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VERMONT WATER RESOURCES STUDY

JULY 31, 2006.—Ordered to be printed

Mr. DOMENICI, from the Committee on Energy and Natural Resources, submitted the following

R E P O R T

[To accompany S. 2054]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 2054) to direct the Secretary of the Interior to conduct a study of water resources in the State of Vermont, having considered the same, reports favorably thereon with an amendment and recommends that the bill, as amended, do pass.

The amendment is as follows:

On page 1, line 7, insert after "shall" the following: ", in accordance with this Act and any other applicable law,".

PURPOSE OF THE MEASURE

S. 2054 would authorize the United States Geological Survey to undertake a water resources study in the State of Vermont.

BACKGROUND AND NEED

It is estimated that approximately sixty-six percent of Vermont's population rely on groundwater for their drinking water. Groundwater also provides a significant source of water for industrial, environmental, and agricultural purposes. Naturally-occurring groundwater contaminants including arsenic, radioactivity, and radon have been found in the groundwater and, according to the state government, pose a health risk to Vermonters.

Concerns have been raised regarding Vermont's groundwater resources. Knowing more about the groundwater resources will allow Vermonters to best mitigate the threat posed by contaminants and to enhance planning efforts, including how best to manage existing water resources. Beginning in the 1960s, the State of Vermont undertook steps to better understand its groundwater resources. Since

that time, knowledge of Vermont's groundwater resources has become more comprehensive and detailed.

While the data acquired by the State since the 1960s allows for rudimentary aquifer mapping for parts of the State, lack of adequate State funding has not allowed the State to obtain information necessary to address potential problems. The study authorized by S. 2054 will allow the State of Vermont to better understand the nature of its groundwater resources and plan accordingly.

LEGISLATIVE HISTORY

S. 2054 was introduced on November 18, 2005, by Senator Jeffords and referred to the Committee on Energy and Natural Resources. The Subcommittee on Water and Power held a hearing on S. 2054 on March 30, 2006. At the business meeting on May 24, 2006, the Committee on Energy and Natural Resources ordered S. 2054 favorably reported with an amendment.

COMMITTEE RECOMMENDATION

The Committee on Energy and Natural Resources, in open business session on May 24, 2006, by a unanimous voice vote of a quorum present, recommends that the Senate pass S. 2054, if amended as described herein.

COMMITTEE AMENDMENT

During consideration of S. 2054, the Committee adopted an amendment which provides that the survey authorized by S. 2054 shall be conducted pursuant to applicable law.

SECTION-BY-SECTION ANALYSIS

Section 1, subsection (a) authorizes the Secretary of the Interior, acting through the Director of the United States Geological Survey and in coordination with the State of Vermont to conduct a survey of water resources in the State.

Subsection (b) directs the Secretary to submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Resources of the House of Representatives a report describing the result of the study not later than two years after the date of enactment of the act.

Subsection (c) authorizes such sums as necessary to carry out this section.

COST AND BUDGETARY CONSIDERATIONS

The following estimate of costs of this measure has been provided by the Congressional Budget Office:

S. 2054—A bill to direct the Secretary of the Interior to conduct a study of water resources in the state of Vermont

S. 2054 would direct the Secretary of the Interior to conduct a study of water resources in Vermont. The study, to be completed within two years of the bill's enactment, would include a survey of groundwater supplies available to municipalities. Based on the cost of similar studies, CBO estimates that carrying out the proposed study would cost the U.S. Geological Survey about $6 million over the next few years, assuming appropriation of the necessary

amounts. Enacting S. 2054 would not affect direct spending or revenues.

The bill contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act and would impose no costs on state, local, or tribal governments.

The CBO staff contact for this estimate is Deborah Reis. This estimate was approved by Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S. 2054. The bill is not a regulatory measure in the sense of imposing Government-established standards or significant responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from the enactment of S. 2054.

EXECUTIVE COMMUNICATIONS

The testimony provided by the United States Geological Survey at the Subcommittee hearing on S. 2054 in the 109th Congress follows:

STATEMENT OF CATHERINE L. HILL, NORTHEAST REGIONAL HYDROLOGIST, UNITED STATES GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR

Madam Chairman and Members of the Subcommittee, I am Catherine L. Hill, Northeast Regional Hydrologist for Water for the U.S. Geological Survey (USGS). I thank you for the opportunity to provide the views of the Department of the Interior (Department) on S. 2054, a bill to conduct a Vermont water resources study.

The Department agrees that the goals of the bill are commendable but has concerns with the bill. We note that studies similar to this have been done by USGS in other States, generally carried out within the USGS Cooperative Water Program, which is a long- standing cost-sharing program using Federal and State funds. Given the existing authorities for our Cooperative Water Program, congressional authorization of this study is not necessary.

