

7. DELIVERING HIGH-PERFORMANCE GOVERNMENT

For too long, Washington has not responsibly managed the tax dollars entrusted it by the American people. Decision-makers opened their doors and ears to those able to afford lobbyists while it became harder and harder for everyone else to learn what Government was doing, what it was accomplishing, and for whom. Programs and practices were allowed to persist out of inertia and not because they were delivering the results expected of them, while others that seemed to work were rarely assessed to confirm their impact and find ways to enhance their value. Over the last two decades, as the private sector was utilizing new management techniques and information technologies to boost productivity, cut costs, and deliver previously unheard of levels of customer service, the public sector lagged conspicuously behind.

The American people deserve better. They deserve a Federal Government that respects their tax dollars, and uses them effectively and efficiently. They deserve a Federal Government that is transparent, fair, and responsive. And they deserve a Government that is constantly looking to streamline what works and to eliminate what does not. The Administration is committed to revolutionizing how the Federal Government runs on behalf of the American people. The President appointed the Nation's first Chief Performance Officer, and the Administration has taken steps to bring more transparency to, for instance, how Federal information technology (IT) dollars are spent to improve customer service for those using citizenship services. At the same time, the Administration has combed the Budget to find programs that are duplicative, outdated, or just not working.

To improve the performance of the Federal Government in the coming fiscal year and in years to come, the Administration will pursue three mutually reinforcing performance management strategies:

1. **Use Performance Information to Lead, Learn, and Improve Outcomes.** Agency leaders set a few high-priority goals and use constructive data-based reviews to keep their organizations on track to deliver on these objectives.
2. **Communicate Performance Coherently and Concisely for Better Results and Transparency.** The Federal Government will candidly communicate to the public the priorities, problems, and progress of Government programs, explaining the reasons behind past trends, the impact of past actions, and future plans. In addition, agencies will strengthen their capacity to learn from experience and experiments.
3. **Strengthen Problem-Solving Networks.** The Federal Government will tap into and encourage practitioner communities, inside and outside Government, to work together to improve outcomes and performance management practices.

Use Performance Information to Lead, Learn, and Improve Outcomes

Government operates more effectively when it focuses on outcomes, when leaders set clear and measurable goals, and when agencies use measurement to reinforce priorities, motivate action, and illuminate a path to improvement. This outcome-focused performance management approach has proved a powerful way to achieve large performance gains in other countries, several States, an increasing number of local governments, and a growing number of Federal programs. For instance, the State of Washington pushed down the re-victimization rate of children harmed in their homes from 13.3 percent to 6.5 percent over the last seven years by monitoring how changes in agency action affected children previously harmed and by adjusting policies accordingly to make improvements for the children.

New York City and, subsequently, the City of Los Angeles saw crime rates plummet after each adopted CompStat meetings. These are frequently scheduled, goal-focused, data-driven meetings at which precinct captains are expected to discuss statistics about outcomes (e.g., crime), cost drivers (e.g., overtime), unwanted side effects (e.g., police abuse complaints), patterns of problems in the precinct, probable causes, apparent effects of prior actions, and future actions planned. Similarly, the U.S. Coast Guard's Marine and Marine Environmental Protection programs work to reduce maritime deaths and injuries, large oil spills, and chemical discharge incidents by regularly analyzing their data to identify contributory causes and by testing different prevention options to identify and then implement those that work best.

Outcome-focused performance management can transform the way government works, but its success is by no means assured. The ultimate test of an effective performance management system is whether it is used, not the number of goals and measures produced. Federal performance management efforts have not fared well on this test. The Government Performance and Results Act of 1993 (GPRA) and the Performance Assessment Rating Tool (PART) reviews increased the production of measurements in many agencies, resulting in the availability of better measures than previously existed; however, these initial successes have not led to increased use. With a few exceptions, Congress does not use the performance goals and measures agencies produce to conduct

oversight, agencies do not use them to evaluate effectiveness or drive improvements, and they have not provided meaningful information for the public.

Studies of past Federal performance management efforts have identified several problematic practices. For example, senior leaders at Federal agencies have historically focused far more attention on new policy development than on managing to improve outcomes. Mechanisms used to motivate change created serious unwanted side effects or linked to the wrong objectives. Central office reviews mandated measurements inappropriate to the situation, and performance reports seldom answered the questions of key audiences. Moreover, the annual reporting requirement of GPRA and the five-year program PART review cycle did not provide agencies the fast feedback needed to assess if delivery efforts were on track or to diagnose why they were or were not. Neither GPRA nor PART precluded more frequent measurement to inform agency action, but only a few agencies opted to supplement their annual measurement cycle with the kinds of data and analysis that fueled the private sector performance revolution.

The Administration is initiating several new performance management actions and is tasking a new generation of performance leaders to implement successful performance management practices.

To encourage senior leaders to deliver results against the most important priorities, the Administration launched the High-Priority Performance Goal initiative in June 2009, asking agency heads to identify and commit to a limited number of priority goals, generally three to eight, with high value to the public. The goals must have ambitious, but realistic, targets to achieve within 18 to 24 months without need for new resources or legislation, and well-defined, outcomes-based measures of progress. These goals are included in this Budget. Some notable examples are:

- Assist 3 million homeowners who are at risk of losing their homes due to foreclosure (Secretaries Donovan and Geithner);
- Reduce the population of homeless veterans to 59,000 in June, 2012 (Secretaries Donovan and Shinseki); and
- Double renewable energy generating capacity (excluding conventional hydropower) by 2012 (Secretary Chu).

In the coming year, the Administration will ask agency leaders to carry out a similar priority-setting exercise with top managers of their bureaus to set bureau-level goals and align those goals, as appropriate, with agency-wide priority goals. These efforts are not distinct from the goal-setting and measurement expectations set forth in the GPRA, but rather reflect an intention to translate GPRA from a reporting exercise to a performance-improving practice across the Federal Government. By making agencies' top leaders responsible for specific goals that they themselves have named as most important, the

Administration is dramatically improving accountability and the chances that Government will deliver results on what matters most.

Agency leaders will put in place rigorous, constructive quarterly feedback and review sessions to help agencies reach their targets, building on lessons from successful public sector performance management models in other governments and in some Federal agencies. In addition, the Office of Management and Budget (OMB) will initiate quarterly performance updates to help senior Federal Government leaders stay focused on driving to results.

OMB will support the agencies with tools and assistance to help them succeed. In addition, OMB will help coordinate inter-agency efforts in select situations where collaboration is critical to success.

Communicate Performance Coherently and Concisely for Better Results and Transparency

Transparent, coherent performance information contributes to more effective, efficient, fair, and responsive government. Transparency not only promotes public understanding about the actions that government is working to accomplish, but also supports learning across government agencies, stimulates idea flow, enlists assistance, and motivates performance gain. In addition, transparency can strengthen public confidence in government, especially when government does more than simply herald its successes but also provides candid assessments of problems encountered, their likely causes, and actions being taken to address problems.

The Administration is initiating several new performance communication actions. First, the Administration will identify and eliminate performance measurements and documents that are not useful. Second, what remains will be used. Goals contained in plans and budgets will communicate concisely and coherently what government is trying to accomplish. Agency, cross-agency, and program measures, including those developed under GPRA and PART that proved useful to agencies, the public, and OMB, will candidly convey how well the Government is accomplishing the goals. Combined performance plans and reports will explain why goals were chosen, the size and characteristics of problems Government is tackling, factors affecting outcomes that Government hopes to influence, lessons learned from experience, and future actions planned.

Going forward, agencies will take greater ownership in communicating performance plans and results to key audiences to inform their decisions. Making performance data useful to all audiences—congressional, public, and agency leaders—improves both program performance and reporting accuracy.

To that end, the Administration will redesign public access to Federal performance information.

The Administration will create a Federal performance portal that provides a clear, concise picture of Federal goals and measures by theme, by agency, by program, and by program type. It will be designed to increase transparency and coherence for the public, motivate improve-

ment, support collaboration, and enhance the ability of the Federal Government and its service delivery partners to learn from others' experiences and from research experiments. The performance portal will also provide easy links to mission-support management dashboards, such as the IT dashboard (<http://it.usaspending.gov/>) launched in the summer of 2009, and similar dashboards planned for other common Government functions including procurement, improper payments, and hiring.

While performance information is critical to improving Government effectiveness and efficiency, it can answer only so many questions. More sophisticated evaluation methods are required to answer fundamental questions about the social, economic, or environmental impact of programs and practices, isolating the effect of Government action from other possible influencing factors. OMB recently launched an Evaluation Initiative to promote rigorous impact evaluations, build agency evaluation capacity, and improve transparency of evaluation findings. These evaluations are a powerful complement to agency performance improvement efforts and often benefit from the availability of performance data. OMB will make information about all Federal evaluations focused on the impacts of programs and program practices available online through the performance portal. The Evaluation Initiative is explained in more detail in Chapter 8, "Program Evaluation," in this volume.

Strengthen Problem-Solving Networks

The third strategy the Administration will pursue to improve performance management involves the extensive use of existing and new practitioner networks. Federal agencies do not work in isolation to improve outcomes. Every Federal agency and employee depends on and is supported by others—other Federal offices, other levels of government, for-profit and not-for-profit organizations, and individuals with expertise or a passion about specific problems. New information technologies are transforming our ability to tap vast reservoirs of capacity beyond the office. At the same time, low-technology networks such as professional associations and communities of practice are also able to solve problems, spur innovation, and diffuse knowledge. The Administration will create cross-agency teams to tackle shared problems and reach out to existing networks, both inside and outside Government, to find and develop smarter performance management methods and to assist others in their application. It will tap their intelligence, ingenuity, and commitment, as well as their dissemination and delivery capacity.

The Performance Improvement Council (PIC), made up of Performance Improvement Officers from every Federal agency, will function as the hub of the performance management network. OMB will work with the PIC to create and advance a new set of Federal performance management principles, refine a Government-wide performance management implementation plan, and identify and tackle specific problems as they arise. The PIC will also serve as a home for Federal communities of practice, some new and some old. Some communities of practice

will be organized by problems, some by program type such as regulatory programs, and some by methods such as quality management. These communities will develop tools and provide expert advice and assistance to their Federal colleagues. In addition, the PIC will address the governance challenge of advancing progress on high-priority problems that require action by multiple agencies. The Administration will also turn to existing external networks—including State and local government associations, schools of public policy and management, think tanks, and professional associations—to enlist their assistance on specific problems and in spreading effective performance management practices.

AGENCY HIGH PRIORITY PERFORMANCE GOALS

The following pages include challenging, near-term performance improvements agencies will strive to deliver for the American people using existing legislative authority and budgetary resources. The high priority performance goals listed here are therefore a subset of the fuller suite of goals reflected in agencies' performance plans, which also include long-term strategic goals, a fuller set of agency-wide and program goals, and goals dependent on new legislation and additional funding. In addition, agencies identified performance measures under the American Recovery and Reinvestment Act, including estimates of jobs created and retained. These are shown on the Recovery Act website (<http://www.recovery.gov>). Also, given the nature of their work, national security agencies were given greater discretion in choosing which outcome-focused goals to include among the high priority performance goals publicly listed.

Department of Agriculture

Mission: The Department of Agriculture (USDA) provides leadership on food, agriculture, natural resources, rural development and related issues based on sound public policy, the best available science, and efficient management.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Department has identified the following limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view a full set of performance information please visit www.usda.gov.

- USDA will assist rural communities to increase prosperity so they are self sustaining, re-populating and economically thriving.
 - By 2011, increase the prosperity of rural communities by concentrating and strategically investing in 8-10 regions, resulting in the creation of strong local and regional economies, with a partic-

ular emphasis on food systems, renewable energy, broadband-based economies, and rural recreation.

- USDA will ensure our national forests and private working lands enhance our water resources and are conserved, restored, and made more resilient to climate change.
 - By the end of 2011, accelerate the protection of clean, abundant water resources by implementing high impact targeted (HIT) practices on three million acres of national forest and private working lands in priority landscapes.
- USDA will help America promote agricultural production and biotechnology exports as America works to increase food security.
 - By the end of 2011, increase the number of provinces in Afghanistan in which women and children are food secure from 10 to 14, ensuring food security for 41 percent of the country in support of the President's Afghanistan and Pakistan strategy.
 - Maintain at zero the number of incidents in which regulated genetically engineered products are commingled with non-regulated products in commercial channels, thereby protecting global markets for organic and biotech products.
 - By the end of 2011, reduce non-tariff trade barriers for five major markets and increase agriculture exports by \$2 billion.
- USDA will ensure that all of America's children have access to safe, nutritious and balanced meals.
 - By the end of 2011, reduce the number of households with children who experience very low food security by 100,000.
 - By 2011, propose national standards that will result in improved quality of food sold in schools throughout the school day.
 - By the end of 2011, increase the availability of healthy foods by strategically investing in six food deserts by providing incentives for food entrepreneurs to establish or expand markets and grocery stores, including farmers markets, that make healthy foods available to low-income Americans.
 - By 2011, USDA will reduce the number of *Salmonella* illnesses by 50,000 and reduce illness costs by about \$900 million as a result of FSIS regulated establishments reducing the presence of *Salmonella*.

Department of Commerce

Mission: The Department of Commerce creates the conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness, and stewardship.

High Priority Performance Goals

The Commerce Department develops a 5-year strategic plan, as well as an annual performance plan and annual report on our progress. As part of developing the 2011 Budget and performance plan, the Department has also identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit: http://www.osec.doc.gov/bmi/budget/budgetsub_perf_strategicplans.htm.

- 2010 Decennial Census: Effectively execute the 2010 Census, and provide the States with accurate and timely redistricting data.
 - Timely completion of milestones to conduct the Census and provide redistricting data as mandated by law.
 - Achieve an accuracy level of an overall net coverage error at the national level of less than one-half of one percent.
- Intellectual Property Protection: Reduce patent pendency for first action and for final actions from the end of 2009 levels of 25.8 and 34.6 months respectively by the end of 2011, as well as the patent backlog.
- Coastal and Ocean Resource Management: Ensure environmentally and economically resilient oceans, coasts, and Great Lakes communities, with healthy and productive ecosystems.
 - Ensure that all 46 Federal fishery management plans have required catch limits to end overfishing in place by the end of 2011.
 - Reduce the number of stocks subject to overfishing to zero by the end of 2011.
 - Improve the Fish Stock Sustainability Index (FSSI) to 586 by the end of 2011. The FSSI is a measure of stock assessments and overfishing. The target represents a four-percent increase above the FSSI score at the end of 2009. (Because the FSSI does not score a stock as “not subject to overfishing” until such status has been confirmed through subsequent survey and analysis, the improvements sought in overfishing will not be fully reflected in the 2011 FSSI level.)
- Broadband Access: Efficiently and effectively implement the Broadband Technology Opportunities Program, to expand service to communities in a cost-effective manner that maximizes impacts on economic growth, education, health care, and public safety.
- Export Opportunities: Increase the annual number of Small and Medium-size Enterprises (SMEs) the Commercial Service successfully assists in exporting to a 2nd or additional country by 40 percent from 2009 to 2011.

- Sustainable Manufacturing and Building Practices: Raise the number of firms adopting sustainable manufacturing processes through the Manufacturing Extension Partnership by 250 by the end of 2011. Raise the percentage of construction projects involving buildings or structures funded by Economic Development Assistance Programs that are certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) or a comparable third-party certification program to 12 percent.

Department of Defense

Mission: The mission of the Department of Defense (DOD) is to provide the military forces needed to deter war and to protect the security of the United States. Since the creation of America's first army in 1775, the Department and its predecessor organizations have evolved into a global presence of three million individuals, stationed in more than 140 countries and dedicated to defending the United States by deterring and defeating aggression and coercion in critical regions. The Department embraces the core values of leadership, professionalism, and technical knowledge. Its employees are dedicated to duty, integrity, ethics, honor, courage, and loyalty.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Department has identified a limited number of high priority goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit: <http://www.defenselink.mil/comptroller/>.

- Increase Energy Efficiencies.
 - By 2011, DOD will reduce average building energy consumption by 18 percent from the 2003 baseline of 116,134 BTUs per gross square foot.
 - By 2011, DOD will produce or procure renewable energy equal to 14.3 percent of its annual electric energy usage.
- Reform the DOD Personnel Security Clearance Process.
 - Beginning in 2010, DOD will adjudicate the fastest 90 percent of initial top secret and secret personnel security clearance cases within 20 days.
 - By 2011, 90 percent of all DOD national security investigations will be received via electronic delivery.
- Create the Next Generation of Electronic Record System—Virtual Lifetime Electronic Record (VLER) by 2012. This interagency initiative will create a more effective means for electronically sharing health and benefits data of servicemembers and veterans.
 - By 2011, DOD will implement Virtual Lifetime Electronic Record (VLER) production capability in at least three sites.
- Streamline the hiring process.
 - By 2011, DOD will improve its external civilian hiring end-to-end timeline to 112 days.
- Implement DOD-wide in-sourcing initiative.
 - By 2011, DOD will decrease reliance on contract services by increasing the in-house civilian or military workforce by 19,844 authorizations for personnel.
- Spend American Reinvestment and Recovery Act (ARRA) funds quickly and effectively.
 - By 2010, DOD will have obligated at least 95 percent of DOD Facilities, Sustainment, Restoration, and Modernization budget authority, funded by ARRA.
 - By 2010, DOD will have obligated at least 95 percent of DOD Research, Development, Test, and Evaluation budget authority, funded by ARRA.
 - By 2011, DOD will have obligated at least 95 percent of DOD Military Construction budget authority, funded by ARRA.
 - By 2011, DOD will have obligated at least 69 percent of DOD Homeowners Assistance Fund budget authority, funded by ARRA.
- Provide effective business operations and ensure logistics support to Overseas Contingency Operations.
 - Beginning in 2010, DOD will maintain a 98 percent fill rate for the Joint Contracting Command (JCC) supporting contingency operations.
 - By 2011, DOD will maintain an assignment rate of 85 percent of required Contracting Officer Representatives (CORs) supporting Iraqi contingency operations.
 - By 2011, DOD will maintain an assignment rate of 85 percent of required Contracting Officer Representatives (CORs) supporting Afghan contingency operations.
 - By 2011, DOD will reduce the percent of in-theater Army central disbursements, using cash, to two percent.
 - By 2011, DOD will increase the percent of contract actions, tied to entitlements and disbursements in the systems of record, to 95 percent.
- Increase the audit readiness of individual DOD components.
 - By 2011, 80 percent of DOD Statement of Budgetary Resources Appropriations Received (line 3A) will be reviewed, verified for accuracy, and "validated" or approved as audit-ready.
 - By 2011, 14 percent of DOD Statement of Budgetary Resources will be validated as audit-ready.
 - By 2011, 30 percent of DOD Funds Balance with the Treasury will be validated as audit-ready.

- By 2011, 45 percent of DOD mission-critical assets (Real Property, Military Equipment, General Equipment, Operating Materials and Supplies, and Inventory balances) will be validated as audit-ready for existence and completeness.
- Reform the DOD Acquisition Process.
 - By 2011, DOD will reduce average cycle time for Major Defense Acquisition Programs (MDAPs) starting in 2002 and later to 72 months.
 - Beginning in 2010, DOD will ensure the number of breaches—significant cost overruns—for Major Defense Acquisition Programs (MDAPs) is equal to or less than the previous fiscal year.
 - Beginning in 2010, DOD will increase, by one percent annually, the amount of contract obligations that are competitively awarded.
 - By 2011, DOD will decrease reliance on contract services in acquisition functions by increasing the in-house civilian and/or military workforce by 4,765 authorizations for personnel.
 - By 2011, DOD will increase the total number of DOD civilian and military personnel performing acquisition functions by 10,025 total personnel (end-strength).
 - For 2010 and 2011, DOD will increase the percent of positions filled with personnel meeting Level II certification requirements from the previous fiscal year.
 - For 2010 and 2011, DOD will increase the percent of positions filled with personnel meeting Level III certification requirements from the previous fiscal year.
- Enhance the security cooperation workforce.
 - By 2011, DOD will increase the percent of incumbents that have been trained in security assistance in positions that require security assistance training to 95 percent or greater.

Department of Education

Mission: The U.S. Department of Education seeks to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.

President Obama's vision is that by 2020, America will again have the best-educated, most competitive workforce in the world with the highest proportion of college graduates of any country. To do this, the United States must also close the achievement gap, so that all youth—regardless of their backgrounds—graduate from high school ready to succeed in college and careers.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Department of Education has identified a limited number of high-priority performance goals that will be a particular focus over the next two years. These goals, which will help measure the success of the

Department's cradle-to-career education strategy, reflect the importance of teaching and learning at all levels of the education system. These goals are consistent with the Department's 5-year strategic plan that is under development and will be used to regularly monitor and report progress. To view the full set of performance information, please visit www.ed.gov.

Educational Outcomes

- Early Learning: All States collecting school readiness data and improving their overall and disaggregated school readiness outcomes.
- K-12: All States improving overall and disaggregated high-school graduation rates.
- College: Nation improving overall and disaggregated college completion rate.

Key Initiatives

- Evidence Based Policy: Implementation of a comprehensive approach to using evidence to inform the Department's policies and major initiatives, including:
 - Increase by 2/3 the number of Department discretionary programs that use evaluation, performance measures and other program data for continuous improvement.
 - Implement rigorous evaluations for all of the Department's highest priority programs and initiatives.
 - Ensure all newly authorized Department discretionary programs include a rigorous evaluation component.
- Struggling Schools Reform: Identify as nationwide models 500 of the persistently lowest achieving schools initiating high-quality intensive reform efforts (e.g., turnarounds, restarts, transformations, or closures).
- Effective Teaching: Improve the quality of teaching and learning by:
 - increasing by 200,000 the number of teachers for low income and minority students who are being recruited or retained to teach in hard-to-staff subjects and schools in systems with rigorous processes for determining teacher effectiveness;
 - ensuring that all States have in place comprehensive teacher evaluation systems, based on multiple measures of effectiveness including student achievement, that are used for professional development, retention, tenure, and compensation decisions.
- Data Driven Decisions: All States implementing comprehensive statewide longitudinal data systems that link student achievement and teacher data and

link K-12 with higher education data and, to the extent possible, with pre-K and workforce data.

- College and Career Ready Standards: All States collaborating to develop and adopt internationally benchmarked college- and career-ready standards.
- Simplified Student Aid: All participating higher education institutions and loan servicers operationally ready to originate and service Federal Direct Student Loans through an efficient and effective student aid delivery system with simplified applications and minimal disruption to students.

Department of Energy

Mission: Discovering the Solutions to Power and Secure America's Future.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, DOE has identified seven high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view performance information please visit: www.energy.gov/about/budget.htm.

- Double renewable energy generating capacity (excluding conventional hydropower) by 2012.
- Assist in the development and deployment of advanced battery manufacturing capacity to support 500,000 plug-in hybrid electric vehicles a year by 2015.
- DOE and HUD will work together to enable the cost-effective energy retrofits of a total of 1.1 million housing units through 2011. Of this number, DOE programs will contribute to retrofits of an estimated one million housing units.
- Commit (conditionally) to loan guarantees for two nuclear power facilities to add new low-carbon emission capacity of at least 3,800 megawatts during 2010.
- Make significant progress towards securing the most vulnerable nuclear materials worldwide within four years.
 - By the end of 2011, remove or dispose of a cumulative total of 3,297 kilograms of vulnerable nuclear material (highly enriched uranium and plutonium).
 - By the end of 2011, complete material protection, control and accounting upgrades on a cumulative total of 218 buildings.
- Maintain the U.S. nuclear weapons stockpile and dismantle excess nuclear weapons to meet national

nuclear security requirements as assigned by the President through the Nuclear Posture Review.

- Annual percentage of warheads in the Stockpile that is safe, secure, reliable, and available to the President for deployment (long term assurance).
- Cumulative percentage of progress in completing Nuclear Weapons Council (NWC)-approved Life Extension Program (LEP) activities.
- Cumulative percent reduction in projected W76 warhead production costs per warhead from established validated baseline, as computed and reported annually by the W76 LEP Cost Control Board.
- Reduce Cold War legacy environmental footprint by 40 percent, from 900 square miles to 540 square miles, by 2011.

Department of Health and Human Services

Mission: The Department of Health and Human Services' (HHS's) mission is to enhance the health and well-being of Americans by providing for effective health and human services and by fostering sound, sustained advances in the sciences underlying medicine, public health, and social services.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Department has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.hhs.gov/asrt/ob/docbudget/index.html.

- Access to Early Care and Education Programs for Low-Income Children: By the end of 2010, increase the number of low-income children receiving Federal support for access to high quality early care and education settings including an additional 64,000 children in Head Start and Early Head Start and an average of 10,000 additional children per month through the Child Care and Development Fund (CCDF) over the number of children who were enrolled in 2008.
- Quality in Early Care and Education Programs for Low-Income Children: Take actions in 2010 and 2011 to strengthen the quality of early childhood programs by advancing recompetition, implementing improved performance standards and improving training and technical assistance systems in Head Start; promoting community efforts to integrate early childhood services; and by expanding the number of States with Quality Ratings Improvement Systems that meet high quality benchmarks for Child Care and other early childhood programs developed by HHS in coordination with the Department of Education.

- **Medicaid and Children’s Health Insurance Program:** Broaden availability and accessibility of health insurance coverage through implementation of the Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA) legislation, by increasing CHIP enrollment by over 7 percent above the 2008 baseline by the end of 2011 (from 7,368,479 children to 7,884,273 children).
- **Food Safety:** By the end of 2011, decrease by 10 percent from the 2005-2007 average baseline, all of the following: the rate of sporadic *Salmonella Enteritidis* (SE) illnesses in the population; the number of SE outbreaks; and, the number of SE cases associated with outbreaks.¹
- **Tobacco - Supportive Policy and Environments:** By the end of 2011, increase to 75 percent² the percentage of communities funded under the Communities Putting Prevention to Work (CPPW) program that have enacted new smoke-free policies and improved the comprehensiveness of existing policies.
- **Primary Care:** By the end of 2011, increase access to primary health care by increasing the Field Strength of the National Health Service Corps (NHSC) to 8,561³ primary care providers. This is in contrast to the 2008 field strength of 3,601.
- **Emergency Preparedness - Incident Command Structure:** By 2011, increase the percentage of State public health agencies that can convene within 60 minutes of notification a team of trained staff that can make decisions about appropriate response and interaction with partners to 96 percent. (CDC, 2007 Baseline: 84 percent).
- **Health Information Technology (HIT):** By the end of 2011, establish the infrastructure necessary to encourage the adoption and meaningful use of Health Information Technology by:
 - Establishing a network of 70 Regional Extension Centers by the end of 2010.
 - Registering 30,000 providers to receive services from Regional Extension Centers by end of 2010.
 - Registering 100,000 providers to receive services from Regional Extension Centers by end of 2011.
 - Achieving 20 percent adoption of EHRs among providers working with Regional Extension Centers by end of 2011.
- **Biomedical Research:** By 2011, reduce the fully-loaded cost of sequencing a human genome to \$25,000.

¹Targets will be reevaluated after actual data is provided for 2009.

²This target may be adjusted once the actual CPPW-funded communities have been selected in February 2010.

³The target of 8,561 assumes the 2010 Appropriation figure of \$100.797 million for the National Health Service Corps Recruitment line and the 2011 President’s Budget Request of \$122.588 million. If the Congress were to provide less funding in 2011, the target would need to be adjusted accordingly.

Department of Homeland Security

Mission: The Department of Homeland Security (DHS) has identified six goals that are based on operational missions defined by the Secretary’s Priorities. In addition, the Department has provided two additional goals focused on the Secretary’s Priority of Maturing and Strengthening the Homeland Security Enterprise. When DHS speaks of the “Homeland Security Enterprise”, we define it as the collective efforts of Federal, State, local, tribal, territorial non-governmental and private-sector partners—as well as individuals, families and communities—to maintain critical homeland security capabilities.

The five operational missions defined by the Secretary are:

1. Countering terrorism and enhance security
2. Securing and managing our borders
3. Administering and enforcing our immigration laws
4. Safeguarding and security cyberspace
5. Ensuring resilience from disasters

DHS currently has a 5-year strategic plan, a 5-year programming plan (Future Year Homeland Security Plan), as well as an annual performance plan and an annual performance report on Department progress. The Department will develop a new strategic plan based on these new priorities established by the Secretary.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, DHS identified this set of high priority performance goals that will be a particular focus over the next two years. These goals have been organized around the priority areas identified above. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit: http://www.dhs.gov/xabout/budget/gc_1214235565991.shtm.

Countering terrorism and enhancing security

- Improve security screening of transportation passengers, baggage, and employees while expediting the movement of the traveling public (aviation security).
 - Passenger and Baggage Security Screening Results (classified measures).
 - Wait times for aviation passengers (Target: Less than 20 minutes by 2012).
- Improve security screening of transportation passengers, baggage, and employees while expediting the movement of the traveling public (surface transportation security).
 - Percent of mass transit and passenger rail agencies that have effectively implemented industry agreed upon Security and Emergency Manage-

ment Action items to improve security (Target: 75 percent by 2012).

Securing and managing our borders

- Prevent terrorist movement at land ports of entry through enhanced screening while expediting the flow of legitimate travel.
 - Achieve 97 percent compliance with Western Hemisphere Travel Initiative.
 - Complete deployment of WHTI facilitative technology to low volume land ports of entry.
 - Improve the land border Law Enforcement Query Rate to 95 percent.
 - Increase the RFID document utilization rate to 25 percent.

Administering and enforcing our immigration laws

- Improve the efficiency of the process to detain and remove illegal immigrants from the United States.
 - Increase the number of dangerous criminal aliens removed by four percent per year.
 - Decrease the number of days spent in custody by criminal aliens before they are removed from the United States from 43 to 41 days in 2010.
- Improve the delivery of immigration services
 - Percent of USCIS workload adjudicated electronically. (Target: 40 percent by Q4 2011).
 - Percent of Solution Architect deliverables delivered on time. (Target: 100 percent).
 - Project milestones completed within 10 percent of cost, schedule, and performance goals.

Ensuring resilience from disasters

- Strengthen disaster preparedness and response by improving FEMA's operational capabilities and strengthening State, local and private citizen preparedness.
 - Increase the capacity to provide temporary housing to disaster survivors by 200 percent.
 - Improve to 90 percent the percentage of shipments arriving with the requested materials at the requested location by the validated/agreed upon delivery date.
 - Improve to 95 percent the percentage of respondents reporting they are better prepared to deal with disasters and emergencies as a result of training.

Maturing and Strengthening the Homeland Security Enterprise

- Mature and unify the Homeland Security Enterprise through effective information sharing.
 - Increase the percentage of information sharing agreements that allow for the sharing of information across all components of DHS by 85 percent.

- Improve Acquisition Execution Across the DHS Acquisition Portfolio, by ensuring Key Acquisition Expertise resides in Major Program Office and Acquisition Oversight Staffs throughout the Department.
 - Increase from 45 percent to 60 percent the major acquisition projects that do not exceed 10 percent of cost / schedule / performance objectives.

Department of Housing and Urban Development

Mission: The mission of the Department of Housing and Urban Development (HUD) is to invest in quality, affordable homes and build strong, safe, healthy communities for all.

High Priority Performance Goals

HUD develops a 5-year strategic plan, as well as an annual performance plan and annual report on our progress. As part of developing the 2011 Budget and performance plan, HUD has also identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit: <http://www.hud.gov/offices/cfo/reports/cforept.cfm>.

- Foreclosure Prevention
 - Assist three million homeowners who are at risk of losing their homes due to foreclosure.
 - 200,000 homeowners will be assisted through FHA programs.
 - 400,000 homeowners will be assisted through third-party lender loss mitigation initiatives mandated by FHA but not receiving FHA subsidy.
 - 2.4 million homeowners will be assisted through joint HUD-Treasury programs.
 - For all FHA borrowers that become 30 days late, achieve a Consolidated Claim Workout (CCW) Ratio⁴ of 75 percent, representing a 10 percentage point improvement over current levels, and for those receiving a CCW achieve a six month re-default rate⁵ of 20 percent or less, representing a five percentage point reduction from current levels.
- Rental Assistance: By the end of 2011, HUD programs will meet more of the growing need for affordable rental homes by serving 5.46 million families, 207,000 more than in 2009.

⁴ CCWs combine FHA partial claims, loan modifications and new HAMP modifications that represent affordable solutions, but exclude less affordable forbearance programs.

⁵ Since most re-defaults tend to occur in the first six months after the workout, the six month period was selected to allow measurement of goal performance within a given year.

- **Veteran's Homelessness:** HUD and the Department of Veterans Affairs (VA) will jointly reduce homelessness among veterans.
 - Together, the two agencies will reduce the number of homeless veterans to 59,000 in June, 2012. Without intervention, there would be an estimated 194,000 homeless veterans by June, 2012.
 - Toward this joint goal, HUD is committed to assisting 16,000 homeless veterans each fiscal year to move out of homelessness into permanent housing (6,000 through Continuum of Care programs, and 10,000 in partnership with VA through the HUD-VASH program).
- **DOE and HUD will work together to enable the cost-effective energy retrofits of a total of 1.1 million housing units through 2011.**
 - Of this number, HUD will complete cost-effective energy retrofits of an estimated 126,000 HUD-assisted and public housing units.
 - Apart from our joint energy retrofit goal with DOE, HUD will complete green and healthy retrofits of 33,000 housing units.

Department of the Interior

Mission: The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated Island Communities.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Department has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.doi.gov/ppp/perfreport.html.

- **Renewable Energy Development:** Increase approved capacity for production of renewable (solar, wind, and geothermal) energy resources on Department of the Interior managed lands, while ensuring full environmental review, by at least 9,000 megawatts through 2011.
- **Water Conservation:** Enable capability to increase available water supply for agricultural, municipal, industrial, and environmental uses in the western United States up to 375,000 acre-feet (estimated amount) by the end of 2011 through the bureau's conservation-related programs, such as water reuse and recycling (Title XVI) and Challenge Grants.
- **Safe Indian Communities:** Achieve significant reduction in criminal offenses of at least five percent within 24 months on targeted tribal reservations by implementing a comprehensive strategy involving community policing, tactical deployment, and critical interagency and intergovernmental partnerships.
- **Climate Change:** By 2012, the Department will identify the areas and species' ranges in the U.S. that are most vulnerable to climate change, and begin implementing comprehensive climate change adaptation strategies in these areas.
- **Youth Stewardship:** By the end of 2011, increase by 50 percent (from 2009 levels) the employment of youth between the ages of 15-25 in the conservation mission of the Department.

Department of Justice

Mission: To enforce the law and defend the interests of the United States according to the law, to ensure public safety against threats foreign and domestic, to provide federal leadership in preventing and controlling crime, to seek just punishment for those guilty of unlawful behavior, and to ensure fair and impartial administration of justice for all Americans.

High Priority Performance Goals

The Department of Justice develops a 5-year strategic plan, as well as an annual performance and accountability report on our progress. As part of developing the 2011 Budget and performance plan, the Department of Justice has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit: <http://www.justice.gov/02organizations/bpp.htm>.

- **National Security:** Increase the percentage of total counterterrorism investigations targeting Top Priority threats by five percent by the end of 2011.
- **White Collar Crime:** Increase white collar caseload by five percent concerning mortgage fraud, health care fraud, and official corruption by 2012, with 90 percent of cases favorably resolved.
- **Violent Crime:** Increase agents and prosecutors by three percent, in order to reduce incidents of violent crime in high crime areas by 2012.
- **Immigration:** Increase Immigration Judges by 19 percent by the end of 2011 in order to expeditiously remove/release detained aliens by completing 85 percent of immigration court detained cases within 60 days.
- **Public Safety:** Support 8,900 additional police officers by 2012 via COPS Hiring Programs to promote

community policing strategies that are evidence based.

- **Civil Rights:** Increase the number of persons favorably impacted by resolution of civil rights enforcement cases and matters.
 - By the end of 2011 increase the criminal civil rights caseload by 34 percent with 80 percent of cases favorably resolved.
 - By the end of 2011 increase the non-criminal civil rights caseload by 28 percent, with 80 percent of cases favorably resolved.
 - By the end of 2011 increase the number of complaints finalized by mediation by 10 percent, with 75 percent of mediation complaints successfully resolved.

Department of Labor

Mission: The Department of Labor fosters and promotes the welfare of the job seekers, wage earners, and retirees of the United States by improving their working conditions, advancing their opportunities for profitable employment, protecting their retirement and health care benefits, helping employers find workers, strengthening free collective bargaining, and tracking changes in employment, prices, and other national economic measurements.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Department of Labor has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.dol.gov/dol/aboutdol/main.htm.

- **Workplace Fatalities:** Reduce fatalities resulting from common causes by two percent in Occupational Safety and Health Administration-covered workplaces and by five percent in mining sites per year.
- **Wage Law Enforcement:** Increase the percent of prior violators who remain in compliance with the minimum wage and overtime provisions of the Fair Labor Standards Act (FLSA) to 75 percent in 2011 from 66 percent in 2009.
- **International Labor Laws:** By the end of 2011, improve worker rights and livelihoods for vulnerable populations in at least eight developing country trading partners.
- **Workers' Compensation:** Create a model return-to-work program to reduce lost production day rates by one percent per year and reduce injury and illness rates by at least four percent per year in 2010 and 2011.

- **Worker Job Training:**

- By June 2012, increase by 10 percent (to 220,000) the number of WIA low-skilled adults, dislocated workers, disadvantaged youth; and National Emergency Grant (NEG), Trade Adjustment Assistance (TAA), and Community-Based Job Training (CBJT) program completers who receive training and attain a degree or certificate.
- Train over 120,000 Americans for green jobs by June 2012.

Department of State and USAID

Mission: The shared mission of the U.S. Department of State and the U.S. Agency for International Development (USAID) is to advance freedom for the benefit of the American people and the international community by helping to build and sustain a more democratic, secure, and prosperous world composed of well-governed states that respond to the needs of their people, reduce widespread poverty, and act responsibly within the international system.

High Priority Performance Goals

As part of our 2011 Performance Budget and Annual Performance Plan, the Department and USAID identified a limited number of joint high priority performance goals that reflect both agencies' priorities and will be a particular focus for the two agencies from now through 2011. These goals are a subset of those used to regularly monitor and report performance against our joint strategic plan. To view the full set of performance information please visit www.state.gov and www.usaid.gov.

- **Afghanistan and Pakistan:** Strengthen the host country capacity to effectively provide services to citizens and enhance the long-term sustainability of development efforts by increasing the number of local implementers (government and private) that can achieve a clean audit to clear them to manage civilian assistance funds.
- **Iraq:** Helping the Iraqi people continue to build a sovereign, stable, and self-reliant country as the United States transitions from military to civilian responsibility in Iraq, measured by improvements in security, political, and economic metrics.
- **Global Health:** By 2011, countries receiving health assistance will better address priority health needs of women and children, with progress measured by USG and UNICEF-collected data and indicators. Longer term, by 2015, the Global Health Initiative aims to reduce mortality of mothers and children under five, saving millions of lives, avert millions of unintended pregnancies, prevent millions of new HIV infections, and eliminate some neglected tropical diseases.

- **Climate Change:** By the end of 2011, U.S. assistance will have supported the establishment of at least 20 work programs to develop Low-Carbon Development Strategies (LCDS) that contain measurable, reportable, and verifiable actions. This effort will lay the groundwork for at least 30 completed LCDS by the end of 2013 and meaningful reductions in national emissions trajectories through 2020.
- **Food Security:** By 2011, up to five countries will demonstrate the necessary political commitment and implementation capacities to effectively launch implementation of comprehensive food security plans that will track progress towards the country's Millennium Development Goal (MDG1) to halve poverty and hunger by 2015.
- **Democracy and Good Governance:** Facilitate transparent, participatory, and accountable governance in 23 priority emerging and consolidating democracies by providing training assistance to 120,000 rule of law professionals, civil society leaders, democratically elected officials, journalists, and election observers over the 24-month period of October 1, 2009 through September 30, 2011.
- **Global Security–Nuclear Nonproliferation:** Improve global controls to prevent the spread of nuclear weapons and enable the secure, peaceful use of nuclear energy.
- **Management–Building Civilian Capacity:** Strengthen the civilian capacity of the State Department and USAID to conduct diplomacy and development activities in support of the Nation's foreign policy goals by strategic management of personnel, effective skills training, and targeted hiring.

Department of Transportation

Mission: The national objectives of general welfare, economic growth and stability, and the security of the United States require the development of transportation policies and programs that contribute to providing fast, safe, efficient, and convenient transportation at the lowest cost consistent with those and other national objectives, including the efficient use and conservation of the resources of the United States.

High Priority Performance Goals

The Department of Transportation (DOT) develops a 5-year strategic plan, as well as annual performance plans in its budget submission to Congress and an annual performance report on our progress. As part of developing the 2011 Budget and performance plan, the Department of Transportation has also identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance.

To view the full set of performance information please visit: http://www.dot.gov/about_dot.html#perfbudgplan.

- **Reduce the Highway Fatality Rate:** Reduce the rate of highway fatalities to 1.13 – 1.16 per 100 million vehicle miles traveled by the end of 2011, through a variety of initiatives aimed at drivers, improved road design, and the use of technology to improve safety. DOT will revisit this target once it has had the opportunity to research the effects of the recession on vehicle miles traveled and more completely understand the effect of new technology, safety standards, and demographic trends on passenger survival in an accident.
- **Limit the Rate of Aviation Risks on Runways:** Reduce the risk of accidents during aircraft departures and landings by reducing the number of runway incursions five percent from the 2008 baseline by the end of 2011.
- **Improve Rail Transit Industry Focus on Safety Vulnerabilities:**
 - Improve State Safety Oversight programs' compliance with existing requirements by the end of the third quarter of 2010.
 - Form a compliance advisory committee, in accordance with the Federal Advisory Committee Act, to provide input on potential future regulation by the end of 2010.
 - Complete at least three workshops and training on transit asset management, including a focus on safety critical assets by the end of 2010.
- **Establish High Speed Rail Capability:** Increase the Nation's ability to develop high speed intercity passenger rail.
 - Obligate or issue a Letter of Intent to obligate 100 percent of funds to selected grantees by the end of 2011.

Department of the Treasury

Mission: Maintain a strong economy and create economic and job opportunities by promoting the conditions that enable economic growth and stability at home and abroad, strengthen national security by combating threats and protecting the integrity of the financial system, and manage the U.S. Government's finances and resources effectively.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan the Department of the Treasury has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.treas.gov/offices/management/budget/planningdocs/.

- Repair and reform the financial system
 - Complete up to four million trial mortgage loan modifications by December 31, 2012.
 - Implement strong, comprehensive regulatory reform to restore stability and accountability to the financial system.
 - Establish a new Financial Services Oversight Council of financial regulators to identify emerging systemic risks and improve interagency cooperation.
 - Indicator: Mortgage interest rates.
 - Indicator: Cost of credit to businesses.
 - Indicator: Consumer Asset-Backed Securities (ABS) issuance.
 - Indicator: Chicago Federal Reserve Bank's National Activity Index, 3-Month Moving Average (CFNAI-MA3).
- Increase voluntary tax compliance
 - Make progress against the Tax Gap through improved service and enhanced enforcement of the tax laws:
 - Achieve over four million document matching closures in a year in 2011 (where IRS information does not match taxpayer reported information).
 - Implement the new Customer Account Data Engine database and processing platform by December 2011, doubling the number of taxpayers receiving refunds on a five-day cycle.
 - Assist Americans in voluntarily meeting their tax obligations:
 - Increase individual income tax filers' American Customer Satisfaction Index to 69 percent.
 - Improve telephone level of service to at least 75 percent by the end of 2011.
- Significantly increase the number of paperless transactions with the public
 - Increase electronic payment, collections, and savings bonds transactions by 33 percent by the end of 2011.
 - Increase individual E-file rate to 81 percent.

Department of Veterans Affairs

Mission: The Department of Veterans Affairs (VA) is responsible for a timeless mission: "To care for him who shall have borne the battle, and for his widow, and his orphan"—by serving and honoring the men and women who are America's Veterans.

High Priority Performance Goals

VA identified five high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and

report performance as part of developing the 2011 Budget and performance plan. To view our most recent annual performance report, please visit <http://www4.va.gov/budget/report/>.

- In conjunction with HUD, reduce the homeless veteran population to 59,000 by June 2012 on the way to eliminating veteran homelessness.
- Build and deploy an automated GI Bill benefits system to speed tuition and housing payments for all eligible veterans by December 2010.
 - By the end of 2011, reduce the average number of days to complete original Post-9/11 GI Bill education benefit claims to 18 days.
- Implement a 21st Century paperless claims processing system by 2012 to ultimately reduce the average disability claims processing time to 125 days.
- Create the next generation of electronic record system—Virtual Lifetime Electronic Record (VLER) by 2012. This interagency initiative will create a more effective means for electronically sharing health and benefits data of service members and veterans.
 - By the end of 2011, at least three sites will be capable of bi-directional information exchange between VA, the Department of Defense, and the private sector.
 - The prototyping and pilot phases will be completed by 2012.
- Improve the quality, access, and value of mental health care provided to veterans by December 2011.
 - By the end of 2011, 96 percent of mental health patients will receive a mental health evaluation within 15 days following their first mental health encounter.
 - By the end of 2011, 97 percent of eligible patients will be screened at required intervals for Post Traumatic Stress Disorder.
 - By the end of 2010, 97 percent of all eligible patients will be screened at required intervals for alcohol misuse, and 96 percent will be screened for depression.
- Deploy a Veterans Relationship Management (VRM) Program to improve access for all Veterans to the full range of VA services and benefits by June 2011.
 - By the end of 2010, implement call recording, national queue, transfer of calls and directed voice and self help.
 - By the end of 2010, enhance transfers of calls among all Veterans Benefits Administration lines of business with capability to simultaneously transfer callers' data.
 - By the end of 2010, pilot the Unified Desktop within Veterans Benefits Administration lines of businesses to improve call center efficiency.

Army Corps of Engineers—Civil Works

Mission: The civil works program develops, manages, and restores water resources, with a focus on its three main mission areas, which are: 1) commercial navigation; 2) flood and storm damage reduction; and 3) aquatic ecosystem restoration. The Corps, working with other Federal agencies, also helps communities respond to and recover from floods and other natural disasters.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Corps has identified four high priority performance goals to focus on over the next two years. These goals are a subset of those that it uses internally to monitor and report project and program performance. To view our performance-related information, please visit <http://www.usace.army.mil/CECW/Pages/fpi.aspx>.

- **Aquatic Ecosystem Restoration and Regulatory Program:** Provide sustainable development, restoration, and protection of the Nation's water resources by restoring degraded habitat on 10,300 acres in the Aquatic Ecosystem Restoration program by the end of 2011, which would result in an increase of 17 percent over the total acreage estimated to have been restored during 2005-2010, and achieving no net loss of wetland function through avoidance and mitigation in the Regulatory Program.
- **Flood Risk Management:** Reduce the Nation's risk of flooding that damages property and places individuals at risk of injury or loss of life. Metrics include:
 - Reduced risk of damage to property (Cumulative damages prevented)
 - 2006-2009: \$122 million; 2010: \$150 million; 2011: \$174 million.
 - Reduced risk to life and safety (Cumulative increase in the number of people offered protection)
 - 2006-2009: 908 thousand people; 2010: 945 thousand people; 2011: 2.77 million people.

This goal reflects the estimated cumulative flood damage reduction benefits (starting from 2006) resulting from completing construction of projects in 2010 or 2011. These first metric's targets are based on projected milestones of an additional \$28 million of property with a reduced risk of damage in 2010 and another \$24 million in 2011. The second metric's targets reflect project milestones of an additional 37 thousand people and another 1.823 million people offered protection in 2010 and 2011 respectively.

In addition, for those completed projects, the Corps also will track overall project implementation performance by identifying variances in schedule and cost between the actual results and the initial estimates as adjusted for inflation, as

well as documenting the causes of such variances. This will enable the Corps to better develop future project cost estimates and implementation schedules with the goal of keeping cost and schedule variance to no more than 10 percent.

- **Commercial Navigation—Help facilitate commercial navigation by providing safe, reliable, highly cost-effective, and environmentally sustainable waterborne transportation systems.**

Primary metric, inland navigation program: The number of instances where mechanically driven failure or shoaling results in the closure of a high or moderate commercial use segment anywhere in the Nation for a defined period of time. The Corps will measure overall program performance based on its ability over time to reduce both the number of preventable closures that last longer than 24 hours, as well as the number of preventable closures that last longer than one week. Using these measures, the Corps will aim to achieve a level of performance each year that is as good as the median level of annual performance over the past three years (from 2007—2009). The Corps will only count preventable closures (i.e., not closures due to low water levels from droughts, high water levels from floods, or accidents) caused by: (1) a failure on the main chamber of a lock, rather than an auxiliary chamber; or (2) shoaling due to inadequate dredging.

- **Hydropower Program—Increase the Hydropower program's performance metric of average peak unit availability for 353 generating units from the 2009 level of 88 percent to 90 percent by 2011. This will move the Corps closer to the industry standard level, which is 98 percent.**

Environmental Protection Agency

Mission: The mission of the Environmental Protection Agency (EPA) is to protect human health and to safeguard the natural environment—air, water and land—upon which life depends.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, EPA has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.epa.gov/ocfo/par/2009par/.

- EPA will improve the country's ability to measure and control Green House Gas (GHG) emissions. Building a foundation for action is essential.
 - By June 15, 2011, EPA will make publically available 100 percent of facility-level GHG emissions

data submitted to EPA in compliance with the GHG Reporting Rule.

- In 2011, EPA working with DOT will begin implementation of regulations designed to reduce the GHG emissions from light duty vehicles sold in the U.S. starting with model year 2012.
- Clean water is essential for our quality of life and the health of our communities. EPA will take actions over the next two years to improve water quality.
 - All Chesapeake Bay watershed States (including the District of Columbia) will develop and submit approvable Phase I watershed implementation plans by the end of CY 2010 and Phase II plans by the end of CY 2011 in support of EPA's final Chesapeake Bay Total Maximum Daily Load (TMDL).
 - By the end of 2011, increase the percent of federal CWA discharge permit enforcement actions that reduce pollutant discharges into impaired waterways from 20 percent (2009 baseline) to 25 percent, and promote transparency and right-to-know by posting results and analysis on the web.
 - EPA will initiate over the next two years, at least four drinking water standard reviews to strengthen public health protection.
- EPA will ensure that environmental health and protection is delivered to our communities.
 - By 2012, EPA will have initiated 20 enhanced Brownfields community level projects that will include a new area-wide planning effort to benefit under-served and economically disadvantaged communities. This will allow those communities to assess and address multiple Brownfields sites within their boundaries, thereby advancing area-wide planning and cleanups and enabling redevelopment of Brownfields properties on a broader scale than on individual sites. EPA will provide technical assistance, coordinate its enforcement, water and air quality programs, and work with other Federal agencies, States, tribes and local governments to implement associated targeted environmental improvements identified in each community's area-wide plan.

National Aeronautics and Space Administration

Mission: The National Aeronautics and Space Administration (NASA) drives advances in science, technology, and exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of the Earth.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, NASA has identified a limited number of high priority performance goals that will be a particular focus over the next two years. The Agency will be establishing one or more additional goals in the months ahead for its hu-

man space programs. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit: www.nasa.gov/news/budget/index.html.

- Aeronautics Research: Increase efficiency and throughput of aircraft operations during arrival phase of flight.
 - By September 2012, NASA will deliver a Technology Transition Document to the FAA. The goal is to conduct demonstration field tests of a NASA-developed technology that can reduce airliner flight time, fuel consumption, noise and emissions. Delivering complete documentation of the demonstration supports a process for potential deployment of this technology by the FAA.
- Earth Science: NASA will make significant progress towards completion of the integration, test, launch, validation and initiation of early orbit operations of the Aquarius, Glory and NPOESS Preparatory Project (NPP) missions prior to the end of Fiscal Year 2011.
 - Aquarius: By February 2011, conduct "In-Orbit Checkout" (60 days post launch).
 - Glory: By January 2011, complete the Glory Transition Review.
 - NPP: By April 2011, complete the NPP Operational Handover Review.

These milestones indicate when each mission is expected to become operational. The delays thus far for these missions represent an unplanned cost burden to NASA as well as lost opportunity in collecting essential data that supports major scientific assessments for climate change.

- Education and Future Workforce Preparation: Increase annually the percentage of NASA higher education program student participants employed by NASA, aerospace contractors, universities, and other educational institutions.
 - In 2010 the target is to achieve a 60 percent conversion to the workforce of students who receive a degree and meet the threshold for funding/contact hour investments by NASA. The current actions and measures within this goal are intended to improve the means through which higher education program managers can increase the percentage of students hired into the NASA, aerospace, and Science, Technology, Engineering, and Mathematics (STEM) education workforce.
- Energy Management: Ensure a sustainable infrastructure by reducing Agency energy intensity use.
 - For facility energy use, the target is 30 percent reduction in energy intensity Btu/gsf by the end of 2015 (from a 2003 baseline, reduce energy three percent per year for 2006-2015).

- For fleet vehicle energy use, the target is 30 percent reduction in fleet total consumption of petroleum products by the end of 2020 (two percent per year from a 2005 baseline).
- For potable water use, the target is 26 percent reduction in water intensity gal/gsf by the end of 2020 (two percent per year from a 2007 baseline).

National Science Foundation

Mission: The National Science Foundation (NSF) promotes the progress of science, engineering, and education for the common good. The National Science Foundation carries out its mission by investing in the best ideas generated by scientists, engineers and educators working at the frontiers of knowledge, and across all fields of research and education.

High Priority Performance Goals

As part of developing the 2011 budget and performance plan, NSF has identified a high priority performance goal focused on evidence-based approaches to our Science, Technology, Engineering, and Mathematics (STEM) workforce development programs that will be a particular focus over the next two years. In addition to this high priority performance goal, there are a number of other goals used to regularly monitor and report performance. To view the full set of performance information please visit www.nsf.gov/about/performance/.

- Improve the education and training of an innovative Science, Technology, Engineering, and Mathematics (STEM) workforce through evidence-based approaches that includes collection and analysis of performance data, program evaluation and other research.
- By the end of 2011, at least six major NSF STEM workforce development programs at the graduate/postdoctoral level have evaluation and assessment systems providing findings leading to program re-design or consolidation for more strategic impact in developing STEM workforce problem solvers, entrepreneurs, or innovators.

Small Business Administration

Mission: The Small Business Administration (SBA) was established in 1953 to “aid, counsel, assist and protect, insofar as is possible, the interests of small business concerns.” The charter also stipulated that SBA would ensure small businesses a “fair proportion” of Government contracts and sales of surplus property. SBA’s mission is to maintain and strengthen the Nation’s economy by enabling the establishment and vitality of small businesses and by assisting in the economic recovery of communities after disasters.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, SBA has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.sba.gov/aboutsba/budgetsplans/index.html.

- Lending: Expand access to capital by increasing the number of active SBA lending partners for the 7(a) loan program to 3,000 by September 30, 2011, a 15 percent increase over the 2008 and 2009 average. The SBA will increase its outreach to lending partners so that small business owners will have increased access to capital. The foundation for the initiative is the Office of Capital Access which oversees the SBA lending programs. Additionally, the primary contacts for these lenders are the staff in the Office of Field Operations’ 68 district offices around the country. Other SBA resources will play a role in promoting and achieving this goal.
- Contracting: Increase small business participation in Federal Government contracting to meet the statutory goals and reduce participation by ineligible firms. Congress has mandated that small businesses should receive 23 percent of Federal Government prime contracts and has set separate goals for other subsets of the small business community. The SBA’s Office of Government Contracting and Business Development will play a lead coordinating role in helping each Federal agency reach the specific goals, and other SBA resources will play a role in promoting contracting opportunities to small business owners.
- Disaster Assistance: Process 85 percent of home loan applications within 14 days and 85 percent of business and EIDL loan applications within 18 days. The SBA’s Office of Disaster Assistance will lead the Agency in overseeing the success of this goal. In addition, the Office of Field Operations, including its 68 offices around the country, will assist with “on the ground” efforts.
- Small Business Innovation Research Program: Improve the SBIR program by 1) deploying an improved data collection and reporting system, including implementing performance metrics, 2) implementing more systematic monitoring for fraud waste and abuse, and 3) improving commercialization from existing program awards.

Social Security Administration

Mission: The Social Security Administration’s (SSA’s) mission is to “deliver Social Security services that meet the changing needs of the public.”

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, the Social Security Administration identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.socialsecurity.gov/asp.

- Increase the Number of Online Applications: By 2012, achieve an online filing rate of 50 percent for retirement applications. In 2011, SSA's goal is to:
 - Achieve 44 percentage of total retirement claims filed online.
 - Additionally, achieve 27 percentage of total initial disability claims filed online.
- Issue More Decisions for People Who File for Disability: SSA will work towards achieving the Agency's long-term outcomes of lowering the disability backlogs and accurately processing claims. SSA will also ensure that clearly disabled individuals will receive an initial claims decision within 20 days. Finally, the Agency will reduce the time it takes an individual to receive a hearing decision to an average of 270 days by 2013. In order to efficiently issue decisions in 2011, SSA's goal is to:
 - Process 3.317 million out of a universe of 4.316 million initial disability claims.
 - Achieve 6.5 percent of initial disability cases identified as a Quick Disability Determination or a Compassionate Allowance.
 - Process 799,000 out of a universe of 1.456 million hearing requests.
- Improve SSA's Customers' Service Experience on the telephone, in field offices, and online: To alleviate field office workloads and to provide the variety of services the public expects, SSA will improve telephone service on the national 800-number and in the field offices. By 2011, SSA's goal is to:
 - Achieve an average speed of answer of 264 seconds by the national 800-number.
 - Lower the busy rate for national 800-number calls from eight percent to seven percent.
 - Raise the percent of individuals who do business with SSA rating the overall services as "excellent," "very good," or "good" from 81 percent in 2009 to 83.5 percent.
- Ensure Effective Stewardship of Social Security Programs by Increasing Program Integrity Efforts: SSA will improve program integrity efforts by minimizing improper payments and strengthening the Agency's efforts to protect program dollars from waste, fraud, and abuse. In 2011, SSA's goal is to:
 - Process 359,800 out of a total of approximately 2 million medical continuing disability reviews, an increase of 9.4 percent over 2010.

- Process 2.422 million supplemental security income non-disability redeterminations in 2011.

General Services Administration

Mission: The General Services Administration (GSA) leverages the buying power of the Federal Government to assure value for taxpayers and our customers.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, GSA has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.gsa.gov/annualreport.

- Further green the GSA Fleet inventory and that of its largest customer, the U.S. Army, by collaborating to provide 1,000 Low Speed Electric Vehicles (LSEV) by September 30, 2011.
- Provide agile technologies and expertise for citizen-to-Government interaction that will achieve unprecedented transparency and build innovative solutions for a more effective, citizen-driven Government.
 - Create three readiness assessments and criteria-based tool selection guidance by April 15, 2010.
 - Provide assistance to other Federal agencies in conducting six dialogs by September 30, 2010.
 - Realize 136 million touchpoints (citizen engagements) through Internet, phone, print and social media channels by September 30, 2010.
 - Successfully complete three agency dialogs with the public to better advance successful use of public engagements by September 30, 2010.
 - Train 100 Government employees on citizen engagement in forums, classes and/or webinars that are rated highly successful by participants and linked to agency capability building and successful engagement outcomes by September 30, 2010.
- Identify at least three demonstration projects during 2010 to begin designing toward zero net energy footprint using the principles of Living Building Challenge.

