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Estimating Fatalities Induced by Economic Impacts of EPA's Ozone and Particulate **Standards**

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Part 1

Introduction

nder the Clean Air Act of 1970, the U.S. EPA is required to set national standards controlling the ambient air concentrations of pollutants that cause adverse effects to public health.1 These National Ambient Air Quality Standards, or NAAQS, have been the source of considerable controversy within the regulated community from the origination of the Clean Air Act. Recently proposed tightening of the NAAQS have dramatically escalated this controversy.2

Provisions of the Clean Air Act require EPA to review the NAAQS every five years, to determine whether they are still fulfilling their purpose in protecting public health. EPA's last review of the ozone standard was in 1979, while the particulate standard has not been reviewed since 1987.

⁴² U.S.C.A. §7409 [CAA §109].

Since jargon tends to make environmental issues hard to follow, we use "standards" as the generic for NAAQS; "existing standard(s)" to refer to those in place as of November 27, 1996; and "proposed standard(s)" for those proposed on November 27, 1996 for adoption in June of 1997.

On November 27, 1996, EPA announced its intention to tighten two already challenging air quality standards—one which regulates exposure to ground-level ozone, and one which limits exposures to small particulate pollution, or particulates. EPA proposed the new standards after a review of the scientific literature generated since the last review process, during which EPA administrative staff concluded that the existing standards for ozone and PM were not considered fully protective of the public's health.

A. Ozone Background

Ozone is a colorless, odorless gas produced by a variety of chemical reactions (at ground-level) involving nitrogen oxides and volatile organic compounds in the presence of sunlight. Ozone is a known respiratory irritant, implicated in causing decreased lung function, respiratory problems, acute lung inflammation, and impairment of lung defense mechanisms, with outdoor workers and active children particularly at risk. A recent study by the American Lung Association, *Breathless: Air Pollution and Hospital Admissions / Emergency Room Visits in 13 Cities*, elevated the profile of ground-level ozone in the clean-air standards debate, implicating ozone in increased hospitalizations for respiratory distress.

EPA has proposed lowering the existing primary standard for ozone from 0.12 parts per million (ppm) measured over one hour to 0.08 parts per million, measured over eight hours. The secondary ozone standard would be set at the same level. At the time of the announcement, 106 counties (in 26 states) were in violation of the existing standard, and estimates indicated that the new standard would increase the number of such "nonattainment areas" by 229 counties (adding counties in eight additional states), bringing the total to 335 counties in 34 states (including D.C. as a state).

B. Particulate Background

Particulate matter, generated through a range of natural and man-made processes including combustion and physical abrasion, has been implicated in increased mortality for the elderly, as well as those members of the population with damaged respiratory systems. Particulates have also been claimed as aggravating factors for existing respiratory and cardiovascular disease, resulting in more frequent and/or serious attacks of asthma in children, for example. This issue grew in the public's awareness with the recent publication of *Breath-Taking: Premature Mortality Due to Particulate Air Pollution in 239 American Cities*, by the Natural Resources Defense Council.

The existing primary standard for particulates (there is no existing secondary standard for particulates) treated all particulates smaller than ten microns as a single class, called PM_{10} , though some recent studies have implicated a subset of this class—particles under 2.5 microns in diameter ($PM_{2.5}$)—as being the most harmful. Under the existing standards, ambient air concentrations of PM_{10} was limited in 24-hour average

In the stratosphere, ozone is produced by the direct interaction of ultraviolet radiation and oxygen. The two pools of ozone (stratospheric and ground-level) are not considered to mix. Stratospheric ozone is considered protective, while ground-level ozone is considered harmful. This study is not concerned with stratospheric ozone.

⁴ Haluk Ozkaynak et al., Breathless: Air Pollution and Hospital Admissions / Emergency Room Visits in 13 Cities, American Lung Association, Washington, D.C., June 1996.

^{5 &}quot;Which Communities Will Be Affected by the New Standards," *Environmental Manager*, Air and Waste Management Association, February 1997, p. 19.

Deborah Sheiman Shprentz et al., Breath-Taking: Premature Mortality Due to Particulate Air Pollution in 239 American Cities, Natural Resources Defense Council, New York, May 1996.

concentration to 150 micrograms per cubic meter (µg/m³) of air, and in average annual concentration to 50 µg/m³ of air. The proposed standards would retain the same concentrations for particulates ranging from 2.5 to 10 microns in diameter, but would add two new standards for particulates below 2.5 microns. The new PM₂₅ standards would limit 24-hour ambient concentrations to 50 µg/m³ and the annual average to 15 µg/m³. Compliance with the proposed annual standard would be based on a three-year average of the annual average, spatially averaged across an area. Compliance with the proposed 24-hour standard would be based on the three-year average of the 98th percentile of the 24-hour PM₂₅ concentrations at each monitor within an area. Under the existing PM₁₀ standard, 41 counties in 19 states were designated nonattainment areas. The proposed standards would drop the PM₁₀ nonattainment counties to 11 (in 5 states), but would add 167 PM, nonattainment counties in 37 states.

C. The Question of Economically Transmitted Regulatory Impacts

Section 109 (b) (1) of the Clean Air Act states:

National primary ambient air quality standards, prescribed under subsection (a) of this section, shall be ambient air quality standards the attainment and maintenance of which in the judgement of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.

EPA considers the Clean Air Act and various judicial rulings made in past standard review processes to forbid any consideration of a proposed rule's cost in making determinations regarding whether a given standard meets the adequate margin of safety described above. In ruling on a 1980 court case in which an industry association challenged EPA's proposed lead standard, J. Skelly Wright, Chief Judge, held that "the legislative history of the Act also shows the Administrator may not consider economic and technological feasibility in setting air quality standards," and further opined that "the absence of any provision requiring consideration of these factors was no accident; it was the result of a deliberate decision by Congress to subordinate such concerns to the achievement of health goals."

But there is a difference between considering "economic feasibility" in the sense of whether a rule is efficient, costly, etc., and accounting for the economically transmitted impacts of a proposed risk-reduction rule.

When evaluating a proposed regulatory action, EPA considers a narrowly-defined set of risk factors, taken only from biomedical research. The problem with this, as we and other researchers have discussed, is that policies aimed at reducing risk to human health can actually increase that risk through the economic impacts of a given policy. In fact, such economically transferred impacts of regulation can be lethal, and the reasoning is straightforward: regulatory costs, transmitted through the economy, are ultimately paid by individuals, leaving them with less disposable income. Since individuals on average use additional income to make their lives safer and healthier, the reductions in disposable income lead to higher mortality risks

EPA is proposing to make the secondary standard the same as the primary standard, as is the case with the proposed ozone standards.

[&]quot;Which Communities Will Be Affected by the New Standards," p. 19.

Lead Industries Assoc. v. EPA, 647 F.2d 1130 (D.C. Cir. 1980).

and fatalities." Aggregating these small increases in risk over millions of people leads to induced fatalities."

D. Purpose of the Study

The purpose of this study is to estimate the number of fatalities that may be induced nationally, and in various states, by the economic costs of the proposed ozone and particulate-matter standards.

Part 2

Research Methods

The model used in the calculations quantifies the concept introduced by Aaron Wildavsky that "richer is safer," and is fully described in a recently published article by Ralph Keeney."

A. Inputs

The model, which uses the income measure of annual household income before taxes, has three fundamental components:

- 1. r(x) = the annual probability of death for an individual living in a household with income x,
- 2. f(x) = the distribution of annual income for households prior to paying the costs of the proposed standards,
- 3. c(x) = the cost of the proposed standard to households with income x.

H.O. Duleep, "Measuring the Effect of Income on Adult Mortality Using Longitudinal Administrative Record Data," Journal of Economic and Social Measurement, vol. 21 (1986); D.R. Williams, "Socioeconomic Differentials in Health: A Review and Redirection," Social Psychology Quarterly, vol. 53 (1990); J.D. Graham, B. Hung-Chang, and J.S. Evans, "Poorer is Riskier," Risk Analysis, vol. 12 (1992); K.S. Chapman and G. Hariharan, "Controlling for Causality in the Link from Income to Mortality," Journal of Risk and Uncertainty, vol. 8 (1994); and A. Wildavsky, "Richer is Safer," The Public Interest, vol. 60 (1980).

Ralph L. Keeney, "Estimating Fatalities Induced by the Economic Costs of Regulations," Journal of Risk and Uncertainty, vol. 14 (1997), pp. 5-23; Aaron Wildavsky, "Richer is Safer," The Public Interest, vol. 60, pp. 23-29; and William Kip Viscusi, "Mortality Effects of Regulatory Costs and Policy Evaluation Criteria," Rand Journal of Economics, vol. 25 (1994), pp. 94-109.

¹² Keeney, "Estimating Fatalities."

B. Annual Mortality Risk

The annual mortality risk r(x) is given by equation 1:

$$\mathbf{r}(\mathbf{x}) = \mathbf{a}\mathbf{e}^{-\mathbf{b}\mathbf{x}} + \mathbf{d} \tag{1}$$

where a, b, and d are positive constants and x is household income. To calculate the constants, data from the National Longitudinal Mortality Study conducted by the National Institutes of Health was used.¹³ Since the most recent data available for the income distribution of U.S. households is in terms of 1994 dollars, the parameters for equation 1 are calculated in terms of 1994 dollars. The calculated best fit parameters for wihites, blacks, males, and females are listed in Table 1 of Appendix 2.14

C. Distribution of Annual Income

The population and income distribution for the U.S. is taken from Bureau of the Census data.¹⁵ Table 2 of Appendix 2 shows the total number of white, black, and other households in 1994 and the percentages of each with particular income. The information for other households, defined as neither white nor black, was calculated as the total minus white and black.

D. Definition of Household

The calculations assumed that each household had one adult male and one adult female, ages 25 to 64. When only one adult is present, the regulatory cost burden will fall more on the other members of the household, including children. This would increase these risks, and hence the resulting induced fatalities to these others. Because of a lack of available data regarding mortality of children, we could not derive specific values for induced fatalities for children.

E. Individual Household Costs of Regulations

The costs to households depend on how these costs are eventually borne. We investigated two possibilities: 1) an allocation of costs equally for all households, and 2) an allocation of costs proportional to household income. Table 3 in Appendix 2 shows the annual costs to households of different income for these two allocations. Since the estimated regulatory costs are in 1990 dollars, Table 3 gives the allocations for a total of \$10 billion (in 1990 dollars)." However, since the household incomes are in 1994 dollars, we also escalate the 1990 dollars to 1994 dollars using the consumer price index, and indicate the

¹³ E. Roget, P.D. Sorlie, N.J. Johnson and C.A. Schmitt, A Mortality Study of 1.3 Million Persons by Demographic, Social, and Economic Factors, 1979–1985 Follow-Up, National Institutes of Health, Publication No. 92-3297 (Bethesda, Md., 1992).

Black Americans were chosen for discrete analysis in order to get at the disproportional impacts that economic harms exert upon all minority communities. Census data is not yet comprehensive enough to allow an analysis of other minority groups. Use of the words "black" and "nonblack" are used in keeping with the categorization used in census data, and to reflect that the population being discussed is of mixed nationality and descent.

Bureau of the Census, "Statistical Abstract of the United States," U.S. Department of Commerce, Washington D.C. (1993).

U.S. Environmental Protection Agency, "Regulatory Impact Analyses for Proposed Particulate Matter National Ambient Air Quality Standards, Draft, Research Triangle Park, North Carolina (1996).

household costs in 1994 dollars. This makes it easier to understand the implications of the costs to a household with a specified 1994 income.

F. Adjustments for State Breakdowns

States differ in a variety of economic variables including:

- Average household income;
- Income distribution;
- Population;
- Ethnic percentages of population; and
- Regulatory costs per household.

The *income distribution for households within each state* was developed using adjustments to the national household income distribution taken from national Bureau of the Census data." The national percentage of households with income in different ranges is shown in Table 4 of Appendix 2 for black and nonblack (meaning white and other) households. The incomes are then adjusted up or down separately for these two categories depending on the income within a state relative to the national average. For instance, the national median black income in 1989 was \$19,758, whereas median black income in California in 1989 was \$26,079." Hence, all the national black income ranges were increased by 1.32 (the ratio of the national and California values) to yield the black household income distribution for California in Table 5 (Appendix 2). The analogous calculations for nonblacks used the national and state median incomes for whites, as whites represent a large majority of nonblacks and the median income for the households in the other categories is similar to that for whites. Thus for California, nonblack incomes were increased by 1.2, which is the California median household income for whites in 1989 (\$37,724) divided by the national median household income for whites (\$31,435).

The total number of households per state was available from the 1994 Census. To get the number of black households, we multiplied the percentage of the black population by the number of households. The remaining households were nonblack. Table 5 in Appendix 2 presents the total number of black and nonblack households in 1994 and the percentages of each with a particular income.

[&]quot;Statistical Abstract of the United States."

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[&]quot;Statistical Abstract of the United States."

Part 3

Results of the Analysis

ur findings indicate that a significant number of fatalities will be induced annually by the economic impacts of the proposed ozone and particulate standards. After deriving values of induced fatality over a range of potential compliance costs, we estimated induced mortality under four different cost scenarios, using two different assumptions: 1) that the brunt of economic impacts is borne equally among households; and 2) that the economic impacts are proportional to household income.

A. Induced Fatalities, \$10 Billion Increments

Table 1 shows the induced fatality estimated for a range of spending from \$0 to \$100 billion, in 1990 dollars. The induced fatalities are broken out by gender, economic bracket, and for the black population.

1990 Regulatory Costs											
(Billions 1990 \$)	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
Total Induced Fatalities	0	2,201	4,414	6,641	8,880	11,132	13,397	15,675	17,966	20,271	22,589
Total Induced Male Fatalities	0	1,488	2,983	4,485	5,995	7,513	9,038	10,570	12,110	13,658	15,214
Total Induced Female Fatalities	0	713	1,432	2,155	2,884	3,619	4,359	5,105	5,856	6,613	7,375
1990 Regulatory Costs											
(Billions 1990 \$)	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
Total Induced Fatalities	0	2,201	4,414	6,641	088,8	11,132	13,397	15,675	17,966	20,271	22,589
Total Induced Black Fatalities	0	510	1,024	1,541	2,061	2,585	3,112	3,642	4,176	4,713	5,253
1990 Regulatory Costs											
(Billions 1990 \$)	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
Total Induced Fatalities	0	2,201	4,414	6,641	8,880	11,132	13,397	15,675	17,966	20,271	22,589
\$0 - \$14,999 (1994 \$)	0	1,251	2,509	3,775	5,048	6,329	7,617	8,913	10,217	11,528	12,847
\$15,000 – \$34,999 (1994 \$)	0	725	1,454	2,187	2,924	3,665	4,410	5,160	5,914	6,672	7,435
\$35,000 and above (1994 \$)	0	225	452	679	908	1,138	1,370	1,602	1,836	2,071	2,307

If one assumes that all households will bear the brunt of the economic impacts equally, each \$10 billion (in 1990 dollars) spent each year to comply with the new standards will lead to annual induced fatalities of:²⁰

- 2,201 Americans, of whom:
 - ♦ 1,488 will be males;
 - ♦ 713 will be females; and
 - ♦ 510 will be black.

These impacts will hit those in the lowest economic brackets hardest, inducing: "

- 1,251 premature deaths annually for those earning under \$15,000 annually;
- 725 premature deaths annually for those earning between \$15,000 and \$35,000 annually; and
- 225 premature deaths annually for those earning above \$35,000 annually.

Table 2 shows the induced fatalities estimated for the same spending range under the assumption that the economic impacts of the proposed rules will not be distributed equally among households, but that they will be absorbed by Americans in proportion to their household income.

1990 Regulatory Costs											
(Billions 1990 \$)	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
Total Induced Fatalities	0	901	1,806	2,714	3,626	4,541	5,460	6,382	7,309	8,238	9,172
Total Induced Male Fatalities	0	659	1,321	1,985	2,651	3,320	3,991	4,665	5,342	6,021	6,702
Total Induced Female Fatalities	0	242	485	730	975	1,221	1,469	1,717	1,967	2,217	2,469
1990 Regulatory Costs											
(Billions 1990 \$)	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
Total Induced Fatalities	0	901	1,806	2,714	3,626	4,541	5,460	6,382	7,309	8,238	9,172
Total Induced Black Fatalities	0	153	307	462	617	772	928	1,085	1,242	1,399	1,558
1990 Regulatory Costs											
(Billions 1990 \$)	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
Total Induced Fatalities	0	901	1,806	2,714	3,626	4,541	5,460	6,382	7,309	8,238	9,172
\$0 - \$14,999 (1994 \$)	0	220	440	660	880	1,101	1,322	1,543	1,765	1,987	2,209
\$15,000 - \$34,999 (1994 \$)	0	409	819	1,231	1,644	2,058	2,474	2,891	3,309	3,729	4,151
\$35,000 And Above (1994 \$)	0	273	547	824	1,102	1,382	1,664	1.948	2,234	2,522	2,812

While the induced fatality function is not linear, for the range of costs evaluated in this study, it is "nearly" linear.

Income ranges have been adjusted to 1994 dollars for all scenarios, for the reader's convenience in assessing impacts based on more familiar value of money. This is the case for all scenarios to follow.

Under this scenario, each \$10 billion (in 1990 dollars) spent each year to comply with the new standards will lead to induced annual fatality of:

- 901 Americans, of whom:
 - ♦ 659 will be men:
 - ♦ 242 will be women; and
 - ♦ 153 will be black.

By comparison with the equal-impact scenario, the induced annual fatalities predicted by a proportional-impact model are shifted into the middle class, though both upper- and lower-income Americans will suffer the induction of premature deaths as follows:

- 220 premature deaths annually for those earning under \$15,000 annually;
- 409 premature deaths annually for those earning between \$15,000 and \$35,000 annually; and
- 273 premature deaths annually for those earning above \$35,000 annually.

B. EPA's Cost Scenario

EPA estimates the national cost of new compliance efforts triggered by the new standards at \$6.5 billion to \$8.5 billion annually. This estimate seems low to some analysts, considering that California's South Coast Air Basin is planning to spend \$1.7 billion per year just to meet the existing standard, while proposed efforts in the Chicago area are estimated to cost \$2.5 to \$7 billion annually. However, for the sake of comparison, the induced fatalities stemming from the midpoint costs EPA acknowledges are as follows for \$7.5 billion annual cost:²²

If one assumes that all households will bear the brunt of the economic impacts equally, the \$7.5 billion (in 1990 dollars) spent each year to comply with the new standards will lead to induced fatality of:²³

- 1,651 Americans, of whom:
 - ♦ 1.116 will be males:
 - ♦ 535 will be females; and
 - ♦ 383 will be black.

The impacts will hit those in the lowest economic brackets hardest, inducing

- 938 induced fatalities annually for those earning under \$15,000 annually;
- 544 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 169 induced fatalities annually for those earning above \$35,000 annually.

²² By interpolation from the \$0 and \$10 billion increments above.

These values were derived simply by taking ¾ of the \$10 billion base case. While the induced mortality function is not linear, for the range of costs evaluated in this study, it is "nearly" linear, justifying this derivation.

If one assumes that the economic impacts of the proposed rules will not be distributed equally among households, but that rather, will be absorbed by Americans in proportion to their economic standing, the distribution of induced fatalities is as follows: each \$7.5 billion (in 1990 dollars) spent each year to comply with the new standards will lead to the induced fatality of:

- 676 Americans, of whom:
 - ♦ 494 will be men:
 - ♦ 182 will be women; and
 - ♦ 115 will be black.

By comparison with the equal-impact scenario, the induced fatalities predicted by a proportional-impact model are shifted into the middle class, though both upper- and lower-income Americans will suffer the induction of induced fatality as follows:

- 165 induced fatalities annually for those earning under \$15,000 annually;
- 307 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 205 induced fatalities annually for those earning above \$35,000 annually.

C. Presidential Economic Adviser's Scenario

Alicia Munnell, a member of the President's Council of Economic Advisers estimated the costs of attaining the new ozone standard alone at \$60 billion annually. Taking data from tables 1 and 2 for economic impacts at the estimated \$60 billion cost proposed by the President's economic adviser, we see induced annual fatalities ranging from:

- 5,460 and 13,397 Americans, depending on the assumed distribution of impact, of whom:
 - ♦ 3,991 to 9,038 will be men;
 - ♦ 2,651 to 4,359 will be women; and
 - ♦ 928 to 3.112 will be black.

Under this scenario, the impacts are shifted into the middle class, though both upper- and lower-income Americans will suffer induced fatalities as follows:

- 1,322 to 7,617 induced fatalities annually for those earning under \$15,000 annually;
- 2,474 to 4,410 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 1,664 to 1,370 induced fatalities annually for those earning above \$35,000 annually

Alicia H. Munnell, "Memorandum from Alicia H. Munnell to Sally Katzen, Office of Management and Budget," Executive Office of the President, Council of Economic Advisors, December 1996; A. Munnell, "Memorandum for Art Fraas, Office of Management and Budget," Executive Office of the President, Council of Economic Advisors, December 1996.

D. RPPI / Anne E. Smith Cost Scenario

In a study performed for Reason Public Policy Institute, economist Anne E. Smith calculated a plausible range of potential costs stemming from the proposed standards of \$90 billion-\$150 billion.³⁵ Taking the midpoint of that range, and assuming that all households will bear the brunt of the economic impacts equally, \$120 billion (in 1990 dollars) spent each year to comply with the new standards will lead to induced fatalities of:

- 27,000 Americans each year, of whom:
 - ♦ 18,100 will be males;
 - ♦ 8,800 will be females; and
 - ♦ 6,300 will be black.

The impacts will hit those in the lowest economic brackets hardest, inducing:

- 15,300 induced fatalities annually for those earning under \$15,000 annually;
- 8,900 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 2,800 induced fatalities annually for those earning above \$35,000 annually.

If one assumes that costs are distributed proportionally to household income, \$120 billion (in 1990 dollars) spent each year to comply with the new standards will lead to annual fatalities of:

- 11,000 Americans, of whom:
 - ♦ 8,000 will be males:
 - ♦ 2,900 will be females; and
 - ♦ 1,860 will be black.

By comparison with the equal-impact scenario, the induced fatalities predicted by a proportional-impact model are shifted into the middle class, though both upper- and lower-income Americans will suffer induced fatalities as follows:

- 2,600 induced fatalities annually for those earning under \$15,000 annually;
- 5,000 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 3,400 induced fatalities annually for those earning above \$35,000 annually.

E. Induced Fatalities By State - The Example of California

Smith et al. also calculated a plausible range of potential costs stemming from the proposed standards in California of approximately \$9 billion per year.²⁶ This value, in combination with the state-specific induced fatality data for California in Appendix 1, was used to derive induced death calculations for

Anne E. Smith et al., "Costs, Economic Impacts, and Benefits of EPA's Proposed Ozone and Particulate Standards," Policy Study No. 226, Reason Public Policy Institute, Los Angeles, Calif., June 1997.

²⁶ Ibid.

California. Assuming that all households will bear the brunt of the economic impacts equally, \$9 billion (in 1990 dollars) spent each year to comply with the new standards will lead to induced fatalities of: "

- 1,632 Californians each year, of whom:
 - ♦ 1,120 will be males;
 - ♦ 154 will be females; and
 - ♦ 252 will be black.

The impacts will hit those in the lowest economic brackets hardest, inducing:

- 989 induced fatalities annually for those earning under \$15,000 annually;
- 513 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 130 induced fatalities annually for those earning above \$35,000 annually.

Under the assumption that costs are distributed proportionally to household income, \$9 billion (in 1990 dollars) spent each year to comply with the new standards will lead to annual fatalities of:

- 604 Californians, of whom:
 - ♦ 450 will be males;
 - ♦ 154 will be females; and
 - ♦ 69 will be black.

