



COUNTY OF PRINCE WILLIAM
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January 11, 2011

TO: Board of County Supervisors

FROM: *FOR* Thomas Blaser *Ray*
Acting Planning Director

THRU: Melissa S. Peacor
County Executive

RE: Regional Water Supply Plan Work Session

Attached, please find the work session presentation for the Regional Water Supply Plan scheduled for January 18, 2011. Norm Goulet, Senior Environmental Planner for the Northern Virginia Regional Commission will present the background, plan components and current schedule. Beau Caire from the Service Authority will present information on current water supply capacity and demand. David McGettigan from the Planning Office will discuss issues and next steps.



Prince William County Government



Northern Virginia Regional Water Supply Plan

BOCS Work Session

January 18, 2011

Normand Goulet – Northern Virginia Regional Commission

R. Beau Caire, PE – PWC Service Authority

David McGettigan, Sr., AICP – Planning Office

Background

- VA Code Section 62.1-44.38:1 requires a water supply plan
- Designated PWCSA agent and NVRC lead agency (Dec. 2006)
- Plan Participants:
 - ◆ Every County, City and Town within Northern Virginia.
 - ◆ Partnership between Jurisdictions, Authorities and Regional Commission.
 - ◆ Authorities lead for data collection within Jurisdictions service area's.
 - ◆ Commission lead for data collection for Non-municipal Community Water Systems and Wells.
- Assistance by MWCOG and ICPRB for aligning schedules for Regional Population Projections and Potomac River Forecasts to Jurisdictional date requirements.
- Northern Virginia Regional Plan due November 2011.
- To be updated every five years.

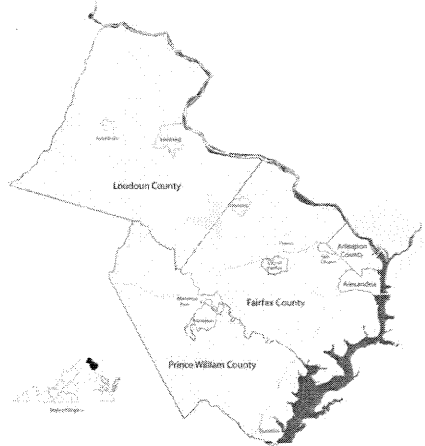
Date: 1/18/2011



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Components of the Regional Plan

- Inventory of existing water sources.
- Assessment of existing water use.
- Assessment of projected water demand.
- Statement of need if demands exceed source availability within the planning horizon.
- Analysis of alternatives to address projected source water deficits if existing.
- Description of water demand management actions.
- Drought Response and Contingency Plan.



Date: 1/18/2011



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Current Schedule

Task	Start	Finish	Duration
Review Draft Plan	6/15/2011	7/12/2011	4 weeks
Compile Final Plan	7/13/2011	7/26/2011	2 weeks
Jurisdiction Public Hearings	7/27/2011	10/18/2011	12 weeks
Collect Adoption Documents and Finalize Submission of Plan to DEQ	10/19/2011	11/1/2011	2 weeks

Date: 1/18/2011



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Demand vs. Capacity

Projected PWC Daily Water Demand vs. PWC Purchased Water Capacity (7.2 COG Average Day Demand Projections)

	2010 (MGD)	2020 (MGD)	2030 (MGD)	2040 (MGD)
Total Daily PWC Public Water System Demand	42.01	50.47	57.13	62.11
Total Daily PWC Public Water Purchased Capacity	67.80	67.80	80.80*	80.80
<small>(*In 2020, PWCSA plans to purchase additional capacity of 12-14 MGD, which is reflected in 2030 capacity.)</small>				
PWC Percent Public Water Capacity Utilized	62%	74%	71%	77%

Note: Projections assume 350 gallons per day/household

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Private Wells

Projected PWC Private Well Daily Demand vs. Projected PWC Total Daily Water Demand (7.2 COG Average Day Demand Projections)

	2010 (MGD)	2020 (MGD)	2030 (MGD)	2040 (MGD)
PWC Private Wells in Development Area	2.09	2.03	1.45	1.04
PWC Private Wells in Rural Area	2.65	2.84	2.63	2.45
Total PWC Public Water System Demand (Includes PWCSA, PWCSA Public Well Systems and VAW)	42.01	50.47	57.13	62.11
Total PWC Demand	46.75	55.34	61.21	65.61
Private Well System Demand as Percent of Total	10%	9%	7%	5%