Office of Personnel Management

Mission: The mission of the Office of Personnel Management (OPM) is to recruit, retain, and honor a world-class workforce to serve the American people.

High Priority Performance Goals

As part of developing the 2011 Budget and performance plan, OPM has identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used

to regularly monitor and report performance. To view the full set of performance information please visit www.opm.gov/about_opm/.

- **Hiring Reform:** 80 percent of Departments and major agencies meet agreed upon targeted improvements to:
 - Improve hiring manager satisfaction with applicant quality.
 - Improve applicant satisfaction.
 - Reduce the time it takes to hire.
- **Telework:** Increase by 50 percent the number of eligible Federal employees who telework.
 - By 2011, increase by 50 percent the number of eligible Federal employees who telework over the 2009 baseline of 102,900.
- **Security Clearance Reform:** Maintain or exceed OPM-related goals of the Intelligence Reform and Terrorism Prevention Act of 2004 and provide OPM deliverables necessary to ensure that security clearance reforms are substantially operational across the Federal Government by the end of CY 2010.
- **Retirement Claims Processing:** Reduce the number of retirement records OPM receives that are incomplete and require development to less than 38 percent by the end of 2010, 35 percent by the end of 2011, and 30 percent by the end of 2012.
- **Wellness:** By the end of 2011, every agency has established and begun to implement a plan for a comprehensive health and wellness program which will achieve a 75 percent participation rate.

Cross-Cutting Goals in Support of Executive Order 13514, Federal Leadership in Environmental Energy and Economic Performance

Mission: Because of the size and scale of Federal operations, agency actions to lead by example in shifting to a clean energy economy align with our Nation's energy security priorities. Executive Order 13514 promotes the Administration's policy to increase energy efficiency; measure, report and reduce Federal agencies' greenhouse gas emissions from both direct and indirect activities; conserve and protect water resources; eliminate waste; leverage Federal acquisition to foster markets for sustainable technologies, products and services; design, construct, maintain and operate high performance sustainable buildings in sustainable locations and strengthen the vitality and livability of the communities in which Federal facilities are located.

High Priority Performance Goals

The following high priority performance goals are identified as essential to meeting the Executive Order objectives. Achievement of all of these goals will help enable the Federal Government to meet its Greenhouse Gas Emission reduction target of 28 percent by 2020. Individual agencies will be held accountable for achieving these goals annually through an OMB Scorecard on Energy and Sustainability.

- **Energy Intensity Reduction (Btu/GSF):** All Federal agencies will reduce their energy intensity (in goal-subject facilities) by 30 percent in 2015 as compared to 2003 or three percent annually. At the start of the Administration, the Federal Government had reduced its energy intensity by at least 9.3 percent since 2003 and plans to exceed 18 percent by the end of 2011.
- **Renewable Energy Increase:** All Federal agencies will increase their use of electricity from renewable sources from three percent in 2008 to 7.5 percent by 2013 and at least half of that will come from (new) sources placed in service after 1999.
- **Water Intensity Reduction:** All Federal agencies will reduce their use of potable water by at least 10 percent in 2012 or two percent annually from their 2007 use.
- **Petroleum Reduction:** Federal agencies will reduce their petroleum use in covered fleet vehicles by at least 20 percent by 2015 or two percent annually from 2005 use. Emergency vehicles are excluded from this requirement.
- **Green Buildings:** By 2015, all Federal agencies will have converted at least 15 percent of their buildings inventories to be green as defined by the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings. These buildings will employ integrated design principles, optimize energy efficiency, use renewable energy, protect and conserve water, have improved indoor environmental quality, and reduce the environmental impacts of materials.
- **GHG Emission Reduction:** Agencies will submit their first complete GHG inventory and demonstrate that they are on track to achieve their individual 2020 GHG emission reduction targets.

8. PROGRAM EVALUATION

Empirical evidence is an essential ingredient for assessing whether Government programs are achieving their intended outcomes. Agencies use performance measurement to track progress toward intended program outcomes and to suggest which programs and practices hold the most promise for improving performance and which do not. Performance measurement is a critical tool managers use to improve performance, but often cannot conclusively answer questions about how outcomes would differ in the absence of a program or if a program had been administered in a different way. That is where program evaluations play a critical role.

Good program evaluations help answer questions such as whether workers are safer in facilities that are inspected more frequently, whether one option for turn-

ing around a low-performing school is more effective than another, and whether outcomes for families are substantially improved in neighborhoods that receive intensive services. A central pillar of good government is a culture where answering such questions is a fundamental part of program design and where agencies have the capacity to use evidence to invest more in what works and less in what does not. The Administration has committed to building such an evaluation infrastructure, complementing and integrated with its efforts to strengthen performance measurement and management.

On October 7, 2009, the OMB Director issued Memo M-10-01 “Increased Emphasis on Program Evaluations”, which called for three steps to improve the evaluation capacity of the Federal Government:

Table 8–1. FUNDED PROGRAM EVALUATION INITIATIVE PROPOSALS

Agency	Description
Department of Defense	Effects of locus of control on ChalleNGe program outcomes
Department of Education	Effects of school improvement grants
Department of Education	Effects of Investing in Innovation Fund (i3)
Department of Education/National Science Foundation	Effects of mathematical professional development for teachers
Department of Energy	Capacity building
Department of Health and Human Services	Effects of early childhood programs
Department of Health and Human Services	Effects of teen pregnancy programs
Department of Housing and Urban Development	Effects of rent reform options
Department of Housing and Urban Development	Effects of Family Self-Sufficiency (FSS) options
Department of Housing and Urban Development	Effects of Choice Neighborhoods
Department of Interior	Capacity building
Department of Justice	Effects of inmate re-entry programs
Department of Justice	Capacity building
Department of Labor	Effects of new WIA performance measures
Department of Labor	Effects of employment services
Department of Labor	Evaluation of workforce programs using administrative data
Department of Labor	Effects of training/wage incentives on dislocated workers
Department of Labor	Recidivism and deterrent effects of OSHA inspections
Department of Labor	Capacity building
Millennium Challenge Corporation	Various efforts to improve evaluation efforts
Department of Transportation	Capacity building
Department of the Treasury	Testing alternative mortgage modification strategies
Department of the Treasury	Evaluating financial innovations by CDFIs
Department of the Treasury	Evaluating different approaches to no-fee debit cards
Department of the Treasury	Evaluating VITA prepaid cards
Department of the Treasury	Linking mortgage/administrative data to assess mortgage risk
Environmental Protection Agency	Capacity building
National Aeronautics and Space Administration	Effects of Applied Sciences data sharing
National Science Foundation	Capacity building
National Science Foundation	Effects of Federal investments in science
National Science Foundation/Department of Education	Effects of various STEM education initiatives
Office of Personnel Management	Effects of Federal employee health and wellness initiative
Small Business Administration	Effects of SBA programs
Social Security Administration	Disability Insurance evaluations
Corporation for National and Community Service	Effects of AmeriCorps on training, service, and communities

Providing on-line information about existing evaluations—OMB is working with agencies to make information readily available on-line about all Federal evaluations focused on program impacts that are planned or already underway. This effort, analogous to that of the HHS clinical trial registry and results data bank (*ClinicalTrials.gov*), will promote increased transparency and allow experts inside and outside the Government to engage early in the development of program evaluations.

Establishing an inter-agency working group—Working with the Domestic Policy Council, National Economic Council, the Council of Economic Advisers, and OMB, this inter-agency working group will promote stronger evaluation across the Federal Government by (a) helping build agency evaluation capacity and creating effective evaluation networks that draw on the best expertise inside and outside the Federal Government, (b) sharing best practices from agencies with strong, independent evaluation offices and making research expertise available to agencies that need assistance in selecting appropriate research designs in different contexts, (c) devising new and creative strategies for using data and evaluation to drive continuous improvement in program policy and practice, and (d) developing Government-wide guidance on program evaluation practices with sufficient flexibility for agencies to adopt practices suited to their specific needs.

Launch a new evaluation initiative—The Budget allocates approximately \$100 million to 17 agencies that submitted proposals requesting funding either to conduct new evaluations with strong study designs that address important, actionable questions or to strengthen agency capacity to support such strong evaluations. Agencies that submitted proposals also needed to demonstrate that their 2011 funding priorities are based upon credible empirical evidence—or a plan to collect that evidence—and to identify impediments to rigorous program evaluation in their statutes or regulations so that these might be addressed going forward.

The evaluation initiative included an extensive review process, with proposals reviewed by program examiners at OMB and evaluation experts at OMB and the Council of Economic Advisers. Agencies then had a series of meetings with OMB and the Council of Economic Advisers to sharpen their proposals. Going forward, OMB and the Council of Economic Advisers plan to continue to work with these agencies on implementing strong research designs that answer important questions.

The accompanying table presents the evaluation activities proposed for funding as part of the 2011 evaluation initiative. Evaluations are also being undertaken separate from this initiative and part of the purpose of making information on all evaluations available on-line is to develop a comprehensive accounting of all such activity being conducted by the Federal Government.

The President has made it very clear that policy decisions should be driven by evidence—evidence about what works and what does not and evidence that identifies the greatest needs and challenges. As an example of this, the Administration has made investments in equality of opportunity an important part of its agenda. Yet there are

many ways to make such investments, such as improving K-12 education, increasing aid for college, increasing training opportunities, and providing greater income support for low-income families. The Administration has chosen to invest in many of those areas, but has made a concerted effort to increase investments in early childhood education and home-visiting programs that are backed by strong evidence—because rigorous evidence suggests that investments in those areas have especially high returns.

One of the challenges to doing evidence-based policy making is that sometimes it is hard to say whether a program is working well or not. Historically, evaluations have been an afterthought when programs are designed—and once programs have been in place for a while it can be hard to build a constituency for a rigorous evaluation.

For that reason, for new initiatives, the Administration is using a three-tiered approach. First, more money is proposed for promoting the adoption of programs and practices that generate results backed up by strong evidence. Second, for an additional group of programs with some supportive evidence but not as much, additional resources are allocated on the condition that the programs will be rigorously evaluated going forward. Over time, the Administration anticipates that some of these programs will move to the top tier, but if not their funds will be directed to other, more promising efforts. Third, the approach encourages agencies to innovate and to test ideas with strong potential—ideas supported by preliminary research findings or reasonable hypotheses.

This three-tiered structure will provide objective criteria to inform decisions about programs and practices in which to invest. It will also create the right incentives for the future. Organizations will know that to be considered for significant funding, they must provide credible evaluation results that show promise, and, before that evidence is available, to be ready to subject their models to analysis. As more models move into the top tier, it will create pressure on all the top-tier models to improve their effectiveness to continue to receive support.

A good example of this approach—in which new or expanded programs have evaluation “baked into their DNA”—is the Department of Education’s Invest in Innovation Fund (i3). The i3 fund invests in high-impact, potentially transformative education interventions—ranging from new ideas with huge potential to those that have proven their effectiveness and are ready to be scaled up. Whether applicants to i3 are eligible for funding to develop, validate, or scale up their program, and therefore how much funding they are eligible to receive, will depend on the strength of the existing research evidence of the program’s effectiveness, the magnitude of the impact this evidence demonstrates the program is likely to have, and the program’s readiness for scaling up.

By instilling a culture of learning into Federal programs, the Administration can build knowledge so that spending decisions are based not only on good intentions, but also on strong evidence, so that carefully targeted investments will produce results.

9. BENEFIT-COST ANALYSIS

I. INTRODUCTION

Federal Government policies and programs make use of our Nation's limited resources to achieve important social goals, including education, security, environmental protection, and public health. Many Federal programs require governmental expenditures, such as those funding early childhood education or job training. Moreover, many policies entail social expenditures that are not reflected in budget numbers. For example, environmental and workplace safety regulations impose compliance costs on the private sector. In all cases, the American people expect the Federal Government to design programs and policies to manage and allocate scarce fiscal resources prudently, and to ensure that programs achieve the maximum benefit to society and do not impose unjustified or excessive costs.

A crucial tool used by the Federal Government to achieve these objectives is benefit-cost analysis, which

provides a systematic accounting of the social benefits and costs of Government policies. As the President recently said in Executive Order 13514, "It is . . . the policy of the United States that . . . agencies shall prioritize actions based on a full accounting of both economic and social benefits and costs and shall drive continuous improvement by annually evaluating performance, extending or expanding projects that have net benefits, and reassessing or discontinuing under-performing projects." The benefits and costs of a government policy are meant to offer a concrete description of the anticipated consequences of the policy. Such an accounting enables policymakers to design programs to be efficient and effective and to avoid unnecessary or unjustified burdens. That accounting also allows the American people to see the expected consequences of programs and to hold policymakers accountable for their actions.

II. BENEFIT-COST ANALYSIS OF FEDERAL REGULATIONS

Overview of Benefit-Cost Analysis of Federal Regulation

For over three decades, benefit-cost analysis has played a critical role in the evaluation and design of significant Federal regulatory actions. While there are precursors in earlier administrations, the Reagan Administration was the first to establish a broad commitment to benefit-cost analysis in regulatory decision making through its Executive Order 12291. The Clinton Administration updated the principles and processes governing regulatory review in Executive Order 12866, which continues in effect today. Executive Order 12866 requires executive agencies to catalogue and assess the benefits and costs of planned significant regulatory actions. It also requires agencies to undertake regulatory action only on the basis of a "reasoned determination" that the benefits justify the costs, and to choose the regulatory approach that maximizes net social benefits, that is, benefits minus costs (unless the law governing the agency's action requires another approach).

A notable change instituted by Executive Order 12866 was a more expansive conception of benefits and costs to include consideration of qualitative benefits and costs that are difficult to monetize but essential to consider, such as the value of protecting endangered species. Executive Order 12866 also calls for explicit consideration of "distributive impacts," that is, of which social groups bear

costs and enjoy benefits. Operating under the broad framework established by Executive Order 12866, OMB requires careful analysis of the costs and benefits of significant rules; identification of the approach that maximizes net benefits; detailed exploration of reasonable alternatives, alongside assessments of their costs and benefits; cost-effectiveness; and attention to unquantifiable benefits and costs as well as to distributive impacts.

Reviewing agencies' benefit-cost analyses and working with agencies to improve them, OMB provides a centralized repository of analytical expertise in its Office of Information and Regulatory Affairs (OIRA). OMB's guidance to agencies on how to do benefit-cost analysis for proposed regulations is contained in its Circular A-4. A-4 directs agencies to specify the goal of a planned regulatory intervention, to consider a range of regulatory approaches for achieving that goal, and to estimate the benefits and costs of each alternative considered. To the extent feasible, agencies are required to monetize benefits and costs, so that they are expressed in comparable units of value. This process enables the agency to identify the approach that maximizes the total net benefits to society generated by the rule.

For example, consider a regulation that sets standards for how quickly a truck's brakes must be able to bring it to a stop.¹ A shorter stopping distance generates great-

¹ The National Highway Traffic Safety Administration recently issued a new safety standard for air brake systems to improve the stopping distance performance of trucks. See 49 CFR § 571.

er safety benefits, but will also impose larger compliance costs if more effective brakes are more expensive. The agency should attempt to quantify both the safety benefits of reduced stopping distance and the costs of regulatory requirements. It should consider a range of stopping distances to determine the optimal one that maximizes net benefits. At such an optimal standard, making the stopping distance even shorter would impose greater additional compliance costs than it would generate in additional safety benefits. At the same time, making the stopping distance longer than optimal results in a loss in safety benefits that is greater than the cost savings. Careful benefit-cost analysis enables the agency to determine the optimal standard. It helps to show that some approaches would be insufficient and that others would be excessive.

To be sure, quantification of the relevant variables, and monetization of those variables, can present serious challenges. OIRA and relevant agencies have developed a range of strategies for meeting those strategies; many of them are sketched in Circular A-4. Efforts continue to be made to improve current analyses and to disclose and test

their underlying assumptions. In some cases, identification of costs and benefits will leave significant uncertainties. But in other cases, an understanding of costs and benefits will rule out some possible courses of action, and will show where, and why, reasonable people might differ.

The Benefits and Costs of Federal Regulation in FY 2008

Each year, OMB reports to Congress agencies' estimates of the benefits and costs of major regulations reviewed in the prior fiscal year. Table 9–1 presents the benefit and cost estimates for the 21 non-budgetary rules reviewed by OMB in FY 2008.² Agencies monetized both the benefits and costs for 13 of the 21 rules.

² FY 2008 is the most recent period for which such a summary is available. These estimates were reported in OMB, 2009 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. A detailed description of the assumptions and calculations underlying these estimates is provided in that Report.

Table 9–1 ESTIMATES OF THE TOTAL ANNUAL BENEFITS AND COSTS OF MAJOR RULES REVIEWED BY OMB IN FISCAL YEAR 2008
(In millions of 2001 dollars)

Rule	Agency	Benefits	Costs
Right Whale Ship Strike Reduction	DOC / NOAA	Not estimated	105
Energy Efficiency Standards for Residential Furnaces and Boilers	DOE / EE	120-182	33-38
Fire Safety Requirements for Long-Term Care Facilities: Sprinkler Systems (CMS-3191-F)	HHS / CMS	53-56	45-56
Group Health Plans and Health Insurance Issuers Under the Newborns' and Mothers' Health Protection Act	HHS/ CMS, DOL/ EBSA and IRS	Not estimated	119-238
Substances Prohibited from Use in Animal Food or Feed to Prevent the Transmission of Bovine Spongiform Encephalopathy	HHS / FDA	Not estimated	58-72
Changes to the Visa Waiver Program to Implement the Electronic System for Travel Authorization (ESTA) Program	DHS / OS	20-29	13-99
Documents Required for Travelers Entering the United States at Sea and Land Ports-of-Entry from within the Western Hemisphere	DHS / USCBP	Not estimated	268-284
Minimum Standards for Driver's Licenses and Identification Cards Acceptable to Federal Agencies for Official Purposes	DHS / OS	Not estimated	477-1,331
Migratory Bird Hunting; 2008 to 2009 Migratory Game Bird Hunting Regulations	DOI / FWS	711-1002	Not estimated
Section 404 Regulation-Default Investment Alternatives under Participant Directed Individual Account Plans	DOL / EBSA	Not estimated	Not estimated
Employer Payment for Personal Protective Equipment	DOL / OSHA	40-336	40-229
Transport Airplane Fuel Tank Flammability Reduction	DOT / FAA	21-66	60-67
Hours of Service of Drivers	DOT/ FMCSA	0-1760	0-105
Regulatory Relief for Electronically Controlled Pneumatic Brake System Implementation	DOT / FRA	828-884	130-145
Implementation of a Revised Basel Capital Accord	TREAS/OCC and TREAS/OTS	Not estimated	101-797
Control of Emissions from New Locomotives and New Marine Diesel Engines Less Than 30 Liters per Cylinder ¹	EPA / AR	4,145-14,550	295-392
Control of Emissions from Nonroad Spark-Ignition Engines and Equipment ¹	EPA / AR	899-4,762	196-200
Review of the National Ambient Air Quality Standards for Ozone ²	EPA / AR	1,581-14,934	6,676-7,730
Petroleum Refineries--New Source Performance Standards (NSPS) ³	EPA / AR	176-1,669	27
Lead-Based Paint; Amendments for Renovation, Repair and Painting	EPA/ OPPTS	657-1,611	383-417
Definition of Solid Wastes Revisions	EPA / SWER	16-285	14

¹ EPA reported estimated impacts in the years of 2020 and 2030. OMB linearly interpolated the impact for the transition period and annualized at 7 percent and 3 percent from 2007 to 2020, and 2020 to 2030.

² EPA reported estimate impacts in the year 2020.

³ EPA reported estimate impacts in the year 2012.

Most of the benefits and costs reported in Table 9–1 are expressed as ranges, and sometimes as wide ranges, because of uncertainty about the likely consequences of rules. Quantification and monetization raise difficult conceptual and empirical questions. Prospective benefit-cost analysis requires predictions about the future—both about what will happen if the regulatory action is taken and what will happen if it is not—and what the future holds is typically not known for certain. A standard goal of the agency’s analysis is to produce both a central “best estimate,” which reflects the expected value of the benefits and costs of the rule, as well as a description of the ranges of plausible values for benefits, costs, and net benefits. These estimates inform the decision makers and the public of the degree of uncertainty associated with the regulatory decision. The process of public scrutiny can sometimes reduce that uncertainty.

To illustrate some of the underlying issues, consider the EPA’s recent National Ambient Air Quality Standard (NAAQS) for Ozone. The benefits of the rule are estimated to be somewhere between \$1,581–\$14,934 million—an expansive range. Almost all of these estimated benefits are due to reduced mortality resulting from the reduction in particulate matter emissions caused by the rule. However, there is substantial uncertainty with respect to (a) the relationship between exposure to particulate matter and premature death and (b) the proper monetary valuation of avoiding a premature death. Hence, the agency reported a wide range of plausible values for the benefits of the NAAQS for Ozone. Similar uncertainties in both the science used to predict the consequences of rules and the monetary values of those consequences, contribute to the uncertainty represented in the ranges of benefits and costs for other rules in Table 9–1. Despite these uncertainties,

benefit-cost analysis often reduces the range of reasonable approaches – and simultaneously helps to inform the decision about which approach is most reasonable.

As noted, Executive Order 12866 requires agencies, to the extent permitted by law, to “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” OIRA works actively with agencies to promote compliance with this requirement. It is noteworthy that for all but one entry in Table 9–1—Transport Airline Fuel Tank flammability reduction—the benefits exceeded the costs for much of the estimated range. The exception was an unusual rule designed to protect against low-probability disasters in the context of air travel. Acknowledging the uncertainties, the Federal Aviation Administration said that “When modeling discrete rare events such as fuel tank explosions, it is important to understand and evaluate the distribution around the mean value rather than to rely only on a single point estimated value. This variability analysis indicates there is a substantial (23 percent) probability that the quantified benefits will be greater than the costs.” The FAA concluded “that the correct public policy choice is to eliminate the substantial probability of a high consequence fuel tank explosion accident by proceeding with the final rule.”³

Cost-per-life-saved of Health and Safety Regulation in FY 2008

For regulations intended to reduce mortality risks, another analytic tool that can be used to assess regulations is cost-effectiveness analysis. Some agencies develop estimates of the “net cost per life saved” for regulations intended to improve public health and safety. To calculate this figure,

³ 73 Fed. Reg. 42489 (July 21, 2008).

Table 9–2. ESTIMATES OF THE NET COSTS PER LIFE SAVED OF SELECTED HEALTH AND SAFETY RULES REVIEWED BY OMB IN FISCAL YEAR 2008
(in millions of 2001 dollars)

Rule	Agency	Benefits	Costs	Net Cost per Life Saved
Fire Safety Requirements for Long-Term Care Facilities: Sprinkler Systems (CMS-3191-F)	HHS / CMS	53-56	45-56	0.23
Transport Airplane Fuel Tank Flammability Reduction	DOT / FAA	21-66	60-67	8.5 ¹
Control of Emissions from New Locomotives and New Marine Diesel Engines Less Than 30 Liters per Cylinder	EPA / AR	4,145-14,550	295-392	Negative ²
Control of Emissions from Nonroad Spark-Ignition Engines and Equipment	EPA / AR	899-4,762	196-200	0.05 - 0.52 ³
Review of the National Ambient Air Quality Standards for Ozone	EPA / AR	1,581-14,934	6,676-7,730	2.7 - 28 ⁴

Notes:

1. FAA estimates that the net cost per life saved for retrofitting cargo planes (one provision in the rule) is \$31 billion, but for this provision the majority of the benefits are not related to mortality risk.
2. EPA reports “the net costs (private compliance costs minus avoided cost of illness minus other benefits) are negative, indicating that the final standards result in cost savings. As such, traditional cost-effectiveness ratios are not informative.”
3. p. 8-110 of EPA’s RIA at <http://www.epa.gov/otaq/regs/nonroad/marines-equipid/420r08014-chp08.pdf>
4. These estimates exclude the costs and benefits of meeting the standard in the south coast of California and the San Joaquin Valley and assume “aggressive technological change” (RIA, p. ES-5). OMB derived it using the ratio of EPA’s highest net cost estimate over EPA’s lowest estimate of the reduction in mortality risk and EPA’s lowest net cost estimate over EPA’s highest estimate of the reduction in mortality risk.

the costs of the rule minus any monetized benefits other than mortality reduction are placed in the numerator, and the expected reduction in mortality in terms of total number of lives saved is placed in the denominator. This measure avoids any assignment of monetary values to reductions in mortality risk. It still reflects, however, a concern for economic efficiency, insofar as choosing a regulatory option that reduces a given amount of mortality risk at a lower net cost to society would conserve scarce resources compared to choosing another regulatory option that would reduce the same amount of risk at greater net costs.

Table 9–2 presents the net cost per life saved for the five health and safety rules from Table 1 for which calculation is possible.⁴ The net cost per life saved is calculated using a 3% discount rate and using agencies' best estimates for costs and expected mortality reduction where those were provided by the agency. There is substantial varia-

tion in the net cost per life saved by these rules, ranging from *negative* (that is, the non-mortality-related benefits outweigh the costs), to potentially as high as \$28 million.

This table is designed to be illustrative rather than definitive, and continuing work must be done to ensure that estimates of this kind are complete and not misleading. For example, some mortality-reducing rules have a range of other benefits, including reductions in morbidity, and it is important to include these benefits in cost-effectiveness analysis. Other rules have benefits that are exceedingly difficult to quantify but nonetheless essential to consider; consider rules that improve water quality or have aesthetic benefits. Nonetheless, it is clear that some rules are far more cost-effective than others, and it is valuable to take steps to catalogue variations and to increase the likelihood that scarce resources will be used as effectively as possible.

III. BENEFIT-COST ANALYSIS OF BUDGETARY PROGRAMS

Historically, benefit-cost analysis of Federal budgetary programs has been more limited than that of regulatory policy. Increasingly, though, the Federal Government explicitly employs benefit-cost analysis to ensure that projects and spending programs have benefits in excess of costs, maximize net benefits, and allocate federal dollars across potential projects.

In the 1936 Flood Control Act, for example, the Congress stated as a matter of policy that the Federal government should undertake or participate in flood control projects if the benefits exceeded the costs, where the lives and social security of people are at stake. By the late 1970s, the Army Corps of Engineers had begun to use benefit-cost analysis to improve the return on investment at a given project site. The Corps did this by designing projects based on increments of work whose benefits exceeded their costs. More recently, the Budget has used benefits and costs, along with other criteria, to develop an overall program for the Corps that yields the greatest bang for the buck.

Benefit-cost analysis can also be used to evaluate programs retrospectively to determine whether they should be either expanded or discontinued and how they can be

improved. Chapter 8, "Program Evaluation", in this volume discusses current efforts to improve program evaluation including through the use of benefit-cost analysis. Evidence that an activity can yield substantial net benefits has motivated the creation and expansion of a substantial number of programs. For example, longitudinal studies have shown that each dollar spent on high quality pre-school programs serving disadvantaged children yields substantially more than a dollar (in present value) in higher wages, less crime, and less use of public services, motivating an expansion of funding for quality pre-K programs. Similar evidence has motivated the decision to expand funding for nurse family partnerships, finding that each dollar spent in the program leads to more than a dollar of benefits mostly in reduced government expenditures on health care, educational and social services, and criminal justice, and that the highest returns were present in serving the most disadvantaged families. GAO has concluded that the Women, Infants, and Children (WIC) program produces monetary benefits that exceed its costs by reducing the incidence of low birth weight and iron deficiency, which are linked to children's behavior and development.

IV. IMPROVING THE USE OF BENEFIT-COST ANALYSIS BY THE FEDERAL GOVERNMENT

OMB continually works with executive agencies to improve their benefit-cost analyses. In its 2009 annual report to Congress on the benefits and costs of Federal

regulations,⁵ OMB made the following recommendations for improvement in agencies' use of benefit-cost analysis in regulatory decision making. Regulation should be data-driven and evidence-based, and benefit-cost analysis can help to ensure a careful focus on evidence and a thorough consideration of alternative approaches. Properly understood, such analysis should be seen as a pragmatic tool for helping agencies to assess the consequences of regulations and thus to identify approaches that best promote human welfare.⁶ In accordance with Executive

⁴ Of the 21 regulations listed in Table 1, 15 are primarily intended to protect health and safety. These 15 include all of EPA's regulations, which affect health and safety primarily through improvements in environmental quality, as well as all FDA and OSHA regulations. Rules issued by the Department of Homeland Security are excluded because homeland security is a much broader goal than public health and safety *per se*. Of the 15 health and safety regulations, five are not suitable for meaningful calculations of the net costs per life saved because their primary goal is to reduce injuries as opposed to mortality risks. For five other rules the agencies did not calculate a net cost per life saved in the regulatory impact analysis and did not present sufficient information to permit OMB to derive an accurate estimate.

⁵ OMB, 2009 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities.

⁶ See Adler and Posner (2004).

Order 12866, regulatory analysis should, where relevant, incorporate the interests of future generations, attend to distributional considerations, and consider issues of fairness.

Furthermore, OMB recommends that benefit-cost analysis should be seen and used as a central part of open government. By providing the public with information about proposed and final regulations, by revealing assumptions and subjecting them to public assessment, and by drawing attention to the consequences of alternative approaches, such analysis can promote public understanding, scrutiny, and improvement of rules. OMB continues to explore ways to ensure that benefit-cost analysis helps promote the commitment to open government.⁷

Improving Benefit-Cost Analysis

With recognition of the limits of quantification, efforts to promote a full accounting of both benefits and costs can greatly inform judgments about appropriate courses of action – and can help to increase benefits, decrease burdens, and inspire new approaches and creative solutions. In this section, OMB recommends several steps designed to promote these goals.

Benefit-cost analysis continues to present a range of analytical, empirical, and normative challenges, involving (for example) the appropriate valuation of mortality and morbidity risks, the proper discount rate for future benefits and harms, the treatment of variables that are hard to quantify or monetize, the appropriate treatment of uncertainty, and the role, if any, of “stated preference” studies. OMB Circular A-4 offers guidance on these and other issues. Because OMB’s goals are to ensure that regulation is evidence-based and data-driven, to increase the likelihood that regulation will be effective in achieving its goals, and to reduce excessive or unjustified burdens on the private and public sectors, OMB continues to explore the underlying questions and the best way to approach them.

Several points are clear. To promote evidence-based regulation, those who produce the relevant numbers must respect scientific integrity. It is also vital to have a process of public scrutiny and review, allowing assumptions to be revealed and errors to be exposed and corrected. Imposition of serious burdens and costs must be justified, and any effort at justification should attempt to measure and quantify benefits; the process of analysis might reveal that a particular approach cannot be justified and that a less stringent or more stringent approach is better. Appropriate analysis should attempt to quantify relevant variables, to promote cost-effective choices, and to explore and evaluate different alternatives. Some variables are essential to identify and consider but difficult to monetize; examples include improvements in the water quality of rivers, protection of endangered species, and measures designed to decrease the risks of terrorist attacks. A sensible approach to benefit-cost analysis recognizes

⁷ See Transparency and Open Government, Memorandum for the Heads of Executive Departments and Agencies, President Obama, Jan. 21, 2009. For discussion of this point and its relationship to retrospective analysis of the effects of regulations, see Greenstone (2009).

the limits of quantification and insists on presentation of qualitative as well as quantitative information. If, for example, a regulation would prevent a specified range of deaths and injuries from occupational accidents, a proper analysis would present that range as well as the monetary equivalents.

In some cases, the effort to monetize certain benefits (such as protection of streams and wildlife) may run into serious obstacles; quantification may be possible but not monetization. In other cases, regulators will know the direction of an effect, and perhaps be able to specify a range, but precise quantification will not be possible. For these reasons, OMB recommends that consistent with Executive Order 12866, the best practice is to accompany all significant regulations with (1) a tabular presentation, placed prominently and offering a clear statement of qualitative and quantitative benefits and costs of the proposed or planned action, together with (2) a presentation of uncertainties and (3) similar information for reasonable alternatives to the proposed or planned actions. As Table 1 above demonstrates, some rules are not accompanied by relevant information on either costs or benefits; OMB recommends that agencies should be more consistent and systematic in providing that information.

While essential, pre-promulgation analyses of costs and benefits of rules may turn out to be inaccurate. Prospective accounts may overestimate or underestimate either costs or benefits. In some cases, regulations may impose significant burdens that are not justified. In other cases, regulations may be working well, and more stringency might be desirable. For this reason, OMB recommends that serious consideration be given to finding ways to employ retrospective analysis more regularly, in order to ensure that rules are appropriate, and to expand, reduce, or repeal them in accordance with what has been learned.⁸

President Obama’s January 30, 2009, memorandum on regulatory review specifically directed OMB to “offer suggestions on the role of cost benefit analysis” and to “address the role of distributional considerations, fairness, and concern for the interests of future generations.” It is clear that a full accounting of the costs and benefits of rules must include, rather than neglect, the interests of future generations. Nor does sensible regulation ignore distributional considerations. If regulation would impose serious costs on the least well-off, or deliver significant benefits to them, regulators should take that point into account in deciding how to proceed.

To meet these challenges, OMB recommends a candid effort to go as far as existing knowledge allows, while also fairly presenting the limits of such knowledge and recognizing that an analysis of quantitative costs and benefits may not be determinative. In some cases, the most that can be done is to present a “break-even analysis,” that is, an analysis that specifies the economic value of the benefits that would make the regulation justified on benefit-cost grounds. OMB continues to explore methods for handling the most difficult challenges posed by efforts to specify the likely effects of regulation.

⁸ See Greenstone (2009).

Regulatory Analysis and Open Government

Rigorous benefit-cost analysis continues to be a central feature of regulatory review. Properly understood, a public accounting of the consequences of alternative regulatory approaches can increase transparency and openness, discourage ill-considered initiatives, and promote valuable innovations. President Obama has placed a great deal of emphasis on open government. He has quoted the words of Supreme Court Justice Louis Brandeis: “Sunlight is said to be the best of disinfectants.”⁹ He has explained that “accountability is in the interest of the Government and the citizenry alike.” He has emphasized that “[k]nowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge.”¹⁰ Transparency can increase the availability of data to all, and with available data we can greatly improve our practices. OMB’s Open Government Directive, issued in late 2009, is designed to promote the President’s goals by requiring a series of steps to promote transparency, participation, and collaboration.

Indeed, careful regulatory analysis, if transparent in its assumptions and subject to public scrutiny, should be seen as part and parcel of open government. It helps to ensure that policies are not based on speculation and guesswork, but instead on a sense of the likely consequences of alternative courses of action. It helps to reduce the risk of insufficiently justified regulation, imposing serious burdens and costs for inadequate reason. It also helps to reduce the risk of insufficiently protective regulation, failing to go as far as proper analysis suggests. OMB believes that regulatory analysis should be developed and designed in a way that fits with the commitment to open government. Modern technologies should be enlisted to promote that goal. Existing websites—*regulations.gov* and *reginfo.gov*—have been improved to increase transparency, participation, and collaboration. OMB recommends continued assessment of those websites to promote these goals. OMB also recommends that agencies should publish, on those websites, existing data sets that can help promote regulatory goals. The Occupational Safety and Health Administration has posted fatality data on *www.osha.gov*. If sunlight can operate as “the best of dis-

infectants,” steps of this kind might help to increase safety and thus promote the agency’s core mission.

Indeed, OMB’s Open Government Directive specifically calls for open government plans that include “high-value information,” defined to include information “that can be used to increase agency accountability and responsiveness; improve public knowledge of the agency and its operations; further the core mission of the agency; create economic opportunity; or respond to need and demand as identified through public consultation.”¹¹ For present purposes, OMB emphasizes that information can “further the core mission of the agency” and “create economic opportunity.” In some cases, disclosure will further that mission, and promote such opportunity, for reasons previously sketched in this chapter.

With full appreciation of its limitations, benefit-cost analysis itself can promote transparency and accountability. By drawing attention to the consequences of proposed courses of action, benefit-cost analysis can help the public to evaluate regulatory initiatives. At the same time, it creates the possibility of self-correction. Benefit-cost analysis should itself be subject to public scrutiny and review and qualified or corrected if it is wrong. As noted, OMB continues to explore ways to promote retrospective analysis of rules, thus (in the words of Executive Order 13514) “extending or expanding projects that have net benefits, and reassessing or discontinuing under-performing projects.” If members of the public have fresh evidence or ideas about improvement of existing regulations – including expansion, redirection, modification, or repeal – it is important to learn about that evidence and those ideas. A general goal is to connect the interest in sound analysis with the focus on open government, in part by promoting public engagement and understanding of regulatory alternatives.

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⁹ Speech by President Obama, Jan. 28, 2009.

¹⁰ Transparency and Open Government, Memorandum for the Heads of Executive Departments and Agencies, President Obama, Jan. 21, 2009.

¹¹ Open Government, Memorandum for the Heads of Executive Departments and Agencies, OMB Director Peter Orszag, Dec. 8, 2009.

10. IMPROVING THE FEDERAL WORKFORCE

The United States has overcome great challenges throughout its history because Americans of every generation have stepped forward to aid their Nation through service, both in civilian Government and in the Armed Forces. Today's Civil Service carries forward that proud American tradition. Whether it is defending our homeland, restoring confidence in our financial system and administering a historic economic recovery effort, providing health care to our veterans, or searching for cures to the most vexing diseases—we are fortunate to be able to rely upon a skilled workforce committed to public service.

A high-performing Government depends on committed, engaged, and well-prepared employees. This chapter presents trends in Federal employment, compensation, and benefits; discusses challenges facing the Federal service; and presents the Administration's plans for achieving the most talented Federal workforce possible to serve the American people.

Trends in Federal Employment

Chart 10-1 shows total Federal civilian employment (excluding the U.S. Postal Service) as a share of the U.S. resident population from 1940 to 2008. Since the end of the Korean War in 1953, there has been a steady downward trend in the relative size of the Federal civilian workforce. In 1953, there was one Federal worker for every 78 residents. Notwithstanding occasional upticks, due to, for example, military conflicts and the enumeration of

the Census, the ratio has steadily decreased over time. In 1988 there was one Federal employee for every 110 residents and by 2008 there was one Federal employee for every 155 residents.

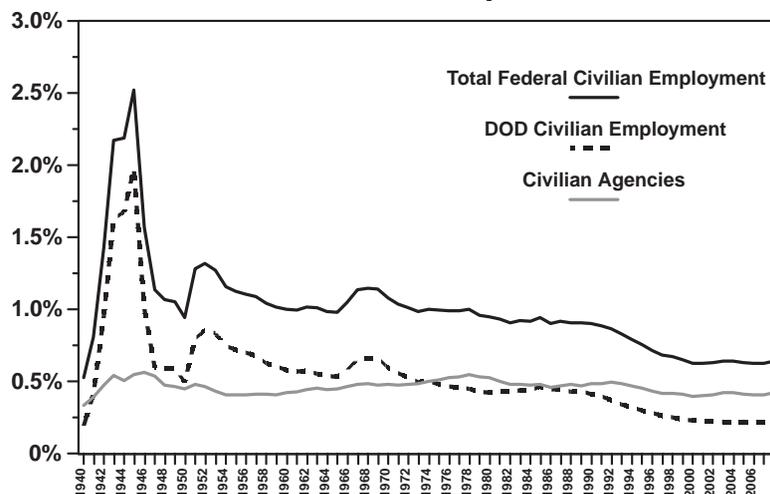
Table 10-1 shows Federal civilian employment in the executive branch by agency from 2007 to 2011. The levels for 2007 through 2009 are actual levels. The levels for 2010 and 2011 are estimates. The full-time equivalents (FTEs) shown in the table are calculated by dividing total hours worked during the fiscal year by 2080 (for 40 hours a week times 52 weeks per year). Total executive branch civilian employment is expected to grow by 274,100 FTEs over this time period. A little more than half of the four-year increase happened between 2007 and 2009, while the remainder occurs between 2009 and 2011.

Most of the increase (79 percent) is at five agencies – the Department of Defense, the Department of Veterans Affairs, the Department of Homeland Security, the Department of Justice, and the Department of State – that are centrally involved in fighting the wars in Iraq and Afghanistan, providing care for our returning veterans, protecting our country from the threat of terrorism, and advancing our Nation's interests abroad.

Federal Workforce Pay

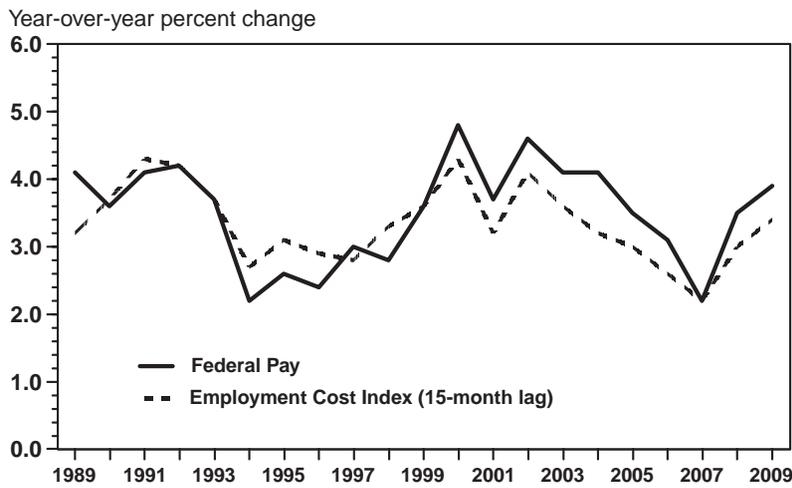
Federal and private sector pay raises have followed each other closely for the past two decades. As a default, Federal pay raises are pegged to changes in the

Chart 10-1. Federal Civilian Workforce as Share of U.S. Population



Sources: Workforce from OPM historical Federal civilian workforce tables. U.S. Population from Census Bureau. Notes: Workforce excludes U.S. Postal Service. U.S. Population is resident population series.

Chart 10-2. Pay Raises for Federal vs. Private Workforce



Sources: Public Laws, Executive Orders, and the Bureau of Labor Statistics.
 Notes: Federal pay is for civilians and includes base and locality pay. Employment Cost Index is the wages and salaries, private industry workers series.

15-month-lagged Employment Cost Index series of wage and salaries for private industry workers.¹ The index

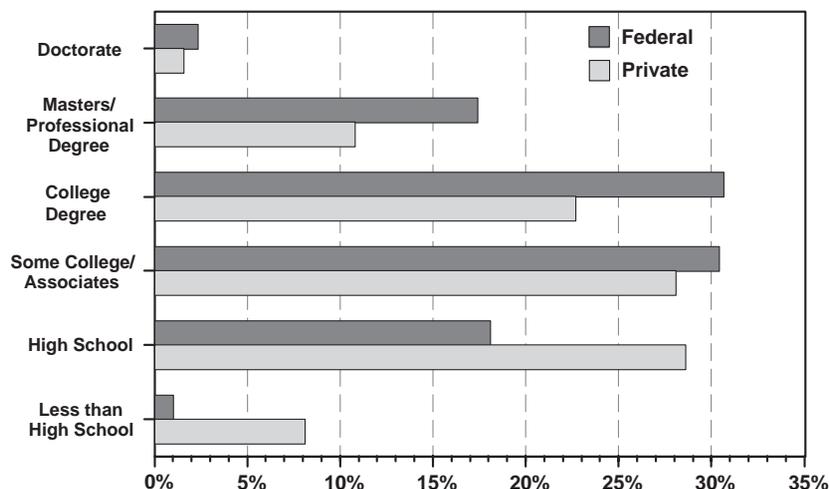
¹ The Federal Employees Pay Comparability Act of 1990 (FEPCA) dictated that Federal civilian employee pay increases be composed of two parts: across-the board or base pay adjustments and locality adjustments. The annual statutory increase for base pay is the 15-month lagged ECI (wages and salaries, private industry workers) minus 0.5 percent. The annual statutory increase for locality pay is different by geographic area and is based upon Bureau of Labor Statistics-measured pay comparability differences between private and Federal pay rates for jobs by locality. Federal civilian pay increases generally have not followed statutory guidelines; instead, Presidents have proposed differing amounts based upon their authority to do so under FEPCA's alternative pay adjustment provisions, and Congress has enacted differing amounts in annual appropriations bills.

measures private sector pay holding constant industry and occupation composition.

Chart 10-2 shows Federal civilian pay raises and the private sector index since 1989. As the lines show, actual pay raises closely track the private sector index. In fact, since 1989 Federal and private sector pay raises have never diverged by more than one percentage point in a given year. And furthermore, since the adjustments have been in both directions, the adjustments have offset each other so that the average difference has been only one tenth of one percentage point over the time period.

The Federal Government hires lawyers to tackle corruption, security professionals to monitor our borders, doc-

Chart 10-3. Education Level Distribution in Federal vs. Private Workforce



Source: Current Population Survey, 2009
 Notes: Full-time, year-round employees. Federal is civilian workforce excluding U.S. Postal Service. State and Local workers excluded from both groups.

tors to care for our injured veterans, and world-class scientists to combat deadly diseases such as cancer. Because of these vital needs, the Federal Government hires a relatively highly educated workforce, resulting in higher average pay. In 2009, full-time, year-round Federal civilian employees earned on average 21 percent more than workers in the private sector, according to Current Population Survey data collected by the Census Bureau. However, a raw comparison of these numbers masks important differences in the education levels of Federal and private sector employees.²

Chart 10-3 examines this difference in more detail, showing the distribution of workers by education level in the Federal civilian and private workforce. About 20 percent of Federal workers have a master's degree, professional degree, or doctorate versus only 13 percent in the private sector. A full 51 percent of Federal employees have at least a college degree compared to 35 percent in the private sector.

Challenges

An older workforce combined with technological change could be a major personnel challenge for the Federal Government. If the Government loses top talent, experience, and institutional memory through retirements but does not recruit, retain, and train talent, government performance will suffer. If the Government does not adapt to technological change by updating the ways it hires, develops, deploys, and engages its personnel, the Government will have difficulty meeting 21st Century challenges. But at the same time, these two developments create an opportunity for Government to bring in new workers excited about Government service with strong technology

and problem-solving skills along with fresh perspectives on the problems that Government is expected to address.

Aging workforce

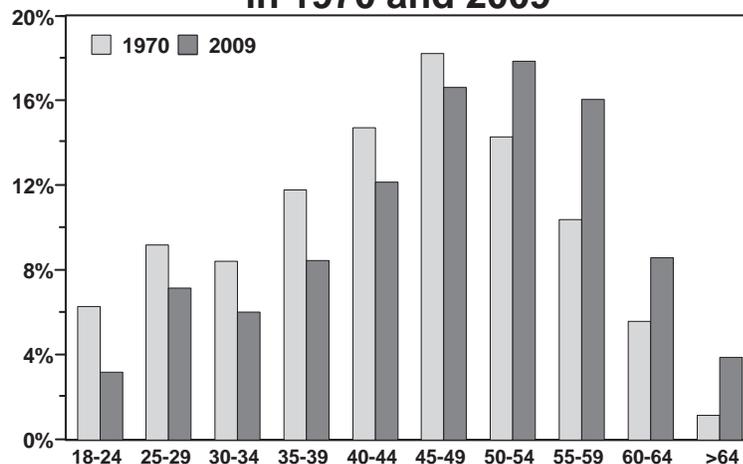
The Federal workforce of 2009 is older than Federal workforces of past decades and older than the private sector workforce of the present. Chart 10-4 shows the age distribution of Federal civilian employees in 1970 and 2009. The age distribution of the 2009 Federal workforce is shifted to the right of the 1970 distribution indicating an older workforce. In 1970, only 31 percent of Federal employees were 50 or older, whereas in 2009 a full 46 percent were at least 50 years old. At the same time, health has improved at older ages, allowing a greater proportion of workers to remain productive longer.

One factor driving this shift is the aging of the Baby Boomers, but the age structure of the Federal workforce is not solely a product of this demographic trend. Chart 10-5 compares the age distribution of Federal and private employees in 2009. The Federal workforce is substantially older than the private sector workforce. About 31 percent of the private workforce is at least 50, while 46 percent of the Federal workforce is 50 or older.

Chart 10-6 shows actual and projected retirements for the Federal civilian workforce from 1999 through 2016. Retirement levels increased from 2001 to 2007, and are projected to maintain their peak through 2011. While the recession that began in 2007 seems to have dampened retirement levels, it is unlikely to have a permanent effect. The gap between actual and predicted retirements in 2008 suggests that Federal workers, like workers in the private sector, are delaying retirement for economic reasons. As the economy recovers, retirements will rebound, likely pushing the retirement peak a few years into the future.

² John Donahue, *The Warping of Government Work* (Harvard University Press, 2008)

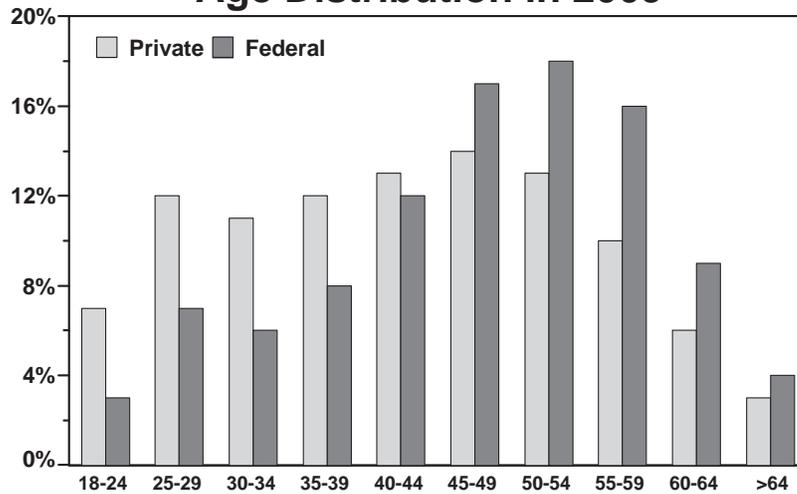
Chart 10-4. Federal Age Distribution in 1970 and 2009



Source: Current Population Survey, 1970 and 2009.

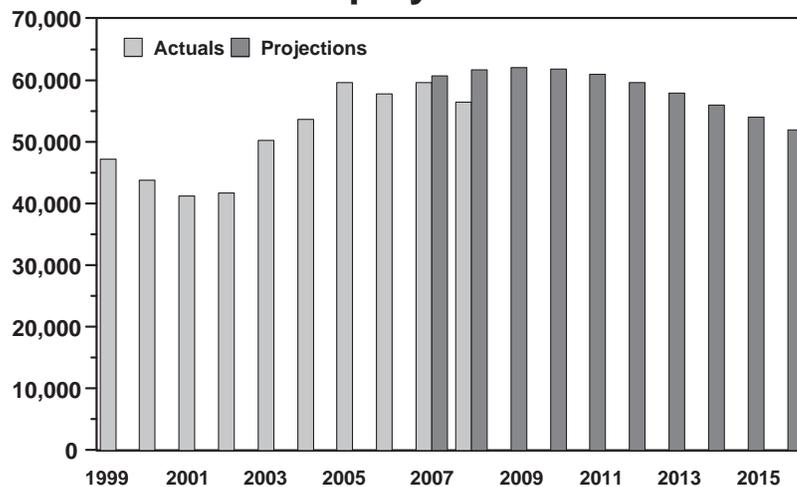
Notes: Full-time, year-round employees. Federal is civilian workforce excluding U.S. Postal Service. State and Local workers excluded from both groups.

Chart 10-5. Federal vs. Private Age Distribution in 2009



Source: Current Population Survey.
 Notes: Full-time, year-round employees. Federal is civilian workforce excluding U.S. Postal Service. State and Local workers excluded from both groups.

Chart 10-6. Actual and Projected Federal Employee Retirements



Source: Office of Personnel Management.
 Notes: Retirements of non-seasonal, full-time, and permanent Federal civilian employees.

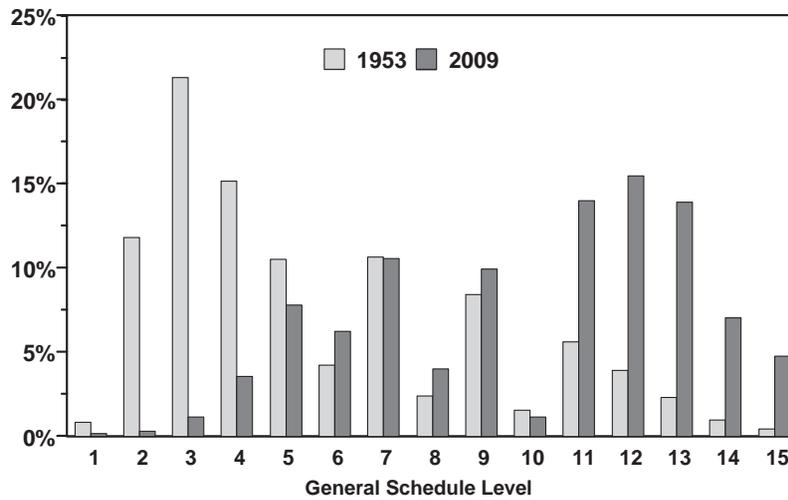
A Knowledge-Based Economy

Half a century ago, most white collar Federal employees performed clerical tasks, such as posting Census figures in ledgers and retrieving taxpayer records from file rooms. Today their jobs are vastly different. Federal workers need the advanced skills required for a knowledge-based economy. Professionals such as doctors, engineers, scientists, statisticians, and lawyers now make up a large portion of the Federal workforce. Additionally, a

large number of Federal employees must manage highly sensitive situations that require great skill, experience, and judgment to balance the interests of multiple stakeholders to advance progress on complex, and often novel, problems, a point emphasized by Donald Kettl.³ Federal employees increasingly need sophisticated management and negotiation skills to coordinate change not just

³ *The Next Government of the United States: Why our Institutions Fail and How to Fix Them* (W. W. Norton & Company, Inc, 2009)

Chart 10-7. Federal General Schedule Distribution in 1953 and 2009



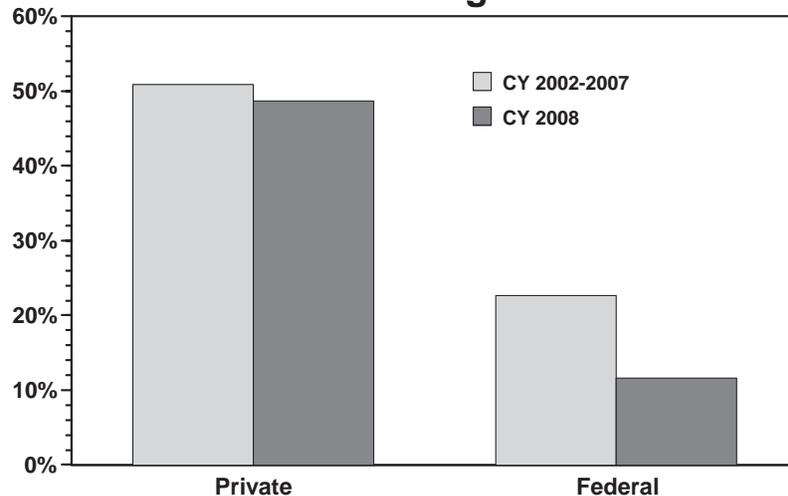
Source: Office of Personnel Management.

across Federal Government organizations, but also with other levels of government, not-for-profit providers, and for-profit contractors. Others need skills to manage large, highly complex information systems that exceed the scope of most private sector systems.

This shift is perhaps illustrated most starkly by Chart 10-7, which shows the General Schedule levels of Federal employees in 1953 and 2009. The General Schedule (GS) is a payment structure set in place in 1949 that classifies occupations according to the difficulty and responsibility of the work. In 1953, about 75 percent of Federal employees had a GS level of 7 or below. By 2009, in contrast, more than 70 percent of the workforce was GS 8 or higher.

Chart 10-8 shows employee turnover in the Federal civilian and private workforce, measured by the percent of employees that left work for voluntary or involuntary reasons within the last year. Hire and separation rates in the Federal Government are consistently about half those in the private sector. At a private firm, on average, about 50 percent of employees have been hired or will leave within the year. In the Federal Government, only about 25 percent of employees are hired or separate within a given year. Federal turnover fell dramatically in CY 2008, presumably due to the recession. Among other implications, the low turnover rate of Federal employees

Chart 10-8. Federal vs. Private Turnover Before and During Recession



Source: Job Openings and Labor Turnover Survey (JOLTS), Bureau of Labor Statistics.
Notes: Turnover defined as separations as a share of workforce.

suggests Government can gain significantly from training its workers.

Personnel Performance Agenda

To serve the American people, the Federal Government needs to improve management of the Federal workforce. The Office of Personnel Management (OPM) has recently released its new Strategic Plan with goals aligned with the lifecycle of a Federal employee. The “Hire the Best” strategic goal concentrates on improving the Federal hiring process. The “Respect the Workforce” strategic goal focuses on employee retention through training and work-life initiatives. The “Expect the Best” strategic goal aims to provide the necessary tools and resources for employees to engage and perform at the highest levels while holding them accountable. Finally, the “Honor Service” strategic goal acknowledges the exemplary service of Federal employees through well-designed compensation and retirement benefits. Combined, these strategic goals will facilitate engagement and satisfaction as the individual moves from applicant to Federal employee to retiree. Having the best possible Federal workforce is critical to improving organizational performance across the Government. Specifically, the Government needs to improve “people” management in order to improve “program” management and ultimately the services on which the American people depend.

Improving the Federal Hiring Process

The Administration believes that fixing the Federal hiring process is urgent to enable the Federal Government to attract the talent it needs, especially in light of retirement projections. The Office of Personnel Management is spearheading a Government-wide hiring initiative and has devised a five-prong approach to 1) elevate public service; 2) create pathways for college recruiting; 3) improve the applicant’s experience; 4) improve the quality of hires; and 5) simplify the hiring process. Additionally, the Administration aims to increase its outreach to veterans and persons with disabilities, and improve the diversity of the Federal workforce. Finally, the Administration is working to improve the timeliness and quality of critical personnel background investigations and employment suitability services.

Improving Federal Manager and Employee Training

The Administration is committed to the strategic management of Federal personnel, and believes that assessing and reducing the skills gap is a critical component of this strategy. As Linda Bilmes and Scott Gould observe, agencies too rarely invest strategically in training.⁴ Yet improving Federal manager and employee training is essential. Given the expected increase in the number of new hires and projected retirements, agencies must harness the institutional knowledge of experienced workers, cross-train new staff to provide seamless delivery of ser-

vices to the public, and groom their future leaders. The Federal workforce needs an optimal skills mix to meet demands in changing technology and process improvements in Government services.

In some areas of the Federal Government, such as the military branches, training has been studied and revised extensively to implement best talent management practices. One promising example of training in the intelligence community is joint duty, which allows personnel to rotate assignments in order to better understand the roles and responsibilities of their counterparts. As another example, the VA San Diego Health System offers its employees disaster preparedness training and nurse triage training via virtual world simulations of real world scenarios.

Improved Personnel Analytics

Over the next year, the Administration plans to strengthen Federal agencies’ ability to use survey feedback from employees to help them improve personnel management. Federal agencies should strive to be model employers, and the engagement and satisfaction of our workforce directly affects Federal Government performance. The Administration will strengthen the capacity of agencies to use results from surveys of Federal workers and from job applicants to identify areas of personnel management strength and promote them in other parts of the Federal Government and to identify areas of weakness needing attention.