By comparison with the equal-impact scenario, the induced fatalities predicted by a proportional-impact model are shifted into the middle class, though both upper- and lower-income Americans will suffer induced fatalities as follows:

- 169 induced fatalities annually for those earning under \$15,000 annually;
- 283 induced fatalities annually for those earning between \$15,000 and \$35,000 annually; and
- 152 induced fatalities annually for those earning above \$35,000 annually.

Value derived by multiplying the \$10 billion estimate by 0.9. Function is nearly linear within the range modeled.

Part 4

Conclusion

he number of fatalities that may be induced annually by the costs of the proposed air quality standards for ozone and particulates is substantial at both state and federal levels. For a cost of \$10 billion in 1990 dollars, an estimated 2,201 fatalities are induced annually nationwide assuming the costs are borne equally among households, and 901 assuming they are borne proportionally among households according to income. The relationship between regulatory costs and induced fatalities is about linear, allowing for the evaluation of different cost scenarios, allowing the derivation of induced fatalities valued for two widely discussed scenarios.

Under EPA's claimed cost scenario, \$7.5 billion in annual compliance costs would induce 1,651 fatalities nationally if costs are borne equally among households, and 676 if borne proportionally according to income. Under the estimate put forward by Alicia Munnell of the President's Council of Economic Advisers, \$60 billion in annual spending would induce 13,397 fatalities nationally if borne equally among households, and 5,460 fatalities if borne proportionally among households according to income. Under the estimate put forward by RPPI / Anne E. Smith, \$120 billion in annual spending would induce 27,000 annual fatalities if borne equally among households, and 11,000 annual fatalities if borne proportionally among households according to income.

States facing high predicted costs will also show significant levels of induced fatalities. In California, for example, a predicted compliance cost of approximately \$9 billion in annual spending would induce approximately 1,600 fatalities annually if borne equally among households, and 604 annual fatalities if borne proportionally among households according to income.

Under all scenarios, induced fatalities occur mostly among people earning less than \$35,000 annually, and disproportionately among the black population.

Part 5

About the Authors

Dr. Ralph L. Keeney is a professor of systems management at the University of Southern California. Previously, Dr. Keeney has been a professor in engineering and in management at MIT, a Research Scholar at the International Institute for Applied System Analysis in Austria, and has consulted on such issues as energy policy and large-scale facility siting. He is the author of *Value-Focused Thinking* (Harvard University Press, 1992); *Siting Energy Facilities* (Academic Press, 1980); and "Estimating Fatalities Induced by the Economic Costs of Regulations" (*Journal of Risk and Uncertainty*, 1997). Dr. Keeney's current research included quantitatively examining the implications of the "richer is safer" phenomenon.

Dr. Kenneth Green is environmental studies director and a senior policy analyst at the Reason Public Policy Institute. Dr. Green has published three previous studies on the linkage between transportation and air quality: *Looking Beyond ECO*, and *Defending Automobility*, and *Checking Up on Smog Check*. He has also directed studies on electric vehicles and on roadway finance reform. Dr. Green serves on the California Department of Transportation Advisery Committee and also on the REACH Commission, a task force sponsored by the Federal Highway Administration and the Southern California Association of Governments to design pricing approaches for roadways in the South Coast Air Basin.

Appendix 1

State Level Breakdowns

State: Alabama

Black income relative to National: Percent Black Population:

0.71 25.45% Nonblack income relative to National: Number of Households (1000s):

0.85 1,583

Table AL - 1. Distribution of annual income for households in 1994.

	Households	Nonblack			<u>Households</u>	Black	
percent of	number	ge	income ran	percent of	number	ge	income ran
total	(1000s)	<u>(1994 \$)</u> <u>(1000s</u>			(1000s)	-	(1994 \$)
households				<u>households</u>			
8.79%	139	\$8,523	Under	6.70%	106	\$7,084	Under
6.54%	104	\$12,783	\$8,523 -	2.93%	46	\$10,625	\$7,084 -
12.23%	194	\$21,306	\$12,784 -	4.81%	76	\$17,710	\$10,626 -
10.72%	170	\$29,829	\$21,307 -	3.26%	52	\$24,794	\$17,711 -
12.45%	197	\$42,614	\$29,830 -	3.39%	54	\$35,420	\$24,795 -
12.87%	204	\$63,921	\$42,615 -	2.75%	44	\$53,131	\$35,421 -
10.95%	173		\$63,922 Plus	1.60%	25		\$53,132 Plus
74.55%	1,180		III nonblack:	25.45%	403		All black:

Table AL - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$632 (1990 \$)

\$717 (1994 \$)

	Nonblack Households					<u>Households</u>	Black		
1994 \$	1990 \$	1994 \$)	e range (1	income ra	1994 \$	1990 \$	994 \$)	ange (1	income r
\$94	\$82	\$8,523	Jnder	Und	\$78	\$69	\$7,084	nder	U
\$234	\$206	\$12,783	23 -	\$8,523	\$194	\$171	\$10,625	-	\$7,084
\$374	\$330	\$21,306	84 -	\$12,784	\$311	\$274	\$17,710	-	\$10,626
\$561	\$495	\$29,829	07 -	\$21,307	\$466	\$411	\$24,794	-	\$17,711
\$795	\$701	\$42,614	30 -	\$29,830	\$661	\$582	\$35,420	-	\$24,795
\$1,169	\$1,030	\$63,921	15 -	\$42,615	\$972	\$856	\$53,131	-	\$35,421
\$2,017	\$1,778		22 Plus	\$63,922	\$1,677	\$1,478		Plus	\$53,132

Table AL -3. Annualindu	uced fatalities of regu	latory costs alloc	cated equally to a	II households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	0.5	1.0	<u>1.5</u>	2.0	2.5
total fatalities	0	151	305	462	622	785
male fatalities	0	99	199	301	404	509
female fatalities	0	53	106	162	218	276
black fatalities	0	69	139	211	285	359
low income fatalities	0	84	170	257	346	437
medium income fatalities	0	50	100	152	204	257
high income fatalities	0	18	35	54	72	91

Table AL -4. Ann	ual induced fatalities of regul	atory costs alloc	ated proportiona	lly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	1.0	<u>1.5</u>	2.0	2.5
total fatalities	0	65	131	198	265	334
male fatalities	0	46	92	139	187	235
female fatalities	0	19	39	58	78	99
black fatalities	0	22	45	67	90	113
low income fatalities	0	14	29	43	58	73
med. income fatalities	0	28	57	86	115	145
high income fatalities	0	22	45	69	92	117

State: Alaska

Black income relative to National:1.59Nonblack income relative to National:1.43Percent Black Population:4.08%Number of Households (1000s):208

Table AK - 1. Distribution of annual income for households in 1994.

		Black	: Households			Nonblack	Households	
inco	me rar	nge	number	percent of	income ra	ange	number	percent of
(1994 \$)_	(1000s)	total	(1994 \$	(1994 \$) (1000s		total
				<u>households</u>				households
U	Inder	\$15,930	2	1.07%	Under	\$14,315	24	11.31%
\$15,930	-	\$23,894	1	0.47%	\$14,315 -	\$21,471	18	8.42%
\$23,895	-	\$39,823	2	0.77%	\$21,472 -	\$35,786	33	15.73%
\$39,824	-	\$55,753	1	0.52%	\$35,787 -	\$50,100	29	13.80%
\$55,754	-	\$79,648	1	0.54%	\$50,101 -	\$71,572	33	16.02%
\$79,649	-	\$119,472	1	0.44%	\$71,573 -	\$107,359	34	16.55%
\$119,473	Plus		1	0.26%	\$107,360 Plu	S	29	14.09%
All black:			8	4.08%	All nonblack:		200	95.92%

Table AK - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$4,808 (1990\$)

\$5,456 (1994 \$)

		Blac	k Households			Nonblac	k Households	
income	range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
L	Inder	\$15,930	\$628	\$713	Under	\$14,315	\$564	\$640
\$15,930	-	\$23,894	\$1,570	\$1,782	\$14,315 -	\$21,471	\$1,411	\$1,601
\$23,895	-	\$39,823	\$2,512	\$2,851	\$21,472 -	\$35,786	\$2,257	\$2,562
\$39,824	-	\$55,753	\$3,768	\$4,276	\$35,787 -	\$50,100	\$3,386	\$3,843
\$55,754	-	\$79,648	\$5,338	\$6,058	\$50,101 -	\$71,572	\$4,797	\$5,444
\$79,649	-	\$119,472	\$7,850	\$8,909	\$71,573 -	\$107,359	\$7,054	\$8,005
\$119,473	Plus		\$13,546	\$15,373	\$107,360 Plus	3	\$12,173	\$13,814

T 11 A16 A		the first training		
Table AK - 3.	Annual induced fata	alities of regulatory co	osts allocated equall	y to all households.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	<u>0.2</u>	<u>0.3</u>	<u>0.4</u>	0.5
total fatalities	0	15	29	45	61	77
male fatalities	0	10	21	31	42	53
female fatalities	0	4	9	14	19	24
black fatalities	0	1	3	4	5	7
low income fatalities	0	9	19	29	39	49
medium income fatalities	0	4	9	13	18	23
high income fatalities	0	1	2	3	4	5

Table AK - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	<u>0.3</u>	<u>0.4</u>	0.5
total fatalities	0	5	10	15	20	25
male fatalities	0	4	7	11	15	19
female fatalities	0	1	2	4	5	6
black fatalities	0	0	1	1	1	2
low income fatalities	0	2	3	5	6	8
med. income fatalities	0	2	5	7	10	12
high income fatalities	0	1	2	3	4	5

State: Arizona

1.04 Nonblack income relative to National: 0.93 Black income relative to National: Percent Black Population: 3.26% Number of Households (1000s): 1,503

Table AZ - 1. Distribution of annual income for households in 1994.

	Households	Nonblack				<u>Households</u>	Black	
percent of	number	income range number				number	ge	income rang
total	(1000s)		94 \$)	(19	total	(1000s)		(1994 \$)
households					<u>households</u>			
11.40%	171	\$9,303	er	Und	0.86%	13	\$10,408	Under
8.49%	128	\$13,954	-	\$9,303	0.38%	6	\$15,611	\$10,408 -
15.87%	239	\$23,257	-	\$13,955	0.62%	9	\$26,019	\$15,612 -
13.92%	209	\$32,561	-	\$23,258	0.42%	6	\$36,427	\$26,020 -
16.15%	243	\$46,516	-	\$32,562	0.43%	7	\$52,039	\$36,428 -
16.70%	251	\$69,774	-	\$46,517	0.35%	5	\$78,059	\$52,040 -
14.21%	214		Plus	\$69,775	0.21%	3		\$78,060 Plus
96.74%	1,454		k:	All nonblac	3.26%	49		All black:

Table AZ - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$665 (1990 \$)

\$755 (1994 \$)

	Black	Households	Nonblack Households				
income range (1	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$10,408	\$87	\$99	Under	\$9,303	\$78	\$88
\$10,408 -	\$15,611	\$218	\$247	\$9,303 -	\$13,954	\$195	\$221
\$15,612 -	\$26,019	\$349	\$396	\$13,955 -	\$23,257	\$312	\$354
\$26,020 -	\$36,427	\$523	\$594	\$23,258 -	\$32,561	\$468	\$531
\$36,428 -	\$52,039	\$741	\$841	\$32,562 -	\$46,516	\$662	\$752
\$52,040 -	\$78,059	\$1,090	\$1,237	\$46,517 -	\$69,774	\$974	\$1,106
\$78,060 Plus		\$1,881	\$2,134	\$69,775 Plus	1	\$1,681	\$1,908

Table A7	- 3	Annual induced fatalities of regulate	ory costs allocated equal	v to all households
Table AZ	- J.	Arrida induced latalities of regular	Ji y cosis allocated equal	y to all flousefloids.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	106	214	324	437	551
male fatalities	0	73	147	222	298	376
female fatalities	0	33	67	102	138	175
black fatalities	0	7	14	21	29	36
low income fatalities	0	55	112	169	227	287
medium income fatalities	0	38	76	115	154	195
high income fatalities	0	13	27	41	55	69

Table AZ -4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs	<u> </u>	<u> </u>	_	_	<u> </u>	
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	46	94	141	190	239
male fatalities	0	34	69	104	140	176
female fatalities	0	12	24	37	49	62
black fatalities	0	2	4	7	9	11
low income fatalities	0	10	19	29	39	49
med. income fatalities	0	21	42	63	84	106
high income fatalities	0	16	32	49	66	84

State: Arkansas

Black income relative to National: 0.61 Nonblack income relative to National: 0.72
Percent Black Population: 15.91% Number of Households (1000s): 927

Table AR - 1. Distribution of annual income for households in 1994.

	Black	K Households			Nonblack	: Households	
income ra	ange	number	percent of	income ran	nge	number	percent of
(1994	\$)	(1000s)	total	(1994 \$)	Ĺ	(1000s)	total
			<u>households</u>				<u>households</u>
Under	\$6,138	39	4.19%	Under	\$7,174	92	9.91%
\$6,138 -	\$9,206	17	1.83%	\$7,174 -	\$10,759	68	7.38%
\$9,207 -	\$15,345	28	3.01%	\$10,760 -	\$17,933	128	13.79%
\$15,346 -	\$21,483	19	2.04%	\$17,934 -	\$25,106	112	12.10%
\$21,484 -	\$30,690	20	2.12%	\$25,107 -	\$35,867	130	14.04%
\$30,691 -	\$46,036	16	1.72%	\$35,868 -	\$53,800	135	14.51%
\$46,037 Plus		9	1.00%	\$53,801 Plus		114	12.35%
All black:		148	15.91%	All nonblack:		779	84.09%

Table AR - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,079 (1990 \$)

\$1,224 (1994\$)

	Blac	k Households		Nonblack Households			
income rang	e (1994 \$)	1990 \$	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Unde	r \$6,138	\$115	\$130	Under	\$7,174	\$134	\$152
\$6,138 -	\$9,206	\$287	\$326	\$7,174 -	\$10,759	\$335	\$381
\$9,207 -	\$15,345	\$459	\$521	\$10,760 -	\$17,933	\$537	\$609
\$15,346 -	\$21,483	\$689	\$782	\$17,934 -	\$25,106	\$805	\$914
\$21,484 -	\$30,690	\$976	\$1,108	\$25,107 -	\$35,867	\$1,141	\$1,294
\$30,691 -	\$46,036	\$1,435	\$1,629	\$35,868 -	\$53,800	\$1,677	\$1,904
\$46,037 Plu	IS	\$2,477	\$2,811	\$53,801 Plus	•	\$2,895	\$3,285

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Table AR - 3.	Annual induced fatalities of regulator	ry costs allocated equally to all households.

0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
0	154	312	476	645	819
0	101	205	312	422	534
0	53	107	164	223	285
0	47	96	146	198	252
0	76	155	237	321	408
0	54	109	167	226	287
0	23	48	72	98	124
	0.0 0 0 0 0 0 0	0 154 0 101 0 53 0 47 0 76 0 54	0 154 312 0 101 205 0 53 107 0 47 96 0 76 155 0 54 109	0 154 312 476 0 101 205 312 0 53 107 164 0 47 96 146 0 76 155 237 0 54 109 167	0 154 312 476 645 0 101 205 312 422 0 53 107 164 223 0 47 96 146 198 0 76 155 237 321 0 54 109 167 226

Table AR - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
	•		4.40	007	000	
total fatalities	0	74	149	227	306	388
male fatalities	0	52	106	161	217	275
female fatalities	0	21	43	66	89	113
black fatalities	0	16	32	48	65	82
low income fatalities	0	13	27	40	53	67
med. income fatalities	0	30	61	93	125	158
high income fatalities	0	30	61	94	128	164

California

low income fatalities

med. income fatalities

high income fatalities

1.20 Black income relative to National: 1.32 Nonblack income relative to National: Percent Black Population: 10,850 7.71% Number of Households (1000s):

Table CA -1. Distribution of annual income for households in 1994.

	Black	Households			Nonblack	Households	
income range		number	percent of	income ra	inge	number	percent of
(1994 \$)		(1000s)	California	(1994 \$	6)	(1000s)	California
			<u>households</u>				households
Under	\$13,199	220	2.03%	Under	\$12,001	1,180	10.88%
\$13,199 -	\$19,798	96	0.89%	\$12,001 -	\$18,000	879	8.10%
\$19,799 -	\$32,997	158	1.46%	\$18,001 -	\$30,001	1,643	15.14%
\$32,998 -	\$46,196	107	0.99%	\$30,002 -	\$42,001	1,440	13.28%
\$46,197 -	\$65,995	111	1.03%	\$42,002 -	\$60,002	1,672	15.41%
\$65,996 -	\$98,993	90	0.83%	\$60,003 -	\$90,004	1,728	15.93%
\$98,994 Plus		53	0.49%	\$90,005 Plus	s	1,471	13.55%
All black:		836	7.71%	All nonblack:		10.014	92.29%

Table CA -2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$92 (1990 \$)

\$105 (1994 \$)

474

802

443

Annual regulatory costs per household with proportional to income allocation:

	Black Households					Nonblack Households			
income r	ange (199	94 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	1990\$	<u>1994 \$</u>	
U	nder	\$13,199	\$12	\$14	Under	\$12,001	\$11	\$12	
\$13,199	-	\$19,798	\$30	\$34	\$12,001 -	\$18,000	\$27	\$31	
\$19,799	-	\$32,997	\$48	\$55	\$18,001 -	\$30,001	\$44	\$50	
\$32,998	-	\$46,196	\$72	\$82	\$30,002 -	\$42,001	\$66	\$74	
\$46,197	-	\$65,995	\$102	\$116	\$42,002 -	\$60,002	\$93	\$105	
\$65,996	-	\$98,993	\$150	\$170	\$60,003 -	\$90,004	\$136	\$155	
\$98,994	Plus		\$259	\$294	\$90,005 Plus	3	\$236	\$267	

Table CA -3. Annual induced fatalities of regulatory costs	allocated equally to all households.
--	--------------------------------------

0

0

0

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>5.0</u>	<u>10.0</u>	<u>15.0</u>	20.0	<u>25.0</u>
total fatalities	0	895	1,814	2,757	3,725	4,719
male fatalities	0	615	1,245	1,888	2,546	3,218
female fatalities	0	280	570	869	1,180	1,500
black fatalities	0	138	280	427	577	732
low income fatalities	0	542	1,099	1,671	2,258	2,862
medium income fatalities	0	282	570	867	1,170	1,482
high income fatalities	0	72	145	220	297	375

Table CA -4. Annual induced fa	talities of regulatory	costs allocated	proportionally to	household incom	e.	
1990 regulatory costs (billions 1990 \$)	0.0	<u>5.0</u>	10.0	<u>15.0</u>	20.0	<u>25.0</u>
total fatalities	0	333	671	1,015	1,364	1,718
male fatalities	0	248	500	756	1,015	1,279
female fatalities	0	85	171	259	348	439
black fatalities	0	38	77	116	156	197

94

156

188

314

169

283

474

258

378

637

349

State: Colorado

Black income relative to National:

1.10 Nonblack income relative to National:

0.99
Percent Black Population:

Number of Households (1000s):

1,417

Table CO - 1. Distribution of annual income for households in 1994.

	Households	Nonblack				<u>Households</u>	Black	
percent o	number	ige	ne ran	incom	percent of	number	ge	income rang
tota	(1000s)	<u>-</u>	94 \$)	(19	total	(1000s)		(1994\$)
households					<u>households</u>			
11.29%	160	\$9,869	er	Und	1.12%	16	\$10,971	Under
8.41%	119	\$14,803	-	\$9,869	0.49%	7	\$16,455	971 -
15.71%	223	\$24,672	-	\$14,804	0.80%	11	\$27,426	456 -
13.77%	195	\$34,541	-	\$24,673	0.54%	8	\$38,397	427 -
15.99%	227	\$49,345	-	\$34,542	0.56%	8	\$54,853	398 -
16.53%	234	\$74,018	-	\$49,346	0.46%	6	\$82,280	854 -
14.06%	199		Plus	\$74,019	0.27%	4		281 Plus
95.76%	1,357		k:	All nonblac	4.24%	60		lack:

Table CO - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$706 (1990 \$)

\$801 (1994\$)

	Black	Households			Nonblack	Households	
income range (1	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$10,971	\$92	\$105	Under	\$9,869	\$83	\$94
\$10,971 -	\$16,455	\$230	\$261	\$9,869 -	\$14,803	\$207	\$235
\$16,456 -	\$27,426	\$368	\$418	\$14,804 -	\$24,672	\$331	\$376
\$27,427 -	\$38,397	\$553	\$627	\$24,673 -	\$34,541	\$497	\$564
\$38,398 -	\$54,853	\$783	\$889	\$34,542 -	\$49,345	\$704	\$799
\$54,854 -	\$82,280	\$1,152	\$1,307	\$49,346 -	\$74,018	\$1,036	\$1,176
\$82,281 Plus		\$1,987	\$2,255	\$74,019 Plus	i	\$1,788	\$2,029

Table CO - 3.	Annual induced fatalities of regulatory costs allocated	equally to all households.
rogulatory costs		

1990 regulatory costs (billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	102	206	312	421	531
male fatalities	0	70	141	214	288	363
female fatalities	0	32	65	99	133	169
black fatalities	0	9	18	27	36	45
low income fatalities	0	55	111	169	227	287
medium income fatalities	0	35	71	108	146	184
high income fatalities	0	12	24	36	48	61

Table CO - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	43	87	131	176	221
male fatalities	0	32	64	97	130	164
female fatalities	0	11	22	34	46	57
black fatalities	0	3	5	8	11	14
low income fatalities	0	10	19	29	39	49
med. income fatalities	0	20	39	59	79	100
high income fatalities	0	14	28	43	58	73

State: Connecticut

1.42 Nonblack income relative to National: 1.38 Black income relative to National: Percent Black Population: 8.78% Number of Households (1000s): 1,222

Table CT - 1. Distribution of annual income for households in 1994.

	Black	: Households			Nonblack	K Households	
income rar	nge	number	percent of	income ra	inge	number	percent of
(1994 \$)_	(1000s)	total	(1994 \$	<u>6)</u>	(1000s)	total
			households				households
Under	\$14,177	28	2.31%	Under	\$13,808	131	10.75%
\$14,177 -	\$21,265	12	1.01%	\$13,808 -	\$20,712	98	8.01%
\$21,266 -	\$35,442	20	1.66%	\$20,713 -	\$34,520	183	14.96%
\$35,443 -	\$49,619	14	1.13%	\$34,521 -	\$48,329	160	13.12%
\$49,620 -	\$70,884	14	1.17%	\$48,330 -	\$69,041	186	15.23%
\$70,885 -	\$106,327	12	0.95%	\$69,042 -	\$103,563	192	15.74%
\$106,328 Plus		7	0.55%	\$103,564 Plus	S	164	13.40%
All black:		107	8.78%	All nonblack:		1,115	91.22%

Table CT - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$818 (1990 \$)

\$929 (1994 \$)

	Black Households					Nonblack	Households	
income r	ange (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
U	nder	\$14,177	\$100	\$114	Under	\$13,808	\$98	\$111
\$14,177	-	\$21,265	\$251	\$284	\$13,808 -	\$20,712	\$244	\$277
\$21,266	-	\$35,442	\$401	\$455	\$20,713 -	\$34,520	\$391	\$443
\$35,443	-	\$49,619	\$602	\$683	\$34,521 -	\$48,329	\$586	\$665
\$49,620	-	\$70,884	\$852	\$967	\$48,330 -	\$69,041	\$830	\$942
\$70,885	-	\$106,327	\$1,253	\$1,422	\$69,042 -	\$103,563	\$1,221	\$1,385
\$106,328	Plus		\$2,163	\$2,454	\$103,564 Plus	6	\$2,106	\$2,390

Toble CT	2	Appual induced fatalities of	rogulatory and	to allocated equa	lly to all baycabalda
Table CT	- J.	Annual induced fatalities of	regulatory cos	sis allocated equa	illy to all flousefloids.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	80	162	246	332	420
male fatalities	0	55	112	169	228	288
female fatalities	0	25	51	77	104	133
black fatalities	0	15	30	46	62	78
low income fatalities	0	52	105	160	215	273
medium income fatalities	0	23	47	72	97	122
high income fatalities	0	5	10	15	20	25

Table CT - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	27	55	83	111	140
male fatalities	0	20	41	62	83	104
female fatalities	0	7	14	21	28	35
black fatalities	0	4	7	11	15	19
low income fatalities	0	9	18	27	35	44
med. income fatalities	0	13	26	39	52	66
high income fatalities	0	6	11	17	23	29

State: Delaware

Black income relative to National: 1.23 Nonblack income relative to National: 1.17
Percent Black Population: 17.51% Number of Households (1000s): 264

Table DE - 1. Distribution of annual income for households in 1994.