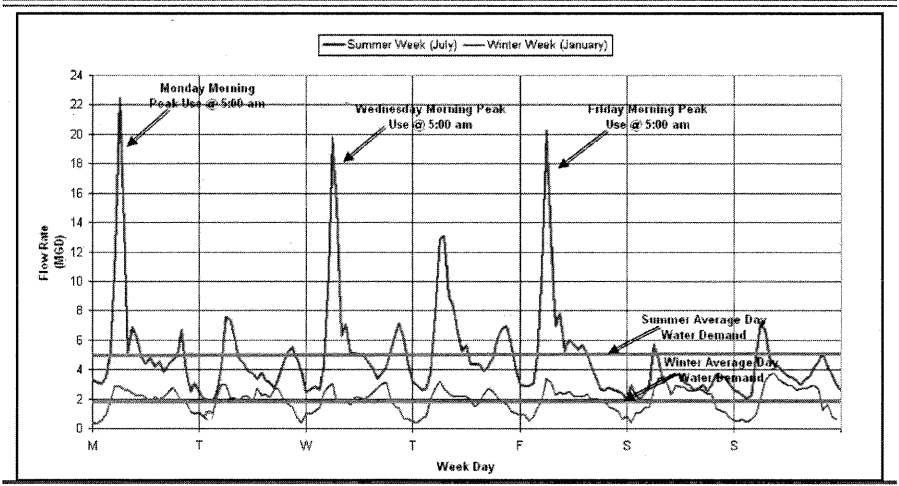
Note: Projections assume 350 gallons per day/household

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Impact of Residential Irrigation Demands



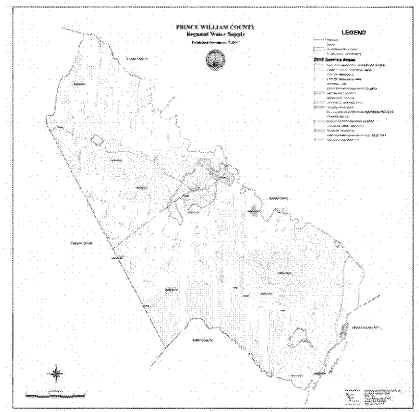
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Issues

- Adopt a Drought Response Plan
- Develop and Adopt a Drought Ordinance
- Develop Guidelines for Irrigation Systems
- Develop and Adopt Changes to Comprehensive Plan
- Approval of Regional Water Supply Plan



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Drought Response Plan

- DEQ requires every jurisdiction to have both a Plan and Ordinance.
- Regulation Requirements of Plan:
 - ◆ Structured to address *unique characteristics of water source(s)*.
 - ◆ Contain graduated stages:
 - Watch Stage: Increase awareness
 - Warning Stage: Conservation activities to reduce use 5-10%
 - Emergency Stage: Mandatory activities to reduce use 10-15%
 - ◆ Shall include references to local *ordinances*.
 - ◆ Specific triggers for government/citizen actions.
- Plan to be developed and adopted as part of Regional Water Supply Plan

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Drought Response Ordinance

- Regulation Requirements of Ordinance:
 - ◆ Provides a framework for authority, consistent trigger mechanisms and enabling state code.
 - ◆ *Procedures* for the triggers, implementation, and enforcement of drought response and contingency plans.
 - ◆ Ordinance reference applicable sections (both triggers and actions) in the regional drought response and contingency component of the plan.
- Developed and adopted by each jurisdiction

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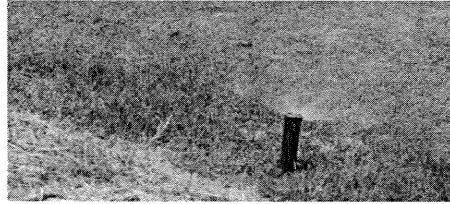


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Irrigation System Guidelines

As a result of Water Demand Management Actions

- Recommend freeze sensors, rain sensors, and flow sensors
- Establish procedures and materials for education and outreach



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Comprehensive Plan

- Update Potable Water Chapter to acknowledge and support Regional Water Supply Plan
- Add Action Strategy to educate public about water conservation
- Amendment developed and adopted by each jurisdiction
- Include Review of the Regional Water Supply Plan in the process



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Next Steps

- BOCS to initiate the development of the following (Feb. 15th):
 - ◆ Drought Plan and Ordinance
 - ◆ Approve Irrigation Guidelines
 - ◆ Comprehensive Plan Amendment/Regional Water Supply Plan
- Schedule Public Hearings between July 27th and Oct. 18th

Date: 1/18/2011



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