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What is the STAR Economics and Decision Science Program?

The STAR Economics and Decision Sciences (EDS) research program supports research by external social scientists that environmental decision-makers can use in real-world situations. The EDS program assists EPA in estimating costs and benefits of proposed actions, identifies costs savings of non-regulatory approaches, and assists in optimizing the use of its enforcement compliance resources. Behavioral research is important to developing effective solutions to environmental problems because the causes and remedies are behavioral in nature. Better understanding of polluter motivations and environmental values can improve the human and ecosystem health, decrease pollution control costs, and improve the efficiency and effectiveness of environmental policies.

From 1995 through 2001, NCER has partnered with the National Science Foundation (NSF) and worked independently to issue 12 RFAs. Together with NSF, EPA has provided more than \$17 million to fund 108 research projects. The EDS program is now one of the largest sources of grant funding for environmental economic and decision science research in the world.

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How does NCER determine what research is needed?



NCER works with clients in EPA and elsewhere to identify the scientific questions that are of the highest interest, focus targeted competitive solicitations ? or requests for applications (RFAs) - on these topics, select the best and most useful peer-reviewed proposals, and disseminate the research results to a variety of audiences. Current EDS research results are helping environmental managers at all levels of government to estimate the costs and benefits of proposed actions, identify the cost-effectiveness of alternative regulatory and non-regulatory approaches, and optimize the use of enforcement and compliance resources.

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What are NCER's EDS Research goals?

The EDS program focuses research on topics where behavior has the greatest impact on environmental outcomes, and where our scientific understanding is in greatest need of improvement. NCER's EDS program has four specific long-term research goals:

1. Identify motivations for environmental behavior and decisions for different entities.
2. Develop reliable estimates of how people value environmental and health benefits with emphasis on children's health.
3. Identify the behavioral responses of different entities to various government interventions, including regulations, enforcement, and technical assistance.
4. Identify the socioeconomic causes and consequences of the potentially most significant long-term environmental issues and the tools for predicting and addressing these.

To answer these questions, we have four on-going RFAs including:

1. Valuation of Ecological and Health Benefits;
2. Corporate Environmental Behavior and the Effectiveness of Government Interventions,
3. Market Mechanisms and Incentives; and,
4. The Value and Use of Environmental Information.

Specific focus areas within these RFAs change from year to year in response to newly identified needs and knowledge added by our existing research.

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Economics and Decision Science Solicitations

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What are some basic questions that we are trying to answer through our solicitations?

1. What and how significant are the different motivations for environmental behavior (e.g., financial, reputation, ethics, etc) for different types of entities?
2. What are the likely behavioral responses of different entities to various government interventions, including regulations, enforcement, technical assistance and incentives?
3. How can programs be designed to take advantage of predictable behavioral responses to deliver cost-effective environmental protection through market forces?
4. What are the theoretical and methodological issues in developing reliable estimates of how people value environmental and health benefits as individuals or in groups?
5. What are the long term socio-economic trends and events that will have significant environmental effects; how can these effects be predicted and addressed?

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What is the current focus of our research?

NCER's current 2002 socio-economics program includes four solicitations:

Corporate Environmental Behavior

This category of solicitations covers the motivators of regulated entities' environmental behavior and performance, and assesses the influence of various governmental interventions.

Market Mechanisms and Incentives

These solicitations generally cover market-based mechanisms and



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other incentives for environmental management.

