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***RPC Backgrounder:***

# **The Data Quality Act: History and Purpose**

## **Introduction**

It is vital that government information, including data derived from scientific and statistical analysis, be valid because it often underpins regulatory and resource-allocation decisions by federal agencies – as well as the laws made by Congress. The use of poor-quality data or bad science can lead to costly mistakes. To help improve the quality and reliability of government information, Congress passed the Data Quality Act in 2000 (also referred to as the Information Quality Act). This background paper will describe the Data Quality Act’s history and purpose, and will address some misperceptions related to the law.

In 1995, a newly Republican Congress oversaw passage of the Paperwork Reduction Act, designed to reduce “red tape” and improve the functioning of the federal government. This law, which passed both houses unanimously, contained government data-quality provisions directing the White House Office of Management and Budget (OMB) to implement “policies, principles, standards, and guidelines” to ensure the quality of information used and disseminated by the Federal government. However, the OMB under the Clinton Administration never did comply with the data-quality requirements of the law, despite several congressional directives to do so. Only after Congress passed a subsequent law in 2000 – the Data Quality Act, which put a deadline on the requirements – did the OMB (under a new administration) comply.

The Data Quality Act – and its potential to improve government decisionmaking – largely has gone unnoticed. Recently, however, it garnered some attention because the Senate’s FY 2005 Commerce, Justice, State appropriations bill initially contained a provision that would have exempted one federal agency – the National Oceanic and Atmospheric Administration (NOAA) – from the law’s requirements. Such an exemption was of concern to some Senators because of the leading role that agency plays in climate change research. In the past, some climate research has been criticized for failing to meet minimal scientific standards. Although the exemption for NOAA was eventually dropped from the bill, the concern it sparked serves to spotlight this obscure but very important law.

## Clinton Administration Failed to Comply With Data-Quality Mandates

The reasons why the Clinton Administration ignored the data-quality provisions in the 1995 law are not entirely clear. But it is likely that regulatory officials recognized that the law could hinder their ability to issue new regulations (including environmental regulations) because of high standards of scientific quality that then would be imposed on the scientific and statistical data supporting those regulations. In any case, that part of the law was ignored, despite Congress's insistence that the White House adhere to it.

The first reminder from Congress to OMB to comply with the data-quality provisions of the 1995 law came in 1998. The House report (H. Rept.105-592) to the FY 1999 Treasury, Postal Service, and General Government Appropriations Bill contained a non-binding provision urging the OMB to develop policy and procedural guidance "in fulfillment of the purposes and provision of the Paperwork Reduction Act of 1995." The report urged OMB to issue the required guidelines by September 30, 1999, to require Federal agencies to develop their own guidelines consistent with the OMB regulations within a year of that date, and to develop administrative mechanisms to allow affected persons to petition for correction of information.

With OMB still failing to move toward compliance the following year, Representative Thomas Bliley (R-VA), chairman of the House Commerce Committee sent a letter to the OMB reiterating the need to comply with the law and reminding it of the previous year's House report language. Bliley expressed frustration over the OMB's failure to act, stating: "I am concerned about OMB's performance in this matter, because the Paperwork Reduction Act of 1995 required OMB to issue such regulations on data quality, and OMB seems to have accomplished little over the last nearly four years" in moving to comply.<sup>1</sup>

In both May 1999 and March 2000, Representative Jo Ann Emerson (R-MO), a primary sponsor of the Data Quality Act, also sent letters reminding the OMB of its obligations.<sup>2</sup> In April 2000, OMB responded to Representative Emerson's inquiries, declining to issue the required guidelines, stating, "At the present time, OMB is not convinced that new 'one-size-fits-all' rules will add much to the existing OMB guidance and oversight activity and the procedures followed by individual agencies."<sup>3</sup>

The repeated lack of compliance by OMB compelled Congress to pass the Data Quality Act in 2000. The Data Quality Act established a mandatory deadline by which the OMB must issue "policy and procedure guidance" to federal agencies on the dissemination of government information, and it provided clarification as to what the guidelines should include. President

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<sup>1</sup>Rep. Thomas Bliley, letter to OMB, May 20, 1999.  
[www.thecre.com/quality/letter-bliley-lew.html](http://www.thecre.com/quality/letter-bliley-lew.html).

<sup>2</sup>Rep. Jo Ann Emerson, letters to OMB, May 6, 1999 and March 20, 2000.  
[www.thecre.com/quality/letter-emerson-lew.html](http://www.thecre.com/quality/letter-emerson-lew.html);  
[www.thecre.com/quality/EmersonLetter20000320.html](http://www.thecre.com/quality/EmersonLetter20000320.html).

<sup>3</sup>John T. Spotila, Administrator of the Office of Information and Regulatory Affairs, letter to Rep. Jo Ann Emerson, April 18, 2000. [http://thece.com/quality/20041012\\_letter.htm](http://thece.com/quality/20041012_letter.htm).

