



## **Economic Impact Analysis Virginia Department of Planning and Budget**

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### **9 VAC 25-780 – Local and Regional Water Supply Planning**

#### **Department of Environmental Quality**

February 18, 2005

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The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 2.2-4007.G of the Administrative Process Act and Executive Order Number 21 (02). Section 2.2-4007.G requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. The analysis presented below represents DPB's best estimate of these economic impacts.

### **Summary of the Proposed Regulation**

Chapter 227 of the 2003 Acts of Assembly requires the State Water Control Board (board), with advice and guidance from the Commissioner of Health, local governments, public service authorities, and other interested parties, to establish a comprehensive water supply planning process for the development of local, regional, and state water supply plans that (i) ensure adequate and safe drinking water for 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.

The proposed regulation establishes a process for the development of local and regional water supply plans and criteria to be used by local governments in the development of these plans.

## Estimated Economic Impact

### *Description of Regulation:*

The proposed regulation establishes a process for the development of local and regional water supply plans. Local governments are required, in consultation and coordination with community water systems, to develop water supply planning programs that ensure availability of adequate and safe drinking water, encourage and protect all in-stream and off-stream beneficial uses<sup>1</sup>, encourage and promote alternative water sources, and promote conservation. Localities with population in excess of 35,000 are required to submit a local water supply planning program to the Department of Environmental Quality (DEQ) within three years of the effective date of this regulation.<sup>2</sup> Localities with population in excess of 15,000 are required to submit a plan within four years and localities with population less than and or equal to 15,000 are required to submit a plan within five years of the effective date of this regulation. Localities can also elect to participate in regional water supply plans. If they choose to do so, they are required to provide DEQ with notice of their intent to participate in a regional plan and submit a list of other localities participating in the plan within three years of the effective date of this regulation and are required to submit the regional plan within six years of the effective date of this regulation.

The proposed regulation also establishes criteria to be used by local governments in the development of their local and/or regional water supply planning programs. Water supply planning programs are to include (i) a description of existing water sources, existing water uses, and existing water resource conditions, (ii) an assessment of projected water demand, (iii) a description of water management actions including drought response, contingency plans, and other water demand management information, (iv) a statement of need, (v) an analysis that identifies alternatives to address projected deficits in water supply, (vi) map(s) identifying important elements of the program such as existing water sources, proposed new sources, and significant existing water uses, (vii) a copy of relevant local program documents, (viii) a resolution approving the water supply plan for each locality participating in the plan, and (ix) a

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<sup>1</sup> In-stream beneficial uses include the protection of fish and wildlife habitat, maintenance of waste assimilation, recreational uses, navigational uses, and cultural and aesthetic values. Off-stream uses include domestic, agricultural, electric power generation, and commercial and industrial uses.

<sup>2</sup> Population figures are to be based on the most recent U.S. census.

record of the public hearing, a copy of all written comments, and a copy of all responses to written comments.

The proposed regulation establishes criteria to be used by localities in the development of their water supply plans. It provides specific guidance regarding the content of these plans. For example, the proposed regulation details information to be reported in a locality's water supply plan regarding existing water sources, existing water uses, and existing resource information. It also specifies the methodology to be used when projecting water demand, the various levels of aggregation at which demand projections are to be made, and the time horizon over which projections are to be made. The proposed regulation requires water supply plans to address conservation and drought response as part of the plan's water management actions. Contingency plans are required to be developed in accordance with the proposed regulation. Finally, all local and regional water supply plans are required to include a statement of need based on the adequacy of existing water sources to meet current and projected water demand over the planning horizon. In the event that existing sources are determined to be inadequate to meet demand over the planning period, water supply plans are required to include an analysis conducted in accordance with the requirements of this regulation that identifies alternative ways of meeting the shortfall in water supply.

The proposed regulation also establishes the state's role in the planning process. It requires that the state assist localities technically and financially in the development of their water supply plans, provide local governments with guidance on compliance options, facilitate the provision of existing resource, existing use, and water management information, identify acceptable methods for projection of future water demand, provide information relating to known conflicts in the development of alternatives to meet shortfalls in water supply, convene a meeting of the Technical Evaluation Committee at the request of the locality, and provide notice of local public hearing(s) on local programs.

