

**"Charles, Michael"** <mcharles@asce.org>  
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cc:  
Subject: Comments on Draft Guidelines

ATTN: Lorraine Hunt

*Attached in Adobe Acrobat PDF and MS Word formats are comments on the American Society of Civil Engineers (ASCE) on the OMB Draft Guidelines for the Conduct of Regulatory Analysis and the Format of Accounting Statements (Appendix C).*

<<ASCE-Comments on Appendix C.doc>>

<<ASCE-Comments on Appendix C.pdf>>

**Michael Charles**  
**Senior Manager, Government Relations**  
**American Society of Civil Engineers**  
**1015 15th Street NW, Suite 600**  
**(202) 326-5126**  
**(800) 548-2723, ext. 5126**  
**(202) 289-6797 FAX**  
[www.asce.org](http://www.asce.org)  
[mcharles@asce.org](mailto:mcharles@asce.org)

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- ASCE-Comments on Appendix C.doc  
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"Charles, Michael" <mcharles@asce.org>  
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To: Lorraine D. Hunt OIRA ECON GUIDE/OMB/EOP@EOP  
cc:  
Subject: Comments on Draft Guidelines

Picture (Metafile)

Washington Office  
1015 15<sup>th</sup> Street, N.W., Suite 600  
Washington, D.C. 20005-2605  
(202) 789-2200  
Fax: (202) 289-6797  
Web: <http://www.asce.org>

May 5, 2003

Office of Information and Regulatory Affairs  
Office of Management and Budget  
Room 10202, NEOB  
725 17<sup>th</sup> Street NW  
Washington, D.C. 20503

ATTN: Lorraine Hunt

RE: Comments on Draft Guidelines (Appendix C) of the Draft 2003 Report to Congress  
on the Costs and Benefits of Federal Regulation, 68 Fed. Reg. 5492 (2003)

## **I. INTRODUCTION**

The American Society of Civil Engineers (ASCE) is pleased to offer these comments on Appendix C of the Draft 2003 Report to Congress on the Costs and Benefits of Federal Regulation. The comment deadline is May 5, 2003, and these comments are timely filed.

ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 130,000 civil engineers individually in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Service rules.

## **II. EXECUTIVE SUMMARY**

ASCE is commenting specifically upon two elements in Appendix C. We discuss the use of cost-benefit analysis (CBA) in Part III.A. of the Appendix and the use of contingent valuation contained in Part IV.B.5 of the Appendix. We make the following general recommendations:

- *Cost-benefit analysis (CBA) should be used cautiously as a general guide with respect to regulatory choices involving highly imprecise economic values for natural resources and other undervalued public goods.*
- *The Guidelines should require great clarity in determining how hypothetical values are to be determined when policymakers engage in the use of the contingent valuation (CV) method.*

### **III. BACKGROUND**

The Office of Management and Budget (OMB) is seeking comment on its annual report to Congress on the costs and benefits of federal regulations. The report is required by law annually beginning with calendar year 2002. Section 624 also requires the OMB to issue guidelines “to standardize measures of costs and benefits; ...”

In its 2003 report, OMB is proposing to issue the standardization guidelines. The Guidelines are to encourage federal agencies to conduct a “good regulatory impact analysis” for federal regulatory actions. The analyses are designed to provide the agencies with regulatory alternatives based on the known costs and benefits of a given regulation. To do so, the Guidelines stress the need to express significant costs and benefits in monetary terms. When these costs cannot be monetized in every case, the agencies are to use best professional judgment in their regulatory actions.

In Part III.A of the Guidelines, OMB explains that cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA) are the primary structures for identifying possible regulatory outcomes. OMB correctly identifies a central weakness of the CBA approach for policymakers, however. “When important benefits and costs cannot be expressed in monetary units, [cost-benefit analysis] is less useful, and it can even be misleading, because the calculation of net benefits ... does not provide a full evaluation of all relevant benefits and costs.”

Finally, in Part IV.B.5, OMB endorses the use of contingent valuation (CV) methods when determining the value of public goods for which there is no clear market.

### **IV. POLICY RECOMMENDATIONS**

#### **A. Cost-benefit analysis (CBA) should be used cautiously as a general guide with respect to regulatory choices involving highly imprecise economic values for natural resources and other undervalued public goods**

Although certain natural resources that lack a clear economic value provide direct and indirect services to a society, public goods such as a clean environment or a thriving rare plant species typically exist outside the "normal" economic system and thus act as an impediment to the efficient operation of the economy.