Clinton signed the Data Quality Act into law as a part of the FY01 Treasury and General Government Appropriations Act (P.L. 106-554). His OMB, however, did not need to issue the guidelines, as the presidential elections that followed put a new president in office. Under President Bush, the guidelines were issued in January of 2002, and each federal agency subsequently has issued its own implementing guidelines.

### **Correcting Misperceptions Regarding the Data Quality Act**

Despite the fact that the 1995 Paperwork Reduction Act passed both houses of Congress unanimously, the Data Quality Act has its opponents, including environmental groups. In an attempt to undermine the law's legitimacy, some opponents have tried to portray it as a stealth appropriations rider that passed without debate or hearings. Others have attacked it for being redundant and unnecessary. These characterizations are inaccurate.

As noted above, the Data Quality Act essentially reaffirmed the data-quality provisions contained in the Paperwork Reduction Act of 1995. That 1995 law was the product of numerous congressional hearings and floor debate over the course of several Congresses, including the 104<sup>th</sup> in which it was enacted. Indeed, the report of the Senate Committee on Governmental Affairs (S. Rept. 104-8) noted, "The effort to adopt legislation to strengthen the Paperwork Reduction Act and reauthorize appropriations for [the Office of Information and Regulatory Policy] has been ongoing within the Committee since the 101<sup>st</sup> Congress. This sustained six-year effort within the Committee was supported by efforts of the Committee on Small Business on which several Members of the Committee also serve." The report notes various relevant hearings conducted by both committees over a multi-year period. The House Committees on Government Reform and Oversight and on Small Business also held numerous hearings regarding the Act. Moreover, the Act was subjected to full floor debate in both houses of Congress and subsequently passed unanimously. Thus, the substance of the Data Quality Act cannot be said to have passed without hearings or floor debate.

Nor can the Data Quality Act be said to be redundant or unnecessary. Although it is true that the 1995 law contains data-quality provisions that were duplicated in the Data Quality Act, the latter went further by setting a deadline for the OMB and clarifying the data-quality requirements. Congress did not see the Data Quality Act as redundant, but as a necessary step to force compliance with its intent. After years of trying to convince the OMB to comply with the law, Congress was finally forced to act by passing another law.

### **How the Data Quality Act Can Address Poor-Quality Information**

Since passage of the Data Quality Act, OMB has established government-wide data-quality guidelines, as well as administrative mechanisms, to allow affected citizens to seek and obtain correction of government-disseminated information. It is this effort to correct poor-quality information that will allow the law's effectiveness to be tested. There has been some success in at least one case in using the law to challenge the quality of one government report.

Using the new law's provisions, the Competitive Enterprise Institute (CEI), a public policy group, in February of 2003 petitioned the White House Office of Science and Technology Policy to cease dissemination of a government global warming report, citing numerous scientific and procedural problems.<sup>4</sup> The report, called the National Assessment on Climate Change, was produced during the Clinton Administration by a federal advisory committee for the U.S. Global Change Research Program, which is under the Office of Science and Technology Policy. Congress had mandated the report in 1990 in an attempt to determine the possible effects of global warming on the United States. The report was intended to be policy-relevant, as one of the purposes of the report was "to promote discussions toward international protocols," such as the Kyoto Protocol. Simply stated, that report was intended to influence regulatory and legislative policymaking, and so the quality of the data was critical.

CEI noted that the assessment report "qualifies as 'influential scientific or statistical information' for purposes of [the Data Quality Act]." As such, CEI noted that, according to the data-quality guidelines, the report must meet a "reproducibility" standard, meaning that the data and methods used to produce the report must be sufficiently transparent so that "an independent re-analysis could be undertaken by a qualified member of the public." CEI argued that the report failed on this count. It also argued that the report's information failed to meet the "objectivity" and "utility" requirements under the Act.<sup>5</sup>

The CEI petition argued that the assessment report suffered from many shortcomings, including its peer review process. Although the report was peer reviewed in principle, in practice the review process was woefully inadequate, as the CEI discovered when it obtained the reviewers' comments through a Freedom of Information Act request. The CEI learned that many of the assessment team's hand-picked peer reviewers harshly criticized the substance of the report as being biased, for relying too heavily on just two climate models, and inappropriately using the models to make regional predictions. Unfortunately, the assessment team did little to address the reviewers' concerns (which, of course, never would have become publicly known except for CEI's persistence).

One peer reviewer with the Department of Energy stated in his review comments, "The most critical shortcomings of the assessment are the attempt to extrapolate global-scale projections down to regional and sub-regional scales and to use two models which provide divergent projections for key climatic elements."<sup>6</sup> Another peer reviewer, a scientist at the Oak Ridge National Laboratory, stated that the bias of the report's authors was evident and that climate variability was not addressed, and he flatly stated that the climate models used for the

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<sup>4</sup>Competitive Enterprise Institute (CEI), "Petition to Cease Dissemination of the National Assessment on Climate Change, Pursuant to the Federal Data Quality Act," February 20, 2003. [www.cei.org/pdf/3360.pdf](http://www.cei.org/pdf/3360.pdf).