Since 2002, the Office of Personnel Management has administered a biannual survey of Federal employees. The Federal Employee Viewpoint survey (formerly the Federal Human Capital Survey) measures the views of full-time, permanent employees across Government. Table 10-4 shows rankings, along four dimensions, constructed with the survey data. (The table shows results only from large agencies, so the rankings skip some numbers.) The first four columns present indices constructed from the 2008 survey: the Leadership and Knowledge Management Index brings together data on the motivational and communication skills of leadership; the Results-Oriented Performance Culture Index combines responses to questions on the promotion of creative and innovating thinking and performance appraisal; the Talent Management Index summarizes data on the recruiting and training of workforce talent; and the Job Satisfaction Index brings together responses to questions on job satisfaction. The rankings across indices are highly correlated, suggesting that the elements of workforce management, engagement, and satisfaction are inherently intertwined and that agencies may be able to take a broad-based approach to improvement. The rankings should be taken in context, as different agency missions place different challenges on employees. Moreover, they do not show variations by type of work or by sub-units within a larger organization, which may vary dramatically, and do not reflect changes in performance over the last year. Still, the survey results begin to shed light on the issues different agencies face in personnel man-

⁴ *The People Factor: Strengthening America by Investing in Public Service* (Brookings Institution Press, 2009)

agement, and highlight areas where there is room for improvement.

Table 10-4 also shows the Employee Engagement Rankings constructed by the Merit System Protections Board (MSPB) and the Best Places to Work ranking constructed by the Partnership for Public Service (PPS). The Employee Engagement Rankings draws from the 2005 Merit Principles Survey and the Best Places to Work ranking uses responses from the same Federal Employee Viewpoint Survey described above. The similar rankings across these different surveys and methodologies may lend support to the validity of the findings.

These survey results can be viewed as a baseline to measure improvements in the workforce. To provide leadership with more current information, the Federal Employee Viewpoint Survey will be administered on an annual basis starting in 2010. Results will be reported so that they can be used by agency leadership to inform management decisions. Going forward, the survey will be administered to more employees so the findings can be sorted by and linked to more organizational units to make them more “actionable” by managers and supervisors. In addition, OMB and OPM will examine the survey to identify promising practices to promote more broadly for Government-wide improvement.

A few other major initiatives being launched in the coming year will improve analysis and management of workforce issues. The Federal Employee Health Benefits (FEHB) program provides health insurance for 8 million Federal employees, retirees, their spouses and dependents, and data from insurance carriers involved in FEHB is currently used to detect fraud. It is not, however, analyzed to improve the effectiveness or efficiency of the program or the health of FEHB members. The Budget proposes funding for new analytical capacity to focus on the FEHB program with the goal of analyzing the data for program improvement, not just for fraud detection. The President’s Budget also includes funding for worksite wellness demonstration projects which are aimed at applying best practices from the private sector to the Federal workforce. These demonstration projects will be evaluated to determine their impact on lowering the growth in employee health care costs and improving employee health, productivity, and morale.

In addition, the Administration will construct a Human Resources Dashboard, with a specific focus on employee and manager satisfaction with the hiring process and other key metrics of personnel management. This dashboard will be used to inform management decisions and identify problem areas at an early stage. Similar to the IT Dashboard, the HR Dashboard will provide senior leaders and managers a mechanism to have better information on the current status of hiring and other key “people issues” in their agencies so they can focus on areas that need improvement. The dashboards will also help agencies benchmark with each other and learn from each other’s best practices.

Restoring Balance Between Work Done by Federal Employees and Work Done by Contractors

Federal agencies use both Federal employees and private sector contractors to deliver important services to citizens. Agency management practices must recognize the proper role of each sector’s labor force and draw on their respective skills to help Government operate at its best. Contractors provide vital expertise to the Government, and agencies must continue to strengthen their acquisition practices so that they can take advantage of the marketplace to meet taxpayer needs. At the same time, agencies must be alert to situations in which excessive reliance on contractors undermines the ability of the Federal Government to control its own operations and accomplish its missions for the American people.

In particular, overreliance on contractors can lead to the erosion of in-house capacity that is essential to effective Government performance, a fact emphasized by Paul Light.⁵ Such overreliance was encouraged by the one-sided management priorities of the previous administration. Those priorities rewarded agencies for identifying functions that could be outsourced, while ignoring the costs associated with the loss of institutional knowledge and internal capability. Too often agencies have neglected the investments in human capital planning, recruitment, hiring, and training that are necessary for building strong internal capacity.

In July 2009, OMB issued guidance providing agencies with a framework of guiding principles for assessing their use of contractors in this context. That guidance directed agencies to take steps to make sure that they have sufficient internal capacity to maintain control of their missions and operations. Each agency was also directed to conduct a pilot human capital analysis of at least one program, project, or activity, where the agency had concerns about the extent of reliance on contractors, and to take appropriate steps to address any identified internal weaknesses. In some instances, the result of the pilots may be that agencies replace contractors with Federal employees, a step that often saves money at the same time that it improves control over mission and operations. Some of the FTE increases described earlier in the chapter result from agencies replacing contractors with Federal workers.

When contractors are used, it is essential that the Federal Government has the ability to protect taxpayer interests. Acquiring the best contractor support requires solid acquisition planning, appropriate competitive procedures, and appropriate management and oversight of firms during performance of contracts. Too often, whether due to inadequate planning or simply poor business decisions, the government has entered into high-risk arrangements, such as sole-source contracts, that cause costs to the taxpayers to rise without commensurate benefits, and, too frequently, contract management has been haphazard and inadequate.

⁵ *A Government Ill Executed: The Decline of the Federal Service and How to Reverse It* (Harvard University Press, 2008)

The Federal Government currently spends more than \$500 billion a year on contracts, more than double the amount that was spent in 2001. Over that period, the size of the acquisition workforce planning, awarding, and managing these contracts has barely grown. The President's 2011 Budget provides \$158 million for an initiative to improve the capacity and capabilities of the civilian agency acquisition workforce, building on a similar initiative at the Department of Defense. The initiative included in the 2011 Budget provides resources sufficient for most civilian agencies to increase their acquisition workforce by five percent and to invest in training and technology that will make the acquisition workforce more effective. The initiative also provides funds for Government-wide investments in the acquisition workforce, such as curriculum development, competency and certification management, and collection of data on acquisition workforce capacity and needs. This additional capacity will allow agencies to acquire the goods and services they need to accomplish their missions at reduced costs and with better performance.

Appendix: The U.S. Overseas Staffing Presence

There are approximately 70,300 American and locally hired staff overseas under the authority of Chiefs of Mission (e.g., Ambassadors or Charge d' Affairs at U.S. embassies worldwide). The average estimated cost to support an American position overseas in 2011 is projected to be \$580,000, as reported by agencies with personnel overseas (see Table 10-5.). This total includes direct costs, such as salary, benefits, and overseas allowances, and also support costs, such as housing, travel, administrative support, Capital Security Cost Sharing charges, and other benefits.

The Administration continues to work to improve the safety, efficiency, and accountability in U.S. Government staffing overseas. To this end, the Administration is committed to developing transparent data on overseas staffing, including the cost of maintaining positions overseas, and incorporating this data in the budget process to better inform decision makers on overseas staffing levels.

Table 10-1. FEDERAL CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH

(Civilian employment as measured by Full-Time Equivalents in thousands, excluding the Postal Service)

Agency	Actual			Estimate		Change: 2007 to 2011	
	2007	2008	2009	2010	2011	FTE	Percent
Cabinet agencies:							
Agriculture	94.8	93.9	94.2	101.0	97.1	2.3	2.4%
Commerce	36.3	37.5	56.0	141.5	43.6	7.3	20.1%
Defense	658.8	671.2	702.7	720.2	757.5	98.7	15.0%
Education	4.1	4.1	4.0	4.3	4.6	0.5	12.2%
Energy	14.6	14.7	15.5	16.6	16.9	2.3	15.8%
Health and Human Services	58.8	59.8	63.0	65.1	68.0	9.2	15.6%
Homeland Security	148.1	158.2	169.6	177.0	183.5	35.4	23.9%
Housing and Urban Development	9.5	9.4	9.5	9.7	9.7	0.2	2.1%
Interior	67.4	67.4	68.6	70.6	69.6	2.2	3.3%
Justice	105.0	106.0	109.1	119.3	125.0	20.0	19.0%
Labor	15.9	16.0	16.0	17.9	17.9	2.0	12.6%
State	30.1	30.4	30.4	35.0	35.7	5.6	18.6%
Transportation	53.4	54.7	56.4	57.9	58.6	5.2	9.7%
Treasury	107.7	106.7	108.7	113.5	113.7	6.0	5.6%
Veterans Affairs	230.4	249.5	272.0	284.3	287.7	57.3	24.9%
Other agencies—excluding Postal Service:							
Agency for International Development	2.4	2.4	2.6	2.8	3.3	0.9	37.5%
Broadcasting Board of Governors	2.0	2.0	1.9	2.1	2.1	0.1	5.0%
Corps of Engineers—Civil Works	21.2	21.1	22.2	22.6	22.6	1.4	6.6%
Environmental Protection Agency	17.0	16.8	17.0	17.4	17.6	0.6	3.5%
Equal Employment Opportunity Comm	2.2	2.2	2.2	2.5	2.6	0.4	18.2%
Federal Deposit Insurance Corporation	4.5	4.6	5.5	7.6	6.6	2.1	46.7%
General Services Administration	11.9	11.8	12.0	13.0	13.3	1.4	11.8%
National Aeronautics and Space Admin	18.2	18.4	18.3	18.6	18.6	0.4	2.2%
National Archives and Records Administration ...	2.8	2.8	3.0	3.2	3.3	0.5	17.9%
National Labor Relations Board	1.7	1.6	1.6	1.7	1.7	0.0	0.0%
National Science Foundation	1.3	1.3	1.4	1.4	1.5	0.2	15.4%
Nuclear Regulatory Commission	3.5	3.7	4.0	4.0	4.0	0.5	14.3%
Office of Personnel Management	4.6	4.7	4.7	4.9	5.0	0.4	8.7%
Peace Corps	1.1	1.0	1.0	1.3	1.4	0.3	27.3%
Railroad Retirement Board	1.0	1.0	0.9	1.0	0.9	-0.1	-10.0%
Securities and Exchange Commission	3.5	3.5	3.6	3.8	4.2	0.7	20.0%
Small Business Administration	4.4	3.6	3.9	3.5	3.5	-0.9	-20.5%
Smithsonian Institution	5.0	5.1	5.1	5.4	5.4	0.4	8.0%
Social Security Administration	61.7	61.3	64.1	67.6	68.4	6.7	10.9%
Tennessee Valley Authority	11.3	11.6	11.5	13.0	13.0	1.7	15.0%
All other small agencies	15.6	15.2	15.6	17.3	17.7	2.1	13.5%
Total, Executive Branch civilian employment * ...	1,831.6	1,875.3	1,977.8	2,148.3	2,105.7	274.1	15.0%
Subtotal, Defense	658.8	671.2	702.7	720.2	757.5	98.7	15.0%
Subtotal, Non-Defense	1,172.8	1,204.1	1,275.1	1,428.1	1,348.2	175.4	15.0%

* Totals may not add due to rounding.

Table 10–2. TOTAL FEDERAL EMPLOYMENT
(As measured by Full-Time Equivalents)

Description	2009 Actual	Estimate		Change: 2009 to 2011	
		2010	2011	FTE	Percent
Executive branch civilian personnel:					
All agencies except Postal Service and Defense	1,275,110	1,428,103	1,348,241	73,131	5.7%
Defense-Military functions (civilians)	702,664	720,201	757,461	54,797	7.8%
Subtotal, excluding Postal Service	1,977,774	2,148,304	2,105,702	127,928	6.5%
Postal Service ¹	674,844	675,256	663,503	-11,341	-1.7%
Subtotal, Executive Branch civilian personnel	2,652,618	2,823,560	2,769,205	116,587	4.4%
Executive branch uniformed personnel:					
Department of Defense ²	1,541,235	1,547,501	1,541,182	-53	-0.0%
Department of Homeland Security (USCG)	42,939	44,276	43,810	871	2.0%
Commissioned Corps (DOC, EPA, HHS)	6,580	6,873	6,926	346	5.3%
Subtotal, uniformed military personnel	1,590,754	1,598,650	1,591,918	1,164	0.1%
Subtotal, Executive Branch	4,243,372	4,422,210	4,361,123	117,751	2.8%
Legislative Branch: Total FTE ³	32,104	33,495	33,533	1,429	4.5%
Judicial branch: Total FTE	34,288	35,162	36,303	2,015	5.9%
Grand total	4,309,764	4,490,867	4,430,959	121,195	2.8%

¹ Includes Postal Rate Commission.

² Does not include Full-Time Support (Active Guard & Reserve (AGRs)) paid from Reserve Component Appropriations.

³ FTE data not available for the Senate (positions filled were used).

Table 10-3. PERSONNEL COMPENSATION AND BENEFITS

(In millions of dollars)

Description	2009 Actual	2010 Estimate	2011 Request	Change: 2009 to 2011	
				Dollars	Percent
Civilian personnel costs:					
Executive Branch (excluding Postal Service):					
Direct compensation:					
DOD—military functions	49,194	52,949	56,914	7,720	15.7%
All other executive branch	104,921	116,353	117,177	12,256	11.7%
Subtotal, direct compensation	154,115	169,302	174,091	19,976	13.0%
Personnel benefits:					
DOD—military functions	13,965	15,565	16,642	2,677	19.2%
All other executive branch	42,604	44,661	45,546	2,942	6.9%
Subtotal, personnel benefits	56,569	60,226	62,188	5,619	9.9%
Subtotal, Executive Branch	210,684	229,528	236,279	25,595	12.1%
Postal Service:					
Direct compensation	36,387	37,914	37,818	1,431	3.9%
Personnel benefits	16,642	18,096	18,615	1,973	11.9%
Subtotal	53,029	56,010	56,433	3,404	6.4%
Legislative Branch: ¹					
Direct compensation	2,072	2,221	2,303	231	11.1%
Personnel benefits	604	665	691	87	14.4%
Subtotal	2,676	2,886	2,994	318	11.9%
Judicial Branch:					
Direct compensation	3,023	3,247	3,425	402	13.3%
Personnel benefits	942	1,015	1,076	134	14.2%
Subtotal	3,965	4,262	4,501	536	13.5%
Total, civilian personnel costs	270,354	292,686	300,207	29,853	11.0%
Military personnel costs:					
DOD—Military Functions:					
Direct compensation	95,613	99,788	100,925	5,312	5.6%
Personnel benefits	47,106	50,815	52,307	5,201	11.0%
Subtotal	142,719	150,603	153,232	10,513	7.4%
All other executive branch, uniformed personnel:					
Direct compensation	2,914	3,140	3,187	273	9.4%
Personnel benefits	792	833	841	49	6.2%
Subtotal	3,706	3,973	4,028	322	8.7%
Total, military personnel costs ²	146,425	154,576	157,260	10,835	7.4%
Grand total, personnel costs	416,779	447,262	457,467	40,688	9.8%
ADDENDUM					
Former Civilian Personnel:					
Retired pay for former personnel					
Government payment for Annuitants:					
Employee health benefits	9,114	9,526	10,118	1,004	11.0%
Employee life insurance	44	47	48	4	9.1%
Former Military personnel:					
Retired pay for former personnel	50,304	50,998	51,933	1,629	3.2%
Military annuitants health benefits	8,291	8,634	9,356	1,065	12.8%

¹ Excludes members and officers of the Senate.² Amounts in this table for military compensation reflect direct pay and benefits for all service members, including active duty, guard, and reserve members.

Table 10–4. AGENCY RANKINGS FROM FEDERAL WORKFORCE SURVEYS¹

Agency	Human Capital Index Score (OPM)				Employee Satisfaction Ranking (PPS Best Places to Work)	Employee Engagement Rankings (MSPB)
	Leadership and Knowledge Management	Results-Oriented Performance Culture	Talent Management	Job Satisfaction		
Nuclear Regulatory Commission	1	2	1	1	1	*
National Aeronautics and Space Administration	5	4	3	4	3	1
State	7	11	10	5	5	2
General Services Administration	8	14	9	12	8	9
Social Security Administration	10	24	24	7	9	14
Commerce	11	8	12	16	10	6
Office of Personnel Management	14	15	26	19	20	18
Defense	15	20	16	18	15	13
Energy	16	19	15	22	19	20
Securities and Exchange Commission	17	27	22	29	11	*
Justice	18	23	17	10	7	7
Environmental Protection Agency	19	13	13	11	6	5
Treasury	20	18	18	28	17	15
Labor	21	16	30	21	18	12
Small Business Administration	22	26	31	27	26	*
Veterans Affairs	23	32	14	14	12	8
Health and Human Services	24	17	20	20	21	11
Education	27	29	25	31	27	21
Agriculture	28	31	23	24	23	19
Housing and Urban Development	31	33	36	30	24	17
Interior	34	30	27	26	22	16
Homeland Security	35	35	34	33	28	24
Transportation	36	36	33	35	30	22

¹ Only large agencies shown. Rankings may skip numbers.

* Not surveyed

Table 10–5. OVERSEAS STAFFING UNDER CHIEF OF MISSION AUTHORITY*

Total Personnel Under COM Authority (including American and locally engaged staff) projected for FY 2011	Total American Personnel Under COM Authority projected for FY 2011	Average Cost of an American Position Overseas Estimated for FY 2011
70,300	17,640	\$580,000

* As reported by agencies in their 2011 Overseas Staffing and Cost submissions

7. DELIVERING HIGH-PERFORMANCE GOVERNMENT

When Government does not work as it should, it has a real effect on people's lives—on small business owners who need loans, on young people who want to go to college, on the men and women in our Armed Forces who need the best resources when in uniform and deserve the benefits they have earned after they have served. Whether protecting individuals and communities, modernizing infrastructure, investing in our children, or taking care of the most vulnerable, the American people deserve a highly effective government.

Building a government that works smarter, better, and more efficiently to deliver results for the American people is a cornerstone of the President's Accountable Government Initiative and a key focus of this Administration.

The Nation's current fiscal situation makes it imperative that every aspect of government deliver programs demonstrated to work, and, when effective programs have not yet been identified, to experiment to find them. Once effective government programs and practices have been identified, government agencies must figure out how and where to promote their adoption, confirm they work as expected, and continually innovate to increase productivity.

To accomplish this, Federal agencies must adopt an evidence-based culture in which decisions are made using information collected in a timely and consistent manner about the effectiveness of specific policies, practices, and programs. Strategies for developing evidence exist along a continuum from the basic collection of program and outcomes information, to more sophisticated performance measurement and formative evaluation methods, to rigorous evaluation techniques that measure program and practice impacts against a comparison group. Some of these strategies are discussed in the next chapter on evaluation, including a discussion of how the Administration will use a tiered evidence approach to foster innovation, encourage promising practices, and scale proven models. This chapter focuses on complementary strategies critical to evidence-based implementation—strategic and daily management using outcome-focused performance goals and measures.

Government works better when organizational leaders identify a limited number of clear, measurable, and ambitious goals and regularly review progress toward them. When leaders ask about performance on specific goals, it reinforces the message that a goal is important. When they monitor if progress is on or off track and request analyses to understand why, it illuminates a path to improvement.

In the coming year, to improve the performance of the Federal Government and implement the recently enacted, bi-partisan Government Performance and Results Act Modernization Act of 2010 which the President signed into law in January 2011, the Administration will use

three mutually reinforcing performance management strategies first introduced in the President's 2011 budget:

1. **Use Performance Information to Lead and Learn to Improve Outcomes.** Agency leaders are using constructive data-based reviews to keep their organizations on track to deliver on the near-term High Priority Performance Goals (Priority Goals) listed in the 2011 Budget and the government-wide management priorities in the Accountable Government Initiative. Given the near-term nature of the goals, OMB did not ask agencies to update or revise their Priority Goals as part of the 2012 budget process, but did encourage agencies to review and increase specificity in longer-term priorities where appropriate in their strategic plans and 2012 annual performance plans that accompany agency budget proposals. The next round of Priority Goal setting will commence in early 2011.
2. **Communicate Performance Coherently and Concisely for Better Results and Transparency.** The Federal Government will candidly communicate to the public the priorities, problems, and progress of Government programs, explaining the reasons behind past trends, the impact of past actions, and future plans. In addition, agencies will strengthen their two-way communication capacity to identify and share lessons from experience and experiments.
3. **Strengthen Problem-Solving Networks.** The Federal Government will tap into and encourage practitioner communities, both inside and outside Government, to work together to improve outcomes and performance management practices.

In addition, the Administration has taken unprecedented steps to engage the Cabinet in reviewing the budget line-by-line to find low-priority, low-performing, or duplicative and outdated programs so that funding can be directed to higher priority, well-performing programs.

The remainder of this chapter elaborates on the way the three strategies are being used—why they are important, what was accomplished over the past year, and plans for the coming year.

Use Performance Information to Lead and Learn to Improve Outcomes

In 1961, when President John F. Kennedy called for the United States to put a man on the moon within a decade, he demonstrated the motivating power of an ambitious, outcome-focused goal. Kennedy motivated people in government to accomplish an incredible feat that still

inspires. He did this, in part, by clearly stating a goal that specified who and how many would accomplish what, where, and by when. Leaders in other countries, States, local governments, and a growing number of Federal programs have similarly demonstrated the power of using specific challenging and more earthly goals, combined with frequent measurement, diagnostic analysis, and unrelenting follow-up, to improve performance and cut costs.

Building on these lessons, President Obama appointed the Nation's first ever Chief Performance Officer and directed Federal agency leaders to set specific agency goals reflecting Administration priorities, combined with frequent measurement and analysis-informed reviews to drive progress. To kick-start agency efforts to operate this way, the Administration asked leaders of the 16 Cabinet departments and 8 other large Federal agencies to identify a small number of ambitious, outcome-focused, near-term High Priority Performance Goals (Priority Goals). Agencies were asked to choose goals that did not require additional resources or legislative action to achieve within an 18 to 24-month time frame, but rather hinged on strong execution. The Administration also identified specific government-wide management goals to cut waste and streamline and modernize the systems that power government operations—in information, finance, acquisition, and human resource management.

Each agency has designated a senior accountable official, a "Goal Leader," responsible for driving progress on each priority and government-wide management goal. Goal Leaders develop action plans using quarterly targets for key measures and milestones, as appropriate, to mark the path to the goal. They update progress on their goals on *Performance.gov*, a new online management tool developed by the Administration to track the government's progress each quarter to support cross-agency coordination and learning and to inform OMB review.

Agency Deputy Secretaries and their equivalents at the 24 agencies with Priority Goals are starting to hold goal-focused, data-driven reviews at least every quarter. At the Department of the Treasury, for example, the Deputy Secretary holds structured quarterly performance and budget reviews with each of his bureaus to steer the department in a unified strategic direction and improve implementation. Attendance at these meetings cuts across hierarchies and bureaucracies, and agendas are carefully vetted. These meetings forgo "daily fire drills" in favor of longer-term strategic issues, and create an unprecedented forum for every major bureau to discuss priorities, not just crises, with senior agency leadership. Critically, every meeting ends with a set of clear deliverables, follow-up actions, and deadlines. Treasury has used these reviews to sharpen the mission and goals of its bureaus, replace low-value performance measures with more meaningful indicators of performance, and foster collaboration and resource-sharing across organizational lines.

This data-driven management discipline is spreading across the Federal Government—at the Department of Veterans Affairs (VA), the Department of Housing and Urban Development (HUD), and in all other agencies with Priority Goals. It is also starting to happen more frequent-

ly at the bureau level and in smaller agencies. The FBI and Customs and Border Patrol, for example, run regular data-driven reviews at all levels of the organization, and the U.S. Food and Drug Administration recently launched FDA-TRACK, an agency-wide performance management program that monitors all 114 FDA program offices' key performance measures and highlighted projects. The acronym FDA chose for this initiative succinctly captures key objectives of the Administration's performance management approach: Transparency, Results, Accountability, Credibility, and Knowledge-Sharing. The FDA-TRACK website allows the public to view FDA's performance data, learn about the agency's breadth of public health responsibilities, and track progress on over 100 important projects and over 800 monthly program measures, including important Agency-wide initiatives such as egg farm inspections, H1N1 vaccines, and medical countermeasures.

OMB, working with the Performance Improvement Council (PIC), has begun monitoring review processes at the 24 agencies with Priority Goals to identify best practices worth sharing and to make sure that agencies that have not yet launched these reviews initiate constructive data-driven reviews at least quarterly. In the coming year, OMB and the PIC will launch a community-of-practice to strengthen agency capacity to prepare for and run effective internal results reviews.

Complementing agency internal reviews, OMB is also holding regular, data-driven constructive performance reviews on Priority Goals, IT projects (TechStat), acquisition (AcqStat), and other government-wide management priorities, including regular reviews with OPM on agency progress on personnel management priorities. While these review processes vary somewhat, they employ a similar approach. Prior to quarterly constructive performance reviews on each Priority Goal, for example, OMB asks every agency Goal Leader to assess the likelihood of success on his or her goal and, if needed, identify ways OMB or others can support goal achievement. Based on each Goal Leader's analysis, OMB budget analysts' review of information on *Performance.gov*, and reviews by members or staff of Federal cross-agency Councils (e.g., Performance Improvement Council), OMB develops a list of prioritized follow-up actions. Some of these require inter-agency meetings, some broker expert assistance, and others establish new interim expectations, such as requiring process benchmarking with industry best practices.

Where efforts are off-track and a team is not making the necessary mid-course corrections, OMB notifies the agency's Deputy Secretary or equivalent about its concerns. Where OMB or Council members have expertise or know of it in other agencies, assistance is offered to help the agency get back on track. Where progress is being made and breakthroughs achieved, OMB and the Councils celebrate and share the successes. Where progress toward a goal shared by multiple agencies requires inter-agency coordination or where agencies face similar problems that would benefit from cross-agency attention, OMB facilitates cross-agency action.

Over the past year, many agencies have released updated strategic plans, using them to communicate long-

term goals and the path an agency will follow to achieve them. OMB uses the goals agencies set in their strategic plans, as well as the near-term Priority Goals, to align budget resources with priorities. Agencies also use their strategic plans to guide decisions about information technology (IT) and other major investments, and their hiring and training needs.

The power of this type of goal-focused performance management system is that it uses performance measures to create a constructive dynamic that motivates continual improvement, not just compliance. This approach stands in contrast to the way most (although not all) Federal agencies previously used goals and measures—primarily to complete the plans and reports required by law, rather than as a tool to improve outcomes and increase productivity. This Administration is committed to creating a performance management approach that ignites continual improvement. Significant progress has been made on some Priority Goals, while weaknesses have been identified and are being addressed in others. HUD and the VA have greatly accelerated housing and services for veterans to reduce the number of homeless veterans in 2010, on the way toward achieving the Administration's long-term goal of eliminating veteran homelessness in five years. To date, the Department of Energy has weatherized 295,000 homes, and more than 300 schools have signed on to the Department of Agriculture's Healthier US Schools Challenge—an important component of the First Lady's *Let's Move!* initiative to raise a healthier generation of kids. These schools agree to meet criteria for better food quality, physical activity, physical education, and nutrition education.

In the coming year, OMB and the PIC will help Federal agencies strengthen their analytic skills to extract insights and actionable lessons from the data they gather and integrate root cause analyses and hypothesis testing into program operations. Programs will be encouraged to search for research about effective interventions relevant to their work, and expected to find organizations with which to benchmark processes and outcomes. One particular area of attention for OMB and the PIC will be Federal agencies that depend on State and local government, non-profit organizations, or other delivery partners to accomplish their objectives, and those with field operations working on similar issues from different locations. Agencies in these situations need to strengthen their capacity to learn from others' experience—scouring for research and analyzing data from the field to identify promising practices, testing promising practices to see if they can be replicated, and when successfully replicated, promoting their adoption when more effective and cost-effective than the alternatives.

Working with the PIC, OMB will develop guidance to help agencies with goal-setting, measurement, analysis, results reviews, delivery chain mapping, and the use of incentives. There will be an increased focus on ensuring agencies understand the suite of measures that complement mission-focused outcome and output measures—such as indicators of responsiveness, beneficial and unwanted side effects, and measurement manipulation—

and enhance program operations. Attention will also be devoted to connecting the performance community with the budget, financial, IT, acquisition, and human capital community.

OMB will also begin immediate implementation of the newly enacted GPRA Modernization Act of 2010, a law that builds on the strengths of the Government Performance and Results Act of 1993 (GPRA) and addresses its weaknesses. The new law is closely aligned with the Administration's aggressive performance agenda. In addition to adding requirements for priority-setting and frequent performance reviews by senior agency leaders and OMB and shifting the emphasis from the production of annual performance reports for their own sake to the use of performance measurement to motivate and illuminate ways to improve, the new law also requires adoption of cross-cutting Federal government priority goals, display of agency and government-wide results on a public website, and increased consultation with Congress.

Communicate Performance Coherently and Concisely for Better Results and Transparency

Transparent, coherent performance information contributes to more effective, efficient, fair, inclusive, and responsive government. Communicating performance information can support public understanding of what government wants to accomplish and how it is trying to accomplish it. It can also support learning across government agencies, stimulate idea flow, enlist assistance, and motivate performance gain. In addition, transparency can strengthen public confidence in government, especially when government does more than simply herald its successes but also provides candid assessments of problems encountered, their likely causes, and actions that will be taken to address problems. And communicating spending information supports public understanding of how federal funds are being used.

Beginning with the Recovery Act, this Administration provided the public unprecedented transparency into contracts and grants issued by the Federal government. Building on this experience, the Administration has charged forward to provide even more transparency, publishing information on all types of Federal spending in line with implementation of the Federal Funding Accountability and Transparency Act while taking care to keep the recipient reporting burden as low as possible. In April 2010, the Administration issued guidance implementing the compensation and sub-award requirements of the Transparency Act, including new requirements for quality and completeness metrics for Federal spending data. Agencies began reporting and displaying sub-award information in October 2010, so Americans can now view how their tax dollars are spent and who received Federal funds on *USAspending.gov*.

The Administration is also tracking and reporting multiple dimensions of Federal spending to increase spending accuracy. In June 2010, the Administration launched *PaymentAccuracy.gov* to display information on agency efforts to prevent, reduce, and recapture improper payments. Specifically, *PaymentAccuracy.gov* includes infor-

mation on spending accuracy performance government-wide (e.g., government-wide improper payment rate and reduction targets for future years), at the agency level (agency-specific improper payment amounts and the amount of improper payments recaptured), and for specific programs. And for specific high-error programs (e.g., Medicare, Medicaid, Unemployment Insurance), the site contains program specific information (e.g., names of agency accountable officials, annual improper payment rates and reduction targets, and supplemental measures related to improper payments). *PaymentAccuracy.gov* makes improper payment information transparent and easily accessible to the public and agency officials, and uses targets and metrics to keep agencies focused on reducing and recapturing improper payments.

In August, the Administration opened *Performance.gov* to all Federal employees to support communications across agencies and between agencies and OMB. *Performance.gov* provides the basis for OMB's quarterly Priority Goal Constructive Performance Reviews. Agencies update information in *Performance.gov* each quarter at a minimum, which provides a clear, concise picture of each agency's Priority Goals, action plans, strategies, and status on measures and milestones. Agencies also explain missed targets and milestones, and what they are doing about them. As experience using the site grows, OMB will work with the PIC to transition annual performance planning and reporting previously required by the Government Performance and Results Act of 1993, and now required by the GPRA Modernization Act of 2010, to *Performance.gov*. Reporting agency performance on *Performance.gov* will save taxpayers' dollars by diminishing the agencies' reporting burden, saving time and reams of paper. It will also increase the usefulness of what is reported. Agencies can already sort by theme on *Performance.gov* to find other agencies with Priority Goals in the same policy area with which they might want to coordinate. They can sort by project type to find organizations handling similar functions with which to benchmark process times and quality. As the site develops, tagging features will be enhanced to support cross-agency coordination on shared goals.

Performance.gov was designed as a Federal Government management tool, but the Administration will open portions of the site to provide a window for Congress, the public and others to show government priorities, candidly convey how goals are being accomplished, and explain what agencies are doing when a problem is encountered. In the interim, the list of near-term High Priority Performance Goals originally set in the 2011 budget can be found at <http://www.whitehouse.gov/omb/performance/default>. These goals represent a subset of the fuller suite of goals reflected in agencies' long-term strategic goals and annual performance plans, as well as individual performance plans of bureaus, and do not include goals dependent on new or recent legislation and additional funding.

Reporting to OMB via *Performance.gov* and opening the site up to the public to provide a window on the way the Federal government is managing bolsters the President's Accountable Government Initiative to make government

more responsive to the American people and creates a healthy dynamic that keeps agencies focused on delivering on their priorities. This is a management technique that has proven effective in both the public and private sectors to improve performance on key goals. For example, the State of Maryland publishes StateStat materials and goal tracking online and was ranked number one in the country for online stimulus tracking material.

Performance.gov is only one piece of an effective Federal performance communication system, however. Over the next year, the Administration will increase attention to other aspects of the performance communication infrastructure—considering more carefully key audiences for performance information, what they need to know, and how, when, and where they need to access the information to help them contribute to better outcomes.

Many Federal programs depend on delivery partners such as state and local governments and non-profit organizations to accomplish their objectives. Over the next year, the Administration will encourage Federal agencies to strengthen their capacity to be learning leaders supporting Federal field operations and state, local, tribal, and not-for-profit delivery partners. This requires not just figuring out how to organize performance and other relevant information about peers in similar situations to reveal effective practices worth promoting for broader adoption and problems that would benefit from cross-jurisdiction attention, but also understanding how to communicate that information in ways that are helpful, actionable, and fair—encouraging continual improvement without adding to fear and frustration.

To improve the quality of government services, provide greater certainty about the time needed, and inform decisions about which service provider to use when, the Administration is also working to enhance the way it communicates transaction performance—whether to those receiving benefits, getting a loan, going through a process designed to enhance security, using Federal facilities such as a national park, or otherwise directly dealing with Federal officials.

The Administration is committed not just to communicating performance from the Federal government in more useful ways, but also to improving public and delivery partner communication to the Federal government. *Performance.gov* will make it easy for site visitors to provide feedback. In addition, OMB and 40 Federal agencies have worked together to make it easier and faster to solicit actionable, timely feedback for many types of qualitative customer information, including comment cards, focus groups, and user testing, by using a generic clearance process that agencies can submit to the Office of Information and Regulatory Affairs for a five-day review. To tap into electronic networks and gather ideas, the Administration is also testing a web-based tool, with a working name of ExpertNet, to find people with expertise relevant to an issue, ask structured questions, receive public answers, and use public reactions to the answers to “filter up” the best suggestions for Federal attention.

Strengthen Problem-Solving Networks

The third strategy the Administration will pursue to improve performance management involves the extensive use of existing and new practitioner networks. Federal agencies do not work in isolation to improve outcomes. Every Federal agency and employee depends on and is supported by others—other Federal offices, other levels of government, for-profit and not-for-profit organizations, and individuals with expertise or a passion about specific problems. New information technologies, such as the ExpertNet tool described in the preceding section, are transforming our ability to tap vast reservoirs of capacity beyond a Federal office. At the same time, low-technology networks such as professional associations and communities of practice are also able to solve problems, spur innovation, and diffuse knowledge.

The Administration is turning to existing networks, both inside and outside Government, to tap their intelligence, ingenuity, and commitment, as well as their dissemination and delivery capacity. The PIC, made up of Performance Improvement Officers from every Federal agency, functions as the hub of the performance management network. OMB worked closely with the PIC over the past year to design and implement *Performance.gov* and the quarterly Constructive Performance Review process. In the coming year, it will continue to work with the PIC to modernize the principles and practices of the current performance management framework and to figure out effective ways to help agencies accelerate their performance. Acceleration efforts will include the creation of a Practitioners' Corner on *Performance.gov* to share tips, tools, and templates; the identification of best practices and agency experts ready to assist counterparts in other agencies; and the establishment of functional working groups and communities of practice to share and co-invest in better practices they can share.

In 2010, several cross-agency teams began sharing experiences and developing common tools. Performance Improvement Officers from agencies responsible for benefits processing identified priority areas of shared interest for future group action, including reducing improper payments and improving the experience of customers—processing their benefits faster and improving customer relationship management. Federal employees who manage unwanted incidents—preventing bad things from happening and reducing their costs when they do—developed a common measurement framework they can all use. Agencies implementing new evidence-based grant programs began exchanging lessons on how to build a strong evidence focus into their grant review and selection pro-

cesses and to require projects to be evaluated using rigorous evaluations designs. And, volunteers from across the government reviewed the content of *Performance.gov* to provide agencies feedback from multiple perspectives. Tapping a network of reviewers from other Federal agencies also spreads and strengthens Federal agency knowledge about outcome-focused performance management practice.

Problem-solving teams have been launched to conduct intensive reviews across a range of disciplines. In the Information Technology (IT) realm, OMB has gathered ideas from private sector leaders, top CEOs, contractors and agency CIOs to improve the Federal Government's management of IT projects. Additionally, the office of the U.S. Chief Information Officer launched TechStat sessions that bring together all of the government staff and private contractors joining forces on a given IT project to identify problems and come up with solutions to improve effectiveness and cut out waste. The Office of Federal Procurement Policy has reinstated the Front Line Forum, comprising front line contracting officers from all the large agencies as well as many small ones, to get the front-line staff's unique perspective and recommendations on improving acquisition across the Federal government. In 2011, the Chief Acquisition Officers Council (CAOC) will focus on strengthening the acquisition workforce and improving communication between program and contracting officials. The CAOC has also initiated a cross-council group (CAOC, PIC, Chief Financial Officers Council, Chief Information Officers Council, and Chief Human Capital Officers), working with the Office of Personnel Management, to share hiring flexibilities and develop effective hiring strategies for agency hiring managers. And like the IT TechStat sessions, the Office of Federal Procurement Policy has launched AcqStat sessions to bring a broad swath of acquisition professionals together to discuss the challenges they face in delivering better results for less.

The Administration is also turning to existing external networks—including State and local government associations, schools of public policy and management, think tanks, and professional associations—to enlist their assistance on specific problems and in spreading effective performance management practices.

AGENCY HIGH PRIORITY PERFORMANCE GOALS

The list of near-term High Priority Performance Goals can be found at <http://www.whitehouse.gov/omb/performance/default>.

8. PROGRAM EVALUATION

The Administration believes that the Federal Government should use taxpayer dollars efficiently and effectively. Central to that is a culture where agencies constantly ask, and try to answer, questions that help them find, sustain, and spread effective programs and practices; find and fix or eliminate ineffective ones; test promising programs and practices to see if they can be replicated; and find lower-cost ways to achieve a positive impact. The Federal fiscal situation necessitates doing more with less, not only to reduce budget deficits, but to build confidence that Americans are receiving maximum value for their hard-earned tax dollars. It is therefore critical to apply an evidence-based approach to government management that utilizes rigorous methods appropriate to the situation, learns from experience, and is open to experimentation.

One of the challenges to evidence-based policy-making is that it is sometimes hard to say whether a program is working well or not. Historically, evaluations have been an afterthought when programs are designed, and once a program has been in place for a while, building a constituency for rigorous evaluation is hard. The Administration is committed to addressing this problem.

This Administration is strongly encouraging appropriately rigorous evaluations to determine the impact of programs and practices on outcomes, complementing the performance measurement and management practices described in chapter 7, “Delivering High-Performance Government”, in this volume. In many policy debates, stakeholders come to the table with deep disagreements about the effectiveness or ineffectiveness of particular interventions. Evaluations that are sufficiently rigorous, relatively straightforward, and free from political interference are especially valuable in such circumstances.

Evaluations do what performance measurement, alone, cannot. Evaluations determine whether programs produce outcomes superior to alternative policy choices, or not putting into place a policy at all. This is in contrast with performance measurement, which tracks progress toward intended program outcomes, but does not compare outcomes to alternative programs or the status quo. If a particular job training approach has a high job placement rate, is it because it is effective or because it attracts those easiest to place in jobs? An evaluation would compare the employment of participants in the job training program to comparable individuals who did not participate in the program in order to isolate the effects of the training from other factors. Evaluations can answer a wide-range of germane questions such as whether workers are safer in facilities that are inspected more frequently, whether one option for turning around a low-performing school is more effective than another, whether outcomes for

families are substantially improved in neighborhoods that receive intensive services, and whether no-fee debit cards increase savings among the unbanked.

Evaluation is one component of the evidence infrastructure that plays a role in a wide range of decision-making. The best government programs embrace a culture where performance measurement and evaluation are regularly used and complement one another. Agencies use performance measurement to detect practices that hold the most promise for improving performance and those with the greatest problems. Descriptive evidence of program recipients helps managers better target their resources. Regression analyses of administrative data shed light on how to better match recipients with appropriate services. Rigorous evaluations using experimental or quasi-experimental methods identify the effects of programs in situations where doing so is difficult using other methods; and rigorous qualitative evidence complements what can be learned from empirical evidence and provides greater insight into the contexts where programs and practices are implemented more and less successfully.

Continuing its emphasis on rigorous program evaluations initiated in the President’s 2011 Budget, the Administration is proposing new evaluation funding for 2012 for 19 evaluations that have the potential for strong study designs and that address important actionable questions or strengthen agency capacity to support such strong evaluations.

Agencies that submitted proposals were expected to demonstrate that their funding priorities are based upon credible empirical evidence—or that they have a plan to collect that evidence—and to identify impediments to rigorous program evaluation in their statutes or regulations so that these might be addressed going forward.

The evaluation initiative included an extensive review process, with proposals reviewed by program examiners and evaluation experts at the Office of Management and Budget (OMB) and the Council of Economic Advisers (CEA). In some cases agencies then had a series of meetings with OMB and the CEA to sharpen their proposals. Going forward, OMB and the CEA plan to continue to work with these agencies on implementing strong research designs that answer important questions.

While the evaluation proposals include a broad range of domestically and internationally focused agencies, each shares the characteristics of rigor and presenting an actionable choice based on results. The accompanying table presents the evaluation activities proposed for funding as part of the 2012 evaluation initiative. These activities include a series of evaluations assessing the effectiveness of different strategies for improving college enrollment, persistence, and completion, capacity-

Table 8–1. FUNDED PROGRAM EVALUATION INITIATIVE PROPOSALS

Agency	Description
Department of Education	Evaluation of providing high schools with financial aid submissions data
Department of Education	Evaluation of integrating FAFSA and tax form preparation
Department of Education	Evaluation of college “bridge programs” for adult learners
Department of Education	Evaluation of early college placement testing and counseling
Department of Education	Evaluation of call centers to increase community college retention
Department of Education	Evaluation of Promise Neighborhoods
Department of Health and Human Services	Impacts of Medicaid expansions in Affordable Care Act
Department of Health and Human Services	Evaluation of health homes for enrollees with chronic conditions
Department of Health and Human Services	Falls prevention demonstration and evaluation
Department of Health and Human Services	Enhancing quality in early childhood programs
Department of Labor	Evaluation of TAA Community College and Career Training Grants
Department of Labor	Capacity building
Millennium Challenge Corporation	Gender-specific impacts of MCA Benin Access to Land project
United States Agency for International Development	Evaluation of Rwanda Integrated Improved Livelihoods program
United States Agency for International Development	Evaluation of Haiti Integrated Watershed Management program
United States Agency for International Development	Capacity building for evaluation consultancies
Department of the Treasury	Research studies to explore new and improved uses of IRS data
National Aeronautics and Space Administration	Evaluation of Applied Sciences program
Office of Personnel Management	Evaluation of Federal Government telework and Results Only Work Environment pilot

building for the United States Agency for International Development (USAID) that should help make rigorous evaluation a more routine aspect of their international development assistance efforts, and an analysis of ways to make the Federal workforce more efficient.

The evaluations proposed in this initiative encompass only a fraction of the evaluations performed by the Federal Government. For example, the Recovery Act launched a number of evaluations across the Federal Government on such topics as the effects of different rent formulas on housing assistance recipients, the effects of smart grid meters on residential electricity usage, and the effects of extended unemployment insurance benefit programs on employment outcomes. In addition, the Administration is placing additional focus on agency evaluation budgets to ensure that those dollars are producing high quality evidence that informs key decisions.

New funding for rigorous evaluations is only part of the Administration’s efforts to reinvigorate evaluation activities across the Federal Government. Additional effort is being placed on building agency capacity for doing good evaluations. Whether that is supporting an agency in standing up a central evaluation office, empowering existing evaluation offices, institutionalizing policies that lead to strong evaluations, or hiring evaluation experts into key administrative positions, this Administration strives to build a robust evaluation infrastructure.

In addition, an inter-agency working group is promoting stronger evaluation across the Federal Government by (a) helping build agency evaluation capacity and creating effective evaluation networks that draw on the best expertise inside and outside the Federal Government, (b) sharing best practices from agencies with strong, independent evaluation offices and making research

expertise available to agencies that need assistance in selecting appropriate research designs in different contexts, (c) devising new and creative strategies for using data and evaluation to drive continuous improvement in program policy and practice, and (d) developing Government-wide guidance on program evaluation practices with sufficient flexibility for agencies to adopt practices suited to their specific needs.

OMB is working with agencies to make information readily available online about all Federal evaluations focused on program impacts that are planned or already underway. This effort, analogous to that of the Department of Health and Human Services (HHS) clinical trial registry and results data bank (ClinicalTrials.gov), will promote increased transparency and accountability, and allow experts inside and outside the Government to engage early in the development of program evaluations.

For several new grant-based initiatives, the Administration is using a three-tiered approach to evidence-based funding. First, money is proposed to promote the adoption of programs and practices that strong evidence suggests will lead to significant improvement in results. Second, for programs with some but not as much supportive evidence, additional resources are proposed with the condition that the programs will be rigorously evaluated going forward. Over time, the Administration anticipates that some second-tier programs will move to the first tier, but only if they prove more promising and cost-effective than other programs. Third, agencies are encouraged to innovate and test ideas with strong potential—ideas supported by preliminary research findings or reasonable hypotheses.

A good example of this approach—in which new or expanded programs have evaluation “baked into their

DNA”—is the Department of Education’s Invest in Innovation Fund (i3). The i3 fund invests in high-impact, potentially transformative education interventions—ranging from new ideas with huge potential to those that have proven their effectiveness and are ready to be scaled up. Whether applicants to i3 are eligible for funding to develop, validate, or scale up their program, and therefore how much funding they are eligible to receive, will depend on the strength of the existing evidence of the program’s effectiveness, the magnitude of the impact the evidence demonstrates the program is likely to have, and the program’s readiness for scaling up.

This three-tiered structure will provide objective criteria to inform decisions about programs and practices in which to invest and create the right incentives for the future. Organizations will know that to be considered for significant funding, they must provide credible evaluation results that show promise, and, before that evidence is available, be ready to subject their models to analysis. As more models move into the top tier, it will create pressure on all the top-tier models to compete to improve their effectiveness to continue to receive support. For example, the Administration has chosen to invest in many of those areas, but has made a concerted effort to increase investments in early childhood education and home-visiting programs that are backed by strong evidence—because rigorous evidence suggests that investments in those areas have especially high returns.

Rigorous evaluation will be a central component of several cross-agency initiatives designed to identify more cost-effective approaches to achieving positive outcomes for disadvantaged populations. These populations

are often eligible for multiple services and benefits administered by separate Federal and State agencies, which are poorly coordinated and governed by rules that stifle effective collaboration and innovation. In 2012, the Departments of Labor and Education will support joint pilots to test interventions and systemic reforms with the potential to improve education and employment outcomes at lower cost to taxpayers. The Social Security Administration and the Department of Education will launch a joint initiative to test interventions that improve outcomes for children with disabilities and their families, which may yield substantial long-term savings if these children leave the Supplemental Security Income program. OMB’s Partnership Fund for Program Integrity Innovation will test promising solutions developed collaboratively by Federal and State agencies to improve payment accuracy, improve administrative efficiency, and enhance service delivery in overlapping benefit programs. Rigorous evaluation of these cross-agency pilots will help determine which strategies lead to better results at lower cost, allowing Federal and State governments to identify the most promising strategies that warrant expansion.

The President has made it very clear that policy decisions should be driven by evidence—evidence about what works and what does not and evidence that identifies the greatest needs and challenges. By instilling a culture of learning into Federal programs, the Administration will build knowledge so that spending decisions are based not only on good intentions, but also on strong evidence that yield the highest social returns on carefully targeted investments.

9. BENEFIT-COST ANALYSIS

I. INTRODUCTION

Federal Government policies and programs make use of our Nation's limited resources to achieve important social goals, including economic growth, job creation, education, national security, environmental protection, and public health. Many Federal programs require governmental expenditures, such as those funding early childhood education or job training. Moreover, many policies entail social expenditures that are not reflected in budget numbers. For example, environmental, energy efficiency, and workplace safety regulations impose compliance costs on the private sector. In all cases, the American people expect the Federal Government to design programs and policies to manage and allocate scarce fiscal resources prudently, and to ensure that programs achieve the maximum benefit to society and do not impose unjustified or excessive costs.

A crucial tool used by the Federal Government to achieve these objectives is benefit-cost analysis, which provides a systematic accounting of the social benefits and costs of Government policies. As the President recently said in Executive Order 13514, "It is the policy of the United States that...agencies shall prioritize actions based on a full accounting of both economic and social benefits and costs and shall drive continuous improve-

ment by annually evaluating performance, extending or expanding projects that have net benefits, and reassessing or discontinuing under-performing projects." The benefits and costs of a government policy are meant to offer a concrete description of the anticipated consequences of the policy. Such an accounting helps policymakers to design programs to be efficient and effective and to avoid unnecessary or unjustified costs and burdens. That accounting also allows the American people to see the expected consequences of programs and to hold policymakers accountable for their actions.

It is true that quantification and monetization produce significant challenges, but serious efforts have been made to meet those challenges. Those efforts are continuing. Importantly, there is a close relationship between public participation and benefit-cost analysis. Because analysis is often improved through transparency and public comments, participation and consideration of benefits and costs are tightly connected in practice. To strengthen the economic recovery and prepare the country to thrive in an increasingly competitive global economy, it is important to analyze both benefits and costs and to take steps to eliminate unnecessary burdens, which may have adverse effects on job creation and growth.

II. BENEFIT-COST ANALYSIS OF FEDERAL REGULATIONS

Overview of Benefit-Cost Analysis of Federal Regulation

For over three decades, benefit-cost analysis has played a critical role in the evaluation and design of significant Federal regulatory actions. While there are precursors in earlier administrations, the Reagan Administration was the first to establish a broad commitment to benefit-cost analysis in regulatory decision making through its Executive Order 12291. The Clinton Administration continued that commitment when it updated the principles and processes governing regulatory review in Executive Order 12866, which continues in effect today. Executive Order 12866 requires executive agencies to catalogue and assess the benefits and costs of planned significant regulatory actions. It also requires agencies (1) to undertake regulatory action only on the basis of a "reasoned determination" that the benefits justify the costs and (2) to choose the regulatory approach that maximizes net social benefits, that is, benefits minus costs (unless the law governing the agency's action requires another approach).

On January 18, 2011, President Obama issued Executive Order 13563, which emphasizes the importance of protecting "public health, safety and our environment while

promoting economic growth, innovation, competitiveness, and job creation."¹ Executive Order 13563 points to the need for predictability and for certainty, and for use of the least burdensome tools for achieving regulatory ends. It states that agencies "must take into account benefits and costs, both quantitative and qualitative." Executive Order 13563 reaffirms the principles, structures, and definitions in Executive Order 12866. In particular, Executive Order 13563 directs:

"As stated in Executive Order 12866 and to the extent permitted by law, each agency must, among other things: (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety,

¹ Available at www.whitehouse.gov/sites/default/files/omb/inforeg/eo12866/eo13563_01182011.pdf.

and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.”

In addition, Executive Order 13563 asks agencies “to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.”

Executive Order 13563 elaborates five new principles to guide regulatory decision making. First, agencies are directed to promote public participation, in part through making relevant documents available on regulations.gov to promote transparency and comment. Second, agencies are directed to attempt to reduce “redundant, inconsistent, or overlapping requirements,” in part by working with one another to simplify and harmonize rules. This important provision is designed to reduce confusion, redundancy, and excessive cost. One goal of simplification and harmonization is “to promote rather than to hamper innovation,” which is a foundation of both growth and job creation. Third, agencies are directed to identify and consider flexible approaches to regulatory problems, including warnings and disclosure requirements. Such approaches may “reduce burdens and maintain flexibility and freedom of choice for the public.” Fourth, agencies are directed to promote scientific integrity. Fifth, and finally, agencies are directed to produce plans to engage in retrospective analysis of existing significant regulations to determine whether they should be modified, streamlined, expanded, or repealed.

Operating under the broad framework established by Executive Order 12866 (and now with the additional guidance of Executive Order 13563), the Office of Management and Budget (OMB) requires careful analysis of the costs and benefits of significant rules; identification of the approach that maximizes net benefits; detailed exploration of reasonable alternatives, alongside assessments of their costs and benefits; cost-effectiveness; and attention to unquantifiable benefits and costs as well as to distributive impacts. These steps are taken to ensure that regulations will be effective in achieving their purposes and that they do not impose excessive costs.

Reviewing agencies’ benefit-cost analyses and working with agencies to improve them, OMB provides a centralized repository of analytical expertise in its Office of Information and Regulatory Affairs (OIRA). OMB’s guidance to agencies on how to do benefit-cost analysis for proposed regulations is contained in OMB’s Circular A-4, Regulatory Analysis. Circular A-4 directs agencies to specify the goal of a planned regulatory intervention, to consider a range of regulatory approaches for achieving that goal, to select the least burdensome approach, and to estimate the benefits and costs of each alternative considered. To the extent feasible, agencies are required to monetize benefits and costs, so that they are expressed

in comparable units of value. This process enables the agency to identify (and generally to choose) the approach that maximizes the total net benefits to society generated by the rule.

For example, consider a regulation that sets standards for how quickly a truck’s brakes must be able to bring it to a stop.² A shorter stopping distance generates greater safety benefits, but also will impose larger compliance costs if more effective brakes are more expensive. The agency should attempt to quantify both the safety benefits of reduced stopping distance and the costs of regulatory requirements. It should consider a range of stopping distances to determine the optimal one that maximizes net benefits. At such an optimal standard, making the stopping distance even shorter would impose greater additional compliance costs than it would generate in additional safety benefits. At the same time, making the stopping distance longer than optimal results in a loss in safety benefits that is greater than the cost savings. Careful benefit-cost analysis enables the agency to determine the optimal standard. It helps to show that some approaches would be insufficient and that others would be excessive.

To be sure, quantification of the relevant variables, and monetization of those variables, can present serious challenges. OIRA and relevant agencies have developed a range of strategies for meeting those challenges; many of them are sketched in Circular A-4, and we take up one such strategy below. Efforts continue to be made to improve current analyses and to disclose and test their underlying assumptions. In some cases, analysis of costs and benefits will leave significant uncertainties. But much of the time, an understanding of costs and benefits will rule out some possible courses of action, and will show where, and why, reasonable people might differ. Such an understanding will also help to identify the most effective courses of action and to eliminate unjustified costs and burdens—in the process helping to promote competitiveness and economic growth.

The Benefits and Costs of Federal Regulation in 2009

Each year, OMB reports to Congress agencies’ estimates of the benefits and costs of major regulations reviewed in the prior fiscal year. Table 9–1 presents the benefit and cost estimates for the 33 non-budgetary rules reviewed by OMB in 2009.³ Of those, agencies were able to monetize both the benefits and costs for 16. (For some rules, agencies were able to monetize benefits but not costs. For example, the Department of Interior adopted three Migratory Bird Hunting regulations for which the agency estimated the benefits associated with increased consumer welfare of hunting allowances.) Most of the benefits

²The National Highway Traffic Safety Administration recently issued a new safety standard for air brake systems to improve the stopping distance performance of trucks. See 49 CFR § 571.

³2009 is the most recent period for which such a summary is available. These estimates were reported in OMB, 2010 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. A detailed description of the assumptions and calculations underlying these estimates is provided in that Report.

and costs reported in Table 9–1 are expressed as ranges, and sometimes as wide ranges, because of uncertainty about the likely consequences of rules. Quantification and monetization raise difficult conceptual and empirical questions. Prospective benefit-cost analysis requires predictions about the future—both about what will happen if the regulatory action is taken and what will happen if it is not—and what the future holds is typically not known for certain. A standard goal of the agency’s analysis is to produce both a central “best estimate,” which reflects the expected value of the benefits and costs of the rule, as well as a description of the ranges of plausible values for benefits, costs, and net benefits. These estimates inform the decisionmakers and the public of the degree of uncertainty associated with the regulatory decision. The process of public scrutiny can sometimes reduce that uncertainty.

To illustrate some of the underlying issues, consider the EPA’s recent National Ambient Air Quality Standard

(NAAQS) for Lead. The benefits of the rule are estimated to be somewhere between \$455 million to \$5,203 billion—an expansive range. Almost all of these estimated benefits are due to reduced lead exposure leading to reductions in decrements in cognitive function in children and ancillary benefits of reduced mortality resulting from the reduction in particulate matter emissions caused by the rule. However, there is substantial uncertainty with respect to (a) the underlying shape of the dose-response relationship in evaluating effect of lead exposure on cognitive function in children, (b) the relationship between exposure to particulate matter and premature death and (c) the proper monetary valuation of avoiding a premature death. Similar uncertainties in both the science used to predict the consequences of rules and the monetary values of those consequences, contribute to the uncertainty represented in the ranges of benefits and costs for other rules in Table 9–1. Despite these uncertainties,

Table 9–1. ESTIMATES OF THE TOTAL ANNUAL BENEFITS AND COSTS OF MAJOR RULES REVIEWED BY OMB IN 2009

(In millions of 2001 dollars)

Rule	Agency	Benefits	Costs
Energy Efficiency Standards for Commercial Refrigeration Equipment	DOE/EE	186-224	69 - 81
Energy Efficiency Standards for General Service Fluorescent Lamps and Incandescent Lamps	DOE/EE	1,111-2,886	192 - 657
Patient Safety and Quality Improvement Act of 2005 Rules	HHS/AHRQ	69-136	87-121
Revisions to HIPAA Code Sets	HHS/CMS	77-261	44- 238
Surety Bond Requirement for Suppliers of Durable Medical Equipment, Prosthetics, Orthotics, and Supplies	HHS/CMS	Not estimated	86
Updates to Electronic Transactions (Version 5010)	HHS/CMS	1,114-3,194	661-1,449
Use of Ozone-Depleting Substances; Removal of Essential Use Designations [Epinephrine]	HHS/FDA	Not estimated	154-940
Prevention of Salmonella Enteritidis in Shell Eggs	HHS/FDA	206-8,583	48-106
Air Cargo Screening	DHS/TSA	Not estimated	191-273
Secure Flight Program	DHS/TSA	Not estimated	262-348
Importer Security Filing and Additional Carrier Requirements	DHS/USCBP	Not estimated	744-3,009
Documents and Receipts Acceptable for Employment Eligibility Verification	DHS/USCIS	Not estimated	118
Real Estate Settlement Procedures Act (RESPA); To Simplify and Improve the Process of Obtaining Mortgages and Reduce Consumer Costs (FR-5180)	HUD/OH	2303	884
Migratory Bird Hunting; 2008 to 2009 Migratory Game Bird Hunting Regulations	DOI/FWS	711-1,001	Not estimated
Migratory Bird Hunting; 2009 to 2010 Migratory Game Bird Hunting Regulations	DOI/FWS	234-309	Not estimated
Migratory Bird Hunting; 2009 to 2010 Migratory Game Bird Hunting Regulations	DOI/FWS	234-309	Not estimated
Abandoned Mine Land Program	DOI/OSMRE	Not estimated	Not estimated
Family and Medical Leave Act of 1993; Conform to the Supreme Court’s Ragsdale Decision	DOL/ESA	Not estimated	224-226
Refuge Alternatives for Underground Coal Mines	DOL/MSHA	Not estimated	41-45
Part 121 Pilot Age Limit	DOT/FAA	30-35	4
Washington, DC, Metropolitan Area Special Flight Rules Area	DOT/FAA	10-839	89-382
Hours of Service of Drivers	DOT/FMCSA	0-1,760	0-105
New Entrant Safety Assurance Process	DOT/FMCSA	472-602	60-72
Passenger Car and Light Truck Corporate Average Fuel Economy Model Year 2011	DOT/NHTSA	857-1,905	650-1,910
Reduced Stopping Distance Requirements for Truck Tractors	DOT/NHTSA	1,250- 1,520	23- 164
Requirements for Temporary Vehicle Trade-In Program	DOT/NHTSA	Not estimated	46
Roof Crush Resistance	DOT/NHTSA	374-1,160	748- 1,189
Pipeline Safety: Standards for Increasing the Maximum Allowable Operating Pressure for Gas Transmission Pipelines	DOT/PHMSA	85-89	13-14
Prohibition on Funding of Unlawful Internet Gambling	Treas/DO	Not estimated	75
TARP Limits on Compensation	Treas/DO	Not estimated	Not estimated
Greenhouse Gas Mandatory Reporting Rule	EPA/AR	Not estimated	64-86
Review of the National Ambient Air Quality Standards for Lead	EPA/AR	455-5,203	113-2,241
FAR Case 2007-013, Employment Eligibility Verification	FAR	Not estimated	127-141

benefit-cost analysis often reduces the range of reasonable approaches—and simultaneously helps to inform the decision about which approach is most reasonable.

