

# The Genuine Progress Indicator 1950-2002 (2004 Update)

*Genuine Progress Indicator (GPI)*



*MEASURING THE REAL  
STATE OF THE ECONOMY*

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Sustainability Indicators Program  
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## SUMMARY

This report includes four brief pieces on the Genuine Progress Indicator (GPI). The first frames the Gross Domestic Product (GDP) within the context of accounting and provides a summary of the most recent GPI update for 1950-2002. The point is driven home that the GDP, as a measure of economic well-being, is \$7 trillion dollars out of step with economic reality.

The next section draws heavily from past work on the GPI (for those that might not be familiar with the GPI, this is a good section with which to begin).

The third piece summarizes findings from the first application of the GPI at the regional and county level—with the focus on the San Francisco Bay Area. Though per capita GPI is significantly below per capita GDP in the Bay Area, on average it was found to be \$7,500 higher than the national GPI.

The fourth piece takes a critical look at how GDP and economic growth relates to disasters. Recent fires in California are used to illustrate the key point: counting the replacement value of destroyed capital is not a net gain, but a diversion of resources in an attempt to return to the status-quo; a lesson that would seem to apply to other disasters and destruction.

In addition, we've included a "What you can do" section, a list of reference material, and an appendix with the figures for 2002 GPI.

Admittedly, the GPI cannot accurately reflect everything of value in an economy—or life, for that matter. Still, the GPI helps highlight an important message: the quality of economic development is at least as important as the quantity of economic activity as measured by GDP.

For sound economic policy to be formulated and political feedback loops to work better, a more discerning qualitative metric of the economy would be a significant advancement. The GPI represents a small but important step in this process. The inclusion of multiple stakeholders and the public may be a very worthwhile next step in refining the GPI so as to better represent a shared vision for a better economy.



## **ACKNOWLEDGEMENTS**

Much great thanks to the staff and steering committee of the Bay Area Alliance for their support and thoughtful feedback in developing the Bay Area GPI. This work would not have been possible without the generous support of the San Francisco Foundation and the Ford Foundation. Dahlia Chazan and Melissa Haynes provided invaluable feedback and editing acumen in the production of this report.

Cliff Cobb is a Senior Fellow at Redefining Progress. Cliff pioneered the GPI as an alternative measure of progress to the Gross Domestic Product and did most of the research and calculations for this annual update. One of the founders of Redefining Progress in 1994, Cobb authored several RP papers and is now working on the theoretical and analytical underpinnings of “common assets.”

Jason Venetoulis, Ph.D., is a Senior Research Associate at Redefining Progress. In addition to calculating the Bay Area GPI figures in this report, Venetoulis updated the national GDP figures, converted all figures to 2000 dollar equivalents, conducted the analysis, and drafted the text used in the first three sections of this report. Jason conducted the first GPI assessment at the local level as a Master’s student at the Claremont College in 1997.





# GROSS NATIONAL ACCOUNTING SCANDAL

No doubt the accounting and financial mischief thought to have taken place at Arthur Anderson, Enron, Halliburton, WorldCom, Xerox, and other large American corporations has not be good for America's economy.

Or has it? Aside from marginally increased scrutiny by the Securities and Exchange Commission, much of the economic activity surrounding Enron and other corporate fraud is considered positive in a leading measure of economic progress, the Gross Domestic Product (GDP). The Enron scandal alone may well contribute up to \$1 billion dollars to the U.S. economy.

Despite warnings in 1934 and 1962 by the Nobel Prize winning economist Simon Kuznets, who helped develop the GDP, it continues to be misused as an indicator of America's economic welfare. The intent of fraudulent accounting may have been more direct at Enron, but in the final tally, all the court cases, lawyers' fees, housing criminals, media frenzy, and payouts continue to be counted as positive gains by the accounting standards of GDP. And politicians are eager to take credit.

"We've got a consistent and effective strategy, and we're making progress . . . Our third-quarter economic growth was vibrant, and that's good," said President George W. Bush in November 2003. When the President of the United States proudly takes responsibility for growth in the economy, as measured by the GDP, and affirms a continued dedication to the "all growth is good agenda" and the media reports it, the public can become over-confident and may even change their vote.

However, before we become too hopeful and cast votes based on one-sided accounting, it is important to consider what is really going on in the economy. Are non-productive contributions such as "creative accounting" or destructive spending like war fueling our economy? Plans and presidential sound bites premised on empty economic growth

may well lead America further off-course and contribute to future economic instability the world over.

Since 1968, income inequality in America has been steadily worsening. If all new economic activity moves from the middle and lower income classes to the richest 1% in America, the GDP reports the same number as it would if the money went to all Americans.

Meanwhile, the volunteer work and raising children are not counted at all, though few would dispute that they contribute to the well-being of the economy or society. Higher health care and education costs, longer commute times to work, increasing pollution, clear cutting forests and paving over open space, and increased use of fossil fuels can all add to the "positive-only" ledger accounting of the GDP.

There is an argument that measures of economic progress must be scientific and value free. Nay-sayers believe that measuring the quality of the economic activity and how it affects people require too many assumptions or too many value judgments.

The GDP, however, is not value free. Leaving social and environmental costs and contributions to the economy off the books does not avoid value judgments. On the contrary, it makes the obvious value judgment that things such as the destruction of farmland and natural resources, underemployment, longer-commute times, and the loss of free time, count for nothing in assessing how the economy is fairing. The GDP does put a value on such factors: Zero. Keep in mind, this is on top of adding in the value of crime, disaster, and war-related expenditures.

In 1995, Redefining Progress developed an economic indicator that attempts to get much closer to the economic reality that people experience. The Genuine Progress Indicator (GPI) includes more that twenty positive and negative aspects of our economic

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## THE GENUINE PROGRESS INDICATOR: SUMMARY OF METHOD

The Genuine Progress Indicator (GPI) takes from the GDP the financial transactions that are relevant to well-being. It then adjusts them for aspects of the economy that the GDP ignores. The GPI thus reveals the relationship between factors conventionally defined as purely economic and those traditionally defined as purely social and environmental.

Like the GDP, the GPI begins with the nation's personal consumption expenditures. But the GPI assesses the well-being of households, rather than focusing exclusively on the number of dollars they spend. While the GDP then adds the nation's spending on investment and government, the GPI considers those expenditures defensive, and thus begins with personal consumption expenditures as its base.