<http://es.epa.gov/ncer/rfa/>

Decision Making and Valuation for Environmental Policy (with the National Science Foundation)

<http://es.epa.gov/ncer/rfa/02dmvep.html>

This RFP Solicits proposals in three focus areas:

- ecosystems valuation, including methods improvements as well as ways to incorporate non-monetizable or non-quantifiable ecological information into environmental policy decisions;
- how to link individual with group or community valuation of environmental amenities; and community environmental decision-making in general;
- research on the costs and benefits, use and affects of environmental information in environmental decision-making

Human Health Valuation

<http://es.epa.gov/ncer/rfa/02childrenval.html>

This RFP is designed to promote research to enhance economic valuation of reducing environmental risks to children's health - including the willingness to pay (WTP) for reductions in (1) morbidity and (2) mortality risks to children's health. Health end points that may be addressed include: (a) childhood cancers, (b) incidence of food- or water-borne pathogenic illnesses, (c) developmental disorders; (d) respiratory illnesses; and (e) diseases, both fatal and non-fatal, that may manifest in adulthood as a result of childhood exposure to toxins or pathogens. Attributes that might be addressed may include intelligence, fertility, functionality, mobility, and life expectancy. This research is expected to emphasize development of empirical research and data.

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What were the areas of emphasis in NCER's past socioeconomic research solicitations?

1995

Valuation for Environmental Policy

This competition emphasized research on methods of valuation of non-market environmental goods and services,

especially ecosystems, using contingent valuation and other stated preference methods;

1996

Decision Making and Valuation for Environmental Policy

This competition was broadened to include valuation of non-cancer health benefits, and estimates of costs of alternative environmental policies including economic incentives;

1997, 1998, and 1999

Decision-Making and Valuation for Environmental Policy

These competitions emphasized research in five areas (1) cost estimation; (2) benefit estimation; (3) identification of the relationship between the economy and environmental quality; (4) ecosystem valuation; and (5) decision-making.

2000

Valuation of Children's Health Effects

This competition focused on valuation of children's health effects in two areas (1) parental and societal willingness to pay (WTP) for reductions in risks to children's health, and (2) improved transfer of benefits from existing adult-oriented analyses to children.

2000

Market Mechanisms and Incentives for Environmental Management

This competition offered in cooperation with the EPA Office of Policy and Innovation sought research projects on market-based mechanisms and other incentives for environmental

management.

2000

**Corporate
Environmental
Performance and the
Effectiveness of
Government
Interventions**

EPA in cooperation with DOJ/NIJ were interested in research that (1) identifies the determinants, or motivators, of regulated entities' environmental behavior and performance, and (2) assesses the influence of various governmental interventions on this behavior/performance.

2001

**Corporate
Environmental
Behavior: Examining
the Effectiveness of
Government
Interventions and
Voluntary Initiatives**

This solicitation succeeded the Corporate Environmental Performance and the Effectiveness of Government Intervention solicitation and continues to focus on the motivators behind adoption of environmentally sound business practices and the effects of government interventions on these motivators.

2001

**Market Mechanisms
and Incentives for
Environmental
Management**

This RFA focused on market mechanisms and economic incentives was reissued for funding in January 2001.

2001

**Valuation of
Environmental
Impacts on Human
Health**

This RFA emphasized research that developed theoretical and/or empirical

methods and data to better value (1) the health risks to children from environmental sources, or (2) health risks with delayed onset, severe and long-term health consequences, such as cancer.

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Corporate Environmental Behavior

| [2000](#) | [2001](#) |

Human Health Valuation

| [2000](#) | [2001](#) |

Market Mechanisms and Incentives for Environmental Management

| [2000](#) | [2001](#) |



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Results Used by EPA and Others

The economic and decision making research conducted by many STAR grantees is being used by EPA, state, and local governments and other researchers:

- [Cost Benefit Analyses](#)
- [Conducting Stated Preference Surveys](#)
- [Cost Abatement Estimates](#)
- [Marketable Permits - Air Pollution Trades](#)
- [Land Preservation/Environmental Management](#)
- [Fast-track Programs](#)
- [Risk Reduction Valuation](#)
- [Wetlands Restoration](#)
- [Communication/Risk Perception](#)

Cost Benefit Analyses

- The recently published Guidelines for Preparing Economic Analyses (EPA, 2000), EPA's peer-reviewed guidance for cost-benefit and other economic analyses supporting rulemaking and policies, includes citations of 10 STAR supported socio-economic research publications from peer-reviewed journals (out of a total of about 60 STAR socio-economic projects completed at the time). These effectively will help guide policy development at EPA for the foreseeable future.