All local and regional water supply plans are to be reviewed by the board in order to ensure compliance with the requirements of the regulation and consistency with the State Water Resources Plan. The Department of Health, the Department of Conservation and Recreation, the Marine Resources Commission, the Department of Historic Resources, the Department of Game and Inland Fisheries, and all other interested parties are to be provided with an opportunity to

comment on the board's tentative and final decisions relating to local and regional program compliance.

Localities are required to review all water supply planning programs within five years of the program's compliance determination by the board. In the event of a change in circumstances or new information becoming available that results in water demand not being met by the alternatives listed in the plan, localities required to submit a revised plan. In the event of no significant changes, localities are required to notify DEQ that the existing plan continues to remain in effect. The five-year review notwithstanding, localities are required to review, revise, and resubmit their water supply planning program every ten years.

*Estimated Economic Impact:*

The proposed regulation is likely to impose *economic costs*. Localities will be required to develop a local water supply plan or participate in a regional water supply plan in accordance with this regulation. The cost of developing a local or regional water supply plan varies depending on the size of the locality, the complexity of delivery systems and current sources of supply, the degree of local need for additional supply, and the type of strategies identified to address shortfalls in water supply. DEQ estimates that it is likely to cost localities between \$13,000 and \$79,00 if the plan is developed using in-house resources and between \$19,000 and \$115,000 if it is developed using a combination of in-house resources and external consultants. Based on the number and size of the localities required to submit local water supply plans, the total cost of developing these plans is estimated to be approximately \$4.5 million if only in-house resources are used and approximately \$6.5 million if a combination of in-house resources and external consultants are used. Localities are also likely to incur costs in reviewing and revising plans every five or ten years. However, DEQ believes that these costs are likely to be much smaller than the costs associated with initially developing the plan. The cost to localities participating in regional water supply plans is likely to be lower. However, an estimate of the cost savings to localities participating in regional plans is not available at this time.

DEQ anticipates awarding between seven and 17 water supply grants ranging from \$20,000 to \$50,000 to localities over the next two years to defray some of the costs associated with preparing these plans. The agency anticipates providing \$350,000 in such grants in FY

2006 and \$500,000 in such grants each year after that to defray some of the cost to localities of developing, reviewing, and revising local and regional water supply plans.

In addition to the cost to localities, DEQ is also likely to incur costs in running the program. The agency estimates that it will incur administrative costs of \$850,000 per year, including the cost associated with creating 13 full-time positions<sup>3</sup>. In addition, the agency intends to conduct ground water characterization studies. According to DEQ, comprehensive ground water studies have not been conducted since the late-1970s and early-1980s. Such studies are necessary in order to have accurate existing water source information when developing the local and regional water supply plans. DEQ estimates that it will cost the agency \$350,000 per year over the next 10-15 years to conduct these studies.

The proposed regulation is also likely to produce *economic benefits* for the state. These benefits include the provision of adequate and safe drinking water, encouragement and protection of beneficial in-stream and off-stream uses, encouragement and promotion of alternative water sources, and promotion of conservation activities<sup>3</sup>. The drought of 2002 is a case in point when inadequate planning resulted shortfalls in water supply. According to DEQ, several localities were within weeks or months of running out of drinking water during the summer of 2002. In August 2002, the city of Charlottesville had less than 90 days of drinking water supplies and even considered postponing the re-opening of institutions of higher education in order to ease the situation. Localities had not envisaged such an event and, hence, had no contingency plans in place to ensure a continuing supply of drinking water under drought conditions. The proposed regulation is intended to prevent such a situation from occurring again. The proposed regulation is also intended to identify potential conflicts between localities and between in-stream and off-stream when securing adequate drinking water supplies uses before they arise. By rationalizing state water resource use such that in-stream and off-stream benefits are balanced and ensuring consistency in the use of water resources on a statewide basis, the proposed regulation is likely to produce additional economic benefits by encouraging more efficient use of Virginia's water resources.

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<sup>3</sup> The 13 full-time positions include one water supply planning manager, one ground water data management position, one stream gauging position, eight water supply planning positions, and two ground water characterization positions.