Personal consumption expenditures are then adjusted for income distribution using the Gini coefficient. It is often assumed that the rising GDP lifts all boats, but this is not necessarily true. From 1973 to 1993, for example, while the GDP rose by 55%, real wages declined by 3.4%. In the 1980s alone, the poorest fifth of American families lost 0.5% of their income each year, while the top 5% of households increased their real income by 3.9% per year. *Growth did not benefit everyone, and a true measure of well-being should take this inequality into account.*

Using personal consumption expenditures adjusted for income inequality as its base, the GPI then adds or subtracts categories of spending based on whether they enhance or detract from our nation's well-being.

The following nonmonetary benefits—ignored by the GDP—are included in the GPI:

1. the value of time spent on household work, parenting, and volunteer work;
2. the value of services of consumer durables (such as cars and refrigerators); and
3. services of highways and streets.

The GPI then subtracts three categories of expenses that do not improve well-being:

1. defensive expenditures, defined as money spent to maintain the household's level of comfort, security, or satisfaction, in the face of declines in quality of life due to such factors as crime, auto accidents, or pollution. Examples include personal water filters, locks or security systems, hospital bills from auto accidents, or the cost of repainting houses damaged by air pollution.
2. social costs, such as the cost of divorce, crime, or loss of leisure time.
3. the depreciation of environmental assets and natural resources, including loss of farmland, wetlands, and old-growth forests; reduction of stocks of natural resources, such as fossil fuels; and damaging effects of wastes and pollution.

See: Cobb et al. (1999), *The Genuine Progress Indicator: Summary of data and methodology* for a discussion on the methodology of GPI.

lives. The GPI uses the same personal consumption data as the GDP but takes into account a number of other factors. Adjustments include factors such as income distribution. Additions take into consideration things like the value of volunteer and housework. Deductions are made for crime, degradation and destruction of natural resources, and other factors. The result is a substantively different picture than that presented by the GDP.

### Summary of 2000-2002 GPI Updates

The GDP shows that in the period from January 2000 (the year before George W. Bush took the presidency) and January 2003 the economy grew approximately 2.64%, about \$272 billion or \$180 per American—adjusted for inflation. Without reference to the quality and distribution, this economic growth may look good on the surface.

Using GPI analysis, however, the value of economic activity grew by less than one percent (0.12%) during the same period. On a per capita basis, from 2000 to 2003 there was a \$212 decline in GPI, with the biggest reductions coming from the degradation of natural resources and a rise in the national debt. On the other—positive—side of the ledger, the GPI shows a \$600 billion increase in the value of housework and volunteer work from 2000 to 2003, which is not counted in the GDP.

Even the ambiguous accounting practices of Anderson, Enron, WorldCom, Xerox and other large American corporations combined pale in comparison to the over counting of the GDP. Using the GDP as a measure of economic progress amounted to a \$7 trillion overstatement of economic gains in 2002, or about \$25,000 per American. Enron *et al.* eat your heart out!

It is time for GDP to be relegated to the back-shelf of our intellectual measures of well-being and be replaced with more discerning and responsible national accounting procedures and political pronouncements, so voters can make well informed decisions.

The graph on page 9 illustrates the difference between the GDP and the GPI. The figures are derived from the table in Appendix A (on page 20).

# REVISITING THE GDP AS A FLAWED MEASURE OF THE ECONOMY—AND OF PROGRESS

As a measure of economic health, the GDP is badly flawed.

First, by counting only monetary transactions as economic activity, the GDP omits much of what people value and activities that serve basic needs. For example, it doesn't count free services—such as community volunteer work or caring for children or elderly parents in the home. These are services that would show up in the GDP if they were paid for.

The GDP also ignores the value of leisure time spent in recreation, relaxation, or with family and friends. The GDP omits crucial contributions of the environment, such as clean air and water, moderate climate, and protection from the sun's burning rays. It ignores them even though these services—which the earth provides for free—become expensive if they need to be bought instead.

It is appropriate that an economic indicator include such measures, because common sense and history tell us that the economy is a tool to address needs and enhance well-being, not an end in itself.

There is widespread belief in America that the GDP is a barometer of the nation's economic health and well-being. When the GDP rises, the media applauds and politicians hasten to take credit. When it falls, there is hand-wringing and general alarm.

For decades, however, many economists have acknowledged that the GDP has fundamental shortcomings. "GDP is not a measure of welfare," wrote William Nordhaus and James Tobin, economists at Yale in the early 1970s. The GDP is simply a gross tally of everything produced in the U.S.—products and services, good things and bad.

The government developed it primarily as a planning tool to guide the massive production effort for World War II. The GDP was never intended to be a yardstick of eco-

nomics progress; it says nothing about the impacts of current modes of production upon the national's health and well-being. Yet economic analysts and the media accord the GDP totemic stature, and regard its growth as the ultimate measure of economic success.

## WHAT IS "THE ECONOMY?"

The economy means far more than the obvious realm of market place exchange. Every activity or relationship that has value in either use or exchange is a part of the economy—whether or not money is involved.

Thus a parent raising a child is engaged in an economic activity as surely as a professional "child care provided," or someone working in a factory or office. By the same token, trees are engaged in economy activity when they produce oxygen and pulp. (If anyone doubts this, they should try maintaining an economy without parents or oxygen.) That parents and trees do not charge for their services does not make them any less valuable. It means only that their contributions are likely to be taken for granted.

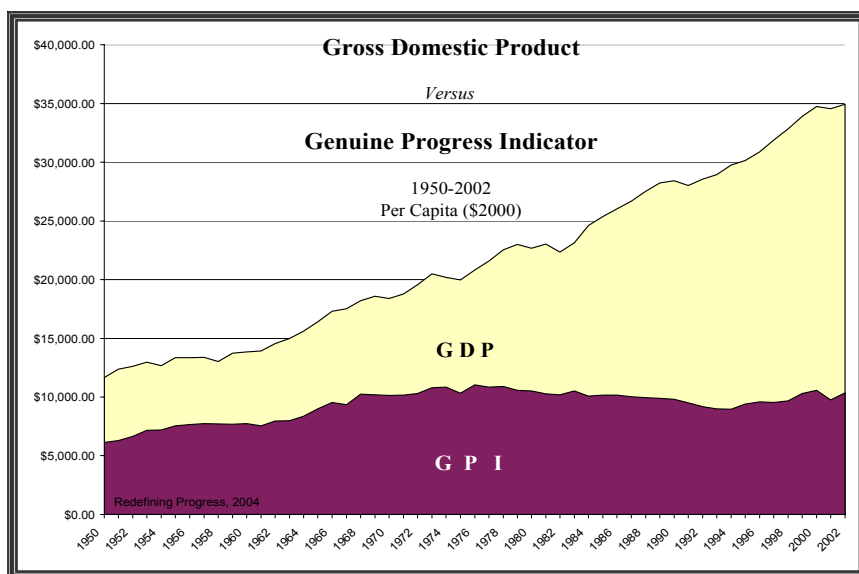
It is not surprising that economists—and thus the GDP—focus on exchanges involving

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money. These are visible and can be counted with a minimum of controversy or intellectual exertion.