[Guidelines for Preparing Economic Analyses](#)



- Herriges, et al's (Iowa State Univ.) research on valuing water quality improvements provided results that were used by EPA's Office of Water in preparing: "Economic, Environmental, and Benefits Analysis of the proposed Metal Products & Machinery Rule".

Original Abstract

- Smith's (North Carolina State Univ.) STAR research on the effects of air pollution on property values was used as new evidence in planning for EPA's second prospective 812 cost-benefit study according to a staff review document. The same study was also referenced in the European Union's assessment of benefit measurement methods for valuing air pollution.

Original Abstract

- Similarly, in the draft analytic plan prepared by EPA's Air Office, reviewed by the Science Advisory Board, Hammitt et al's (Harvard University) research on a contingent valuation approach to valuing mortality risk reductions provided the only two CV studies, of more than 80 studies reviewed, that met EPA-proposed quality criteria for use in the forthcoming (second) prospective Section 812 cost benefit study of the Clean Air Act.

Original Abstract

- Gregory, et al (Decision Research), have undertaken STAR-supported empirical work on discounting of environmental, health and monetary goods. Because of its path-breaking nature and direct implications for benefit cost analysis, the researchers have been asked by several agencies to share initial results and to discuss their implications for ongoing analyses. Researchers have reported findings to the City of Seattle (King County, WA), the Conference Board of Canada, EPA's Superfund program and the National Estuary Program. Researchers are also incorporating new results into current work on hazardous and radiation waste cleanup options for the Department of Energy

Original Abstract

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Conducting Stated Preference Surveys

- EPA's National Center for

Environmental Economics in the Administrator's Office (NCEE) is in the early stages of developing a handbook for practitioners conducting stated preference surveys. The handbook will draw heavily on several published STAR grant results, notably Carson (U. Cal. San Diego).

Original Abstract

- Carson's (U. Cal. San Diego) theoretical research into incentive-compatible formats for stated preference surveys is now being used by other, independent, researchers who will be developing surveys that will establish values for ecological resources (Hanemann, U. Cal Berkeley), and human health, including reducing fatal risks (DeShazo & Cameron, UCLA). This second-stage research will likely be very important to EPA and state policy analysts evaluating the costs and benefits of environmental programs. This illustrates how basic theoretical research supported by STAR influences a field of study, which ultimately is translated into empirical results that are used in policy development.

Original Abstract

- Kanninen, (University of Minnesota) used a STAR grant to develop a theoretical (methodological) framework to improve the statistical efficiency of stated preference surveys, allowing researchers to develop statistically valid results using smaller sample sizes, which reduces the cost of conducting surveys. The method has been used in at least two other studies, one in a STAR grant studying the value of wetlands (Hoehn, Michigan State University), and, in a separate study, the attributes of Michigan bird-watching sites. This is demonstrative of how theoretical results ultimately make their way into policy-making

Original Abstract

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Cost Abatement Estimates

- Gray & Shadbegian's (Clark University) research has reportedly been used in EPA discussions with OMB about pollution abatement cost estimates in conjunction with the Thompson report - an annual OMB

report to Congress on the overall costs of regulation. This research has also improved EPA's ability to interpret of the Census's Pollution Abatement and Control Expenditure data, and was included in briefings for the last EPA Administrator on the costs of environmental protection.

Original Abstract

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Marketable Permits - Air Pollution Trades

- STAR research on marketable permits for air pollution (Burtraw et al, Resources for the Future) in the presence of pre-existing taxes has been used by the Clean Air Markets Division of the Office of Air and Radiation, as well as the Departments of Treasury and Commerce to evaluate the impacts of carbon taxes and other air pollution trades. The investigators also have made presentations to the President's Council of Economic Advisors, state governments and the OECD, they also conducted a briefing for legislative and agency staff on capital hill and provided guidance to the Congressional Budget Office. One researcher was appointed to the Intergovernmental Panel on Climate Change (IPCC) as a result of this research. This research also has influenced two European countries to reevaluate their pollution tax policy proposals.