	Black	<u> Households</u>		Nonblack Households				
income ran	ge	number	percent of	income range		number	percent of	
(1994 \$)	_	(1000s)	total	(1994 \$)_	(1000s)	total	
			<u>households</u>				households	
Under	\$12,292	12	4.61%	Under	\$11,662	26	9.72%	
\$12,292 -	\$18,437	5	2.02%	\$11,662 -	\$17,492	19	7.24%	
\$18,438 -	\$30,728	9	3.31%	\$17,493 -	\$29,154	36	13.53%	
\$30,729 -	\$43,020	6	2.24%	\$29,155 -	\$40,817	31	11.87%	
\$43,021 -	\$61,458	6	2.33%	\$40,818 -	\$58,310	36	13.77%	
\$61,459 -	\$92,187	5	1.89%	\$58,311 -	\$87,465	38	14.24%	
\$92,188 Plus		3	1.10%	\$87,466 Plus	i	32	12.11%	
All black:		46	17.51%	All nonblack:		218	82.49%	

Table DE - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$3,788 (1990 \$)

\$4,299 (1994 \$)

	Blac	k Households		Nonblack Households				
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$12,292	\$488	\$553	Under	\$11,662	\$463	\$525	
\$12,292 -	\$18,437	\$1,219	\$1,383	\$11,662 -	\$17,492	\$1,157	\$1,312	
\$18,438 -	\$30,728	\$1,950	\$2,213	\$17,493 -	\$29,154	\$1,850	\$2,100	
\$30,729 -	\$43,020	\$2,926	\$3,320	\$29,155 -	\$40,817	\$2,776	\$3,150	
\$43,021 -	\$61,458	\$4,145	\$4,703	\$40,818 -	\$58,310	\$3,932	\$4,462	
\$61,459 -	\$92,187	\$6,095	\$6,917	\$58,311 -	\$87,465	\$5,783	\$6,562	
\$92,188 Plus		\$10,518	\$11,936	\$87,466 Plus	i	\$9,979	\$11,324	

Table DE	- 3	Annual induced	I fatalities of regulat	ony costs allocated a	equally to all households.
Table DE	- 3.	Annual muuced	i ialaiilles oi regulal	ury cusis anucateu e	equally to all HouseHolds.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	<u>0.5</u>
total fatalities	0	20	41	63	85	107
male fatalities	0	14	28	42	57	72
female fatalities	0	7	14	21	28	35
black fatalities	0	7	13	20	27	35
low income fatalities	0	13	26	40	53	67
medium income fatalities	0	6	12	19	25	32
high income fatalities	0	2	3	5	6	8

Table DE -4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	0.4	<u>0.5</u>
total fatalities	0	8	15	23	31	39
male fatalities	0	6	11	17	22	28
female fatalities	0	2	4	6	8	10
black fatalities	0	2	4	6	8	10
low income fatalities	0	2	5	7	9	11
med. income fatalities	0	3	7	11	14	18
high income fatalities	0	2	4	6	8	10

State: Washington DC

Black income relative to National: 1.24 Nonblack income relative to National: 1.46
Percent Black Population: 65.64% Number of Households (1000s): 237

Table DC - 1. Distribution of annual income for households in 1994.

	Black	<u> Households</u>		Nonblack Households				
income ran	ge	number	percent of	income ra	income range		percent of	
(1994 \$)		(1000s)	total	(1994 \$	<u>s)</u>	(1000s)	total	
			<u>households</u>				households	
Under	\$12,439	41	17.28%	Under	\$14,631	10	4.05%	
\$12,439 -	\$18,657	18	7.56%	\$14,631 -	\$21,945	7	3.02%	
\$18,658 -	\$31,095	29	12.42%	\$21,946 -	\$36,575	13	5.64%	
\$31,096 -	\$43,534	20	8.41%	\$36,576 -	\$51,206	12	4.94%	
\$43,535 -	\$62,192	21	8.74%	\$51,207 -	\$73,152	14	5.74%	
\$62,193 -	\$93,288	17	7.10%	\$73,153 -	\$109,728	14	5.93%	
\$93,289 Plus		10	4.14%	\$109,729 Plus	3	12	5.05%	
All black:		156	65.64%	All nonblack:		81	34.36%	

Table DC - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$4,219 (1990\$)

\$4,788 (1994 \$)

	Black Households				Nonblack Households				
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>		
Under	\$12,439	\$573	\$650	Under	\$14,631	\$674	\$765		
\$12,439 -	\$18,657	\$1,433	\$1,626	\$14,631 -	\$21,945	\$1,685	\$1,912		
\$18,658 -	\$31,095	\$2,293	\$2,602	\$21,946 -	\$36,575	\$2,697	\$3,060		
\$31,096 -	\$43,534	\$3,439	\$3,902	\$36,576 -	\$51,206	\$4,045	\$4,590		
\$43,535 -	\$62,192	\$4,872	\$5,528	\$51,207 -	\$73,152	\$5,730	\$6,503		
\$62,193 -	\$93,288	\$7,164	\$8,130	\$73,153 -	\$109,728	\$8,427	\$9,563		
\$93,289 Plus		\$12,363	\$14,029	\$109,729 Plus	3	\$14,541	\$16,502		

Table DO 0	A			المام والمستناء والمستعدد والمنا
Table DC - 3.	Annual induced is	atalities of regulator	y costs allocated eqt	ually to all households.

0.0	0.1				
0.0	0.1				
	<u>0.1</u>	<u>0.2</u>	<u>0.3</u>	<u>0.4</u>	<u>0.5</u>
0	29	59	90	122	154
0	19	37	57	77	97
0	11	22	33	45	57
0	25	50	76	102	130
0	22	44	67	90	114
0	7	13	20	27	34
0	1	2	3	4	5
	0 0 0 0 0 0	0 19 0 11 0 25	0 19 37 0 11 22 0 25 50 0 22 44	0 19 37 57 0 11 22 33 0 25 50 76 0 22 44 67 0 7 13 20	0 19 37 57 77 0 11 22 33 45 0 25 50 76 102 0 22 44 67 90 0 7 13 20 27

Table DC - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	0.4	<u>0.5</u>
total fatalities	0	10	19	29	39	49
male fatalities	0	6	13	20	26	33
female fatalities	0	3	6	9	12	16
black fatalities	0	7	15	22	30	38
low income fatalities	0	4	8	12	16	20
med. income fatalities	0	4	8	13	17	22
high income fatalities	0	1	3	4	6	7

State: Florida

Black income relative to National:0.91Nonblack income relative to National:0.92Percent Black Population:14.11%Number of Households (1000s):5,456

Table FL - 1. Distribution of annual income for households in 1994.

	Black	K Households		Nonblack Households			
income r	ange	number	percent of	income range		number	percent of
(1994	\$)_	(1000s)	total	(1994 \$	_	(1000s)	total
			households				households
Under	\$9,138	203	3.72%	Under	\$9,219	552	10.12%
\$9,138 -	\$13,706	89	1.62%	\$9,219 -	\$13,828	411	7.54%
\$13,707 -	\$22,844	146	2.67%	\$13,829 -	\$23,047	769	14.09%
\$22,845 -	\$31,982	99	1.81%	\$23,048 -	\$32,267	674	12.35%
\$31,983 -	\$45,689	103	1.88%	\$32,268 -	\$46,096	782	14.34%
\$45,690 -	\$68,535	83	1.53%	\$46,097 -	\$69,144	809	14.82%
\$68,536 Plus	3	49	0.89%	\$69,145 Plus		688	12.61%
All black:		770	14.11%	All nonblack:		4,686	85.89%

Table FL - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$183 (1990 \$)

\$208 (1994 \$)

	Black Households				Nonblack Households				
income ra	ange (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Ur	nder	\$9,138	\$22	\$25	Under	\$9,219	\$22	\$25	
\$9,138	-	\$13,706	\$55	\$63	\$9,219 -	\$13,828	\$56	\$63	
\$13,707	-	\$22,844	\$88	\$100	\$13,829 -	\$23,047	\$89	\$101	
\$22,845	-	\$31,982	\$133	\$151	\$23,048 -	\$32,267	\$134	\$152	
\$31,983	-	\$45,689	\$188	\$213	\$32,268 -	\$46,096	\$190	\$215	
\$45,690	-	\$68,535	\$276	\$314	\$46,097 -	\$69,144	\$279	\$316	
\$68,536	Plus		\$477	\$541	\$69,145 Plus		\$481	\$546	

Table FL - 3. Annual indu	ced fatalities of regu	latory costs alloc	cated equally to	all households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>2.0</u>	<u>4.0</u>	<u>6.0</u>	<u>8.0</u>	<u>10.0</u>
total fatalities	0	486	983	1,490	2,009	2,538
male fatalities	0	326	658	995	1,340	1,690
female fatalities	0	161	326	495	669	848
black fatalities	0	131	265	403	543	687
low income fatalities	0	270	546	828	1,116	1,410
medium income fatalities	0	162	327	496	669	845
high income fatalities	0	54	110	167	224	283

Table FL - 4. Annu	ual induced fatalities of reg	ulatory costs allo	cated proportiona	ılly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	2.0	4.0	<u>6.0</u>	<u>8.0</u>	<u>10.0</u>
total fatalities	0	207	416	629	846	1,065
male fatalities	0	150	302	456	612	771
female fatalities	0	57	115	174	233	294
black fatalities	0	41	83	125	168	211
low income fatalities	0	47	95	143	191	239
med. income fatalities	0	92	185	279	375	471
high income fatalities	0	67	136	207	280	354

State: Georgia

Black income relative to National:

0.95 Nonblack income relative to National:

1.03
Percent Black Population:

27.40% Number of Households (1000s):

2,581

Table GA - 1. Distribution of annual income for households in 1994.

	Households	Nonblack		Black Households				
percent of	number	ge	income rang	percent of	number	ge	income rang	
total	(1000s)	_	(1994 \$)	total	(1000s)		(1994 \$)	
households				<u>households</u>				
8.56%	221	\$10,321	Under	7.21%	186	\$9,459	Under	
6.37%	164	\$15,481	\$10,321 -	3.15%	81	\$14,187	\$9,459 -	
11.91%	307	\$25,802	\$15,482 -	5.18%	134	\$23,646	\$14,188 -	
10.44%	270	\$36,124	\$25,803 -	3.51%	91	\$33,105	\$23,647 -	
12.12%	313	\$51,605	\$36,125 -	3.65%	94	\$47,294	\$33,106 -	
12.53%	323	\$77,409	\$51,606 -	2.96%	76	\$70,941	\$47,295 -	
10.66%	275		\$77,410 Plus	1.73%	45		\$70,942 Plus	
72.60%	1,874		All nonblack:	27.40%	707		All black:	

Table GA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$387 (1990 \$)

\$440 (1994\$)

	Black	Households		Nonblack Households				
income range (1	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$9,459	\$46	\$52	Under	\$10,321	\$50	\$57	
\$9,459 -	\$14,187	\$115	\$130	\$10,321 -	\$15,481	\$125	\$142	
\$14,188 -	\$23,646	\$184	\$208	\$15,482 -	\$25,802	\$200	\$227	
\$23,647 -	\$33,105	\$276	\$313	\$25,803 -	\$36,124	\$301	\$341	
\$33,106 -	\$47,294	\$390	\$443	\$36,125 -	\$51,605	\$426	\$483	
\$47,295 -	\$70,941	\$574	\$652	\$51,606 -	\$77,409	\$626	\$711	
\$70,942 Plus		\$991	\$1,124	\$77,410 Plus	1	\$1,081	\$1,227	

Table 0	3A - 3.	Annual induced	fatalities of	regulatory	costs allocate	ed equally t	o all households.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	4.0	<u>5.0</u>
total fatalities	0	261	528	801	1.080	1,366
male fatalities	0	171	346	524	706	891
female fatalities	0	90	182	277	374	475
black fatalities	0	125	252	383	517	654
low income fatalities	0	160	323	491	662	838
medium income fatalities	0	79	160	243	327	414
high income fatalities	0	22	44	67	90	114

Table GA - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	101	204	308	414	521
male fatalities	0	72	145	219	294	370
female fatalities	0	29	59	89	120	151
black fatalities	0	38	76	115	154	194
low income fatalities	0	28	56	84	112	140
med. income fatalities	0	46	92	139	187	235
high income fatalities	0	27	56	85	115	145

State: Hawaii

Black income relative to National: 1.38 Nonblack income relative to National: 1.19
Percent Black Population: 2.51% Number of Households (1000s): 381

Table HI - 1. Distribution of annual income for households in 1994.

	Households	Nonblack				Black Households				
percent of	number	ige	income range		percent of	number	ge	income ran		
total	(1000s)	<u>L</u>	(1994\$)	(total	(1000s)	<u>_</u>	(1994 \$)		
<u>households</u>					<u>households</u>					
11.49%	44	\$11,899	Under	Ur	0.66%	3	\$13,774	Under		
8.56%	33	\$17,848	,899 -	\$11,89	0.29%	1	\$20,660	,774 -		
15.99%	61	\$29,748	,849 -	\$17,84	0.47%	2	\$34,434	,661 -		
14.02%	53	\$41,647	,749 -	\$29,74	0.32%	1	\$48,209	,435 -		
16.28%	62	\$59,496	,648 -	\$41,64	0.33%	1	\$68,870	,210 -		
16.83%	64	\$89,245	,497 -	\$59,49°	0.27%	1	\$103,305	,871 -		
14.32%	55		,246 Plus	\$89,24	0.16%	1		,306 Plus		
97.49%	371		nblack:	All nonbl	2.51%	10		lack:		

Table HI - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$2,625 (1990 \$)

\$2,979 (1994 \$)

	Black	Households		Nonblack Households				
income range (1994 \$)_	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$13,774	\$355	\$403	Under	\$11,899	\$307	\$348	
\$13,774 -	\$20,660	\$888	\$1,007	\$11,899 -	\$17,848	\$767	\$870	
\$20,661 -	\$34,434	\$1,420	\$1,612	\$17,849 -	\$29,748	\$1,227	\$1,392	
\$34,435 -	\$48,209	\$2,130	\$2,417	\$29,749 -	\$41,647	\$1,840	\$2,088	
\$48,210 -	\$68,870	\$3,018	\$3,425	\$41,648 -	\$59,496	\$2,607	\$2,959	
\$68,871 -	\$103,305	\$4,438	\$5,036	\$59,497 -	\$89,245	\$3,834	\$4,351	
\$103,306 Plus		\$7,658	\$8,691	\$89,246 Plus	i	\$6,616	\$7,508	

Table HI	- 3	Annual induced fatalities of regulatory costs allocated equally to all households.
I GOIO I II	٠.	Trinida induoda ididiriloo di rogalatory dodto dilocatod oqually to dii nodocirolac.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	<u>0.6</u>	<u>0.8</u>	<u>1.0</u>
total fatalities	0	34	69	105	142	181
male fatalities	0	24	48	73	98	124
female fatalities	0	10	21	32	44	56
black fatalities	0	2	4	5	7	9
low income fatalities	0	20	40	61	83	105
medium income fatalities	0	11	23	35	47	59
high income fatalities	0	3	6	9	12	16

Table HI - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	0.4	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	•	40	00	40	50	07
total fatalities	0	13	26	40	53	67
male fatalities	0	10	20	30	40	50
female fatalities	0	3	6	10	13	17
black fatalities	0	0	1	1	2	3
low income fatalities	0	3	7	10	14	17
med. income fatalities	0	6	12	19	25	31
high income fatalities	0	3	7	11	14	18

State: Idaho

Black income relative to National: Nonblack income relative to National: 0.81 1.11 Percent Black Population: 0.38% Number of Households (1000s): 405

Table ID - 1. Distribution of annual income for households in 1994.

	Black	<u> Households</u>		Nonblack Households			
income ran	income range		percent of	income ran	nge	number	percent of
(1994 \$)	-	(1000s)	total	(1994 \$)	(1994 \$)		total
			<u>households</u>				households
Under	\$11,084	0	0.10%	Under	\$8,133	48	11.74%
\$11,084 -	\$16,625	0	0.04%	\$8,133 -	\$12,199	35	8.75%
\$16,626 -	\$27,709	0	0.07%	\$12,200 -	\$20,332	66	16.34%
\$27,710 -	\$38,793	0	0.05%	\$20,333 -	\$28,466	58	14.33%
\$38,794 -	\$55,420	0	0.05%	\$28,467 -	\$40,665	67	16.64%
\$55,421 -	\$83,130	0	0.04%	\$40,666 -	\$60,999	70	17.19%
\$83,131 Plus		0	0.02%	\$61,000 Plus		59	14.63%
All black:		2	0.38%	All nonblack:		403	99.62%

Table ID -2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$2,469 (1990\$)

\$2,802 (1994\$)

	Black	Households	Nonblack Households					
income range (1	income range (1994 \$)		<u>1990 \$</u> <u>1994 \$</u>		income range (1994 \$)		<u>1994 \$</u>	
Under	\$11,084	\$391	\$444	Under	\$8,133	\$287	\$326	
\$11,084 -	\$16,625	\$978	\$1,110	\$8,133 -	\$12,199	\$718	\$815	
\$16,626 -	\$27,709	\$1,565	\$1,776	\$12,200 -	\$20,332	\$1,149	\$1,303	
\$27,710 -	\$38,793	\$2,348	\$2,664	\$20,333 -	\$28,466	\$1,723	\$1,955	
\$38,794 -	\$55,420	\$3,326	\$3,774	\$28,467 -	\$40,665	\$2,441	\$2,770	
\$55,421 -	\$83,130	\$4,891	\$5,551	\$40,666 -	\$60,999	\$3,589	\$4,073	
\$83,131 Plus		\$8,441	\$9,578	\$61,000 Plus		\$6,193	\$7,028	

Table ID	- 3	Annual induced fatalities of regulatory costs allocated equally to all househo	olde
Table ID	- 3.	Allitual illuuceu latailities oli regulatory costs allocateu equally to all riouseric	Jius.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	46	94	142	192	244
male fatalities	0	32	64	97	131	166
female fatalities	0	15	30	45	61	78
black fatalities	0	0	1	1	1	2
low income fatalities	0	22	45	68	92	116
medium income fatalities	0	17	35	53	71	90
high income fatalities	0	7	14	22	30	38

Table ID - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	0.4	0.6	<u>0.8</u>	1.0
total fatalities	0	22	44	67	90	114
male fatalities	0	16	33	49	67	84
female fatalities	0	6	12	18	24	30
black fatalities	0	0	0	0	0	1
low income fatalities	0	4	8	12	16	20
med. income fatalities	0	9	19	29	38	48
high income fatalities	0	9	18	27	37	46

State: Illinois

Black income relative to National:1.06Nonblack income relative to National:1.09Percent Black Population:15.12%Number of Households (1000s):4,308

Table IL - 1. Distribution of annual income for households in 1994.

	Black	: Households		Nonblack Households			
income ran	income range		percent of	income rar	nge	number	percent of
(1994 \$)	_	(1000s)	total	(1994 \$)		(1000s)	total
			households				households
Under	\$10,624	171	3.98%	Under	\$10,930	431	10.01%
\$10,624 -	\$15,934	75	1.74%	\$10,930 -	\$16,394	321	7.45%
\$15,935 -	\$26,558	123	2.86%	\$16,395 -	\$27,324	600	13.92%
\$26,559 -	\$37,181	83	1.94%	\$27,325 -	\$38,253	526	12.21%
\$37,182 -	\$53,117	87	2.01%	\$38,254 -	\$54,648	611	14.17%
\$53,118 -	\$79,676	70	1.63%	\$54,649 -	\$81,973	631	14.65%
\$79,677 Plus		41	0.95%	\$81,974 Plus		537	12.47%
All black:		651	15.12%	All nonblack:		3,657	84.88%

Table IL - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$232 (1990 \$)

\$263 (1994 \$)

	Black	Households	Nonblack Households				
income range (*	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$10,624	\$28	\$31	Under	\$10,930	\$28	\$32
\$10,624 -	\$15,934	\$69	\$78	\$10,930 -	\$16,394	\$71	\$81
\$15,935 -	\$26,558	\$110	\$125	\$16,395 -	\$27,324	\$114	\$129
\$26,559 -	\$37,181	\$166	\$188	\$27,325 -	\$38,253	\$170	\$193
\$37,182 -	\$53,117	\$235	\$266	\$38,254 -	\$54,648	\$241	\$274
\$53,118 -	\$79,676	\$345	\$392	\$54,649 -	\$81,973	\$355	\$403
\$79,677 Plus	. ,	\$596	\$676	\$81,974 Plus		\$613	\$695

Table IL - 3. Annual induce	ed fatalities of regu	latory costs alloc	cated equally to	all households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>2.0</u>	<u>4.0</u>	<u>6.0</u>	8.0	<u>10.0</u>
total fatalities	0	431	873	1,328	1,794	2,274
male fatalities	0	290	586	890	1,200	1,518
female fatalities	0	141	287	438	594	756
black fatalities	0	127	258	393	532	675
low income fatalities	0	259	525	798	1,079	1,368
medium income fatalities	0	135	273	415	561	711
high income fatalities	0	37	75	114	153	194

Table IL - 4. Annu	al induced fatalities of regu	latory costs allo	cated proportiona	lly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>2.0</u>	<u>4.0</u>	<u>6.0</u>	<u>8.0</u>	<u>10.0</u>
total fatalities	0	165	333	504	678	856
male fatalities	0	121	243	368	495	624
female fatalities	0	45	90	136	184	232
black fatalities	0	36	73	110	148	187
low income fatalities	0	45	90	135	180	226
med. income fatalities	0	76	153	232	311	392
high income fatalities	0	45	91	138	187	238

State: Indiana

Black income relative to National: 0.97 Nonblack income relative to National: 0.94
Percent Black Population: 7.95% Number of Households (1000s): 2,161

Table IN - 1. Distribution of annual income for households in 1994.