<sup>5</sup>In the guidelines, OMB defines 'quality,' and also defines 'utility,' 'objectivity,' and 'integrity' as constituent terms of 'quality.' See Office of Management and Budget (OMB), "Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Dissemination by Federal Agencies," *Federal Register*, Vol. 67, No. 2, January 3, 2002.

<sup>6</sup>Mitchell Baer, U.S. Department of Energy, as quoted in the CEI petition, February 20, 2003.

report were not “sufficiently accurate to make regional projections.”<sup>7</sup> These criticisms and many others like it were ignored by the assessment team.

Moreover, many reviewers complained that they were not given sufficient time to adequately review the report.<sup>8</sup> “This review was constrained to be performed within a day and a half. This is not an adequate amount of time to perform the quality review that should be performed on this size document,” said one reviewer. Another stated, “Given the deadline I have been given for these comments, I have not been able to read this chapter in its entirety.”<sup>9</sup>

The CEI petition asserted that even more significant than the peer review shortcomings was the deficiency in the two climate models used to produce the report’s conclusions. Incredibly, those models performed worse than a table of random numbers when applied to U.S. temperatures. In other words, the report’s temperature predictions were statistically insignificant, thereby failing to meet the most rudimentary test of scientific quality. The reviewer who conducted the test and brought this “fatal flaw” (as he described it) to the attention of the assessment team was a climatologist at the University of Virginia. He described the assessment team’s reaction to his criticisms:

There was no discernible alteration of the [assessment report] text in response to this fatal flaw. However, the [National Assessment] Synthesis Team, co-chaired by Thomas Karl, Director of the National Climatic Data Center, took the result so seriously that they commissioned an independent replication of this test, only more inclusive, using 1-year, 5-year, 10-year and 25-year running means of the U.S. annual temperature. This analysis verified that in fact both models performed no better than a table of random numbers applied to the U.S. Climate Data. Mr. Karl was kind enough to send the results to this reviewer.<sup>10</sup>

In short, the assessment report ignored the most basic scientific rules, and so failed to meet the requirements of the Data Quality Act. As a result of the CEI’s persistence (which included filing a lawsuit in the U.S. District Court for the District of Columbia), the Bush Administration has placed a disclaimer on the assessment report, stating that it was “not subjected to” the Data Quality Act’s guidelines.<sup>11</sup>

This is one example of using the Data Quality Act to diminish the harm of the government disseminating poor-quality information. Although the faulty report was not

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<sup>7</sup> Stan Wullschleger, Oak Ridge National Laboratory, as quoted in the CEI petition, February 20, 2003.

<sup>8</sup>In 1990, Congress mandated that a “national assessment on climate change” be conducted every four years. But it wasn’t until November of 2000, the eve of the presidential election between Al Gore and George W. Bush, that the first report was released. It then became urgent for the Clinton Administration, which had not seen fit to release the report in a timely manner, to get the report out, which then prevented a thorough review.

<sup>9</sup>CEI petition, February 20, 2003.

<sup>10</sup>Patrick J. Michaels, as quoted in the CEI petition, February 20, 2003.

<sup>11</sup>The assessment report, including the disclaimer, can be found at [www.usgcrp.gov/usgcrp/nacc](http://www.usgcrp.gov/usgcrp/nacc).

withdrawn, the disclaimer on the front of the report is at least an admission by the government that the report failed to meet the basic quality standards required under the Data Quality Act.

This episode is also a clear example of the type of faulty government information that the Data Quality Act was meant to guard against. Government information geared toward policy formulation must be accurate to be of any use. Bad information and/or “junk science” disseminated by the federal government can be costly if it leads to unnecessary regulations or policies that fail to correct, or even exacerbate, the problem being addressed.

It is important to add that the case discussed in this paper is only one example of the way the law can be used to guard against poor-quality government information. Another purpose of the law was to prevent “regulation by publication,” where federal agencies publish unsupportable claims that achieve a regulatory impact without having to go through the regulatory process. Among other things, this tactic provides fodder for trial lawyers to sue agencies to “force” them, through the courts, to regulate where statutory authority is lacking. Finally, the outstanding question of whether government actions, subject to the Data Quality Act, can be reviewed in the courts is one that Congress may need to address in the future.

## **Conclusion**

Government information often forms the basis for regulations and resource-allocation decisions by federal agencies. The use of poor-quality data can lead to costly mistakes. To address data-quality concerns, Congress passed the Data Quality Act requiring the OMB to establish government-wide data-quality guidelines. The law is important and necessary because it can lead to the correction of government information that does not meet the established data quality guidelines. It will continue to be an important tool to ensure that government decision-making is based on high-quality information.