Quantification and Breakeven Analysis

In some cases, the effort to monetize certain benefits (such as protection of streams and wildlife) will run into serious obstacles; quantification may be possible but not monetization. In other cases, analysts will know the direction of an effect, and perhaps be able to specify a range, but precise quantification itself will not be possible. Recognizing these points, OMB has recommended that consistent with Executive Order 12866, the best practice is to accompany all significant regulations with (1) a tabular presentation, placed prominently and offering a clear statement of qualitative and quantitative benefits and costs of the proposed or planned action, together with (2) a presentation of uncertainties and (3) similar information for reasonable alternatives to the proposed or planned action. An advantage of this approach is transparency. If, for example, it is possible to quantify certain benefits (such as protection of water quality) but not to monetize them, then the public should be made aware of that fact. At the same time, qualitative discussion of nonquantifiable benefits should help the public, and relevant decisionmakers, to understand the goal of the regulation and how it might achieve that goal.

When quantification is not possible, many agencies have found it both useful and informative to engage in “breakeven analysis.” Under this approach, agencies specify how high the unquantified or unmonetized benefits would have to be in order for the benefits to justify the costs. Suppose, for example that regulation that protects water quality costs \$105 million annually, and that it also has significant effects in reducing pollution in rivers and streams. It is clear that the regulation would be justified if and only if those effects could reasonably be valued at \$105 million or more. Once the nature and extent of the water quality benefits are understood, it might well be easy to see whether or not the benefits plausibly justify the costs—and if the question is difficult, at least it would be clear why it is difficult. Breakeven analysis is an important tool, and it has analytical value when quantification is speculative or impossible.

Current Agency Practice for Values of Mortality Reduction

Since agencies often design health and safety regulation to reduce risks to life, evaluation of these benefits can be the key part of the analysis. When monetizing reduced mortality risks, agencies often use what is commonly described as a “Value of a Statistical Life,” or VSL. The term is misleading because it suggests, erroneously, that the goal of monetization is to place a “value” on individual lives. The goal is instead to value reductions in small risks of premature death (such as 1 in 100,000); it follows that “VSL” actually refers to the value of marginal risks. There is no effort to suggest that any individual’s life can be expressed in monetary terms.

Circular A-4 provides background on the theory and practice of calculating VSL. It states that a substantial majority of the studies of VSL indicate a value that varies “from roughly \$1 million to \$10 million per statistical life.” In practice, agencies have tended to use a value in the middle or upper range of this distribution. (Note that Circular A-4 was issued in 2003 and that because of national income growth, the figure increases over time.) OMB believes that it is important to consult the relevant literature, which contains a range of significant empirical findings and conceptual claims, in order to base analysis on the best available research.

Two agencies, the Environmental Protection Agency (EPA) and the Department of Transportation (DOT), have developed official guidance on VSL. In its 2009 update to its guidelines, DOT uses a value of \$6.0 million (2009 dollars), and requires all the components of the Department to use this value in their Regulatory Impact Analyses (RIAs). EPA recently changed its VSL to \$6.3 million (2000 dollars) and adjusts this value for real income growth to later years. For example, in its final rule setting a new primary standard for Nitrogen Dioxide, EPA adjusted VSL to account for a different currency year (2006 dollars) and to account for income growth to 2020, which yields a VSL of \$8.9 million. EPA stated in this RIA, however, that it is continuing its efforts to update this guidance.

Although the Department of Homeland Security has no official policy on VSL, it recently sponsored a report through its U.S. Customs and Border Protection, and has used the recommendations of this report to inform VSL values for several recent rulemakings. This report recommends \$6.3 million (2008 dollars) and also recommends that DHS adjust this value upward over time for real income growth (in a manner similar to EPA’s adjustment approach). Other regulatory agencies that have used a VSL in individual rulemakings include the Department of Labor’s (DOL’s) Occupational Safety and Health Administration (OSHA) and the Department of Health and Human Services’ (HHS’) Food and Drug Administration (FDA). In OSHA’s rulemaking setting a Permissible Exposure Limit for Hexavalent Chromium, OSHA specifically referred to EPA guidance to justify a VSL of \$7.0 million (2003 dollars), as the types of air exposure risks regulated in this rulemaking were very similar to those in EPA rulemakings. The FDA has consistently used values of \$5.0 million and \$6.5 million (2002 dollars) in several of its rulemakings to monetize mortality risks, but also often uses a monetary value of the remaining life years saved by alternative policies. This is sometimes referred to as a “Value of a Statistical Life Year” or VSLY. As noted, OMB believes in the importance of consulting the growing empirical and conceptual work in this domain.

Cost-per-life-saved of Health and Safety Regulation in 2009

For regulations intended to reduce mortality risks, another analytic tool that can be used to assess regulations, and to help avoid unjustified burdens, is cost-effectiveness analysis. Some agencies develop estimates of the “net cost

per life saved” for regulations intended to improve public health and safety. To calculate this figure, the costs of the rule minus any monetized benefits other than mortality reduction are placed in the numerator, and the expected reduction in mortality in terms of total number of lives saved is placed in the denominator. This measure avoids any assignment of monetary values to reductions in mortality risk. It still reflects, however, a concern for economic efficiency, insofar as choosing a regulatory option that reduces a given amount of mortality risk at a lower net cost to society would conserve scarce resources compared to choosing another regulatory option that would reduce the same amount of risk at greater net costs.

Table 9–2 presents the net cost per life saved for four recent health and safety rules for which calculation is possible. The net cost per life saved is calculated using a 3 percent discount rate and using agencies’ best estimates for costs and expected mortality reduction where those were provided by the agency. There is substantial varia-

tion in the net cost per life saved by these rules, ranging from negative (that is, the non-mortality-related benefits outweigh the costs), to potentially as high as \$11.0 million.

This table is designed to be illustrative rather than definitive, and continuing work must be done to ensure that estimates of this kind are complete and not misleading. For example, some mortality-reducing rules have a range of other benefits, including reductions in morbidity, and it is important to include these benefits in cost-effectiveness analysis. Other rules have benefits that are exceedingly difficult to quantify but nonetheless essential to consider; consider rules that improve water quality or have aesthetic benefits. Nonetheless, it is clear that some rules are far more cost-effective than others, and it is valuable to take steps to catalogue variations and to increase the likelihood that scarce resources will be used as effectively as possible.

Table 9–2. ESTIMATES OF THE NET COSTS PER LIFE SAVED OF SELECTED HEALTH AND SAFETY RULES REVIEWED BY OMB IN FISCAL YEAR 2009

(In millions of 2001 dollars)

Rule	Agency	Net Cost per Life Saved	Notes
Prevention of Salmonella Enteritidis in Shell Eggs	HHS/FDA	Negative	Morbidity benefits exceed costs.
New Entrant Safety Assurance Process	DOT/FMCSA	Negative	Property damage and morbidity benefits exceed costs.
Reduced Stopping Distance Requirements for Truck Tractors	DOT/NHTSA	Negative	Property damage benefits exceed costs.
Roof Crush Resistance	DOT/NHTSA	\$6.4-11.0	The agency estimates that the rule will prevent 135 fatalities and 1,065 nonfatal injuries annually. These figures translate into 156 equivalent fatalities. The main estimates value equivalent fatalities prevented at \$6.1 million. It follows that the value of nonfatal injuries prevented is \$6.1 million*(156-135)=\$128.1 million annually. Total costs associated with the rule range from \$875 million to \$1,400 million annually. If injury benefits are subtracted from costs, the range of net cost per life saved is thus \$5.5 million to \$9.4 million (2007 dollars). Adjusting to 2001 dollars yields \$6.4 million to \$11.0 million.

III. BENEFIT-COST ANALYSIS OF BUDGETARY PROGRAMS

As noted, Executive Orders 13563 and 12866 require agencies, to the extent permitted by law, to “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” OIRA works actively with agencies to promote compliance with this requirement.

Historically, benefit-cost analysis of Federal budgetary programs has been more limited than that of regulatory policy. Increasingly, though, the Federal Government explicitly employs benefit-cost analysis to ensure that projects and spending programs have benefits in excess of costs, maximize net benefits, and allocate Federal dollars most efficiently across potential projects.

In the 1936 Flood Control Act, for example, the Congress stated as a matter of policy that the Federal Government should undertake or participate in flood control projects if the benefits exceeded the costs, where the lives and social security of people are at stake. By the late 1970s, the Army Corps of Engineers had begun to use benefit-cost analysis to improve the return on investment at a given project site. The Corps did this by designing projects based on increments of work whose benefits exceeded

their costs. More recently, the budget has used benefits and costs, along with other criteria, to develop an overall program for the Corps that yields the greatest bang for the buck.

Benefit-cost analysis can also be used to evaluate programs retrospectively to determine whether they should be either expanded or discontinued and how they can be improved. Chapter 8, “Program Evaluation”, in this volume discusses current efforts to improve program evaluation. Evidence that an activity can yield substantial net benefits has motivated the creation and expansion of a substantial number of programs. For example, longitudinal studies have shown that each dollar spent on high quality pre-school programs serving disadvantaged children yields substantially more than a dollar (in present value) in higher wages, less crime, and less use of public services, motivating an expansion of funding for quality pre-kindergarten programs. Similar evidence has spurred the decision to expand funding for nurse-family partnerships, finding that each dollar spent in the program leads to more than a dollar of benefits mostly in reduced Government expenditures on health care, educational and

social services, and criminal justice, and that the highest returns were present in serving the most disadvantaged families. Similarly, the Government Accountability Office (GAO) has concluded that the Women, Infants, and Children (WIC) program produces monetary benefits that exceed its costs by reducing the incidence of low birth weight and iron deficiency, which are linked to children's behavior and development.

OMB continually works with Executive agencies to improve their benefit-cost analyses, and to increase transparency. In its 2010 annual report to Congress on the benefits and costs of Federal regulations,⁴ OMB made the following recommendations for improvement in agencies' benefit-cost analysis by promoting (1) clarity with respect to underlying assumptions and anticipated consequences,

⁴ OMB 2010 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities.

(2) prominent tabular presentations of costs and benefits, and (3) careful consideration of the comments offered by members of the public on proposed rules. Furthermore, OMB recommends that benefit-cost analysis should be seen and used as a central part of open government. By providing the public with information about proposed and final regulations, by revealing assumptions and subjecting them to public assessment, and by drawing attention to the consequences of alternative approaches, such analysis can promote public understanding, scrutiny, and improvement of rules. OMB continues to explore ways to ensure that benefit-cost analysis helps promote the commitment to open government.⁵

⁵ See Transparency and Open Government, Memorandum for the Heads of Executive Departments and Agencies, President Obama, Jan. 21, 2009.

IV. IMPROVING BENEFIT-COST ANALYSIS

In the Memorandum on Transparency and Open Government, issued on January 21, 2009, the President called for the establishment of "a system of transparency, public participation, and collaboration."⁶ The memorandum elaborated the principles of such a system, designed to promote accountability and disclosure of information that "the public can readily find and use." The memorandum noted that "[k]nowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge." Implementing the President's memorandum, agencies have begun to take a series of concrete measures described in the Open Government Directive to put into practice the commitments to transparency, participation, and collaboration.⁷

The goals of this effort are to promote accountability, to ensure that regulations are informed by a careful analysis of the likely consequences, and to reduce the dual risks of excessive and insufficient regulation. A particular goal, in the current period, is to avoid unjustified or excessive burdens on business, State and local government, and individuals. The recent agency checklist for Regulatory Impact Analysis is designed to promote these various goals (see Appendix).

Participation and Collaboration in the Regulatory Process

Regulations are likely to be most sensibly designed when they are created through the open exchange of information and perspectives among public officials, experts in relevant disciplines, and the public as a whole. To promote that open exchange, the Administration has asked agencies to provide the public with timely access to regulatory analyses and supporting documents (to the extent permitted by law and subject to privacy, confidentiality, security, or other restrictions), to ensure a meaningful opportunity for public comment.

The Internet provides an ideal vehicle for making information public, and the Administration has committed

to publish as much as possible online in a format that can be retrieved, downloaded, indexed, and searched by commonly-used web search applications. Importantly, this commitment promotes public accessibility of the analysis of benefits and costs, together with the supporting materials, in order to ensure that the analysis is subject to public scrutiny. That process of scrutiny can help to increase benefits, decrease costs, or both.

Agencies now publish a great deal of information relevant to rulemaking and benefit-cost analysis, including underlying data, online and in downloadable, as well as traditional, formats. The Administration has directed agencies to use regulations.gov as often as possible, in order to make the online record as complete as possible,⁸ to take all necessary steps to make relevant material available to the public for comment, and to make sure that all information provided to the public conforms to stringent information quality guidelines.⁹

Executive Orders 13563 and 12866 require that the public should generally receive a comment period of not less than 60 days for proposed regulatory actions. Even where statutes necessitate shorter comment periods, agencies can seek public comment and respond in a timely fashion to suggestions about potential improvements in rules and underlying analyses.

Publicly Accessible Summaries and Tables with Key Information

In order to improve analysis of the effects of regulations, and simultaneously to improve accountability, OMB has called for a clear, salient, publicly accessible executive summary of both benefits and costs—written in a "plain language" manner designed to be understandable to the public. For all economically significant regulations, Executive Order 12866 requires agencies to provide a description of the need for the regulatory action and a clear summary of the analysis of costs and benefits, both quali-

⁸ Available at: www.whitehouse.gov/omb/assets/inforeg/edocket_final_5-28-2010.pdf

⁹ Available at www.whitehouse.gov/omb/fedreg_final_information_quality_guidelines/

⁶ Available at: www.gpoaccess.gov/presdocs/2009/DCPD200900010.pdf

⁷ Available at: www.openthegovernment.org/otg/OGD.pdf

tative and quantitative. The summary often includes an accounting of benefits and costs of alternative approaches, and where relevant, an analysis of distributional impacts on subpopulations (such as people with disabilities or those with low income).

As noted, some benefits and costs can be quantified and monetized, while some can be described only in qualitative terms. Agencies are now asked to list all costs and benefits of a regulation in a convenient summary, quantifying and monetizing as many of them as possible. A useful way to communicate effects that cannot be easily quantified or monetized is to present ranges of values (as agencies frequently now do).

Simple, Straightforward Justification of Preferred Option

Executive Order 12866 requires the executive summary to include “an explanation of why the planned regulatory action is preferable to the identified potential alternative,” and demonstrate that the agency has selected the approach “that maximizes net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity) unless a statute requires another regulatory approach.”

Under the Executive Order, agencies are required to provide a “reasoned determination that the benefits of the intended regulation justify its costs,” to the extent permitted by law. In making those determinations, agencies should pay close attention to quantifiable and monetizable benefits and costs, but are permitted to consider

values that are hard or impossible to quantify in light of existing knowledge, as well as distributional effects, fairness, and considerations of equity (including, where relevant, considerations of environmental justice). Executive Order 13563 endorses and amplifies these principles.

Where nonquantified or nonmonetized variables are important to the agency’s determination, agencies often use “breakeven analysis,” explaining how high the nonquantified or nonmonetized benefits would have to be in order for the benefits to justify the costs. In those situations, agencies make underlying assumptions transparent to the public and available through the rulemaking process. Where the agency has proceeded even though the benefits do not justify the costs, and where the agency has not selected the approach that maximizes net benefits, it should carefully explain its reasoning (as, for example, where a statute so requires).

Benefit-cost analysis is a useful and often indispensable method for evaluating programs and options. In some cases, it reveals that apparently attractive proposals are too expensive to be worthwhile. In other cases, it shows that costly proposals are well-justified, because the benefits are significantly higher than the costs. Often benefit-cost analysis helps to identify the range of reasonable options. It is true that conceptual and empirical challenges remain and that it is important to assess the evolving literature in order to meet those challenges. Especially in a period of serious economic difficulties, greater use and improvement of benefit-cost analysis are high priorities.

APPENDIX

AGENCY CHECKLIST: REGULATORY IMPACT ANALYSIS

With this document, the Office of Information and Regulatory Affairs is providing a checklist to assist agencies in producing regulatory impact analyses (RIAs), as required for economically significant rules by Executive Order 12866 and OMB Circular A-4.

Nothing herein alters, adds to, or reformulates existing requirements in any way. Moreover, this checklist is limited to the requirements of Executive Order 12866 (available at: http://www.reginfo.gov/public/jsp/Utilities/EO_12866.pdf) and Circular A-4 (available at: www.whitehouse.gov/OMB/circulars/a004/a-4.pdf); it does not address requirements imposed by other authorities, such as the National Environmental Policy Act, the Regulatory Flexibility Act, the Unfunded Mandates Reform Act, the Paperwork Reduction Act, and various Executive Orders that require analysis. Executive Order 12866 and Circular A-4, as well as those other authorities, should be consulted for further information.

Checklist for Regulatory Impact Analysis:¹⁰

Does the RIA include a reasonably detailed description of the need for the regulatory action?

Does the RIA include an explanation of how the regulatory action will meet that need?

Does the RIA use an appropriate baseline (i.e., best assessment of how the world would look in the absence of the proposed action)?

Is the information in the RIA based on the best reasonably obtainable scientific, technical, and economic information and is it presented in an accurate, clear, complete, and unbiased manner?

Are the data, sources, and methods used in the RIA provided to the public on the Internet so that a qualified person can reproduce the analysis?

To the extent feasible, does the RIA quantify and monetize the anticipated benefits from the regulatory action?

To the extent feasible, does the RIA quantify and monetize the anticipated costs?

Does the RIA explain and support a reasoned determination that the benefits of the intended regulation justify its costs (recognizing that some benefits and costs are difficult to quantify)?

Does the RIA assess the potentially effective and reasonably feasible alternatives?

Does the RIA assess the benefits and costs of different regulatory provisions separately if the rule includes a number of distinct provisions?

Does the RIA assess at least one alternative that is less stringent and at least one alternative that is more stringent?

¹⁰ www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/RIA_Checklist.pdf. The checklist provides the complete cross-reference to the Executive Order 12866 and the Circular A-4.

Does the RIA consider setting different requirements for large and small firms?

Does the preferred option have the highest net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires a different approach?

Does the RIA include an explanation of why the planned regulatory action is preferable to the identified potential alternatives?

Does the RIA use appropriate discount rates for benefits and costs that are expected to occur in the future?

Does the RIA include, if and where relevant, an appropriate uncertainty analysis?

Does the RIA include, if and where relevant, a separate description of distributive impacts and equity?

Does the RIA provide a description/accounting of transfer payments?

Does the RIA analyze relevant effects on disadvantaged or vulnerable populations (e.g., disabled or poor)?

Does the analysis include a clear, plain-language executive summary, including an accounting statement that summarizes the benefit and cost estimates for the regulatory action under consideration, including the qualitative and non-monetized benefits and costs?

Does the analysis include a clear and transparent table presenting (to the extent feasible) anticipated benefits and costs (quantitative and qualitative)?

10. SOCIAL INDICATORS

The social indicators presented in this chapter illustrate in broad terms how the Nation is faring in selected areas where the Federal Government has significant responsibilities, including the economy, energy, the environment, health, and education, among others.

The indicators shown in the tables in this chapter are only a subset drawn from the vast array of available data on conditions in the United States. In choosing indicators for this table, priority was given to measures that were consistently available over an extended period. Such indicators make it easier to draw comparisons and establish trends.

The individual measures in these tables are influenced to varying degrees by many Government policies and programs, as well as by external factors beyond the Government's control. They do not measure the outcomes of Government policies, because they do not show the direct results of Government activities, but they do provide a quantitative measure of the progress or lack of progress toward some of the ultimate ends that Government policy is intended to promote. The "Program Evaluation" and "Benefit-Cost Analysis" chapters of this volume discuss approaches toward assessing directly the impacts of particular Government programs.

The President has made it clear that policy decisions should be based upon evidence—evidence about what the Nation's greatest needs and challenges are and evidence about what strategies are working. The social indicators in this chapter provide useful information both for prioritizing budgetary and policymaking resources and for evaluating how well existing approaches are working.

Economic Conditions: The 2008-2009 economic downturn has produced the worst labor market in more than a generation. Unemployment is double its rate at the most recent business cycle peak. The employment-to-population ratio has fallen below 60 percent for the first time in 25 years.

Over the full 1960 to 2010 period shown in the tables, the primary pattern has been one of rising living standards. Real disposable income per capita has more than tripled over the past five decades as technological progress and the accumulation of human and physical capital have increased the Nation's productive capacity. Average household net worth has more than doubled. But the median family has not shared fully in this prosperity—median income is up only about 24 percent (since 1967) and was lower in 2009 than in 1998, because income gains have been concentrated among higher-income families and individuals. Household composition has also affected the median income as the numbers of two-earner households and single-parent households have increased. Similarly the median wealth of households in the decade before retirement has risen, but not nearly as rapidly as mean wealth.

The rise in the share of national income received by those at the top of the income distribution can be seen in the two inequality measures in Table 10-1. The share of income accruing to the lower 60 percent of households has fallen from 32.9 percent in 1968 to 26.6 percent in 2009 - the most recent year for which we have data. The income share of the top one percent of taxpayers has risen from around eight percent in the two decades between 1960 and 1980 to 18 percent in 2008. The poverty rate, which fell dramatically between 1960 and 1970, as the economy prospered and as Social Security and other safety-net programs expanded, is at about the same level as in 1967—despite the large increase in per capita income, and 15 percent of American households are food-insecure. Changes in family structure among low-income households and stagnating wages for low-skill workers are a large part of the story for why rising aggregate income has not had more impact on the most economically vulnerable Americans.

Setting the Stage for Future Prosperity: The Nation's future economic prosperity depends on having a highly skilled workforce, an expanding stock of physical capital including advanced infrastructure, and a business environment that encourages innovation. National saving is a key determinant of future prosperity because it supports capital accumulation. Table 10-1 shows that net national saving, which was already low by international standards when it averaged around 10 percent in the 1960s and 1970s, fell from 6.2 percent in 2000 to 1.8 percent in 2007 as Federal budget surpluses turned to deficits. During the recent economic downturn, personal saving has rebounded to around 6 percent, but net national saving, which includes the Government's dissaving, has fallen to -1 percent of GDP. Despite the current low saving rate, past saving has resulted in a large accumulation of physical capital. The stock of physical capital including consumer durable goods like cars and appliances amounted to \$49 trillion in 2009, more than four times the size of the capital stock in 1960, after accounting for inflation.

National Research and Development (R&D) spending has hovered between 2.5 percent and 2.8 percent of GDP for most of the past 50 years. The President has set a target to increase this number to 3.0 percent. Patents encourage innovation by awarding an inventor the right to exclude others from the use of an invention unless compensated. The patent system also assures publication of patented ideas distributing knowledge that might otherwise be kept confidential. Patents by U.S. inventors have more than doubled since 1960.

The Nation's future well-being and prosperity depends also on stewardship of our natural resources and environment and on our ability to bring about a clean energy economy. The country has made major strides in improving

air quality since the passage of the Clean Air Act in 1970. Concentrations of the main criteria pollutants tracked by the Environmental Protection Agency have declined significantly since 1970. The largest decline was for lead, which was removed from gasoline, but there have also been large declines in the emissions of carbon monoxide, nitrogen oxides, and sulfur dioxide. The air has become markedly cleaner in the United States as a result of this progress. Progress on improving water quality has also been noticeable as an increasing proportion of the population is served by improved water treatment facilities.

Moving forward, the greatest environmental challenge is reducing greenhouse gas emissions. In 2008, emissions were 6016 teragrams. The President announced a target reduction of 17 percent in greenhouse gas emissions between 2005 and 2020, with an ultimate reduction of 83 percent between 2005 and 2050. While technological advances and a shift in production patterns mean that Americans now use about half as much energy per real dollar of GDP as they did 40 years ago, rising income levels mean that per capita consumption has remained roughly constant. And today only eight percent of U.S. energy production is from renewable sources.

Health, Education, and Civic Engagement: Table 10-2 focuses on additional national priorities.

The first three groups of indicators in this table show measures related to the Nation's health. The United States devotes a large fraction of its income to health care, and that share has increased more than threefold since 1960. In the latest data, the share of GDP accounted for by health expenditures was 17.6 percent of GDP in 2009, and the share is projected to have remained near that level in 2010. This is the largest it has ever been and well above what other nations spend on health. Despite the large expenditures on health care, many Americans were unable to obtain health insurance. In 2009, about 17 percent of the U.S. population was uninsured. In 2010, the President signed into law the Affordable Care Act, which is projected to reduce the number of uninsured Americans significantly. The United States has seen progress over the last 50 years in some important indicators of health status. Infant mortality has fallen from 26 deaths per 1,000 live births in 1960 to less than 7 deaths in 2000, although there has been relatively slow progress since 2000. Life expectancy at birth has increased substantially in the United States, rising by more than eight years since 1960, although it lags behind that in many other developed countries, and registered a small decline in 2008.

Americans' behaviors contribute to some of our health problems. Cigarette smoking has declined dramatically since the 1970s, but 21 percent of the adult population still smokes with the attendant health risks that brings. Obesity is a growing problem for the United States as more and more Americans fall into this category. About 27 percent of the population is classified as obese according to criteria established by the Centers for Disease Control and Prevention, up from 15 percent fifteen years ago.

The Administration is committed to returning America to being number one in the world in high school and college graduation rates and academic achievement, which

is critical to long-term competitiveness and growth. Between 1960 and 1980, the percentage of 18-24 year olds with a high school diploma increased from 60 percent to 81 percent, a gain of about ten percentage points per decade. Progress has slowed since then with only a four percentage point gain over the past 30 years. The most thorough measurement of education achievement is the National Assessment of Educational Progress (NAEP). These measures have been taken since the 1980s. They show only very gradual improvement in mathematics and no discernible progress in reading for American 17-year olds. College enrollment rates have continued to rise. In 1980 only a quarter of 18-24 year olds were enrolled in college. Today that number is almost 40 percent.

Americans are generally well housed, but some of the population faces housing problems. In 2007, about five percent of households with children lived in inadequate housing as defined by the Census Bureau. These problems usually consisted of poor plumbing, inadequate heating, or other physical maintenance problems. About six percent of these households were experiencing overcrowding. Both measures were down from levels reported in the 1980s. However, many families have experienced increased housing costs relative to income. In 2007, 37 percent of families with children were spending more than 30 percent of reported income on housing and utilities, up from 17 percent in 1980.

Since 1980, there has been a remarkable decline in violent crime. The two crime measures shown in Table 10-2 are based on different types of record keeping. The murder rate is based on reported homicides compiled by the Federal Bureau of Investigation from local law enforcement agencies, while the violent crime statistic is based on surveys of victims. The violent crime rate has declined to about one-third of its 1980 level. The murder rate has been cut in half.

Measures of family instability increased significantly up until around 1995. Since 1995, births to unmarried adolescents age 15 to 17 have dropped from around 30 per 1,000 women to about 21 per 1,000. After rising for more than three decades, the percentage of children living only with their mother has stabilized at around 24 percent of all children. Americans increased their charitable contributions at an average real rate of slightly less than two percent per year between 1960 and 2008; real GDP per capita grew by slightly more than two percent per year over that interval. Charitable giving measured in real terms dropped slightly in 2008 and again in 2009, as the recession and capital losses cut into family resources, but the level of giving was still higher than in any year before 2007. Another measure of American's willingness to participate in civic activity, the voting rate for President, was at 64 percent in 1960, but averaged about 55 percent from 1972 through 2000 before rising to 60 percent in 2004 and 62 percent in 2008.

Other Compilations of Economic and Social Indicators: There are many other sources of data on trends in American social and economic conditions, including the *Statistical Abstract* published annually by the Census Bureau. Some examples are described below. Cutting

across a range of social and economic domains, the Interagency Forum on Child and Family Statistics annually assembles *American's Children: Key National Indicators of Well-Being* (<http://www.childstats.gov>). The Interagency Forum on Aging-Related Statistics publishes *Older Americans: Key Indicators of Well-Being* every other year (http://www.agingstats.gov/agingstatsdotnet/main_site/default.aspx).

There are also topic-specific indicators, which highlight performance in specific areas. *Science and Engineering Indicators*, published by the National Science Board, provides a broad base of quantitative information on the U.S. and international science and engineering enterprise: (<http://www.nsf.gov/statistics/indicators>). The Science Resources Statistics Division at the National Science

Foundation is doing developmental work on measuring innovation, an important component of the scientific enterprise not currently included in our measures. *Healthy People 2020* within the Department of Health and Human Services offers a statement of national health objectives that identifies the most significant preventable threats to health and establishes national goals to reduce these threats. The National Center for Health Statistics annually publishes *Health, United States* (<http://www.cdc.gov/nchs/hus.htm>), a comprehensive compilation of health indicators. The National Center for Education Statistics within the Department of Education publishes the *Condition of Education* (<http://nces.ed.gov/programs/coe>). The website includes a set of indicators and also special analyses and a user's guide.

Table 10-1. ECONOMIC AND SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2006	2007	2008	2009	2010
Economic Conditions:													
Living Standards:													
1	Real GDP per person (2005 dollars) ¹	15,729	20,933	25,697	32,184	34,151	39,784	42,733	43,458	43,865	43,462	41,955	42,723
	average annual percent change (5-year trend)	0.8	2.3	2.6	2.3	1.2	3.1	1.4	1.8	1.8	1.3	0.1	-0.0
2	Real disposable income per capita average (2005 dollars) ²	10,865	15,158	18,863	23,568	24,951	28,899	31,318	32,271	32,693	32,946	32,847	33,019
	average annual percent change (5-year trend)	1.2	3.2	2.0	1.8	1.1	3.0	1.6	2.0	1.8	1.6	1.0	1.1
3	Real median income: all households (2009 dollars)	N/A	43,055	43,892	47,637	47,622	52,301	50,899	51,278	51,965	50,112	49,777	N/A
	average annual percent change (5-year trend)	N/A	N/A	0.5	1.2	-0.0	1.9	-0.5	0.0	0.5	-0.2	-0.2	N/A
4	Poverty rate (%) ²	22.2	12.6	13.0	13.5	13.8	11.3	12.6	12.3	12.5	13.2	14.3	N/A
5	Food-insecure households (percent of all households) ³	N/A	N/A	N/A	N/A	N/A	10.5	11.0	10.9	11.1	14.6	14.7	N/A
Jobs and Unemployment:													
6	Civilian unemployment rate (%)	5.5	4.9	7.1	5.5	5.6	4.0	5.1	4.6	4.6	5.8	9.9	9.6
7	Unemployment plus marginally attached and underemployed (%)	N/A	N/A	N/A	N/A	10.0	7.0	8.9	8.2	8.3	10.6	16.3	16.8
8	Employment-population ratio % ⁴	56.1	57.4	59.2	62.8	62.9	64.4	62.7	63.1	63.0	62.2	59.3	58.5
9	Payroll employment change - December to December (millions)	-0.4	-0.5	0.3	0.3	2.2	2.0	2.5	2.1	1.1	-3.6	-4.7	1.1
10	Payroll employment change - 5-year annual average (millions)	0.2	1.7	2.6	2.1	1.8	2.9	0.5	1.2	1.6	0.8	-0.5	-0.8
Economic Inequality:													
11	Income share of lower 60% of all households	N/A	32.3	31.2	29.3	28.0	27.3	26.6	26.5	26.9	26.7	26.6	N/A
12	Income share of top 1% of all taxpayers	8.4	7.8	8.2	13.0	13.5	16.5	17.4	18.0	18.3	17.7	N/A	N/A
Wealth Creation:													
13	Net national saving rate (% of GDP) ⁵	10.4	8.1	7.1	3.9	4.7	6.2	2.9	3.8	1.8	-0.4	-2.3	-1.2
14	Personal Saving Rate (% of Disposable Personal Income) ⁵	7.2	9.4	9.8	6.5	5.2	2.9	1.4	2.4	2.1	4.1	5.9	5.8
15	Average household net worth (thousands 2010 dollars) ⁵	227	272	298	357	401	509	586	607	582	447	467	476
16	Median wealth of households aged 55-64 (thous. 2007 \$) ⁶	N/A	N/A	N/A	160	156	199	269	262	254	N/A	N/A	N/A
Innovation:													
17	R&D spending (% of GDP)	2.6	2.5	2.3	2.6	2.5	2.7	2.5	2.6	2.6	2.8	N/A	N/A
18	Patents issued to U.S. residents (thousands)	42.3	50.6	41.7	56.1	68.2	103.6	88.5	112.5	105.1	105.0	107.0	N/A
19	Multifactor productivity (average 5 year percent change)	1.0	0.9	0.8	0.6	0.5	1.3	1.8	1.8	1.4	0.9	N/A	N/A
20	Nonfarm output per hour (average 5 year percent change)	1.8	2.1	1.1	1.5	1.5	2.7	3.1	2.7	2.1	1.6	1.7	2.1
Capital and Infrastructure:													
21	Bridges that are structurally deficient or functionally obsolete (%) ⁷	N/A	N/A	N/A	N/A	31.8	28.6	26.3	25.8	25.4	25.2	24.8	N/A
22	Real net stock of fixed assets and consumer durable goods (\$09 bil) ..	11,209	16,360	22,543	29,818	33,174	38,952	44,821	46,097	47,247	48,103	48,500	N/A
Energy and Environment:													
Air Quality - Mean Pollution Concentration levels ⁸ :													
23	Carbon Monoxide (ppm) based on 124 monitoring sites	N/A	N/A	8.951	6.130	4.797	3.461	2.296	2.195	2.021	1.874	N/A	N/A
24	Ground Level Ozone (ppm) based on 258 monitoring sites ..	N/A	N/A	0.100	0.089	0.090	0.081	0.080	0.078	0.079	0.075	N/A	N/A
25	Lead (ug/m3) based on 19 monitoring sites	N/A	N/A	1.263	0.357	0.090	0.079	0.078	0.066	0.102	0.101	N/A	N/A
26	Nitrogen Dioxide (ppm) based on 75 monitoring sites	N/A	N/A	0.028	0.024	0.023	0.021	0.017	0.016	0.016	0.015	N/A	N/A
Particulate Matter (ug/m3):													
27	PM10 based on 325 monitoring sites	N/A	N/A	N/A	80.769	67.718	62.601	57.194	56.388	58.360	55.929	N/A	N/A
28	PM 2.5 based on 728 monitoring sites	N/A	N/A	N/A	N/A	N/A	13.470	12.831	11.535	11.887	10.899	N/A	N/A
29	Sulfur Dioxide (ppm) based on 141 monitoring sites	N/A	N/A	0.012	0.009	0.006	0.005	0.004	0.004	0.004	0.003	N/A	N/A
Water Quality:													
30	Population served by secondary treatment or better (millions) ⁶ ..	53.4	85.9	117.9	154.4	163.3	189.1	205.2	205.4	205.5	205.7	208.0	210.2
Climate Change:													
31	Net greenhouse gas emissions (teragrams CO2 equivalent) ⁹ ..	N/A	N/A	N/A	5,217	5,646	6,380	6,183	6,101	6,213	6,016	N/A	N/A
32	Per capita greenhouse gas emissions (megagrams CO2 equivalent)	N/A	N/A	N/A	20.9	21.2	22.6	20.9	20.4	20.6	19.8	N/A	N/A
33	Per 2005\$ of GDP greenhouse emissions (kilograms CO2 equivalent)	N/A	N/A	N/A	0.649	0.621	0.568	0.489	0.470	0.470	0.455	N/A	N/A
Energy:													
34	Energy consumption per capita (millions of BTUs)	250	331	344	339	342	351	340	334	337	327	308	N/A
35	Energy consumption per real dollar of GDP (thousands of BTUs) ..	15.9	15.9	13.4	10.5	10.0	8.8	8.0	7.7	7.7	7.5	7.3	N/A
36	Energy production from renewable sources (% of total)	N/A	N/A	N/A	N/A	N/A	N/A	6.4	6.8	6.7	7.4	7.7	N/A

¹ Values for 2010 based on preliminary data for 2010.Q4.

² The poverty rate does not reflect noncash government transfers.

³ These households were uncertain of having, or unable to acquire, enough food to meet the needs of all their members because they had insufficient money or other resources for food at some time during the year.

⁴ Civilian employment as a percent of the civilian noninstitutional population age 16 and above.

⁵ 2010 through 2010.Q3 only.

⁶ Data interpolated for some years.

⁷ Bridges are structurally deficient if they have been restricted to light vehicles, require immediate rehabilitation, or are closed. They are functionally obsolete if they have deck geometry, load carrying capacity, clearance or approach roadway alignment that no longer meet the criteria for the system of which the bridge is carrying a part.

⁸ ppm -- parts per million; ug/m3 -- micrograms per cubic meter

⁹ This is a net measure reflecting both sources and sinks of greenhouse gases.

Table 10–2. ECONOMIC AND SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2006	2007	2008	2009	2010
Access to Health Care:													
37	Total national health expenditures (percent of GDP) ¹	5.2	7.2	9.2	12.5	13.9	13.8	16.0	16.1	16.2	16.6	17.6	17.8
38	Percentage of population without health insurance	N/A	N/A	N/A	12.9	14.4	13.7	15.3	15.8	15.3	15.4	16.7	N/A
39	% of children age 19–35 months with recommended immunizations ²	N/A	N/A	N/A	N/A	N/A	72.8	80.8	80.5	80.1	78.2	75.7	N/A
Health Status:													
40	Infant mortality (per 1000 live births) ³	26.0	20.0	12.6	9.2	7.6	6.9	6.9	6.7	6.8	6.6	N/A	N/A
41	Low birthweight [<2,500 gms] percentage of babies	7.7	7.9	6.8	7.0	7.3	7.6	8.2	8.3	8.2	8.2	N/A	N/A
42	Life expectancy at birth (years) ³	69.7	70.8	73.7	75.4	75.8	76.8	77.4	77.7	77.9	77.8	N/A	N/A
Health Risks:													
43	Cigarette smokers (% population 18 and older)	N/A	37.4	33.2	25.5	24.7	N/A	20.9	20.8	19.8	20.6	20.6	N/A
44	Obesity (% of population with BMI over 30) ⁴	N/A	N/A	N/A	N/A	15.3	19.8	23.9	N/A	25.6	N/A	26.7	N/A
45	Alcohol (% high school students engaged in heavy drinking) ⁵	N/A	N/A	N/A	N/A	32.6	30.7	25.5	25.8	26.0	N/A	24.2	N/A
46	Physical activity: % of adults engaged in regular physical activity ⁶	N/A	N/A	N/A	N/A	N/A	N/A	48.7	N/A	49.2	N/A	50.6	N/A
Education:													
47	High school graduates (% of population 25 and older)	44.6	55.2	68.6	77.6	81.7	84.1	85.2	85.5	85.7	86.6	86.7	N/A
48	Percentage of 18–24 year olds with a high school diploma	59.9	78.8	80.9	81.7	80.8	81.9	82.9	82.6	83.9	84.9	N/A	N/A
49	Percentage of 18–24 year olds enrolled in college	N/A	25.7	25.6	32.0	34.3	35.5	38.9	37.3	38.8	39.6	N/A	N/A
50	College graduates (% of population 25 and older)	8.4	11.0	17.0	21.3	23.0	25.6	27.6	28.0	28.7	29.4	29.5	N/A
National Assessment of Educational Progress ⁷													
51	Reading 17-year olds	N/A	N/A	283	288	286	285	284	285	285	286	N/A	N/A
52	Mathematics 17-year olds	N/A	N/A	297	303	305	306	305	306	306	306	N/A	N/A
Housing:													
53	Percentage of families with children with inadequate housing ⁸	N/A	N/A	9	9	7	7	5	5	5	N/A	N/A	N/A
54	Percentage of families with children with crowded housing	N/A	N/A	9	7	7	7	6	6	6	N/A	N/A	N/A
55	Percentage of families with children with costly housing ⁹	N/A	N/A	17	25	28	28	34	36	37	N/A	N/A	N/A
Crime:													
56	Violent crime rate (per 100,000 population 12 and older) ¹⁰	N/A	N/A	4,940	4,410	4,610	2,740	2,100	N/A	2,040	1,900	1,690	N/A
57	Murder rate (per 100,000 population) ¹¹	5.1	7.8	10.2	9.4	8.2	5.5	5.6	5.8	5.7	5.4	5.0	N/A
Families:													
58	Births to unmarried women age 15–17 (per 1,000)	N/A	N/A	20.6	29.6	30.1	23.9	19.7	20.4	20.8	20.6	N/A	N/A
59	Children living with mother only (% of all children)	9.2	11.6	18.6	21.6	24.0	22.3	23.4	24.0	24.1	23.9	24.4	N/A
Civic Engagement:													
60	Individual Charitable Giving per Capita (2008 dollars)	306	438	467	533	504	771	823	795	786	748	741	N/A
61	Percentage of Americans volunteering ¹²	N/A	N/A	N/A	20.4	N/A	N/A	27.0	26.7	26.2	26.4	26.8	N/A
62	Voting for President by election year (% eligible population) ¹³	(1960) 63.8	(1968) 61.5	(1972) 56.2	(1976) 54.8	(1980) 54.2	(1984) 55.2	(1988) 52.8	(1992) 58.1	(1996) 51.7	(2000) 54.2	(2004) 60.1	(2008) 61.7

¹ The 2010 values is projected, the last actual data are for 2009.

² The 4:3:1:3:3 series consisting of 4 doses (or more) of diphtheria, tetanus toxoids, and pertussis (DTP) vaccines, diphtheria and tetanus toxoids (DT), or diphtheria, tetanus toxoids, and any acellular pertussis (DTaP) vaccines; 3 doses (or more) of poliovirus vaccines; 1 dose (or more) of any measles-containing vaccine; 3 doses (or more) of Haemophilus influenzae type b (Hib) vaccines; and 3 doses (or more) of hepatitis B vaccines.

³ Data for 2008 are preliminary

⁴ BMI refers to body mass index. A BMI over 30 is the criterion for obesity used by the Centers for Disease Control and Prevention.

⁵ Data are interpolated. Percentage of high school students who had five or more drinks within a couple of hours at least once within the 30 days prior to the survey.

⁶ Adults with 30+ minutes of moderate physical activity five or more days per week, or vigorous physical activity for 20+ minutes three or more days per week

⁷ Data are interpolated. Actual survey years were 1973, 1978, 1982, 1986, 1990, 1992, 1994, 1996, 1999, 2004, and 2008.

⁸ Inadequate housing has moderate to severe physical problems, usually poor plumbing or heating or upkeep problems. Some data interpolated.

⁹ Expenditures for housing and utilities exceed 30 percent of reported income. Some data interpolated.

¹⁰ Includes crimes both reported and not reported to law enforcement. Offenses include homicide, rape, robbery, aggravated assault and simple assault.

¹¹ Based on reported crimes. Not all crimes are reported, and the fraction that go unreported may have varied over time, preliminary data for 2008.

¹² Data from 1974, 1989, and since 2005 are drawn from the Current Population Survey.

¹³ As computed by Professor Michael McDonald, George Mason University, after adjusting the population for those not eligible to vote in Presidential elections.

Table 10-3. SOURCES FOR ECONOMIC AND SOCIAL INDICATORS

Indicator:	Source:
Economic, Environmental, and Energy Indicators (Table 10-1):	
Real GDP per person	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Real disposable income per capita	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Real median income: all households	U.S. Census Bureau, Housing and Household Economic Statistics Division
Poverty rate	U.S. Census Bureau, Housing and Household Economic Statistics Division
Food-insecure households	U.S. Census Bureau, Current Population Survey Food Security Supplement; tabulated by U.S. Department of Agriculture, Economic Research Service
Civilian unemployment rate	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Unemployment plus marginally attached and underemployed	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Employment-population ratio	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Payroll employment	U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics program.
Income share of lower 60% of all households	U.S. Census Bureau, Housing and Household Economic Statistics Division
Income share of top 1% of all taxpayers	Thomas Piketty and Emanuel Saez, "Income Inequality in the United States, 1913-1998" <i>Quarterly Journal of Economics</i> , 118(1), 2003, 1-39 (tables and figures updated to 2008, July 2010)
Net national saving rate	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Personal Saving Rate	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Average household net worth	Board of Governors of the Federal Reserve System, Flow of Funds Accounts of the United States, and U.S. Census Bureau, Housing and Economic Statistics Division.
Median wealth of households aged 55-64	Board of Governors of the Federal Reserve System, 2007 Survey of Consumer Finances Chartbook.
R&D spending	National Science Foundation, Division of Science Resources Statistics, National Patterns of R&D Resources 2008, data update, NSF 10-314.
Patents issued to U.S. residents	U.S. Patent and Trademark Office, Electronic Information Products Division, Patent Technology Monitoring Team, submissions to the World Intellectual Property Organization.
Multifactor productivity	U.S. Department of Labor, Bureau of Labor Statistics, Major Sector Productivity Program.
Nonfarm output per hour	U.S. Department of Labor, Bureau of Labor Statistics, Major Sector Productivity Program.
Bridges that are structurally deficient or functionally obsolete	U.S. Federal Highway Administration, Office of Bridge Technology, "National Bridge Inventory."
Real net stock of fixed assets and consumer durable goods	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Carbon Monoxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Ground Level Ozone	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Lead	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Nitrogen Dioxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
PM10	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
PM 2.5	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Sulfur Dioxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Population served by secondary treatment or better	U.S. Environmental Protection Agency, Clean Watersheds Needs Survey 2008 Report to Congress, June 10, 2010 (includes a projection for 2028) EPA-832-R-10-002.
Net greenhouse gas emissions	U.S. Environmental Protection Agency, 2010 Inventory of Greenhouse Gases Emissions and Sinks: 1990-2008.
Energy consumption per capita	U.S. Energy Information Administration, Annual Energy Review 2009, August 19, 2010 energy overview table 1.5.
Energy consumption from renewable sources	U.S. Energy Information Administration, Independent Statistics and Analysis, Renewable Energy Consumption by Energy Use Sector and Energy Source, Table 1.2, August 2010.
Health, Education, and Other Social Indicators (Table 10-2):	
Total national health expenditures	Centers for Medicare and Medicaid Services, National Health Expenditures Data, January 2011.
Percentage of population without health insurance	U.S. Census Bureau, Housing and Household Economic Statistics Division
% of children age 19-35 months with recommended immunizations	Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases and National Center for Health Statistics, National Immunization Survey.
Infant mortality	Centers for Disease Control and Prevention, National Vital Statistics Report, vol. 59, no. 2, December 9, 2010
Low birthweight percentage of babies	Centers for Disease Control and Prevention, National Vital Statistics Report, vol. 58, no. 16, April 6, 2010.
Life expectancy at birth	Centers for Disease Control and Prevention, National Vital Statistics Report, vol. 59, no. 2, December 9, 2010
Cigarette smokers (% population 18 and older)	Centers for Disease Control and Prevention, Data and Statistics, Trends in Current Cigarette Smoking Among High School Students and Adults, United States, 1965-2009
Obesity (% of population with BMI over 30) (d)	Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report, Vital Signs: State-Specific Obesity Prevalence Among Adults --- United States, 2009, August 3, 2010
% high school students engaged in heavy drinking	Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report, Vital Signs: Binge Drinking Among High School Students and Adults --- United States, 2009, October 8, 2010.
% of adults over 45 engaged in regular activity	Centers for Disease Control and Prevention, Prevalence and Trends Data Nationwide (States, DC, and Territories), Physical Activity

Table 10–3. SOURCES FOR ECONOMIC AND SOCIAL INDICATORS—Continued

Indicator:	Source:
High school graduates (% of population 25 and older)	U.S. Census Bureau, People and Households, Educational Attainment, Table A-2, Percent of People 25 Years and Over: Who Have Completed High School or College, Selected Years 1940-2009.
Percentage of 18-24 year olds with a high school diploma	U.S. Census Bureau, School Enrollment, Historical Table A-5a, The Population 14 to 24 Years Old by HS Graduate Status and College Enrollment.
Percentage of 18-24 year olds enrolled in college	U.S. Census Bureau, School Enrollment, Historical Table A-5a, The Population 14 to 24 Years Old by HS Graduate Status and College Enrollment.
College graduates (% of population 25 and older)	U.S. Census Bureau, Current Population Survey, 2008 Annual Social and Economic Supplement, Internet Release Data, April 2009.
NAEP: Reading 17-year olds	National Assessment of Educational Progress, National Center for Education Statistics, 2008 Long-Term Trend Top Stories.
NAEP: Mathematics 17-year olds	National Assessment of Educational Progress, National Center for Education Statistics, 2008 Long-Term Trend Top Stories.
Percentage of families with children with inadequate housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Percentage of families with children with crowded housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Percentage of families with children with costly housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Violent crime rate (per 100,000 population 12 and older)	U.S. Department of Justice, Bureau of Justice Statistics, Violent Crime Trends
Murder rate (per 100,000 population)	U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division, 2008 Crime in the United States, Table 1.
Births to unmarried women age 15-17 (per 1,000)	Centers for Disease Control and Prevention, National Vital Statistics Report, Volume 59, Number 1, December, 2010.
Children living with mother only	Annual Social and Economic Supplement to the Current Population Survey, Detailed Poverty Tabulations various years
Individual Charitable Giving	Statistical Abstract 2010, Center on Philanthropy at Indiana University, <i>Giving USA</i> .
Percentage of Americans volunteering	Corporation for National and Community Service, "Volunteer Growth in America: A Review of Trends since 1974" based on the Current Population Survey.
Voting for President by election year (% eligible population)	The United States Elections Project, Dr. Michael McDonald, George Mason University, Fairfax, Virginia.

11. IMPROVING THE FEDERAL WORKFORCE

The United States has overcome great challenges throughout our history because Americans of every generation have stepped forward to aid their Nation through service, both in civilian Government and in the Uniformed Services. Today's Federal public servant carries forward that proud American tradition. Whether it is defending our homeland, restoring confidence in our financial system and administering an historic economic recovery effort, providing health care to our veterans, or searching for cures to the most vexing diseases, we are fortunate to be able to rely upon a skilled workforce committed to public service.

A high-performing Government depends on an engaged, well-prepared, and well-trained workforce with the right set of skills appropriate to the situation. As the mission of our government has changed over time, the Federal government has worked to ensure that it employs people with the skills needed to tackle new challenges. This chapter discusses trends in Federal employment, composition, and compensation, and presents the Administration's plans for achieving the talented Federal workforce needed to serve the American people efficiently and effectively.

Trends in Federal Employment

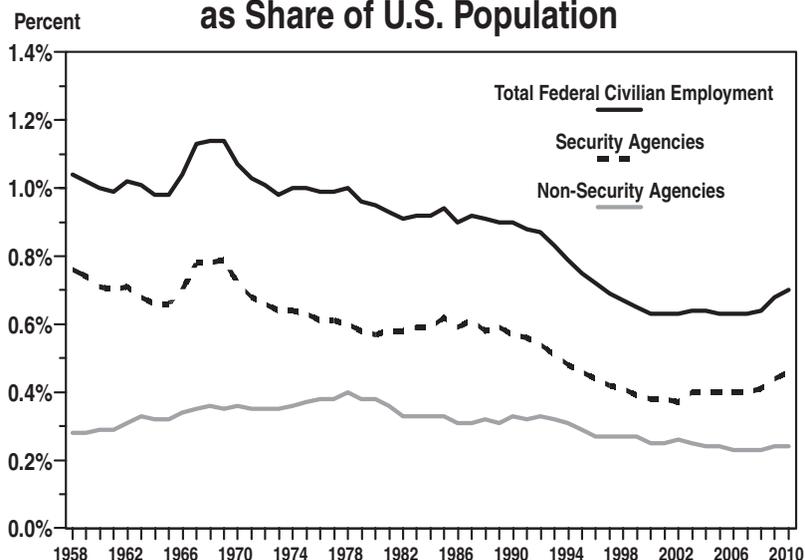
The relative size of the Federal civilian workforce has declined dramatically over the last several decades.

Notwithstanding occasional upticks due, for example, to military conflicts and the enumeration of the Census, the number of Federal workers as a percentage of population has fallen over time. In 1953, there was one Federal worker for every 78 residents. In 1989, there was one Federal employee for every 110 residents. By 2009, the ratio had dropped to one Federal employee for every 147 residents. The picture that emerges is one of a Federal workforce that has significantly shrunk compared to the overall U.S. population, as well as compared to the size of Federal expenditures and the work that the Federal Government is called upon to perform.

Chart 11-1 shows Federal civilian employment (excluding the U.S. Postal Service) as a share of the U.S. resident population from 1958 to 2010. The chart shows the overall decline noted above. Both security and non-security agencies have declined, although the greatest overall reductions have been in the security agencies.

This overall downward trend began to reverse itself in 2001, following the September 11 attack. Following that tragic event, the Federal workforce expanded to deal with national security and safety issues and to serve our veterans. Civilians working for the Army grew from 203,000 in 2001 to 260,000 in 2010, for example, while people working for the Veterans Health Administration increased from 189,000 in 2001 to 252,000 in 2010. Customs and Border Protection grew from 38,000 employees in Fiscal Year 2003

**Chart 11-1. Federal Civilian Workforce
as Share of U.S. Population**



Source: Office of Personnel Management.

Notes: Security Agencies include the Department of Defense, the Department of Justice, the Department of State, Department of the Treasury, and the Department of Veterans Affairs. Non-Security Agencies include the remainder of the Executive Department agencies.

to 56,000 today. Overall, security agency employment grew by 22 percent from 2001 to 2010. During the same period, employment in non-security agencies as a percent of population fell by 4 percent.

The 2012 Budget continues these trends. Table 11-2 shows actual Federal civilian employment in the executive branch by agency in 2010, and estimates it for 2011 and 2012. The 2012 Budget estimates a 2012 workforce of 2.1 million, roughly the same level as proposed last year and a modest increase over 2010 actual levels. Consistent with the overall recent trends, personnel increases focus on providing greater security and economic opportunity for the American people. Seventy percent of the proposed increase in the size of the 2012 Federal workforce occurs in five agencies – the Department of Defense, the Department of Veterans Affairs, the Department of Homeland Security, the Department of Justice, and the Department of State. These organizations are all centrally involved in our security interests, including operations and activities in Afghanistan and Iraq, providing care for our returning veterans, protecting our country from the threat of terrorism, protecting our borders, and advancing our Nation's interests abroad. Other increases aim at implementing the recently enacted Affordable Care Act, assuring fair and thriving financial markets, and restoring some of the regulatory protections eliminated by the previous Administration in areas such as oversight of mortgage lenders and mine safety. Personnel figures at most non-security agencies remain essentially flat over the past two years, with some agencies, including Commerce (beyond the Census), the U.S. Army Corps of Engineers, Agriculture, Interior, the Nuclear Regulatory Commission, and the Small Business Administration proposing lower personnel levels due to increased efficiencies and hard choices about budget trade-offs.

Federal Workforce Pay Trends

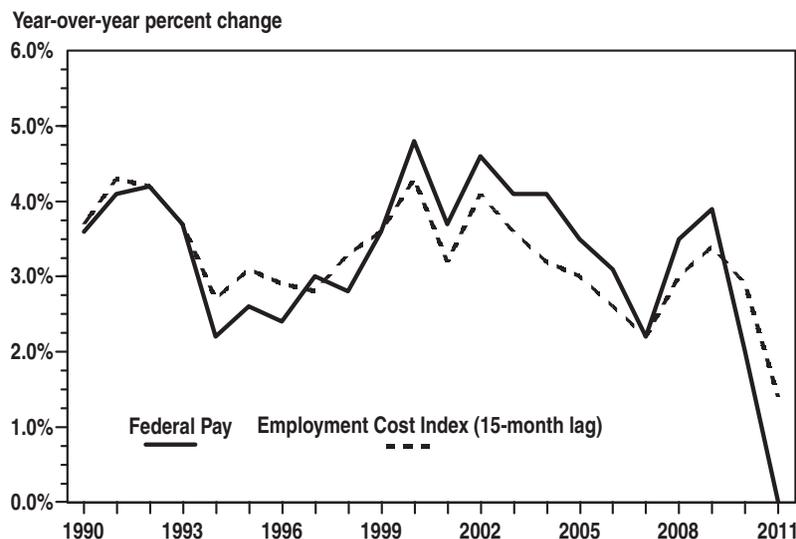
Federal and private sector pay raises have followed each other closely for the past two decades (as seen in chart 11-2). By law, as a default, Federal pay raises are pegged to changes in the 15-month-lagged Employment Cost Index (ECI) series of wage and salaries for private industry workers. The index measures private sector pay, holding constant industry and occupation composition. The law also gives the President the authority to propose alternative pay adjustments for both base and locality pay. Presidents have regularly proposed alternative pay plans.

In late 2010, the President proposed and Congress enacted a two-year freeze in the pay of civilian Federal employees as one of the steps needed to put the Nation on a sustainable fiscal path. This will save \$2 billion for the remainder of 2011, \$28 billion over the next five years, and more than \$60 billion over the next 10 years.