The major components of the GDP are relatively easy to measure: the amount of money spent on households on consumer items (about 2/3 of GDP); the amount spent by businesses on investment and the amount spent by federal, state, and local governments on products and service. To broaden the accounts to include services and costs that do not have obvious dollar value make the computation far more difficult.

But not to include such unpriced products and services leads to difficulties of a more serious kind. It results in a view of the economy that is fundamentally distorted, and causes our commentators and politicians to lose touch with economic reality.

When they say an environmental or family-leave policy is bad for the economy because it will reduce the growth rate of the GDP, they are falling into a trap that accounting conventions have created. They are seeing only part of the economy—that part acknowledged by the GDP—and mistake it for the whole. A family leave policy might well boost the real economy by giving rise to high-value work in the home. But this is a crucial contribution that the GDP ignores.

Similarly, when the World Bank imposes a development plan on a country based on boosting the GDP, the result can be erosion of that country's cultural cohesion and the long-term viability of the economy itself. Such policies are especially destructive in countries of the global South where the basic economic activities relating to food, water, energy, and housing often occur outside the market in the nonmonetized household economy. The more this economy declines and the monetized market takes its place, the more the GDP goes up, even though the social situation may be falling apart.

If our measures of progress treated nonmarket services as elements of the economy—which they are—the supposed dichotomy between social or environmental goals and economic ones would greatly di-

minish. We could see that very often, these are really the same things under different names. A policy that increased the values of nonmarket services—such as work in the home or community—would be viewed as “good for the economy” even if it means somewhat lower level of market production and GDP.

## **WHY GROWTH OF GDP DOES NOT EQUAL PROGRESS**

The defects of the GDP as a measure of progress are egregious and many. For one thing, it includes only a portion of economic activity—the part that involves the exchange of money. As a result, it leaves out much that people value and that serve basic needs, such as unpaid work in household caring for children and the elderly, and the hours of free time for family or community activities. It also leaves out the crucial contribution of the natural world, such as clean air and water, fertile soil, moderate climate, and production of the sun's rays.

On top of this, the GDP makes no distinction between transactions that contribute to the well-being, and those that tend to diminish it, or that merely attempt to hold the line. The GDP operates like a business income statement that adds expenses to income instead of subtracting them. It is oblivious to the difference between progress and regress, and loss and gain.

The GDP has some valuable uses, such as investment planning in business, and setting money supply targets. Like a business, a nation does need a total income statement, but the GDP is not enough.

National accounting should be at least as realistic as traditional business accounting, so that revenues and expenses are differentiated. It should also be more comprehensive, so that economic policies harmonize full employment, resource conservation, and other social goals instead of pitting them against one another.

Ideally, such a measure would include both market and nonmarket products and services in a single index so that gains in one

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area could be offset by losses in another, and vice versa. It would be helpful, for example, to compare in a single account the benefits of petroleum use with the cost of depleting the resource and the various forms of damage that arise from its use.

This kind of idealized economic accounting system is much easier to describe than to achieve. The value of products sold in the market is commonly regarded as whatever people are willing to pay for them.

By contrast, the value of nonmarket social services and scarce national resources are often difficult to reckon in monetary terms. How to put a price on such things as time away from work for family and community activities, streets free of crime, or the preservation of a benign climate for the next generation.

Such equations lack the comfortable certainty of issues that come prepackaged in terms of market price. But they must at least be approximated if the national accounts are to serve as a guide for national policy.

It is important to recognize that the GDP deals with such equations already—in a misleading and backdoor way. It assigns to social and ecological capital an implicit and arbitrary value of zero.

To use the GDP as a measure of progress is to assume that families, communities, and the national habitat add nothing to economic well-being, so that the nation can safely ignore their contributions, and in fact their destruction can be regarded as economic gain.

This premise is hidden in virtually all the reporting and commentary that centers upon the GDP. We submit that it is indefensible.

A reasonable estimate of the contribution of nonmarket economy and natural habitat would come close to economic reality and would provide a more accurate feedback to public policy. That is what we have attempted with the GPI.

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# SAN FRANCISCO BAY AREA GPI

The Genuine Progress Indicator (GPI) was developed to address some of the major short-comings of Gross Domestic Product (GDP) and its regional corollary, Gross Regional Product (GRP).

The GDP is a measure of the final market value of products and services and receives much attention from policy makers. By counting all economic activity as positive, the GDP overlooks some significant economic contributions and costs.

The GPI, by contrast, classifies expenditures of time and money as positive or negative in order to estimate economic well-being. Housework and volunteer work contribute positively to the GPI, while environmental quality, income inequity, and social breakdown reduce the GPI's total value.

By necessity, these adjustments to GDP require value judgments, and economists continue to debate their appropriateness. The GPI makes reasonable estimates, acknowledging that there is still room for progress.

## HOW IS THE BAY AREA DOING?

In the Bay Area, GRP in 2000 was about \$350 billion. Including the value of housework, volunteer work, and capital investments and services added over \$63 billion dollars to the Bay Area's GPI.

Costs associated with environmental degradation, economic inequities, and defensive expenditures, however, resulted in a \$104 billion deduction from the Bay Area's GPI. Environmental costs in the Bay Area amounted to \$31.1 billion, topped by the use of non-renewable natural resources. Costs from commuting and job-housing imbalance hit \$15 billion and underemployment, \$4.4 billion. Overall, GPI comes in about 45% below GRP for the region.

GRP per capita averaged about \$31,000 in 2000, which was about 15% above 1990

(US Census). Bay Area GPI per capita was \$16,974, higher per person than the national average GPI by \$7,500. (See figures on pages 14-15.)

The findings suggest that improvements in the economy that contribute to the well-being of Bay Area residents (growth in GPI) could come from more housing closer to job centers, decreased use of non-renewable resources, and education and training for jobs in information and service industries that pay livable and equitable wages. The following graph illustrates differences between the counties.

## CONCLUDING REMARKS

In the final analysis the methodology and results of the GPI help highlight an important message: the quality of economic development is at least as important as the quantity of economic activity as measured by GDP and used by policy makers and pundits. For sound economic policy to be formulated a more discerning qualitative metric of the economy would be a significant advancement, GPI represents a small but important step in this process. The inclusion of multiple stakeholders and the public may be a very worthwhile next step in refining the GPI so as to better represent a shared vision for a better economy.

