolutions heretofore adopted by a governing body shall be deemed to have been validly adopted, unless some provision of the Constitution of Virginia or the Constitution of the United States has been violated in such adoption.

D. An ordinance may be amended or repealed in the same manner, or by the same procedure, in which, or by which, ordinances are adopted.

E. An amendment or repeal of an ordinance shall be in the form of an ordinance which shall become effective upon adoption or upon a date fixed by the governing body, but, if no effective date is specified, then such ordinance shall become effective upon adoption.

F. In counties, except as otherwise authorized by law, no ordinance shall be passed until after descriptive notice of an intention to propose the ordinance for passage has been published once a week for two successive weeks prior to its passage in a newspaper having a general circulation in the county. The second publication shall not be sooner than one calendar week after the first publication. The publication shall include a statement either that the publication contains the full text of the ordinance or that a copy of the full text of the ordinance is on file in the clerk's office of the circuit court of the county or in the office of the county administrator; or in the case of any county organized under the form of government set out in Chapter 5, 7 or 8 of this title, a statement that a copy of the full text of the ordinance is on file in the office of the clerk of the county board. Even if the publication contains the full text of the ordinance, a complete copy shall be available for public inspection in the offices named herein.

In counties, emergency ordinances may be adopted without prior notice; however, no such ordinance shall be enforced for more than sixty days unless readopted in conformity with the provisions of this Code.

G. In towns, no tax shall be imposed except by a two-thirds vote of the council members.

(Code 1950, §§ 15-8, 15-10; 1950, p. 113; 1954, c. 529; 1956, cc. 218, 664; 1956, Ex. Sess., c. 40; 1958, cc. 190, 279; 1960, c. 606; 1962, c. 623, § 15.1-504; 1966, cc. 405, 612; 1968, c. 625; 1970, c. 581; 1972, cc. 41, 837; 1973, c. 380; 1978, c. 235; 1983, c. 11; 1997, c. 587; 1998, c. 823; 2000, c. 895.)