Prices ration resources, but price cannot always determine the value of a natural resource. This is particularly true for the "nonuse values" of such goods -- that is, the value they represent to some individuals simply by existing. In every case, these goods lack property rights and cannot be bought or sold as with other privately traded goods and services. Economists refer to this inability to move public goods through the marketplace as "market failure" -- although it is probably more accurate to state that these goods are part of an incomplete market.

The lack of a market value is due primarily to the inability of the market or legal systems to assign property rights to the resource. This does not mean, however, that natural resources, as one set of scarce riches among a universe of scarce riches, are without economic value.

The difficulties in measuring the value of natural resources through standard economic models lead to the development of "environmental economics" as a subdiscipline. Its application, however, depends upon standard economic assumptions about the value of goods, services, and natural resources; its use is at least as concerned with economic necessity as with environmental protection. Economics simply balances the optimal level of pollution against the environmental destruction necessary to maintain a well-functioning economy.

To cite one example, the contemporary approach to the application of economic solutions to species conservation under the Endangered Species Act inevitably leads to the following result:

Conservation of species is considered an investment that can take the form of refraining from current consumption in favor of future consumption, or the allocation of space (habitat) and management services to enhance survival of species. *Economic science states that such investments should be undertaken only if the rate of return, broadly interpreted as a social rate of return that includes market and nonmarket values, is competitive with other social investments.*

It is clear, then, that economic inquiries -- no matter how well intentioned -- never lead to anything like an ideal *environmental* solution. As one critic has explained it, the policy outcomes lack any moral dimension. As economic goods, natural resources will be consumed or destroyed in any efficient economy, and the necessary "rate of return" from the "investment" in public goods will, in the end, sanction their consumption, albeit possibly at a slower pace.

Put another way, all market-driven economic systems are unsentimental and utilitarian; they do not place the preservation of natural resources above the need to improve the economic welfare of individuals and groups in the economy. The highest purpose of neoclassical economics is the well-being of the consumers and producers who make up the economy.

So *human* economic welfare, not the physical welfare of natural resources, is the central theme of much contemporary economic analysis. In neoclassical economic theory, groups and individuals act to advance their own economic self-interest. Non-economic considerations -- including potential damages to public goods from industrial pollution or other threats to the environment from economic activity -- are not possible. "According to the neoclassicists, people will cooperate only when it can be shown to be in their interest. Economic systems that depend on appeals to moral sentiments such as pity are doomed to economic failure, for people are not capable of selfless economic behavior ... ."

In effect, the welfare consequence of a policy (as measured in economic terms) dictates everything else. "The hallmark of welfare economics is that policies are assessed exclusively in terms of their effects on the well-being of individuals. Accordingly, whatever is relevant to individuals' well-being is relevant under welfare economics, and whatever is unrelated to individuals' well-being is excluded from consideration under welfare economics."

Even in heavily regulated economies as in the United States and other industrialized societies, the imperatives of the market, left to themselves, always will attempt to elevate economic efficiency over the public interest. "Markets are by their nature unfair, and when confronted with state-generated public-interest issues like justice, full employment, and environmental protection they seek above all to be left alone."

Despite these marked shortcomings, economists have developed a number of (highly imperfect) analytical tools that are designed to aid policymakers in determining the right balance between economic efficiency and environmental protection. Their otherwise severe economic functionalism has been somewhat softened by a host of environmental laws and other regulations governing virtually every aspect of American economic and industrial activity. But the use of economics to measure the benefits of these protective laws remains controversial. Indeed, the advent of new economic approaches – often called "natural capitalism" or "resource economics" – simply exacerbates the old economic problem of how best to allocate scarce natural resources.

At the center of the modern debate over many public policies and their economic impacts on society is the issue of cost-benefit analysis (CBA). "Cost-benefit analysis provides the dominant economic approach with which economists talk to each other, to government bureaucrats and to the general laity about the desirability of public programs and investment projects."

In the United States, the U.S. Army Corps of Engineers had standardized the practice as early as the 1920s. Congress first adopted the idea in the Flood Control Act of 1936, which required an explicit cost-benefit analysis for flood-control projects financed under the Act.