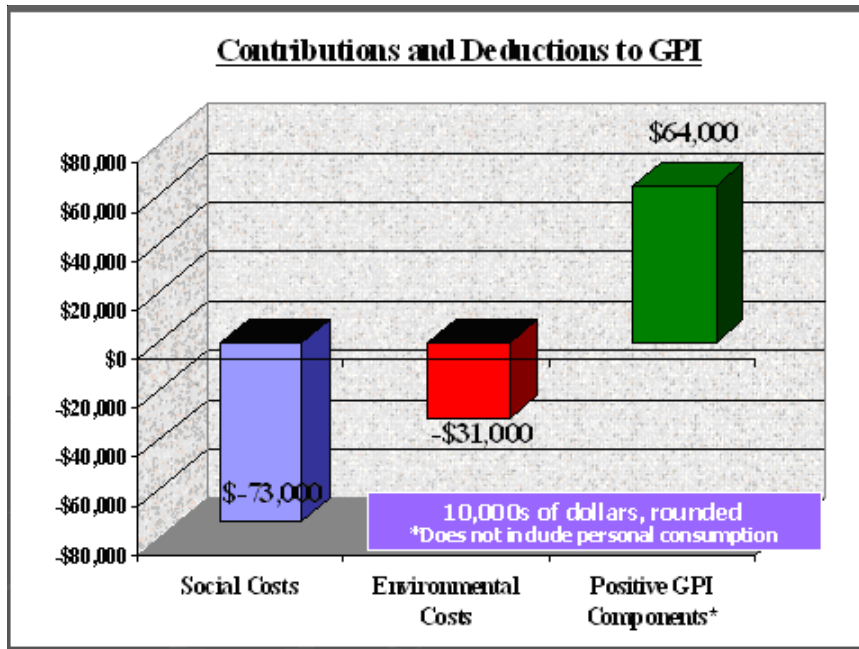
If we choose not to value social and environmental contributions to the economy, nor consider how their decline influences our economic lives, the GDP may be a useful proxy for the final value of economic activity.

If we choose to move beyond the impossible objective of keeping economic indicators value free and move toward accounting procedures that is relevant to the economic well-being of the public, salient, and estimated as accurately as possible, policies that strengthen the economy for all and future generations are probably more likely to be forthcoming. Moreover, the feedback loop

*The San Francisco Bay Area's Gross Regional Product (GRP) per capita averaged about \$31,000 in 2000, which was about 15% above 1990 (US Census). Bay Area GPI per capita was \$16,974, higher per person than the national average GPI by \$7,500.*

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**FIGURE 1**  
**CONTRIBUTIONS AND DEDUCTION TO BAY AREA GPI**



going from public perceptions, to voting related to the economy, and then political accountability may be better clarified and thus more effective in achieving the desired intent. Until then, it may be wise to be wary of politicians, pundits, and researchers touting quantitative growth as the key to our collective salvation.

**FIGURE 2**  
**GDP VS. GPI IN THE BAY AREA**

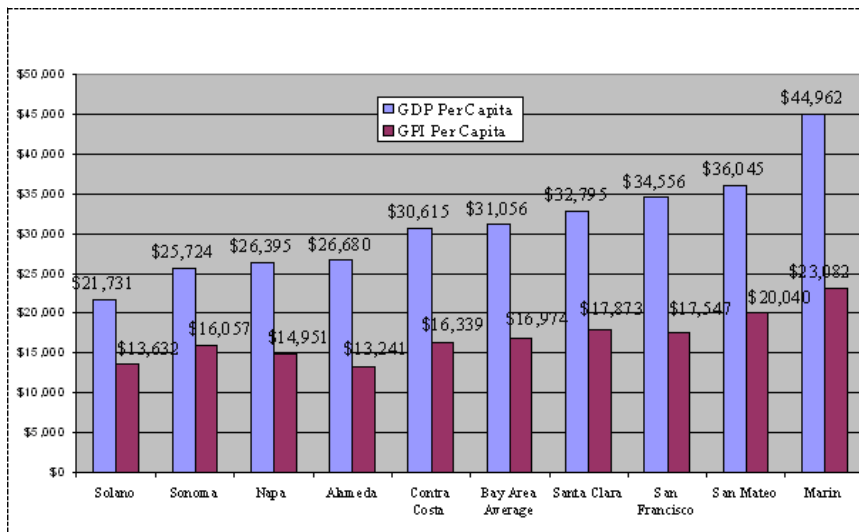
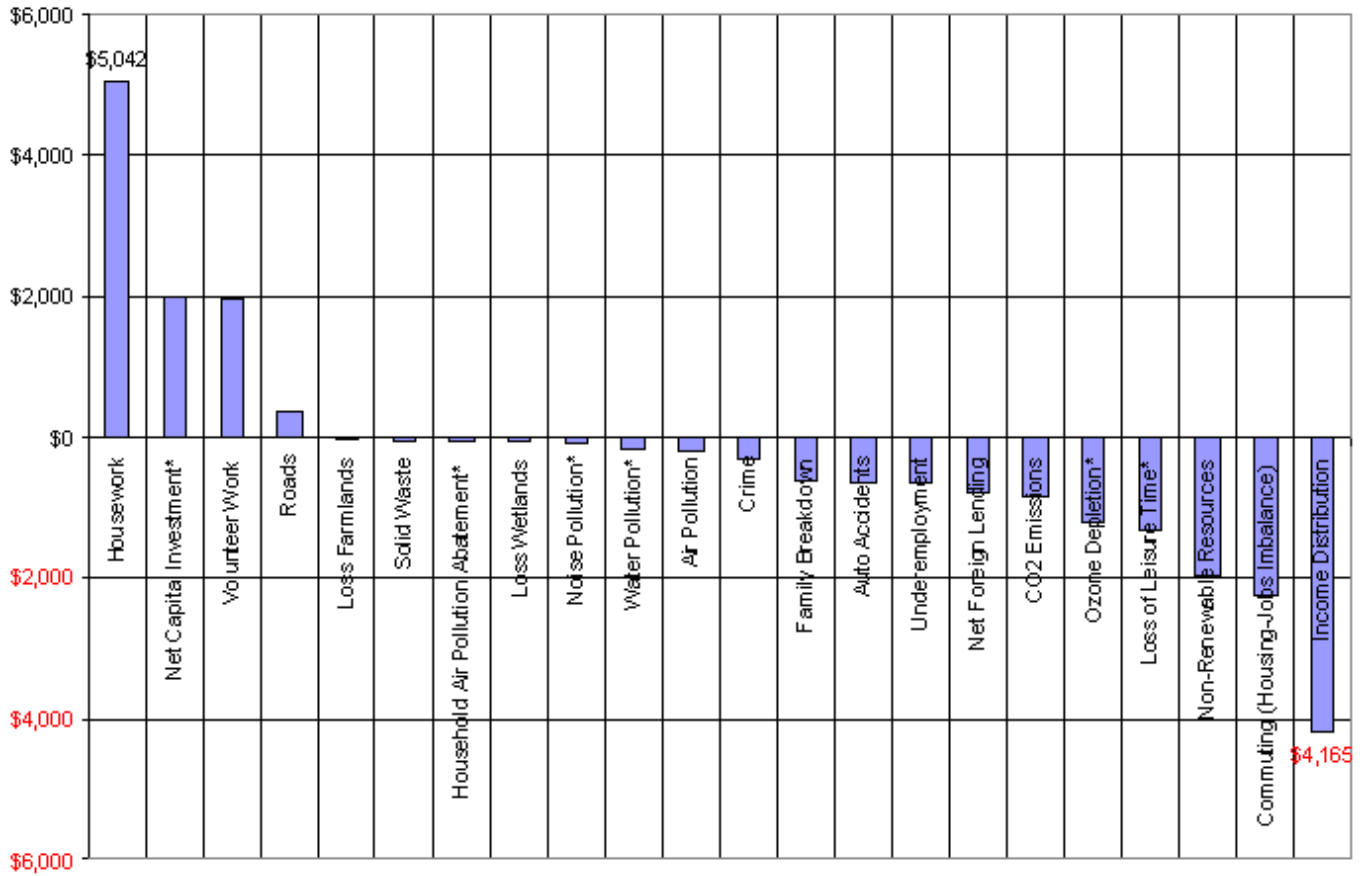