	Black Households					Nonblack	Households	
income range		number	percent of	income rai	nge	number	percent of	
(1994	4 \$)	<u></u>	(1000s)	total	(1994 \$)	(1000s)	total
				<u>households</u>				households
Unde	er	\$9,667	45	2.09%	Under	\$9,412	234	10.85%
\$9,667 -		\$14,500	20	0.92%	\$9,412 -	\$14,118	175	8.08%
\$14,501 -		\$24,168	33	1.50%	\$14,119 -	\$23,530	326	15.10%
\$24,169 -		\$33,835	22	1.02%	\$23,531 -	\$32,943	286	13.24%
\$33,836 -		\$48,336	23	1.06%	\$32,944 -	\$47,061	332	15.37%
\$48,337 -		\$72,505	19	0.86%	\$47,062 -	\$70,592	343	15.89%
\$72,506 Plu	us		11	0.50%	\$70,593 Plus	3	292	13.52%
All black:			172	7.95%	All nonblack:		1,989	92.05%

Table IN - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$463 (1990 \$)

\$525 (1994 \$)

	Black	Households		Nonblack Households				
income range (1	income range (1994 \$)		<u>1994 \$</u>	income range (1994 \$)		<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$9,667	\$57	\$64	Under	\$9,412	\$55	\$63	
\$9,667 -	\$14,500	\$141	\$161	\$9,412 -	\$14,118	\$138	\$156	
\$14,501 -	\$24,168	\$226	\$257	\$14,119 -	\$23,530	\$220	\$250	
\$24,169 -	\$33,835	\$339	\$385	\$23,531 -	\$32,943	\$331	\$375	
\$33,836 -	\$48,336	\$481	\$546	\$32,944 -	\$47,061	\$468	\$531	
\$48,337 -	\$72,505	\$707	\$803	\$47,062 -	\$70,592	\$689	\$781	
\$72,506 Plus		\$1,220	\$1,385	\$70,593 Plus	•	\$1,188	\$1,348	

Table IN	- 3.	Annual induced fatali	ties of regulat	ory costs al	located equall	y to all households.	
regulatory co	sts						

1990 regulatory costs (billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	4.0	<u>5.0</u>
total fatalities	0	223	452	688	929	1,177
male fatalities	0	152	307	465	627	793
female fatalities	0	72	146	223	302	384
black fatalities	0	36	72	110	149	189
low income fatalities	0	121	245	372	503	637
medium income fatalities	0	76	155	236	318	403
high income fatalities	0	26	53	80	108	137

Table IN - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	95	193	292	393	495
male fatalities	0	70	141	214	288	363
female fatalities	0	25	51	78	105	132
black fatalities	0	11	22	34	45	57
low income fatalities	0	21	42	64	85	107
med. income fatalities	0	43	86	130	175	220
high income fatalities	0	32	64	98	133	168

State: lowa

Black income relative to National:

0.81 Nonblack income relative to National:

0.84

Percent Black Population:

1.86% Number of Households (1000s):

1,082

Table IA - 1. Distribution of annual income for households in 1994.

	Black	Households		Nonblack Households				
income rar	nge	number	percent of	income ra	nge	number	percent of	
(1994 \$)_	(1000s)	total	(1994 \$)		(1000s)	total	
			<u>households</u>				households	
Under	\$8,103	5	0.49%	Under	\$8,407	125	11.57%	
\$8,103 -	\$12,154	2	0.21%	\$8,407 -	\$12,609	93	8.62%	
\$12,155 -	\$20,257	4	0.35%	\$12,610 -	\$21,016	174	16.10%	
\$20,258 -	\$28,360	3	0.24%	\$21,017 -	\$29,423	153	14.12%	
\$28,361 -	\$40,514	3	0.25%	\$29,424 -	\$42,033	177	16.39%	
\$40,515 -	\$60,772	2	0.20%	\$42,034 -	\$63,051	183	16.94%	
\$60,773 Plus		1	0.12%	\$63,052 Plus	3	156	14.41%	
All black:		20	1.86%	All nonblack:		1,062	98.14%	

Table IA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$924 (1990 \$)

\$1,049 (1994\$)

		Black	Households		Nonblack Households				
income r	ange (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)		<u>1990 \$</u>	<u>1994 \$</u>	
U	nder	\$8,103	\$104	\$118	Under	\$8,407	\$108	\$123	
\$8,103	-	\$12,154	\$261	\$296	\$8,407 -	\$12,609	\$270	\$307	
\$12,155	-	\$20,257	\$417	\$473	\$12,610 -	\$21,016	\$432	\$491	
\$20,258	-	\$28,360	\$625	\$710	\$21,017 -	\$29,423	\$649	\$736	
\$28,361	-	\$40,514	\$886	\$1,005	\$29,424 -	\$42,033	\$919	\$1,043	
\$40,515	-	\$60,772	\$1,303	\$1,478	\$42,034 -	\$63,051	\$1,352	\$1,534	
\$60,773	Plus		\$2,248	\$2,551	\$63,052 Plus	S	\$2,332	\$2,647	

Table IA - 3. Annual induce	d fatalities of regula	itory costs alloca	ated equally to all	households.
1990 regulatory costs				
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>

(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	114	232	352	476	603
male fatalities	0	78	158	240	324	409
female fatalities	0	36	74	112	153	194
black fatalities	0	5	9	14	20	25
low income fatalities	0	56	114	173	233	296
medium income fatalities	0	42	85	128	173	220
high income fatalities	0	17	34	51	69	88

Table IA - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	53	107	162	219	276
male fatalities	0	39	79	120	161	203
female fatalities	0	14	28	43	58	73
black fatalities	0	1	3	4	6	8
low income fatalities	0	10	20	30	40	50
med. income fatalities	0	23	46	70	94	118
high income fatalities	0	20	41	63	85	108

State: Kansas

Black income relative to National: 0.93 Nonblack income relative to National: 0.89
Percent Black Population: 5.96% Number of Households (1000s): 966

Table KS - 1. Distribution of annual income for households in 1994.

	Black	K Households		Nonblack Households				
income rar	nge	number	percent of	income ran	nge	number	percent of	
(1994 \$)	Ĺ	(1000s)	total	<u>(1994 \$)</u>		(1000s)	total	
			<u>households</u>				<u>households</u>	
Under	\$9,324	15	1.57%	Under	\$8,919	107	11.09%	
\$9,324 -	\$13,985	7	0.69%	\$8,919 -	\$13,377	80	8.25%	
\$13,986 -	\$23,309	11	1.13%	\$13,378 -	\$22,296	149	15.43%	
\$23,310 -	\$32,632	7	0.76%	\$22,297 -	\$31,215	131	13.53%	
\$32,633 -	\$46,618	8	0.79%	\$31,216 -	\$44,593	152	15.70%	
\$46,619 -	\$69,928	6	0.64%	\$44,594 -	\$66,889	157	16.23%	
\$69,929 Plus		4	0.38%	\$66,890 Plus		133	13.81%	
		•		•	•	•		
All black:		58	5.96%	All nonblack:		908	94.04%	

Table KS - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,035 (1990 \$)

\$1,175 (1994 \$)

		Black	Households		Nonblack Households					
income r	income range (1994 \$)		<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)		<u>1990 \$</u>	<u>1994 \$</u>		
U	nder	\$9,324	\$128	\$145	Under	\$8,919	\$122	\$139		
\$9,324	-	\$13,985	\$320	\$363	\$8,919 -	\$13,377	\$306	\$347		
\$13,986	-	\$23,309	\$512	\$581	\$13,378 -	\$22,296	\$490	\$556		
\$23,310	-	\$32,632	\$768	\$871	\$22,297 -	\$31,215	\$734	\$833		
\$32,633	-	\$46,618	\$1,088	\$1,234	\$31,216 -	\$44,593	\$1,040	\$1,181		
\$46,619	-	\$69,928	\$1,600	\$1,815	\$44,594 -	\$66,889	\$1,530	\$1,736		
\$69,929	Plus		\$2,760	\$3,132	\$66,890 Plus	i	\$2,640	\$2,996		

Table KS - 3.	Annual induced	fatalities of	regulatory	costs allocated	equally to a	II households.
1990 regulatory costs						
(hillians 1000 \$)		0.0		0.5	1.0	1.5

(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	114	232	353	477	605
male fatalities	0	78	157	239	322	408
female fatalities	0	37	75	114	155	197
black fatalities	0	14	28	43	58	73
low income fatalities	0	59	121	184	249	316
medium income fatalities	0	40	81	124	167	212
high income fatalities	0	15	30	45	61	77

Table KS - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

0.0	0.5	1.0	<u>1.5</u>	2.0	<u>2.5</u>
0	51	102	155	209	264
0	37	75	114	153	193
0	13	27	41	56	71
0	4	9	13	18	23
0	10	21	31	42	53
0	22	45	68	91	115
0	18	36	56	75	96
	0.0 0 0 0 0 0	0 51 0 37 0 13 0 4 0 10 0 22	0 51 102 0 37 75 0 13 27 0 4 9 0 10 21 0 22 45	0 51 102 155 0 37 75 114 0 13 27 41 0 4 9 13 0 10 21 31 0 22 45 68	0 51 102 155 209 0 37 75 114 153 0 13 27 41 56 0 4 9 13 18 0 10 21 31 42 0 22 45 68 91

State: Kentucky

Black income relative to National:0.75Nonblack income relative to National:0.74Percent Black Population:7.17%Number of Households (1000s):1,440

Table KY - 1. Distribution of annual income for households in 1994.

		Black	Households			Nonblack	Households	
income	e rar	nge	number	percent of	income rar	nge	number	percent of
(199	94 \$		(1000s)	total	(1994 \$)		(1000s)	total
				households				households
Und	ler	\$7,527	27	1.89%	Under	\$7,381	158	10.94%
\$7,527	-	\$11,289	12	0.82%	\$7,381 -	\$11,070	117	8.15%
\$11,290	-	\$18,815	20	1.36%	\$11,071 -	\$18,451	219	15.23%
\$18,816	-	\$26,342	13	0.92%	\$18,452 -	\$25,832	192	13.35%
\$26,343	-	\$37,632	14	0.95%	\$25,833 -	\$36,904	223	15.50%
\$37,633	-	\$56,448	11	0.77%	\$36,905 -	\$55,356	231	16.02%
\$56,449 PI	lus		7	0.45%	\$55,357 Plus	i	196	13.63%
		•		•		•		
All black:			103	7.17%	All nonblack:		1,337	92.83%

Table KY - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$694 (1990 \$)

\$788 (1994 \$)

	Black Households				Nonblack Households				
income range	e (1994 \$)	1990 \$	1994 \$	income range (1994 \$)_	1990 \$	<u>1994 \$</u>		
Unde	\$7,527	\$84	\$95	Under	\$7,381	\$83	\$94		
\$7,527 -	\$11,289	\$210	\$239	\$7,381 -	\$11,070	\$206	\$234		
\$11,290 -	\$18,815	\$337	\$382	\$11,071 -	\$18,451	\$330	\$374		
\$18,816 -	\$26,342	\$505	\$573	\$18,452 -	\$25,832	\$495	\$562		
\$26,343 -	\$37,632	\$715	\$811	\$25,833 -	\$36,904	\$701	\$796		
\$37,633 -	\$56,448	\$1,052	\$1,193	\$36,905 -	\$55,356	\$1,031	\$1,170		
\$56,449 Plu	S	\$1,815	\$2,059	\$55,357 Plus		\$1,780	\$2,019		

Table KY - 3. Annual indu	ced fatalities of regu	latory costs allo	cated equally to a	Il households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	133	269	408	550	694
male fatalities	0	90	181	274	368	464
female fatalities	0	44	89	135	182	230
black fatalities	0	19	38	58	78	98
low income fatalities	0	64	130	196	265	334
medium income fatalities	0	48	97	147	198	250
high income fatalities	0	21	43	65	87	110

Table KY - 4. Annual inc	luced fatalities of regu	latory costs allo	cated proportiona	lly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	65	131	199	267	336
male fatalities	0	47	95	144	193	243
female fatalities	0	18	36	55	74	93
black fatalities	0	7	13	20	27	34
low income fatalities	0	11	23	34	46	58
med. income fatalities	0	27	54	82	110	138
high income fatalities	0	27	54	82	111	140

State: Louisiana

Black income relative to National:0.61Nonblack income relative to National:0.84Percent Black Population:31.25%Number of Households (1000s):1,543

Table LA - 1. Distribution of annual income for households in 1994.

		Black	Households			Nonblack	: Households	
income	e rar	nge	number	percent of	income rar	nge	number	percent of
(199	94 \$	Ĺ	(1000s)	total	(1994 \$)	Ĺ	(1000s)	total
				households				households
Und	ler	\$6,088	127	8.23%	Under	\$8,410	125	8.10%
\$6,088	-	\$9,131	55	3.60%	\$8,410 -	\$12,614	93	6.04%
\$9,132	-	\$15,219	91	5.91%	\$12,615 -	\$21,023	174	11.28%
\$15,220	-	\$21,308	62	4.00%	\$21,024 -	\$29,433	153	9.89%
\$21,309	-	\$30,440	64	4.16%	\$29,434 -	\$42,048	177	11.48%
\$30,441	-	\$45,660	52	3.38%	\$42,049 -	\$63,072	183	11.87%
\$45,661 P	lus		30	1.97%	\$63,073 Plus		156	10.10%
All black:			482	31.25%	All nonblack:		1,061	68.75%

Table LA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$648 (1990 \$)

\$735 (1994 \$)

	Black Households				Nonblack Households				
income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>		
Under	\$6,088	\$65	\$73	Under	\$8,410	\$89	\$101		
\$6,088 -	\$9,131	\$162	\$184	\$8,410 -	\$12,614	\$223	\$253		
\$9,132 -	\$15,219	\$259	\$294	\$12,615 -	\$21,023	\$357	\$406		
\$15,220 -	\$21,308	\$388	\$440	\$21,024 -	\$29,433	\$536	\$608		
\$21,309 -	\$30,440	\$550	\$624	\$29,434 -	\$42,048	\$760	\$862		
\$30,441 -	\$45,660	\$809	\$918	\$42,049 -	\$63,072	\$1,117	\$1,268		
\$45,661 Plus		\$1,395	\$1,583	\$63,073 Plus		\$1,927	\$2,187		

Table LA - 3. Annual indu	ced fatalities of regu	latory costs alloc	cated equally to a	II households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	169	341	517	695	878
male fatalities	0	109	219	331	446	562
female fatalities	0	60	122	185	250	316
black fatalities	0	92	186	283	381	481
low income fatalities	0	93	188	285	384	485
medium income fatalities	0	55	112	169	227	287
high income fatalities	0	20	41	62	84	105

Table LA - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.								
1990 regulatory costs								
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>		
total fatalities	0	72	144	218	293	369		
male fatalities	0	50	101	152	204	257		
female fatalities	0	22	44	66	89	112		
black fatalities	0	29	59	89	119	149		
low income fatalities	0	15	31	46	62	78		
med. income fatalities	0	31	62	94	126	158		
high income fatalities	0	25	51	78	106	134		

State: Maine

Black income relative to National: 1.33 Nonblack income relative to National: 0.89
Percent Black Population: 0.40% Number of Households (1000s): 474

Table ME - 1. Distribution of annual income for households in 1994.

	Households	Nonblack				Households	Black		
percent of	number	ige	ne ran	incom	percent of	number	ge	income range	
total	(1000s)	<u>L</u>	994 \$)	(19	total	(1000s)		(1994 \$)	
<u>households</u>					<u>households</u>				
11.74%	56	\$8,876	er	Und	0.11%	1	\$13,286	Under	
8.74%	41	\$13,313	-	\$8,876	0.05%	0	\$19,928	\$13,286 -	
16.34%	77	\$22,188	-	\$13,314	0.08%	0	\$33,213	\$19,929 -	
14.33%	68	\$31,064	-	\$22,189	0.05%	0	\$46,499	\$33,214 -	
16.63%	79	\$44,378	-	\$31,065	0.05%	0	\$66,428	\$46,500 -	
17.19%	81	\$66,567	-	\$44,379	0.04%	0	\$99,642	\$66,429 -	
14.63%	69		Plus	\$66,568	0.03%	0		\$99,643 Plus	
99.60%	472		:k:	All nonblac	0.40%	2		All black:	

Table ME - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$2,110 (1990\$)

\$2,394 (1994\$)

	Black Households				Nonblack Households				
income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>		
Under	\$13,286	\$367	\$417	Under	\$8,876	\$245	\$278		
\$13,286 -	\$19,928	\$918	\$1,041	\$8,876 -	\$13,313	\$613	\$696		
\$19,929 -	\$33,213	\$1,468	\$1,666	\$13,314 -	\$22,188	\$981	\$1,113		
\$33,214 -	\$46,499	\$2,203	\$2,500	\$22,189 -	\$31,064	\$1,471	\$1,670		
\$46,500 -	\$66,428	\$3,120	\$3,541	\$31,065 -	\$44,378	\$2,085	\$2,366		
\$66,429 -	\$99,642	\$4,589	\$5,207	\$44,379 -	\$66,567	\$3,066	\$3,479		
\$99,643 Plus		\$7,918	\$8,986	\$66,568 Plus	i	\$5,290	\$6,003		

Toble ME 2	Appual induced fatalities of regulate	ry costs allocated equal	v to all bouseholds
Table IVIE - 3.	Annual induced fatalities of regulator	ny cosis anocaleu equan	y to all flousefloius.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	43	87	132	178	225
male fatalities	0	30	60	90	122	154
female fatalities	0	13	27	41	56	71
black fatalities	0	0	1	1	1	2
low income fatalities	0	21	43	65	88	112
medium income fatalities	0	16	32	48	65	82
high income fatalities	0	6	12	18	25	31

Table ME - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	0.4	0.6	<u>0.8</u>	1.0
total fatalities	0	19	39	59	80	101
male fatalities	0	14	29	44	59	75
female fatalities	0	5	10	15	21	26
black fatalities	0	0	0	0	0	1
low income fatalities	0	4	8	11	15	19
med. income fatalities	0	9	17	26	35	44
high income fatalities	0	7	14	22	30	38

State: Maryland

Black income relative to National: 1.56 Nonblack income relative to National: 1.33
Percent Black Population: 25.67% Number of Households (1000s): 1,831

Table MD - 1. Distribution of annual income for households in 1994.

		Black	K Households		Nonblack Households			
inco	me rar	nge	number	percent of	income ra	inge	number	percent of
(1	1994 \$	<u>)</u>	(1000s)	total	(1994 \$	<u>5)</u>	(1000s)	total
				<u>households</u>				<u>households</u>
U	nder	\$15,561	124	6.76%	Under	\$13,349	160	8.76%
\$15,561	-	\$23,341	54	2.95%	\$13,349 -	\$20,023	119	6.53%
\$23,342	-	\$38,902	89	4.86%	\$20,024 -	\$33,373	223	12.19%
\$38,903	-	\$54,464	60	3.29%	\$33,374 -	\$46,722	196	10.69%
\$54,465	-	\$77,805	63	3.42%	\$46,723 -	\$66,746	227	12.41%
\$77,806	-	\$116,709	51	2.77%	\$66,747 -	\$100,120	235	12.83%
\$116,710	Plus		30	1.62%	\$100,121 Plus	s	200	10.92%
All black:			470	25.67%	All nonblack:		1,361	74.33%

Table MD - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$546 (1990 \$)

\$620 (1994 \$)

		Black	Households	Nonblack Households				
income ra	ange (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Un	nder	\$15,561	\$78	\$88	Under	\$13,349	\$67	\$76
\$15,561	-	\$23,341	\$195	\$221	\$13,349 -	\$20,023	\$167	\$190
\$23,342	-	\$38,902	\$312	\$354	\$20,024 -	\$33,373	\$268	\$304
\$38,903	-	\$54,464	\$468	\$531	\$33,374 -	\$46,722	\$401	\$455
\$54,465	-	\$77,805	\$663	\$752	\$46,723 -	\$66,746	\$569	\$645
\$77,806	-	\$116,709	\$975	\$1,106	\$66,747 -	\$100,120	\$836	\$949
\$116,710	Plus		\$1,682	\$1,909	\$100,121 Plu	S	\$1,443	\$1,637

Table	MD - 3	Annual induced	fatalities of re	aulatory costs	allocated equ	ally to all households.
i abic	IVID - 3.	Allilual Illuuceu	ialaiilles ui le	guiatory costs	anocated equ	ally to all HouseHolus.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	<u>4.0</u>	<u>5.0</u>
total fatalities	0	191	389	593	803	1,020
male fatalities	0	128	260	395	534	677
female fatalities	0	63	129	197	269	343
black fatalities	0	81	164	251	341	433
low income fatalities	0	133	270	411	557	709
medium income fatalities	0	49	100	152	206	261
high income fatalities	0	10	19	29	40	50

Table MD - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	1.0	2.0	3.0	4.0	<u>5.0</u>
total fatalities	0	64	129	195	262	331
male fatalities	0	46	94	141	190	240
female fatalities	0	18	35	54	72	91
black fatalities	0	22	45	68	91	115
low income fatalities	0	24	48	72	96	120
med. income fatalities	0	29	58	88	118	149
high income fatalities	0	11	23	36	48	62

State: Massachusetts

Black income relative to National:1.29Nonblack income relative to National:1.21Percent Black Population:5.79%Number of Households (1000s):2,265

Table MA - 1. Distribution of annual income for households in 1994.

	Black	k Households			Nonblack	k Households	
income ran	nge	number	percent of	income ra	nge	number	percent of
(1994 \$)	<u>L</u>	(1000s)	total	(1994 \$	<u>s)</u>	(1000s)	tota
			<u>households</u>				households
Under	\$12,857	35	1.52%	Under	\$12,115	252	11.11%
\$12,857 -	\$19,284	15	0.67%	\$12,115 -	\$18,171	187	8.27%
\$19,285 -	\$32,140	25	1.10%	\$18,172 -	\$30,286	350	15.45%
\$32,141 -	\$44,997	17	0.74%	\$30,287 -	\$42,401	307	13.55%
\$44,998 -	\$64,282	17	0.77%	\$42,402 -	\$60,573	356	15.73%
\$64,283 -	\$96,423	14	0.63%	\$60,574 -	\$90,860	368	16.26%
\$96,424 Plus		8	0.37%	\$90,861 Plus	3	313	13.84%
All black:		131	5.79%	All nonblack:		2,134	94.21%

Table MA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$442 (1990 \$)

\$501 (1994\$)

	Black	Households	Nonblack Households				
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$12,857	\$55	\$63	Under	\$12,115	\$52	\$59
\$12,857 -	\$19,284	\$138	\$157	\$12,115 -	\$18,171	\$130	\$148
\$19,285 -	\$32,140	\$221	\$251	\$18,172 -	\$30,286	\$209	\$237
\$32,141 -	\$44,997	\$332	\$377	\$30,287 -	\$42,401	\$313	\$355
\$44,998 -	\$64,282	\$470	\$534	\$42,402 -	\$60,573	\$443	\$503
\$64,283 -	\$96,423	\$692	\$785	\$60,574 -	\$90,860	\$652	\$740
\$96,424 Plus		\$1,194	\$1,355	\$90,861 Plus	1	\$1,125	\$1,276

Table MA - 3. Annual induced fatalities of regulatory costs allocated equally to all hous	- L - L L -
	enoias.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	4.0	<u>5.0</u>
total fatalities	0	174	353	536	724	916
male fatalities	0	120	243	369	497	628
female fatalities	0	54	110	167	227	289
black fatalities	0	21	43	65	88	112
low income fatalities	0	105	212	322	435	551
medium income fatalities	0	56	112	171	230	291
high income fatalities	0	14	29	43	58	74

Table MA - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	3.0	<u>4.0</u>	<u>5.0</u>
total fatalities	0	65	131	197	265	334
male fatalities	0	48	98	148	198	250
female fatalities	0	16	33	50	67	84
black fatalities	0	6	12	17	23	29
low income fatalities	0	18	36	54	72	91
med. income fatalities	0	30	61	93	124	157
high income fatalities	0	16	33	50	68	87

State: Michigan

0.95 1.03 Black income relative to National: Nonblack income relative to National: Percent Black Population: 14.17% Number of Households (1000s): 3,502

Table MI - 1. Distribution of annual income for households in 1994.