Original Abstract

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Land Preservation/Environmental Management

- EPA's Region 3 is initiating efforts to use the results of STAR research identifying cost-effective means to preserve migratory bird habitat (ReVelle, Johns Hopkins University) in several important ways throughout the mid-Atlantic region: 1. along with other information (e.g., weather information) Region 3 is using the study methods to alert the public and local governments about bird migration patterns, which will influence pesticide applications and timing, land use decisions and NEPA applications; 2. Region 3 is using the information from this research to advise USDA and state environmental

agencies to better select plant species used in streambank buffers to prevent nonpoint water pollution so they will also provide migratory bird habitat; and 3. Region 3 also is using this research to modify oil spill responses to better address migratory bird habitat protection.

Original Abstract

- EPA's region 3 also is intending to employ Bockstael's (Univ. of Maryland) research on the effectiveness of farmland preservation programs in its Mid-Atlantic Integrated Assessment Project

Original Abstract

- Swallow (University of Rhode Island) reports that his research is helping state and local officials (e.g., town planners), and non-profit organizations (e.g., land trusts) rank priorities for conservation dollars, and plan for management of urban sprawl. This research has helped these groups improve their integration of public values for open space into new development. This researcher has been contacted by land developers from Florida, Washington state, and St. Louis County, who want to learn to use environmental impact fees to preserve open space.

Original Abstract

- In order to make effective stakeholder participation possible, Morgan, et al's (Carnegie Mellon) research developed comprehensible and comprehensive representations of the complex scientific and value issues involved in environmental management. The researchers also developed methodologies that allow thoughtful, unbiased deliberation by stakeholders. The researchers' approaches have been used in a number of relevant decision forums, include deliberations of EPA's Science Advisory Board and several highly visible committees of the National Academy of Science/National Research Council/Institute of Medicine.

[Original Abstract](#)

- As a result of his STAR grant research on fragmentation of habitat and shoreline development, another grantee (Lemberg, Western Michigan University) was asked to review and revise a proposed shoreline development ordinance for Prairieville

Township, Barry County, Michigan. Issues included setback of structures, height above shoreline, and width of shoreline vegetation buffer. He was also asked by the Gun River Watershed Project Steering Committee in Gun Plain Township, Allegan County, Michigan to do a field survey of a stretch of the Gun River to evaluate potential for native plant landscaping to mitigate stream bank erosion problems. He also has been receiving requests from lakeshore associations for consulting on lakeshore landscaping.

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Fast-track Programs

- Krupnick and Blackman's (Resources for the Future) research on the efficiency of EPA's XL program has direct policy relevance for designing future "fast-track" programs. EPA's Office of Policy, Economics and Innovation has consulted the researchers regarding the results.

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Risk Reduction Valuation

- Mortality risk reduction valuation research by STAR supported researchers (Krupnick, et al, Resources for the Future) was used by Health Canada, which proceeded to fund a similar study on Canadian population. In addition, this work led the European Community to fund a study of mortality risk valuation estimates in France, Britain, Spain, Germany and Italy. It also led Korean researchers who were working with EPA's International Office to do a mortality risk valuation study using the STAR researchers' instrument for a sample of Koreans. The Canadian study is significantly referenced in a recent report of the Royal Society of Canada (the NAS equivalent) evaluating the cost-benefit analysis performed by Environment Canada for the proposed changes to the PM standards.

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Wetlands Restoration

- Opaluch's (University of Rhode Island) STAR research is being used by the state of Rhode Island to develop an approach to prioritize wetlands restoration projects. The researchers are coordinating with the State of Rhode Island Department of Environmental Management and Coastal Resources Management Council to use a public survey conducted under a STAR grant as input into their process to set priorities for restoration actions.