Composition of Federal Workforce and Factors Affecting Federal Pay

In addition to changes in the relative size of the Federal workforce, the last half century has also seen significant shifts in its composition. Fifty years ago, most white collar Federal employees performed clerical tasks, such as posting Census figures in ledgers and retrieving taxpayer records from file rooms. Today their jobs are vastly different, requiring advanced skills to serve a knowledge-based economy. Professionals such as doctors, engineers, scientists, statisticians, and lawyers now make up a large portion of the Federal workforce. A large number of Federal employees must manage highly sensitive situations that require great skill, experience, and judgment. They increasingly need sophisticated management and negotiation skills to coordinate changes not just across Federal

Chart 11-2. Pay Raises for Federal vs. Private Workforce



Sources: Public Laws, Executive Orders, and the Bureau of Labor Statistics.

Notes: Federal pay is for civilians and includes base and locality pay. Employment Cost Index is the wages and salaries, private industry workers series.

Table 11–1. OCCUPATIONS OF FEDERAL AND PRIVATE SECTOR WORKFORCES
(Grouped by Average Private Sector Salary)

Occupational Groups	Percent	
	Federal Workers	Private Sector Workers
Top Third Occupations Ranked by Private Sector Salary		
Lawyers and judges	1.8%	0.5%
Engineers	4.2%	1.9%
Scientists and social scientists	4.6%	0.6%
Managers	11.4%	13.1%
Doctors, nurses, psychologists, etc.	7.2%	4.9%
Miscellaneous professionals	15.1%	7.7%
Administrators, accountants, HR personnel	6.7%	2.6%
Pilots, conductors, and related mechanics	2.1%	0.8%
Inspectors	1.4%	0.3%
Total Percentage	54.5%	32.4%
Middle Third Occupations Ranked by Private Sector Salary		
Sales including real estate, insurance agents	1.0%	6.7%
Other miscellaneous occupations	3.2%	4.2%
Automobile and other mechanics	1.8%	3.0%
Social workers	1.4%	0.5%
Office workers	2.6%	6.3%
Drivers of trucks and taxis	0.6%	3.5%
Laborers and construction workers	4.2%	10.8%
Total Percentage	14.8%	35.0%
Bottom Third Occupations Ranked by Private Sector Salary		
Clerks	14.8%	11.6%
Manufacturing	2.6%	8.1%
Law enforcement and related occupations	8.4%	0.8%
Other miscellaneous service workers	2.5%	6.0%
Janitors and housekeepers	1.7%	2.3%
Cooks, bartenders, bakers, and wait staff	0.8%	4.0%
Total Percentage	30.8%	32.8%

Source: Current Population Survey, 2006-2010.

Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive, Legislative, and Judicial Branches. However, the vast majority of these employees are civil servants in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes state and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1500 annual hours of work.

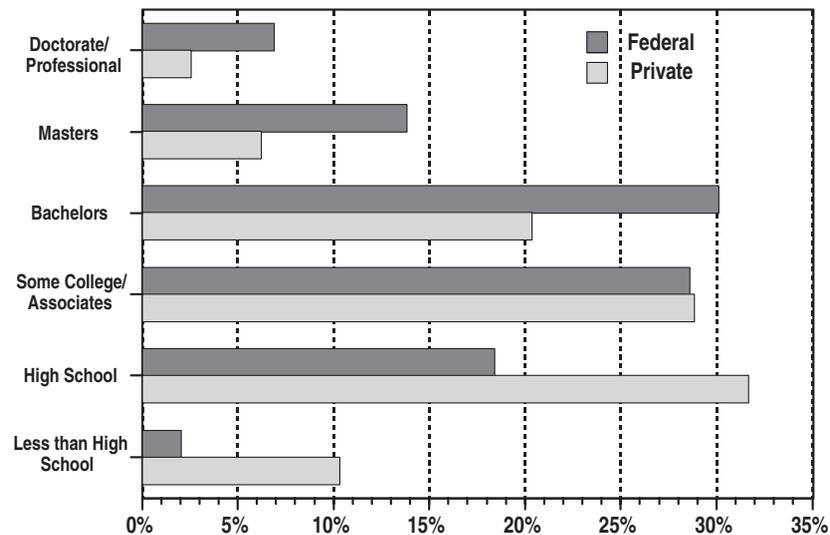
Government organizations, but also with other levels of government, not-for-profit providers, and for-profit contractors.

Federal worker pay receives a great deal of public scrutiny, in particular in comparison to pay of private sector workers. Such comparisons are complicated by the fact that Federal and private sector workers do very different types of work. Using data from the Current Population Survey (CPS) of full-time, full-year workers, Table 11-1 breaks all Federal and private sector jobs into 23 occupation groups. That breakdown shows that more than half (54.5 percent) of Federal workers work in the nine highest-paying occupation groups – as judges, engineers, scientists, nuclear plant inspectors, etc. – compared to

less than a third (32.4 percent) of private sector workers in those same nine highest paying occupation groups. In contrast, a fifth of private sector workers work in the four lowest-paying occupation groups (excluding law enforcement, which does not have a good private sector counterpart) as cooks, janitors, service workers, and manufacturing workers. Fewer than one in thirteen Federal workers work in those four lowest-paying occupation groups.

Raw comparisons of average pay between Federal and private sector employees mask important differences in the skill levels, complexity of work, scope of responsibility, size of organization, location, experience level, and special requirements, as well as exposure to personal danger.

Chart 11-3. Education Level Distribution in Federal vs. Private Workforce



Source: Current Population Survey, 2006-2010.

Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive, Legislative, and Judicial Branches. However, the vast majority of these employees are civil servants in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes State and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1500 annual hours of work.

Some of the factors to consider when comparing Federal and private workers' pay are:

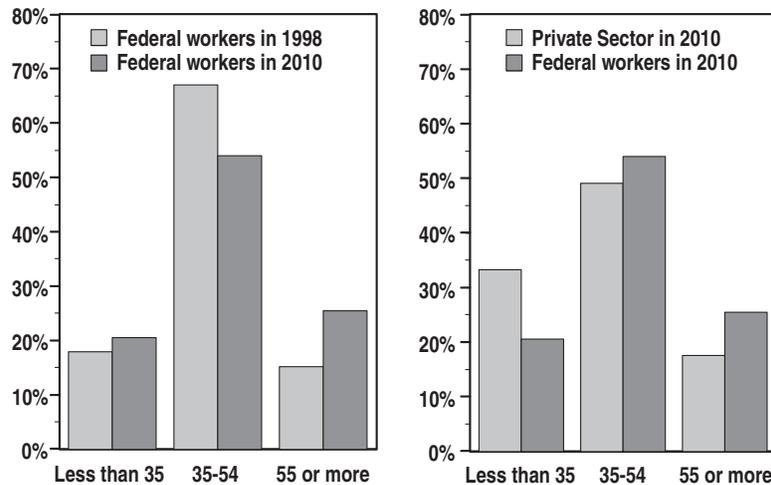
- **Demographic characteristics.** Federal workers tend to have demographic characteristics associated with higher pay in the private sector. They are more experienced, older and live in higher cost metropolitan areas. For example, in the private sector, there are more full-time workers under the age of 30 than between the ages of 50 and 59 (25 percent versus 19 percent). In the Federal workforce there are more than twice as many 50 to 59 year-olds as those under 30 years old (29 percent versus 14 percent).
- **Size of organization.** Another important consideration is the size of the organization. Federal agencies are large and often face challenges of enormous scale, such as distributing Social Security checks and caring for the Nation's Veterans. In many situations, it is more appropriate to compare the Federal workforce to those at larger private firms. Workers from large firms (those with 1,000 or more employees) are paid about 15 percent more than workers from small firms (those with less than 100 employees), even after accounting for occupation, education, and other characteristics.
- **Education level.** The size and complexity of much Federal work necessitates a highly educated workforce – whether that work is analyzing security and financial risks, forecasting weather, planning bridges to withstand extreme weather events, conducting research to advance human health and en-

ergy efficiency, or advancing science to fuel future economic growth. Chart 11-3 examines the difference in the education level of the Federal civilian and private workforce. About 20 percent of Federal workers have a master's degree, professional degree, or doctorate versus only 13 percent in the private sector. A full 51 percent of Federal employees have at least a college degree compared to 35 percent in the private sector.

Challenges

The Federal Government faces specific challenges, including an aging and retiring workforce and an inadequate system for hiring, developing, deploying, and engaging personnel. If the Government loses top talent, experience, and institutional memory through retirements but cannot recruit, retain, and train highly qualified workers, government performance will suffer. If the Government does not adapt to technological change by updating the ways it develops, deploys, and engages its personnel, it will have difficulty meeting 21st century challenges. The large number of retiring workers poses a challenge, but also creates an opportunity for an infusion of new workers excited about Government service and equipped with strong technology skills, problem-solving ability, and fresh perspectives to tackle the problems that Government is expected to address. This section lays out some of the Federal workforce challenges. The following section describes some of the

Chart 11-4. Federal Age Distribution in 1998 and 2010 and Federal vs. Private Age Distribution in 2010



Sources: Current Population Survey, 2010 and FedScope.

Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes SState and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1500 annual hours of work.

actions this Administration is taking to address those challenges.

Aging workforce

The Federal workforce of 2010 is older than Federal workforces of past decades and older than the present private sector workforce. The left panel of Chart 11-4 shows how the Federal workforce aged between 1998 and 2010. The percentage of Federal workers age 55 or older increased from 15 to 25 percent over 12 years. At the same time, the percentage of workers under 35 also edged up, from 18 to 21 percent, between 1998 and 2010. The right panel of Chart 11-4 shows that the private sector experienced a more significant shift from older employees to younger workers than did the Federal government during this period.

The recent recession substantially slowed projected Federal retirements. Between 2005 and 2008, annual separations (retirements and other departures) from the Federal workforce ranged between 244,000 and 252,000. Separations fell to 212,000 in 2009. If the reduced retirement pattern continues, 230,000 separations are likely in 2011. If separation rates return to their 2007 levels instead, more than 300,000 separations could occur in 2011.

Given these demographics, the Federal government faces two immediate challenges: preparing for retirements to maximize knowledge transfer from one generation to the next, and hiring and developing the next generation of the government workforce in a manner that enables them to accomplish the varied and challenging missions the Federal government must deliver.

Need to Strengthen System for Developing, Deploying and Engaging Personnel

One well documented challenge in the public sector is creating personnel performance systems that encourage commitment and innovation. At the same time, the systems must deal with poor performers who fail to improve as appropriate to their situation. Federal employees have identified this as an area of weakness over the past 10 years. Employees rate “Results Oriented Performance Culture” as a weak spot in the Federal employee survey. In 2010, only 31 percent of employees sampled answered positively that “In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.” In addition, only 41 percent agreed that “creativity and innovation are rewarded”.

In contrast, Federal employees are generally positive about the importance of their work and their willingness to put in extra effort to accomplish the goals of their agencies, with 92 percent of respondents answering positively to the statement “the work I do is important” and nearly 97 percent of respondents answering positively to the statement “when needed I am willing to put in the extra effort to get a job done.”

Personnel Performance Agenda

To serve the American people and address these challenges, the Federal Government needs to improve management of the Federal workforce. The Office of Personnel Management (OPM) Strategic Plan has four overarching goals that match the career cycle of a Federal em-

ployee. The “Hire the Best” strategic goal concentrates on improving the Federal hiring process. The “Respect the Workforce” strategic goal focuses on employee retention through training, labor relations, and work-life balance initiatives. The “Expect the Best” strategic goal aims to provide the necessary tools and resources for employees to engage and perform at the highest levels while holding them accountable. Finally, the “Honor Service” strategic goal acknowledges and recognizes the exemplary service of Federal employees. Combined, these strategic goals will help the government recruit and retain the talented and high performing employees required to tackle new and emerging challenges and deliver the services on which the American people depend efficiently and effectively.

Improving the Federal Hiring Process

The likelihood of large numbers of workers retiring could be a problem if not managed well, but it also creates an opportunity for Government to bring in new workers excited about Government service with strong technology and problem-solving skills along with fresh perspectives on the problems that Government is expected to address.

To manage these challenges well, the Administration launched the Hiring Reform Initiative, making it a priority for all Federal agencies to improve their hiring processes. On May 11, 2010, President Obama issued a Memorandum to agencies on Improving the Federal Recruitment and Hiring Process. This launched the first phase of the Administration’s comprehensive initiative to address major, long-standing impediments to recruiting and hiring the best and brightest into the Federal civilian workforce. The reform effort’s sweeping changes are already taking hold, but to spread to every part of government, will require a cultural shift over many years.

The President’s Memorandum established three initial objectives for the first phase of hiring reform:

1. Make it easier for Americans to apply for Federal jobs by simplifying and shortening job descriptions and letting applicants apply using only a resume, as is done in the private sector;
2. Federal agency managers and supervisors assume a greater role planning, recruiting, and selecting employees, and human resource offices provide greater support to them; and
3. Improve hiring timeliness, as well as applicant and manager satisfaction with the hiring process and manager satisfaction with applicant quality.

Progress is being made:

- Lengthy job descriptions – some previously over 20 pages – have been reduced. By November 2010, 49 percent of job descriptions were shorter than five pages, improved from 24 percent in 2009.

- Agencies adopted aggressive new benchmarks for Veteran hiring in response to the President’s Executive Order 13518 on Employment of Veterans in the Federal Government. More than 50,000 Veterans were hired in the first nine months, exceeding prior years’ Veteran hiring levels.

On December 27, 2010, President Obama signed Executive Order 13562 “Recruiting and Hiring Students and Recent Graduates”. The E.O. established a comprehensive structure that will help the Federal Government be more competitive in recruiting and hiring talented individuals who are in school or who have recently received a degree.

In addition, the Administration has made significant progress improving the timeliness and quality of security clearances. Security clearances are performed in two stages, investigation and adjudication. At OPM, which conducts the majority of non-intelligence community investigations, it took an average of only 39 days to complete 90 percent of initial investigations in 2010, whereas it took an average of 67 days to complete the fastest 80 percent of its initial investigations in 2007. Agencies handle their own adjudications and, as the Federal government’s largest employer, the Department of Defense (DOD) adjudicates most of the Federal government’s adjudications (used to determine whether potential employees are suitable for Federal employment after an investigation is completed.) In 2010, it took DOD an average of only 10 days to adjudicate 90% of those investigations for its employees, whereas it took an average of 28 days to adjudicate 80% of those investigations in 2007.

More changes are needed, however, to improve the Federal hiring system. In 2010, the Administration sent legislative language to Congress proposing changes to existing hiring laws to facilitate inter-agency cooperation in hiring and make it easier for the most experienced employees to enter into part-time retirement arrangements to provide expertise or mentor new and rising employees.

Developing and Using Personnel Analytics

The Federal Government has fallen behind its private sector counterparts in tapping data and analytic advances to improve personnel management. The Administration is committed to strengthening Federal agencies’ capacity in this area to address workplace problems, improve productivity, and cut costs.

The Federal Government began annual administration of the Employee Viewpoint Survey in 2010 to make it more useful as a managerial tool to identify areas of personnel management strength and weakness. To enhance its value further, in 2011, the survey will be administered to more employees and done so in a way that allows findings to be linked to more organizational units. In 2012, OPM will begin to survey all civilian employees every other year. Each year, OMB and OPM will analyze survey findings to identify promising practices to promote more broadly for Government-wide improvement and to pinpoint problem areas needing attention.

A second analytic initiative proposed this year will improve management of health costs and quality. The Federal Employee Health Benefits (FEHB) program provides health insurance for 8 million Federal employees, retirees, their spouses and dependents. Data from insurance carriers involved in FEHB is currently used to detect fraud. It has not, however, been analyzed to improve the effectiveness or efficiency of the program or the health of FEHB members. This Budget proposes funding to build capacity to analyze FEHB program data for quality improvement, cost control, and fraud detection.

In addition, the Administration is developing a human resources dashboard to show agency progress on human resource management – providing the public a window on government-wide and agency-specific hiring times and satisfaction, employee engagement and retention, other aspects of employee viewpoints, diversity and disability data, and Veteran’s hiring and employment.

Using Evaluation to Improve Personnel Management

The President’s Budget includes funding for an evaluation of Federal telework practices. The Telework Enhancement Act of 2010 creates a framework through which agencies can improve their telework programs to assure continuity of operations, improve management and productivity, and accommodate the changing family caregiver needs of the workforce without compromising work quality. The Administration is committed to helping agencies implement best practices in these areas.

Engaging a Diverse Workforce

The American people are best served by a Federal employee workforce that reflects the rich diversity of the populace. An expected wave of retirements in the manager and senior executive corps presents both a challenge and an opportunity to improve the diversity of our leadership, which is disproportionately lacking in minority representation. As one part of that effort, the President issued Executive Order 13548 in July 2010 to increase the number of individuals with disabilities that agencies employ. The 2012 Budget includes funds to support the implementation and execution of the Executive Order, including funds for the use of technology to track and report agency progress in hiring those with disabilities. It also includes funds for continued recruitment of individuals with disabilities and to coordinate with agency-designated senior officials responsible for disability recruitment and retention.

The President firmly believes in the fundamental American principle of fairness and equality. Over the past two years, the President directed the heads of executive departments and agencies, in consultation with OPM, to conduct a thorough review of the benefits they provide, identify those benefits that could be extended to

LGBT employees and their families, and based on recommendations provided by OPM in consultation with the Department of Justice, extend those discretionary benefits. However, legislative action is still necessary to provide full equality to LGBT Federal employees. Since many top private sector companies now offer domestic partner benefits, making these changes will strengthen our ability to recruit and retain highly qualified candidates from all segments of society.

Improving Labor-Management Relations

On December 9, 2009, the President issued Executive Order 13522 “Creating Labor-Management Forums to Improve the Delivery of Government Services”. Cooperative labor-management forums are now being formed across the Federal government to resolve workplace issues and improve mission performance and service delivery to the American public. The Administration has developed guidelines to help each forum think about its objectives and how to measure the results of its efforts along three dimensions: mission accomplishment and high quality products and services; employee perceptions; and labor-management relations.

Strengthening Government Acquisition and the Acquisition Workforce

The Government uses both Federal employees and private sector contractors to deliver important services to citizens. Contractors provide a wide range of services to help federal employees carry out their agencies’ missions and operations -- from scientific research and environmental protection, to information technology support and construction. While spending on federal contracts doubled between 2001 and 2008, the federal acquisition workforce, which negotiates and manages these contracts, remained relatively flat. This imbalance contributed to ineffective and wasteful contracting practices, such as awarding contracts without competition; bundling many buys into one large contract, which often makes it impossible for small businesses to compete; and agreeing to pay contractors on a per-hour basis, which reduces the incentives for contractors to be efficient. In his March 4, 2009, Memorandum on Government Contracting, the President called on agencies to address these concerns, and agencies are now doing that. Improvements include ending contracts that are ineffective, leveraging the government’s purchasing power to negotiate better prices, and using competition and more effective pricing incentives to reduce cost overruns. These efforts have instilled a new sense of fiscal responsibility that has stopped the costly and unsustainable growth in spending on contracting and helped agencies reduce spending on contracts between 2009 and 2010 for the first time in more than 10 years. To sustain these improvements, this Budget includes resources focused on developing and retaining the acquisition workforce.

Table 11–2. FEDERAL CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH
(Civilian employment as measured by Full-Time Equivalents in thousands, excluding the Postal Service)

Agency	Actual	Estimate		Change: 2010 to 2012	
	2010	2011	2012	FTE	Percent
Cabinet agencies:					
Agriculture	96.3	98.4	94.7	-1.6	-1.7%
Commerce	123.3	42.8	42.0	-81.3	-65.9%
Defense	741.4	755.4	748.0	6.6	0.9%
Education	4.1	4.4	4.5	0.4	9.8%
Energy	16.1	16.9	16.5	0.4	2.5%
Health and Human Services	66.1	68.0	70.7	4.6	7.0%
Homeland Security	173.0	185.9	193.6	20.6	11.9%
Housing and Urban Development	9.5	9.7	9.9	0.4	4.2%
Interior	70.9	69.7	69.9	-1.0	-1.4%
Justice	113.4	119.3	123.0	9.6	8.5%
Labor	16.9	17.3	17.8	0.9	5.3%
State	31.6	31.8	32.0	0.4	1.3%
Transportation	57.2	58.1	58.9	1.7	3.0%
Treasury	111.9	111.5	116.6	4.7	4.2%
Veterans Affairs	284.8	294.5	295.4	10.6	3.7%
Other agencies—excluding Postal Service:					
Agency for International Development	3.1	3.3	3.5	0.4	12.9%
Broadcasting Board of Governors	1.9	2.0	2.1	0.2	10.5%
Corps of Engineers—Civil Works	23.6	23.2	22.4	-1.2	-5.1%
Environmental Protection Agency	17.2	17.4	17.2	0.0	0.0%
Equal Employment Opportunity Comm	2.4	2.5	2.6	0.2	8.3%
Federal Deposit Insurance Corporation	7.1	7.3	8.8	1.7	23.9%
General Services Administration	12.5	13.4	13.4	0.9	7.2%
National Aeronautics and Space Admin	18.4	18.8	18.4	0.0	0.0%
National Archives and Records Administration ...	3.2	3.4	3.4	0.2	6.3%
National Labor Relations Board	1.6	1.7	1.7	0.1	6.3%
National Science Foundation	1.4	1.4	1.5	0.1	7.1%
Nuclear Regulatory Commission	4.0	4.0	4.0	0.0	0.0%
Office of Personnel Management	4.8	5.4	5.4	0.6	12.5%
Peace Corps	1.1	1.2	1.2	0.1	9.1%
Railroad Retirement Board	1.0	0.9	0.9	-0.1	-10.0%
Securities and Exchange Commission	3.7	3.8	4.5	0.8	21.6%
Small Business Administration	3.4	3.5	3.4	0.0	0.0%
Smithsonian Institution	5.1	5.2	5.2	0.1	2.0%
Social Security Administration	67.3	68.0	70.5	3.2	4.8%
Tennessee Valley Authority	12.0	12.5	12.5	0.5	4.2%
All other small agencies	16.4	18.1	19.7	3.3	20.1%
Total, Executive Branch civilian employment * ...	2,127.9	2,100.8	2,115.8	-12.1	-0.6%
Subtotal, Defense	741.4	755.4	748.0	6.6	0.9%
Subtotal, Non-Defense	1,386.5	1,345.4	1,367.8	-18.7	-1.3%

* Totals may not add due to rounding.

Table 11–3. TOTAL FEDERAL EMPLOYMENT
(As measured by Full-Time Equivalents)

Description	2010 Actual	Estimate		Change: 2010 to 2012	
		2011	2012	FTE	Percent
Executive branch civilian personnel:					
All agencies except Postal Service and Defense	1,386,496	1,345,390	1,367,844	-18,652	-1.3%
Department of Defense	741,393	755,448	747,981	6,588	0.9%
Subtotal, excluding Postal Service	2,127,889	2,100,838	2,115,825	-12,064	-0.6%
Postal Service ¹	626,723	608,195	582,320	-44,403	-7.1%
Subtotal, Executive Branch civilian personnel	2,754,612	2,709,033	2,698,145	-56,467	-2.0%
Executive branch uniformed military personnel:					
Department of Defense ²	1,552,041	1,541,182	1,500,668	-51,373	-3.3%
Department of Homeland Security (USCG)	43,080	44,273	44,011	931	2.2%
Commissioned Corps (DOC, EPA, HHS)	6,892	7,137	7,235	343	5.0%
Subtotal, uniformed military personnel	1,602,013	1,592,592	1,551,914	-50,099	-3.1%
Subtotal, Executive Branch	4,356,625	4,301,625	4,250,059	-106,566	-2.4%
Legislative Branch ³	32,890	35,515	35,550	2,660	8.1%
Judicial Branch	34,862	35,672	36,206	1,344	3.9%
Grand total	4,424,377	4,372,812	4,321,815	-102,562	-2.3%

¹ Includes Postal Rate Commission.

² Includes activated Guard and Reserve members on active duty. Does not include Full-Time Support (Active Guard & Reserve (AGRs)) paid from Reserve Component Appropriations.

³ FTE data not available for the Senate (positions filled were used).

Table 11-4. PERSONNEL COMPENSATION AND BENEFITS

(In millions of dollars)

Description	2010 Actual	2011 Estimate	2012 Request	Change: 2010 to 2012	
				Dollars	Percent
Civilian personnel costs:					
Executive Branch (excluding Postal Service):					
Direct compensation:					
Department of Defense	53,743	57,324	57,253	3,510	6.5%
All other executive branch	114,182	115,312	119,616	5,434	4.8%
Subtotal, direct compensation	167,925	172,636	176,869	8,944	5.3%
Personnel benefits:					
Department of Defense	15,560	16,711	16,881	1,321	8.5%
All other executive branch	45,996	46,828	48,444	2,448	5.3%
Subtotal, personnel benefits	61,556	63,539	65,325	3,769	6.1%
Subtotal, Executive Branch	229,481	236,175	242,194	12,713	5.5%
Postal Service:					
Direct compensation	37,832	36,861	36,061	-1,771	-4.7%
Personnel benefits	20,384	16,089	18,153	-2,231	-10.9%
Subtotal	58,216	52,950	54,214	-4,002	-6.9%
Legislative Branch: ¹					
Direct compensation	2,181	2,177	2,226	45	2.1%
Personnel benefits	634	663	673	39	6.2%
Subtotal	2,815	2,840	2,899	84	3.0%
Judicial Branch:					
Direct compensation	3,160	3,227	3,345	185	5.9%
Personnel benefits	1,000	1,034	1,109	109	10.9%
Subtotal	4,160	4,261	4,454	294	7.1%
Total, civilian personnel costs	294,672	296,226	303,761	9,089	3.1%
Military personnel costs:					
Department of Defense					
Direct compensation	99,638	102,356	100,412	774	0.8%
Personnel benefits	50,891	49,206	52,826	1,935	3.8%
Subtotal	150,529	151,562	153,238	2,709	1.8%
All other executive branch, uniformed personnel:					
Direct compensation	3,088	3,203	3,305	217	7.0%
Personnel benefits	805	871	882	77	9.6%
Subtotal	3,893	4,074	4,187	294	7.6%
Total, military personnel costs ²	154,422	155,636	157,425	3,003	1.9%
Grand total, personnel costs	449,094	451,862	461,186	12,092	2.7%
ADDENDUM					
Former Civilian Personnel:					
Retired pay for former personnel	70,996	73,865	76,793	5,797	8.2%
Government payment for Annuitants:					
Employee health benefits	9,642	10,185	10,817	1,175	12.2%
Employee life insurance	44	47	47	3	6.8%
Former Military personnel:					
Retired pay for former personnel ³	51,095	55,475	48,455	-2,640	-5.2%
Military annuitants health benefits	8,623	9,457	9,917	1,294	15.0%

¹ Excludes members and officers of the Senate.² Amounts in this table for military compensation reflect direct pay and benefits for all service members, including active duty, guard, and reserve members.³ Public Law 111-383 required changes in the payment date for most military retirees. No benefits were reduced, but approximately \$3.6 billion in payments was shifted from 2012 to 2011.

Table 6–5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued
(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings, End of 2013 Estimate
	2011 Actual	2012 Estimate	2013 Estimate	
Federal disability insurance trust fund ²	–25,256	–29,374	–33,487	99,104
District of Columbia: Federal pension fund	–7	21	9	3,689
Farm Credit System Insurance Corporation:				
Farm Credit System Insurance fund	126	211	147	3,570
Federal Communications Commission:				
Universal service fund	–266	92	43	5,950
Federal Deposit Insurance Corporation:				
Deposit insurance fund	–2,516	–19,008	17,058	32,976
Senior unsecured debt guarantee fund	1,143	–1,004	–1	6,296
FSLIC resolution fund	–13	53	73	3,500
National Credit Union Administration:				
Share insurance fund	1,454	–12	139	10,860
Central liquidity facility	125	105	110	2,311
Temporary corporate credit union stabilization fund	1,822	–635	55	1,606
Postal Service funds ²	424	*	.....	1,815
Railroad Retirement Board trust funds	–106	–265	–133	1,745
Securities Investor Protection Corporation ³	238	59	141	1,620
United States Enrichment Corporation fund	26	5	4	1,602
Other Federal funds	–626	26	–70	4,279
Other trust funds	2	105	148	3,367
Unrealized discount ¹	90	.....	.....	–1,015
Total, investment in Treasury debt¹	126,089	136,786	138,445	4,911,241
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	2	.....	.....	6
Total, investment in agency debt¹	2	.....	.....	6
Total, investment in Federal debt¹	126,090	136,786	138,445	4,911,247
Memorandum:				
Investment by Federal funds (on-budget)	26,787	–4,467	36,357	410,948
Investment by Federal funds (off-budget)	424	*	.....	1,815
Investment by trust funds (on-budget)	30,626	79,704	62,923	1,744,289
Investment by trust funds (off-budget)	68,164	61,548	39,165	2,755,210
Unrealized discount ¹	90	.....	.....	–1,015

* \$500 thousand or less.

¹ Debt held by Government accounts is measured at face value except for the Treasury zero-coupon bonds held by the Nuclear waste disposal fund and the Pension Benefit Guaranty Corporation (PBGC), which are recorded at market or redemption price; and the unrealized discount on Government account series, which is not distributed by account. Changes are not estimated in the unrealized discount. If recorded at face value, at the end of 2011 the debt figures would be \$22.4 billion higher for the Nuclear waste disposal fund and \$0.2 billion higher for PBGC than recorded in this table.

² Off-budget Federal entity.

³ Amounts on calendar-year basis.

to finance such assets. They are equivalent in concept to other forms of borrowing from the public, although under different terms and conditions. The budget therefore records the upfront cash proceeds from these methods as borrowing from the public, not offsetting collections.¹⁶

¹⁶ This budgetary treatment differs from the treatment in the *Monthly Treasury Statement* Table 6 Schedule C, and the *Combined Statement of Receipts, Outlays, and Balances of the United States Government* Schedule 3, both published by the Department of the Treasury. These two schedules, which present debt issued by agencies other than Treasury, exclude the TVA alternative financing arrangements. This difference in treatment is one factor causing minor differences between debt figures reported in the Budget and debt figures reported by Treasury.

The budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 6–4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. Obligations for lease/leasebacks were \$1.3 billion at the end of 2011 and are estimated to increase to \$4.7 billion at the end of 2012. Obligations for prepayments were \$0.7 billion at the end of 2011 and

The other factors are adjustments for the timing of the reporting of Federal debt held by the National Railroad Retirement Investment Trust and treatment of the Federal debt held by the Securities Investor Protection Corporation.

are estimated to be \$0.6 billion at the end of 2012. After 2012, obligations for these two types of alternative financing are estimated to gradually decline as TVA fulfills the terms of the contracts.

Although the FHA generally makes direct disbursements to the public for default claims on FHA-insured mortgages, it may also pay claims by issuing debentures. Issuing debentures to pay the Government's bills is equivalent to selling securities to the public and then paying the bills by disbursing the cash borrowed, so the transaction is recorded as being simultaneously an outlay and borrowing. The debentures are therefore classified as agency debt.

A number of years ago, the Federal Government guaranteed the debt used to finance the construction of buildings for the National Archives and the Architect of the Capitol, and subsequently exercised full control over the design, construction, and operation of the buildings. These arrangements are equivalent to direct Federal construction financed by Federal borrowing. The construction expenditures and interest were therefore classified as Federal outlays, and the borrowing was classified as Federal agency borrowing from the public.

A number of Federal agencies borrow from the Bureau of the Public Debt (BPD) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the BPD is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the BPD or FFB and (b) the Treasury borrowing from the public that is needed to provide the BPD or FFB with the funds to lend to the agencies.

Debt Held by Government Accounts

Trust funds, and some special funds and public enterprise revolving funds, accumulate cash in excess of current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

New investment by trust funds and other Government accounts was \$126 billion in 2011. Investment by Government accounts is estimated to be \$137 billion in 2012 and \$138 billion in 2013, as shown in Table 6–5. The holdings of Federal securities by Government accounts are estimated to increase to \$4,911 billion by the end of 2013, or 28 percent of the gross Federal debt. The percentage is estimated to decrease gradually over the next 10 years.

The Government account holdings of Federal securities are concentrated among a few funds: the Social Security Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds; the Medicare Hospital Insurance and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the military retirement trust fund, the special fund for uniformed services Medicare-eligible retiree health care, the Civil Service Retirement and Disability Fund (CSRDF), and a separate special fund for Postal Service retiree health benefits. At the end of 2013, these Social Security, Medicare, and Federal employee retirement funds are estimated to own

93 percent of the total debt held by Government accounts. During 2011–2013, the Social Security OASI fund has a large surplus and is estimated to invest a total of \$257 billion, 64 percent of total net investment by Government accounts. Over this period, the military retirement trust fund is projected to invest \$199 billion, 50 percent of the total. Some Government accounts reduce their investments in Federal securities during 2011–2013. During these years, the Social Security DI fund disinvests \$88 billion, or 22 percent of the total net investment and the Medicare Hospital Insurance trust fund disinvests \$78 billion, or 19 percent of the total.

Technical note on measurement.—The Treasury securities held by Government accounts consist almost entirely of the Government account series. Most were issued at par value (face value), and the securities issued at a discount or premium were traditionally recorded at par in the OMB and Treasury reports on Federal debt. However, there are two kinds of exceptions.

First, Treasury issues zero-coupon bonds to a very few Government accounts. Because the purchase price is a small fraction of par value and the amounts are large, the holdings are recorded in Table 6–5 at par value less unamortized discount. The only two Government accounts that held zero-coupon bonds during the period of this table are the Nuclear Waste Disposal Fund in the Department of Energy and the Pension Benefit Guaranty Corporation (PBGC). The total unamortized discount on zero-coupon bonds was \$22.7 billion at the end of 2011.

Second, Treasury subtracts the unrealized discount on other Government account series securities in calculating “net Federal securities held as investments of Government accounts.” Unlike the discount recorded for zero-coupon bonds and debt held by the public, the unrealized discount is the discount at the time of issue and is not amortized over the term of the security. In Table 6–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$1.0 billion at the end of 2011.

Limitations on Federal Debt

Definition of debt subject to limit.—Statutory limitations have usually been placed on Federal debt. Until World War I, the Congress ordinarily authorized a specific amount of debt for each separate issue. Beginning with the Second Liberty Bond Act of 1917, however, the nature of the limitation was modified in several steps until it developed into a ceiling on the total amount of most Federal debt outstanding. This last type of limitation has been in effect since 1941. The limit currently applies to most debt issued by the Treasury since September 1917, whether held by the public or by Government accounts; and other debt issued by Federal agencies that, according to explicit statute, is guaranteed as to principal and interest by the United States Government.

The third part of Table 6–2 compares total Treasury debt with the amount of Federal debt that is subject to the limit. Nearly all Treasury debt is subject to the debt limit.

A large portion of the Treasury debt not subject to the general statutory limit was issued by the Federal

Financing Bank. The FFB is authorized to have outstanding up to \$15 billion of publicly issued debt. It issued \$14 billion of securities to the Civil Service Retirement and Disability Fund on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The FFB securities have the same interest rates and maturities as the regular Treasury securities for which they were exchanged. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2011, \$8 billion of these securities remained outstanding.

The Housing and Economic Recovery Act of 2008 created a new type of debt not subject to limit. This debt, termed "Hope Bonds," is issued by Treasury to the Federal Financing Bank for the HOPE for homeowners program. The outstanding balance of Hope Bonds was \$0.5 billion at the end of 2011 and is projected to increase by small amounts annually in 2012 through 2022.

The other Treasury debt not subject to the general limit consists almost entirely of silver certificates and other currencies no longer being issued. It was \$487 million at the end of 2011 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$10 million at the end of 2011, is certain debentures issued by the Federal Housing Administration.¹⁷

Some of the other agency debt, however, is subject to its own statutory limit. For example, the Tennessee Valley Authority is limited to \$30 billion of bonds and notes outstanding.

The comparison between Treasury debt and debt subject to limit also includes an adjustment for measurement differences in the treatment of discounts and premiums. As explained earlier in this chapter, debt securities may be sold at a discount or premium, and the measurement of debt may take this into account rather than recording the face value of the securities. However, the measurement differs between gross Federal debt (and its components) and the statutory definition of debt subject to limit. An adjustment is needed to derive debt subject to limit (as defined by law) from Treasury debt. The amount of the adjustment was \$18.7 billion at the end of 2011 compared with the total unamortized discount (less premium) of \$53.1 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, Congress has passed 79 separate acts to raise the limit, extend the duration of a temporary increase, or revise the definition.¹⁸

The Budget Control Act of 2011, enacted on August 2, 2011, created a new framework for increasing the debt limit, based on the President's submission of a series of written certifications that such increases are necessary because the debt subject to limit is within \$100 billion of the current limit. The certification triggering the first two increases was submitted immediately following the Act's enactment. Consequently, the debt limit was first in-

creased by \$400 billion, from \$14,294 billion to \$14,694 billion, effective as of August 2, 2011, and then by an additional \$500 billion, from \$14,694 billion to \$15,194 billion, effective after the close of business on September 21.

The Act also provided for a third increase of \$1,200 billion, to \$16,394 billion.¹⁹ Under the Act, the third part of the increase was scheduled to occur 15 calendar days after the President submitted certification to Congress that the debt subject to limit was within \$100 billion of the \$15,194 billion limit (unless Congress enacted a joint resolution of disapproval). The certification was submitted on January 12, 2012, and the increase took effect after the close of business on January 27.

Between July 2008 and February 2010, the debt limit was increased five times. On February 12, 2010, the debt limit was increased by \$1,900 billion to \$14,294 billion and on December 28, 2009, by \$290 billion to \$12,394 billion. The December 2009 increase, enacted shortly before the anticipated reaching of the previous limit, had been intended to cover only a short period. In the three instances between July 2008 and February 2009, the increase was included in a larger piece of legislation aimed at stabilizing the financial markets and restoring economic growth and provided room under the statutory debt ceiling for the activities authorized by each piece of legislation. On July 30, 2008, the debt limit was increased by \$800 billion, to \$10,615 billion, as part of the Housing and Economic Recovery Act of 2008. On October 3, 2008, the Emergency Economic Stabilization Act of 2008 increased the debt limit by \$700 billion, to \$11,315 billion. On February 17, 2009, the American Recovery and Reinvestment Act of 2009 increased the statutory limit by \$789 billion, to \$12,104 billion. At the dates of enactment, the debt subject to limit was at least a few hundred billion dollars below the previous ceiling.

At many times in the past several decades, including 2011, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Treasury Department to take administrative actions to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. One such measure is the partial or full disinvestment of the Government Securities Investment Fund (G-fund). This fund is one component of the Thrift Savings Plan (TSP), a defined contribution pension plan for Federal employees. The Secretary has statutory authority to suspend investment of the G-fund in Treasury securities as needed to prevent the debt from exceeding the debt limit. Treasury determines each day the amount of investments that would allow the fund to be invested as fully as possible without exceeding the debt limit. At the end of 2011, the TSP G-fund had an outstanding balance of \$139 billion. The Treasury Secretary is also authorized to declare

¹⁷ At the end of 2011, there were also \$18 million of FHA debentures not subject to limit.

¹⁸ The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2013*, Table 7.3.

¹⁹ Under the Act, if the constitutional amendment voted on pursuant to Title II of the Act (balanced budget amendment) had been submitted to the States for ratification, the increase would have been \$1,500 billion, or if a Joint Select Committee on Deficit Reduction bill had been enacted, pursuant to Title IV of the Act, that achieved an amount of deficit reduction greater than \$1,200 billion, the increase would have been equal to that amount, but not greater than \$1,500 billion.

a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the Civil Service Retirement and Disability Fund and stop investing its receipts. The law requires that when any such actions are taken with the TSP G-fund or the CSRDF, the Secretary is required to make the fund whole after the debt limit has been raised by restoring the forgone interest and investing the fund fully. In 2011, Treasury determined that, because the special fund for Postal Service retiree health benefits was governed by the same laws as the CSRDF, administrative actions could also be taken with that fund.²⁰ Therefore, reinvestment of the Postal Service Retiree Health Benefits Fund's maturing balances and investment of new interest collections was briefly postponed. After the debt limit increase, the foregone interest was restored to the Postal Service Retiree Health Benefits Fund. Another measure for staying below the debt limit is disinvestment of the Exchange Stabilization Fund. The outstanding balance in the Exchange Stabilization Fund was \$23 billion at the end of 2011.

As the debt nears the limit, Treasury has also suspended acceptance of subscriptions to the State and Local Government Series to reduce unanticipated fluctuations in the level of the debt. In 2011, Treasury also allowed the cash balance in the temporary Supplementary Financing Program to decline from \$200 billion to zero by not rolling over the bills as they matured. Because Treasury does not currently have any plans to resume the SFP, this action

²⁰ Both the CSRDF and the Postal Service Retiree Health Benefits Fund are administered by the Office of Personnel Management.

is not anticipated to be an available administrative action in the future.

In addition to these steps, Treasury has previously replaced regular Treasury securities with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in November 2004, and the outstanding FFB securities began to mature in June 2009.

At the time of submission of the January 12, 2012, certification, the debt was already at the then-current limit of \$15,194 billion, which had been reached on January 4. Therefore, Treasury had begun to use some of its administrative actions, such as use of the Exchange Stabilization Fund and the TSP G-fund.

The debt limit has always been increased prior to the exhaustion of Treasury's limited available administrative actions to continue to finance Government operations when the statutory ceiling has been reached. Failure to enact a debt limit increase before these actions were exhausted would have significant and long-term negative consequences. Without an increase, Treasury would be unable to make timely interest payments or redeem maturing securities. Investors would cease to view U.S. Treasury securities as free of credit risk and Treasury's interest costs would increase. Because interest rates throughout the economy are benchmarked to the Treasury rates, interest rates for State and local governments, businesses, and individuals would also rise. Foreign investors would likely shift out of dollar-denominated assets, driving down the val-

Table 6-6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT

(In billions of dollars)

Description	Actual 2011	Estimate										
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Change in Gross Federal Debt:												
Federal funds deficit (+)	1,396.6	1,426.2	1,010.1	777.2	745.3	783.9	762.9	745.3	734.9	764.8	791.9	788.6
Other transactions affecting borrowing from the public— Federal funds ¹	-188.9	123.2	158.6	142.2	143.8	135.6	121.9	116.3	109.0	103.0	101.1	105.1
Increase (+) or decrease (-) in Federal debt held by Federal funds	27.2	-4.5	36.4	34.1	38.9	47.1	50.9	58.6	64.3	57.9	39.6	39.5
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ²	0.4	41.8	-8.0	-1.4	-1.2	-1.7	-1.1	-1.2	-1.3	-1.2	-1.2	-1.0
Change in unrealized discount on Federal debt held by Government accounts	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total financing requirements	1,235.4	1,586.7	1,197.1	952.0	926.7	964.9	934.6	918.9	906.9	924.4	931.4	932.2
Change in Debt Subject to Limit:												
Change in gross Federal debt	1,235.4	1,586.7	1,197.1	952.0	926.7	964.9	934.6	918.9	906.9	924.4	931.4	932.2
Less: increase (+) or decrease (-) in Federal debt not subject to limit	-1.0	-0.7	-1.1	-0.8	-0.8	-1.8	-1.1	-1.0	-1.2	-1.2	-1.9	-1.8
Less: change in adjustment for discount and premium ³ ...	0.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, change in debt subject to limit	1,235.7	1,587.3	1,198.2	952.8	927.5	966.7	935.7	919.9	908.2	925.7	933.3	934.0
Memorandum:												
Debt subject to statutory limit ⁴	14,746.6	16,333.9	17,532.1	18,484.9	19,412.5	20,379.2	21,314.9	22,234.8	23,142.9	24,068.6	25,001.8	25,935.8

* \$50 million or less.

¹ Includes Federal fund transactions that correspond to those presented in Table 6-2, but that are for Federal funds alone with respect to the public and trust funds.

² Includes trust fund holdings in other cash assets and changes in the investments of the National Railroad Retirement Investment Trust in non-Federal securities.

³ Consists of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds).

⁴ The statutory debt limit is \$16,394 billion, as increased after January 27, 2012.

ue of the dollar and further increasing interest rates on non-Federal, as well as Treasury, debt. In addition, the Federal Government would be forced to delay or discontinue payments on its broad range of obligations, including Social Security and other payments to individuals, Medicaid and other grant payments to States, individual and corporate tax refunds, Federal employee salaries, payments to vendors and contractors, and other obligations.

The debt subject to limit is estimated to increase to \$16,334 billion by the end of 2012 and to \$17,532 billion by the end of 2013.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 6–2, and the change in debt net of financial assets are determined primarily by the total Government deficit or surplus. The debt subject to limit, however, includes not only debt held by the public but also debt held by Government accounts. The change in debt subject to limit is therefore determined both by the factors that determine the total Government deficit or surplus and by the factors that determine the change in debt held by Government accounts. The effect of debt held by Government accounts on the total debt subject to limit can be seen in the second part of Table 6–2. The change in debt held by Government accounts results in 16 percent of the estimated total increase in debt subject to limit from 2012 through 2022.

The budget is composed of two groups of funds, Federal funds and trust funds. The Federal funds, in the main, are derived from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, are financed by taxes or other receipts dedicated by law for specified purposes, such as for paying Social Security benefits or making grants to State governments for highway construction.²¹

A Federal funds deficit must generally be financed by borrowing, which can be done either by selling securities to the public or by issuing securities to Government accounts that are not within the Federal funds group. Federal funds borrowing consists almost entirely of Treasury securities that are subject to the statutory debt limit. Very little debt subject to statutory limit has been issued for reasons except to finance the Federal funds deficit. The change in debt subject to limit is therefore determined primarily by the Federal funds deficit, which is equal to the difference between the total Government deficit or surplus and the trust fund surplus. Trust fund surpluses are almost entirely invested in securities subject to the debt limit, and trust funds hold most of the debt held by Government accounts. The trust fund surplus reduces the total budget deficit or increases the total budget surplus, decreasing the need to borrow from the public or increasing the ability to repay borrowing from the public. When the trust fund surplus is invested in Federal securities, the debt held by Government accounts increases, offsetting the decrease in debt held by the public by an equal amount. Thus, there is no net effect on gross Federal debt.

Table 6–6 derives the change in debt subject to limit. In 2011 the Federal funds deficit was \$1,397 billion, and other factors decreased financing requirements by \$189 billion. The change in the Treasury operating cash balance reduced financing requirements by \$252 billion, while the net financing disbursements of credit financing accounts increased financing requirements by \$58 billion. Other factors increased financing requirements by \$5 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$27 billion in Treasury securities. An adjustment is also made for the difference between the trust fund surplus or deficit and the trust funds' investment or disinvestment in Federal securities (including the changes in the National Railroad Retirement Investment Trust's investments in non-Federal securities). As a net result of all these factors, \$1,235 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by \$1 billion and the adjustment for discount and premium changed by \$1 billion, the debt subject to limit increased by \$1,236 billion, while debt held by the public increased by \$1,109 billion.

Debt subject to limit is estimated to increase by \$1,587 billion in 2012 and by \$1,198 billion in 2013. The projected increases in the debt subject to limit are caused by the continued Federal funds deficit, supplemented by the other factors shown in Table 6–6. While debt held by the public increases by \$5,585 billion from the end of 2011 through 2017, debt subject to limit increases by \$6,568 billion.

Foreign Holdings of Federal Debt

During most of American history, the Federal debt was held almost entirely by individuals and institutions within the United States. In the late 1960s, foreign holdings were just over \$10 billion, less than 5 percent of the total Federal debt held by the public. Foreign holdings began to grow significantly starting in 1970 and now represent almost half of outstanding debt. This increase has been almost entirely due to decisions by foreign central banks, corporations, and individuals, rather than the direct marketing of these securities to foreign residents.

Foreign holdings of Federal debt are presented in Table 6–7. At the end of 2011, foreign holdings of Treasury debt were \$4,660 billion, which was 46 percent of the total debt held by the public.²² Foreign central banks and foreign official institutions owned 75 percent of the foreign holdings of Federal debt; private investors owned nearly all the rest. At the end of 2011, the nations holding the largest shares of U.S. Federal debt were China, which held 25 percent of all foreign holdings, Japan, which held 21 percent, and the United Kingdom, which held 9 percent. All of the foreign holdings of Federal debt are denominated in dollars.

Although the amount of foreign holdings of Federal debt has grown greatly over this period, the proportion that foreign entities and individuals own, after increasing abruptly in the very early 1970s, remained about 15–20

²¹ For further discussion of the trust funds and Federal funds groups, see Chapter 28, "Trust Funds and Federal Funds."

²² The debt calculated by the Bureau of Economic Analysis, Department of Commerce, is different, though similar in size, because of a different method of valuing securities.

percent until the mid-1990s. During 1995–97, however, growth in foreign holdings accelerated, reaching 33 percent by the end of 1997. Foreign holdings of Federal debt resumed growth in the following decade, increasing from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. Foreign holdings were 48 percent at the end of 2010 and fell to 46 percent at the end of 2011. The increase in foreign holdings was about 30 percent of total Federal borrowing from the public in 2011 and 50 percent over the last five years.

Foreign holdings of Federal debt are around 25 percent of the foreign-owned assets in the United States, depending on the method of measuring total assets. The foreign purchases of Federal debt securities do not measure the full impact of the capital inflow from abroad on the market for Federal debt securities. The capital inflow supplies additional funds to the credit market generally, and thus affects the market for Federal debt. For example, the capital inflow includes deposits in U.S. financial intermediaries that themselves buy Federal debt.

Federal, Federally Guaranteed, and Other Federally Assisted Borrowing

The Government's effects on the credit markets arise not only from its own borrowing but also from the di-

rect loans that it makes to the public and the provision of assistance to certain borrowing by the public. The Government guarantees various types of borrowing by individuals, businesses, and other non-Federal entities, thereby providing assistance to private credit markets. The Government is also assisting borrowing by States through the Build America Bonds program, which subsidizes the interest that States pay on such borrowing. In addition, the Government has established private corporations—Government-Sponsored Enterprises—to provide financial intermediation for specified public purposes; it exempts the interest on most State and local government debt from income tax; it permits mortgage interest to be deducted in calculating taxable income; and it insures the deposits of banks and thrift institutions, which themselves make loans.

Federal credit programs and other forms of assistance, including the substantial Government efforts to support the credit markets during the recent financial turmoil, are discussed in Chapter 23, "Credit and Insurance," in this volume. Detailed data are presented in tables at the end of that chapter.

Table 6–7. FOREIGN HOLDINGS OF FEDERAL DEBT

(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public	
	Total	Foreign ¹	Percentage foreign	Total ²	Foreign ¹
1965	260.8	12.3	4.7	3.9	0.3
1970	283.2	14.0	5.0	5.1	3.8
1975	394.7	66.0	16.7	51.0	9.2
1980	711.9	121.7	17.1	71.6	1.4
1985	1,507.3	222.9	14.8	200.3	47.3
1990	2,411.6	463.8	19.2	220.8	72.0
1995	3,604.4	820.4	22.8	171.3	138.4
2000	3,409.8	1,038.8	30.5	–222.6	–242.6
2005	4,592.2	1,929.6	42.0	296.7	135.1
2006	4,829.0	2,025.3	41.9	236.8	95.7
2007	5,035.1	2,235.3	44.4	206.2	210.0
2008	5,803.1	2,802.4	48.3	767.9	567.1
2009	7,544.7	3,570.6	47.3	1,741.7	768.2
2010	9,018.9	4,324.2	47.9	1,474.2	753.6
2011	10,128.2	4,660.2	46.0	1,109.3	336.0

¹ Estimated by Treasury Department. These estimates exclude agency debt, the holdings of which are believed to be small. The data on foreign holdings are recorded by methods that are not fully comparable with the data on debt held by the public. Projections of foreign holdings are not available. The estimates include the effects of benchmark revisions in 1984, 1989, 1994, and 2000, and annual June benchmark revisions for 2002–2010.

² Change in debt held by the public is defined as equal to the change in debt held by the public from the beginning of the year to the end of the year.

PERFORMANCE AND MANAGEMENT

7. DELIVERING A HIGH-PERFORMANCE GOVERNMENT

The work of the Federal Government has a real effect on people's lives – on small business-owners who need loans, on young people who want to go to college, on the men and women in our Armed Forces who need the best resources when in uniform and who, after they have served, deserve the benefits they earned. Whether protecting individuals and communities, modernizing infrastructure, investing in our children, or taking care of the most vulnerable, the American people deserve a highly effective government.

The Nation's current fiscal situation makes it more important than ever for government agencies to use taxpayer money wisely to achieve more mission for the money. Building a government that works smarter, better, and more efficiently to deliver results for the American people is a cornerstone of this Administration. This chapter discusses the Administration's approach to improving the performance of the Federal Government, progress of this effort, challenges remaining, and the path forward.

Driving Federal Performance

We must use taxpayer dollars in the most effective and efficient ways we can, continually searching for smarter ways to serve the American people, businesses, and communities. A critical part of our effort is creating a culture of continual performance improvement where Federal agencies constantly strive to improve the quality of Americans' lives and find lower-cost ways to achieve positive outcomes.

The Administration's approach to delivering more effective and efficient government is straightforward, and builds on a careful examination of best management practices in the Federal Government, State and local governments, other countries, and businesses (described in the President's 2011 and 2012 Budgets). The Administration has built on these lessons learned, and the groundwork established by Congress and previous Administrations. This approach rests on three mutually reinforcing practices.

1. **Choose Areas of Focus and Clear Goals.** Leaders at all levels of the organization choose a limited number of areas of focus that have high potential to advance the well-being of the American people, cut the costs of delivery, or both. Where goals are likely to accelerate progress, leaders set clear, ambitious goals for outcome-focused and management priorities. For each area of focus, senior officials responsible for leading change are clearly identified and goals are clearly communicated to employees, delivery partners, and the public.
2. **Measure and Analyze Performance.** Agencies measure, analyze, and discuss performance infor-

mation to reinforce priorities, motivate action, and illuminate a path to improvement. They analyze data to find problems to fix, successful practices to spread, and the root causes of both. Armed with this understanding, they take actions to achieve better outcomes and cut the costs of delivery. Agencies also communicate goals, measurements, progress, and strategies to enlist external ideas, expertise, and assistance to improve performance and boost accountability.

3. **Deliver Better Results with Frequent, Data-Driven Reviews.** Leaders conduct frequent, in-depth performance reviews to drive progress on priorities. They review progress with those involved in implementation and adjust agency action quickly, as needed, to improve outcomes and reduce costs.

Progress on Agency Priorities

The Administration's performance management approach is fueling progress on performance and productivity. Federal agencies are widely adopting these performance improvement practices and beginning to see changes on the ground. Leadership engagement, not just in goal-setting but in running frequent progress reviews to identify actions an agency can take to improve results, is on the rise across the Federal government. At the same time, agencies are learning how outcome-focused goals can help them break down organizational barriers, leading to better results than one agency can achieve on its own. As described in "Reducing Crime on Indian Reservations" on the following page, efforts at the Department of Interior to reduce crime on Indian reservations exemplify how these practices can coalesce to produce breakthrough performance.

Performance results like this are not limited to Interior; other agencies are also making great progress on their mission-focused priorities, some of which they identified as two-year Agency Priority Goals (introduced as High Priority Performance Goals) in the 2011 Budget.

Streamlining Student Loans and Strengthening Teacher Evaluation Systems

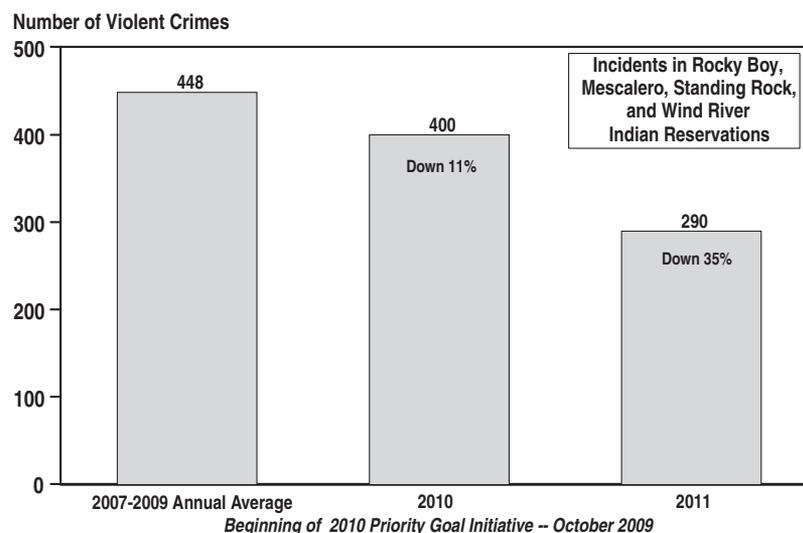
The Department of Education (Education) set a goal that all participating higher education institutions and loan servicers will be operationally ready to originate and service Federal Direct Student Loans through an efficient and effective student aid delivery system with simplified applications and minimal disruption to students. Within six months of the enactment of the Student Aid and Fiscal Responsibility Act (SAFRA), Education successfully moved to making students loans directly instead of hav-

REDUCING CRIME ON INDIAN RESERVATIONS

High crime rates on some Indian reservations have long been a public concern, especially to the Native American community at large. The Department of the Interior's (Interior) pilot program to reduce crime on Indian reservations demonstrates how transformative it can be when an agency adopts a goal that matters to a community, takes actions to address the problem, regularly measures and reviews relevant data to see if change is happening, and engages the local community in every aspect of the effort. To seek solutions to this long-standing issue – but given tough constraints on its budget – Interior started a pilot program to test and identify effective crime reduction strategies on Indian lands. In the 2011 Budget, Interior set an agency High Priority Performance Goal to reduce crime by at least 5 percent on four reservations with some of the highest crime rates.

When this goal was set, most considered it ambitious; Interior had never before adopted a crime reduction goal and does not control many of the factors that affect the crime rate. Nevertheless, by the end of 2011, the initiative far exceeded its goal, reducing violent crime, on average, by a remarkable 35 percent across all four reservations, with crime going down on three of the four.

Chart 7-1. Safe Indian Communities Priority Goal



The importance and resonance of the goal won the cooperation of law enforcement partners and the enthusiasm of the local communities. This enabled a comprehensive strategy that involved community policing, tactical deployment, and inter-agency and intergovernmental partnerships between the Federal Bureau of Investigations (FBI), Department of Justice (DOJ), and the tribal police departments. The number of Indian country and DOJ officers on the ground was doubled and the number of law enforcement officers who received basic training increased ten-fold. Interior also supported officer-initiated programs to help victims and their families along with programs to strengthen community relationships with law enforcement. Community-launched innovations also played a role, such as an initiative on Rocky Boy's Reservation in Montana to reduce juvenile delinquency and criminal behavior.

Recognizing the importance of fresh and actionable data, Interior has now established a computer-aided system to help analyze crime data, identify crime trends, and report criminal offenses. These data and trend analyses were used to allocate resources and to evaluate law enforcement and community policing strategies.

The results strongly affirm the value of a data-based, goal-oriented approach that empowers local officials to drive change. In the next two years, Interior is seeking to spread this success, starting with a replication demonstration at two new reservations, while continuing efforts on the original four reservations.

ing third party lenders make them. This lending approach serves students better and, according to Congressional Budget Office estimates, will save taxpayers more than \$60 billion over ten years. Education is also supporting and encouraging states to strengthen teacher evaluation systems given the evidence that teacher effectiveness contributes more to improving student academic outcomes

than any other school characteristic. Education has made considerable progress – forty-one states adopted such systems over the last two years.