S. 2054, VERMONT WATER RESOURCES STUDY

S. 2054 directs the Secretary of the Interior, acting through the Director of the USGS and in coordination with the State of Vermont, to conduct a study on water resources in the State of Vermont. The role identified for the Department in this bill is consistent with USGS's leadership role in surveying and characterizing ground-water resources.

The bill requires a survey of ground-water supplies and aquifers available for water supply by municipalities

throughout the State, as part of a study to determine whether these supplies provide water of potable (drinkable) quality.

The USGS has a long history of conducting ground-water assessments on both local and regional scales. In the 1950s and 1960s, studies were conducted across the Nation to provide a basic understanding of geohydrologic conditions at a county-level scale. In the 1980s, 25 regional aquifer systems were studied in detail, including the aquifer systems in Vermont. However, these studies provide a regional and national context of ground water that are often not detailed enough for State and municipal needs.

As stated, the goals of the S. 2054 can be met through existing authorities, and many related activities are being implemented on the ground in Vermont. USGS has been actively working with the Vermont Geological Survey in the creation of a new bedrock geologic map that is scheduled to be completed in the next few years. This new geologic map will provide a variety of information that can be used to help define ground-water availability and quality. Map information will include bedrock types that may be correlated with high yield wells or bedrock types that may be associated with natural contaminants (for example arsenic or radon). In 2003, USGS provided information on possible approaches for ground-water assessment and aquifer mapping to the State of Vermont for a report to the State Legislature on the status of ground-water and aquifer mapping. In this report, a plan for future statewide ground-water and aquifer assessments was presented. This document provides a foundation for how work proposed by this legislation could be performed.

The USGS has extensive databases that would provide useful information in evaluating potential ground-water resources in Vermont. These databases include the location and characteristics of most mineral occurrences throughout the United States; geochemical characteristics of rocks, soils, stream sediments, and water; long-term ground-water level and stream flows; and water-use and well inventories.

The USGS also has a number of on-going studies that relate to ground water in Vermont. USGS, through the Mineral Resources Program and in cooperation with the U.S. Environmental Protection Agency, is determining the water quality effects of three abandoned mines on local streams and ground water. Another USGS study, in cooperation with the Vermont Geological Survey, is looking at the radionuclide content of wells in the Barre West and Montpelier quadrangles. USGS is also analyzing the presence of arsenic in bedrock wells throughout New England as part of a project with the National Institutes of Health. This work will identify the probability of bedrock wells having detectable levels of arsenic. In addition, through the USGS National Water-Quality Assessment Program, we are evaluating how radon and uranium vary from aqui-

fer to aquifer in the northern portions of the United States, including Vermont.

In New Hampshire, USGS has already performed statewide surficial and bedrock aquifer mapping and characterization. This work, conducted through the USGS Cooperative Water Program, occurred in the 1980s and 90s and now serves as the benchmark for ground-water characterization in the State and is the basis for State and local planning and resource protection programs. We envision that a statewide aquifer mapping and ground-water characterization effort in Vermont would be similar in many respects to the New Hampshire effort.

Ground water is the source of water for two-thirds of Vermont's residents. From 1950 to 2000, the amount of ground water used in the State is estimated to have increased by at least 60 percent. While Vermont is blessed with a major surface-water supply source in Lake Champlain to serve its largest cities, most communities, businesses, and homes away from the Lake rely on ground water for their water supply.

The proposed legislation also requires an assessment of how ground water recharges and interacts with surface water. This is critical because ground water can be a major source of water for streams, especially in headwater areas. Vermont's rivers and streams are an important natural resource—providing habitat for its trout and other fisheries and supplying flows to its many lakes and ponds. As stated previously, USGS is currently working with the States to provide a better understanding of ground-water aquifers, the areas that contribute to both ground- and surface-water systems, and how current and future water demands could influence these systems, will help decision makers ensure that sufficient supplies are present for the multiple uses of Vermont's water resources.

CONCLUSION

In conclusion, the USGS concurs with the goals of the bill to meet Vermont's need for a detailed ground-water assessment and aquifer mapping program, but notes that there are already ongoing efforts to address these goals. Such an effort would help ensure long-term water supplies for its citizens, businesses, industry, and natural features. However, we feel that such a proposed study would take 5 or more years to complete and that the 2-year time frame for completing the study would not yield comprehensive results. We recommend that studies of this type be conducted under the USGS Cooperative Water Program, through a cost-share arrangement. The USGS looks forward to working with the State of Vermont, particularly the Vermont Geological Survey, in future ground-water resource and aquifer studies.

Thank you, Madam Chairman, for the opportunity to present this testimony. I will be pleased to respond to questions you and other Members of the Subcommittee may have.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee notes that no changes in existing law are made by the bill S. 2054, as ordered reported.

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