			Black	Households			Nonblack	Households	
	income range numbe			number	percent of	income ra	nge	number	percent of
	(199	94 \$)		(1000s)	total	(1994 \$) <u> </u>	(1000s)	total
					<u>households</u>				households
	Und	ler	\$9,541	131	3.73%	Under	\$10,327	354	10.12%
	\$9,541	-	\$14,310	57	1.63%	\$10,327 -	\$15,490	264	7.53%
\$	14,311	-	\$23,851	94	2.68%	\$15,491 -	\$25,817	493	14.08%
\$	23,852	-	\$33,392	64	1.82%	\$25,818 -	\$36,144	432	12.35%
\$	33,393	-	\$47,704	66	1.89%	\$36,145 -	\$51,634	502	14.33%
\$-	47,705	-	\$71,556	54	1.53%	\$51,635 -	\$77,452	519	14.81%
\$	71,557 P	lus		31	0.89%	\$77,453 Plus	3	441	12.61%
А	II black:			496	14.17%	All nonblack:		3,006	85.83%

Table MI - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$286 (1990\$)

\$324 (1994\$)

10.0

		Black	Households		Nonblack Households				
income ra	ange (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Ui	nder	\$9,541	\$32	\$37	Under	\$10,327	\$35	\$40	
\$9,541	-	\$14,310	\$81	\$92	\$10,327 -	\$15,490	\$88	\$99	
\$14,311	-	\$23,851	\$129	\$147	\$15,491 -	\$25,817	\$140	\$159	
\$23,852	-	\$33,392	\$194	\$220	\$25,818 -	\$36,144	\$210	\$238	
\$33,393	-	\$47,704	\$275	\$312	\$36,145 -	\$51,634	\$298	\$338	
\$47,705	-	\$71,556	\$404	\$459	\$51,635 -	\$77,452	\$438	\$497	
\$71,557	Plus		\$698	\$792	\$77,453 Plus	;	\$755	\$857	

Table MI - 3. Annual induced fatalities of regulatory costs allocated equally to all households.									
1990 regulatory costs									
(billions 1990 \$)	0.0	2.0	<u>4.0</u>	6.0	8.0				
total fatalities	0	453	920	1,404	1,903				
male fatalities	0	304	616	938	1,269				
female fatalities	0	149	304	466	635				

0	453	920	1,404	1,903	2,419
0	304	616	938	1,269	1,609
0	149	304	466	635	811
0	129	262	401	544	693
0	263	535	817	1,108	1,409
0	146	297	453	614	780
0	43	88	134	182	231
		0 304 0 149 0 129 0 263 0 146	0 304 616 0 149 304 0 129 262 0 263 535 0 146 297	0 304 616 938 0 149 304 466 0 129 262 401 0 263 535 817 0 146 297 453	0 304 616 938 1,269 0 149 304 466 635 0 129 262 401 544 0 263 535 817 1,108 0 146 297 453 614

Table MI - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income. 1990 regulatory costs (billions 1990 \$) 0.0 <u>2.0</u> <u>4.0</u> <u>6.0</u> <u>8.0</u> <u>10.0</u> total fatalities 0 179 363 550 741 937 male fatalities 0 131 264 400 539 682 female fatalities 0 49 99 150 202 256 black fatalities 0 37 75 152 192 113 low income fatalities 0 45 90 136 182 228 med. income fatalities 0 82 165 250 336 425 0 high income fatalities 53 107 164 223 285

State: Minnesota

Black income relative to National:0.96Nonblack income relative to National:1.00Percent Black Population:2.44%Number of Households (1000s):1,711

Table MN - 1. Distribution of annual income for households in 1994.

		Black	Households			Nonblack	: Households	
incon	ne rai	nge	number	percent of	income rai	nge	number	percent of
<u>(19</u>	994 \$)_	(1000s)	total	(1994 \$	<u>)</u>	(1000s)	total
				<u>households</u>				households
Un	der	\$9,555	11	0.64%	Under	\$9,964	197	11.50%
\$9,555	-	\$14,331	5	0.28%	\$9,964 -	\$14,945	147	8.56%
\$14,332	-	\$23,886	8	0.46%	\$14,946 -	\$24,909	274	16.00%
\$23,887	-	\$33,440	5	0.31%	\$24,910 -	\$34,873	240	14.03%
\$33,441	-	\$47,772	6	0.32%	\$34,874 -	\$49,819	279	16.29%
\$47,773	-	\$71,659	5	0.26%	\$49,820 -	\$74,729	288	16.84%
\$71,660 I	Plus		3	0.15%	\$74,730 Plus	3	245	14.33%
All black:			42	2.44%	All nonblack:		1,669	97.56%

Table MN - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$584 (1990\$)

\$663 (1994 \$)

	Black	Households		Nonblack Households				
income range (1994 \$)_	1990 \$	<u>1994 \$</u>	income range (1994 \$)	1990 \$	<u>1994 \$</u>	
Under	\$9,555	\$66	\$75	Under	\$9,964	\$69	\$78	
\$9,555 -	\$14,331	\$164	\$186	\$9,964 -	\$14,945	\$171	\$194	
\$14,332 -	\$23,886	\$263	\$298	\$14,946 -	\$24,909	\$274	\$311	
\$23,887 -	\$33,440	\$394	\$447	\$24,910 -	\$34,873	\$411	\$467	
\$33,441 -	\$47,772	\$558	\$634	\$34,874 -	\$49,819	\$582	\$661	
\$47,773 -	\$71,659	\$821	\$932	\$49,820 -	\$74,729	\$856	\$972	
\$71,660 Plus		\$1,417	\$1,608	\$74,730 Plus		\$1,478	\$1,677	

Table MN - 3. Annual indu	uced fatalities of regu	ulatory costs allo	cated equally to a	all households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	201	409	623	845	1,074
male fatalities	0	138	281	427	577	732
female fatalities	0	63	128	196	268	342
black fatalities	0	11	23	34	47	60
low income fatalities	0	107	218	333	452	574
medium income fatalities	0	70	143	218	296	376
high income fatalities	0	23	47	72	98	124

Table MN - 4. Ann	nual induced fatalities of re	gulatory costs	allocated propor	tionally to housel	hold income.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	4.0	<u>5.0</u>
total fatalities	0	85	171	260	350	443
male fatalities	0	63	127	193	260	329
female fatalities	0	22	44	67	90	114
black fatalities	0	3	6	10	13	16
low income fatalities	0	19	37	56	75	94
med. income fatalities	0	38	78	118	158	200
high income fatalities	0	28	56	86	117	149

State: Mississippi

Black income relative to National: 0.59 Nonblack income relative to National: 0.79
Percent Black Population: 35.83% Number of Households (1000s): 949

Table MS - 1. Distribution of annual income for households in 1994.

		Black	<u> Households</u>		Nonblack Households				
incom	ne ran	ge	number	percent of	income ra	nge	number	percent of	
(19	994 \$)	_	(1000s)	total	(1994 \$	<u>S)</u>	(1000s)	total	
				households				<u>households</u>	
Un	der	\$5,884	90	9.43%	Under	\$7,934	72	7.56%	
\$5,884	-	\$8,825	39	4.12%	\$7,934 -	\$11,900	53	5.63%	
\$8,826	-	\$14,708	64	6.78%	\$11,901 -	\$19,834	100	10.53%	
\$14,709	-	\$20,592	44	4.59%	\$19,835 -	\$27,767	88	9.23%	
\$20,593	-	\$29,417	45	4.77%	\$27,768 -	\$39,668	102	10.72%	
\$29,418	-	\$44,127	37	3.87%	\$39,669 -	\$59,503	105	11.07%	
\$44,128 F	Plus		21	2.26%	\$59,504 Plus	3	89	9.42%	
·					·				
All black:			340	35.83%	All nonblack:		609	64.17%	

Table MS - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,054 (1990 \$)

\$1,196 (1994 \$)

		Black	Households		Nonblack Households				
income range (1994 \$)		1994 \$)	<u>1990 \$</u> <u>1994 \$</u>		income range (1994 \$)		<u>1990 \$</u>	<u>1994 \$</u>	
U	nder	\$5,884	\$110	\$125	Under	\$7,934	\$149	\$169	
\$5,884	-	\$8,825	\$275	\$313	\$7,934 -	\$11,900	\$371	\$421	
\$8,826	-	\$14,708	\$441	\$500	\$11,901 -	\$19,834	\$594	\$674	
\$14,709	-	\$20,592	\$661	\$750	\$19,835 -	\$27,767	\$891	\$1,012	
\$20,593	-	\$29,417	\$937	\$1,063	\$27,768 -	\$39,668	\$1,263	\$1,433	
\$29,418	-	\$44,127	\$1,377	\$1,563	\$39,669 -	\$59,503	\$1,857	\$2,108	
\$44,128	Plus		\$2,377	\$2,697	\$59,504 Plus	i	\$3,205	\$3,637	

Table MS - 3	Annual induced	fatalities of regulator	v costs allocated ac	qually to all households.
Table IVIS - 3.	Annual induced	ratalities of regulator	y cosis allocated et	quality to all flousefloids.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	184	373	569	771	980
male fatalities	0	117	238	362	489	620
female fatalities	0	66	136	207	282	360
black fatalities	0	108	220	336	456	580
low income fatalities	0	101	205	313	424	538
medium income fatalities	0	60	122	186	252	320
high income fatalities	0	23	46	71	96	122

Table MS - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	80	163	248	334	423
male fatalities	0	56	112	171	230	291
female fatalities	0	25	51	77	104	132
black fatalities	0	36	74	111	150	190
low income fatalities	0	17	34	51	68	86
med. income fatalities	0	34	69	104	140	177
high income fatalities	0	29	60	92	126	160

State: Missouri

Black income relative to National:0.93Nonblack income relative to National:0.86Percent Black Population:10.88%Number of Households (1000s):2,008

Table MO - 1. Distribution of annual income for households in 1994.

	Black Households						: Households	
income	e rar	nge	number	percent of	income rai	nge	number	percent of
(199	94 \$	<u>_</u>	(1000s)	total	(1994 \$)_	(1000s)	total
				<u>households</u>				households
Und	der	\$9,300	58	2.87%	Under	\$8,646	211	10.51%
\$9,300	-	\$13,948	25	1.25%	\$8,646 -	\$12,968	157	7.82%
\$13,949	-	\$23,248	41	2.06%	\$12,969 -	\$21,614	294	14.62%
\$23,249	-	\$32,547	28	1.39%	\$21,615 -	\$30,260	257	12.82%
\$32,548	-	\$46,497	29	1.45%	\$30,261 -	\$43,229	299	14.88%
\$46,498	-	\$69,745	24	1.18%	\$43,230 -	\$64,845	309	15.38%
\$69,746 P	lus		14	0.69%	\$64,846 Plus	<u> </u>	263	13.09%
All black:			219	10.88%	All nonblack:		1,789	89.12%

Table MO - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$498 (1990\$)

\$565 (1994 \$)

	Black	Households		Nonblack Households				
income range (1	1994 \$)	1990 \$	<u>1994 \$</u>	income range (1994 \$)	1990 \$	<u>1994 \$</u>	
Under	\$9,300	\$64	\$73	Under	\$8,646	\$60	\$68	
\$9,300 -	\$13,948	\$160	\$182	\$8,646 -	\$12,968	\$149	\$169	
\$13,949 -	\$23,248	\$256	\$291	\$12,969 -	\$21,614	\$238	\$270	
\$23,249 -	\$32,547	\$385	\$436	\$21,615 -	\$30,260	\$357	\$406	
\$32,548 -	\$46,497	\$545	\$618	\$30,261 -	\$43,229	\$506	\$575	
\$46,498 -	\$69,745	\$801	\$909	\$43,230 -	\$64,845	\$745	\$845	
\$69,746 Plus		\$1,382	\$1,569	\$64,846 Plus		\$1,285	\$1,458	

Table MO - 3. Annual indu	ced fatalities of regu	ulatory costs allo	cated equally to a	all households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	245	498	757	1,024	1,299
male fatalities	0	165	334	507	685	867
female fatalities	0	80	164	250	340	433
black fatalities	0	50	102	155	211	267
low income fatalities	0	130	264	403	545	691
medium income fatalities	0	84	171	260	351	445
high income fatalities	0	31	62	95	128	162

Table MO - 4. Annual in	duced fatalities of regu	latory costs allo	cated proportiona	ally to household	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	109	220	334	450	569
male fatalities	0	79	160	242	327	413
female fatalities	0	30	60	92	124	157
black fatalities	0	17	34	51	68	86
low income fatalities	0	23	46	70	94	117
med. income fatalities	0	48	96	145	196	247
high income fatalities	0	38	78	119	161	205

State: Montana

Black income relative to National:1.03Nonblack income relative to National:0.75Percent Black Population:0.36%Number of Households (1000s):325

Table MT - 1. Distribution of annual income for households in 1994.

	Black	: Households			Nonblack	K Households	
income ran	ge	number	percent of	income range		number	percent of
(1994 \$)		(1000s)	total	(1994 \$))	(1000s)	total
			households				households
Under	\$10,307	0	0.10%	Under	\$7,483	38	11.75%
\$10,307 -	\$15,459	0	0.04%	\$7,483 -	\$11,224	28	8.75%
\$15,460 -	\$25,766	0	0.07%	\$11,225 -	\$18,707	53	16.34%
\$25,767 -	\$36,072	0	0.05%	\$18,708 -	\$26,191	47	14.33%
\$36,073 -	\$51,533	0	0.05%	\$26,192 -	\$37,416	54	16.64%
\$51,534 -	\$77,299	0	0.04%	\$37,417 -	\$56,124	56	17.20%
\$77,300 Plus		0	0.02%	\$56,125 Plus		48	14.63%
All black:		1	0.36%	All nonblack:		324	99.64%

Table MT - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$3,077 (1990 \$)

\$3,492 (1994\$)

	Blac	k Households		Nonblack Households				
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$10,307	\$493	\$559	Under	\$7,483	\$358	\$406	
\$10,307 -	\$15,459	\$1,232	\$1,398	\$7,483 -	\$11,224	\$894	\$1,015	
\$15,460 -	\$25,766	\$1,971	\$2,237	\$11,225 -	\$18,707	\$1,431	\$1,624	
\$25,767 -	\$36,072	\$2,957	\$3,355	\$18,708 -	\$26,191	\$2,147	\$2,436	
\$36,073 -	\$51,533	\$4,189	\$4,753	\$26,192 -	\$37,416	\$3,041	\$3,451	
\$51,534 -	\$77,299	\$6,160	\$6,990	\$37,417 -	\$56,124	\$4,472	\$5,075	
\$77,300 Plus		\$10,629	\$12,062	\$56,125 Plus	i	\$7,718	\$8,758	

T	A 11 1 16 4 100 6 1 4		
Table MT - 3.	Annual induced fatalities of regulator	ry costs allocated equally to all househol	ds.

0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
0	49	100	153	208	265
0	34	68	104	141	179
0	16	32	49	67	86
0	0	1	1	1	2
0	23	46	70	95	121
0	18	38	57	78	99
0	8	17	26	35	45
	0 0 0 0 0	0 16 0 0 0 23 0 18	0 16 32 0 0 1 0 1 0 23 46 0 18 38	0 16 32 49 0 0 1 1 1 0 23 46 70 0 18 38 57	0 16 32 49 67 0 0 1 1 1 1 0 23 46 70 95 0 18 38 57 78

Table MT - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	0.8	<u>1.0</u>
	•				400	400
total fatalities	0	24	50	75	102	130
male fatalities	0	18	36	55	75	95
female fatalities	0	7	13	20	27	35
black fatalities	0	0	0	0	1	1
low income fatalities	0	4	8	12	16	20
med. income fatalities	0	10	20	31	42	53
high income fatalities	0	10	21	32	44	56

State: Nebraska

Black income relative to National: 0.86 Nonblack income relative to National: 0.84
Percent Black Population: 3.75% Number of Households (1000s): 614

Table NB - 1. Distribution of annual income for households in 1994.

	k Households	Nonblack		Black Households					
percent of	number	income range		percent of	number	ge	income rang		
total	(1000s))	(1994 \$)	total	(1000s)		(1994 \$)		
households				<u>households</u>					
11.35%	70	\$8,409	Under	0.99%	6	\$8,623	Under		
8.45%	52	\$12,613	\$8,409 -	0.43%	3	\$12,934	\$8,623 -		
15.79%	97	\$21,023	\$12,614 -	0.71%	4	\$21,557	\$12,935 -		
13.85%	85	\$29,432	\$21,024 -	0.48%	3	\$30,181	\$21,558 -		
16.07%	99	\$42,046	\$29,433 -	0.50%	3	\$43,116	\$30,182 -		
16.61%	102	\$63,070	\$42,047 -	0.41%	2	\$64,674	\$43,117 -		
14.14%	87		\$63,071 Plus	0.24%	1		\$64,675 Plus		
96.25%	591		All nonblack:	3.75%	23		All black:		

Table NB - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,629 (1990\$)

\$1,848 (1994 \$)

	Black	Households		Nonblack Households				
income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$8,623	\$196	\$223	Under	\$8,409	\$191	\$217	
\$8,623 -	\$12,934	\$491	\$557	\$8,409 -	\$12,613	\$479	\$543	
\$12,935 -	\$21,557	\$785	\$891	\$12,614 -	\$21,023	\$766	\$869	
\$21,558 -	\$30,181	\$1,178	\$1,337	\$21,024 -	\$29,432	\$1,149	\$1,304	
\$30,182 -	\$43,116	\$1,669	\$1,894	\$29,433 -	\$42,046	\$1,627	\$1,847	
\$43,117 -	\$64,674	\$2,454	\$2,785	\$42,047 -	\$63,070	\$2,393	\$2,716	
\$64,675 Plus		\$4,235	\$4,806	\$63,071 Plus	i	\$4,130	\$4,687	

Table ND 0	A control for the control of the formation of the control of the		all bearing to a labor
Table NB - 3.	Annual induced fatalities of regulator	y costs allocated equally to a	ali nousenoids.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	47	94	142	191	241
male fatalities	0	32	64	97	130	164
female fatalities	0	15	30	46	61	78
black fatalities	0	4	7	11	15	19
low income fatalities	0	23	47	71	95	120
medium income fatalities	0	17	34	51	69	87
high income fatalities	0	7	13	20	27	34

Table NB - 4. Annual induced fatalities of regulatory costs allocated proportionallyly to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	0.4	0.6	0.8	<u>1.0</u>
total fatalities	0	21	43	65	88	110
male fatalities	0	16	32	48	64	81
female fatalities	0	6	11	17	23	29
black fatalities	0	1	2	4	5	6
low income fatalities	0	4	8	12	16	21
med. income fatalities	0	9	19	28	38	47
high income fatalities	0	8	16	25	33	42

State: Nevada

Black income relative to National: 1.14 Nonblack income relative to National: 1.01
Percent Black Population: 6.89% Number of Households (1000s): 560

Table NV - 1. Distribution of annual income for households in 1994.

	Black	<u> Households</u>			Nonblack	<u> Households</u>	
income ran	ge	number	percent of	income rar	nge	number	percent of
(1994 \$)	-	(1000s)	total	(1994 \$)	(1000s)	total
			<u>households</u>				households
Under	\$11,402	10	1.81%	Under	\$10,120	61	10.98%
\$11,402 -	\$17,102	4	0.79%	\$10,120 -	\$15,179	46	8.17%
\$17,103 -	\$28,504	7	1.30%	\$15,180 -	\$25,300	86	15.27%
\$28,505 -	\$39,906	5	0.88%	\$25,301 -	\$35,420	75	13.39%
\$39,907 -	\$57,009	5	0.92%	\$35,421 -	\$50,600	87	15.55%
\$57,010 -	\$85,514	4	0.74%	\$50,601 -	\$75,901	90	16.07%
\$85,515 Plus		2	0.43%	\$75,902 Plus	1	77	13.68%
All black:		39	6.89%	All nonblack:		521	93.11%

Table NV - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,786 (1990 \$)

\$2,026 (1994 \$)

	Black	Households			Nonblack	Households	
income range (1	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$11,402	\$238	\$270	Under	\$10,120	\$211	\$239
\$11,402 -	\$17,102	\$594	\$674	\$10,120 -	\$15,179	\$527	\$598
\$17,103 -	\$28,504	\$950	\$1,078	\$15,180 -	\$25,300	\$843	\$957
\$28,505 -	\$39,906	\$1,425	\$1,618	\$25,301 -	\$35,420	\$1,265	\$1,436
\$39,907 -	\$57,009	\$2,019	\$2,292	\$35,421 -	\$50,600	\$1,792	\$2,034
\$57,010 -	\$85,514	\$2,970	\$3,370	\$50,601 -	\$75,901	\$2,636	\$2,991
\$85,515 Plus		\$5,125	\$5,815	\$75,902 Plus		\$4,549	\$5,162

Table NV - 3.	Annual induced fatalities of regulatory costs allocated equally to all households.
regulatory costs	

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.2</u>	<u>0.4</u>	<u>0.6</u>	<u>0.8</u>	<u>1.0</u>
total fatalities	0	41	83	126	169	214
male fatalities	0	28	57	86	115	145
female fatalities	0	13	26	40	54	68
black fatalities	0	5	11	17	23	29
low income fatalities	0	23	46	70	94	119
medium income fatalities	0	14	28	42	57	72
high income fatalities	0	4	9	13	18	23

Table NV - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	0.4	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	17	34	52	69	87
male fatalities	0	13	25	38	51	64
female fatalities	0	4	9	13	18	23
black fatalities	0	2	3	5	7	9
low income fatalities	0	4	8	12	16	20
med. income fatalities	0	8	16	23	31	39
high income fatalities	0	5	11	16	22	27

State: New Hampshire

Black income relative to National:1.60Nonblack income relative to National:1.16Percent Black Population:0.63%Number of Households (1000s):424

Table NH - 1. Distribution of annual income for households in 1994.

	Black	<u> Households</u>			Nonblack	: Households	
income ra	nge	number	percent of	income rar	nge	number	percent of
(1994 \$	(3)	(1000s)	total	(1994 \$)_	(1000s)	total
			<u>households</u>				households
Under	\$16,022	1	0.17%	Under	\$11,573	50	11.71%
\$16,022 -	\$24,033	0	0.07%	\$11,573 -	\$17,358	37	8.72%
\$24,034 -	\$40,055	1	0.12%	\$17,359 -	\$28,931	69	16.30%
\$40,056 -	\$56,077	0	0.08%	\$28,932 -	\$40,504	61	14.29%
\$56,078 -	\$80,111	0	0.08%	\$40,505 -	\$57,863	70	16.59%
\$80,112 -	\$120,167	0	0.07%	\$57,864 -	\$86,795	73	17.15%
\$120,168 Plus		0	0.04%	\$86,796 Plus		62	14.59%
All black:		3	0.63%	All nonblack:		421	99.37%

Table NH - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$2,358 (1990 \$)

\$2,676 (1994 \$)

income	range (Households 1990 \$	1994 \$	income range		K Households 1990 \$	1994 \$
U	Inder	\$16,022	\$380	\$431	Under	\$11,573	\$274	\$311
\$16,022	-	\$24,033	\$949	\$1,077	\$11,573 -	\$17,358	\$686	\$778
\$24,034	-	\$40,055	\$1,519	\$1,724	\$17,359 -	\$28,931	\$1,097	\$1,245
\$40,056	-	\$56,077	\$2,278	\$2,586	\$28,932 -	\$40,504	\$1,646	\$1,868
\$56,078	-	\$80,111	\$3,228	\$3,663	\$40,505 -	\$57,863	\$2,331	\$2,646
\$80,112	-	\$120,167	\$4,747	\$5,387	\$57,864 -	\$86,795	\$3,429	\$3,891
\$120,168	Plus		\$8,191	\$9,295	\$86,796 Plu	S	\$5,916	\$6,714

Table NH - 3. Annual indu	ced fatalities of regul	atory costs alloca	ated equally to a	l households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	34	69	105	142	180
male fatalities	0	24	48	73	98	124
female fatalities	0	10	21	32	44	55
black fatalities	0	0	1	1	2	2
low income fatalities	0	19	39	60	81	102
medium income fatalities	0	12	23	36	48	61
high income fatalities	0	3	7	10	13	17

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	<u>0.6</u>	<u>0.8</u>	1.0
total fatalities	0	13	27	41	54	69
male fatalities	0	10	20	31	41	52
female fatalities	0	3	7	10	13	17
black fatalities	0	0	0	0	0	1
low income fatalities	0	3	7	10	13	17
med. income fatalities	0	6	13	19	26	32
high income fatalities	0	4	8	11	16	20

State: New Jersey

Black income relative to National:1.48Nonblack income relative to National:1.36Percent Black Population:14.08%Number of Households (1000s):2,845

Table NJ - 1. Distribution of annual income for households in 1994.