Improving Health and Well-Being

To improve not just the education of students but other aspects of their well-being, the Department of Agriculture

(USDA) set a goal to partner with local schools, propose national standards, and take other actions that will result in improved quality of food sold in schools throughout the school day. Since 2009, USDA has signed up over 1600 more schools for its Healthier US School Challenge, a program that certifies schools as meeting rigorous quality standards for the food they offer. In addition, toward its goal of improving the availability and accessibility of health insurance coverage by increasing enrollment of eligible children in Children's Health Insurance Program (CHIP) by 9 percent over the 2008 baseline and increasing enrollment of eligible children in Medicaid by 11 percent over the 2008 baseline by the end of FY 2011, the Department of Health and Human Services (HHS) enrolled an additional 4.8 million children in the CHIP and Medicaid from 2008 to 2010, thus providing greater access to health care.

Agencies are working to improve the well-being of adults, as well. To save lives and tens of billions of dollars in Medicare and Medicaid costs, HHS launched the Partnership for Patients and set a new Priority Goal to reduce the rate of hospital acquired conditions and hospital readmissions. More than 3,100 hospitals and nearly 3,500 other partners, such as physician, nurses groups, and employers, have already joined this initiative. HHS has adopted a 2012-2013 Priority Goal focusing on reducing hospital associated infections reflecting this effort. Working in conjunction with the Interagency Council on Homelessness, the Departments of Veterans Affairs (VA) and Housing and Urban Development (HUD) set a goal to reduce the population of homeless veterans to 59,000 by June 2012, and have reduced the population of homeless veterans from 75,609 in January 2009 to 67,495 in January 2011. Building upon this progress, VA and HUD set a Priority Goal to house another 24,400 Veterans by the end of 2013 on the way to eliminating veteran homelessness by 2015.

Energy Savings for Low-Income Families and Clean Energy Production

The Department of Energy (Energy) and the Department of Housing and Urban Development (HUD) set a joint goal to enable the cost-effective energy retrofits of 1.2 million housing units by the end of 2013. By supporting energy conservation in over 750,000 homes of lower income and middle class families, Energy has already helped reduce energy costs, on average, by over \$400 per home each year. These changes have reduced the overall annual energy consumption by 20 percent for these homes, but also cut annual greenhouse gas emissions nearly 2.0 million metric tons. HUD similarly reduced energy consumption at 120,000 HUD-assisted housing units. Energy, in the same period, has invested in reducing the cost of batteries for electric drive vehicles to help increase the market for Plug-In Hybrids and All-Electric Vehicles.

Not surprisingly, because agencies were asked to set stretch targets to reach higher levels of performance, agencies did not attain every Priority Goal. In fact, if every target had been met it would indicate that the goals

were insufficiently ambitious - not bold enough to spur the sort of innovation and focus associated with challenging but realistic targets. The experience of Interior on its energy goal illustrates not just the performance-improving power of a stretch target but also of the Administration's emphasis on performance progress, rather than goal attainment for its own sake, to create a healthy performance-improving dynamic across the Federal government. Interior set a goal to authorize 9000 megawatts of solar, wind, and geothermal energy projects by the end of 2011. It did not reach its target, but did approve more than 6,000 megawatts of new renewable energy capacity on Interior land - enough to power, when fully developed, more than 1 million homes. Prior to setting this goal in October 2009, Interior had approved only a small number of projects like this. It had a slower than expected start-up because it had to move along a learning curve, yet by setting a stretch goal in this area Interior was highly successful - permitting more than 6,000 megawatts in 2 years. To continue progress in this area, Interior set a new Priority Goal to increase the approved capacity for production of renewable energy resources to 11,000 megawatts by the end of 2013.

Strengthening Small and Medium-Sized Businesses

The Small Business Administration (SBA) increased small business access to capital by growing the number of active lending partners and bringing 1,200 new or returning lenders into the 7(a) loan program. Loans approved by active lenders reached nearly \$20 million in 2011, up from \$12 million in 2010 and \$9 million in 2009. The Department of Commerce (Commerce) increased the number of small and medium-sized enterprises that entered a 2nd or additional market, not quite reaching its 2011 target but nonetheless up 20% between 2009 to 2011 (over 3000 businesses in 2011) despite staffing decreases and modest global economic growth in that period. Commerce has adopted a new 2012-2013 Priority Goal to expand its export activity, one of many strategies outlined in the National Export Initiative (NEI) report that contribute to the President's directive to double U.S. exports by 2014, a new Cross-Agency Priority Goal.

Improving Water Quality and Aquatic Health

Commerce has also worked closely with Regional Fishery Management Councils (RFMCs) to end and prevent overfishing. The agency set a goal to reduce the number of stocks subject to overfishing to zero by the end of 2011; improve the Fish Stock Sustainability Index (FSSI) to 586 by the end of 2011; and ensure that all 46 Federal fishery management plans have required catch limits to end overfishing in place by the end of 2011. By the end of December 2011, all stocks subject to overfishing had annual catch limits in place, and the Fish Stock Sustainability Index rose from 565.5 (in 2009) to 598.5. At the same time, the effort to ensure all Fishery Management Plans have annual catch limits is moving forward at a steady pace. Forty Fishery Management Plans have been completed as of December 31, 2011 and

six will be completed in time to be effective for the respective 2012 fishing years.

In other agency efforts related to aquatic health, the Corps of Engineers completed 27 projects restoring over 12,000 acres of aquatic habitat, most of it to improve the Upper Mississippi River, surpassing its goal of 10,300 acres. In a separate effort to improve the health of the Nation's waters, the Environmental Protection Agency (EPA) focused approximately 60% of its water quality enforcement actions on facilities discharging to waters that do not meet water quality standards, up from 32 percent in 2009 and well above the agency's goal of at least 37 percent. This resulted in reductions in harmful discharges from 195 facilities into these waters.

National Security

One of the Department of State's goals is to improve global controls to prevent the spread of nuclear weapons and enable the secure, peaceful use of nuclear energy. The 2010 Nuclear Security Summit moved the U.S. closer to this goal by strengthening international cooperation to control weapons-usable nuclear materials and prevent nuclear terrorism - actions critical to our own national security. Attending states pledged specific national actions to prevent terrorists, criminals, and proliferators from acquiring nuclear materials, ranging from ratification of a convention to extremely complicated steps converting reactors from the use of highly-enriched to low-enriched uranium. The number of countries ratifying the Amendment to the Convention on Physical Protection of Nuclear Materials (CPPNM) is now at 52, up from 20 at the end of 2008.

Improving Customer Service and Saving Taxpayer Dollars

Both the Department of the Treasury (Treasury) and the Social Security Administration (SSA) are making it easier for their customers, while saving taxpayer dollars. Treasury has saved over \$63.9 million by encouraging taxpayers to file electronically - increasing the electronic filing rate for individual tax returns to 76.9 percent in the 2011 season, up from 66 percent in 2009. SSA increased online retirement benefit applications from single digits in most prior years to the highest usage ever - 41 percent in FY 2011. These online services reduce the time employees spend handling applications, which frees them to handle other work. SSA has achieved this success while maintaining high customer satisfaction. The online claim application is one of three SSA electronic services that consistently tops the American Customer Satisfaction Index survey, rating higher than popular private sector electronic services.

Despite this progress, some agencies did not meet their goals because of fiscal pressures. While the Priority Goals were intended to be budget neutral, they were not budget independent. For example, in the President's 2011 Budget the Social Security Administration had a target for completing 3.409 million initial disability claims. However, Congress appropriated \$1 billion less than the President requested and the agency could not complete all of the

work related to their disability programs. To compensate for this, SSA decreased its target for the number of initial disability claims completed to 3.273 million. The agency was able to leverage technology to identify and fast-track the most severe disability claims. From October 2010 through June 2011, the agency fast-tracked over 108,000 initial disability cases, or 4.6 percent of all disability claims filed through the two fast-track processes. Learning from this experience, SSA continues to refine the predictive model and selection software to maximize capacity and accurately identify these cases.

More complete performance updates on the 2010-2011 Agency Priority Goals and other agency performance goals for the 15 Cabinet agencies and nine other large departments can be found at each agency's Performance.gov home page (click on the annual performance plans and reports button or access all 24 agency plans and reports at <http://my-goals.performance.gov/agency/plans>). Updates on government-wide management priorities established under the Accountable Government Initiative can also be found at Performance.gov under the Area of Focus tabs.

Building a Culture of Continual Performance Improvement

Agency heads have charged their leadership teams with transforming the way their agencies use goals, measurement, analysis, and data-driven discussions to drive performance improvements. This transformation is increasingly evident. As discussed above, agencies are using goals not just as words on the pages of reports required by Congress or OMB, but instead as simple, powerful tools for communicating priorities and focusing agency action. Complementing progress on the Agency Priority Goals, this budget continues efforts to integrate performance more directly into the use of traditional government tools such as grants. Race to the Top grants, for example, are being used to enlist state and local education leaders willing to commit to rigorous standards and high-quality assessments, build better data systems to inform decisions and improve instruction, attract and retain great teachers, and adopt the most promising evidence-based practices to turn-around the lowest performing schools. Similarly, HHS has established stronger performance expectations for its early childhood grants, requiring Head Start grantees that fail to meet rigorous benchmarks to re-compete for continued Federal funding to help children from low-income families achieve their full potential.

As discussed in AP Chapter 8: Program Evaluation and Data Analytics, a number of agencies have begun to use tiered grant-funding to encourage state, local, and not-for-profit delivery partners to improve performance in three complementary ways: scale, validate, and develop. Scale-up grants promote adoption of effective practices identified through objectives searches of the evidence and experience. Validation grants support replication demonstrations before scale-up to test if practices effective in one location or situation can be replicated in others. Smaller grants support development and testing of

new high-potential practices. In addition, the President's Budget proposes Pay for Success pilots.

Looking Forward

Over the next year, the Administration will continue to build upon these efforts to deliver more value for the taxpayer's dollar. It will continue to strengthen its approach of using goals to communicate priorities, focus agency actions on innovative solutions, support cross-agency collaboration, and enlist external ideas and assistance. The Administration will continue to measure and analyze to find lower cost ways to deliver more mission for the money. It will set ambitious goals to stimulate innovation and motivate effort, and communicate progress and strategies to boost accountability to the public. Increasingly, it will reach out to field employees, other offices, other agencies, and delivery partners to engage them in regular data-driven reviews to find smarter ways to accomplish priority objectives. And, it will strengthen networks, within and beyond government, to tackle common problems and pursue shared areas of opportunity.

Agency Priority Goals

Major Federal agencies have set near-term Agency Priority Goals for 2012-2013, which are a subset of agencies' broader goals and objectives. Over half of the agency goals, such as Interior's goal to permit renewable energy on Interior land, continue Agency Priority Goals set with the 2011 Budget, but update the targets. Other goals address a problem tackled with a 2010-2011 goal, but frame the goals in ways more likely to accelerate progress. For example, an HHS goal expands from tracking the percentage of Recovery Act funded communities that adopt smoke-free policies to a goal to reduce nation-wide cigarette consumption per capita. Still other goals expand into areas previously untouched by previous Agency Priority Goals, such as the Commerce Department's weather-forecasting goal.

The full list of Agency Priority Goals can be found at www.Goals.Performance.gov and are sortable by agency and by theme. Agency Priority Goals are presented this year in the context of agency strategic goals and objectives to show how Agency Priority Goals fit within the context of agencies' longer term strategic goals, and each agency's full set of performance objectives. In addition, to make the goals more understandable to the public, each goal includes an "Impact Statement" that describes generally what the goal is trying to accomplish, paired with a time-specific target to guide agency action.

Cross-Agency Priority Goals

In addition, the Administration has adopted interim Cross-Agency Priority (CAP) Goals. This Administration, Congress, the U.S. Government Accountability Office (GAO), and others have long recognized that government often tackles problems in stove-piped or fragmented ways that can prevent problems from being effectively addressed. To enhance progress in areas needing more cross-government collaboration, the GPRA Modernization Act

requires OMB to establish a limited number of CAP Goals for both crosscutting policy and government-wide management areas. The goals are to be revised or updated at least every four years, starting with the 2015 Budget. At the same time, the law instructs the Administration to set interim CAP goals concurrent with the 2013 Budget.

To develop the interim CAP Goals, OMB and the Performance Improvement Council worked with senior policy officials and agencies, and consulted with Congress. GAO studies were also considered in selecting CAP Goals. Emphasis was placed on choosing goals that reflect Presidential priorities and where increased cross-agency coordination and regular review are expected to speed progress. The limited number of interim CAP Goals therefore reflect a subset of Presidential priorities and opportunities for increased cross-agency collaboration. CAP Goals are complemented by other cross-agency coordination and goal-setting efforts, such as those of the Federal Food Safety Working Group and the Office of National Drug Control Policy (ONDCP). ONDCP has established government-wide goals and measurements to combat the public health and safety consequences of drug use, and coordinates inter-agency efforts to cut drug use among youth by 15 percent, drug-induced deaths and drug-related morbidity by 15 percent, and drugged driving by 10 percent in five years. The National Drug Control Strategy is available at <http://www.whitehouse.gov/ondcp/2011-national-drug-control-strategy>. The Federal Food Safety Working Group issued an update on its progress since its March 2009 formation at http://www.whitehouse.gov/sites/default/files/fsug_report_final.pdf.

The Administration set interim CAP Goals in the following areas:

- Science, Technology, Engineering, and Math (STEM) Education
- Veterans Career Readiness
- Broadband
- Entrepreneurship and Small Businesses
- Energy Efficiency
- Exports
- Job Training
- Cybersecurity
- Sustainability
- Financial Management
- Human Capital Management
- Information Technology Management
- Procurement and Acquisition Management
- Real Property Management

The interim CAP Goals can be found at www.Goals.Performance.gov. The website, which comprises the Federal performance plan, is the beginning of a broader transition to providing the public more dynamic, useful, and current performance information. Progress on each Priority Goal will be published through a central website starting in the fall of 2012.

Frequent Data-Driven Reviews

For each Agency Priority Goal, the agency head or Chief Operating Officer (COO), often the Deputy Secretary, will continue running data-driven performance reviews

on their Priority Goals at least once a quarter. Some COOs also run quarterly performance reviews with their Departmental components - agencies, bureaus, or programs. At the same time, leaders of individual components, such as the heads of the FBI, Customs and Border Patrol, Federal Emergency Management Agency, and the Food and Drug Administration, are running their own frequent data-driven reviews. OMB, with support from the Performance Improvement Council, will initiate progress reviews on CAP Goals later this year.

Producing Results for the American People

In the coming year, the Administration will continue to develop tools and offer services to strengthen agency performance improvement capacity and to foster inter-agency networks to facilitate expertise and data sharing, co-investment, and learning. It will strengthen a working group begun in 2011 to help agencies improve and benchmark their data-driven progress reviews. The Administration will continue to foster inter-agency networks, such as the Benefits Processing Working Group,

launched in 2010, and will also work to launch additional networks to develop measures for other common government functions, such as reducing the number of undesirable incidents and their associated costs. Additionally, the Administration will develop training opportunities and career pathways to strengthen performance improvement skills and capacity across the Federal government.

The Administration is strongly committed to responding to the President's charge to deliver a government that works, a government that is smarter, leaner, and more effective, one that produces tangible results all around us – in a small business opening its doors, more homes becoming energy-efficient, new wind turbines generating clean renewable energy, healthier children, better served veterans, and falling crime rates. Leadership engagement, clear goals, measurement, analysis of progress, and frequent progress reviews to find and promote what works and fix or eliminate what does not are keys to fulfilling that commitment to improve the lives of the American people.

8. PROGRAM EVALUATION AND DATA ANALYTICS

The Administration is committed to using taxpayer dollars efficiently and effectively. Central to that commitment is a culture where agencies constantly ask, and try to answer, questions that help them find, implement, spread, and sustain effective programs and practices; find and fix or eliminate ineffective ones; test promising programs and practices to see if they are effective and can be replicated; and find lower-cost ways to achieve positive impacts. The Federal fiscal situation necessitates doing more with less, not only to reduce budget deficits, but also to build confidence that Americans are receiving maximum value for their hard-earned tax dollars. It is therefore critical to apply an evidence-based approach to government management that utilizes rigorous methods appropriate to the situation, learns from experience, and is open to experimentation. This application requires selecting and implementing promising policies, programs, and strategies, monitoring of their implementation, evaluating their effectiveness, and adapting them over time to meet emerging challenges informed by ongoing measures of the well-being of Americans and the Nation.

One of the challenges to evidence-based policy-making is that it is sometimes hard to say whether a program is working well or not. Historically, evaluations have been an afterthought when programs are designed, and once a program has been in place for a while, building a constituency for rigorous evaluation is hard. Further, the use of data and evaluation on an ongoing basis to manage and improve programs is rare. The Administration is committed to addressing this problem.

This Administration is strongly encouraging appropriately rigorous evaluations and data analytics to determine the impact of programs and practices on outcomes, complementing the performance measurement and management practices described in chapter 7, “Delivering a High-Performance Government”, in this volume. In many policy debates, stakeholders come to the table with deep disagreements about the effectiveness or ineffectiveness of particular interventions. Evaluations that are sufficiently rigorous, relatively straightforward, and free from political interference are especially valuable in such circumstances.

Evaluations do what performance measurement, alone, cannot. Evaluations determine whether programs produce outcomes superior to alternative policy choices, or not putting into place a policy at all. This is in contrast with performance measurement, which tracks implementation and progress toward intended program outcomes, but typically does not compare outcomes to alternative programs or the status quo. If a particular job training approach has a high job placement rate, is it because it is effective or because it attracts those easiest to place in jobs? An evaluation would compare the employment of

participants in the job training program to comparable individuals who did not participate in the program in order to isolate the effects of the training from other factors. Evaluations can answer a wide-range of germane questions such as whether workers are safer in facilities that are inspected more frequently, whether one option for turning around a low-performing school is more effective than another, whether outcomes for families are substantially improved in neighborhoods that receive intensive services, whether no-fee debit cards increase savings among the unbanked, and whether re-employment services are cost-effective.

Evaluation is one component of the evidence infrastructure that plays a role in a wide range of decision-making. The best government programs embrace a culture where broad statistical data series, performance and other measurement, evaluation, and other data analytics are regularly used and complement one another. Agencies use broad statistical data series to understand social and economic conditions of the populations to be served, and to inform the design of new or revised policies. They use performance measurement to monitor the implementation of their policies, to detect promising practices for improving performance and to identify challenges. They use descriptive evidence about program recipients, program stakeholders, and community conditions to target their resources more precisely to areas of high need and opportunity. Regression analyses of administrative data can, for example, shed light on how to better match recipients with appropriate services. Rigorous evaluations using experimental or quasi-experimental methods identify the effects of programs in situations where doing so is difficult using other methods; and rigorous qualitative evidence complements what can be learned from quantitative evidence and provides greater insight into how programs and practices can be implemented more and less successfully.

Developing and supporting the use of data and evaluation in decision-making requires a coordinated effort between those charged with managing the operations of a program and those responsible for using data and evaluation to understand a program’s effectiveness. It requires consistent messages from multiple leaders in an agency to ensure that evidence is valued, collected or built, analyzed, understood, and appropriately acted upon. No one individual in an agency has the knowledge and skills necessary to develop research designs that address actionable questions, understand different types of evidence, interpret evidence, and develop and implement effective, evidence-based practices. Rather, it takes a leadership team, at the agency level, to oversee these efforts and to build and sustain a culture of learning. Complementing this team with a team of “implementers” at the program

level encourages the use of evidence and data so that it will filter down into program management.

Who is on these teams and how their work is divided depends upon the specific needs, personnel, and structure of a given agency. Success of these teams depends on including leadership at the agency and bureau level capable of supporting and requiring programs' use of data and evaluation in program operations. This leadership team, working together with OMB and Congress, can make sure that the right questions are being asked about the program's effectiveness and its operations. Program managers are responsible for creating a culture where all operational decisions and internal and external communications of progress are based on evidence and data. In order to do so, the program managers need a team of both data analysts and evaluators. These individuals can provide the data and analysis packaged in a way that helps inform the program's operational and policy decisions, including understanding the different types of evidence available and its implications for decisions, as well as identifying the need for new descriptive data and evaluation studies.

The Administration and Congress have made considerable progress in making Federal decision-making more based in data and evidence. Chapter 7, "Delivering a High-Performance Government", in this volume discusses how Administration efforts are helping focus agencies on setting high-priority goals and measuring their progress on those goals.

In the area of evaluation, the Administration has moved to adopt a multi-tiered approach to evidence-based funding for new grant-based initiatives targeted towards education interventions, teenage pregnancy prevention, social innovations, home visitations for new parents, workforce interventions, and science, technology, engineering, and math programs. The initiatives offer the most funding to programs and practices supported by the strongest evidence. Programs with some, but not as much, supportive evidence also receive significant funding, the condition that the programs will be rigorously evaluated going forward. Over time, the Administration anticipates that some second-tier programs will move to the first tier as they prove more promising and cost-effective than other programs. Finally, agencies are encouraged to innovate and test ideas with strong potential—ideas supported by preliminary research findings or reasonable hypotheses. At all levels, it is important to build implementation evidence into this multi-tiered approach so that we understand how best to scale successful programs and to create more and better program options.

A good example of this approach—in which new or expanded programs have evaluation "baked into their DNA"—is the Department of Education's Invest in Innovation Fund (i3). The i3 fund invests in high-impact, potentially transformative education interventions—ranging from new ideas with huge potential to those that have proven their effectiveness and are ready to be scaled up. Whether applicants to i3 are eligible for funding to develop, validate, or scale up their program, and therefore how much funding they are eligible to receive, depends

on the strength of the existing evidence of the program's effectiveness, the magnitude of the impact the evidence demonstrates the program is likely to have, and the program's readiness for scaling up.

This multi-tiered structure provides objective criteria to inform decisions about programs and practices in which to invest and create the right incentives for the future. Organizations understand that to be considered for significant funding, they must provide credible evaluation results that show promise, and, before that evidence is available, be ready to subject their models to analysis. As more models move into the top tier, this approach creates pressure on all the top-tier models to compete to improve their effectiveness to continue to receive support. The Administration is also working with agencies to adopt common evidence standards (where such common standards are appropriate) and to develop more robust "what works" repositories across a wide range of programs.

The Administration has also championed the Pay for Success model. In the Pay for Success model, philanthropic and other private investors provide up-front funding for services for a target population to achieve specific outcomes that are measured in terms of improved lives and reduced costs. The government pays only if agreed-upon goals are achieved. Pay for Success allows the government to better partner with and leverage the resources of philanthropic and other investors to help drive evidence-based innovation and invest in what works.

The Pay for Success model is particularly well-suited to cost-effective interventions that produce government savings, since those savings can be used to pay for results. For example, effective prisoner re-entry interventions can reduce future prison costs, and a portion of those savings can be used to pay back the investors. More effective workforce systems could increase job placement and improve job retention and again, some savings may be used to repay the investments. The Administration is promoting the Pay for Success model in several Federal grant programs and is helping several states and localities that are seeking to implement the Pay for Success model. In addition, the Administration is exploring ways in which appropriations bills can better account for programs that generate savings for other programs.

The Administration supports evaluations with rigorous research designs that address questions critical to program design, and supports strengthened agency capacity to support such evaluations, even in tight budget times. The Recovery Act launched a number of evaluations across the Federal Government on such topics as the effects of different rent formulas on housing assistance recipients, the effects of smart grid meters on residential electricity usage, and the effects of extended unemployment insurance benefit programs on employment outcomes. Even with scarce dollars, agencies continue to direct scarce dollars to evaluations to assure they are not funding programs without positive impacts, the biggest waste of all.

Research and evaluation are part of any comprehensive effort to use data and evidence to serve the American people in more cost-effective ways. So ideally the fund-

ing for research and evaluation would not be viewed as optional but rather as an essential element of running effective government programs. New funding for research and evaluation is only part of the Administration's efforts to re-invigorate evaluation activities across the Federal Government. The Administration is also working to build agency capacity for a robust evaluation and data analytics infrastructure, whether that is supporting an agency in standing up a central evaluation office, empowering existing evaluation offices, institutionalizing policies that lead to strong evaluations, helping spread effective procurement practices, or hiring evaluation and data analytics experts into key administrative positions.

Part of that evaluation and data analytics infrastructure is helping agencies make better use of administrative data. Administrative data, especially when linked across programs or to survey data, can sometimes make rigorous program evaluations much more informative and much less costly. Data from an early childhood program linked to the data from juvenile justice systems or K-16 educational systems shed light on the long-term effects of interventions in ways that would be cost-prohibitive in a long-term survey follow-up. Linking records from across programs also enables policy makers to better understand how families access combinations of government assistance programs, such as food assistance and unemployment insurance, during times of economic challenges. This sort of analysis is not evaluation, but is an incredibly important aspect of agency management – looking at available information to find patterns, relationships, anomalies, and other features to inform priority-setting, program design, and hypothesis formulation.

Moreover, when skilled data analysts have access to linked administrative data with appropriate privacy protections, the cost of additional policy-relevant research is extremely modest. The private sector is increasingly using such data analytics to drive decisions on how to allocate resources and better serve their customers. There is perhaps even greater potential in the public sector to make use of such analytics, although realizing this potential will also take a concerted effort to hire and retain skilled data analysts, increased attention to the multiple legal and policy contexts that make data access a continued challenge, and infrastructure investments that support this sort of analysis by more people across the organization.

In addition, an inter-agency working group is beginning to share best practices across the Federal Government and to discuss issues, such as how to do a better job disseminating evidence of what works, integrating cost-effectiveness analysis into evaluations, and making better use of administrative data for evaluation and other data analytics purposes. OMB is also building tools that should make it easier for agencies to make information available online about their completed and underway evaluations.

Rigorous evaluation will be a central component of several cross-agency initiatives designed to identify more cost-effective approaches to achieving positive outcomes for disadvantaged populations. These populations are often eligible for multiple services and benefits administered

by separate Federal and State agencies, which are poorly coordinated and governed by rules that stifle effective collaboration and innovation. In 2012, the Departments of Labor and Education will support joint pilots to test interventions and systemic reforms with the potential to improve education and employment outcomes at lower cost to taxpayers. The Departments of Education, Labor, and Health and Human Services and the Social Security Administration will launch a joint initiative to test interventions that improve outcomes for children with disabilities and their families, which may yield substantial savings through reduced long-term reliance on the Supplemental Security Income program and other public services. OMB's Partnership Fund for Program Integrity Innovation is testing promising solutions developed collaboratively by Federal agencies, States, and other stakeholders to improve payment accuracy, improve administrative efficiency, and enhance service delivery in benefit programs that serve overlapping populations. Evaluation of these pilots will help determine which strategies lead to better results at lower cost, allowing Federal and State governments to identify the most promising strategies that warrant expansion.

The Administration is committed to producing more and better empirical evidence. There is, however, perhaps an even greater need to promote greater demand for data and evidence in Federal decision-making processes. The process of setting high-priority goals and measuring progress towards meeting them is beginning to increase the demand for data, its analysis, and complementary evaluations, as leaders running frequent data-driven reviews to achieve progress on ambitious goals search for increasingly effective and cost-effective practices to speed progress toward the goals they have set.

State, local, and tribal governments face a similar need to prioritize programs that achieve the best results. One particularly interesting model is the Washington State Institute for Public Policy. The Institute provides a good example of how a centralized evaluation and research agency can conduct reviews of existing evaluation research to identify policies, practices, and strategies that are most likely to give taxpayers a return on their investment. It was created by the Washington state legislature to carry out practical, non-partisan research – at legislative direction – of importance to Washington State. The Institute has its own set of policy analysts and economists, specialists from universities, and consultants whom it engages to conduct policy analysis. It does a systematic review of evidence and has a methodology for comparing the relative return-on-investment of alternative interventions and presents the results in a straightforward, user-friendly manner. The Institute provides a potential model for Federal, state, local, and tribal government as well as for not-for-profit and for-profit organizations. An example of an assessment of the evidence for options to improve statewide outcomes in a variety of areas, including child maltreatment, crime, and education can be found at the Institute's website here: <http://www.wsipp.wa.gov/rpt-files/11-07-1201.pdf>.

The President has made it clear that policy decisions should be driven by evidence—evidence about what works and what does not and evidence that identifies the greatest needs and challenges. By instilling a culture of learning into Federal programs, the Administration will

build knowledge so that spending decisions are based not only on good intentions, but also on strong evidence that yield the highest social returns on carefully targeted investments.

9. BENEFIT-COST ANALYSIS

I. INTRODUCTION

Federal Government policies and programs make use of our Nation's limited resources to achieve important social goals, including economic growth, job creation, education, national security, environmental protection, and public health. Many Federal programs require governmental expenditures, such as those funding early childhood education or job training. Moreover, many policies entail social expenditures that are not reflected in budget numbers. For example, environmental, energy efficiency, and workplace safety regulations impose compliance costs on the private sector. In all cases, the American people expect the Federal Government to design programs and policies to manage and allocate scarce fiscal resources prudently, and to ensure that programs achieve the maximum benefit to society and do not impose unjustified or excessive costs.

A crucial tool used by the Federal Government to achieve these objectives is benefit-cost analysis, which provides a systematic accounting of the social benefits and costs of Government policies. Executive Order 13563, issued in January 2011, makes a firm commitment to cost-benefit analysis and to ensuring that the benefits of regulations justify the costs. It states, among other things, that each agency must "use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible." It also states that agencies must "propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify.)"

The goal of benefit-cost analysis is to promote social welfare -- to ensure that the consequences of regulations are desirable on balance. The use of monetary equivalents does of course create numerous challenges, both conceptual and empirical; philosophers and economists have grappled with those challenges.¹ The translation of regulatory

¹ See Adler (2011). [Reference is to Matthew D. Adler, *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis*, Oxford University

consequences into monetary figures is meant to promote sensible comparisons, and should be understood as an administrable method for promoting that assessment. Other considerations, not subject to that translation, may also matter. As Executive Order 13563 also states, "each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts."

The assessment of benefits and costs of a government policy are meant to offer a concrete description of the anticipated consequences of the policy. Such an accounting helps policymakers to design programs to be both efficient and effective and to avoid unnecessary or unjustified costs and burdens. That accounting also allows the American people to see the expected consequences of programs and to hold policymakers accountable for their actions.

As noted, quantification and monetization produce significant challenges, but serious efforts have been made to meet those challenges. Those efforts are continuing. Importantly, there is a close relationship between open government and benefit-cost analysis. Because analysis is often improved through transparency and public comments, transparency and consideration of benefits and costs are tightly connected in practice. Especially in a difficult economic period, it is important to analyze both benefits and costs and to take steps to eliminate unnecessary burdens, which may have adverse effects on job creation and growth. Executive Order 13563 calls for such steps with its efforts to discipline the flow of new regulations and its requirement of retrospective analysis of existing significant rules. Retrospective analysis has recently become a central part of the regulatory process as agencies identify outdated or redundant regulations and is helping to eliminate billions of dollars in regulatory burdens, in areas including environmental protection, transportation, labor, health care, and agriculture.

Press, 2011)]

II. BENEFIT-COST ANALYSIS OF FEDERAL REGULATIONS

Overview of Benefit-Cost Analysis of Federal Regulation

For over three decades, benefit-cost analysis has played a critical role in the evaluation and design of significant Federal regulatory actions. While there are precursors in earlier administrations, the Reagan Administration was the first to establish a broad commitment to benefit-cost analysis in regulatory decision making through its Executive Order 12291. The Clinton Administration continued that commitment when it updated the principles

and processes governing regulatory review in Executive Order 12866, which continues in effect today. Executive Order 12866 requires executive agencies to catalogue and assess the benefits and costs of planned significant regulatory actions. It also requires agencies (1) to undertake regulatory action only on the basis of a "reasoned determination" that the benefits justify the costs and (2) to choose the regulatory approach that maximizes net social benefits, that is, benefits minus costs (unless the law governing the agency's action requires another approach). Executive Order 13563, issued in January 2011, reaffirms

the requirements of Executive Order 12866 and imposes a set of important additional requirements designed to promote sound analysis, to increase flexibility, to promote public participation, to harmonize conflicting and redundant requirements, and to ensure scientific integrity.

Operating under the broad framework established by Executive Orders 13563 and 12866, the Office of Management and Budget requires careful analysis of the costs and benefits of significant rules; identification of the approach that maximizes net benefits; detailed exploration of reasonable alternatives, alongside assessments of their costs and benefits; cost-effectiveness; and attention to unquantifiable benefits and costs as well as to distributive impacts. Central goals are to ensure that regulations will be effective in achieving their purposes and that they do not impose excessive costs. As noted, it is especially important to maximize net benefits, and to avoid unjustified burdens, in a period of economic difficulty. Notably, Executive Order 13563 specifically refers to “job creation,” and where feasible, agencies have recently devoted a great deal of attention to the anticipated job impacts (whether positive or negative) of regulations.

Under Executive Order 13563, agencies are authorized to consider “values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.” In analyzing the effects of rules issued under the Americans with Disabilities Act, for example, it is legitimate to consider the dignitary values² associated with protection against discrimination, and also the equitable goals of the statute. Also, in eliminating the ban on entry into the United States of those who are HIV-positive, it is legitimate to consider dignitary and equitable factors that properly bear on the decision to eliminate that ban.

Reviewing agencies’ benefit-cost analyses and working with agencies to improve them, OMB provides a centralized repository of analytical expertise in its Office of Information and Regulatory Affairs (OIRA). OMB’s guidance to agencies on how to do benefit-cost analysis for proposed regulations is contained in its Circular A-4. A-4 directs agencies to specify the goal of a planned regulatory intervention, to consider a range of regulatory approaches for achieving that goal, to select the least burdensome approach, and to estimate the benefits and costs of each alternative considered. To the extent feasible, agencies are re-

quired to monetize benefits and costs, so that they are expressed in comparable units of value. This process enables the agency to identify (and generally to choose) the approach that maximizes the total net benefits to society generated by the rule. OIRA has recently issued a primer on Circular A-4 and also a response to Frequently Asked Questions.

For example, consider a regulation that sets standards for how quickly a truck’s brakes must be able to bring it to a stop.³ A shorter stopping distance generates greater safety benefits, but also will impose larger compliance costs (if more effective brakes are more expensive). The agency should attempt to quantify both the safety benefits of reduced stopping distance and the costs of regulatory requirements. It should consider a range of stopping distances to determine the optimal one that maximizes net benefits. At such an optimal standard, making the stopping distance even shorter would impose compliance costs greater than additional safety benefits. At the same time, making the stopping distance longer than optimal results in a loss in safety benefits that is greater than the cost savings. Careful benefit-cost analysis enables the agency to determine the optimal standard. It helps to show that some approaches would be insufficient and that others would be excessive.

To be sure, quantification of the relevant variables, and monetization of those variables, can present serious challenges. OIRA and relevant agencies have developed a range of strategies for meeting those challenges; many of them are sketched in Circular A-4, and we take up one such approach below. Efforts continue to be made to improve current analyses and to disclose and test their underlying assumptions. In some cases, identification of costs and benefits will leave significant uncertainties. In some cases, the monetized figures will not be sufficient to settle the appropriate choice. But much of the time, an understanding of costs and benefits will rule out some possible courses of action, and will show where, and why, reasonable people might differ. Such an understanding will also help to identify the most effective courses of action and to eliminate unjustified costs and burdens—in the process potentially helping to promote competitiveness, innovation, job creation, and economic growth. (Recall that the purpose of cost-benefit analysis is to provide an administrable method for assessing the consequences of regulation.)

² Dignitary value is defined as “a concern for values inherent in or intrinsic to our common humanity-values such as autonomy, self-respect, or equality that might be nurtured or suppressed depending on the form that governmental decision making takes.” The definition is available at <http://digitalcommons.law.yale.edu/>.

³ The National Highway Traffic Safety Administration issued a new safety standard for air brake systems to improve the stopping distance performance of trucks. See 49 CFR § 571.

Table 9–1. ESTIMATES OF THE TOTAL ANNUAL BENEFITS AND COSTS OF MAJOR RULES REVIEWED BY OMB IN 2010

(In billions of 2001 dollars)

Rule	Agency	Benefits	Costs
Energy Conservation Standards for Small Electric Motors	DOE	0.7-0.8	0.2
Energy Efficiency Standards for Commercial Clothes Washers	DOE	0-0.1	<0.1
Energy Efficiency Standards for Pool Heaters and Direct Heating Equipment and Water Heaters	DOE	1.3-1.8	1.0-1.1
Medical Examination of Aliens--Removal of Human Immunodeficiency Virus (HIV) Infection from Definition of Communicable Disease of Public Health Significance ...	HHS	Not Estimated	<0.1
Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents	HHS	Not Estimated	Not Estimated
Use of Ozone-Depleting Substances; Removal of Essential Use Designations [Flunisolide, Triamcinolone, Metaproterenol, Pirbuterol, Albuterol and Ipratropium in Combination, Cromolyn, and Nedocromil]	HHS	Not Estimated	Not Estimated
Interim Final Rules under the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Issuers Relating to Dependent Coverage of Children to Age 26 under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Coverage Relating to Status as a Grandfathered Health Plan under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	<0.1
Patient Protection and Affordable Care Act: Preexisting Condition Exclusions, Lifetime and Annual Limits, Rescissions, and Patient Protections	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Issuers Relating to Internal Claims and Appeals and External Review Processes under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Issuers Relating to Coverage of Preventive Services under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	Not Estimated
Migratory Bird Hunting; Final Frameworks for Early-Season Migratory Bird Hunting Regulations	DOI	0.2-0.3	Not estimated
Migratory Bird Hunting; Final Frameworks for Late Season Migratory Bird Hunting Regulations	DOI	0.2-0.3	Not estimated
Nondiscrimination on the Basis of Disability in Public Accommodations and Commercial Facilities	DOJ	1.0-2.1	0.5-0.7
Nondiscrimination on the Basis of Disability in State and Local Government Services	DOJ	0.2-0.3	0.1-0.2
Electronic Prescriptions for Controlled Substances	DOJ	0.3-1.3	<0.1
Cranes and Derricks in Construction	DOL	0.2	0.1
Improved Fee Disclosure for Pension Plans	DOL	Not Estimated	<0.1
Automatic Dependent Surveillance--Broadcast (ADS-B) Equipage Mandate to Support Air Traffic Control Service	DOT	0.1-0.2	0.2
Electronic On-Board Recorders for Hours-of-Service Compliance	DOT	0.2	0.1
Positive Train Control	DOT	<0.1	0.5-1.3
Pipeline Safety: Distribution Integrity Management	DOT	0.1	0.1
Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016	DOT and EPA	3.9-18.2	1.7-4.7
S.A.F.E. Mortgage Licensing Act	TREAS	Not Estimated	0.1-0.2
Control of Emissions from New Marine Compression-Ignition Engines at or above 30 Liters per Cylinder	EPA	Not Estimated	Not Estimated
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines	EPA	0.7-1.9	0.3
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines--Existing Stationary Spark Ignition (Gas-Fired)	EPA	0.4-1.0	0.2
NESHAP: Portland Cement Notice of Reconsideration	EPA	6.1-16.3	0.8-0.9
Prevention of Significant Deterioration/Title V Greenhouse Gas Tailoring Rule	EPA	Not Estimated	Not Estimated
Renewable Fuels Standard Program	EPA	Not Estimated	Not Estimated
Review of the National Ambient Air Quality Standards for Sulphur Dioxide	EPA	2.8-38.6	0.3-2.0
Lead; Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program	EPA	0.8-3.0	0.3
Revisions to the Spill Prevention, Control, and Countermeasure (SPCC) Rule	EPA	0	-0.1

The Benefits and Costs of Federal Regulation in FY 2010

Each year, OMB reports to Congress agencies' estimates of the benefits and costs of major regulations reviewed in the prior fiscal year. Table 9–1 presents the benefit and cost estimates for the 34 non-budgetary rules reviewed by OMB in FY 2010.⁴ Of those, agencies monetized both the benefits and costs for 18.⁵

Most of the benefits and costs reported in Table 9–1 are expressed as ranges, and sometimes as wide ranges, because of uncertainty about the likely consequences of rules. Quantification and monetization raise difficult conceptual and empirical questions. Prospective benefit-cost analysis requires predictions about the future—both about what will happen if the regulatory action is taken and what will happen if it is not—and what the future holds is typically not known for certain. A standard goal of the agency's analysis is to produce both a central "best estimate," which reflects the expected value of the benefits and costs of the rule, as well as a description of the ranges of plausible values for benefits, costs, and net benefits. These estimates inform the decisionmakers and the public of the degree of uncertainty associated with the regulatory decision. The process of public scrutiny can sometimes reduce that uncertainty.

To illustrate some of the underlying issues, consider the EPA's recent National Ambient Air Quality Standard (NAAQS) for Sulfur Dioxide. The benefits of the rule are estimated to be somewhere between \$2.8 to \$38.6 billion—an expansive range. Almost all of these estimated benefits are due to co-benefits of reduced mortality resulting from the reduction in particulate matter emissions caused by the rule. However, there is substantial uncertainty with respect to (a) the relationship between exposure to particulate matter and premature death and (b) the proper monetary valuation of avoiding a premature death. Hence, the agency reported a wide range of plausible values for the benefits of the NAAQS for Sulfur Dioxide. Similar uncertainties in both the science used to predict the consequences of rules and the monetary values of those consequences, contribute to the uncertainty represented in the ranges of benefits and costs for other rules in Table 9–1. Despite these uncertainties, benefit-cost analysis often reduces the range of reasonable approaches – and simultaneously helps to inform the decision about which approach is most reasonable.

⁴ FY 201020 is the most recent period for which such a summary is available. These estimates were reported in OMB, 2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. A detailed description of the assumptions and calculations underlying these estimates is provided in that Report.

⁵ (1) The Department of Health and Human Services issued six rules to implement health insurance reforms. (2) The Department of Interior adopted two Migratory Bird Hunting regulations where the agency assessed benefits associated with increased consumer welfare of hunting allowances. (3) The Environmental Protection Agency assessed the benefits and costs for both national and international coordinated strategy to control emissions from ocean-going vessels, adopted a case-study approach to examine the effects of the Renewable Fuels Program, and provided illustrative estimates for the Greenhouse Gas Tailoring Rule.

Quantification and Breakeven Analysis

In some cases, the effort to monetize certain benefits (such as protection of streams and wildlife) will run into serious obstacles; quantification may be possible but not monetization. In other cases, analysts will know the direction of an effect, and perhaps be able to specify a range, but precise quantification itself will not be possible. Recognizing these points, OMB has recommended that consistent with Executive Orders 13563 and 12866, the best practice is to accompany all significant regulations with (1) a tabular presentation, placed prominently and offering a clear statement of qualitative and quantitative benefits and costs of the proposed or planned action, together with (2) a presentation of uncertainties and (3) similar information for reasonable alternatives to the proposed or planned action. An advantage of this approach is transparency. If, for example, it is possible to quantify certain benefits (such as protection of water quality) but not to monetize them, then the public should be made aware of that fact. At the same time, qualitative discussion of nonquantifiable benefits should help the public, and relevant decisionmakers, to understand the goal of the regulation and how it might achieve that goal.

When quantification is not possible, many agencies have found it both useful and informative to engage in "breakeven analysis." Under this approach, agencies specify how high the unquantified or unmonetized benefits would have to be in order for the benefits to justify the costs. Suppose, for example, that regulation that protects water quality costs \$105 million annually, and that it also has significant effects in reducing pollution in rivers and streams. It is clear that the regulation would be justified if and only if those effects could reasonably be valued at \$105 million or more. Once the nature and extent of the water quality benefits are understood, it might well be easy to see whether or not the benefits plausibly justify the costs -- and if the question is difficult, at least it would be clear why it is difficult. Breakeven analysis is an important tool, and it has analytical value when quantification is speculative or impossible.

Current Agency Practice for Values of Mortality Reduction

Since agencies often design health and safety regulation to reduce risks to life, evaluation of these benefits can be the key part of the analysis. When monetizing reduced mortality risks, agencies often use what is commonly described as a "Value of a Statistical Life," or VSL. The term is misleading because it suggests, erroneously, that the goal of monetization is to place a "value" on individual lives. The goal is instead to value reductions in small risks of premature death (such as 1 in 100,000); it follows that "VSL" actually refers to the value of gaining small risk reductions. There is no effort to suggest that any individual's life can be expressed in monetary terms.

Circular A-4 provides background on the theory and practice of calculating VSL. It states that a substantial majority of the studies of VSL indicate a value that varies "from roughly \$1 million to \$10 million per statisti-

cal life.” In practice, agencies have tended to use a value in the middle or upper range of this distribution. (Note that Circular A-4 was issued in 2003 and that because of income growth, the figure increases over time.) OMB believes that it is important to consult the relevant literature, which contains a range of significant empirical findings and conceptual claims, in order to base analysis on the best available research. Below we provide a brief summary of the VSL values agencies have adopted in recent Regulatory Impact Analyses (RIAs).

Two agencies, EPA and DOT, have developed official guidance on VSL. In its 2011 update to its guidelines, DOT uses a value of \$6.2 million (\$2011), and requires all the components of the Department to use this value in their RIAs. EPA recently changed its VSL to \$6.3 million (\$2000) and adjusts this value for real income growth to later years. For example, in its final rule setting a new primary standard for Sulfur Dioxide, EPA adjusted VSL to account for a different currency year (\$2006) and to account for income growth to 2020, which yields a VSL of \$8.9 million. EPA stated in this RIA, however, that it is continuing their efforts to update this guidance.

OMB believes in the importance of consulting the growing empirical and conceptual work in this domain.

Cost-per-life-saved of Health and Safety Regulation

For regulations intended to reduce mortality risks, another analytic tool that can be used to assess regulations, and to help avoid unjustified burdens, is cost-effectiveness analysis. Some agencies develop estimates of the “net cost per life saved” for regulations intended to improve public health and safety. To calculate this figure, the costs of the rule minus any monetized benefits other than mortality reduction are placed in the numerator, and the expected reduction in mortality in terms of total number of lives saved is placed in the denominator. This measure avoids any assignment of monetary values to reductions in mortality risk. It still reflects, however, a concern for economic efficiency, insofar as choosing a regulatory option that reduces a given amount of mortality risk at a lower net cost to society would conserve scarce resources compared to choosing another regulatory option that would reduce the same amount of risk at greater net costs.

Table 9–2. ESTIMATES OF THE NET COSTS PER LIFE SAVED OF SELECTED HEALTH AND SAFETY RULES RECENTLY REVIEWED BY OMB

(In millions of 2001 dollars)

Rule	Agency	Net Cost per Life Saved	Notes
Prevention of Salmonella Enteritidis in Shell Eggs	HHS/FDA	Negative	Morbidity benefits exceed costs.
New Entrant Safety Assurance Process	DOT/FMCSA	Negative	Property damage and morbidity benefits exceed costs.
Reduced Stopping Distance Requirements for Truck Tractors	DOT/NHTSA	Negative	Property damage benefits exceed costs.
Roof Crush Resistance	DOT/NHTSA	\$6.4-11.0	The agency estimates that the rule will prevent 135 fatalities and 1,065 nonfatal injuries annually. These figures translate into 156 equivalent fatalities. The main estimates value equivalent fatalities prevented at \$6.1 million. It follows that the value of nonfatal injuries prevented is \$6.1 million*(156-135)=\$128.1 million annually. Total costs associated with the rule range from \$875 million to \$1,400 million annually. If we subtract the injury benefits from costs, the range of net cost per life saved is thus \$5.5 million to \$9.4 million (2007 dollar). Adjusting to \$2001 yields \$6.4 million to \$11.0 million.

Although the Department of Homeland Security has no official policy on VSL, it recently sponsored a report through its U.S. Customs and Border Protection, and has used the recommendations of this report to inform VSL values for several recent rulemakings. This report recommends \$6.3 million (\$2008) and also recommends that DHS adjust this value upward over time for real income growth (in a manner similar to EPA’s adjustment approach). Other regulatory agencies that have used a VSL in individual rulemakings include DOL’s Occupational Safety and Health Administration (OSHA) and HHS’ Food and Drug Administration (FDA). In a rulemaking revising worker safety standards when using cranes and derricks in construction, OSHA updated the previously used VSL of \$7.0 million (\$2003) to \$8.7 million (\$2010). The FDA is using a value of \$7.9 million (\$2010), but also often uses a monetary value of the remaining life years saved by alternative policies. This is sometimes referred to as a “Value of a Statistical Life Year” or VSLY. As noted,

Table 9–2 presents the net cost per life saved for four recent health and safety rules for which calculation is possible. The net cost per life saved is calculated using 3 percent discount rate and using agencies’ best estimates for costs and expected mortality reduction where those were provided by the agency. There is substantial variation in the net cost per life saved by these rules, ranging from negative (that is, the non-mortality-related benefits outweigh the costs), to potentially as high as \$11.0 million.

This table is designed to be illustrative rather than definitive, and continuing work must be done to ensure that estimates of this kind are complete and not misleading. For example, some mortality-reducing rules have a range of other benefits, including reductions in morbidity, and it is important to include these benefits in cost-effectiveness analysis. Other rules have benefits that are exceedingly difficult to quantify but nonetheless essential to consider; consider rules that improve water quality or have aes-

thetic benefits. Nonetheless, it is clear that some rules are far more cost-effective than others, and it is valuable to take steps to catalogue variations and to increase the

likelihood that scarce resources will be used as effectively as possible.

III. BENEFIT-COST ANALYSIS OF BUDGETARY PROGRAMS

As noted, Executive Orders 13563 and 12866 require agencies, to the extent permitted by law, to “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” OIRA works actively with agencies to promote compliance with this requirement.

Historically, benefit-cost analysis of Federal budgetary programs has been more limited than that of regulatory policy. Increasingly, though, the Federal Government explicitly employs benefit-cost analysis to ensure that projects and spending programs have benefits in excess of costs, maximize net benefits, and allocate federal dollars most efficiently across potential projects.

In the 1936 Flood Control Act, for example, Congress stated as a matter of policy that the Federal government should undertake or participate in flood control projects if the benefits exceeded the costs, where the lives and social security of people are at stake. By the late 1970s, the Army Corps of Engineers had begun to use benefit-cost analysis to improve the return on investment at a given project site. The Corps did this by designing projects based on increments of work whose benefits exceeded their costs. More recently, the Budget has used benefits and costs, along with other criteria, to develop an overall program for the Corps that yields the greatest net benefits or cost effectiveness.

Benefit-cost analysis can also be used to evaluate programs retrospectively to determine whether they should be either expanded or discontinued and how they can be improved. Chapter 8, “Program Evaluation”, in this volume discusses current efforts to improve program evaluation. Evidence that an activity can yield substantial net benefits has motivated the creation and expansion of a substantial number of programs. For example, longitudinal studies have shown that each dollar spent on high quality pre-school programs serving disadvantaged children yields substantially more than a dollar (in present value) in higher wages, less crime, and less use of public services, motivating an expansion of funding for quality

pre-K programs. Similar evidence has spurred the decision to expand funding for nurse-family partnerships, finding that each dollar spent in the program leads to more than a dollar of benefits mostly in reduced government expenditures on health care, educational and social services, and criminal justice, and that the highest returns were present in serving the most disadvantaged families. Similarly, GAO has concluded that the Women, Infants, and Children (WIC) program produces monetary benefits that exceed its costs by reducing the incidence of low birth weight and iron deficiency, which are linked to children’s behavior and development.

OMB continually works with executive agencies to improve their benefit-cost analyses, and to increase transparency. In its 2011 annual report to Congress on the benefits and costs of Federal regulations,⁶ OMB continues to support the recommendations for improvement in agencies’ benefit-cost analysis by promoting (1) clarity with respect to underlying assumptions and anticipated consequences, (2) prominent tabular presentations of costs and benefits, and (3) careful consideration of the comments offered by members of the public on proposed rules. Furthermore, OMB recommends that benefit-cost analysis should be seen and used as a central part of open government. By providing the public with information about proposed and final regulations, by revealing assumptions and subjecting them to public assessment, and by drawing attention to the consequences of alternative approaches, such analysis can promote public understanding, scrutiny, and improvement of rules. OMB continues to explore ways to ensure that benefit-cost analysis helps promote the commitment to open government.

⁶ OMB, 2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities.

⁷ See Transparency and Open Government, Memorandum for the Heads of Executive Departments and Agencies, President Obama, Jan. 21, 2009. For discussion of this point and its relationship to retrospective analysis of the effects of regulations, see Greenstone (2009).

IV. IMPROVING BENEFIT-COST ANALYSIS

In the Memorandum on Transparency and Open Government, issued on January 21, 2009, the President called for the establishment of “a system of transparency, public participation, and collaboration.”⁸ The memorandum elaborated the principles of such a system, designed to promote accountability and disclosure of information that “the public can readily find and use.” The memorandum noted that “[k]nowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge.” Implementing the President’s memorandum, agencies have begun to take a series of

concrete measures described in the Open Government Directive to put into practice the commitments to transparency, participation, and collaboration.⁹

The goals of this effort are to promote accountability, and to ensure that regulations are informed, to the extent possible, by a careful analysis of the likely consequences, and to reduce the dual risks of excessive and insufficient regulation. A particular goal, in the current period, is to avoid unjustified or excessive burdens on business, state and local government, and individuals. The recent agency checklist for Regulatory Impact Analysis is designed to promote these various goals (see Appendix).

⁸ Available at: <http://www.gpoaccess.gov/presdocs/2009/DPCD200900010.pdf>

⁹ Available at: <http://www.openthegovernment.org/otg/OGD.pdf>

Participation and Collaboration in the Regulatory Process

Executive Order 13563 states that “regulations shall be based, to the extent feasible and consistent with law, on the open exchange of information and perspectives” To promote that open exchange, Executive Order 13563 directs agencies to provide the public with timely access to regulatory analyses and supporting documents on regulations.gov to ensure a meaningful opportunity for public comment.

The Internet provides an ideal vehicle for making information public and, under Executive Order 13563, the Administration has committed to publish as much as possible online in a format that can be retrieved, downloaded, indexed, and searched by commonly-used web search applications. Importantly, this commitment promotes public accessibility of the analysis of benefits and costs, together with the supporting materials, in order to ensure that the analysis is subject to public scrutiny. That process of scrutiny can help to increase benefits, decrease costs, or both.

Agencies now publish a great deal of information relevant to rulemaking and benefit-cost analysis, including underlying data, online and in downloadable, as well as traditional, formats. Executive Order 13563 directs agencies to use regulations.gov to make the online record as complete as possible¹⁰ and to take all necessary steps to make relevant material available to the public for comment.

Executive Order 13563 requires that the public should generally receive a comment period of at least 60 days for proposed regulatory actions. Even where statutes necessitate shorter comment periods, agencies can seek public comment and respond in a timely fashion to suggestions about potential improvements in rules and underlying analyses.

Publicly Accessible Summaries and Tables with Key Information

In order to improve analysis of the effects of regulations, and simultaneously to improve accountability, OMB has called for a clear, salient, publicly accessible executive summary of both benefits and costs—written in a “plain language” manner designed to be understandable to the public. For all economically significant regulations, Executive Orders 13563 and 12866 require agencies to provide a description of the need for the regulatory action and a clear summary of the analysis of costs and benefits, both qualitative and quantitative. The summary often includes an accounting of benefits and costs of alternative approaches, and where relevant, an analysis of distributional impacts on subpopulations (such as disabled people or those with low income).

As noted, some benefits and costs can be quantified and monetized, while some can be described only in qualitative terms. A useful way to communicate effects that cannot be easily quantified or monetized is to present ranges of values (as agencies frequently now do).

Simple, Straightforward Justification of Preferred Option

Executive Orders 13563 and 12866 require the executive summary to include “an explanation of why the planned regulatory action is preferable to the identified potential alternative,” and demonstrate that the agency has selected the approach “that maximizes net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity) unless a statute requires another regulatory approach.”

Under the Executive Orders, agencies are required to provide a “reasoned determination that the benefits of the intended regulation justify its costs,” to the extent permitted by law. In making those determinations, agencies should pay close attention to quantifiable and monetizable benefits and costs, but are permitted to consider values that are hard or impossible to quantify in light of existing knowledge, as well as distributional effects, human dignity, fairness, and considerations of equity (including, where relevant, considerations of environmental justice).

We have noted that where nonquantified or nonmonetized variables are important to the agency’s determination, agencies often use “breakeven analysis,” explaining how high the nonquantified or nonmonetized benefits would have to be in order for the benefits to justify the costs. In those situations, agencies make underlying assumptions transparent to the public and available through the rulemaking process. Where the agency has proceeded even though the benefits do not justify the costs, and where the agency has not selected the approach that maximizes net benefits, it should carefully explain its reasoning (as, for example, where a statute so requires).

Benefit-cost analysis is a useful and often indispensable method for evaluating programs and options. In some cases, it reveals that apparently attractive proposals are too expensive to be worthwhile. In other cases, it shows that costly proposals are well-justified, because the benefits are significantly higher than the costs. Often benefit-cost analysis helps to identify the range of reasonable options. It is true that conceptual and empirical challenges remain and that it is important to assess the evolving literature in order to meet those challenges. Especially in a period of serious economic difficulties, greater use and improvement of benefit-cost analysis are high priorities.

¹⁰ Available at: http://www.whitehouse.gov/omb/assets/inforeg/edocket_final_5-28-2010.pdf

APPENDIX

AGENCY CHECKLIST: REGULATORY IMPACT ANALYSIS

With this document, the Office of Information and Regulatory Affairs is providing a checklist to assist agencies in producing regulatory impact analyses (RIAs), as required for economically significant rules by Executive Order 12866 and OMB Circular A-4.

Nothing herein alters, adds to, or reformulates existing requirements in any way. Moreover, this checklist is limited to the requirements of Executive Order 12866 (available at: http://www.reginfo.gov/public/jsp/Utilities/EO_12866.pdf) and Circular A-4 (available at: <http://www.whitehouse.gov/OMB/circulars/a004/a-4.pdf>); it does not address requirements imposed by other authorities, such as the National Environmental Policy Act, the Regulatory Flexibility Act, the Unfunded Mandates Reform Act, the Paperwork Reduction Act, and various Executive Orders that require analysis. Executive Order 12866 and Circular A-4, as well as those other authorities, should be consulted for further information.

Checklist for Regulatory Impact Analysis:

Does the RIA include a reasonably detailed description of the need for the regulatory action?^{11 12}

Does the RIA include an explanation of how the regulatory action will meet that need?¹³

Does the RIA use an appropriate baseline (i.e., best assessment of how the world would look in the absence of the proposed action)?¹⁴

Is the information in the RIA based on the best reasonably obtainable scientific, technical, and economic information and is it presented in an accurate, clear, complete, and unbiased manner?¹⁵

¹¹ Required under Executive Order 12866, Section 6(a)(3)(B)(i): "The text of the draft regulatory action, together with a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet

¹² Circular A-4 states: "If the regulation is designed to correct a significant market failure, you should describe the failure both qualitatively and (where feasible) quantitatively." (P. 4)

¹³ See note 1 above.