[Original Abstract](#)

- The research team of Hulse, et al (Univ. of Oregon) have worked closely with the Willamette Restoration Initiative, a group appointed by Oregon's Governor Kitzhaber, to develop a restoration strategy for the Willamette River and surrounding lands. This restoration strategy was published and delivered to the Governor and legislature of Oregon in February 2001 (see

<http://www.oregonwri.org> ).

The first of 4 key recommendations by the group is to use the spatially-explicit restoration prioritization developed primarily through work by the PIs on this project.

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Communication/Risk Perception

- Werner's (Univ. of Utah) research into communication and household hazardous waste management behavior has been used by local government program managers to improve communications, often at a lower cost, that has resulted in improved management of household hazardous waste.

[Original Abstract](#)

- One researcher (Fischhoff, Carnegie Mellon University) reports that as a result of his STAR supported research on risk perception and constructed preference, he has become involved with businesses, and state and local governments in negotiations involving pipeline siting, nuclear power plant siting, electricity deregulation, power plant refueling, the anthrax vaccine, hazardous material labeling, and toxicity research reporting.

[Original Abstract](#)

- Beierle's, (Resources for the Future) survey of electronic participation mechanisms in state environmental agency websites was the most downloaded paper ever from Resources for the Future's website--around 6,000 copies in a month, with apparently high use by state agency staff. The project also led to the PI's involvement in an electronic dialogue that EPA just conducted on public participation in EPA decisions, which resulted in proposed pilot projects using these electronic dialogues as integral parts of public participation in rulemaking.

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Annual Review Workshops were designed to allow federal officials and Investigators to interact and for the significance the funded studies and preliminary findings to be discussed.

The following reports funded by EPA and NSF were conducted to determine if the DMVEP program is producing useful results and communicating them effectively. Results of the program are assessed and summarized, and a bibliometric analysis is also included:

[Evaluation Report: "A Decision Making and Valuation for Environmental Policy Interim Assessment "](#) (PDF)

[Final Report: Interim Assessment for the Decision Making and Valuation for Environmental Policy Grants Program](#) (PDF)

- [Appendix A - Grants by Research Category Topic and Methods](#) (PDF)
- [Appendix B - Publications Database for DMVEP Interim Assessment](#) (PDF)
- [Appendix C - DMVEP Research Grant Abstracts and Findings](#) (PDF)



The following workshops provided a forum for investigators to interact with one another and with EPA, NSF, and other federal officials interested in valuation research.

[Proceedings 1998 Decision-Making
and Valuation for Environmental
Policy Workshop \(PDF\)](#)

[Proceedings 1997 Decision-Making
and Valuation for Environmental
Policy Workshop \(PDF\)](#)

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● STAR Report #8



This report describes economic and ecological research supported by

EPA's STAR program to meet the needs for cost, benefit and valuation information to support environmental decision making.

- Research capsule being drafted
- State of Science Report underway: A report will be developed characterizing the state of the science in valuation and suggesting priority areas for investing research funds



Environmental Decision Making and Economics

Environmental policies and programs are intended to protect the health and well being of humans and ecosystems. Policies that protect the environment also provide economic value and other benefits to society. Federal environmental laws typically require some economic analyses to be conducted by implementing agencies.

Methods commonly used by economists to measure public values include revealed or stated preference methods and contingent valuation. Representatives of the public are surveyed, or choices made by individuals or supported by the public in local government forums are determined, to learn how various types of environmental protection have been valued. Measures used by ecologists to describe the functions and services of healthy ecosystems are also central to valuing the benefits of environmental protection. Each of these types of approach are furthered by research supported by the STAR program.

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Do we want to reference either chris' old stat center or barb's new stat centers here?



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(Leave this question here - Thought there was a collection of CERI economic stuff on NCEE site - but can't find it - other suggestions?)

Systems Analysis Branch



The [Systems Analysis Branch](#) of the National Risk Management Research Laboratory (NRMRL) develops and demonstrates

cost-effective decision making tools for use by public and private sectors. The tools integrate environmental solutions, life cycle concepts, value engineering, environmental engineering, economics, trade-offs, and pollution prevention factors.