	Blac	k Households			Nonblack	Households	
income	income range number percent of			income ra	nge	number	percent of
(199	4 \$)	(1000s)	total	(1994 \$	<u>s)</u>	(1000s)	total
•			<u>households</u>	•			households
Unde	er \$14,751	105	3.71%	Under	\$13,596	288	10.13%
\$14,751 -	\$22,125	46	1.62%	\$13,596 -	\$20,393	215	7.54%
\$22,126 -	\$36,876	76	2.66%	\$20,394 -	\$33,990	401	14.09%
\$36,877 -	\$51,627	51	1.80%	\$33,991 -	\$47,586	352	12.36%
\$51,628 -	\$73,754	53	1.87%	\$47,587 -	\$67,981	408	14.35%
\$73,755 -	\$110,631	43	1.52%	\$67,982 -	\$101,971	422	14.83%
\$110,632 Plu	us	25	0.89%	\$101,972 Plus	3	359	12.62%
All black:		401	14.08%	All nonblack:		2,444	85.92%

Table NJ - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$351 (1990\$)

\$399 (1994\$)

	Black Households					Nonblack Households			
income r	range (1994 \$)_	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
U	Inder	\$14,751	\$46	\$52	Under	\$13,596	\$42	\$48	
\$14,751	-	\$22,125	\$115	\$130	\$13,596 -	\$20,393	\$106	\$120	
\$22,126	-	\$36,876	\$184	\$209	\$20,394 -	\$33,990	\$170	\$192	
\$36,877	-	\$51,627	\$276	\$313	\$33,991 -	\$47,586	\$254	\$289	
\$51,628	-	\$73,754	\$391	\$443	\$47,587 -	\$67,981	\$360	\$409	
\$73,755	-	\$110,631	\$575	\$652	\$67,982 -	\$101,971	\$530	\$601	
\$110,632	Plus		\$992	\$1,125	\$101,972 Plus	S	\$914	\$1,037	

Table NJ - 3.	Annual induced	fatalities of regula	atory costs alloc	ated equally to all	l households.
1990 regulatory costs					
(hillione 1990 \$)		0.0	2.0	4.0	6.0

(billions 1990 \$)	0.0	2.0	<u>4.0</u>	<u>6.0</u>	8.0	10.0
total fatalities	0	345	704	1,078	1,467	1,873
male fatalities	0	235	478	730	991	1,261
female fatalities	0	110	226	348	476	612
black fatalities	0	93	190	292	398	509
low income fatalities	0	229	467	715	973	1,243
medium income fatalities	0	97	197	302	410	523
high income fatalities	0	20	40	62	84	107

Table NJ - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

0.0	2.0	<u>4.0</u>	6.0	8.0	10.0
0	116	235	357	481	608
0	86	174	264	356	450
0	30	61	93	125	158
0	24	49	74	100	126
0	39	79	118	159	199
0	54	109	166	224	283
0	23	47	73	99	127
	0 0 0	0 116 0 86 0 30 0 24 0 39 0 54	0 116 235 0 86 174 0 30 61 0 24 49 0 39 79 0 54 109	0 116 235 357 0 86 174 264 0 30 61 93 0 24 49 74 0 39 79 118 0 54 109 166	0 116 235 357 481 0 86 174 264 356 0 30 61 93 125 0 24 49 74 100 0 39 79 118 159 0 54 109 166 224

State: New Mexico

Black income relative to National:0.99Nonblack income relative to National:0.82Percent Black Population:2.28%Number of Households (1000s):587

Table NM - 1. Distribution of annual income for households in 1994.

	Black	Households			Nonblack	Households	
income ra	income range number			income rai	nge	number	percent of
(1994 \$	<u>S)</u>	(1000s)	total	(1994 \$)	(1000s)	total
			<u>households</u>				households
Under	\$9,900	4	0.60%	Under	\$8,230	68	11.52%
\$9,900 -	\$14,849	2	0.26%	\$8,230 -	\$12,344	50	8.58%
\$14,850 -	\$24,750	3	0.43%	\$12,345 -	\$20,575	94	16.03%
\$24,751 -	\$34,650	2	0.29%	\$20,576 -	\$28,805	83	14.06%
\$34,651 -	\$49,500	2	0.30%	\$28,806 -	\$41,151	96	16.32%
\$49,501 -	\$74,251	1	0.25%	\$41,152 -	\$61,726	99	16.87%
\$74,252 Plus		1	0.14%	\$61,727 Plus	1	84	14.35%
All black:		13	2.28%	All nonblack:		574	97.72%

Table NM - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,704 (1990\$)

\$1,933 (1994 \$)

	Black Households					Nonblack Households				
income rai	<u>nge (1</u>	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>		
Und	der	\$9,900	\$239	\$271	Under	\$8,230	\$199	\$226		
\$9,900	-	\$14,849	\$598	\$679	\$8,230 -	\$12,344	\$497	\$564		
\$14,850	-	\$24,750	\$957	\$1,086	\$12,345 -	\$20,575	\$795	\$903		
\$24,751	-	\$34,650	\$1,435	\$1,629	\$20,576 -	\$28,805	\$1,193	\$1,354		
\$34,651	-	\$49,500	\$2,033	\$2,307	\$28,806 -	\$41,151	\$1,690	\$1,918		
\$49,501	-	\$74,251	\$2,990	\$3,393	\$41,152 -	\$61,726	\$2,485	\$2,821		
\$74,252 F	Plus		\$5,159	\$5,855	\$61,727 Plus		\$4,289	\$4,867		

Toble NIM 2	Approach indused fotalities of regulate	n, acata allocated agually to	all barraabalda
rable MW - 3.	Annual induced fatalities of regulato	ly costs allocated equally to	ali nousenoius.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	46	94	142	191	241
male fatalities	0	32	64	97	130	164
female fatalities	0	15	30	45	61	77
black fatalities	0	2	4	6	8	10
low income fatalities	0	23	46	69	93	117
medium income fatalities	0	17	34	52	69	88
high income fatalities	0	7	14	21	28	36

Table NM - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.2</u>	<u>0.4</u>	<u>0.6</u>	<u>0.8</u>	1.0
total fatalities	0	22	44	66	89	112
male fatalities	0	16	32	49	65	82
female fatalities	0	6	12	18	24	30
black fatalities	0	1	1	2	3	4
low income fatalities	0	4	8	12	16	20
med. income fatalities	0	9	19	28	38	48
high income fatalities	0	8	17	26	35	44

State: **New York**

1990

Nonblack income relative to National: 1.14 Black income relative to National: 1.22 Percent Black Population: 17.22% Number of Households (1000s): 6,669

Table NY - 1. Distribution of annual income for households in 1994.

	Black	: Households			Nonblack	: Households	
income ran	income range number percent of			income ran	nge	number	percent of
(1994 \$)		(1000s)	total	(1994 \$)	L	(1000s)	total
			<u>households</u>				households
Under	\$12,192	302	4.53%	Under	\$11,392	651	9.76%
\$12,192 -	\$18,287	132	1.98%	\$11,392 -	\$17,087	485	7.27%
\$18,288 -	\$30,479	217	3.26%	\$17,088 -	\$28,479	906	13.58%
\$30,480 -	\$42,671	147	2.21%	\$28,480 -	\$39,871	794	11.91%
\$42,672 -	\$60,959	153	2.29%	\$39,872 -	\$56,959	922	13.82%
\$60,960 -	\$91,439	124	1.86%	\$56,960 -	\$85,440	953	14.29%
\$91,440 Plus		72	1.09%	\$85,441 Plus		811	12.16%
All black:		1,148	17.22%	All nonblack:		5,521	82.78%

Table NY - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$150 (1990\$)

\$170 (1994\$)

	Black Households					Nonblack Households				
income	range (1	1994 \$)	1990 \$	1994 \$	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>		
ι	Inder	\$12,192	\$20	\$22	Under	\$11,392	\$18	\$21		
\$12,192	-	\$18,287	\$49	\$55	\$11,392 -	\$17,087	\$46	\$52		
\$18,288	-	\$30,479	\$78	\$89	\$17,088 -	\$28,479	\$73	\$83		
\$30,480	-	\$42,671	\$117	\$133	\$28,480 -	\$39,871	\$110	\$124		
\$42,672	-	\$60,959	\$166	\$189	\$39,872 -	\$56,959	\$155	\$176		
\$60,960	-	\$91,439	\$244	\$277	\$56,960 -	\$85,440	\$228	\$259		
\$91,440	Plus		\$422	\$478	\$85,441 Plus	1	\$394	\$447		

Table NY - 3.	Annual induced	fatalities of regulatory	/ costs allocate	d equally to al	l households.
regulatory costs					
no 1000 ft)		0.0	2.0	6.0	0.0

0.0	3.0	6.0	9.0	<u>12.0</u>	<u>15.0</u>
0	624	1,265	1,922	2,596	3,289
0	420	850	1,289	1,738	2,197
0	204	415	633	858	1,091
0	197	399	607	821	1,041
0	388	787	1,196	1,617	2,049
0	188	381	578	781	989
0	48	97	147	199	251
	0.0 0 0 0 0 0 0	0 624 0 420 0 204 0 197 0 388 0 188	0 624 1,265 0 420 850 0 204 415 0 197 399 0 388 787 0 188 381	0 624 1,265 1,922 0 420 850 1,289 0 204 415 633 0 197 399 607 0 388 787 1,196 0 188 381 578	0 624 1,265 1,922 2,596 0 420 850 1,289 1,738 0 204 415 633 858 0 197 399 607 821 0 388 787 1,196 1,617 0 188 381 578 781

Table NY - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	3.0	6.0	9.0	<u>12.0</u>	<u>15.0</u>
total fatalities	0	233	471	712	957	1,206
male fatalities	0	170	343	519	698	879
female fatalities	0	63	127	193	259	327
black fatalities	0	57	115	173	233	293
low income fatalities	0	68	137	206	275	345
med. income fatalities	0	107	216	327	439	553
high income fatalities	0	58	118	179	242	308

State: North Carolina

Black income relative to National:0.91Nonblack income relative to National:0.93Percent Black Population:22.15%Number of Households (1000s):2,679

Table NC - 1. Distribution of annual income for households in 1994.

	Black Households					Nonblack Households			
income	e rar	ige	number	percent of	income rar	nge	number	percent of	
(199	94 \$)	<u>_</u>	(1000s)	total	(1994 \$)_	(1000s)	total	
				households				households	
Und	ler	\$9,100	156	5.83%	Under	\$9,321	246	9.18%	
\$9,100	-	\$13,648	68	2.55%	\$9,321 -	\$13,980	183	6.83%	
\$13,649	-	\$22,748	112	4.19%	\$13,981 -	\$23,301	342	12.77%	
\$22,749	-	\$31,848	76	2.84%	\$23,302 -	\$32,622	300	11.20%	
\$31,849	-	\$45,497	79	2.95%	\$32,623 -	\$46,603	348	13.00%	
\$45,498	-	\$68,246	64	2.39%	\$46,604 -	\$69,905	360	13.44%	
\$68,247 PI	lus		37	1.40%	\$69,906 Plus		306	11.43%	
All black:			593	22.15%	All nonblack:		2,086	77.85%	

Table NC - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$373 (1990 \$)

\$424 (1994 \$)

	Blac	k Households			<u>Nonbla</u>	ack Households	-
income rang	<u>je (1994 \$)</u>	<u>1990 \$</u>	<u>1994 \$</u>	income ran	ige (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Unde	er \$9,100	\$46	\$52	Unde	er \$9,321	\$47	\$53
\$9,100 -	\$13,648	\$114	\$130	\$9,321	- \$13,980	\$117	\$133
\$13,649 -	\$22,748	\$183	\$207	\$13,981	- \$23,301	\$187	\$212
\$22,749 -	\$31,848	\$274	\$311	\$23,302	- \$32,622	\$281	\$319
\$31,849 -	\$45,497	\$388	\$441	\$32,623	- \$46,603	\$398	\$451
\$45,498 -	\$68,246	\$571	\$648	\$46,604	- \$69,905	\$585	\$664
\$68,247 Pl	ıs	\$985	\$1,118	\$69,906 I	Plus	\$1,009	\$1,146

Table NC - 3. Annual indu	ced fatalities of regu	latory costs allo	cated equally to a	III households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	<u>4.0</u>	<u>5.0</u>
total fatalities	0	263	531	806	1,086	1,373
male fatalities	0	174	351	531	715	902
female fatalities	0	89	181	275	372	471
black fatalities	0	103	209	317	428	541
low income fatalities	0	152	308	467	630	797
medium income fatalities	0	84	170	257	347	438
high income fatalities	0	27	54	81	110	139

Table NC - 4. Annual inc	duced fatalities of regu	latory costs allo	cated proportiona	lly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	109	220	332	446	562
male fatalities	0	78	157	237	319	402
female fatalities	0	31	63	95	128	161
black fatalities	0	33	66	100	134	169
low income fatalities	0	27	54	81	108	136
med. income fatalities	0	49	98	148	198	249
high income fatalities	0	34	68	103	140	177

State: North Dakota

Black income relative to National: 1.07 Nonblack income relative to National: 0.75
Percent Black Population: 0.63% Number of Households (1000s): 241

Table ND - 1. Distribution of annual income for households in 1994.

	Black	<u> Households</u>			Nonblack	<u> Households</u>	
income ran	ge	number	percent of	income rar	nge	number	percent of
(1994 \$)		(1000s)	total	(1994 \$)_	(1000s)	total
			<u>households</u>				households
Under	\$10,662	0	0.17%	Under	\$7,518	28	11.71%
\$10,662 -	\$15,992	0	0.07%	\$7,518 -	\$11,277	21	8.72%
\$15,993 -	\$26,654	0	0.12%	\$11,278 -	\$18,795	39	16.30%
\$26,655 -	\$37,316	0	0.08%	\$18,796 -	\$26,313	34	14.29%
\$37,317 -	\$53,309	0	0.08%	\$26,314 -	\$37,591	40	16.59%
\$53,310 -	\$79,964	0	0.07%	\$37,592 -	\$56,387	41	17.15%
\$79,965 Plus		0	0.04%	\$56,388 Plus	i	35	14.59%
All black:		2	0.63%	All nonblack:		239	99.37%

Table ND - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$4,149 (1990\$)

\$4,709 (1994 \$)

	Blac	k Households		Nonblack Households				
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$10,662	\$684	\$776	Under	\$7,518	\$482	\$548	
\$10,662 -	\$15,992	\$1,711	\$1,941	\$7,518 -	\$11,277	\$1,206	\$1,369	
\$15,993 -	\$26,654	\$2,737	\$3,106	\$11,278 -	\$18,795	\$1,930	\$2,190	
\$26,655 -	\$37,316	\$4,105	\$4,659	\$18,796 -	\$26,313	\$2,895	\$3,285	
\$37,317 -	\$53,309	\$5,816	\$6,600	\$26,314 -	\$37,591	\$4,101	\$4,654	
\$53,310 -	\$79,964	\$8,553	\$9,706	\$37,592 -	\$56,387	\$6,031	\$6,844	
\$79,965 Plus		\$14,759	\$16,749	\$56,388 Plus		\$10,407	\$11,810	

Toble ND 2	A nousel indused	fotalities of regulator	n, acata allacatad a	مامام مدييم المحدد بالمديد
Table ND - 3.	Annual induced	ratalities of regulator	y cosis anocaled el	qually to all households.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	<u>0.5</u>
total fatalities	0	25	50	75	102	128
male fatalities	0	17	34	51	69	87
female fatalities	0	8	16	24	33	41
black fatalities	0	0	1	1	1	1
low income fatalities	0	11	23	35	47	59
medium income fatalities	0	9	18	28	38	48
high income fatalities	0	4	8	13	17	22

Table ND - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	<u>0.5</u>
	•	40	0.4			
total fatalities	0	12	24	37	50	63
male fatalities	0	9	18	27	36	46
female fatalities	0	3	7	10	13	17
black fatalities	0	0	0	0	0	1
low income fatalities	0	2	4	6	8	10
med. income fatalities	0	5	10	15	21	26
high income fatalities	0	5	10	16	21	27

State: Ohio

Black income relative to National:0.90Nonblack income relative to National:0.96Percent Black Population:10.94%Number of Households (1000s):4,190

Table OH - 1. Distribution of annual income for households in 1994.

		Black	Households			Nonblack	: Households	
incom	e rar	ige	number	percent of	income range		number	percent of
<u>(19</u>	94 \$)	<u>_</u>	(1000s)	total	(1994 \$)		(1000s)	total
				households				households
Und	der	\$8,966	121	2.88%	Under	\$9,552	440	10.50%
\$8,966	-	\$13,449	53	1.26%	\$9,552 -	\$14,327	328	7.82%
\$13,450	-	\$22,415	87	2.07%	\$14,328 -	\$23,878	612	14.61%
\$22,416	-	\$31,382	59	1.40%	\$23,879 -	\$33,430	537	12.81%
\$31,383	-	\$44,831	61	1.46%	\$33,431 -	\$47,758	623	14.87%
\$44,832	-	\$67,248	50	1.18%	\$47,759 -	\$71,637	644	15.37%
\$67,249 F	Plus		29	0.69%	\$71,638 Plus		548	13.08%
All black:			459	10.94%	All nonblack:		3,731	89.06%

Table OH - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$239 (1990 \$)

\$271 (1994 \$)

	Black	Households		Nonblack Households			
income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	1990 \$	<u>1994 \$</u>
Under	\$8,966	\$27	\$31	Under	\$9,552	\$29	\$33
\$8,966 -	\$13,449	\$68	\$77	\$9,552 -	\$14,327	\$72	\$82
\$13,450 -	\$22,415	\$108	\$123	\$14,328 -	\$23,878	\$115	\$131
\$22,416 -	\$31,382	\$163	\$184	\$23,879 -	\$33,430	\$173	\$197
\$31,383 -	\$44,831	\$230	\$261	\$33,431 -	\$47,758	\$245	\$278
\$44,832 -	\$67,248	\$339	\$384	\$47,759 -	\$71,637	\$361	\$409
\$67,249 Plus	3	\$584	\$663	\$71,638 Plus		\$623	\$707

Table OH - 3. Annual indu	ced fatalities of regu	latory costs allo	cated equally to	all households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>2.0</u>	<u>4.0</u>	<u>6.0</u>	8.0	10.0
total fatalities	0	462	937	1,424	1,926	2,441
male fatalities	0	311	630	956	1,290	1,632
female fatalities	0	151	307	468	635	809
black fatalities	0	103	210	319	432	549
low income fatalities	0	255	518	787	1,065	1,350
medium income fatalities	0	155	315	479	647	820
high income fatalities	0	51	104	158	213	270

Table OH - 4. Annual inc	duced fatalities of regu	ulatory costs allo	cated proportiona	ılly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	2.0	<u>4.0</u>	<u>6.0</u>	<u>8.0</u>	<u>10.0</u>
total fatalities	0	193	391	591	796	1,005
male fatalities	0	141	285	431	580	732
female fatalities	0	52	106	160	216	273
black fatalities	0	31	62	94	126	159
low income fatalities	0	44	88	133	178	223
med. income fatalities	0	87	175	265	355	448
high income fatalities	0	63	127	194	263	334

State: Oklahoma

0.80 Nonblack income relative to National: 0.78 Black income relative to National: Percent Black Population: 7.68% Number of Households (1000s): 1,236

Table OK - 1. Distribution of annual income for households in 1994.

	Nonblack Households					<u>Households</u>	Black	
percent of	number	umber percent of income range		number	ge	income ran		
tota	(1000s)		(1994 \$)		total	(1000s)		(1994 \$)
households					<u>households</u>			
10.88%	135	\$7,842	ler	Und	2.02%	25	\$7,959	Under
8.10%	100	\$11,762	-	\$7,842	0.88%	11	\$11,937	67,959 -
15.14%	187	\$19,604	-	\$11,763	1.45%	18	\$19,896	1,938 -
13.28%	164	\$27,446	-	\$19,605	0.98%	12	\$27,855	9,897 -
15.42%	191	\$39,208	-	\$27,447	1.02%	13	\$39,793	27,856 -
15.93%	197	\$58,813	-	\$39,209	0.83%	10	\$59,690	39,794 -
13.56%	168		Plus	\$58,814	0.48%	6		9,691 Plus
				•		•	•	•
92.32%	1,141		ck:	All nonblac	7.68%	95		l black:

Table OK - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$809 (1990 \$)

\$918 (1994\$)

	Black	Households		Nonblack Households				
income range (1	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$7,959	\$98	\$111	Under	\$7,842	\$96	\$109	
\$7,959 -	\$11,937	\$244	\$277	\$7,842 -	\$11,762	\$241	\$273	
\$11,938 -	\$19,896	\$391	\$444	\$11,763 -	\$19,604	\$385	\$437	
\$19,897 -	\$27,855	\$586	\$665	\$19,605 -	\$27,446	\$578	\$656	
\$27,856 -	\$39,793	\$831	\$943	\$27,447 -	\$39,208	\$818	\$929	
\$39,794 -	\$59,690	\$1,222	\$1,386	\$39,209 -	\$58,813	\$1,204	\$1,366	
\$59,691 Plus		\$2,108	\$2,392	\$58,814 Plus	•	\$2,077	\$2,357	

Table OK - 3	Annual induced fatalities	of regulatory co	sts allocated equal	v to all households
Tubic Oil 0.	/ IIII laai ii laadeea lataiities	or regulatory co	oto anocatea equan	y to all flouscribius.

		,				
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	128	260	394	532	673
male fatalities	0	87	175	265	356	450
female fatalities	0	42	85	130	176	223
black fatalities	0	19	39	60	81	103
low income fatalities	0	64	129	196	264	334
medium income fatalities	0	46	93	141	190	240
high income fatalities	0	19	38	58	78	99
	0					

Table OK - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.5	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalitics	0	64	400	405	040	245
total fatalities	Ü	61	122	185	249	315
male fatalities	0	44	89	134	181	228
female fatalities	0	17	34	51	69	87
black fatalities	0	7	13	20	27	34
low income fatalities	0	11	23	34	46	57
med. income fatalities	0	26	52	78	105	132
high income fatalities	0	24	48	73	99	125

State: Oregon

Black income relative to National:

0.93 Nonblack income relative to National:

0.88

Percent Black Population:

1.72% Number of Households (1000s):

1,195

Table OR - 1. Distribution of annual income for households in 1994.