FIGURE 3

CONTRIBUTIONS & DEDUCTIONS IN BAY AREA BY CATEGORY



The \$0.00 line in Figure 2 is the starting point for adjustments to personal consumption, which averaged \$18,565 in the Bay Area in 2000.

\*These figures are based upon national GPI data for 2000.

\*\*Farmland and wetlands deductions are small because they only include one year of losses and are based on a conservative estimate of the land value; they do not include the value of ecological services lost.

For much more information on the Bay Area GPI see: [www.regionalprogress.org](http://www.regionalprogress.org)



# IGNITING THE ECONOMY: DISASTER AND THE GDP

How can the US economy be ignited? A recent article in the *New York Times* reported that fires in Southern California “could help business as people replace losses” (10/28/18). Closer to the blazes, the Los Angeles Times reported that analysts in Chapman, California found that the fires throughout the region “will pump some juice into the economy” (*Los Angeles Times* 10/30/03).

Though the thought of catastrophic fires contributing to the economy may seem perverse, as Mark Baldassare recently quipped, post-fire rebuilding expenditures do contribute to a powerful economic indicator of growth used in California and the world over, Gross Domestic Product (GDP). Could fire hold one of the keys to igniting the economy in California and elsewhere? No, growth in GDP does not equate with economic progress.

If only for a moment, we free ourselves from the stance that growth in GDP is always good, the expenditures post-fire might be considered neutral. From this perspective, the \$2 billion or so that are expected to be spent in California will not have an additional positive effect on the economy. And this is the way conventional economic theory would seem to have it, GDP aside.

The “broken window fallacy” holds that money spent to replace pre-existing capital does not produce gains over and above the capital that was lost. In other words, rebuilding burned-down houses does not add new value to the economy; it replaces a terrible loss. There is another perspective that takes an even dimmer view of effects of catastrophe.

In California, spending on capital (i.e. houses, refrigerators, and stereos) needed to replace the services (i.e. shelter, food, and fun) represent a two billion dollar cost. There are benefits though. The benefits from the services eventually equal the cost of the replacement capital. The costs are, however, multiplied with declines in human health

stemming from severe air pollution that comes with fires and the destruction of valuable natural capital and the services they provide (forests can produce oxygen and absorb CO<sub>2</sub>, pleasing views, habitat, and lend themselves well to long reflective walks with friends, unless they are burned down). While such costs could be deducted (or at least, not treated as gains), GDP only sees gains in the wake of catastrophe and other costly social and environmental ills.

If markets and the economy depend on accurate information to work well, as an indicator of economic progress GDP sends the wrong signal. After all, given the choice between more unqualified growth in GDP and having homes, belongings, and irreplaceable memories burned to the ground, most of the affected communities in California would probably have chosen not to have suffered such a devastating catastrophe.

This has profound implications beyond California when the President of the United States proudly takes responsibility for growth in the economy (GDP) and affirms a continued dedication to the “growth agenda” (10/30/03).

The media reports it, and the public becomes hopeful. But, before we become too hopeful, we should give careful consideration to what is really going on in the economy.

Is economic growth being fueled by non-productive and even destructive spending, such as fire, war, and creative accounting? Hopeful plans and presidential sound bites premised upon empty economic growth are likely to lead America further off-course and contribute to future economic instability the world over.

It is time for GDP to be relegated to the back-shelf of our intellectual wherewithal and be replaced with more discerning and responsible national accounting procedures and pronouncements.

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# WHAT YOU CAN DO

If you want to help advance the adoption of a Genuine Progress measure, here are five things you could do:

**1. Contact your elected representatives.** Write, call, fax, or e-mail your members of Congress to tell them you think this country needs to develop indicators of progress that provide the real picture of the quality of life of Americans and the health of the environment. Until we have better indicators that tell us more than that we're spending increasing amounts of money, we are hindered in holding politicians accountable for how a booming economy is affecting us. Our country needs both monetary indicators like the GPI and nonmonetary measurements, such as social indicators that tell us how we are faring on a number of fronts like education, health, crime, and equity.

**2. Spread the word.** Share press reports on the GPI and its critique of the GDP, as well as RP articles and publications, with your friends and family to awaken their concern about mistaking economic growth for progress. Stimulating them to think and talk about whether their lives are getting better or worse as we spend more is an important step toward building an aware and motivated citizenry that insists on genuine progress.

**3. Inform your local press.** If you're not seeing this talked about enough in your community, call your radio stations, newspapers, and TV stations to say you know Redefining Progress just released an important report and you're wondering why they haven't covered it yet. Give them the address of the RP Web site ([www.redefiningprogress.org](http://www.redefiningprogress.org)) and ask them to research the limitations of the GDP and cover them as energetically as they cover the release of new GDP figures.

