



Economic Impact Analysis Virginia Department of Planning and Budget

12 VAC 5-590-505 – Rules Governing Development of Emergency Management Plans for Community Waterworks During Extended Power Outrages

Department of Health

October 25, 2005

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 2.2-4007.H of the Administrative Process Act and Executive Order Number 21 (02). Section 2.2-4007.H 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

The State Board of Health (board) proposes to require community waterworks to develop and maintain an emergency management plan (EMP) to provide pure water during extended power outages of no less than five days. The plan will address procedures for obtaining and distributing potable water, notification procedures to public officials, customers and the media, emergency disinfection procedures and telephone numbers for state regulatory personnel, waterworks personnel, and energy suppliers to the waterworks.

Estimated Economic Impact

A community waterworks is a system that serves piped water for drinking or domestic use to (i) the public, (ii) at least 15 connections, or (iii) an average of 25 individuals for at least 60 days out of the year. The term "waterworks" includes all structures, equipment and

appurtenances used in the storage, collection, purification, treatment and distribution of pure water except the piping and fixtures inside the building where such water is delivered.

Occasionally, incidents such as ice storms, hurricanes, tornadoes, flooding, terrorism, vandalism, and blackouts may cause extended power outages in the Commonwealth of Virginia. According to the Virginia Department of Health (VDH), the extended power outages may lead to low (below 20 psi) or loss of water pressure in a water distribution system, which could allow contamination to enter the water system through backflow by back-pressure or back-siphonage. This represents a threat to the public health. For example, on September 18, 2003, Hurricane Isabel impacted the east coast and then moved inland up through Virginia as a major tropical storm. The storm caused over 2 million customers to lose power, some for up to sixteen days, and eighteen percent of the community waterworks in Virginia to issue a boil water notice as a precautionary measure.

In order to better prepare the community waterworks in Virginia to respond to an extended power outage, the board promulgated emergency regulation in October 2004 requiring that the community waterworks develop and maintain an emergency management plan for an extended power outage. The effective date for compliance was April 15, 2005 for waterworks serving a population of 3,300 or greater, and September 5, 2005 for waterworks serving a population under 3,300.

Now the board proposes to promulgate a permanent regulation that will replace the emergency regulation. According to the proposed regulation,

A) Each community waterworks¹ shall develop and maintain an emergency management plan for extended power outages.

B) Each plan shall be kept current and shall be kept at a location that is readily accessible in the event of an extended power outage.

C) Each community waterworks shall certify in writing to the appropriate field office of the Office of Drinking Water in the Department of Health that the waterworks has completed such plan.

¹ This includes consecutive waterworks that purchase or receive water from another community waterworks for resale.

In the emergency management plan, the community waterworks will be required to address the following: (1) identification of the criteria (events, duration of power outage, etc.) that will initiate activation of the plan, (2) how the community waterworks will respond to an extended power outage for a minimum of five days, (3) procedures for obtaining and distributing potable water in the event that primary source(s) becomes unavailable, (4) notification procedures and example notices to the public and media (local radio stations, television stations, local newspapers, etc.) including conservation and boil water advisories, (5) emergency disinfection procedures for distribution system(s) and storage tank(s), (6) the telephone number of the appropriate field office of the Office of Drinking Water in the Virginia Department of Health, (7) the names and telephone numbers of the waterworks personnel who should be notified, (8) the name and telephone number of the Local Emergency Coordinator designated by the Virginia Department of Emergency Management, and (9) the names and telephone numbers of the electric power, natural gas, and propane distributors, or other energy supplier to the waterworks. VDH will evaluate whether an emergency management plan is complete.

The proposed regulation will better prepare the community waterworks in Virginia to respond to an extended power outage for a minimum of five days. The community waterworks will be required to address in the emergency management plan procedures for obtaining and distributing potable water in the event that primary sources becomes unavailable. According to VDH, this could mean having bottled water delivered, having a water tanker truck deliver water to customers, obtaining water supply through interconnection to another waterworks, or having an arrangement with a fire department to deliver or distribute water, etc. Some community waterworks may be encouraged to install generators, or transfer switches and generator receptacles (in order to hook up portable generators).^{2 3} So with the emergency management plan, the community waterworks will be able to respond to extended power outages in a more expedited manner, thus the likelihood of issuing boil water advisories due to unsafe tap water or

² Some community waterworks have already installed or planned to install generators or take other measures to prepare themselves for extended power outages, in the absence of the proposed regulation. For example, according to VDH, Fairfax County is planning to spend about 60 million dollars to put on generators for its county system before the proposed regulation.