	Nonblack Households					Households	Black		
percent of	number	nge	come rar	inco	percent of	number	ge	me rang	inco
total	(1000s)	<u>(1994 \$)</u>		total	(1000s)		994 \$)	(1	
households					<u>households</u>				
11.59%	138	\$8,772	Jnder	Un	0.45%	5	\$9,329	nder	U
8.63%	103	\$13,157	72 -	\$8,772	0.20%	2	\$13,992	-	\$9,329
16.12%	193	\$21,928	58 -	\$13,158	0.32%	4	\$23,321	-	\$13,993
14.14%	169	\$30,700	29 -	\$21,929	0.22%	3	\$32,650	-	\$23,322
16.41%	196	\$43,858	01 -	\$30,701	0.23%	3	\$46,643	-	\$32,651
16.96%	203	\$65,787	59 -	\$43,859	0.19%	2	\$69,966	-	\$46,644
14.43%	172		88 Plus	\$65,788	0.11%	1		Plus	\$69,967
98.28%	1,174		black:	All nonbla	1.72%	21			All black:

Table OR - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$837 (1990 \$)

\$950 (1994\$)

	Black Households					Nonblack Households			
income r	ange (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
U	nder	\$9,329	\$104	\$118	Under	\$8,772	\$98	\$111	
\$9,329	-	\$13,992	\$260	\$295	\$8,772 -	\$13,157	\$244	\$277	
\$13,993	-	\$23,321	\$416	\$472	\$13,158 -	\$21,928	\$391	\$444	
\$23,322	-	\$32,650	\$624	\$708	\$21,929 -	\$30,700	\$586	\$665	
\$32,651	-	\$46,643	\$884	\$1,003	\$30,701 -	\$43,858	\$831	\$943	
\$46,644	-	\$69,966	\$1,299	\$1,475	\$43,859 -	\$65,787	\$1,222	\$1,386	
\$69,967	Plus		\$2,242	\$2,544	\$65,788 Plus	S	\$2,108	\$2,392	

Table OD 2	Approach indused fotalities	of regulators, and	to allocated agreell	to all barrachalds
Table OR - 3.	Annual induced fatalities	s of regulatory cos	is allocated equali	y to all flousefiolus.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	110	223	338	456	577
male fatalities	0	75	152	231	311	393
female fatalities	0	35	70	107	145	184
black fatalities	0	4	8	12	16	21
low income fatalities	0	55	111	169	228	288
medium income fatalities	0	40	81	122	165	209
high income fatalities	0	15	31	47	63	80

Table OR - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	50	101	153	205	259
male fatalities	0	37	74	113	151	191
female fatalities	0	13	26	40	54	68
black fatalities	0	1	3	4	5	6
low income fatalities	0	10	19	29	39	49
med. income fatalities	0	22	44	67	89	112
high income fatalities	0	18	37	57	77	97

State: **Pennsylvania**

Black income relative to National: 1.02 Nonblack income relative to National: 0.96
Percent Black Population: 9.45% Number of Households (1000s): 4,551

Table PA - 1. Distribution of annual income for households in 1994.

	Households	Nonblack		Black Households				
percent of	number	nge	income ran	percent of	number	ge	income rang	
total	(1000s))_	(1994 \$)	total	(1000s)		(1994 \$)	
households				<u>households</u>				
10.67%	486	\$9,564	Under	2.49%	113	\$10,155	Under	
7.95%	362	\$14,345	\$9,564 -	1.09%	50	\$15,231	\$10,155 -	
14.85%	676	\$23,909	\$14,346 -	1.79%	81	\$25,386	\$15,232 -	
13.03%	593	\$33,474	\$23,910 -	1.21%	55	\$35,541	\$25,387 -	
15.12%	688	\$47,820	\$33,475 -	1.26%	57	\$50,773	\$35,542 -	
15.63%	711	\$71,730	\$47,821 -	1.02%	47	\$76,161	\$50,774 -	
13.30%	605		\$71,731 Plus	0.60%	27		\$76,162 Plus	
	•	•	•	•	•	•		
90.55%	4,121		All nonblack:	9.45%	430		All black:	

Table PA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$220 (1990 \$)

\$249 (1994 \$)

	Black	<u>Households</u>		Nonblack Households			
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$10,155	\$28	\$32	Under	\$9,564	\$26	\$30
\$10,155 -	\$15,231	\$70	\$79	\$9,564 -	\$14,345	\$66	\$74
\$15,232 -	\$25,386	\$111	\$126	\$14,346 -	\$23,909	\$105	\$119
\$25,387 -	\$35,541	\$167	\$190	\$23,910 -	\$33,474	\$157	\$178
\$35,542 -	\$50,773	\$237	\$268	\$33,475 -	\$47,820	\$223	\$253
\$50,774 -	\$76,161	\$348	\$395	\$47,821 -	\$71,730	\$328	\$372
\$76,162 Plus		\$600	\$681	\$71,731 Plus	i	\$565	\$642

Table PA - 3.	Annual induced fatal	lities of regulatory	costs allocated	equally to all households.
1 , ,				

1990 regulatory costs						
(billions 1990 \$)	0.0	2.0	4.0	<u>6.0</u>	<u>8.0</u>	<u>10.0</u>
	_					
total fatalities	0	446	903	1,372	1,852	2,345
male fatalities	0	302	611	926	1,248	1,577
female fatalities	0	144	292	446	604	767
black fatalities	0	82	166	253	342	434
low income fatalities	0	246	497	756	1,021	1,293
medium income fatalities	0	150	305	463	625	791
high income fatalities	0	50	101	153	206	261

Table PA - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

0.0	2.0	4.0	6.0	8.0	10.0
0	188	380	575	773	975
0	138	278	421	566	713
0	50	102	154	207	262
0	26	51	78	105	132
0	43	87	130	174	219
0	84	170	257	345	435
0	61	123	187	253	321
	0 0 0 0	0 188 0 138 0 50 0 26 0 43 0 84	0 188 380 0 138 278 0 50 102 0 26 51 0 43 87 0 84 170	0 188 380 575 0 138 278 421 0 50 102 154 0 26 51 78 0 43 87 130 0 84 170 257	0 188 380 575 773 0 138 278 421 566 0 50 102 154 207 0 26 51 78 105 0 43 87 130 174 0 84 170 257 345

State: Rhode Island

Black income relative to National:1.03Nonblack income relative to National:1.05Percent Black Population:4.50%Number of Households (1000s):374

Table RI - 1. Distribution of annual income for households in 1994.

Nonblack Households				Black Households					
percent of	number	ge	come ran	incor	percent of	number	ge	ome rang	inco
total	(1000s)		(1994 \$)	<u>(1</u>	total	(1000s)		1994 \$)	(1
households					<u>households</u>				
11.26%	42	\$10,531	Inder	Und	1.18%	4	\$10,313	Jnder	U
8.38%	31	\$15,795	31 -	\$10,531	0.52%	2	\$15,469	-	\$10,313
15.67%	59	\$26,326	96 -	\$15,796	0.85%	3	\$25,782	-	\$15,470
13.74%	51	\$36,856	27 -	\$26,327	0.58%	2	\$36,096	-	\$25,783
15.95%	60	\$52,652	57 -	\$36,857	0.60%	2	\$51,565	-	\$36,097
16.48%	62	\$78,979	53 -	\$52,653	0.49%	2	\$77,349	-	\$51,566
14.03%	52		30 Plus	\$78,980	0.28%	1		Plus	\$77,350
95.50%	357		olack:	All nonbla	4.50%	17		:	All black:

Table RI - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$2,674 (1990\$)

\$3,034 (1994 \$)

	Black	Households	Nonblack Households				
income range (1	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$10,313	\$309	\$351	Under	\$10,531	\$315	\$358
\$10,313 -	\$15,469	\$772	\$877	\$10,531 -	\$15,795	\$789	\$895
\$15,470 -	\$25,782	\$1,236	\$1,402	\$15,796 -	\$26,326	\$1,262	\$1,432
\$25,783 -	\$36,096	\$1,854	\$2,104	\$26,327 -	\$36,856	\$1,893	\$2,148
\$36,097 -	\$51,565	\$2,626	\$2,980	\$36,857 -	\$52,652	\$2,682	\$3,043
\$51,566 -	\$77,349	\$3,862	\$4,383	\$52,653 -	\$78,979	\$3,944	\$4,475
\$77,350 Plus		\$6,665	\$7,563	\$78,980 Plus	1	\$6,805	\$7,722

Table RI	- 3	Annual induced fatalities of regulatory costs allocated equally to all households.
Table IN	- 3.	Allitual illudeed latalities of regulatory costs allocated equally to all riouseriolus.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	<u>0.4</u>	0.6	<u>0.8</u>	<u>1.0</u>
total fatalities	0	39	80	121	164	209
male fatalities	0	27	55	83	112	142
female fatalities	0	12	25	38	52	67
black fatalities	0	4	8	12	16	21
low income fatalities	0	22	44	68	92	116
medium income fatalities	0	13	27	41	56	71
high income fatalities	0	4	8	13	17	22

Table RI - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.2</u>	<u>0.4</u>	<u>0.6</u>	0.8	<u>1.0</u>
total fatalities	0	16	32	49	66	83
male fatalities	0	12	24	36	49	61
female fatalities	0	4	8	12	17	21
black fatalities	0	1	2	3	4	6
low income fatalities	0	4	8	11	15	19
med. income fatalities	0	7	15	22	30	38
high income fatalities	0	5	10	15	20	26

State: South Carolina

Black income relative to National:0.84Nonblack income relative to National:0.96Percent Black Population:29.98%Number of Households (1000s):1,337

Table SC - 1. Distribution of annual income for households in 1994.

	Black Households				Nonblack Households			
income rar	nge	number	percent of	income rar	nge	number	percent of	
(1994 \$	<u>_</u>	(1000s)	total	(1994 \$)_	(1000s)	total	
			<u>households</u>				households	
Under	\$8,379	106	7.89%	Under	\$9,581	110	8.25%	
\$8,379 -	\$12,567	46	3.45%	\$9,581 -	\$14,371	82	6.15%	
\$12,568 -	\$20,946	76	5.67%	\$14,372 -	\$23,952	154	11.49%	
\$20,947 -	\$29,325	51	3.84%	\$23,953 -	\$33,533	135	10.07%	
\$29,326 -	\$41,893	53	3.99%	\$33,534 -	\$47,904	156	11.69%	
\$41,894 -	\$62,841	43	3.24%	\$47,905 -	\$71,857	162	12.09%	
\$62,842 Plus		25	1.89%	\$71,858 Plus	1	138	10.28%	
			•		•			
All black:		401	29.98%	All nonblack:		936	70.02%	

Table SC - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$748 (1990\$)

\$849 (1994\$)

	Black Households				Nonblack Households				
income range (1	1994 \$)	1990 \$	<u>1994 \$</u>	income range ((1994 \$)	1990 \$	<u>1994 \$</u>		
Under	\$8,379	\$86	\$98	Under	\$9,581	\$99	\$112		
\$8,379 -	\$12,567	\$216	\$245	\$9,581 -	\$14,371	\$247	\$280		
\$12,568 -	\$20,946	\$345	\$392	\$14,372 -	\$23,952	\$395	\$448		
\$20,947 -	\$29,325	\$518	\$588	\$23,953 -	\$33,533	\$592	\$672		
\$29,326 -	\$41,893	\$734	\$833	\$33,534 -	\$47,904	\$839	\$952		
\$41,894 -	\$62,841	\$1,079	\$1,225	\$47,905 -	\$71,857	\$1,234	\$1,401		
\$62,842 Plus		\$1,863	\$2,114	\$71,858 Plus	1	\$2,130	\$2,417		

Table SC - 3. Annual indu	iced fatalities of regu	latory costs alloc	cated equally to a	ıll households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>2.5</u>
total fatalities	0	144	291	441	595	752
male fatalities	0	94	189	286	386	487
female fatalities	0	50	102	155	209	265
black fatalities	0	74	149	226	305	386
low income fatalities	0	86	173	263	355	448
medium income fatalities	0	45	90	137	184	233
high income fatalities	0	13	27	41	56	70

Table SC - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.								
1990 regulatory costs						<u>.</u>		
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>		
total fatalities	0	58	117	176	237	298		
male fatalities	0	41	82	124	167	210		
female fatalities	0	17	34	52	70	88		
black fatalities	0	23	47	70	94	119		
low income fatalities	0	15	30	45	60	75		
med. income fatalities	0	26	52	79	106	133		
high income fatalities	0	17	35	53	71	91		

State: South Dakota

Black income relative to National: 1.06 Nonblack income relative to National: 0.74
Percent Black Population: 0.56% Number of Households (1000s): 265

Table SD - 1. Distribution of annual income for households in 1994.

	Black Households				Nonblack	<u> Households</u>	
income ran	ge	number	percent of	income range		number	percent of
(1994 \$)		(1000s)	total	(1994 \$))	(1000s)	total
			households				households
Under	\$10,573	0	0.15%	Under	\$7,387	31	11.72%
\$10,573 -	\$15,858	0	0.07%	\$7,387 -	\$11,079	23	8.73%
\$15,859 -	\$26,431	0	0.11%	\$11,080 -	\$18,466	43	16.31%
\$26,432 -	\$37,004	0	0.07%	\$18,467 -	\$25,852	38	14.30%
\$37,005 -	\$52,864	0	0.08%	\$25,853 -	\$36,932	44	16.60%
\$52,865 -	\$79,296	0	0.06%	\$36,933 -	\$55,399	45	17.16%
\$79,297 Plus		0	0.04%	\$55,400 Plus		39	14.60%
All black:		1	0.56%	All nonblack:		264	99.44%

Table SD - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$3,774 (1990 \$)

\$4,282 (1994 \$)

	Black Households				Nonblack Households			
income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$10,573	\$628	\$713	Under	\$7,387	\$439	\$498	
\$10,573 -	\$15,858	\$1,570	\$1,782	\$7,387 -	\$11,079	\$1,097	\$1,245	
\$15,859 -	\$26,431	\$2,512	\$2,851	\$11,080 -	\$18,466	\$1,755	\$1,992	
\$26,432 -	\$37,004	\$3,768	\$4,276	\$18,467 -	\$25,852	\$2,633	\$2,987	
\$37,005 -	\$52,864	\$5,338	\$6,058	\$25,853 -	\$36,932	\$3,729	\$4,232	
\$52,865 -	\$79,296	\$7,850	\$8,909	\$36,933 -	\$55,399	\$5,484	\$6,224	
\$79,297 Plus		\$13,546	\$15,373	\$55,400 Plus		\$9,464	\$10,740	

Toble CD 2	Appual induced fatalities of regulate	any acete allocated equal	v to all bouseholds
Table 3D - 3.	Annual induced fatalities of regulator	ny cosis anocated equan	y to all flousefloids.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	<u>0.5</u>
total fatalities	0	25	50	76	102	129
male fatalities	0	17	34	52	69	88
female fatalities	0	8	16	24	33	42
black fatalities	0	0	0	1	1	1
low income fatalities	0	11	23	35	47	59
medium income fatalities	0	9	19	28	38	48
high income fatalities	0	4	9	13	18	22

Table SD - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	0.5
	•	40	0.5			0.4
total fatalities	0	12	25	38	51	64
male fatalities	0	9	18	28	37	47
female fatalities	0	3	7	10	14	17
black fatalities	0	0	0	0	0	0
low income fatalities	0	2	4	6	8	10
med. income fatalities	0	5	10	16	21	26
high income fatalities	0	5	11	16	22	28

State: Tennessee

0.83 0.83 Black income relative to National: Nonblack income relative to National: Percent Black Population: 16.08% Number of Households (1000s): 1,966

Table TN - 1. Distribution of annual income for households in 1994.

	Black Households Nor					: Households	
income r	ange	number	percent of	income range		number	percent of
(1994	\$)	(1000s)	total	(1994 \$	Σ.	(1000s)	total
			<u>households</u>				households
Under	\$8,317	83	4.23%	Under	\$8,349	194	9.89%
\$8,317 -	\$12,474	36	1.85%	\$8,349 -	\$12,522	145	7.37%
\$12,475 -	\$20,791	60	3.04%	\$12,523 -	\$20,871	271	13.77%
\$20,792 -	\$29,107	41	2.06%	\$20,872 -	\$29,219	237	12.07%
\$29,108 -	\$41,582	42	2.14%	\$29,220 -	\$41,742	276	14.01%
\$41,583 -	\$62,374	34	1.74%	\$41,743 -	\$62,614	285	14.48%
\$62,375 Plus	3	20	1.01%	\$62,615 Plus	i	242	12.33%
All black:		316	16.08%	All nonblack:		1,650	83.92%

Table TN - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$509 (1990 \$)

\$577 (1994 \$)

	Black Households				Nonblack Households				
income range (1994 \$)	<u>1990 \$</u>	1994 \$	income range (1994 \$)_	1990 \$	<u>1994 \$</u>		
Under	\$8,317	\$62	\$70	Under	\$8,349	\$62	\$71		
\$8,317 -	\$12,474	\$155	\$176	\$8,349 -	\$12,522	\$156	\$177		
\$12,475 -	\$20,791	\$248	\$282	\$12,523 -	\$20,871	\$249	\$283		
\$20,792 -	\$29,107	\$372	\$422	\$20,872 -	\$29,219	\$374	\$424		
\$29,108 -	\$41,582	\$527	\$598	\$29,220 -	\$41,742	\$529	\$601		
\$41,583 -	\$62,374	\$776	\$880	\$41,743 -	\$62,614	\$779	\$884		
\$62,375 Plus		\$1,338	\$1,519	\$62,615 Plus		\$1,343	\$1,525		

Table TN - 3. Annual indu	ced fatalities of regu	ulatory costs allo	cated equally to a	III households.		
1990 regulatory costs						-
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	<u>3.0</u>	4.0	<u>5.0</u>
total fatalities	0	269	546	831	1.124	1.426
	-				,	, -
male fatalities	0	179	362	550	742	940
female fatalities	0	90	184	281	382	487
black fatalities	0	80	162	247	335	425
low income fatalities	0	144	293	447	605	768
medium income fatalities	0	91	184	281	380	482
high income fatalities	0	34	68	103	140	177

Table TN - 4. Annual inc	duced fatalities of regu	ulatory costs allo	cated proportiona	ılly to household i	ncome.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	4.0	<u>5.0</u>
total fatalities	0	120	243	368	496	627
male fatalities	0	86	174	264	356	449
female fatalities	0	34	69	104	141	178
black fatalities	0	27	54	81	109	138
low income fatalities	0	26	51	77	103	129
med. income fatalities	0	52	105	159	214	269
high income fatalities	0	42	86	132	179	229

State: **Texas**

Black income relative to National: 0.90 Nonblack income relative to National: 0.95 Percent Black Population: Number of Households (1000s): 12.10% 6,539

Table TX - 1. Distribution of annual income for households in 1994.

	Black	Households			Nonblack	Households	
income ran		number	percent of			number	percent of
(1994 \$)		(1000s)	total	(1994 \$	Ĺ	(1000s)	total
			<u>households</u>				households
Under	\$9,036	208	3.18%	Under	\$9,457	678	10.36%
\$9,036 -	\$13,553	91	1.39%	\$9,457 -	\$14,184	505	7.72%
\$13,554 -	\$22,589	150	2.29%	\$14,185 -	\$23,641	943	14.42%
\$22,590 -	\$31,624	101	1.55%	\$23,642 -	\$33,098	827	12.65%
\$31,625 -	\$45,178	105	1.61%	\$33,099 -	\$47,284	960	14.68%
\$45,179 -	\$67,768	86	1.31%	\$47,285 -	\$70,926	992	15.17%
\$67,769 Plus		50	0.76%	\$70,927 Plus	i	844	12.91%
All black:		791	12.10%	All nonblack:		5,748	87.90%

Table TX - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$153 (1990 \$)

\$174 (1994\$)

	Black Households					Households				
income ra	income range (1994 \$) 1		<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>		
U	nder	\$9,036	\$18	\$20	Under	\$9,457	\$19	\$21		
\$9,036	-	\$13,553	\$44	\$50	\$9,457 -	\$14,184	\$46	\$53		
\$13,554	-	\$22,589	\$71	\$80	\$14,185 -	\$23,641	\$74	\$84		
\$22,590	-	\$31,624	\$106	\$121	\$23,642 -	\$33,098	\$111	\$126		
\$31,625	-	\$45,178	\$151	\$171	\$33,099 -	\$47,284	\$158	\$179		
\$45,179	-	\$67,768	\$222	\$251	\$47,285 -	\$70,926	\$232	\$263		
\$67,769	Plus		\$382	\$434	\$70,927 Plus	3	\$400	\$454		

Table TX - 3.	Annual induced fatalities of regulatory costs allocated equally to all households.
regulatory costs	

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>3.0</u>	<u>6.0</u>	9.0	<u>12.0</u>	<u>15.0</u>
total fatalities	0	706	1,430	2,173	2,937	3,720
male fatalities	0	474	960	1,456	1,963	2,483
female fatalities	0	231	470	717	973	1,238
black fatalities	0	170	346	526	712	903
low income fatalities	0	391	792	1,205	1,629	2,064
medium income fatalities	0	236	479	728	983	1,245
high income fatalities	0	78	159	241	325	411

Table TX - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	3.0	<u>6.0</u>	9.0	12.0	<u>15.0</u>
total fatalities	0	296	598	906	1,219	1,538
male fatalities	0	216	435	659	886	1,118
female fatalities	0	81	163	247	333	420
black fatalities	0	52	104	157	211	266
low income fatalities	0	68	136	205	274	343
med. income fatalities	0	133	267	404	543	684
high income fatalities	0	96	195	297	402	511

State: Utah

Black income relative to National: 1.01 Nonblack income relative to National: 0.95
Percent Black Population: 0.72% Number of Households (1000s): 599

Table UT - 1. Distribution of annual income for households in 1994.

	Households	Nonblack			Households	Black	
percent of	number	nge	income ran	percent of	number	ge	income rang
total	(1000s)	Ĺ	(1994 \$)	total	(1000s)		(1994 \$)
<u>households</u>							
11.70%	70	\$9,543	Under	0.19%	1	\$10,061	Under
8.72%	52	\$14,314	\$9,543 -	0.08%	0	\$15,090	\$10,061 -
16.29%	98	\$23,857	\$14,315 -	0.14%	1	\$25,151	\$15,091 -
14.28%	86	\$33,400	\$23,858 -	0.09%	1	\$35,212	\$25,152 -
16.58%	99	\$47,715	\$33,401 -	0.10%	1	\$50,303	\$35,213 -
17.14%	103	\$71,573	\$47,716 -	0.08%	0	\$75,455	\$50,304 -
14.58%	87		\$71,574 Plus	0.05%	0		\$75,456 Plus
99.28%	595		All nonblack:	0.72%	4		All black:

Table UT -2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,669 (1990\$)

\$1,895 (1994\$)

	Black	<u> Households</u>	s Nonblack Households			Households	
income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$10,061	\$205	\$233	Under	\$9,543	\$194	\$221
\$10,061 -	\$15,090	\$513	\$582	\$9,543 -	\$14,314	\$486	\$552
\$15,091 -	\$25,151	\$820	\$931	\$14,315 -	\$23,857	\$778	\$883
\$25,152 -	\$35,212	\$1,230	\$1,396	\$23,858 -	\$33,400	\$1,167	\$1,324
\$35,213 -	\$50,303	\$1,743	\$1,978	\$33,401 -	\$47,715	\$1,653	\$1,876
\$50,304 -	\$75,455	\$2,563	\$2,908	\$47,716 -	\$71,573	\$2,431	\$2,759
\$75,456 Plus		\$4,422	\$5,019	\$71,574 Plus	i	\$4,195	\$4,760

Table l	JT	- 3.	Annual induced	l fatalities	of regulatory	costs alloca	ted equally	to all households.
rogulaton	,	nto.						

total fatalities 0 40 82 124 16	<u>.8</u> <u>1.0</u>
total fatalities 0 40 62 124 10	6 210
male fatalities 0 28 56 85 11	
female fatalities 0 13 25 39 5.	2 66
black fatalities 0 1 1 2	3 3
low income fatalities 0 21 42 64 8	6 109
medium income fatalities 0 14 29 44 6i	0 75
high income fatalities 0 5 10 16 2	1 26

Table UT - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	0.2	0.4	<u>0.6</u>	<u>0.8</u>	<u>1.0</u>
total fatalities	0	18	35	54	72	90
male fatalities	0	13	26	40	54	67
female fatalities	0	4	9	14	18	23
black fatalities	0	0	0	1	1	1
low income fatalities	0	4	7	11	15	18
med. income fatalities	0	8	16	24	32	40
high income fatalities	0	6	12	19	25	32

State: Vermont

Black income relative to National: 1.45 Nonblack income relative to National: 0.95
Percent Black Population: 0.35% Number of Households (1000s): 220

Table VT - 1. Distribution of annual income for households in 1994.