At about the same time, economists Nicholas Kaldor and John Hicks developed a highly utilitarian theory, called the Kaldor-Hicks criterion. This theory asserted that any public policy may be economically justified as long as the policy's social gains exceed its social costs so that it is theoretically possible for "winners" to compensate the "losers" (even if no compensation is actually paid). It is clear then that the Kaldor-Hicks criterion would bloodlessly solve the problem created by an "externality" — the uncompensated costs or benefits that an economic activity by one group or individual imposes on another. In this way pollution would benefit a polluter in the form of more economically efficient operating costs at the same time it imposes a separate cost on those who are damaged by it. Therefore, *any* public policy that improves economic efficiency is justifiable as long as the winners are able — theoretically — to compensate the losers, regardless of the equity (or lack of it) from the policy change. The trap for policymakers of course is, that under the criterion, benefits *always* exceed costs.

In the absence of price signals to determine the worth in pecuniary terms of public goods, economists have established a "let's pretend" approach to the valuation of these goods. The policymaker must determine a theoretical "willingness to pay" among agents in the economy to begin the CBA process. "(Human) preferences determine choices, and choices 'reveal' wellbeing through the medium of willingness to pay. In turn, willingness to pay can be observed in markets, surrogate or associated markets, or 'created' hypothetical

markets." CBA, which is founded on the need for tradeoffs among competing societal needs and wants, merely aggregates all preferences to determine a society's willingness to pay for a non-marketable good.

Simply stated, CBA compares the Kaldor-Hicks criterion's gains and losses to society (in economic terms) derived from an investment project, such as a highway, shopping mall, airport or other major construction project. Modern economists, however, have attempted to apply the concept in a more socially agreeable manner. They extended CBA into the natural resources arena in an effort to identify policy choices through analyses of the costs and benefits of public goods (clean air, biological diversity, and beautiful sunsets) that were coming into conflict with private economic activity and that could not be valued using the traditional economic means of price because they were not privately owned.

CBA is far from a perfect policy tool. For one thing, it may cheat the future, especially if policymakers are not careful to determine the discount costs and benefits that occur in the future to settle on the present value of the policy. For one thing, without a firm consensus on the means of discounting the future costs and benefits of contemporary social policies, CBA simply seeks to instruct *current* decisionmaking processes exclusively.

In any event, CBA is poorly suited to the task of enlightening contemporary policymakers on the importance of intergenerational issues – that is, the *prospective* needs of a society for various nonmarket public goods that future generations may value.

Finally, CBA also depersonalizes public-policy choices, especially when attempting to determine a society's willingness to pay to protect human life. “[G]overnment regulation of hazardous materials, foods and drugs, and the safety of the workplace changes the risk of dying and *does not cause or prevent the certain death of a particular person.*”

And, as with all economic approaches to problems associated with nonmarketable goods, the use of CBA is most appropriate in those cases where economic efficiency is the ultimate policy goal. The process has been rightly criticized, for example, for placing too great a reliance on willingness-to-pay principles that tend to favor those who have a greater ability to pay.

ASCE therefore recommends the following:

- *CBA, rooted as it is in neoclassical economic theory, should be used solely as a guide to a variety of policy choices, not as a fundamental standard to determine all policy alternatives in all cases. CBA can flag possible solutions to policy problems, but it should not be the process that determines a given policy choice.*

**B. The Guidelines should require great clarity in determining how hypothetical values are to be determined when policymakers engage in the use of the contingent valuation (CV) method.**

There are three ways in which economists identify the hypothetical value of natural resources: the "travel cost method;" the "hedonic pricing method;" and the "contingent valuation (CV) method."

The travel cost method involves establishing the cost a group or individuals would be willing to incur to go some distance to visit a resource. The cost of the trip, i.e., the effort involved in the enjoyment of the resource, serves as a proxy for the actual value of the resource itself.

The hedonic pricing method measures the price one is willing to pay to avoid being exposed to an undesirable "resource" like toxic waste or traffic congestion. A person may be faced with the choice of buying two identical houses -- one located near a waste dump and the other in a pristine valley. The methodology infers the value placed on the characteristics (good and bad) of each location based on actual market transactions. The difference in the two values is the hedonic price and is equal to the price a person is willing to pay to increase his enjoyment by avoiding the dump site.