**4. Teach the GPI.** If you're a student or educator, talk about the GPI in your class. Share a Redefining Progress article on the GDP with your teacher and ask if it can be discussed as part of the class agenda. If the class is discussing the GDP, raise the questions on RP's flyer "Questions That Citizens Should Ask Politicians about the GDP" and describe the GPI.

**5. Contribute to Redefining Progress.** Please help Redefining Progress do this work by giving what you can. Anything you can contribute will be appreciated and put to good use. (It's tax deductible, too.) Send contributions to: Redefining Progress, 1904 Franklin, Oakland, CA 94612. You can also make your donation on-line on our web site at [www.redefiningprogress.org](http://www.redefiningprogress.org).

## Appendix A. GPI 1950-2002 data by category

Year	Personal Consumption	Income Distribution	Weighted Personal Consumption (B/C)	Value of Housework & Parenting	Value of Volunteer Work	Services of Consumer Durables	Services of Highways & Streets	Cost of Crime	Cost of Family Breakdown	Loss of Leisure Time	Cost of Under-employment	Cost of Consumer Durables	Cost of Commuting	Cost Household Pollution Abatement	Cost of Automobile Accidents	Cost of Water Pollution
1950	\$1,091	\$108	\$1,010	\$638	\$24	\$70	\$29	\$8	\$16	\$11	\$15	\$84	\$130	\$0	\$27	\$30
1951	\$1,107	\$104	\$1,069	\$642	\$25	\$74	\$30	\$9	\$16	\$11	\$16	\$76	\$130	\$0	\$31	\$31
1952	\$1,142	\$105	\$1,088	\$688	\$25	\$78	\$32	\$9	\$17	\$10	\$17	\$73	\$130	\$0	\$31	\$32
1953	\$1,197	\$103	\$1,168	\$733	\$25	\$84	\$29	\$9	\$17	\$10	\$18	\$83	\$135	\$0	\$33	\$33
1954	\$1,222	\$106	\$1,152	\$774	\$25	\$88	\$29	\$10	\$17	\$9	\$19	\$83	\$132	\$0	\$33	\$34
1955	\$1,310	\$104	\$1,262	\$802	\$25	\$95	\$31	\$10	\$17	\$9	\$21	\$101	\$140	\$0	\$34	\$34
1956	\$1,349	\$102	\$1,317	\$813	\$25	\$100	\$34	\$10	\$19	\$8	\$22	\$96	\$142	\$0	\$34	\$35
1957	\$1,382	\$100	\$1,375	\$828	\$25	\$102	\$34	\$10	\$21	\$8	\$24	\$97	\$143	\$0	\$33	\$36
1958	\$1,393	\$101	\$1,375	\$841	\$25	\$102	\$35	\$11	\$23	\$7	\$25	\$89	\$138	\$0	\$32	\$37
1959	\$1,471	\$103	\$1,423	\$871	\$25	\$104	\$36	\$11	\$26	\$6	\$27	\$102	\$144	\$1	\$32	\$38
1960	\$1,511	\$104	\$1,449	\$925	\$25	\$108	\$37	\$12	\$29	\$6	\$29	\$104	\$147	\$1	\$33	\$39
1961	\$1,541	\$107	\$1,438	\$948	\$25	\$110	\$38	\$12	\$30	\$5	\$31	\$100	\$146	\$1	\$33	\$40
1962	\$1,617	\$104	\$1,557	\$967	\$26	\$113	\$41	\$12	\$31	\$5	\$33	\$112	\$150	\$2	\$35	\$41
1963	\$1,684	\$104	\$1,622	\$993	\$26	\$119	\$43	\$13	\$33	\$4	\$35	\$122	\$154	\$2	\$37	\$42
1964	\$1,785	\$104	\$1,723	\$1,034	\$26	\$124	\$44	\$13	\$34	\$3	\$38	\$134	\$158	\$2	\$40	\$43
1965	\$1,898	\$102	\$1,858	\$1,085	\$26	\$133	\$47	\$14	\$36	\$3	\$40	\$151	\$166	\$2	\$44	\$44
1966	\$2,006	\$100	\$2,002	\$1,115	\$30	\$146	\$50	\$14	\$37	\$2	\$43	\$163	\$171	\$2	\$48	\$45
1967	\$2,066	\$103	\$2,009	\$1,150	\$34	\$157	\$53	\$15	\$38	\$1	\$46	\$166	\$174	\$3	\$48	\$47
1968	\$2,184	\$100	\$2,184	\$1,221	\$39	\$169	\$54	\$15	\$40	\$1	\$49	\$184	\$181	\$3	\$52	\$48
1969	\$2,265	\$101	\$2,247	\$1,240	\$45	\$179	\$58	\$16	\$42	\$0	\$53	\$190	\$187	\$3	\$59	\$49
1970	\$2,318	\$102	\$2,282	\$1,288	\$52	\$188	\$62	\$16	\$43	\$3	\$56	\$184	\$188	\$4	\$67	\$50