It is worth noting that DEQ does not currently intend to directly link the water supply planning process to the permitting of water supply projects. Thus, localities are not required by regulation to ensure that water supply projects undertaken by them are consistent with their local or regional water supply plan. Water supply projects are currently permitted under the Virginia Water Protection Permit (VWPP) regulations.<sup>4</sup> While DEQ intends to evaluate VWPP applications in the context of local and regional water supply plans, the proposed regulation specifically states that a review of local and regional water supply planning programs is not a prerequisite in order to apply for a permit for a water supply project. Moreover, amendments to the VWPP regulation currently being considered by DEQ and the board do not include changes that would directly link water supply projects to local and regional water supply plans.

Uncertainty on the part of water suppliers and conservationists regarding the impact of directly linking water supply projects to local and regional water supply plans was a major factor in the planning and permitting processes not being linked.<sup>5</sup> However, by not explicitly linking the planning and permitting process, some of the potential economic benefits accruing from this regulation could be foregone. A significant portion of the benefits of local and regional water supply planning accrue from the improvement in efficiency in the use of the state's water resource as a result of having local and regional water supply plans. While DEQ believes that most localities will undertake water supply projects that are consistent with their local or regional water supply plans, not requiring a direct link between these two aspects of water supply management could result in not all the benefits of the proposed regulation being realized.

The *net economic impact* depends on whether the costs imposed by the proposed regulation are greater than or less than the benefits accruing from it. The additional costs include the cost to localities in developing, reviewing, and revising their water supply plans<sup>6</sup> and the cost to DEQ in running the program. Estimates of these costs are provided above. The economic

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<sup>4</sup> The VWPP regulations deal with the permitting of intake structures and development of reservoirs to support the water supply planning activities of the state.

<sup>5</sup> Water suppliers were concerned about linking the planning process to the permitting process due to the difference in horizon for these processes. While water supply planning is done over a 30-50 year horizon, water supply projects are undertaken on the basis of a much shorter horizon. Conservationists were concerned about linking the planning process to the permitting process due to the difference in the level of scrutiny and review of these two processes. The planning process is subject to less scrutiny and review than the permitting process for a water supply project.

<sup>6</sup> As discussed above, some of the cost to localities is likely to be defrayed by water supply planning grants provided by the state.

benefits accruing from this regulation include the provision of adequate drinking water supplies and an improvement in efficiency in the use of state water resources. However, estimates of these benefits are not available at this time. A benefits estimate would require calculating the reduction in risk to drinking water supplies through local and regional water supply planning and a valuation the risk reduction in terms of improved public health and safety. It would also require estimation of the impact of this regulation in preserving the state's water resources through improved efficiency in its use. While precise estimates of the benefits are not possible at this time, they are likely to be significant. Demand for water supply is likely to continue to increase over time, increasing the strain on existing water resources and making the provision of drinking water supplies increasingly challenging. Thus, the benefits of the proposed regulation are likely to be in the ballpark of the costs, if not larger than them.

### **Businesses and Entities Affected**

The proposed regulation is likely to have a positive impact on businesses and entities providing water supply planning services. There will be an increase in demand for these services as localities seeking to develop, review, and revise their water supply plans. The precise number of such businesses operating in Virginia is not known.

### **Localities Particularly Affected**

The proposed regulation applies to all localities in the Commonwealth. All cities, counties, and incorporated towns will be required to develop local and/or regional water supply plans and submit them to DEQ for approval. They will also be required to review the plans every five years and review, revise, and resubmit the plans every ten years. According to DEQ, there are 41 localities with population of less than or equal to 15,000, 48 localities with population between 15,000 and 35,000, and 45 localities with population greater than 35,000.

The cost of developing, reviewing, and revising local and regional water supply plans will be incurred by localities. However, DEQ intends to provide water supply planning grants to defray some of the cost to localities. The remaining costs are likely to be passed on to tax payers in the form of higher rates and fees.

## **Projected Impact on Employment**

DEQ intends to create 13 full-time positions to administer the program. In addition, there is likely to be an increase in demand for water supply planning specialists from localities trying to meet the requirements of this regulation. This, in turn, could lead to more individuals employed in this area.

## **Effects on the Use and Value of Private Property**

The proposed regulation is likely to result in an increase in demand for water supply planning services. Consequently, businesses and entities providing these services are likely to see an increase in demand for their services that, in turn, is likely to have a positive effect on their asset value.