The contingent valuation method creates a constructed market that estimates a society's willingness to pay for the preservation of the nonuse values of a natural resource. CVM seeks to determine the *theoretical* compensation necessary to satisfy the Kaldor-Hicks criterion. It does this by establishing the "willingness to pay" for a scarce resource by individuals or groups who may be affected by the potential loss of the resources and their use and existence values. By placing a (speculative) value on the resource the government can establish a sound conservation policy.

CVM employs techniques, including focus groups and questionnaires, from the world of public opinion surveys to determine the willingness to pay. It involves a series of interviews with individuals for the purpose of determining the values they attribute to particular changes in certain resources.

Among the formats available to an interviewer in developing the hypothetical scenario embodied in a CV survey are direct questioning, by which the interviewer learns how much the interviewee is willing to pay for the resource; bidding formats, for example, the interviewee is asked whether he or she would pay a given amount for a resource and, depending upon the response, the bid is set higher or lower until a final price is derived; and a "take or leave it" format, in which the interviewee decides whether or not he is willing to pay a designated amount of money for the resource. CV methodology thus enables the measurement of individually expressed values for different levels of quality of resources, and dollar values of individuals' changes in well-being.

How the opinion survey is conducted determines its success as a valid means of estimating the hypothetical value of the resource under study. The best surveys avoid the use of general questions and instead focus on the presumed cost of a specific project or environmental good.

The Environmental Protection Agency (EPA) has made extensive use of CVM in conducting cost-benefit analyses to determine nonuse values.

[T]here are a number of stated preference methods that can be and have been successfully applied to develop credible estimates of nonuse values. Research using some of the early applications of the contingent valuation method (CVM, which is one type of stated preference method that has been applied by economists for nonuse value estimation) indicated that nonuse estimates derived from inadequately designed CVM survey instruments may not be wholly reliable. Nonetheless, the body of research on stated preferences that has evolved over the past several years provides a broadening array of tools and methodological refinements that overcome many of the limitations inherent in some of the earlier applications of contingent valuation methods. EPA believes that well-designed,

fully tested, and properly implemented stated preference approaches can provide useful and credible measures of nonuse values.

ASCE recommends that the OMB Guidelines be written to include the following policy requirements regarding the use of contingent valuation (CV) methods:

- *The CV study should be in the form of direct questioning of respondents, either through the use of focus groups or face-to-face discussions with respondents. Telephone surveys and mailed questionnaires will not provide the most accurate results.*
- *The respondents must be as geographically close to the amenities in question as possible to avoid the potential for undervaluing them by those who are more or less physically removed from them.*
- *The CV study needs to be detailed enough about the prospective designations to convince respondents that the agency will deliver the nonmarketable good promised, e.g., a protected species, cleaner water or air, and the like.*
- *The payment mechanism must be believable so that the respondents believe they may actually have to pay for the protected amenities. The challenge for the government will be to design a study that demonstrably provides an unbiased value estimate for each nonmarketable good.*
- *The survey must attempt to measure the true willingness to pay for the specific resource in a specific location for the protected amenities as precisely as possible. The willingness of a respondent to pay to protect any resource may be expected to drop significantly when the resource is asked to be valued with and in comparison to other resources, rather than in isolation.*
- *To yield economically accurate prices, the existence value survey must ask about marginal increments rather than lump sum totals. It is more legitimate to ask about valuations of "more" or "less" in space, intensity, and time, than to ask about the existence value of an arbitrarily chosen lump of existence.*
- *The survey must not ignore marginal valuations by asking only about alleged "total" valuations. Ignoring the margin misses the solution to the so-called diamond-water paradox. To cite one example, if survey respondents are asked, "How much do you value safe drinking water?" the questioner implies that the only alternative to the available drinking water is no drinking water. If the choice were water or no water, then the value of water would be immense.*

## V. CONCLUSION

Thank you for your attention to these comments. If you have any questions, please contact Michael Charles of our Washington Office at (202) 326-5126 or by electronic mail at [mcharles@asce.org](mailto:mcharles@asce.org).

Respectfully submitted,

Picture (Metafile)

Thomas L. Jackson, P.E.  
President

**Michael Charles**  
**Senior Manager, Government Relations**  
**American Society of Civil Engineers**  
**1015 15th Street NW, Suite 600**  
**(202) 326-5126**  
**(800) 548-2723, ext. 5126**  
**(202) 289-6797 FAX**  
[www.asce.org](http://www.asce.org)  
[mcharles@asce.org](mailto:mcharles@asce.org)

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