1971	\$2,405	\$102	\$2,357	\$1,313	\$60	\$193	\$62	\$17	\$45	\$5	\$59	\$203	\$194	\$4	\$69	\$52
1972	\$2,551	\$103	\$2,468	\$1,342	\$69	\$207	\$63	\$18	\$47	\$8	\$63	\$229	\$204	\$4	\$78	\$53
1973	\$2,676	\$102	\$2,615	\$1,358	\$79	\$226	\$69	\$18	\$49	\$11	\$67	\$252	\$214	\$6	\$82	\$53
1974	\$2,654	\$102	\$2,607	\$1,363	\$91	\$245	\$83	\$19	\$50	\$29	\$72	\$235	\$215	\$7	\$77	\$53
1975	\$2,711	\$102	\$2,649	\$1,373	\$91	\$247	\$75	\$20	\$51	\$48	\$76	\$235	\$213	\$9	\$83	\$53
1976	\$2,869	\$103	\$2,797	\$1,528	\$92	\$256	\$70	\$21	\$52	\$67	\$81	\$265	\$227	\$9	\$88	\$53
1977	\$2,992	\$104	\$2,888	\$1,564	\$92	\$272	\$66	\$21	\$53	\$88	\$86	\$289	\$241	\$10	\$94	\$53
1978	\$3,125	\$104	\$3,016	\$1,582	\$92	\$290	\$66	\$22	\$54	\$109	\$92	\$305	\$252	\$11	\$100	\$53
1979	\$3,203	\$104	\$3,076	\$1,604	\$93	\$305	\$70	\$23	\$56	\$131	\$98	\$304	\$262	\$11	\$99	\$53
1980	\$3,193	\$104	\$3,074	\$1,612	\$93	\$310	\$76	\$25	\$57	\$137	\$104	\$280	\$265	\$12	\$94	\$53
1981	\$3,236	\$105	\$3,093	\$1,632	\$93	\$312	\$79	\$25	\$57	\$143	\$111	\$283	\$271	\$14	\$90	\$53
1982	\$3,276	\$106	\$3,085	\$1,653	\$94	\$311	\$77	\$25	\$57	\$149	\$118	\$283	\$269	\$13	\$88	\$53
1983	\$3,454	\$107	\$3,237	\$1,674	\$94	\$323	\$72	\$25	\$57	\$154	\$126	\$326	\$281	\$15	\$89	\$53
1984	\$3,641	\$107	\$3,404	\$1,696	\$94	\$342	\$68	\$26	\$58	\$161	\$134	\$373	\$299	\$16	\$95	\$53
1985	\$3,821	\$108	\$3,538	\$1,718	\$95	\$364	\$69	\$27	\$59	\$168	\$142	\$410	\$314	\$17	\$102	\$53
1986	\$3,981	\$110	\$3,635	\$1,740	\$95	\$395	\$73	\$27	\$59	\$175	\$151	\$447	\$320	\$17	\$105	\$53
1987	\$4,113	\$110	\$3,746	\$1,762	\$95	\$414	\$76	\$28	\$59	\$182	\$161	\$455	\$328	\$15	\$107	\$53
1988	\$4,280	\$110	\$3,889	\$1,784	\$96	\$442	\$75	\$29	\$59	\$189	\$171	\$482	\$341	\$16	\$110	\$53
1989	\$4,394	\$111	\$3,955	\$1,807	\$96	\$463	\$76	\$30	\$59	\$197	\$183	\$492	\$351	\$14	\$113	\$53
1990	\$4,475	\$110	\$4,056	\$1,830	\$95	\$482	\$77	\$30	\$59	\$206	\$177	\$487	\$359	\$11	\$114	\$53
1991	\$4,467	\$110	\$4,049	\$1,854	\$93	\$487	\$76	\$30	\$60	\$214	\$171	\$455	\$350	\$8	\$109	\$53
1992	\$4,595	\$112	\$4,108	\$1,878	\$93	\$495	\$76	\$31	\$61	\$225	\$166	\$479	\$359	\$9	\$111	\$53
1993	\$4,749	\$117	\$4,059	\$1,902	\$92	\$513	\$76	\$32	\$62	\$234	\$160	\$518	\$369	\$9	\$113	\$53
1994	\$4,928	\$118	\$4,193	\$1,926	\$94	\$530	\$79	\$34	\$63	\$254	\$156	\$558	\$383	\$10	\$116	\$53
1995	\$5,076	\$116	\$4,376	\$1,951	\$96	\$549	\$83	\$33	\$64	\$266	\$148	\$584	\$391	\$11	\$118	\$53
1996	\$5,238	\$117	\$4,466	\$1,976	\$96	\$575	\$85	\$32	\$63	\$279	\$145	\$617	\$403	\$11	\$119	\$53
1997	\$5,424	\$118	\$4,585	\$2,001	\$96	\$608	\$88	\$33	\$63	\$294	\$136	\$657	\$419	\$12	\$136	\$53
1998	\$5,684	\$118	\$4,836	\$2,027	\$97	\$649	\$90	\$32	\$63	\$308	\$125	\$727	\$432	\$12	\$144	\$53
1999	\$5,965	\$118	\$5,053	\$2,053	\$97	\$699	\$93	\$31	\$63	\$322	\$119	\$813	\$451	\$13	\$151	\$53
2000	\$6,224	\$119	\$5,227	\$2,079	\$95	\$754	\$96	\$30	\$63	\$336	\$115	\$879	\$464	\$14	\$158	\$53
2001	\$6,377	\$120	\$5,310	\$2,106	\$95	\$804	\$98	\$30	\$64	\$341	\$139	\$932	\$477	\$14	\$165	\$53
2002	\$6,576	\$119	\$5,523	\$2,133	\$95	\$863	\$100	\$32	\$64	\$343	\$172	\$1,000	\$484	\$15	\$176	\$53