	(Households	Nonblack				Households	Black		
percent of	number	income range numbe				number	nge	me ran	inco
total	(1000s))	1994 \$	(1)	total	(1000s)	Ĺ	1994 \$)	(
households					<u>households</u>				
11.75%	26	Under \$9,496		Und	0.09%	0	\$14,488	Inder	U
8.75%	19	\$14,244	6 -	\$9,496	0.04%	0	\$21,731	-	\$14,488
16.35%	36	\$23,740	; -	\$14,245	0.07%	0	\$36,219	-	\$21,732
14.33%	32	\$33,236	-	\$23,741	0.04%	0	\$50,706	-	\$36,220
16.64%	37	\$47,481	-	\$33,237	0.05%	0	\$72,438	-	\$50,707
17.20%	38	\$71,222	2 -	\$47,482	0.04%	0	\$108,658	-	\$72,439
14.64%	32	i	Plus	\$71,223	0.02%	0		Plus	\$108,659
99.65%	219		ick:	All nonbla	0.35%	1			All black:

Table VT - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$4,545 (1990 \$)

\$5,158 (1994 \$)

		Blac	k Households		Nonblack Households				
income i	ange (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range (1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
U	nder	\$14,488	\$806	\$915	Under	\$9,496	\$528	\$600	
\$14,488	-	\$21,731	\$2,015	\$2,287	\$9,496 -	\$14,244	\$1,321	\$1,499	
\$21,732	-	\$36,219	\$3,224	\$3,659	\$14,245 -	\$23,740	\$2,113	\$2,398	
\$36,220	-	\$50,706	\$4,836	\$5,488	\$23,741 -	\$33,236	\$3,170	\$3,598	
\$50,707	-	\$72,438	\$6,852	\$7,775	\$33,237 -	\$47,481	\$4,491	\$5,097	
\$72,439	-	\$108,658	\$10,076	\$11,434	\$47,482 -	\$71,222	\$6,605	\$7,495	
\$108,659	Plus		\$17,387	\$19,731	\$71,223 Plus		\$11,397	\$12,933	

Table VT - 3. Annual induced fatalities of regulatory costs allocated equally to all ho	
	useholds.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	<u>0.5</u>
total fatalities	0	20	41	62	84	107
male fatalities	0	14	28	43	58	73
female fatalities	0	6	13	19	26	34
black fatalities	0	0	0	0	0	1
low income fatalities	0	10	21	32	43	55
medium income fatalities	0	7	15	22	30	38
high income fatalities	0	3	5	8	11	14

Table VT - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	<u>0.4</u>	0.5
total fatalities	0	9	18	27	36	46
male fatalities	0	7	13	20	27	34
female fatalities	0	2	5	7	9	12
black fatalities	0	0	0	0	0	0
low income fatalities	0	2	4	5	7	9
med. income fatalities	0	4	8	12	16	20
high income fatalities	0	3	6	9	13	16

State: Virginia

Black income relative to National: Nonblack income relative to National: 1.15 1.11 Percent Black Population: 19.21% Number of Households (1000s): 2,439

Table VA - 1. Distribution of annual income for households in 1994.

	Black	Households			Nonblack	Households	
income ran	ge	number	percent of	income ran	ige	number	percent of
(1994 \$)		(1000s)	total	(1994 \$)	_	(1000s)	total
			<u>households</u>				households
Under	\$11,128	123	5.06%	Under	\$11,465	232	9.52%
\$11,128 -	\$16,691	54	2.21%	\$11,465 -	\$17,196	173	7.09%
\$16,692 -	\$27,819	89	3.63%	\$17,197 -	\$28,661	323	13.25%
\$27,820 -	\$38,948	60	2.46%	\$28,662 -	\$40,125	283	11.62%
\$38,949 -	\$55,640	62	2.56%	\$40,126 -	\$57,322	329	13.49%
\$55,641 -	\$83,460	51	2.08%	\$57,323 -	\$85,984	340	13.94%
\$83,461 Plus		30	1.21%	\$85,985 Plus		289	11.87%
All black:		468	19.21%	All nonblack:		1,971	80.79%

Table VA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$410 (1990\$)

\$465 (1994\$)

	Black	Households		Nonblack Households				
income range (1	994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	
Under	\$11,128	\$49	\$56	Under	\$11,465	\$51	\$58	
\$11,128 -	\$16,691	\$124	\$140	\$11,465 -	\$17,196	\$127	\$144	
\$16,692 -	\$27,819	\$198	\$224	\$17,197 -	\$28,661	\$204	\$231	
\$27,820 -	\$38,948	\$297	\$336	\$28,662 -	\$40,125	\$305	\$347	
\$38,949 -	\$55,640	\$420	\$477	\$40,126 -	\$57,322	\$433	\$491	
\$55,641 -	\$83,460	\$618	\$701	\$57,323 -	\$85,984	\$636	\$722	
\$83,461 Plus		\$1,066	\$1,210	\$85,985 Plus	;	\$1,098	\$1,246	

Table	VA	- 3.	Annual induced fatali	ities of regulator	y costs	allocated equ	ually to all	households.
) regulator	у со	sts						

1990 regulatory costs	ioda latalitido di Toga	atory cools and	atou oquany to a			
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	4.0	<u>5.0</u>
total fatalities	0	216	438	664	896	1,134
male fatalities	0	145	292	443	597	754
female fatalities	0	72	145	221	300	380
black fatalities	0	78	158	240	325	411
low income fatalities	0	135	273	415	561	709
medium income fatalities	0	65	131	199	268	339
high income fatalities	0	16	33	50	67	85

Table VA - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	<u>4.0</u>	<u>5.0</u>
total fatalities	0	80	161	243	327	412
male fatalities	0	58	117	177	237	299
female fatalities	0	22	44	67	90	113
black fatalities	0	22	44	67	90	113
low income fatalities	0	23	47	70	94	118
med. income fatalities	0	37	74	112	150	189
high income fatalities	0	20	40	61	83	105

State: Washington

Black income relative to National:1.22Nonblack income relative to National:1.01Percent Black Population:3.21%Number of Households (1000s):2,042

Table WA - 1. Distribution of annual income for households in 1994.

	Black	: Households			Nonblack	: Households	
income ran	ige	number	percent of	income rai	nge	number	percent of
(1994 \$)	_	(1000s)	total	(1994 \$)	(1000s)	total
			households				households
Under	\$12,180	17	0.84%	Under	\$10,080	233	11.41%
\$12,180 -	\$18,270	8	0.37%	\$10,080 -	\$15,118	173	8.50%
\$18,271 -	\$30,450	12	0.61%	\$15,119 -	\$25,198	324	15.88%
\$30,451 -	\$42,630	8	0.41%	\$25,199 -	\$35,277	284	13.92%
\$42,631 -	\$60,901	9	0.43%	\$35,278 -	\$50,397	330	16.16%
\$60,902 -	\$91,352	7	0.35%	\$50,398 -	\$75,595	341	16.71%
\$91,353 Plus		4	0.20%	\$75,596 Plus	3	290	14.22%
All black:		66	3.21%	All nonblack:		1,976	96.79%

Table WA - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$490 (1990\$)

\$556 (1994 \$)

	Black	Households		Nonblack Households				
income range (1994 \$)	1990 \$	<u>1994 \$</u>	income range (1994 \$)	1990 \$	1994 \$	
Under	\$12,180	\$69	\$79	Under	\$10,080	\$57	\$65	
\$12,180 -	\$18,270	\$173	\$196	\$10,080 -	\$15,118	\$143	\$162	
\$18,271 -	\$30,450	\$277	\$314	\$15,119 -	\$25,198	\$229	\$260	
\$30,451 -	\$42,630	\$415	\$471	\$25,199 -	\$35,277	\$343	\$390	
\$42,631 -	\$60,901	\$588	\$667	\$35,278 -	\$50,397	\$487	\$552	
\$60,902 -	\$91,352	\$865	\$981	\$50,398 -	\$75,595	\$716	\$812	
\$91,353 Plus		\$1,492	\$1,693	\$75,596 Plus	•	\$1,235	\$1,401	

Table WA - 3. Annual indu	ced fatalities of regu	ulatory costs allo	cated equally to a	all households.		
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalities	0	198	402	612	827	1,048
male fatalities	0	137	276	419	566	716
female fatalities	0	62	126	192	261	332
black fatalities	0	12	25	38	51	65
low income fatalities	0	107	218	331	448	568
medium income fatalities	0	69	139	212	286	363
high income fatalities	0	22	45	69	93	117

Table WA - 4.	Annual induced fatalities of	regulatory costs	s allocated propo	rtionally to house	hold income.	
1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	<u>4.0</u>	<u>5.0</u>
total fatalities	0	83	167	254	341	431
male fatalities	0	62	125	189	254	320
female fatalities	0	21	43	65	88	111
black fatalities	0	4	8	12	16	20
low income fatalities	0	19	38	57	76	95
med. income fatalities	0	38	76	115	155	195
high income fatalities	0	26	54	82	111	141

State: West Virginia

0.67 Nonblack income relative to National: 0.67 Black income relative to National: Percent Black Population: 3.15% Number of Households (1000s): 705

Table WV - 1. Distribution of annual income for households in 1994.

	Households	Nonblack			<u>Households</u>	Black	
percent of	number	nge	income ran	percent of	number	ge	income ranç
total	(1000s)	<u>)</u>	(1994 \$)	total	(1000s)		(1994 \$)
households				<u>households</u>			
11.42%	80	\$6,691	Under	0.83%	6	\$6,668	Under
8.50%	60	\$10,036	\$6,691 -	0.36%	3	\$10,001	\$6,668 -
15.89%	112	\$16,727	\$10,037 -	0.60%	4	\$16,668	\$10,002 -
13.93%	98	\$23,418	\$16,728 -	0.40%	3	\$23,336	\$16,669 -
16.17%	114	\$33,455	\$23,419 -	0.42%	3	\$33,337	\$23,337 -
16.72%	118	\$50,184	\$33,456 -	0.34%	2	\$50,007	\$33,338 -
14.22%	100		\$50,185 Plus	0.20%	1		\$50,008 Plus
96.85%	683		All nonblack:	3.15%	22		All black:

Table WV - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$1,418 (1990\$)

\$1,610 (1994\$)

		Black	Households			Households		
income rar	<u>nge (1</u>	1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range ((1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Und	der	\$6,668	\$166	\$188	Under	\$6,691	\$167	\$189
\$6,668	-	\$10,001	\$415	\$471	\$6,691 -	\$10,036	\$416	\$473
\$10,002	-	\$16,668	\$664	\$753	\$10,037 -	\$16,727	\$666	\$756
\$16,669	-	\$23,336	\$996	\$1,130	\$16,728 -	\$23,418	\$999	\$1,134
\$23,337	-	\$33,337	\$1,411	\$1,601	\$23,419 -	\$33,455	\$1,416	\$1,607
\$33,338	-	\$50,007	\$2,075	\$2,354	\$33,456 -	\$50,184	\$2,082	\$2,363
\$50,008 P	Plus		\$3,580	\$4,063	\$50,185 Plus	1	\$3,593	\$4,077

Table WV - 3.	Annual induced	tatalities of regula	atory costs alloca	ted equally to all	households.
0 regulatory costs					
ions 1990 \$)		0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>

(billions 1990 \$)	0.0	0.5	1.0	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	139	283	434	590	753
male fatalities	0	94	190	290	394	501
female fatalities	0	45	93	144	197	253
black fatalities	0	9	18	28	38	49
low income fatalities	0	62	126	193	263	336
medium income fatalities	0	52	105	161	219	280
high income fatalities	0	25	52	79	108	138

Table WV - 4. Annual induced fatalities of regulatory costs allocated proportionally to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	2.0	<u>2.5</u>
total fatalities	0	72	146	224	303	386
male fatalities	0	52	106	161	219	278
female fatalities	0	20	41	62	85	108
black fatalities	0	3	6	10	13	17
low income fatalities	0	11	22	33	44	56
med. income fatalities	0	29	58	88	119	150
high income fatalities	0	32	66	102	140	180

State: Wisconsin

 Black income relative to National:
 0.82
 Nonblack income relative to National:
 0.96

 Percent Black Population:
 5.27%
 Number of Households (1000s):
 1,890

Table WI - 1. Distribution of annual income for households in 1994.

	: Households	Nonblack			Households	<u>Black</u>	
percent of	number	nge	income ran	percent of	number	ge	income rang
total	(1000s))	(1994 \$)	total	(1000s)		(1994 \$)
households				<u>households</u>			
11.17%	211	\$9,612	Under	1.39%	26	\$8,194	Under
8.32%	157	\$14,417	\$9,612 -	0.61%	11	\$12,289	\$8,194 -
15.54%	294	\$24,030	\$14,418 -	1.00%	19	\$20,483	\$12,290 -
13.63%	258	\$33,642	\$24,031 -	0.67%	13	\$28,677	\$20,484 -
15.82%	299	\$48,060	\$33,643 -	0.70%	13	\$40,967	\$28,678 -
16.35%	309	\$72,091	\$48,061 -	0.57%	11	\$61,451	\$40,968 -
13.91%	263		\$72,092 Plus	0.33%	6		\$61,452 Plus
94.73%	1.790		All nonblack:	5.27%	100		All black:

Table WI - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$529 (1990 \$)

\$600 (1994 \$)

	Black	K Households					
income range	income range (1994 \$)		<u>1994 \$</u>	income range (1994 \$)		<u>1990 \$</u>	<u>1994 \$</u>
Under	\$8,194	\$54	\$61	Under	\$9,612	\$63	\$71
\$8,194 -	\$12,289	\$134	\$152	\$9,612 -	\$14,417	\$157	\$178
\$12,290 -	\$20,483	\$214	\$243	\$14,418 -	\$24,030	\$252	\$285
\$20,484 -	\$28,677	\$322	\$365	\$24,031 -	\$33,642	\$377	\$428
\$28,678 -	\$40,967	\$456	\$517	\$33,643 -	\$48,060	\$535	\$607
\$40,968 -	\$61,451	\$670	\$760	\$48,061 -	\$72,091	\$786	\$892
\$61,452 Plus		\$1,156	\$1,312	\$72,092 Plus	3	\$1,356	\$1,539

Table WI - 3.	Annual induced fatalities of regulatory costs allocated equally to all households.
regulatory costs	

1990 regulatory costs (billions 1990 \$)	0.0	<u>1.0</u>	2.0	3.0	4.0	5.0
total fatalities	0	216	439	669	905	1,149
male fatalities	0	147	299	454	613	776
female fatalities	0	69	140	215	292	373
black fatalities	0	26	54	82	111	141
low income fatalities	0	115	234	357	484	614
medium income fatalities	0	75	153	233	315	399
high income fatalities	0	26	52	79	107	136

Table WI - 4. Annual induced fatalities of regulatory costs allocated proportionallyly to household income.

1990 regulatory costs						
(billions 1990 \$)	0.0	<u>1.0</u>	2.0	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>
total fatalita	2	00	405	004	070	470
total fatalities	0	92	185	281	378	478
male fatalities	0	68	137	207	279	352
female fatalities	0	24	49	74	100	126
black fatalities	0	7	15	22	30	38
low income fatalities	0	20	40	60	80	100
med. income fatalities	0	41	83	126	169	213
high income fatalities	0	31	62	95	129	165

State: Wyoming

Black income relative to National: 0.85 Nonblack income relative to National: 88.0 Percent Black Population: 0.86% Number of Households (1000s):

Table WY - 1. Distribution of annual income for households in 1994.

	Households	Nonblack			Households	Black	
percent of	number	ge	income ran	percent of	number	ge	income rang
total	(1000s)		(1994 \$)	total	(1000s)		(1994 \$)
<u>households</u>				<u>households</u>			
11.69%	21	\$8,780	Under	0.23%	0	\$8,456	Under
8.70%	15	\$13,169	\$8,780 -	0.10%	0	\$12,683	\$8,456 -
16.26%	29	\$21,949	\$13,170 -	0.16%	0	\$21,140	12,684 -
14.26%	25	\$30,729	\$21,950 -	0.11%	0	\$29,596	21,141 -
16.55%	29	\$43,899	\$30,730 -	0.11%	0	\$42,281	29,597 -
17.11%	30	\$65,849	\$43,900 -	0.09%	0	\$63,421	42,282 -
14.56%	26		\$65,850 Plus	0.05%	0		63,422 Plus
99.14%	176		All nonblack:	0.86%	2		II black:

Table WY - 2. Annual costs to individual households for each \$ 1.0 billion (in 1990 \$) of regulatory cost to state residents.

Annual regulatory costs per household with equal allocation:

\$5,618 (1990 \$)

\$6,375 (1994 \$)

Annual regulatory costs per household with proportional to income allocation:

	Blac	k Households			Nonblac	k Households	
income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>	income range	(1994 \$)	<u>1990 \$</u>	<u>1994 \$</u>
Under	\$8,456	\$631	\$716	Under	\$8,780	\$655	\$743
\$8,456 -	\$12,683	\$1,577	\$1,790	\$8,780 -	\$13,169	\$1,638	\$1,858
\$12,684 -	\$21,140	\$2,524	\$2,864	\$13,170 -	\$21,949	\$2,620	\$2,973
\$21,141 -	\$29,596	\$3,785	\$4,296	\$21,950 -	\$30,729	\$3,930	\$4,460
\$29,597 -	\$42,281	\$5,363	\$6,086	\$30,730 -	\$43,899	\$5,568	\$6,319
\$42,282 -	\$63,421	\$7,886	\$8,949	\$43,900 -	\$65,849	\$8,188	\$9,292
\$63,422 Plus		\$13,609	\$15,443	\$65,850 Plus	;	\$14,130	\$16,035

Table WY - 3. Annual ind	uced fatalities of regula	tory costs alloca	ited equally to all	households.
1990 regulatory costs				
(billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3

0.4 0.5 total fatalities male fatalities female fatalities black fatalities low income fatalities medium income fatalities high income fatalities

Table WY - 4. Annual induced fatalities of regulatory costs allocated proportionallyly to household in	come.
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1990 regulatory costs (billions 1990 \$)	0.0	<u>0.1</u>	0.2	0.3	0.4	<u>0.5</u>
total fatalities	0	10	20	31	41	52
male fatalities	0	7	15	23	30	39
female fatalities	0	3	5	8	11	14
black fatalities	0	0	0	0	1	1
low income fatalities	0	2	4	6	8	10
med. income fatalities	0	4	9	13	18	23
high income fatalities	0	4	8	12	16	20

Appendix 2

Model Input Parameters

Table 1. Parameters Calculated For The Annual Mortality Risk Model. A							
Parameter	White Males	Black Males	White Females	Black Females			
a	0.00926	0.01220	0.00390	0.00701			
b	0.04142	0.04979	0.06515	0.06423			
d	0.00422	0.00614	0.00277	0.00343			

^a The parameters in the annual mortality risk model are calculated for 1994 dollars in thousands.

Table 2. Distribution Of Annual Income For U.S. Households In 1994. Percentage of U.S. households with income in range							
Income range (1994 \$)	Black	Nonblack	White	Other	Total		
Under \$10,000	26.3%	11.8%	11.7%	13.3%	13.5%		
\$10,000 - \$14,999	11.5%	8.8%	8.7%	10.2%	9.1%		
\$15,000 - \$24,999	18.9%	16.4%	16.4%	15.7%	16.7%		
\$25,000 - \$34,999	12.8%	14.4%	14.4%	13.4%	14.2%		
\$35,000 - \$49,999	13.3%	16.7%	16.7%	15.9%	16.3%		
\$50,000 - \$74,999	10.8%	17.3%	17.3%	15.5%	16.5%		
\$75,000 plus	6.3%	14.7%	14.6%	16.0%	13.7%		
Number of Households (1,000s)	11,655	87,335	83,737	3,598	98,990		

Table 3: Annual Cost of a \$10 Billion Regulation (in 1990 \$) to an Individual Household for Different Relative Regulatory Costs.							
Income Range (1994 \$)	1990\$	1994\$	1990\$	1994\$			
Under \$10,000	\$101.02	\$114.64	\$12.19	\$13.84			
\$10,000 - \$14,999	\$101.02	\$114.64	\$30.48	\$34.59			
\$15,000 - \$24,999	\$101.02	\$114.64	\$48.77	\$55.34			
\$25,000 - \$34,999	\$101.02	\$114.64	\$73.15	\$83.02			
\$35,000 - \$49,999	\$101.02	\$114.64	\$103.63	\$117.61			
\$50,000 - \$74,999	\$101.02	\$114.64	\$152.40	\$172.95			
\$75,000 plus	\$101.02	\$114.64	\$262.99	\$298.44			

Table 4. Annual Costs To Individual Households For A \$ 10 Billion (In 1990 \$) Regulatory Cost To State Residents. Annual Regulatory Costs With Equal Allocation: \$922 (1990\$) \$1,046 (1994\$) Annual Regulatory Costs With Proportional To Income Allocation

Black Households			Nonblack Households		
Income Range (1994 \$)	1990 \$	1994 \$	Income Range (1994 \$)	1990 \$	1994 \$
Under \$13,199	\$120	\$136	Under \$12,001	\$109	\$124
\$13,199 -\$19,798	\$300	\$341	\$12,001 -\$18,000	\$273	\$310
\$19,799 -\$32,997	\$480	\$545	\$18,001 -\$30,001	\$437	\$496
\$32,998 -\$46,196	\$721	\$818	\$30,002 -\$42,001	\$655	\$744
\$46,197 -\$65,995	\$1,021	\$1,159	\$42,002 -\$60,002	\$928	\$1,053
\$65,996 -\$98,993	\$1,501	\$1,704	\$60,003 -\$90,004	\$1,365	\$1,549
\$98,994 Plus	\$2,591	\$2,940	\$90,005 Plus	\$2,355	\$2,673

Black Households			Nonblack Households		
Income Range (1994\$)	Number (1000s)	Percent Of California Households	Income Range (1994\$)	Number (1000s)	Percent Of California Households
Under \$13,199	220	2.03%	Under \$12,001 - 1,180	10.88%	
\$13,199 - \$19,798	96	0.89%	\$12,001 - \$18,000	879	8.10%
\$19,799 - \$32,997	158	1.46%	\$18,001 - \$30,001	1,643	15.14%
\$32,998 - \$46,196	107	0.99%	\$30,002 - \$42,001	1,440	13.28%
\$46,197 - \$65,995	111	1.03%	\$42,002 - \$60,002	1,672	15.41%
\$65,996 - \$98,993	90	0.83%	\$60,003 - \$90,004	1,728	15.93%
\$98,994 - Plus	53	0.49%	\$90,005 Plus	1,471	13.55%
All black	836	7.71%	All nonblack	10.014	92,29%

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