Simulation and Design

[Simulation and Design](#) - this team develops computerized approaches to achieving environmentally beneficial changes in manufacturing processes and products.



Life Cycle Assessment



[Life Cycle Assessment](#) - this team is involved in the advance of LCA practice and application across the public and private sectors.

Impact Assessment and Measurement (IAM)

The [IAM](#) program focuses on the development and application of environmental impact assessment and progress measurement for environmental decision making.

Environmental Engineering Economics



[Environmental Engineering Economics](#) - this program provides scientists and decision makers information on NRMRL activities related to the cost and effectiveness of environmental technologies and risk management methods.

Engineering Trade-Offs

[Engineering Trade-Offs](#)

team - this NRMRL team is tasked to develop a new integrated decision making approach to compare two or more states of being: a



benchmark and an alternative, a change in a production process, alternative processes or products. Differences in engineering performance, economic/cost efficiency, environmental burdens, and social resistance to change are highlighted.

Tools Integration for Sustainable Development



[Tools Integration for Sustainable Development](#)

- This NRMRL team focuses on the identification, development, integration, and application of environmental decision making tools.

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Office of Policy, Economics, and Innovation



The [Office of Policy, Economics, and Innovation](#) is EPA's primary policy arm which houses the National Center for Environmental Economics and groups

innovative approaches to compliance including voluntary partnerships, market - based incentives, and new technologies.



Innovative Approaches

[Innovative Approaches](#) relays numerous EPA programs that encourage voluntary actions into regulatory approaches including Partners for the environment, Project XL, Community Based programs and others.

National Center for Environmental Economics

EPA's [National Center for Environmental Economics](#) (NCEE) conducts and supervises research and development on economic analytic methods; leads production



of cross-Agency economic reports; provides guidance for performing economic analysis; promotes consistency in the preparation and presentation of economic information in the Agency. The Center prepares economic analyses under its own direction, and functions as an internal resource for other Agency offices seeking information on benefit-cost research and techniques, economic impact models and measures, and economic incentive mechanisms. The Center also conducts research on environmental health issues in an effort to improve risk assessment data used in

economic analyses and aid in the evaluation and design of environmental programs.

Regulatory Economic Analyses Inventory

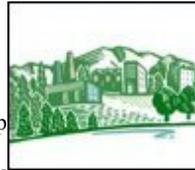
The [Regulatory Economic Analyses Inventory](#) is a searchable database of more than 1700 document descriptions with more than 50 downloadable EPA economic analysis reports, organized by assessment topics.

Office of Pollution Prevention and Toxics (OPPT) - Economic Analysis

[OPPT - Economic Analysis](#) - This site relays the economic analyses conducted by EPA's Office of Pollution Prevention and Toxics as part of its decision making process, under TSCA, EPCRA, AHERA and ASHAA. The site includes market studies, financial feasibility studies, and industry sector studies.

Design for the Environment (DfE)

This site describes the [Design for the Environment](#) (DfE) program which is one of EPA's premier partnership programs, working with individual industry sectors



to compare and improve the performance and human health and environmental risks and costs of existing and alternative products, processes, and practices.

Pollution Prevention - Business Practices



The EPA's [Pollution Prevention - Business Practices](#) site describes several programs through which EPA promotes environmental stewardship to the

business community via several programs that encourage businesses to incorporate environmental concerns into their standard financial and accounting practices.

Office of Water - Water Quality Economics and Benefits

EPA's [Office of Water](#) program is designed to improve the data and methods used for estimating benefits of water quality programs instituted under the 1972 Clean Water Act.



Safe Drinking Water



[Safe Drinking Water](#) -

This site relays new cost benefit analyses for upcoming drinking water regulations. EPA is



developing a new regulatory impact analysis framework for proposed drinking water regulations. The Safe Drinking Water Act, as amended in 1996, requires that whenever EPA proposes a national primary drinking water regulation, EPA must publish a cost-benefit analysis. Components of the analysis include treatment design, unit treatment costs and national costs, model systems development, baseline estimates, data quality objectives, and benefits analysis.