¹⁴ Circular A-4 states: "You need to measure the benefits and costs of a rule against a baseline. This baseline should be the best assessment of the way the world would look absent the proposed action... In some cases, substantial portions of a rule may simply restate statutory requirements that would be self-implementing, even in the absence of the regulatory action. In these cases, you should use a pre-statute baseline." (P. 15-16)

¹⁵ Circular A-4 states: "Because of its influential nature and its special role in the rulemaking process, it is appropriate to set minimum quality standards for regulatory analysis. You should provide documentation that the analysis is based on the best reasonably obtainable scientific, technical, and economic information available... you should assure compliance with the Information Quality Guidelines for your agency and OMB's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies..." (P. 17). The IQ Guidelines (paragraph V.3.a) define objectivity to

Are the data, sources, and methods used in the RIA provided to the public on the Internet so that a qualified person can reproduce the analysis?¹⁶

To the extent feasible, does the RIA quantify and monetize the anticipated benefits from the regulatory action?^{17 18}

To the extent feasible, does the RIA quantify and monetize the anticipated costs?¹⁹

Does the RIA explain and support a reasoned determination that the benefits of the intended regulation justify its costs (recognizing that some benefits and costs are difficult to quantify)?²⁰

include "whether disseminated information is being presented in an accurate, clear, complete, and unbiased manner." <http://www.whitehouse.gov/omb/assets/omb/fedreg/reproducible2.pdf>

¹⁶ Circular A-4 states: "A good analysis should be transparent and your results must be reproducible. You should clearly set out the basic assumptions, methods, and data underlying the analysis and discuss the uncertainties associated with the estimates. A qualified third party reading the analysis should be able to understand the basic elements of your analysis and the way in which you developed your estimates. To provide greater access to your analysis, you should generally post it, with all the supporting documents, on the internet so the public can review the findings." (P. 17). OMB IQ Guidelines (paragraph V.3.b.ii) further states: "If an agency is responsible for disseminating influential scientific, financial, or statistical information, agency guidelines shall include a high degree of transparency about data and methods to facilitate the reproducibility of such information by qualified third parties."

¹⁷ Required under Executive Order 12866, Section 6(a)(3)(C)(i): "An assessment, including the underlying analysis, of benefits anticipated from the regulatory action (such as, but not limited to, the promotion of the efficient functioning of the economy and private markets, the enhancement of health and safety, the protection of the natural environment, and the elimination or reduction of discrimination or bias) together with, to the extent feasible, a quantification of those benefits."

¹⁸ Circular A-4 states: "You should monetize quantitative estimates whenever possible. Use sound and defensible values or procedures to monetize benefits and costs, and ensure that key analytical assumptions are defensible. If monetization is impossible, explain why and present all available quantitative information." (P. 19). Circular A-4 also offers a discussion of appropriate methods for monetizing benefits that might not easily be turned into monetary equivalents.

¹⁹ Required under Executive Order 12866, Section 6(a)(3)(C)(ii): "An assessment, including the underlying analysis, of costs anticipated from the regulatory action (such as, but not limited to, the direct cost both to the government in administering the regulation and to businesses and others in complying with the regulation, and any adverse effects on the efficient functioning of the economy, private markets (including productivity, employment, and competitiveness), health, safety, and the natural environment), together with, to the extent feasible, a quantification of those costs;" See also note 6 above.

²⁰ Executive Order 12866, Section 1(b)(6) states that to the extent permitted by law, "[e]ach agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." As Executive Order 12866 recognizes, a statute may require an agency to proceed with a regulation even if the benefits do not justify the costs; in such a case, the agency's analysis may not show any such justification.

Does the RIA assess the potentially effective and reasonably feasible alternatives?²¹

Does the RIA assess the benefits and costs of different regulatory provisions separately if the rule includes a number of distinct provisions?²²

Does the RIA assess at least one alternative that is less stringent and at least one alternative that is more stringent?²³

Does the RIA consider setting different requirements for large and small firms?²⁴

Does the preferred option have the highest net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires a different approach?²⁵

Does the RIA include an explanation of why the planned regulatory action is preferable to the identified potential alternatives?²⁶

²¹ Required under Executive Order 12866, Section 6(a)(3)(C)(iii): “An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions).”

²² Circular A-4 states: “You should analyze the benefits and costs of different regulatory provisions separately when a rule includes a number of distinct provisions.” (P. 17)

²³ Circular A-4 states: “you generally should analyze at least three options: the preferred option; a more stringent option that achieves additional benefits (and presumably costs more) beyond those realized by the preferred option; and a less stringent option that costs less (and presumably generates fewer benefits) than the preferred option.” (P. 16)

²⁴ Circular A-4 states: “You should consider setting different requirements for large and small firms, basing the requirements on estimated differences in the expected costs of compliance or in the expected benefits. The balance of benefits and costs can shift depending on the size of the firms being regulated. Small firms may find it more costly to comply with regulation, especially if there are large fixed costs required for regulatory compliance. On the other hand, it is not efficient to place a heavier burden on one segment of a regulated industry solely because it can better afford the higher cost. This has the potential to load costs on the most productive firms, costs that are disproportionate to the damages they create. You should also remember that a rule with a significant impact on a substantial number of small entities will trigger the requirements set forth in the Regulatory Flexibility Act. (5 U.S.C. 603(c), 604).” (P. 8)

²⁵ Executive Order 12866, Section 1(a) states: “agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity) unless a statute requires another regulatory approach.”

²⁶ Required under Executive Order 12866, Section 6(a)(3)(C)(iii): “An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions), and an explanation why the planned regulatory action is preferable to the identified potential alternatives.”

Does the RIA use appropriate discount rates for benefits and costs that are expected to occur in the future?²⁷

Does the RIA include, if and where relevant, an appropriate uncertainty analysis?²⁸

Does the RIA include, if and where relevant, a separate description of distributive impacts and equity?²⁹

Does the RIA provide a description/accounting of transfer payments?³⁰

²⁷ Circular A-4 contains a detailed discussion, generally calling for discount rates of 7 percent and 3 percent for both benefits and costs. It states: “Benefits and costs do not always take place in the same time period. When they do not, it is incorrect simply to add all of the expected net benefits or costs without taking account of when they actually occur. If benefits or costs are delayed or otherwise separated in time from each other, the difference in timing should be reflected in your analysis.... For regulatory analysis, you should provide estimates of net benefits using both 3 percent and 7 percent.... If your rule will have important inter-generational benefits or costs you might consider a further sensitivity analysis using a lower but positive discount rate in addition to calculating net benefits using discount rates of 3 and 7 percent.” (PP. 31, 34, 36)

²⁸ Circular A-4 provides a detailed discussion. Among other things, it states: “Examples of quantitative analysis, broadly defined, would include formal estimates of the probabilities of environmental damage to soil or water, the possible loss of habitat, or risks to endangered species as well as probabilities of harm to human health and safety. There are also uncertainties associated with estimates of economic benefits and costs, such as the cost savings associated with increased energy efficiency. Thus, your analysis should include two fundamental components: a quantitative analysis characterizing the probabilities of the relevant outcomes and an assignment of economic value to the projected outcomes.” (P. 40). Circular A-4 also states: “You should clearly set out the basic assumptions, methods, and data underlying the analysis and discuss the uncertainties associated with the estimates.” (P. 17)

²⁹ Executive Order 12866, Section 1(b)(5) states: “When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective. In doing so, each agency shall consider incentives for innovation, consistency, predictability, the costs of enforcement and compliance (to the government, regulated entities, and the public), flexibility, distributive impacts, and equity” (emphasis added).

Circular A-4 states: “The term ‘distributional effect’ refers to the impact of a regulatory action across the population and economy, divided up in various ways (e.g., income groups, race, sex, industrial sector, geography)... Your regulatory analysis should provide a separate description of distributional effects (i.e., how both benefits and costs are distributed among sub-populations of particular concern) so that decision makers can properly consider them along with the effects on economic efficiency... Where distributive effects are thought to be important, the effects of various regulatory alternatives should be described quantitatively to the extent possible, including the magnitude, likelihood, and severity of impacts on particular groups.” (P. 14)

³⁰ Circular A-4 states: “Distinguishing between real costs and transfer payments is an important, but sometimes difficult, problem in cost estimation. . . . Transfer payments are monetary payments from one group to another that do not affect total resources available to society. . . . You should not include transfers in the estimates of the benefits and costs of a regulation. Instead, address them in a separate discussion of the regulation’s distributional effects.” (P. 14)

Does the RIA analyze relevant effects on disadvantaged or vulnerable populations (e.g., disabled or poor)?³¹

Does the analysis include a clear, plain-language executive summary, including an accounting statement that summarizes the benefit and cost estimates for the regulatory action under consideration, including the qualitative and non-monetized benefits and costs?³²

³¹ Circular A-4 states: “Your regulatory analysis should provide a separate description of distributional effects (i.e., how both benefits and costs are distributed among sub-populations of particular concern) so that decision makers can properly consider them along with the effects on economic efficiency. Executive Order 12866 authorizes this approach. Where distributive effects are thought to be important, the effects of various regulatory alternatives should be described quantitatively to the extent possible, including the magnitude, likelihood, and severity of impacts on particular groups.” (P. 14)

³² Circular A-4 states: “Your analysis should also have an executive summary, including a standardized accounting statement.” (P. 3). OMB recommends that: “Regulatory analysis should be made as transparent as possible by a prominent and accessible executive summary—written in a “plain language” manner designed to be understandable to the public—that outlines the central judgments that support regulations, including the key findings of the analysis (such as central assumptions and uncertainties)...If an agency has analyzed the costs and benefits of regulatory alternatives to the planned action (as is required for economically significant regulatory actions), the summary should include such information.” See 2010 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities, page 51. Available at: <http://www.whitehouse.gov/sites/>

Does the analysis include a clear and transparent table presenting (to the extent feasible) anticipated benefits and costs (quantitative and qualitative)?³³

[default/files/omb/legislative/reports/2010_Benefit_Cost_Report.pdf](http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/2010_Benefit_Cost_Report.pdf)

³³ Circular A-4 states: “You need to provide an accounting statement with tables reporting benefit and cost estimates for each major final rule for your agency.” (P. 44). Circular A-4 includes an example of a format for agency consideration. OMB recommends “that agencies should clearly and prominently present, in the preamble and in the executive summary of the regulatory impact analysis, one or more tables summarizing the assessment of costs and benefits required under Executive Order 12866 Section 6(a)(3)(C)(i)-(iii). The tables should provide a transparent statement of both quantitative and qualitative benefits and costs of the proposed or planned action as well as of reasonable alternatives. The tables should include all relevant information that can be quantified and monetized, along with relevant information that can be described only in qualitative terms. It will often be useful to accompany a simple, clear table of aggregated costs and benefits with a separate table offering disaggregated figures, showing the components of the aggregate figures. To the extent feasible in light of the nature of the issue and the relevant data, all benefits and costs should be quantified and monetized. To communicate any uncertainties, we recommend that the table should offer a range of values, in addition to best estimates, and it should clearly indicate impacts that cannot be quantified or monetized. If nonquantifiable variables are involved, they should be clearly identified. Agencies should attempt, to the extent feasible, not merely to identify such variables but also to signify their importance.” See 2010 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities, page 51. Available at: http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/2010_Benefit_Cost_Report.pdf

10. SOCIAL INDICATORS

The social indicators presented in this chapter illustrate in broad terms how the Nation is faring in selected areas, including the economy, energy, the environment, health, and education, among others. The indicators shown in the tables in this chapter are only a subset drawn from the vast array of available data on conditions in the United States. In choosing indicators for these tables, priority was given to measures that were consistently available over an extended period. Such indicators make it easier to draw comparisons and establish trends.

The individual measures in these tables are influenced to varying degrees by many Government policies and programs, as well as by external factors beyond the Government's control. They do not measure the outcomes of Government policies, because they do not show the direct results of Government activities, but they do provide a quantitative measure of the progress or lack of progress toward some of the ultimate ends that Government policy is intended to promote. The "Program Evaluation" and "Benefit-Cost Analysis" chapters of this volume discuss approaches toward assessing directly the impacts of particular Government programs.

The President has made it clear that policy decisions should be based upon evidence—evidence about what the Nation's greatest needs and challenges are and evidence about what strategies are working. The social indicators in this chapter provide useful information both for prioritizing budgetary and policymaking resources and for evaluating how well existing approaches are working.

Economic Conditions: The 2008-2009 economic downturn produced the worst labor market in more than a generation. Unemployment is higher than at any time in the past quarter century, and the employment-to-population ratio has fallen below 60 percent for the first time since 1984. Real GDP per capita has declined over the past five years.

Income and Wealth: Over the entire period from 1960 to 2011 shown in the tables the primary pattern has been one of rising living standards. Real disposable income per capita has more than tripled as technological progress and the accumulation of human and physical capital have increased the Nation's productive capacity. Average household net worth has more than doubled. But these gains have not been evenly distributed. Median household income is up only 23 percent (since 1967) and was lower in 2010 than in 1997. The largest income gains have been concentrated among higher-income families and individuals. Similarly, the median wealth of households in the decade before retirement has risen, but not nearly as rapidly as mean wealth. Changing household composition is partly responsible for these trends. The numbers of two-earner households and single-parent households have both increased. Stagnating wages for

low-skill workers are another reason why rising average incomes have not had more impact on the most economically vulnerable Americans.

Economic Inequality: The rise in the share of national income received by those at the top of the income distribution can be seen in the two inequality measures in Table 10-1. The share of income accruing to the lower 60 percent of households has fallen from 32.3 percent in 1970 to 26.4 percent in 2010. The income share of the top one percent of taxpayers has risen from around eight percent in the two decades between 1960 and 1980 to 18 percent in 2008. The poverty rate, which fell dramatically between 1960 and 1970, as the economy prospered and as Social Security and other safety-net programs expanded, is at about the same level as it was in 1966—despite the large increase in per capita income—and 15 percent of American households are food-insecure.

Setting the Stage for Future Prosperity: The Nation's future economic prosperity depends on having a highly skilled workforce, an expanding stock of physical capital, including advanced infrastructure, and a business environment that encourages innovation. Environmental quality is also important for future well-being.

Saving: National saving is a key determinant of future prosperity because it supports capital accumulation. Table 10-1 shows that net national saving, which was already low by international standards when it averaged around 10 percent in the 1960s and 1970s, fell from 6.2 percent in 2000 to 2.0 percent in 2007 as Federal budget surpluses turned to deficits, and fell even further in the recession that followed. During the recent economic downturn, personal saving has rebounded to around 5 percent, but net national saving, which includes the Government's dis-saving, has turned slightly negative. Despite the current low saving rate, previous saving has resulted in a large accumulation of physical capital. The stock of physical capital including consumer durable goods like cars and appliances amounted to \$49 trillion in 2010, more than four times the size of the capital stock in 1960, after accounting for inflation.

Innovation: National Research and Development (R&D) spending has hovered between 2.5 percent and 2.8 percent of GDP for most of the past 50 years. Successful R&D can result in new innovations, which can also be encouraged by patent protection. Patents encourage innovation by awarding an inventor the right to exclude others from the use of an invention unless compensated. The patent system also assures publication of patented ideas distributing knowledge that might otherwise be kept confidential. Patents by U.S. inventors have increased threefold since 1960.

Environmental Quality: The Nation's future well-being and prosperity depends also on stewardship of our

natural resources, the environment, and on our ability to bring about a clean energy economy. The country has made major strides in improving air quality since the passage of the Clean Air Act in 1970. Concentrations of the main criteria pollutants tracked by the Environmental Protection Agency have declined significantly since 1970. The largest decline was for lead, which was removed from gasoline, but there have also been large declines in the emissions of carbon monoxide, nitrogen oxides, and sulfur dioxide. The air has become markedly cleaner in the United States as a result of this progress. Progress on improving water quality has also been noticeable as an increasing proportion of the population is served by improved water treatment facilities.

Moving forward, the greatest environmental challenge is reducing greenhouse gas emissions. In 2009, emissions were 5,618 teragrams. The President announced a target reduction of 17 percent in greenhouse gas emissions between 2005 and 2020, with an ultimate reduction of 83 percent between 2005 and 2050. While technological advances and a shift in production patterns mean that Americans now use about half as much energy per real dollar of GDP as they did 50 years ago, rising income levels mean that per capita consumption has remained roughly constant. Only seven percent of U.S. energy production is from renewable sources.

Health, Education, and Civic Engagement: Table 10-2 focuses on additional national priorities: health, education, community involvement and civic engagement.

Health: The first three groups of indicators in this table show measures related to the Nation's health. The United States devotes a large fraction of its income to health care, and that share has increased more than threefold since 1960. In the latest data, the share of GDP accounted for by health expenditures was 17.8 percent of GDP in 2009, and the share is projected to have remained near that level in 2010-2011. This is the largest it has ever been and well above what other nations spend on health. Despite the large expenditures on health care, many Americans were unable to obtain health insurance. In 2010, about 50 million people, 16 percent of the U.S. population, lacked health insurance. In 2010, the President signed into law the Affordable Care Act, which is projected to reduce the number of uninsured by 32 million Americans.

The United States has seen progress over the last 50 years in some important indicators of health status. Infant mortality has fallen from 26 deaths per 1,000 live births in 1960 to less than 7 deaths since 2000. In 2009, infant mortality fell to all-time low of 6.4 per 1,000 live births. Life expectancy at birth has increased substantially, rising by more than eight years since 1960, although it lags behind that in many other developed countries. Running counter to these positive trends, 21 percent of the adult population still smokes (a level below historic highs, but still troubling), and about 33 percent of the population is classified as obese according to criteria established by the Centers for Disease Control and Prevention, up from 15 percent twenty years ago.

Education: The Administration is committed to returning America to being number one in the world in

high school and college graduation rates and academic achievement, which is critical to long-term prosperity and growth. Between 1960 and 1980, the percentage of 18-24 year olds with a high school diploma increased from 60 percent to 81 percent, a gain of about 10 percentage points per decade. Progress has slowed since then with only a four percentage point gain over the past 30 years. College enrollment rates have continued to rise. In 1980 only a quarter of 18-24 year olds were enrolled in college. In the latest data that number was 41 percent. The most thorough measurement of education achievement is the National Assessment of Educational Progress (NAEP). These measures have been taken since the 1980s. They show only very gradual improvement in mathematics and no discernible progress in reading for American 17-year olds.

Housing: Americans are generally well housed, but some of the population faces housing problems. In 2009, about 5 percent of households with children lived in inadequate housing as defined by the Census Bureau. These problems usually consisted of poor plumbing, inadequate heating, or other physical maintenance problems. About six percent of these households were experiencing overcrowding. Both measures were down from levels reported in the 1980s. However, many families have experienced increased housing costs relative to income. In 2009, 39 percent of families with children were spending more than 30 percent of reported income on housing and utilities, up from 17 percent in 1980.

Crime: Since 1980, there has been a remarkable decline in violent crime. The two crime measures shown in Table 10-2 are based on different types of record keeping. The murder rate is based on reported homicides compiled by the Federal Bureau of Investigation from local law enforcement agencies, while the violent crime statistic is based on surveys of victims. The violent crime rate has declined to about 30 percent of its peak level in 1979. Meanwhile, the murder rate has been cut in half.

Families: Measures of family instability increased significantly up until around 1995. Since 1995, births to unmarried adolescents age 15 to 17 have dropped from around 30 per 1,000 women to about 19 per 1,000. After rising for more than three decades, the percentage of children living only with their mother stabilized at around 24 percent of all children from 1995 through 2009.

Charitable Giving: Americans increased their charitable contributions at an average real rate of slightly less than two percent per year between 1960 and 2008; real GDP per capita grew by slightly more than two percent per year over that interval. Charitable giving measured in real terms dropped slightly in 2008 and again in 2009, as the recession and capital losses cut into family resources, but the level of giving appears to have rebounded in 2010, and it remains above its level in 2006.

Voting: Another measure of American's willingness to participate in civic activity, the voting rate for President, was at 64 percent in 1960, but averaged about 55 percent from 1972 through 2000 before rising to 60 percent in 2004 and 62 percent in 2008.

Other Compilations of Economic and Social Indicators: There are many other sources of data on trends in American social and economic conditions, including the *Statistical Abstract* published annually by the Census Bureau (the Census Bureau has announced plans to cease publication of the *Statistical Abstract* following the 2012 volume). Some examples are described below. Cutting across a range of social and economic domains, the Interagency Forum on Child and Family Statistics annually assembles *American's Children: Key National Indicators of Well-Being* (<http://www.childstats.gov>). The Interagency Forum on Aging-Related Statistics publishes *Older Americans: Key Indicators of Well-Being* every other year (http://www.agingstats.gov/agingstatsdotnet/main_site/default.aspx).

There are also topic-specific indicators, which highlight performance in specific areas. *Science and Engineering Indicators*, published by the National Science Board, provides a broad base of quantitative information on the U.S.

and international science and engineering enterprise: (<http://www.nsf.gov/statistics/indicators>). The Science Resources Statistics Division at the National Science Foundation is doing developmental work on measuring innovation, an important component of the scientific enterprise not currently included in our measures. *Healthy People 2020* within the Department of Health and Human Services offers a statement of national health objectives that identifies the most significant preventable threats to health and establishes national goals to reduce these threats. The National Center for Health Statistics annually publishes *Health, United States* (<http://www.cdc.gov/nchs/hus.htm>), a comprehensive compilation of health indicators. The National Center for Education Statistics within the Department of Education publishes the *Condition of Education* (<http://nces.ed.gov/programs/coe>). The website includes a set of indicators and also special analyses and a user's guide.

Table 10-1. ECONOMIC AND SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2009	2010	2011
Economic Conditions											
Living Standards:											
1	Real GDP per person (2005 dollars) ¹	15,716	20,915	25,675	32,157	34,122	39,752	42,715	41,409	42,308	42,631
	average annual percent change (5-year trend)	0.8	2.3	2.6	2.3	1.2	3.1	1.4	-0.2	-0.2	-0.4
2	Real disposable income per capita average (2005 dollars) ²	10,860	15,151	18,855	23,557	24,939	28,886	31,318	32,141	32,446	32,495
	average annual percent change (5-year trend)	1.2	3.2	2.0	1.8	1.1	3.0	1.6	0.6	0.7	0.1
3	Real median income: all households (2010 dollars)	N/A	43,055	44,616	48,423	48,408	53,164	51,739	50,599	49,445	N/A
	average annual percent change (5-year trend)	N/A	N/A	0.5	1.2	-0.0	1.9	-0.5	-0.2	-0.9	N/A
4	Poverty rate (%) ²	22.2	12.6	13.0	13.5	13.8	11.3	12.6	14.3	15.1	N/A
5	Food-insecure households (percent of all households) ³	N/A	N/A	N/A	N/A	11.9	10.5	11.0	14.7	14.5	N/A
Jobs and Unemployment:											
6	Civilian unemployment rate (%)	5.5	4.9	7.1	5.5	5.6	4.0	5.1	9.3	9.6	9.0
7	Unemployment plus marginally attached and underemployed (%)	N/A	N/A	N/A	N/A	10.0	7.0	8.9	16.3	16.8	15.9
8	Employment-population ratio % ⁴	56.1	57.4	59.2	62.8	62.9	64.4	62.7	59.3	58.5	58.4
9	Payroll employment change - December to December (millions)	-0.4	-0.5	0.3	0.3	2.2	2.0	2.5	-5.1	0.9	1.6
10	Payroll employment change - 5-year annual average (millions)	0.2	1.7	2.6	2.1	1.8	2.9	0.5	-0.6	-0.9	-1.0
Economic Inequality:											
11	Income share of lower 60% of all households	N/A	32.3	31.2	29.3	28.0	27.3	26.6	26.6	26.4	N/A
12	Income share of top 1% of all taxpayers	8.4	7.8	8.2	13.0	13.5	16.5	17.4	N/A	N/A	N/A
Wealth Creation:											
13	Net national saving rate (% of GDP) ⁵	10.4	8.1	7.1	3.9	4.7	6.2	3.0	-1.9	-0.4	-0.3
14	Personal Saving Rate (% of Disposable Personal Income) ⁵	7.2	9.4	9.8	6.5	5.2	2.9	1.5	5.1	5.3	4.5
15	Average household net worth (2011 dollars) ⁵	233,621	280,457	307,200	366,831	412,725	523,483	608,807	493,011	515,875	483,249
16	Median wealth of households aged 55-64 (2009 dollars) ⁶	N/A	N/A	N/A	166,668	163,752	210,052	281,741	222,300	N/A	N/A
Innovation:											
17	R&D spending (% of GDP)	2.6	2.5	2.3	2.6	2.5	2.7	2.6	2.8	2.7	2.7
18	Patents issued to U.S. residents (thousands)	42.3	50.6	41.7	56.1	68.2	103.6	88.5	107.0	132.5	N/A
19	Multifactor productivity (average 5 year percent change)	1.0	0.9	0.8	0.7	0.5	1.3	1.8	0.2	0.6	N/A
20	Nonfarm output per hour (average 5 year percent change) ¹	1.8	2.1	1.1	1.5	1.5	2.7	3.1	1.4	1.9	1.9
Capital and Infrastructure:											
21	Bridges that are structurally deficient or functionally obsolete (%) ⁷	N/A	N/A	N/A	N/A	31.8	28.6	26.3	24.8	24.3	N/A
22	Real net stock of fixed assets and consumer durable goods (\$2010 bills)	11,257	16,430	22,639	29,946	33,316	39,209	45,155	48,872	49,324	N/A
Energy and Environment:											
Air Quality - Mean Pollution Concentration levels ⁸ :											
23	Carbon Monoxide (ppm) based on 104 monitoring sites	N/A	N/A	8.951	6.130	4.797	3.461	2.296	N/A	N/A	N/A
24	Ground Level Ozone (ppm) based on 247 monitoring sites	N/A	N/A	0.101	0.089	0.090	0.082	0.080	0.070	0.073	N/A
25	Lead (ug/m3) based on 31 monitoring sites	N/A	N/A	1.338	0.525	0.357	0.270	0.194	0.226	0.144	N/A
26	Nitrogen Dioxide (ppb) based on 81 monitoring sites	N/A	N/A	27.341	23.935	22.438	20.034	16.871	13.564	13.076	N/A
Particulate Matter (ug/m3):											
27	PM10 based on 279 monitoring sites	N/A	N/A	N/A	82.663	68.551	64.344	59.093	50.624	51.022	N/A
28	PM 2.5 based on 646 monitoring sites	N/A	N/A	N/A	N/A	N/A	13.620	12.958	9.816	9.992	N/A
29	Sulfur Dioxide (ppm) based on 141 monitoring sites	N/A	N/A	11.830	8.306	5.926	5.102	4.299	2.528	2.443	N/A
Water Quality:											
30	Population served by secondary treatment or better (millions) ⁶	53.4	85.9	117.9	154.4	163.3	189.1	205.2	208.0	210.2	212.5
Climate Change:											
31	Net greenhouse gas emissions (teragrams CO2 equivalent) ⁹	N/A	N/A	N/A	5,320	5,928	6,536	6,157	5,618	N/A	N/A
32	Per capita greenhouse gas emissions (megagrams CO2 equivalent)	N/A	N/A	N/A	21.3	22.3	23.2	20.8	18.3	N/A	N/A
33	Per 2005\$ of GDP greenhouse emissions (kilograms CO2 equivalent)	N/A	N/A	N/A	0.663	0.652	0.583	0.488	0.442	N/A	N/A
Energy:											
34	Energy consumption per capita (millions of BTUs)	250	331	344	338	342	350	339	308	317	N/A
35	Energy consumption per real dollar of GDP (thousands of BTUs)	15.9	15.9	13.4	10.5	10.0	8.8	7.9	7.3	7.4	N/A
36	Energy production from renewable sources (% of total)	N/A	N/A	N/A	N/A	N/A	N/A	6.4	8.2	7.5	N/A

¹ Values for 2011 based on Administration projection for 2011.Q4 growth.

² The poverty rate does not reflect noncash government transfers.

³ These households were unable to acquire adequate food to meet the needs of all their members at some time during the year because they had insufficient money or other resources for food.

⁴ Civilian employment as a percent of the civilian noninstitutional population age 16 and above.

⁵ 2011 through 2011.Q3 only.

⁶ Data interpolated for some years.

⁷ Bridges are structurally deficient if they have been restricted to light vehicles, require immediate rehabilitation, or are closed. They are functionally obsolete if they no longer meet the criteria for the system of which the bridge is carrying a part.

⁸ ppm -- parts per million; ug/m3 -- micrograms per cubic meter

⁹ This is a net measure reflecting both sources and sinks of greenhouse gas.

Table 10–2. ECONOMIC AND SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2009	2010	2011
Access to Health Care:											
37	Total national health expenditures (percent of GDP) ¹	5.2	7.2	9.2	12.5	13.9	13.8	16.0	17.8	17.8	17.9
38	Percentage of population without health insurance	N/A	N/A	N/A	12.9	14.4	13.1	14.6	16.1	16.3	N/A
39	% of children age 19–35 months with recommended immunizations ²	N/A	N/A	N/A	N/A	N/A	72.8	80.8	71.9	N/A	N/A
Health Status:											
40	Infant mortality (per 1000 live births) ³	26.0	20.0	12.6	9.2	7.6	6.9	6.9	6.4	N/A	N/A
41	Low birthweight [<2,500 gms] percentage of babies	7.7	7.9	6.8	7.0	7.3	7.6	8.2	8.2	8.1	N/A
42	Life expectancy at birth (years) ³	69.7	70.8	73.7	75.4	75.8	76.8	77.4	78.2	N/A	N/A
Health Risks:											
43	Cigarette smokers (% population 18 and older)	N/A	39.2	32.7	25.3	24.6	23.1	20.8	20.6	N/A	N/A
44	Obesity (% of population with BMI over 30) ⁴	13.3	N/A	15.1	22.9	N/A	30.1	33.9	N/A	N/A	N/A
45	Alcohol (% high school seniors engaged in heavy drinking) ⁵	N/A	N/A	41.2	32.2	29.8	30.0	26.2	25.2	N/A	N/A
46	Physical activity: % of adults engaged in regular physical activity ⁶	N/A	N/A	N/A	N/A	N/A	15.0	17.1	19.1	N/A	N/A
Education:											
47	High school graduates (% of population 25 and older)	44.6	55.2	68.6	77.6	81.7	84.1	85.2	86.7	87.1	N/A
48	Percentage of 18–24 year olds with a high school diploma	59.9	78.8	80.9	81.7	80.8	81.9	82.9	84.3	N/A	N/A
49	Percentage of 18–24 year olds enrolled in college	N/A	25.7	25.6	32.0	34.3	35.5	38.9	41.3	N/A	N/A
50	College graduates (% of population 25 and older)	8.4	11.0	17.0	21.3	23.0	25.6	27.6	29.5	29.9	N/A
National Assessment of Educational Progress ⁷											
51	Reading 17-year olds	N/A	N/A	283	288	286	285	284	N/A	N/A	N/A
52	Mathematics 17-year olds	N/A	N/A	297	303	305	306	305	N/A	N/A	N/A
Housing:											
53	Percentage of families with children with inadequate housing ⁸	N/A	N/A	9	9	7	7	5	5	N/A	N/A
54	Percentage of families with children with crowded housing	N/A	N/A	9	7	7	7	6	6	N/A	N/A
55	Percentage of families with children with costly housing ⁹	N/A	N/A	17	25	28	28	34	39	N/A	N/A
Crime:											
56	Violent crime rate (per 100,000 population 12 and older) ¹⁰	N/A	N/A	4,940	4,410	4,610	2,740	2,100	1,690	1,490	N/A
57	Murder rate (per 100,000 population) ¹¹	5.1	7.8	10.2	9.4	8.2	5.5	5.6	5.0	4.8	N/A
Families:											
58	Births to unmarried women age 15–17 (per 1,000)	N/A	N/A	20.6	29.6	30.1	23.9	19.7	19.3	N/A	N/A
59	Children living with mother only (% of all children)	9.2	11.6	18.6	21.6	24.0	22.3	23.4	24.4	25.2	N/A
Civic Engagement:											
60	Individual charitable giving per capita (2011 dollars)	321	460	489	559	529	808	863	778	782	N/A
61	Percentage of Americans volunteering ¹²	N/A	N/A	N/A	20.4	N/A	N/A	27.0	26.8	26.3	N/A
		(1960)	(1968)	(1972)	(1976)	(1980)	(1984)	(1988)	(2004)	(2008)	(2012)
62	Voting for President by election year (% eligible population) ¹³	63.8	61.5	56.2	54.8	54.2	55.2	52.8	60.1	61.7	N/A

¹ The 2010 and 2011 values are projected, the last actual data are for 2009.

² The 4:3:1:3:3 series consisting of 4 doses (or more) of diphtheria, tetanus toxoids, and pertussis (DTP) vaccines, diphtheria and tetanus toxoids (DT), or diphtheria, tetanus toxoids, and any acellular pertussis (DTaP) vaccines; 3 doses (or more) of poliovirus vaccines; 1 dose (or more) of any measles-containing vaccine; 3 doses (or more) of Haemophilus influenzae type b (Hib) vaccines; and 3 doses (or more) of hepatitis B vaccines.

³ Data for 2009 are preliminary.

⁴ BMI refers to body mass index. A BMI over 30 is the criterion for obesity used by the Centers for Disease Control and Prevention.

⁵ Data are interpolated. Percentage of high school students who had five or more drinks in a row at least once within the two weeks prior to the survey.

⁶ Participation in leisure-time aerobic and muscle-strengthening activities that meet the 2008 Federal physical activity guidelines for adults 18 years of age and over.

⁷ Data are interpolated. Actual survey years were 1973, 1978, 1982, 1986, 1990, 1992, 1994, 1996, 1999, 2004, and 2008.

⁸ Inadequate housing has moderate to severe physical problems, usually poor plumbing or heating or upkeep problems. Some data are interpolated.

⁹ Expenditures for housing and utilities exceed 30 percent of reported income. Some data are interpolated.

¹⁰ Includes crimes both reported and not reported to law enforcement. Offenses include homicide, rape, robbery, aggravated assault and simple assault.

¹¹ Based on reported crimes. Not all crimes are reported, and the fraction that go unreported may have varied over time, preliminary data for 2008.

¹² Data from 1974, 1989, and since 2005 are drawn from the Current Population Survey.

¹³ As computed by Professor Michael McDonald, George Mason University, after adjusting the population for those not eligible to vote in Presidential elections.

Table 10-3. SOURCES FOR ECONOMIC AND SOCIAL INDICATORS

Indicator:	Source:
Economic, Environmental, and Energy Indicators (Table 10-1):	
Real GDP per person	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Real disposable income per capita	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Real median income: all households	U.S. Census Bureau, Housing and Household Economic Statistics Division
Poverty rate	U.S. Census Bureau, Housing and Household Economic Statistics Division
Food-insecure households	U.S. Census Bureau, Current Population Survey Food Security Supplement; tabulated by U.S. Department of Agriculture, Economic Research Service
Civilian unemployment rate	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Unemployment plus marginally attached and underemployed	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Employment-population ratio	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Payroll employment	U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics program.
Income share of lower 60% of all households	U.S. Census Bureau, Housing and Household Economic Statistics Division
Income share of top 1% of all taxpayers	Thomas Piketty and Emanuel Saez, "Income Inequality in the United States, 1913-1998" Quarterly Journal of Economics, 118(1), 2003, 1-39 (tables and figures updated to 2008, July 2010)
Net national saving rate	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Personal Saving Rate	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Average household net worth	Board of Governors of the Federal Reserve System, Flow of Funds Accounts of the United States, and U.S. Census Bureau, Housing and Economic Statistics Division.
Median wealth of households aged 55-64	Board of Governors of the Federal Reserve System, 2009 Survey of Consumer Finances Chartbook.
R&D spending	National Science Foundation, Division of Science Resources Statistics, National Patterns of R&D Resources
Patents issued to U.S. residents	U.S. Patent and Trademark Office, Electronic Information Products Division, Patent Technology Monitoring Team, submissions to the World Intellectual Property Organization.
Multifactor productivity	U.S. Department of Labor, Bureau of Labor Statistics, Major Sector Productivity Program.
Nonfarm output per hour	U.S. Department of Labor, Bureau of Labor Statistics, Major Sector Productivity Program.
Bridges that are structurally deficient or functionally obsolete	U.S. Federal Highway Administration, Office of Bridge Technology, "National Bridge Inventory."
Real net stock of fixed assets and consumer durable goods	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Carbon Monoxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Ground Level Ozone	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Lead	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Nitrogen Dioxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
PM10	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
PM 2.5	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Sulfur Dioxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Population served by secondary treatment or better	U.S. Environmental Protection Agency, Clean Watersheds Needs Survey 2008 Report to Congress, June 10, 2010 (includes a projection for 2028) EPA-832-R-10-002.
Net greenhouse gas emissions	U.S. Environmental Protection Agency, 2010 Inventory of Greenhouse Gases Emissions and Sinks: 1990-2008.
Energy consumption per capita	U.S. Energy Information Administration, Annual Energy Review 2009, August 19, 2010 energy overview table 1.5.
Energy consumption from renewable sources	U.S. Energy Information Administration, Independent Statistics and Analysis
Health, Education, and Other Social Indicators (Table 10-2):	
Total national health expenditures	Centers for Medicare and Medicaid Services, National Health Expenditures Data, January 2011.
Percentage of population without health insurance	U.S. Census Bureau, Housing and Household Economic Statistics Division
% of children age 19-35 months with recommended immunizations	Childstats.gov, Forum on Child and Family Statistics
Infant mortality	Centers for Disease Control and Prevention, National Vital Statistics Report
Low birthweight percentage of babies	Centers for Disease Control and Prevention, National Vital Statistics Report
Life expectancy at birth	Centers for Disease Control and Prevention, National Vital Statistics Report
Cigarette smokers (% population 18 and older)	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
Obesity (% of population with BMI over 30) (d)	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
% high school students engaged in heavy drinking	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
% of adults engaged in regular physical activity	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
High school graduates (% of population 25 and older)	U.S. Census Bureau, Current Population Survey
Percentage of 18-24 year olds with a high school diploma	U.S. Census Bureau, Current Population Survey
Percentage of 18-24 year olds enrolled in college	U.S. Census Bureau, Current Population Survey
College graduates (% of population 25 and older)	U.S. Census Bureau, Current Population Survey
NAEP: Reading 17-year olds	National Assessment of Educational Progress, National Center for Education Statistics

Table 10–3. SOURCES FOR ECONOMIC AND SOCIAL INDICATORS—Continued

Indicator:	Source:
NAEP: Mathematics 17-year olds	National Assessment of Educational Progress, National Center for Education Statistics
Percentage of families with children with inadequate housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Percentage of families with children with crowded housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Percentage of families with children with costly housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Violent crime rate (per 100,000 population 12 and older)	U.S. Department of Justice, Bureau of Justice Statistics, Violent Crime Trends
Murder rate (per 100,000 population)	U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division
Births to unmarried women age 15-17 (per 1,000)	Centers for Disease Control and Prevention, National Vital Statistics Report
Children living with mother only	Annual Social and Economic Supplement to the Current Population Survey, Detailed Poverty Tabulations various years
Individual Charitable Giving	Statistical Abstract 2012, Center on Philanthropy at Indiana University, Giving USA.
Percentage of Americans volunteering	Corporation for National and Community Service, "Volunteer Growth in America: A Review of Trends since 1974" based on the Current Population Survey.
Voting for President by election year (% eligible population)	The United States Elections Project, Dr. Michael McDonald, George Mason University, Fairfax, Virginia.

PERFORMANCE AND MANAGEMENT

6. SOCIAL INDICATORS

The social indicators presented in this chapter illustrate in broad terms how the Nation is faring in selected areas in which the Federal Government has significant responsibilities. Indicators are drawn from six selected domains: economic, demographic and civic, socioeconomic, health, security and safety, and environment and energy. The indicators shown in the tables in this chapter were chosen in consultation with statistical and data experts from across the Federal Government. These indicators are only a subset of the vast array of available data on conditions in the United States. In choosing indicators for these tables, priority was given to measures that are broadly relevant to Americans and consistently available over an extended period. Such indicators provide a current snapshot while also making it easier to draw comparisons and establish trends.

The measures in these tables are influenced to varying degrees by many Government policies and programs, as well as by external factors beyond the Government's control. They do not measure the outcomes of Government policies because they do not show the direct results of Government activities. However, they do provide a quantitative picture of the progress (or lack of progress) toward some of the ultimate ends that Government policy is intended to promote, and the baseline on which future policies are set. Subsequent chapters in the Performance and Management section of this volume discuss approaches toward assessing the impacts of Government programs and improving the quality of Government.

The President has made it clear that policy decisions should be based upon evidence—evidence that identifies the Nation's greatest needs and challenges and evidence about which strategies are working to overcome those challenges. The social indicators in this chapter provide useful information both for prioritizing budgetary and policymaking resources and for evaluating how well existing approaches are working.

Economic: The 2008-2009 economic downturn produced the worst labor market in more than a generation. The employment-population ratio dropped sharply from its pre-recession level, and real GDP per person also declined. The economy is steadily recovering, with the unemployment rate declining to 7.9 percent in January 2012 from a high of 10 percent in October 2009, and real GDP per person roughly regaining its level prior to the recession. However, the employment-population ratio remains low by historical standards, while the continuing effects of the recession are reflected in high rates of marginally attached and underemployed workers.

Over the entire period from 1960 to 2012, the primary pattern has been one of economic growth and rising living standards. Real GDP per person has approximately tripled as technological progress and the accumulation of human and physical capital have increased the Nation's productive capacity. The stock of physical capital including consumer durable goods like cars and appliances amounted to \$51 trillion in 2011, more than four times the size of the capital stock in 1960, after accounting for inflation.

But national saving, a key determinant of future prosperity because it supports capital accumulation, fell from 6.1 percent in 2000 to 2.9 percent in 2005 as Federal budget surpluses turned to deficits, and fell even further in the recession that followed, turning negative in 2010. Meanwhile, the labor force participation rate, also critical for growth, has declined for more than a decade, reflecting the beginning of a trend in which the baby boomer generation retires.

The United States continues to be a leader in innovation. Patents by U.S. inventors have increased three-fold since 1960. National Research and Development (R&D) spending has hovered between 2.3 percent and 2.8 percent of GDP for the past 50 years.

Demographic and Civic: The U.S. population has steadily increased from 1970, where it numbered 204 million, to 314 million in 2012. The foreign born population has increased rapidly since 1970, quadrupling from about 10 million in 1970 to over 40 million in 2011. The U.S. population is getting older, due in part to the aging of the baby boomers and to improvements in medical technology. From 1970 to 2011, the percent of the population over age 65 increased from 9.8 to 13.3, and the percent over age 85 more than doubled.

The composition of American households and families has evolved considerably over time. The percent of Americans who have ever married continued to decline as it has over the last five decades. Average family sizes have also fallen over this period, a pattern that is typical among developed countries. After increasing for over three decades, births to unmarried women age 15-17 and the fraction of single parent households reached a turning point in 1995. From 1995 to 2010, the number of births per 1,000 unmarried women age 15-17 fell from 30.1 to 16.8, a level below that of 1970. Meanwhile, the fraction of single parent households stopped increasing in 1995, stabilizing at a little over 9 percent.

Charitable giving among Americans, measured by the average charitable contribution per itemized tax return,

has generally increased over the past 50 years.¹ However, the effects of the 2008-2009 recession are evident in the sharp drop in charitable giving from 2005 to 2010. More Americans are volunteering. In 1990, 20 percent of Americans volunteered at least once; in 2011, 27 percent volunteered. The political participation of Americans, measured by the voting rate in Presidential elections, declined from about 63 percent in 1964 to 57 percent in 1972. It fell further in the 1996 and 2000 elections, reaching a low of only 50 percent in 1996. However, the Presidential voting rate rebounded in the 2004 and 2008 elections, averaging almost 58 percent.

Socioeconomic:

Education is a critical component of the Nation's economic growth and competitiveness, while also benefiting society in areas such as health, crime, and civic engagement. Between 1960 and 1980, the percentage of 25-34 year olds who have graduated from high school increased from 58 percent to 84 percent, a gain of 13 percentage points per decade. Progress has slowed since then with only a four percentage point gain over the past 30 years. But the percentage of 25-34 year olds who have graduated from college continues to rise, from only 11 percent in 1960 to over 31 percent in 2011. Measures of math and reading achievement show little if any improvement in mathematics and reading for American 17-year olds over the period from 1970 to 2010. The percentage of graduate degrees in science and engineering fell by half in the period between 1960 to 1980, from 22 percent to 11 percent, and was only 12 percent in 2011.

While national prosperity has grown considerably over the past 50 years, these gains have not been shared equally. Real disposable income per capita roughly tripled since 1960, and more than doubled since 1970. But real income for the median household increased only 22 percent from 1970 to 2000, and has declined by 9 percent since 2000. The income share of the top 1 percent of taxpayers, approximately 9 percent in 1980, rose to 21 percent in 2005 before dipping slightly in 2010. In contrast, the income share of the bottom 50 percent of taxpayers declined from 18 percent in 1980 to 12 percent in 2010. The poverty rate, after falling rapidly in the 1960s due to a strong economy and large expansions in Social Security, has since remained relatively steady despite the advances in real disposable income per capita. From 2005 to 2011, the poverty rate, the percentage of food-insecure households, and the percentage of Americans receiving benefits from the Supplemental Nutrition Assistance Program (formerly known as the Food Stamp Program), increased as Americans struggled with the economic downturn.

After slowly increasing from 1960 to 2005, homeownership rates dropped somewhat following the 2008 housing crisis, but remain close to the historical average. The

¹This measure includes charitable giving only among those who claim itemized deductions. It is therefore influenced by changes in tax laws and in the characteristics of those who itemize.

share of families with children and severe housing cost burdens, however, more than doubled from 8 percent in 1980 to 18 percent in 2011.

Health:

America has by far the most expensive health care system in the world, yet much higher rates of uninsured than other countries with comparable wealth. National health expenditures as a share of GDP have increased from about 5 percent in 1960 to almost 18 percent in 2011. This increase in health care spending has corresponded with improvements in medical technology that have improved health, but the rate of spending increase in the United States is far greater than that in other Organization for Economic Cooperation and Development (OECD) countries which have experienced comparable health improvements. Despite high health care costs, over 21 percent of adults and 9 percent of children were without health insurance in 2011. In 2010 the President signed the Affordable Care Act into law. The Affordable Care Act is expected to reduce the number of uninsured by about 27 million by 2022.²

Some key indicators of national health have improved since 1960. Life expectancy at birth increased by nine years over the last five decades, from 69.7 in 1960 to 78.7 in 2011. Infant mortality fell from 26 to approximately 6 per 1,000 live births, with a precipitous decline occurring in the 1970s.

Improvement in health behaviors among Americans has been mixed. While the percent of adults who smoke cigarettes in 2011 was less than half of that in 1970, rates of obesity have soared. In 1980, 15 percent of adults and 6 percent of children were obese; in 2010, 35 percent of adults and 17 percent of children were obese. Adult obesity continued to rise even as the share of adults engaging in regular physical activity increased from 15 percent in 2000 to 21 percent in 2011.

Security and Safety:

The last three decades have witnessed a remarkable decline in crime. From 1980 to 2011, the property crime rate dropped by 72 percent while the murder rate was cut by over half. Road transportation has also become safer. Safety belt use increased by 15 percentage points from 2000 to 2012, and the annual number of highway fatalities fell by 38 percent from 1970 to 2011 despite the increase in the population.

Environment and Energy:

The Nation's future well-being and prosperity depend on stewardship of our natural resources, the environment, and on our ability to bring about a clean energy economy. Substantial progress has been made on air quality in the United States, with the concentration of particulate matter falling 28 percent from 2000 to 2010. Moving forward, the greatest environmental challenge is reducing

²Congressional Budget Office. 2013. "The Budget and Economic Outlook: Fiscal Years 2013 to 2023." Washington, DC: Congressional Budget Office.

greenhouse gas emissions. The President announced a target reduction of 17 percent in greenhouse gas emissions between 2005 and 2020, with an ultimate reduction of 83 percent between 2005 and 2050. From 2005 to 2010, gross greenhouse gas emissions fell by 5.3 percent. Gross greenhouse gas emissions per capita and per unit of GDP have fallen by 9.5 and 8.6 percent, respectively. However, annual mean CO₂ concentration, a global measure of climate change, has increased roughly between three- and five-fold since 1960.

While technological advances and a shift in production patterns mean that Americans now use about half as much energy per real dollar of GDP as they did 50 years ago, rising income levels mean that per capita consumption has remained roughly constant over the last 40 years. The percent of U.S. electricity production that is from renewable sources has grown since 2005, but remains only 12.7 percent.

Table 6-1. SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2010	2011	2012
Economic											
General Economic Conditions											
1	Real GDP per person (2005 dollars) ¹	15,648	20,802	25,618	32,085	34,082	39,718	42,646	42,169	42,620	43,352
2	Real GDP per person change, 5-year annual average	0.7	2.3	2.6	2.3	1.2	3.1	1.4	-0.2	-0.3	N/A
3	Consumer Price Index ²	15.1	19.3	38.5	59.9	68.2	76.6	86.8	96.9	100.0	N/A
4	Private goods producing (%)	N/A	N/A	N/A	39.7	37.2	33.7	32.1	29.5	30.8	N/A
5	Private services producing (%)	N/A	N/A	N/A	60.3	62.8	66.3	67.9	70.5	69.2	N/A
Jobs and Unemployment											
6	Labor force participation rate (%)	59.4	60.4	63.8	66.5	66.6	67.1	66.0	64.7	64.1	63.7
7	Employment (millions)	65.8	78.7	99.3	118.8	124.9	136.9	141.7	139.1	139.9	142.5
8	Employment-population ratio (%)	56.1	57.4	59.2	62.8	62.9	64.4	62.7	58.5	58.4	58.6
9	Payroll employment change - December to December (millions)	-0.4	-0.5	0.3	0.3	2.2	2.0	2.5	1.0	1.8	1.8
10	Payroll employment change - 5-year annual average (millions)	0.7	2.0	2.7	2.4	1.6	2.9	0.4	-0.8	-0.9	-0.9
11	Civilian unemployment rate (%)	5.5	4.9	7.1	5.6	5.6	4.0	5.1	9.6	8.9	8.1
12	Unemployment plus marginally attached and underemployed (%)	N/A	N/A	N/A	N/A	10.1	7.0	8.9	16.7	15.9	14.7
13	Receiving Social Security disabled-worker benefits (% of population) ³	0.9	2.0	2.8	2.5	3.3	3.7	4.5	5.5	5.7	5.8
Infrastructure, Innovation, and Capital Investment											
14	Nonfarm output per hour (average 5 year % change)	1.8	2.1	1.1	1.5	1.5	2.8	3.1	1.8	1.8	N/A
15	Corn for grain production (billion bushels)	3,907	4,152	6,639	7,934	7,400	9,915	11,112	12,447	12,358	10,725
16	Real net stock of fixed assets and consumer durable goods (billions of 2010\$) ⁴	11,564	16,879	23,258	30,765	34,227	40,281	46,389	50,673	51,117	N/A
17	Population served by secondary wastewater treatment or better (%) ⁵	N/A	41.6	56.4	63.7	61.1	71.4	74.3	72.0	N/A	N/A
18	Electricity net generation (kWh per capita)	4,202	7,486	10,076	12,170	12,594	13,475	13,723	13,335	13,177	N/A
19	Patents issued to U.S. residents (per 1,000 population)	42.3	50.6	41.7	56.1	68.2	103.6	88.5	132.5	131.9	N/A
20	Net national saving rate (% of GDP)	10.3	8.1	7.2	3.9	4.7	6.1	2.9	-0.7	-0.6	N/A
21	R&D spending (% of GDP)	2.6	2.5	2.3	2.6	2.5	2.7	2.6	2.8	2.7	N/A
Demographic and Civic											
Population											
22	Total population (millions)	N/A	204.0	227.2	249.6	266.3	282.2	295.5	309.3	311.6	313.9
23	Foreign born population (millions) ⁶	9.7	9.6	14.1	19.8	N/A	31.1	37.5	40.0	40.4	N/A
24	17 years and younger (%)	N/A	N/A	28.0	25.7	26.1	25.7	24.9	24.0	23.7	23.5
25	65 years and older (%)	N/A	9.8	11.3	12.5	12.7	12.4	12.4	13.1	13.3	N/A
26	85 years and older (%)	N/A	0.7	1.0	1.2	1.4	1.5	1.6	1.8	1.8	N/A
Household Composition											
27	Ever married (% of age 15 and older) ⁷	78.0	75.1	74.1	73.8	72.9	71.9	70.9	69.3	69.2	68.8
28	Average family size ⁸	3.7	3.6	3.3	3.2	3.2	3.2	3.1	3.2	3.1	3.1
29	Births to unmarried women age 15-17 (per 1,000)	N/A	17.1	20.6	29.6	30.1	23.9	19.4	16.8	N/A	N/A
30	Single parent households (%)	4.4	5.2	7.5	8.3	9.1	8.9	8.9	9.1	9.1	9.3
Civic Engagement											
31	Average charitable contribution per itemized tax return (2010 dollars) ⁹	2,063	2,046	2,361	2,968	3,155	4,188	4,287	3,650	N/A	N/A
32	Voting for President (% of voting age population) ¹⁰	63.4	57.0	55.1	56.4	49.8	52.1	56.7	58.3	N/A	N/A
33	Persons volunteering (% age 16 and older) ¹¹	N/A	N/A	N/A	20.4	N/A	N/A	28.8	26.3	26.8	N/A

TABLE 6-1. SOCIAL INDICATORS—Continued

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2010	2011	2012
Socioeconomic											
Education											
34	High school graduates (% of age 25–34) ¹²	58.1	71.5	84.2	84.1	N/A	83.9	86.4	87.2	87.9	N/A
35	College graduates (% of age 25–34) ¹³	11.0	15.5	23.3	22.7	N/A	27.5	29.9	31.1	31.5	N/A
36	Reading achievement score (age 17) ¹⁴	N/A	285	285	290	288	288	283	286	N/A	N/A
37	Math achievement score (age 17) ¹⁵	N/A	304	298	305	306	308	305	306	N/A	N/A
38	Science and engineering graduate degrees (% of total graduate degrees)	22.0	17.2	11.2	14.7	14.2	12.6	12.7	12.1	12.4	N/A
39	Receiving special education services (% of age 3–21 public school students)	N/A	N/A	10.1	11.4	12.4	13.3	13.7	13.0	N/A	N/A
Income, Savings, and Inequality											
40	Real median income: all households (2011 dollars)	N/A	45,146	46,024	49,950	49,935	54,841	53,371	50,831	50,054	N/A
41	Real disposable income per capita average (2011 dollars) ^{1, 4}	12,457	17,450	21,716	27,132	28,724	33,272	36,100	37,242	37,463	37,646
42	Adjusted gross income share of top 1% of all taxpayers	N/A	N/A	8.5	14.0	14.6	20.8	21.2	18.9	N/A	N/A
43	Adjusted gross income share of lower 50% of all taxpayers	N/A	N/A	17.7	15.0	14.5	13.0	12.9	11.7	N/A	N/A
44	Personal saving rate (% of disposable personal income) ¹	7.2	9.4	9.8	6.5	5.2	2.9	1.5	5.1	4.2	3.6
45	Poverty rate (%) ¹⁶	22.2	12.6	13.0	13.5	13.8	11.3	12.6	15.1	15.0	N/A
46	Food-insecure households (% of all households) ¹⁷	N/A	N/A	N/A	N/A	11.9	10.5	11.0	14.5	14.9	N/A
47	Supplemental Nutrition Assistance Program (formerly Food Stamps) ¹⁸	N/A	3.3	9.5	8.2	9.9	6.1	8.9	13.5	14.6	14.9
48	Median wealth of households, age 55–64 (in thousands of 2011 dollars) ^{19,4}	75	N/A	148	170	169	234	299	185	N/A	N/A
Housing											
49	Homeownership among families with children (%)	61.9	62.9	64.4	64.2	65.0	66.2	66.9	65.1	64.6	N/A
50	Families with children and severe housing cost burden (%) ²⁰	N/A	N/A	8.0	10.0	12.0	11.0	14.5	17.9	18.3	N/A
51	Families with children and inadequate housing (%) ²¹	N/A	N/A	9.0	9.0	7.0	7.0	5.4	5.3	5.5	N/A
Health											
Health Status											
52	Life expectancy at birth ²²	69.7	70.8	73.7	75.4	75.8	76.8	77.6	78.7	78.7	N/A
53	Infant mortality (per 1,000 live births) ²²	26.0	20.0	12.6	9.2	7.6	6.9	6.9	6.1	6.1	N/A
54	Low birthweight [<2,500 gms] (% of babies) ²²	7.7	7.9	6.8	7.0	7.3	7.6	8.2	8.1	8.1	N/A
55	Activity limitation (% of age 5–17) ²³	N/A	N/A	N/A	N/A	N/A	7.0	8.0	9.2	9.3	N/A
56	Activity limitation (% of aged 18 and over) ²⁴	N/A	N/A	N/A	N/A	N/A	27.9	29.1	29.9	29.8	N/A
57	Difficulties with activities of daily living (% of age 65 and over) ²⁵	N/A	N/A	N/A	N/A	N/A	6.3	6.2	6.8	7.3	N/A
Health Behavior											
58	Engaged in regular physical activity (% of age 18 and older) ²⁶	N/A	N/A	N/A	N/A	N/A	15.0	16.6	20.7	21.0	N/A
59	Obesity (% of age 20–74 with BMI 30 or greater) ²⁷	13.3	14.6	15.1	23.3	N/A	31.1	34.1	35.3	N/A	N/A
60	Obesity (% of age 2–19) ²⁸	N/A	5.1	5.5	10.0	N/A	13.9	15.4	16.9	N/A	N/A
61	Cigarette smokers (% of age 18 and older)	N/A	39.2	32.7	25.3	24.6	23.1	20.8	19.3	19.0	N/A
62	Excessive alcohol use (% of age 18 and older) ²⁹	N/A	N/A	N/A	N/A	N/A	8.7	8.9	10.1	9.4	N/A
Access to Health Care											
63	Total national health expenditures (% of GDP) ³⁰	5.2	7.2	9.2	12.5	13.9	13.8	16.1	17.9	17.9	17.9
64	Persons without health insurance (% of age 18–64)	N/A	N/A	N/A	N/A	N/A	16.4	19.0	21.8	21.2	N/A
65	Persons without health insurance (% of age 17 and younger)	N/A	N/A	N/A	N/A	N/A	10.7	10.3	9.8	9.4	N/A
66	Children age 19–35 months with recommended vaccinations (%) ³¹	N/A	N/A	N/A	N/A	55.1	72.8	76.1	72.7	73.6	N/A
Security and Safety											
Crime											
67	Property crimes (per 100,000 households) ³²	N/A	N/A	49,610	34,890	31,547	19,043	15,947	12,542	13,871	N/A
68	Violent crime victimizations (per 100,000 population age 12 or older) ³³	N/A	N/A	4,940	4,410	7,068	3,749	2,842	1,928	2,254	N/A
69	Murder rate (per 100,000 persons)	5.1	7.9	10.2	9.4	8.2	5.5	5.6	4.8	4.7	N/A
Transportation Safety											
70	Safety belt use (%)	N/A	N/A	N/A	N/A	N/A	71	82	85	84	86
71	Highway fatalities	36,399	52,627	51,091	44,599	41,817	41,945	43,510	32,999	32,367	N/A
Environment and Energy											
Air Quality and Greenhouse Gases											
72	Ground level ozone (ppm) based on 247 monitoring sites	N/A	N/A	0.101	0.089	0.090	0.082	0.080	0.073	N/A	N/A
73	Particulate matter 2.5 (ug/m3) based on 646 monitoring sites	N/A	N/A	N/A	N/A	N/A	13.6	13.0	10.0	N/A	N/A

TABLE 6-1. SOCIAL INDICATORS—Continued

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2010	2011	2012
74	Annual mean atmospheric CO ₂ concentration (Mauna Lao, Hawaii; ppm/yr)	0.5	1.1	1.7	1.2	2.0	1.6	2.5	2.4	1.8	N/A
75	Gross greenhouse gas emissions (teragrams CO ₂ equivalent) ³⁴	N/A	N/A	N/A	6,175	N/A	N/A	7,204	6,822	N/A	N/A
76	Net greenhouse gas emissions, including sinks (teragrams CO ₂ equivalent)	N/A	N/A	N/A	5,293	N/A	N/A	6,118	5,747	N/A	N/A
77	Gross greenhouse gas emissions per capita (metric tons CO ₂ equivalent)	N/A	N/A	N/A	24.7	N/A	N/A	24.3	22.0	N/A	N/A
78	Gross greenhouse gas emissions per 2005\$ of GDP (kilograms CO ₂ equivalent)	N/A	N/A	N/A	0.769	N/A	N/A	0.570	0.521	N/A	N/A
Energy											
79	Energy consumption per capita (million Btu)	250	331	344	338	342	350	339	316	312	N/A
80	Energy consumption per 2005\$ GDP (thousand Btu per 2005\$)	15.9	15.9	13.4	10.5	10.0	8.8	7.9	7.5	7.3	N/A
81	Electricity net generation from renewable sources, all sectors (% of total)	19.7	16.4	12.4	11.8	11.5	9.4	8.8	10.4	12.7	N/A

N/A=Number is not available.