³ According to VDH, the cost for installing a generator could be \$50,000 for a ground water system and \$100,000 or more for a surface system. The estimated cost for installing transfer switch and generator receptacle varies from \$1,000 to \$10,000.

other emergency declarations involving the state's drinking water will be decreased. As a result, the public health will be better protected.

The proposed regulatory action will also improve the Virginia Department of Health and the Commonwealth's ability to monitor and manage extended power outage events, which in turn will allow for better allocation of resources. Additionally, the proposed regulation will facilitate better communication between community waterworks owners, the public and government officials in times of emergency to help ensure safe drinking water.

The proposed requirement for an emergency management plan will affect the 1,300 community waterworks in the Commonwealth of Virginia. According to VDH, the 150 community waterworks that serve 3,300 people or more have been required by federal regulation to conduct a vulnerability assessment and either prepare or revise, where necessary, an emergency response plan (ERP) that incorporates the results of their vulnerability assessment. A variety of situations may have been planned for by waterworks that developed an ERP or some other type of emergency operating procedures manual. Many components of the emergency management plan regulation may have already been covered in these prepared plans. Therefore, the impact of the proposed regulation on the community waterworks serving 3,300 people or more may be moderate. However, waterworks serving a population of less than 3,300 were not required to prepare assessments or response plans. Therefore, those waterworks will need to develop a plan or modify whatever plan does exist. According to VDH, the projected increased cost to develop and maintain an emergency management plan is approximately eight hours of work per year, consisting of telephone calls, information gathering, and updating records. Although some community waterworks may be encouraged to install generators, or transfer switches and generator receptacles (in order to hook up portable generators), the proposed regulation does not require these specific solutions.

The residents in the Commonwealth of Virginia will benefit from the waterworks' better preparation for extended power outages. On the other hand, they may experience increased rates if the community waterworks choose to install generators, or transfer switches and generator receptacles.

The projected cost for VDH to implement the proposed regulation will be approximately \$10,000 for internal work group meetings and regional public meetings with stakeholders to plan and implement the regulatory action.

Businesses and Entities Affected

The proposed regulation will affect the 1,300 community waterworks in the Commonwealth of Virginia. Among those, the 150 waterworks that serve 3,300 people or more will be less significantly affected because previously they were required by federal regulation to maintain an ERP, which may have covered some components of the emergency management plan. The projected increased cost to develop and maintain the emergency management plan is approximately eight hours of work per year, consisting of telephone calls, information gathering, and updating records.

Localities Particularly Affected

The proposed regulation affects localities throughout the Commonwealth, especially those that are more likely to encounter incidents such as ice storms, hurricanes, tornadoes and flooding.

Projected Impact on Employment

The proposed regulation will moderately increase costs for the community waterworks, but will likely not adversely affect employment. The community waterworks may need to pay for additional working hours for developing and maintaining the emergency management plan. Employment may also moderately increase for contractors that engage in generator installation or switch installation, if the community waterworks are encouraged to have the generator or switch installed.

Effects on the Use and Value of Private Property

The proposed regulation will cause an increased cost of eight hours of work per year for the community waterworks, which may moderately reduce their profit and commensurately, moderately reduce the value of these waterworks. On the other hand, the requirement of an emergency management plan will better prepare the community waterworks for an extended power outage and will benefit the residents served by the community waterworks. As a result, the value of the residential properties will be positively affected.

Small Businesses: Costs and Other Effects

According to VDH, all of the 1,300 community waterworks in the Commonwealth of Virginia are small businesses. The 150 waterworks serving 3,300 people or more will be affected less compared to the others because previously they were required by federal regulation to maintain an ERP, which may have already covered some components of the emergency management plan. For most of the community waterworks, the increased cost to develop and maintain an emergency management plan will be approximately eight hours of work per year.

Small Businesses: Alternative Method that Minimizes Adverse Impact

The proposed regulation will benefit the public health by better preparing the community waterworks to respond to extended power outages. The proposed regulation will less significantly affect the 150 community waterworks that serve 3,300 people or more. For the 1,150 smaller waterworks that serve fewer than 3,300 people, the proposed regulation will cause an increased workload of eight hours per year. There is no clear alternative method that would both achieve the stated goals to benefit the public, and have a smaller adverse impact.