Allowance Trading

[Allowance Trading](#) - Site describes how to use the allowance trading system for sulfur dioxide air emissions. Allowance trading is the centerpiece of EPA's Acid Rain Program, and allowances are the currency with which compliance with the SO₂ emissions requirements is achieved. Through the market-based allowance trading system, utilities regulated under the program, rather than a governing agency, decide the most cost-effective way to use available resources to comply with the acid rain requirements of the Clean Air Act. Utilities can reduce emissions by employing energy conservation measures, increasing reliance on renewable energy, reducing usage, employing pollution control technologies, switching to lower sulfur fuel, or developing other alternate strategies. Units that reduce their emissions below the number of allowances they hold may trade allowances with other units in their system, sell them to other utilities on the open market or through EPA auctions, or bank them to cover emissions in future years. Allowance trading provides incentives for energy conservation and technology innovation that can both lower the cost of compliance and yield pollution prevention benefits.



Clean Air Act - Cost Benefit Analyses



[Clean Air Act - Cost Benefit Analyses](#) - Relays the cost benefit analyses related to the Clean Air Act.

Air Quality Management - Cost Benefit Analyses

[Air Quality Management - Cost Benefit Analyses](#) - Relays information on cost benefit analysis of air quality management strategies and new methods for assessing benefits costs and market assessments associated with the National Emission Standard programs and State and local air pollution control programs.



Root Causes of Non-compliance



[Root Causes of Non-compliance](#) - From



1996 through 1998, EPA and the Chemical Manufacturers Association (CMA)

worked together to pilot an approach for identifying and evaluating the root causes (that is, underlying causes) of noncompliance with regulatory requirements, to identify recommendations for improving compliance, and to provide insight into the effect of environmental management systems (EMS) on compliance. This site relays the details of this report.

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National Science Foundation DMVEP Program

This is the [National Science Foundation's DMVEP Program site](#). The National Science Foundation (NSF) and the Environmental Protection Agency (EPA) have jointly supported extramural grant activities in this field since fiscal year 1995. DMVEP encourages research that will contribute to the development of practical, credible approaches for estimating the benefits and costs of environmental programs and improving decision making about environmental issues.



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NSF/EPA - Decision Making and Valuation for Environmental Policy (DMVEP)

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Corporate Environmental Behavior

| 2000 | 2001 |

Human Health Valuation

| 2000 | 2001 |

Market Mechanisms and Incentives for Environmental Management

| 2000 | 2001 |

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Workshops and Conferences

NCER and NCEE have jointly sponsored a series of social science research workshops, with six topical workshops that present STAR grant and other research taking place from Fall 1998 through Fall 2000. These workshops included:

- *Valuing and Managing Ecosystems*
- *Valuing Health for Environmental Policy with Special Emphasis on Children's Health Issues*
- *Economic Research and Policy Concerning Water Use and Watershed Management*
- *Community Based Environmental Decision-Making*
- *Stated Preference: What do we know? Where do we go?*
- *Economic Analysis and Land Use Policy*

* Beyond Compliance

Two workshops are planned each year for the next few years. The format of the workshops includes research presentation and discussions by EPA and external parties. Proceedings, including discussions, are available on the web (see at: <http://www.epa.gov/economics/> link to Workshop Series, Past Workshops, Proceedings).

NCER also co-sponsored a research symposium with EPA's Office of Enforcement and Compliance Assurance and Department of Justice's National



Institute of Environmental Justice (NIJ) and Environmental and Natural Resources Division. The symposium, in May 1998, hosted the pre-eminent researchers in the field of deterrence and enforcement effectiveness and resulted in the establishment of a new STAR grant program in 2000, Corporate Environmental Behavior and the Effectiveness of Government Intervention.

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