

Calendar No. 1058

110TH CONGRESS }
2d Session }

SENATE

{ REPORT
{ 110-487

CLIMATE CHANGE DRINKING WATER ADAPTATION RESEARCH ACT

SEPTEMBER 24 (legislative day, SEPTEMBER 17), 2008.—Ordered to be printed

Mrs. BOXER, from the Committee on Environment and Public
Works, submitted the following

R E P O R T

[To accompany S. 2970]

[Including cost estimate of the Congressional Budget Office]

The Committee on Environment and Public Works, to which was referred a bill (S. 2970) to enhance the ability of drinking water utilities in the United States to develop and implement climate change adaptation programs and policies, and for other purposes, reports, favorably thereon, and recommends that the bill do pass.

PURPOSES OF THE LEGISLATION

S. 2970, the Climate Change Drinking Water Adaptation Research Act, would require the Environmental Protection Agency, in consultation with the Departments of Commerce, Energy, and Interior, to establish a research program to assist suppliers of drinking water in adapting to the effects of climate change.

GENERAL STATEMENT AND BACKGROUND

According to scientific experts including the U.S. Climate Change Science Program conclude that climate change threatens our water supplies due to a variety of hydrologic cycle changes, including increasingly severe extreme weather events, decreased snow pack, decreased runoff, and increased saltwater intrusion. According to a report from the U.S. Climate Change Science Program under President Bush, “likely reductions in snowmelt, river flows, and groundwater levels, along with increases in saline intrusion into coastal

rivers and groundwater, will reduce fresh water supplies.”¹ S. 2970 provides for a 10-year research program on water supply impacts and adaptation strategies.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

Section 1 would provide that the Act may be cited as the “Climate Change Drinking Water Adaptation Research Act.”

Section 2. Findings

The central findings of the Act are: (1) the consensus among climate scientists is overwhelming that climate change is occurring more rapidly than can be occurred to natural causes, and significant impacts to the water supply are already occurring, (2) among the first and most critical of those impacts will be change to patterns of precipitation around the world, which will affect water availability for the most basic drinking water and domestic water needs of populations in many areas of the United States, and supplying water is highly energy-intensive and will become more so and energy production consumes a significant percentage of the fresh water resources of the United States. Additional findings highlight the worldwide extent of the problem, the relationships between water use and production and energy use and production, the usefulness and findings of ongoing studies by research institutions and foundations, and the need for water utilities to prepare for a wider range of possibilities in managing and delivering water.

Section 3. Research on the effects of climate change on drinking water utilities

The Environmental Protection Agency, in cooperation with the Departments of Commerce, Energy, and Interior, shall establish and provide funding for a research program to be conducted through a nonprofit water research foundation, to assist suppliers of drinking water in adapting to the effects of climate change. Water utilities are also expected to sponsor such research working with such a nonprofit foundation. It is expected that the federally-funded research plans will be developed through an open public process involving drinking water utilities, government experts, and others.

Areas of research shall include:

- (1) Water quality impacts and solutions, including pathogens and algae and mitigating increasing damage to watersheds and water quality from extreme events, such as wildfire and hurricanes;
- (2) Impacts on ground water supply from carbon sequestration;
- (3) Water quantity impacts and solutions, including hydrological basin research, improvement of regional climate change models, and improved aboveground and underground storage;

¹U.S. Climate Change Science Program, “Analyses of the effects of global change on human health and welfare and human systems,” Executive Summary, p. 8, <http://downloads.climate-science.gov/sap/sap4-6/sap4-6-final-all.pdf>.

(4) Infrastructure impacts and solutions for water treatment facilities and underground pipelines, including sea-level rise impacts and ways to increase resilience of existing infrastructure;

(5) Desalination, water reuse and alternative water supply technologies;

(6) Energy efficiency and greenhouse gas minimization in water supply and improving water efficiency in energy production;

(7) Regional and hydrological basin cooperative management solutions;

(8) Utility management, decision support systems, and water management models;

(9) Reducing greenhouse gas emissions and energy demand management in the provision, transmission, and treatment of drinking water;

(10) Water conservation and demand management;

(11) Communications, education, and public acceptance for improved strategies and communication with customers, decisionmakers, and stakeholders.

The Act authorizes appropriations of \$25,000,000 per year from 2009–2019.

LEGISLATIVE HISTORY AND VOTES

On September 17, 2008, the Committee on Environment and Public Works held a business meeting at which the Committee considered S. 2970. The Committee favorably adopted the legislation by voice vote.

REGULATORY IMPACT STATEMENT

In compliance with section 11(b) of rule XXVI of the Standing Rules of the Senate, the committee finds that the legislation would not have any regulatory impact. The Congressional Budget Office found that the bill imposes no private sector mandates.

MANDATES ASSESSMENT

In compliance with the Unfunded Mandates Reform Act of 1995 (Public Law 104–4), the Committee finds that the legislation establishes no intergovernmental or private sector mandates. The CBO found that “S. 2970 contains no intergovernmental or private-sector mandates as defined in UMRA and would not affect the budgets of state, local, or tribal governments.”

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

SEPTEMBER 19, 2008.

Hon. BARBARA BOXER,
Chairman, Committee on Environment and Public Works,
U.S. Senate, Washington, DC.

DEAR MADAM CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 2970, the Climate Change Drinking Water Adaptation Research Act.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Susanne S. Mehlman.

Sincerely,

PETER R. ORSZAG.

Enclosure.

S. 2970—Climate Change Drinking Water Adaptation Research Act

Summary: S. 1933 would require the Environmental Protection Agency (EPA), in cooperation with the Secretaries of Commerce, Energy, and the Interior, to establish a research program to help drinking water suppliers adapt to the effects of climate change. This legislation would authorize the appropriation of \$25 million annually over the 2009–2019 period.

Assuming appropriation of the authorized amounts, CBO estimates that implementing S. 2970 would cost \$106 million over the 2009–2013 period and \$169 million after 2013. Enacting S. 1933 would not affect direct spending or revenues.

S. 2970 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would not affect the budgets of state, local, or tribal governments.

Estimated cost to the Federal Government: The estimated budgetary impact of S. 2970 is shown in the following table. The costs of this legislation fall within budget function 300 (natural resources and environment). For this estimate, CBO assumes that S. 2970 will be enacted near the start of fiscal year 2009 and that the amounts authorized by the bill will be appropriated each year. Estimated outlays are based on historical spending patterns for similar programs.

	By fiscal year, in millions of dollars—					
	2009	2010	2011	2012	2013	2009–2013
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Authorization Level	25	25	25	25	25	125
Estimated Outlays	10	21	25	25	25	106

Intergovernmental and private-sector impact: S. 2970 contains no intergovernmental or private-sector mandates as defined in UMRA and would not affect the budgets of state, local, or tribal governments.

Estimate prepared by: Federal Costs: Susanne S. Mehlman. Impact on State, Local, and Tribal Governments: Burke Doherty. Impact on the Private Sector: Amy Petz.

Estimate approved by: Theresa Gullo, Deputy Assistant Director for Budget Analysis.

CHANGES IN EXISTING LAW

Section 12 of rule XXVI of the Standing Rules of the Senate requires the committee to publish changes in existing law made by the bill as reported. Passage of this bill will make no changes to existing law.