All figures are presented in billions of 1996 dollars, except where noted in last two columns.

GPI data by category continued.

Year	Cost of Air Pollution	Cost of Noise Pollution	Loss of Wetlands	Loss of Farmland	Depletion of Nonrenewable Resources	Other Long-term Environmental Damage	Cost of Ozone Depletion	Loss of Old-growth Forests	Net Capital Investment	Net Foreign Lending or Borrowing	Genuine Progress Indicator	GPI Per Capita \$2,000	GDP Per Capita \$2,000
1950	\$67	\$6	\$36	\$22	\$164	\$262	\$3	\$47	\$8	\$0	\$850	\$1,777	\$11,672
1951	\$68	\$7	\$37	\$24	\$186	\$272	\$4	\$47	\$12	\$1	\$888	\$1,915	\$12,365
1952	\$68	\$7	\$38	\$26	\$188	\$282	\$5	\$47	\$26	\$0	\$956	\$1,988	\$12,620
1953	\$69	\$7	\$40	\$28	\$196	\$292	\$6	\$47	\$31	\$0	\$1,047	\$2,080	\$12,982
1954	\$70	\$7	\$41	\$30	\$193	\$302	\$7	\$47	\$34	\$0	\$1,069	\$2,065	\$12,669
1955	\$71	\$7	\$42	\$32	\$220	\$312	\$8	\$47	\$33	\$0	\$1,142	\$2,213	\$13,336
1956	\$71	\$8	\$44	\$34	\$241	\$324	\$10	\$47	\$31	\$1	\$1,175	\$2,256	\$13,356
1957	\$72	\$8	\$46	\$36	\$251	\$335	\$11	\$47	\$24	\$1	\$1,211	\$2,301	\$13,380
1958	\$73	\$8	\$48	\$38	\$240	\$346	\$13	\$48	\$24	\$1	\$1,228	\$2,279	\$13,033
1959	\$73	\$8	\$50	\$40	\$259	\$358	\$15	\$48	\$25	\$1	\$1,247	\$2,441	\$13,728
1960	\$74	\$9	\$52	\$43	\$273	\$370	\$17	\$48	\$11	\$1	\$1,272	\$2,502	\$13,847
1961	\$75	\$9	\$54	\$45	\$285	\$382	\$20	\$48	\$18	\$1	\$1,263	\$2,560	\$13,936
1962	\$77	\$9	\$57	\$47	\$304	\$395	\$23	\$49	\$27	\$2	\$1,351	\$2,715	\$14,556
1963	\$79	\$9	\$60	\$49	\$331	\$408	\$27	\$49	\$29	\$2	\$1,379	\$2,834	\$14,975
1964	\$81	\$10	\$63	\$51	\$355	\$422	\$31	\$50	\$37	\$2	\$1,462	\$2,999	\$15,627
1965	\$83	\$10	\$66	\$53	\$377	\$436	\$36	\$50	\$54	\$2	\$1,592	\$3,191	\$16,423
1966	\$85	\$10	\$70	\$56	\$412	\$452	\$42	\$50	\$71	-\$4	\$1,709	\$3,399	\$17,293
1967	\$87	\$11	\$74	\$58	\$447	\$467	\$48	\$51	\$72	-\$3	\$1,693	\$3,485	\$17,536
1968	\$89	\$11	\$78	\$60	\$476	\$484	\$55	\$51	\$86	-\$3	\$1,872	\$3,653	\$18,199
1969	\$91	\$11	\$83	\$63	\$509	\$502	\$63	\$52	\$90	-\$3	\$1,885	\$3,765	\$18,578
1970	\$93	\$12	\$87	\$65	\$552	\$520	\$70	\$52	\$88	-\$3	\$1,894	\$3,772	\$18,395
1971	\$90	\$12	\$93	\$67	\$560	\$539	\$81	\$53	\$82	\$3	\$1,925	\$3,899	\$18,774
1972	\$88	\$12	\$98	\$70	\$588	\$558	\$92	\$54	\$81	\$2	\$1,968	\$4,105	\$19,557
1973	\$85	\$13	\$104	\$72	\$602	\$578	\$104	\$54	\$96	\$2	\$2,080	\$4,341	\$20,487
1974	\$83	\$13	\$111	\$74	\$604	\$598	\$116	\$55	\$133	\$2	\$2,112	\$4,320	\$20,199
1975	\$75	\$13	\$118	\$77	\$613	\$617	\$127	\$56	\$81	\$2	\$2,034	\$4,311	\$19,962
1976	\$77	\$13	\$125	\$79	\$634	\$638	\$139	\$57	\$72	\$2	\$2,191	\$4,541	\$20,827
1977	\$74	\$13	\$132	\$82	\$664	\$659	\$150	\$58	\$68	-\$7	\$2,176	\$4,751	\$21,570
1978	\$72	\$13	\$139	\$84	\$689	\$680	\$160	\$59	\$56	\$0	\$2,207	\$5,015	\$22,531
1979	\$65	\$13	\$147	\$87	\$743	\$702	\$170	\$60	\$37	\$5	\$2,166	\$5,173	\$22,987
1980	\$64	\$13	\$155	\$89	\$778	\$723	\$180	\$61	\$105	\$2	\$2,183	\$5,162	\$22,666
1981	\$60	\$14	\$164	\$91	\$799	\$743	\$190	\$63	\$105	\$7	\$2,150	\$5,292	\$23,011
1982	\$54	\$14	\$173	\$94	\$811	\$763	\$199	\$64	\$89	\$76	\$2,156	\$5,189	\$22,349
1983	\$54	\$14	\$183	\$98	\$795	\$783	\$210	\$66	\$102	\$73	\$2,247	\$5,424	\$23,148
1984	\$56	\$14	\$194	\$102	\$888	\$803	\$220	\$67	\$102	\$30	\$2,175	\$5,814	\$24,598
1985	\$53	\$14	\$205	\$106	\$904	\$824	\$231	\$69	\$102	\$22	\$2,208	\$6,054	\$25,386
1986	\$52	\$14	\$215	\$111	\$922	\$845	\$243	\$72	\$101	\$16	\$2,226	\$6,264	\$26,028
1987	\$53	\$14	\$226	\$115	\$965	\$866	\$255	\$74	\$139	-\$58	\$2,218	\$6,475	\$26,668
1988	\$53	\$15	\$237	\$119	\$1,020	\$888	\$268	\$77	\$133	-\$72	\$2,220	\$6,743	\$27,519
1989	\$52	\$15	\$248	\$123	\$1,044	\$911	\$278	\$79	\$123	-\$49	\$2,230	\$6,981	\$28,226
1990	\$49	\$15	\$261	\$127	\$1,102	\$934	\$286	\$83	\$114	-\$64	\$2,237	\$7,112	\$28,435
1991	\$49	\$15	\$274	\$132	\$1,128	\$956	\$292	\$83	\$104	-\$85	\$2,199	\$7,101	\$28,011
1992	\$46	\$15	\$288	\$136	\$1,158	\$979	\$299	\$84	\$109	-\$112	\$2,148	\$7,337	\$28,559
1993	\$45	\$15	\$302	\$140	\$1,157	\$1,003	\$304	\$84	\$127	-\$33	\$2,133	\$7,533	\$28,943
1994	\$45	\$15	\$318	\$144	\$1,240	\$1,027	\$307	\$85	\$154	-\$14	\$2,154	\$7,836	\$29,744
1995	\$42	\$16	\$334	\$149	\$1,275	\$1,051	\$309	\$86	\$190	-\$32	\$2,285	\$8,032	\$30,131
1996	\$41	\$16	\$351	\$153	\$1,331	\$1,077	\$310	\$86	\$264	-\$19	\$2,357	\$8,329	\$30,886
1997	\$39	\$16	\$370	\$157	\$1,370	\$1,102	\$311	\$87	\$315	-\$65	\$2,371	\$8,704	\$31,891
1998	\$39	\$16	\$389	\$162	\$1,430	\$1,128	\$312	\$88	\$379	-\$181	\$2,435	\$9,067	\$32,837
1999	\$39	\$16	\$409	\$166	\$1,447	\$1,154	\$312	\$89	\$452	-\$178	\$2,619	\$9,470	\$33,908
2000	\$39	\$16	\$412	\$171	\$1,486	\$1,180	\$313	\$90	\$512	-\$227	\$2,717	\$9,817	\$34,758
2001	\$39	\$17	\$415	\$175	\$1,561	\$1,206	\$313	\$91	\$501	-\$346	\$2,535	\$9,867	\$34,554
2002	\$39	\$17	\$418	\$179	\$1,578	\$1,232	\$314	\$92	\$523	-\$307	\$2,720	\$10,083	\$34,938

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*Redefining Progress (RP) is a non-profit organization that works with a broad array of partners to shift the economy and public policy toward sustainability. RP measures the real state of our economy, of our environment, and of social justice with tools like the Genuine Progress Indicator and the Ecological Footprint. We design policies—like environmental tax reform—to shift behavior in these three domains towards sustainability. We promote and create new frameworks—like common assets—to replace the ones that are taking us away from long-term social, economic, and environmental justice.*