¹ Data for 2012 reflect 2012 Q3.

² Adjusted CPI-U. 2011=100.

³ Gross prevalence rate for persons receiving Social Security disabled-worker benefits among the estimated population insured in the event of disability at end of year. Gross rates do not account for changes in the age and gender composition of the insured population over time.

⁴ Data adjusted by OMB to real 2010 dollars for indicator 16, and to 2011 dollars for indicators 41 and 48.

⁵ Data correspond to years 1962, 1972, 1982, 1992, 1996, 2000, 2004, 2008.

⁶ Data source for 1960 to 2000 is the decennial census; data source for 2006, 2010, and 2011 is the American Community Survey.

⁷ For 1960, age 14 and older.

⁸ Average size of family households. Family households are those in which there is someone present who is related to the householder by birth, marriage, or adoption.

⁹ Charitable giving reported as itemized deductions on Schedule A.

¹⁰ Data correspond to years 1964, 1972, 1980, 1992, 1996, 2000, 2004, 2008.

¹¹ Refers to those who volunteered at least once during a one-year period, from September of the previous year to September of the year specified. For 1990, refers to 1989 estimate from the CPS Supplement on volunteers.

¹² For 1960, includes those who have completed 4 years of high school or beyond. For 1970 and 1980, includes those who have completed 12 years of school or beyond. For 1990 onward, includes those who have completed a high school diploma or the equivalent.

¹³ For 1960 to 1980, includes those who have completed 4 or more years of college. From 1990 onward, includes those who have a bachelor's degree or higher.

¹⁴ Data correspond to years 1971, 1980, 1990, 1994, 1999, 2004, and 2008.

¹⁵ Data correspond to years 1973, 1982, 1990, 1994, 1999, 2004, and 2008.

¹⁶ The poverty rate does not reflect noncash government transfers.

¹⁷ Food-insecure classification is based on reports of three or more conditions that characterize households when they are having difficulty obtaining adequate food, out of a total of 10 such conditions.

¹⁸ 2012 reflects average monthly participation from January through September 2012.

¹⁹ Data values shown are 1962, 1983, 1989, 1995, 2001, 2004, and 2010. For 1962, the data source is the SFCC; for subsequent years, the data source is the SCF.

²⁰ Expenditures for housing and utilities exceed 50 percent of reported income. Some data interpolated.

²¹ Inadequate housing has moderate to severe physical problems, usually poor plumbing or heating or upkeep problems. Some data interpolated.

²² Data for 2011 are preliminary.

²³ Total activity limitation includes special education and other limitations, including limitations in children's ability to walk, care for themselves, or perform other activities.

²⁴ Activity limitation among adults aged 18 and over is defined as having a basic action difficulty in one or more of the following: movement, emotional, sensory (seeing or hearing), or cognitive.

²⁵ Activities of daily living include include bathing or showering, dressing, getting in or out of bed or a chair, using the toilet, and eating.

²⁶ Participation in leisure-time aerobic and muscle-strengthening activities that meet 2008 Federal physical activity guidelines.

²⁷ BMI refers to body mass index.

²⁸ Percentage at or above the sex-and age-specific 95th percentile BMI cutoff points from the 2000 CDC growth charts.

²⁹ Percent of age 18 and over who had five or more drinks in a day on at least 12 days in the past year.

³⁰ 2012 values are projected.

³¹ Recommended vaccine series changed over time. 1995 and 2000 data correspond with the 4:3:1:3:3 recommended series; 2005 data correspond with the 4:3:1:3:3:1 series; 2010 and 2011 data correspond with the 4:3:1:3:3:1:4 series.

³² Property crimes, including burglary, motor vehicle theft, and property theft, reported by a sample of households. Includes property crimes both reported and not reported to law enforcement.

³³ Violent crimes include rape, robbery, aggravated assault, and simple assault. Includes crimes both reported and not reported to law enforcement. Due to methodological changes in the enumeration method for NCVS estimates from 1993 to present, use caution when comparing 1980 and 1990 criminal victimization estimates to future years. Estimates from 1995 and beyond include a small number of victimizations, referred to as series victimizations, using a new counting strategy. High-frequency repeat victimizations, or series victimizations, are six or more similar but separate victimizations that occur with such frequency that the victim is unable to recall each individual event or describe each event in detail. Including series victimizations in national estimates can substantially increase the number and rate of violent victimization; however, trends in violence are generally similar regardless of whether series victimizations are included. See Methods for Counting High-Frequency Repeat Victimizations in the National Crime Victimization Survey for further discussion of the new counting strategy and supporting research.

³⁴ The gross emissions indicator does not include sinks, which are processes (typically naturally occurring) that remove greenhouse gases from the atmosphere. Gross emissions are therefore more indicative of trends in energy consumption and efficiency than are net emissions.

Table 6–2. SOURCES FOR SOCIAL INDICATORS

	Indicator	Source
Economic		
General Economic Conditions		
1	Real GDP per person (2005 dollars)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national
2	Real GDP per person change, 5-year annual average	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national
3	Consumer Price Index	Bureau of Labor Statistics, BLS Consumer Price Index Program. http://www.bls.gov/cpi
4	Private goods producing (%)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national
5	Private services producing (%)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national
Jobs and Unemployment		
6	Labor force participation rate (%)	Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/cps
7	Employment (millions)	Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/cps
8	Employment-population ratio (%)	Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/cps
9	Payroll employment change - December to December (millions)	Bureau of Labor Statistics, Current Employment Statistics program. http://www.bls.gov/ces/
10	Payroll employment change - 5-year annual average (millions)	Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/cps
11	Civilian unemployment rate (%)	Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/cps
12	Unemployment plus marginally attached and underemployed (%)	Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/cps
13	Receiving Social Security disabled-worker benefits (% of population)	Social Security Administration, Office of Research, Evaluation, and Statistics, Annual Statistical Supplement to the Social Security Bulletin, tables 4.C1 5.A4. http://www.ssa.gov/policy/docs/statcomps/supplement/
Infrastructure, Innovation, and Capital Investment		
14	Nonfarm output per hour (average 5 year % change)	Bureau of Labor Statistics, Major Sector Productivity Program. http://www.bls.gov/lpc/
15	Corn for grain production (billion bushels)	National Agricultural Statistics Service, Agricultural Estimates Program. http://www.nass.usda.gov/
16	Real net stock of fixed assets and consumer durable goods (billions of 2010\$)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national
17	Population served by secondary wastewater treatment or better (%)	U.S. Environmental Protection Agency, Clean Watersheds Needs Survey. http://water.epa.gov/scitech/datait/databases/cwns/index.cfm
18	Electricity net generation (kWh per capita)	U.S. Energy Information Administration, Annual Energy Review Table 8.2a (Col. 16) divided by Table D1 (Col. 1). http://www.eia.gov/totalenergy/data/annual/index.cfm
19	Patents issued to U.S. residents (per 1,000 population)	U.S. Patent and Trademark Office, Electronic Information Products Division, Patent Technology Monitoring Team. http://www.uspto.gov/products/catalog/ptmd/patent_statistics.jsp
20	Net national saving rate (% of GDP)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national
21	R&D spending (% of GDP)	National Science Foundation, National Patterns of R&D Resources. http://www.nsf.gov/statistics/natpatterns/
Demographic and Civic		
Population		
22	Total population (millions)	U.S. Census Bureau, Population Division, Vintage 2012 Population Estimates (2012), Vintage 2011 Population Estimates (2010-2011), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970).
23	Foreign born population (millions) xx/	U.S. Census Bureau, Population Division, Decennial Census and American Community Survey. http://www.census.gov/prod/www/abs/decennial/ and http://www.census.gov/acs
24	17 years and younger (%)	U.S. Census Bureau, Population Division, Vintage 2012 Population Estimates (2012), Vintage 2011 Population Estimates (2010-2011), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970)
25	65 years and older (%)	U.S. Census Bureau, Population Division, Vintage 2012 Population Estimates (2012), Vintage 2011 Population Estimates (2010-2011), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970)
26	85 years and older (%)	U.S. Census Bureau, Population Division, Vintage 2012 Population Estimates (2012), Vintage 2011 Population Estimates (2010-2011), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970)
Household Composition		
27	Ever married (% of age 15 and older)	U.S. Census Bureau, Current Population Survey. http://www.census.gov/hhes/families/
28	Average family size	U.S. Census Bureau, Current Population Survey. http://www.census.gov/hhes/families/
29	Births to unmarried women age 15-17 (per 1,000)	Centers for Disease Control and Prevention, National Vital Statistics Report. http://www.cdc.gov/nchs/nvss.htm
30	Single parent households (%)	U.S. Census Bureau, Current Population Survey. http://www.census.gov/hhes/families/
Civic Engagement		
31	Average charitable contribution per itemized tax return (2010 dollars)	U.S. Internal Revenue Service, Statistics of Income - Individual Income Tax Returns (IRS Publication 1304). Returns-Publication-1304-(Complete-Report)">http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Income-Tax>Returns-Publication-1304-(Complete-Report)

TABLE 6-2. SOURCES FOR SOCIAL INDICATORS—Continued

	Indicator	Source
32	Voting for President (% of voting age population)	The Office of the Clerk of the U.S. House of Representatives and the U.S. Census Bureau, Current Population Survey. http://www.census.gov/cps/
33	Persons volunteering (% age 16 and older)	U.S. Census Bureau, Current Population Survey. http://www.census.gov/cps/
Socioeconomic		
Education		
34	High school graduates (% of age 25-34)	U.S. Census Bureau, Decennial Census and American Community Survey. http://www.census.gov/prod/www/abs/decennial/ and http://www.census.gov/acs
35	College graduates (% of age 25-34)	U.S. Census Bureau, American Community Survey. http://www.census.gov/acs
36	Reading achievement score (age 17)	National Center for Education Statistics, National Assessment of Educational Progress. http://nces.ed.gov/nationsreportcard/
37	Math achievement score (age 17)	National Center for Education Statistics, National Assessment of Educational Progress. http://nces.ed.gov/nationsreportcard/
38	Science and engineering graduate degrees (% of total graduate degrees)	National Center for Education Statistics, Integrated Postsecondary Education Data System. http://nces.ed.gov/ipeds/
39	Receiving special education services (% of age 3-21 public school students)	National Center for Education Statistics, Digest of Education Statistics, 2012. http://nces.ed.gov/programs/digest/d12/tables/dt12_046.asp
Income, Savings, and Inequality		
40	Real median income: all households (2011 dollars)	U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. http://www.census.gov/hhes/www/income/data/historical/household/
41	Real disposable income per capita average (2005 dollars)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
42	Adjusted gross income share of top 1% of all taxpayers	U.S. Internal Revenue Service, Statistics of Income. http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Statistical-Tables-by-Tax-Rate-and-Income-Percentile
43	Adjusted gross income share of lower 50% of all taxpayers	U.S. Internal Revenue Service, Statistics of Income. http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Statistical-Tables-by-Tax-Rate-and-Income-Percentile
44	Personal saving rate (% of disposable personal income)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
45	Poverty rate (%)	U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. http://www.census.gov/hhes/www/poverty/publications/pubs-cps.html
46	Food-insecure households (% of all households)	Economic Research Service, Household Food Security in the United States report series. http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/readings.aspx
47	Supplemental Nutrition Assistance Program (formerly Food Stamps)	Food and Nutrition Service, USDA
48	Median wealth of households, age 55-64 (in thousands of 2010 dollars)	Board of Governors of the Federal Reserve System, Survey of Consumer Finances Chartbook. http://www.federalreserve.gov/econresdata/scf/scfindex.htm
Housing		
49	Homeownership among families with children (%)	U.S. Census Bureau, American Housing Survey. http://www.census.gov/housing/ahs
50	Families with children and severe housing cost burden (%)	U.S. Census Bureau, American Housing Survey as tabulated by the Housing and Urban Development's Office of Policy Development and Resesarch. http://www.census.gov/housing/ahs
51	Families with children and inadequate housing (%)	U.S. Census Bureau, American Housing Survey as tabulated by the Housing and Urban Development's Office of Policy Development and Resesarch. http://www.census.gov/housing/ahs
Health		
Health Status		
52	Life expectancy at birth	Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System (mortality), Health, United States, 2012 forthcoming, Table 18. http://www.cdc.gov/nchs/nvss.htm
53	Infant mortality (per 1,000 live births)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System (natality), Health, United States, 2012 forthcoming, Table 13. http://www.cdc.gov/nchs/nvss.htm
54	Low birthweight [<2,500 gms] (% of babies)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System (natality), Health, United States, 2012 forthcoming, Table 6. http://www.cdc.gov/nchs/nvss.htm
55	Activity limitation (% of age 5-17)	Office of Special Education and Rehabilitative Services. http://www2.ed.gov/about/offices/list/osep/osep/index.html
56	Activity limitation (% of age 18 and over)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey. http://www.cdc.gov/nchs/nhis.htm
57	Difficulties with activities of daily living (% of age 65 and over)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey (for 2000 and 2005), Health, United States, 2008, Table 58, age-adjusted. http://www.cdc.gov/nchs/nhis.htm
Health Behavior		
58	Engaged in regular physical activity (% of age 18 and older)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, Health, United States, 2012 forthcoming, Table 67, age adjusted. http://www.cdc.gov/nchs/nhis.htm

TABLE 6-2. SOURCES FOR SOCIAL INDICATORS—Continued

	Indicator	Source
59	Obesity (% of age 20-74 with BMI 30 or greater)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey, Health, United States, 2012 forthcoming, Table 68, age adjusted. http://www.cdc.gov/nchs/nhis.htm
60	Obesity (% of age 2-19)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey. http://www.cdc.gov/nchs/nhis.htm
61	Cigarette smokers (% of age 18 and older)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, Health, United States, 2012 forthcoming, Table 54, age adjusted. http://www.cdc.gov/nchs/nhis.htm
62	Excessive alcohol use (% of age 18 and older)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, Health, United States, 2012 forthcoming, Table 62, age adjusted. http://www.cdc.gov/nchs/nhis.htm
	Access to Health Care	
63	Total national health expenditures (% of GDP)	Centers for Medicare and Medicaid Services, National Health Expenditures Data. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html
64	Persons without health insurance (% of age 18-64)	U.S. Census Bureau, Current Population Survey Annual Social and Economic Supplement. http://www.census.gov/hhes/www/poverty/publications/pubs-cps.html
65	Persons without health insurance (% of age 17 and younger)	U.S. Census Bureau, Current Population Survey Annual Social and Economic Supplement. http://www.census.gov/hhes/www/poverty/publications/pubs-cps.html
66	Children age 19-35 months with recommended vaccinations (%)	Centers for Disease Control and Prevention, National Immunization Survey. http://www.cdc.gov/nchs/nhis.htm
	Security and Safety	
	Crime	
67	Property crimes (per 100,000 households)	Bureau of Justice Statistics, National Crime Victimization Survey. http://bjs.ojp.usdoj.gov/index.cfm?ty=tp&tid=32
68	Violent crime victimizations (per 100,000 population age 12 or older)	National Crime Victimization Survey. http://bjs.ojp.usdoj.gov/index.cfm?ty=tp&tid=32
69	Murder rate (per 100,000 persons)	Federal Bureau of Investigation, Uniform Crime Reports, Crime in the United States. http://www.fbi.gov/about-us/cjis/ucr/ucr
	Transportation Safety	
70	Safety belt use (%)	Bureau of Transportation Statistics, National Transportation Statistics (as compiled from Safety Belt and Helmet Use in 2002 and Traffic Safety Facts). http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/index.html
71	Highway fatalities	Bureau of Transportation Statistics, National Transportation Statistics. http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/index.html
	Environment and Energy	
	Air Quality and Greenhouse Gases	
72	Ground level ozone (ppm) based on 247 monitoring sites	U.S. Environmental Protection Agency, Latest Findings on National Air Quality. http://www.epa.gov/airtrends/reports.html
73	Particulate matter 2.5 (ug/m3) based on 646 monitoring sites	U.S. Environmental Protection Agency, Latest Findings on National Air Quality. http://www.epa.gov/airtrends/reports.html
74	Annual mean atmospheric CO2 concentration (Mauna Loa, Hawaii; ppm/yr)	National Oceanic and Atmospheric Administration. http://www.esrl.noaa.gov/gmd/ccgg/trends/#mlo_data
75	Gross greenhouse gas emissions (teragrams CO2 equivalent)	U.S. Environmental Protection Agency, 2010 Inventory of Greenhouse Gases. http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html
76	Net greenhouse gas emissions, including sinks (teragrams CO2 equivalent)	U.S. Environmental Protection Agency, 2010 Inventory of Greenhouse Gases. http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html
77	Gross greenhouse gas emissions per capita (metric tons CO2 equivalent)	U.S. Environmental Protection Agency, 2010 Inventory of Greenhouse Gases. http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html
78	Gross greenhouse gas emissions per 2005\$ of GDP (kilograms CO2 equivalent)	U.S. Environmental Protection Agency, 2011 Inventory of Greenhouse Gases. http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html
	Energy	
79	Energy consumption per capita (million BTU)	U.S. Energy Information Administration, Annual Energy Review, Table 1.5, Col. 2. http://www.eia.gov/totalenergy/data/annual/index.cfm
80	Energy consumption per 2005\$ GDP (thousand BTU per 2005\$)	U.S. Energy Information Administration, Annual Energy Review, Table 1.5, Col. 10. http://www.eia.gov/totalenergy/data/annual/index.cfm
81	Electricity net generation from renewable sources, all sectors (% of total)	U.S. Energy Information Administration, Annual Energy Review, Table 8.2a. http://www.eia.gov/totalenergy/data/annual/index.cfm

7. DELIVERING A HIGH-PERFORMANCE GOVERNMENT

The Federal government has a positive impact on the quality of American lives. It influences the safety of the communities in which we live, the roads on which we drive, and the airplanes in which we fly. It enables those harmed by natural disasters to recover faster and increases access to capital for entrepreneurs and small business owners. The Federal government enables more young people to go to college and get jobs, and more seniors to maintain their quality of life. The men and women of the armed forces defend our nation and the Federal government, in turn, attends to the needs of military families and the veterans who so ably served. The responsibilities of agencies are vast, varied, and significant. The Department of the Interior, for example, is the largest supplier and manager of water in 17 states, delivers irrigation to 31 million people and one out of every five western farmers, and manages lands that produce over 30 percent of the nation's energy.

The Federal government has the ability and responsibility to improve the quality of the lives of the American people, the safety of our communities, and the strength of our economy.

A Culture of Performance Improvement

Because government can have such a positive impact on the quality of people's lives, good management of programs is essential. The challenge agencies face is using their tools of program delivery, such as grants, contracts, regulation, information collection, and information dissemination, in ways that yield the highest return on taxpayer dollars. The Obama Administration expects agencies to use evidence to set priorities and find increasingly effective and cost-effective practices. It expects them to test new practices to identify those that successfully solve problems, advance opportunities, and boost productivity. It expects agency leaders to adjust and re-allocate resources or change practices as new evidence is obtained, and to constantly ask if lower cost options are available to accomplish the same or higher levels of performance. Finally, it expects agencies to share information with the public to enhance accountability and facilitate understanding of the services the government provides.

To fulfill these expectations, the Obama Administration has emphasized six practices:

1. goal-setting;
2. frequent measurement of performance and other indicators;
3. ongoing analysis;
4. use of evidence in decision-making;
5. data-driven reviews; and
6. information dissemination that is timely, accessible, and user-friendly.

These six practices are essential for finding what works and what needs fixing. They support agency efforts to achieve better outcomes for each dollar spent. These six practices help clarify what agencies are trying to accomplish, why they are focused on those goals, how they plan to accomplish those goals, and how well they achieve them. Effective communication about our performance goals, progress, and results strengthens democratic decision-making and builds a culture of continuous improvement in government.

To emphasize and enhance these performance practices across the Federal government, in 2009 the Obama Administration directed agency leaders to set high-priority performance goals (Priority Goals). The Priority Goals represent a small number of specific, ambitious, outcome-focused goals selected by agency leaders. They are near-term implementation priorities each agency is working to accomplish within two years, without new legislation or funding.

Agencies set new Priority Goals every two years. The current set was established for FY 2012-2013. The Deputy Secretary (or Chief Operating Officer) of each agency is responsible for running quarterly progress reviews and designating a senior official responsible for driving progress on each Priority Goal. Goal Leaders are expected to select strategies using appropriately rigorous evidence, set milestones, and assess progress at least once a quarter. Every quarter, major agencies report progress on their Priority Goals on Performance.gov.

Complementing Agency Priority Goals, the Administration has also selected 14 Federal Cross-Agency Priority (CAP) Goals to deliver on the President's commitment. CAP Goals have been set for: exports; entrepreneurship and small businesses; energy efficiency; broadband; science, technology, engineering, math education; job training; and transitioning returning veterans to civilian jobs. CAP Goals have also been set to improve sustainability, cybersecurity, and other aspects of Federal government operations.

Doing What Works; Fixing What Doesn't

The following examples illustrate how adoption of these six practices is translating to tangible improvements in the lives of the American people. These examples represent a small subset of the vast contributions Federal agencies make to people, communities, and the economy.

Strengthening the Economy with Faster Patent Processing.

Timely, high-quality processing of patent applications cultivates and protects innovation and boosts economic prosperity. The backlog of patent applications has been reduced to the lowest level in years despite increases in

filings last year and this year. From its peak, of approximately 764,000 in January 2009, the patent backlog has been reduced to approximately 595,078 in February 2013. http://goals.performance.gov/goal_detail/DOC/338

Broader Broadband Coverage.

Access to broadband capabilities is growing at a rapid rate, providing a strong foundation for economic growth, job creation, and global competitiveness. As of June 2012, 81% of Americans have access to advanced wireless broadband and the ability to enjoy minimum download speeds of at least 6 megabits per second, up from 36% in mid-2010. When wired connections are included, availability jumps to almost 96%. <http://goals.performance.gov/node/38578>

Energy Efficiency.

Energy efficiency is one of the least expensive, most cost-effective ways to enhance the nation's energy security, save money for American households, reduce dependence on oil, and ensure a clean environment. The Federal government is pursuing strategic opportunities to boost energy efficiency in four areas: buildings, industry, transportation, and federal operations. Energy productivity improved by more than 6 percent from the fourth quarter of calendar year 2010 through the fourth quarter of 2012: the total quarterly average energy consumption held steady at 24.55 quadrillion British Thermal Units (BTUs), while the quarterly average GDP increased from \$13,181 billion (\$2005) to \$13,506. As one example of federally supported actions in the buildings sector, over 1.2 million homes of American families have been retrofitted since 2009, with annual per household energy savings from each retrofit between \$250 to \$450 dollars. As a result of this effort, more than 30 trillion BTUs of energy per year have been saved, and approximately 3 million metric tons of greenhouse gases (carbon dioxide equivalent) have been reduced annually. <http://goals.performance.gov/node/38504>

Renewable Energy.

The Federal government continues to support increased renewable energy production capacity on Federal lands. Since the U.S. Department of the Interior first set a goal in FY 2010 to develop all appropriate sources of renewable and conventional energy on U.S. public lands and waters, the department has authorized over 10,900 megawatts of solar, wind, and geothermal energy projects on or crossing Interior lands. This approved capacity, if fully developed, could generate enough energy to power millions of homes. In contrast, for thirty years prior to setting this goal, between 1978 and 2009, Interior approved only a small number of wind and geothermal renewable energy projects, estimated to provide for development of about 1,500 megawatts of renewable energy. http://goals.performance.gov/goal_detail/DOI/379

Reducing Water Shortages and Costs.

The Nation faces an increasing set of water resource challenges: aging infrastructure, rapid population growth, depletion of groundwater resources, and climate variability and change. Water issues and challenges are increasing in the West, even in "normal" years, due in part to prolonged drought and shifting population patterns. Traditional water management approaches no longer meet today's need. The Department of the Interior's Bureau of Reclamation is working closely with other governments, private entities, and individuals to identify practices that will increase water conservation capacity in western states. Since FY 2010, the Bureau has funded projects that have increased conservation capability by over 600,000 acre-feet and will continue this important work in FY 2014. http://goals.performance.gov/goal_detail/DOI/382

Safer, Lower-Cost Health Care.

Hospital-acquired infections (HAIs) are a significant cause of morbidity and mortality in the United States,

A Case Study: The National Highway Transportation and Safety Administration (NHTSA) has long taken a goal-focused, data-driven, evidence-based approach to reduce traffic fatalities. It integrates performance measurements, retrospective evaluations, and experiments into its operations.

Since its inception, NHTSA has worked with states to code every fatal accident in the country, noting characteristics of the operator, equipment, environmental situation (e.g., traffic light), and jurisdiction. It complements this performance information with information about accident costs, enabling the agency and its delivery partners to detect performance variations and target actions to situations likely to be the most costly and risky.

NHTSA supports ongoing performance measurement with occasional studies and experiments. For example, it analyzes how changes in state law, such as allowing police to stop and check drivers for seat belt use, correlate with changes in traffic fatalities. Currently, it is running an experiment to see if lessons learned from its highly successful enforcement-and-marketing campaign to increase seat belt use, "Click-It-or-Ticket," can be used to reduce distracted driving in a different campaign, "Cell Phone in One Hand, Ticket in the Other." NHTSA initially tested its distracted driving campaign in two municipalities. Distracted driving dropped by a third in one (Syracuse) and over 50% in the other (Hartford). NHTSA is now testing if the results can be replicated in larger areas, an eight-county region of California and the state of Delaware. <http://www.distracted.gov/content/dot-action/enforcement.html>

accounting for an estimated 1.7 million infections in hospital patients, 99,000 associated deaths in 2002, and approximately \$28 to \$33 billion dollars in excess health-care expenditures. Two of the most serious, common, and preventable infections are central line-associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections. The Department of Health and Human Services is working hard with the private sector, other levels of government, and medical professionals to cut the number of infections. In October 2012, as part of a 4-year nationwide initiative, over 1,000 hospital intensive care units achieved a 41 percent reduction in the CLABSI rates. This equates to more than 2,000 CLABSIs prevented, more than 500 lives saved, and over \$34 million in excess costs avoided. The Budget includes an increase of \$12 million within the Centers for Disease Control and Prevention (CDC) to expand reporting of HAIs through CDC's National Healthcare Safety Network to more than 1,800 additional healthcare sites. http://goals.performance.gov/goal_detail/HHS/375

Fewer Homeless Veterans.

The Departments of Veterans Affairs and the Housing and Urban Development have been working together to eliminate veterans' homelessness by 2015. The Annual Homeless Assessment Report to Congress estimates the number of sheltered and unsheltered homeless persons on a single night in January. In 2012, the annual homeless count estimated 62,619 homeless veterans, down 7.2 percent from 2011 and 18 percent from 2010. http://goals.performance.gov/goal_detail/VA/331

Violent Crime Reduction in Tribal Communities.

The Bureau of Indian Affairs in the Department of the Interior is working with tribal communities to reduce violent crime. At the end of FY 2011, violent crime had declined an average of 35 percent across four high-crime reservations in just two years. One year later, violent crime is down across all four tribal communities – an average 55% reduction in violent crime incidents relative to the 2009 baseline. Interior will continue its community policing programs, maintaining efforts at the four reservations and focusing on an additional two communities. To promote adoption of these promising practices by all tribal communities, the bureau has prepared a “Crime-Reduction Best Practices Handbook.” <http://www.bia.gov/cs/groups/xojs/documents/text/idc-018678.pdf>.

Saving Taxpayer Dollars with Paperless Treasury Transactions.

Treasury has cut the number of paper claims it handles from a high of 195.5 million in 2007 to 41 million in 2012, saving the Federal government an average of \$100 million annually. http://goals.performance.gov/goal_detail/TREAS/335

Faster Social Security Disability Hearing Decisions.

The Social Security Administration has reduced the average processing time for a hearing before an

Administrative Law Judge from an all-time high of 532 days in August 2008 to 362 days as of September 2012. http://goals.performance.gov/goal_detail/SSA/357

In addition, the Administration is building on previous efforts to eliminate waste, reduce duplication, and save costs. Agencies are making noteworthy progress addressing fragmentation in areas as diverse as exports and veterans' homelessness. For example, in February 2012, the President issued a memorandum directing the Export Promotion Cabinet to work across agencies to identify overlap and duplication and to maximize the combined effectiveness of their programs and initiatives in support of the Administration's strategic trade and investment priorities.

Looking Forward

Experience over the last four years reinforced prior evidence about the benefits of the six management practices. It is also refining our understanding of smarter ways to apply these practices:

Goal Ownership Improves Results.

Goals and measures are merely words unless someone assumes responsibility for managing their progress. The designation of goal leaders for each Priority Goal, and quarterly reviews run by Chief Operating Officers, assure high-level attention to Priority Goal execution. Many goal leaders, in turn, are clarifying who needs to do what by when to achieve a national goal. In forthcoming strategic plans, agencies will expand on this best practice of assigning clear goal ownership by identifying the lead office responsible for each strategic objective.

Improvement is the Objective, not Target Attainment.

Ambitious goals energize people and encourage creativity, innovation, and cross-organization collaboration that can lead to better outcomes and higher productivity. By definition, ambitious goals are hard to meet. Therefore, when progress on a goal is less than expected, agencies are accountable for understanding why and having a cogent evidence-based strategy to improve. Also, agencies that meet all of their ambitious targets will be asked to set more ambitious targets in the future.

Diagnostic Analyses, Experiments, and Other Studies Make Measurement Actionable.

Analysis turns performance measurement into actionable information. While it is good to know if a national trend is moving in the right direction, that knowledge alone does not suggest a next step. Finding variations in trends or outliers can lead to the discovery of better practices. The Department of Housing and Urban Development has taken this approach in its efforts to reduce veterans' homelessness. (See <http://goals.performance.gov/delivering-better-results-using-frequent-data-driven-reviews>.)

Agencies are applying a variety of data diagnostics to prepare for quarterly Priority Goal performance reviews,

strategy selection, and other data-driven discussions. They are increasingly complementing analyses of their performance and operational data with other studies, replication demonstrations, and experiments to find increasingly effective and cost-effective approaches, discussed in greater detail in the next chapter.

Transparency Motivates, Educates, and Facilitates Cooperation.

Transparency strengthens accountability to the public, and can also lead to improved outcomes, greater productivity, and better decision-making. Performance.gov makes it easier for the public to see how, why, and what the Federal Government is trying to accomplish. The site also supports collaboration on shared goals and facilitates learning across and beyond agencies, including soliciting feedback from the public. In the future, efforts will be undertaken to test use of the website to facilitate coordination among goal allies, enlist ideas and assistance to accelerate progress on goals, and enhance public understanding of the work of the Federal government.

Attention to Audience Enables Delivery Partners and Others To Make Better Choices.

Federal agencies depend on a wide variety of partners to improve public outcomes. Therefore, agencies must consider how performance information can best be provided to support their needs. In education, for example, key audiences for performance information include state education departments, local school superintendents, school principals, teachers, parents, non-profit organizations, and for-profit companies. All need performance information but need it delivered, displayed, and analyzed in different ways, often for different purposes. Agencies are being asked to think strategically about their delivery partners' information needs and to return data to data suppliers with value added through analyses in order to achieve better results.

Leveraging Networks Boosts Returns.

Formal and informal networks, both within and outside government, are invaluable resources for leveraging the impact of government action. The Administration has

been building and strengthening networks, such as the Partnership for Patients, to facilitate sharing of actionable data and speed adoption of evidence-based practices. Formal networks within government, such as the Performance Improvement Council (PIC) and the Chief Human Capital Officers' Council (CHCOC), function as valuable learning networks to identify and exchange information about best practices. Smaller working groups, such as the PIC working group on quarterly data-driven progress reviews, tackle shared challenges. The PIC and CHCOC are working together to use Employee Viewpoint Survey data to improve employee engagement and organizational performance. Several evidence-building learning networks have also been created and are discussed in the next chapter.

Emphasizing Outcomes Improves Results.

Alignment to outcome-focused goals helps ensure organizations focus on what matters most to the public. Maintaining a line of sight toward those outcomes supports an agency's ability to identify better practices, rather than assuming its current approach is best. Goals focused on areas such as reducing hospital-acquired infections or boosting energy efficiency also enlist expertise, ideas, and assistance from external allies. Building on the success of Priority Goals, in the coming year, agencies will identify outcome-focused strategic objectives in their strategic plans and begin to use them as a mechanism for improving results across their agency. Each year, agencies will review progress on the strategic objectives, and, using the evidence, identify opportunities for improvement.

Conclusion

Smarter Federal performance management practices are translating to better value for the American people. At the same time, the Federal government is doing business smarter, improving quality while cutting costs. By adopting proven management practices, such as ambitious goals set by leaders combined with frequent data-driven reviews, Federal agencies are continually improving their ability to serve the American people.

8. PROGRAM EVALUATION AND DATA ANALYSIS

The Administration is committed to using taxpayer dollars effectively and efficiently. Central to that commitment is a culture where agencies constantly (1) ask and answer questions that help them find, implement, spread, and sustain effective programs and practices, (2) identify and fix or eliminate ineffective programs and practices, (3) test promising programs and practices to see if they are effective and can be replicated, and (4) find lower cost ways to achieve positive impacts. The Federal fiscal situation necessitates improvements in efficiency and at times doing more with less, not only to reduce budget deficits, but also to build confidence that Americans are receiving maximum value for their hard-earned tax dollars. More fundamentally, government programs are typically designed to address particular policy challenges. Without measurement and testing, those challenges are more likely to persist and opportunities to try other approaches are squandered.

OMB's *May 2012 "Use of Evidence and Evaluation in the 2014 Budget" memo* encouraged a broad-based set of activities to better integrate evidence and rigorous evaluation in budget, management, and policy decisions, such as adopting more evidence-based structures for grant programs, building evaluation capacity, making better use of data within government agencies, and developing tools to better communicate what works. The memo stated that: "Where evidence is strong, we should act on it. Where evidence is suggestive, we should consider it. Where evidence is weak, we should build the knowledge to support better decisions in the future."

The best government programs use a broad range of analytical and management tools, i.e. an "evidence infrastructure," to learn what works (and what doesn't) and improve results. In doing so, they create a culture of continuous feedback and improvement.

- It is a culture that keeps asking, "How can we do things better?" and approaches public policy and management challenges with humility about what we know or don't know about what works.
- It is a culture that values rapid, operationally-focused experiments that can quickly boost program efficiency, effectiveness and customer service, while at the same time equally valuing longer-term evaluation focused on more fundamental questions about program strategy.
- It is a culture that sees program evaluation and performance measurement as valuable, complementary tools, since each has different strengths.
- It is a culture that believes in using data to drive decision-making and is not satisfied with anecdotal evidence, since intuition about what works is often wrong.

- It is a culture where people are open to changing their minds and practices based upon evidence.
- It is a culture that is committed to publically disseminating results from evaluations in an open and transparent manner, never suppressing evidence because it is politically inconvenient.
- It is a culture that sees improved program performance not as a destination that can be reached with the right tool or strategy, but as a process of ongoing program refinement, since new challenges will always arise and new knowledge and innovations can always bring better outcomes and efficiencies.

Among the most important analytical tools is program evaluation, which can produce rigorous evidence about program effectiveness. For example, evaluations using experimental or quasi-experimental methods can identify the effects of programs in situations where doing so is difficult using other tools. Qualitative evidence can complement this work by providing insight into how programs and practices can be implemented successfully. And less rigorous tools can shed light on important issues. For example, descriptive regression analyses of administrative data can reveal important patterns that inform decisions, such as how to better match recipients with appropriate services. Agencies also often use statistical time series data, such as those presented in Chapter 6, "Social Indicators," of this volume, to take a broad look at societal and economic trends over time. They also use this information to prioritize among policy interests and budgetary resources, to inform the design of policies, and to provide the benchmarks that are used to assess the effects of policy changes.

Role of Performance Measurement

Performance measurement is another critical analytical and management tool. By tracking inputs, outputs, outcomes and measures of efficiency, programs can generate data that managers can then use to improve program performance. Simply collecting performance data, after all, is unlikely to change anything in itself. Performance data are useful when the data is high quality and actively used to ask and answer questions about what's being achieved, identify the most pressing program challenges, set goals, monitor results, and celebrate progress. This is the process of moving from performance measurement to performance management.

Too often, though, performance measurement and program evaluation are seen as completely separate tools, with agency experts housed in separate units that work independently of each other. Bridging that divide will be important in order to take advantage of the synergy between the two approaches. For example, evaluation's main

strength lies in its ability to generate rigorous insights about program effectiveness, so that programs can be adapted and improved. But evaluation, especially when focused on longer-term outcomes, by definition takes time to produce insights. Performance measurement, on the other hand, harnesses readily available program data and uses it to set goals, track performance and improve results.

Role of Program Evaluation

Performance measures are an essential resource for agencies to understand ongoing, real-time program performance so they can use that information to build a culture of continuous improvement, but they often do not tell us a lot about some key questions. Program evaluations (of all types) and other data analytics provide context for the performance measures and help us better understand what can be learned from them. In addition, rigorous impact evaluations, in particular those with random assignment to program and control groups, can provide better evidence of whether a program works and whether an alternative practice might work better. For example, if a job training program has a high job placement rate, is it because it is effective or because it attracts those easiest to place in jobs? An evaluation could compare the employment of participants to comparable individuals who did not participate in the program in order to isolate the effects of the training from other factors.

Evaluations can answer a wide-range of germane questions such as whether workers are safer in facilities that are inspected more frequently, whether one approach to turning around low-performing schools is more effective than another, whether outcomes for families are substantially improved in neighborhoods that receive intensive services, whether no-fee debit cards increase savings among the unbanked, and whether re-employment services are cost-effective.

This Administration is strongly encouraging appropriately rigorous evaluations to determine the impact of programs and practices on outcomes. In many policy debates, stakeholders come to the table with deep disagreements about the effectiveness or ineffectiveness of particular interventions. Evaluations that are sufficiently rigorous, relatively straightforward, and free from political interference are especially valuable in such circumstances. Historically, evaluations have generally not been built into program designs. And once a program is up and running, building a constituency for evaluation is hard. As a result, the active use of evidence and evaluation to manage and improve programs is too rare. The Administration is committed to addressing these challenges, but will need help from Congress and other stakeholders.

Operationalizing an Evidence Infrastructure

Developing and supporting the use of evidence and evaluation in decision-making requires a coordinated effort between those charged with managing the operations of a program and those responsible for using data and evaluation to understand a program's effectiveness. It requires consistent messages from leaders at different

levels of an agency—e.g., policy officials, program and performance managers, strategic planning and budget staff, evaluators, and statistical staff—to ensure that evidence is valued, collected or built, analyzed, understood, and appropriately acted upon. No one individual in an agency has the knowledge and skills necessary to develop research designs that address actionable questions, understand different types of evidence, interpret evidence, and develop and implement effective, evidence-based practices. Rather, it takes an agency leadership team to oversee these efforts and to build and sustain a culture of learning. It also takes a team of “implementers” at the program level to encourage the use of evidence and data so that it reaches program management.

Who is on these teams and how their work is divided depends upon the specific needs, personnel, and structure of a given agency. Success of these teams depends on including leadership at the agency and bureau level capable of supporting and requiring programs' use of data and evaluation in program operations. This leadership team, working together with OMB and Congress, can make sure that the right questions are being asked about the program's effectiveness and its operations. Program managers are responsible for creating a culture where all operational decisions and internal and external communications of progress are based on evidence and data. In order to do so, the program managers need a team of both data analysts and evaluators. These individuals can provide the data and analysis and package it in a way that helps inform the program's operational and policy decisions, including understanding the different types of evidence available and its implications for decisions, as well as identifying the need for new descriptive data and evaluation studies.

The Administration and Congress have made progress in basing Federal decision-making on data and evidence, but more progress is needed. Chapter 7, “Delivering High-Performance Government,” in this volume discusses how Administration efforts are helping focus agencies on setting high-priority goals and measuring their progress on those goals.

Tiered-Evidence Grant Programs and Innovation Funds

Because many Federal dollars flow to States, localities, and other entities through competitive and formula grants, grant reforms are an important component of strengthening the use of evidence in government. The goals include encouraging a greater share of grant funding to be spent on approaches with strong evidence of effectiveness and building more evaluation into grant-making so that we keep learning more about what works.

Among the most exciting advancements in this area are so-called “tiered-evidence” or “innovation fund” grant designs. The Administration has adopted multi-tiered grant programs in the areas of education interventions, teenage pregnancy prevention, social innovations, voluntary home visitations for parents, workforce interventions, international assistance efforts, and science, technology, engineering, and mathematics programs. These

initiatives are designed to focus money on practices with strong evidence but still allow for new innovation. For example, in a three-tiered grant model, grantees that use practices with strong evidence qualify for the top, “scale up” tier and receive the most funding. Grantees that use approaches with more limited evidence qualify for the middle, “validation” tier. They can receive more limited funding along with support for evaluation. And grantees using innovative but untested approaches may qualify for the third tier, “proof of concept” and receive the least funding, but also support for evaluation.

A good example of this approach is the Department of Education’s Investing in Innovation Fund (i3). The i3 fund invests in high-impact, potentially transformative education interventions, ranging from new ideas with significant potential to those with strong evidence of effectiveness that are ready to be scaled up. Applicants to i3 are eligible for funding to develop, validate, or scale up their program. In fact, the Department recently issued proposed regulations that would allow its other competitive grant programs to adopt this three-tiered model.

With a multi-tiered grant structure, organizations understand that in order to be considered for funding they must provide credible evaluation results that show promise and/or be ready to subject their models to analysis. The goal is that, over time, more programs move up tiers as evidence for new innovations becomes stronger.

Pay for Success

The Administration is also investing in Pay for Success. In the Pay for Success model, philanthropic and other private investors provide up-front funding for preventive services and the government does not pay unless and until there are results. The Pay for Success model is particularly well-suited to cost-effective interventions that produce government savings, since those savings can be used to pay for results. For example, over the past year, the Department of Justice launched Pay for Success projects in which more effective prisoner re-entry interventions can reduce not just recidivism, but also the cost of the interventions, and a portion of those savings can be used to pay back the investors. In addition, the Department of Labor has launched an effort to target effective workforce systems that lead to improvements in a range of employment and educational outcomes, like job placement and job retention, paying out only after outcomes are achieved. The Administration is promoting the Pay for Success model in several other Federal programs, including housing, energy, and education, and is proposing a new \$300 million fund in the Treasury to create incentives for States, localities and not-for-profits to invest in programs that will produce Federal savings.

Examples of Evaluations and Innovative Pilots

The Administration supports evaluations with rigorous research designs that address questions critical to program design, and supports strengthened agency capacity to support such evaluations, especially in tight budget times. The Budget supports new evaluations across the Federal Government to analyze program im-

pacts, including how to structure student aid in order to increase college access for low-income students; how to strengthen the impact of Federal technical assistance to small businesses; and how to use increased local flexibility in housing assistance to increase employment and self-sufficiency.

The Departments of Labor and Education are supporting joint pilots to test interventions and systemic reforms with the potential to improve education and employment outcomes at lower cost to taxpayers. The Departments of Education, Labor, and Health and Human Services and the Social Security Administration have launched a joint initiative, PROMISE, to test interventions that improve outcomes for children with disabilities and their families, which may yield substantial savings through reduced long-term reliance on the Supplemental Security Income program and other public services.

In addition, OMB’s Partnership Fund for Program Integrity Innovation has tested promising solutions developed collaboratively by Federal agencies, States, and other stakeholders to improve payment accuracy, improve administrative efficiency, and enhance service delivery in benefit programs that serve overlapping populations. For example, a pilot administered by the Centers for Medicare & Medicaid Services is testing how shared services solutions can reduce administrative costs and potentially fraud to States and the Federal Government by enabling multiple States to reuse the same standards and systems for activities such as enrolling providers. Evaluation of these pilots will help determine which strategies lead to better results at lower cost, allowing Federal and State governments to identify the most promising strategies that warrant expansion.

Rigorous evaluation will be a central component of the Administration’s Performance Partnership pilots, which will enable leading edge States and localities to demonstrate better ways to use resources, by giving them flexibility to pool discretionary funds across multiple Federal programs serving similar populations and communities in exchange for greater accountability for results. For example, the 2014 Budget would authorize up to 13 State or local performance partnership pilots to improve outcomes for disconnected youth. Pilot projects would support innovative, efficient, outcome-focused strategies using blended funding from separate youth-serving programs in the Departments of Education, Labor, Health and Human Services, Housing and Urban Development, Justice, and other agencies. Evaluations would help us learn whether these strategies yield better outcomes and would inform future program reforms.

Evaluation Capacity, Learning Networks, and Administrative Data

Research and evaluation are part of any comprehensive effort to use data and evidence to serve the American people in more cost-effective ways. Funding for research and evaluation should not be viewed as a luxury but rather as an essential element of running effective government programs. However, new funding for research and evaluation is only part of the Administration’s efforts

to re-invigorate evaluation activities across the Federal Government. The Administration is also pulling up its sleeves and working to better utilize existing research and evaluation resources. It is building agency capacity for a robust evaluation and data analytics infrastructure by supporting agencies in standing up central evaluation offices, empowering existing evaluation offices, institutionalizing policies that lead to strong evaluations, and hiring evaluation and data analytics experts into key administrative positions.

In addition, an inter-agency working group of evaluators across the Federal Government is sharing best practices, such as helping spread effective procurement practices, developing common evidence standards, and better integrating evaluation and performance measurement efforts. Other cross-agency groups are forming learning networks around related program areas that will share relevant research about what works and develop tools and evaluation strategies that can benefit multiple agencies. During development of the President's 2014 Budget, multi-agency learning networks involving both program and evaluation experts have formed around enforcement programs, economic development activities, and financial literacy. Each of these groups proposes to invest modest amounts to create a coordinated, efficient strategy to improve related evaluation activities across agencies. For example, the Department of Transportation plans to lead an interagency effort to determine how enforcement funding provided to States best drives positive safety outcomes.

Another part of the evaluation and data analytics infrastructure is helping agencies make better use of "administrative data," i.e., data collected for the administration of a program. Administrative data, especially when linked across programs or to survey data and with strong privacy protections, can sometimes make both performance measurement and rigorous program evaluations much more informative and much less costly. For example, data from an early childhood program linked to the data from juvenile justice systems or K-16 educational systems shed light on the long-term effects of interventions in ways that would be cost-prohibitive in a long-term survey follow-up. Linking records across programs also enables policy makers to better understand how families access combinations of government assistance programs, such as food assistance and unemployment insurance, during times of economic challenges. The Departments of Health and Human Services and Housing and Urban Development, for instance, are sharing data to analyze how housing interventions, including efforts to reduce homelessness, affect the health care use and costs of residents. Also, the Departments of Veterans Affairs and Housing and Urban Development are streamlining reporting by homelessness programs to create a more comprehensive picture of homelessness trends and interventions.

Data linkage can be a powerful tool for improving agency management—looking at available information to find patterns, relationships, anomalies, and other features to inform priority-setting, program design, and hypothesis formulation. Administrative data also can be used in conducting low-cost rigorous evaluations, for example, as dis-

cussed in the Coalition for Evidence-Based Policy's 2012 brief, "*Rigorous Program Evaluations on a Budget: How Low-Cost Randomized Controlled Trials Are Possible in Many Areas of Social Policy.*" A number of States and localities, such as those participating in the *Actionable Intelligence for Social Policy Initiative* are creating capacity to link data across multiple systems so that researchers and government decision-makers can work together to analyze problems. Their pioneering work, which provides strong safeguards to protect privacy, can help other States, localities, and Federal agencies harness data for learning and better decision-making.

Rapid Experimentation

This culture of integrating data and evidence into decision-making is growing not only in the Federal Government, but also among private sector firms, foundations, and other levels of government. Innovative firms in the private sector, including a few industry leaders, have adopted a culture of learning where each year they run hundreds of rapid, low-cost experiments designed to improve their operations and get better results using data from their extensive administrative data systems. One of the lessons of their work is that improving on the status quo is difficult and that most experiments that test improvements fail, so it is critical to run many tests to learn what works. There is perhaps great potential in the public sector to make use of such analytics, although realizing this potential will also take a concerted effort to hire and retain skilled data analysts and research method experts, increased attention to the multiple legal and policy contexts that make data access a continued challenge, infrastructure investments that support this sort of analysis by more people across the organization, and continued emphasis on defining and collecting useful outcome data.

Common Evidence Standards and "What Works" Repositories

To ensure that policymakers, program managers, and practitioners have reliable information about what works that is informed by rigorous research, OMB and Federal agencies are working together to develop common standards for research and evaluation and for using results from different types of high quality studies to identify effective programs, improve programs, and encourage innovation in the development of new approaches. For example, the Department of Education and National Science Foundation have developed a set of standards that clarifies how different types of studies contribute to the evidence base, including basic research and impact evaluations, and sets expectations for the evidence that different types studies should seek to generate. Other agencies such as the Department of Labor and components of the Department of Health and Human Services are having discussions about augmenting these standards and creating a common framework for judging evidence on the effectiveness of programs and practices. Common research standards and evidence frameworks across agencies can facilitate evaluation contracting, information collection clearance, and the strengthening or creation of research

clearinghouses and repositories about “what works.” “What works” repositories synthesize evaluation findings in ways that make research useful to decision-makers, researchers, and practitioners in the field. Furthermore, as Federal innovation funds and other programs provide financial incentives for using evidence, these repositories will continue to evolve and provide useful tools for understanding what interventions are ready for replication, expansion, and greater investment. Information in the repositories also indicates the implementation contexts of programs and strategies evaluated, and areas where more innovation or more evaluation is needed.

Increasing the Use of Evidence

The Administration is committed to producing more and better empirical evidence. There is, however, perhaps an even greater need to increase demand for data and evidence in Federal decision-making processes. One piece of this is the process of setting high-priority goals and measuring progress towards meeting them, as described in Chapter 7, “Delivering High-Performance Government,” in this volume. This goal-setting and performance measurement is beginning to increase the demand for data, its analysis, and complementary evaluations, as leaders running frequent data-driven reviews to achieve progress on ambitious goals search for increasingly effective and efficient practices to speed progress toward the goals they have set. But more can be done.

Often the focus is on producing better evidence, but not on making that evidence useful for busy, non-technical decision-makers. Some policy areas lack rich evidence, but in areas with rich evidence decision-makers are not able to sort through the myriad of evaluation reports and analyses, especially when they point in different directions. There is a tremendous need for careful, systematic, and credible analyses of which interventions have a high return and which ones do not. At the Federal level, work described above on common evidence standards and improving “what works” repositories, such as the Department of Education’s *What Works Clearinghouse*, the Department of Justice’s *CrimeSolutions.gov*, Substance Abuse and Mental

Health Services Administration’s *National Registry of Evidenced-based Programs and Practices* (NREPP), and the Department of Labor’s new Clearinghouse of Labor Evaluation and Research (CLEAR) are helpful steps towards making evidence more useful for decision-makers.

State, local, and tribal governments face a similar need to prioritize programs that achieve the best results. One particularly interesting model (that has played a role in shaping state legislative decisions) is the Washington State Institute for Public Policy. The Institute provides a good example of how a centralized evaluation and research entity can conduct systematic reviews of existing evaluation research to identify policies, practices, and strategies that are most likely to give taxpayers a return on their investment. It was created by the Washington State legislature to carry out practical, non-partisan research—at legislative direction—of importance to Washington State. The Institute has its own policy analysts and economists, specialists from universities, and consultants with whom it engages to conduct policy analysis. It conducts a systematic review of evidence and has a methodology for comparing the relative return-on-investment of alternative interventions. The Institute presents the results of its analysis in a straightforward, user-friendly manner that is accessible to politicians, policy-makers, and the public. The Institute provides a potential model for Federal, State, local, and tribal government, as well as for not-for-profit and for-profit organizations and is currently being adapted to 13 other States. An example of an assessment of the evidence for options to improve statewide outcomes in a variety of areas, including child maltreatment, crime, and education can be found *at the Institute’s website*.

The President has made it clear that policy decisions should be driven by evidence—evidence about what works and what does not, and evidence that identifies the greatest needs and opportunities to solve great challenges. By instilling a culture of learning into Federal programs, the Administration will build knowledge so that spending decisions are based not only on good intentions, but also on strong evidence that yield the highest social returns on carefully targeted investments.

9. BENEFIT-COST ANALYSIS

I. INTRODUCTION

Federal Government policies and programs make use of our Nation's limited resources to achieve important social goals, including economic growth, job creation, education, national security, environmental protection, and public health. Many Federal programs require governmental expenditures, such as those funding early childhood education or job training. Moreover, many policies entail social expenditures that are not reflected in budget numbers. For example, environmental, energy efficiency, and workplace safety regulations impose compliance costs on the private sector. In all cases, the American people expect the Federal Government to design programs and policies to manage and allocate scarce fiscal resources prudently, and to ensure that programs achieve the maximum benefit to society and do not impose unjustified or excessive costs.

A crucial tool used by the Federal Government to achieve these objectives is benefit-cost analysis, which provides a systematic accounting of the social benefits and costs of Government policies. Executive Order 13563, issued in January 2011, makes a firm commitment to cost-benefit analysis and to ensuring that the benefits of regulations justify the costs. It states, among other things, that each agency must "use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible." It also states that agencies must "propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify.)"

The assessment of benefits and costs of a government policy is meant to offer a concrete description of the an-

tipated consequences of the policy. Such an accounting helps policymakers to design programs to be both efficient and effective and to avoid unnecessary or unjustified costs and burdens. That accounting also allows the American people to see the expected consequences of programs and to hold policymakers accountable for their actions. While quantification and monetization of benefits and costs produce significant analytic challenges, serious efforts have been made to meet those challenges. Those efforts are continuing. Executive Order 13563 also states, "each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts." Importantly, there is a close relationship between open government and benefit-cost analysis. Because analysis is often improved by public comments, public participation and consideration of benefits and costs are tightly connected in practice.

Especially in a difficult economic period, it is important to analyze both benefits and costs and to take steps to eliminate unnecessary burdens, which may have adverse effects on job creation and growth. Executive Order 13563 calls for such steps with its efforts to discipline the flow of new regulations and its requirement of retrospective analysis of existing significant rules. Retrospective analysis has recently become a central part of the regulatory process as agencies identify outdated or redundant regulations and is helping to eliminate billions of dollars in regulatory burdens, in areas including environmental protection, transportation, labor, health care, and agriculture.

II. BENEFIT-COST ANALYSIS OF FEDERAL REGULATIONS

Overview of Benefit-Cost Analysis of Federal Regulation

For over three decades, benefit-cost analysis has played a critical role in the evaluation and design of significant Federal regulatory actions. While there are precursors in earlier administrations, the Reagan Administration was the first to establish a broad commitment to benefit-cost analysis in regulatory decision making through its Executive Order 12291. The Clinton Administration continued that commitment when it updated the principles and processes governing regulatory review in Executive Order 12866, which continues in effect today. Executive Order 12866 requires executive agencies to catalogue and assess the benefits and costs of significant regulatory actions. It also requires agencies (1) to undertake regulatory action only on the basis of a "reasoned determination" that the benefits justify the costs and (2) to choose the regulatory approach that

maximizes net social benefits, that is, benefits minus costs (unless the law governing the agency's action requires another approach). Executive Order 13563, issued in January 2011, reaffirms the requirements of Executive Order 12866 and imposes a set of important additional requirements designed to promote sound analysis, to increase flexibility, to promote public participation, to harmonize conflicting and redundant requirements, and to ensure scientific integrity.

Operating under the broad framework established by Executive Orders 13563 and 12866, the Office of Management and Budget requires careful analysis of the benefits and costs of significant rules; identification of the approach that maximizes net benefits; detailed exploration of reasonable alternatives, alongside assessments of their costs and benefits; cost-effectiveness; and attention to unquantifiable benefits and costs as well as to distributive impacts. Central goals are to ensure that regulations

will be effective in achieving their purposes and that they do not impose excessive costs. As noted, it is especially important to maximize net benefits, and to avoid unjustified burdens, in a period of economic difficulty. Notably, Executive Order 13563 specifically refers to “job creation,” and where feasible, agencies have recently devoted a great deal of attention to the anticipated job impacts (whether positive or negative) of regulations.

Reviewing agencies’ benefit-cost analyses and working with agencies to improve them, OMB provides a centralized repository of analytical expertise in its Office of Information and Regulatory Affairs (OIRA). OMB’s guidance to agencies on how to do benefit-cost analysis for proposed regulations is contained in its Circular A–4. OMB Circular A–4 directs agencies to specify the goal of a regulatory intervention, to consider a range of regulatory approaches for achieving that goal and to estimate the benefits and costs of each alternative considered. To the extent feasible, agencies are required to monetize benefits and costs, so that they are expressed in comparable units of value. This process enables the agency to identify (and generally to choose) the approach that maximizes the total net benefits to society generated by the rule.

For example, consider a regulation that sets a standard to reduce air pollution emissions. The agency should attempt to quantify both the benefits and costs of reduced air pollution emissions. It should consider a range of emission reductions to determine the optimal one that maximizes net benefits. Careful benefit-cost analysis enables the agency to determine the optimal standard. It helps to

show that some approaches would be insufficient and that others would be excessive.

Quantification and monetization of the relevant variables can present serious analytic challenges. OIRA and other federal agencies have developed a range of strategies for meeting those challenges; many of them are sketched in OMB Circular A–4. Efforts continue to be made to improve current analyses and to disclose and test their underlying assumptions. In some cases, identification of benefits and costs will leave significant uncertainties. But much of the time, an understanding of benefits and costs will rule out some possible courses of action, and will show where, and why, reasonable people might differ. Such an understanding will also help to identify the most effective courses of action and to eliminate unjustified costs and burdens—in the process potentially helping to promote competitiveness, innovation, job creation, and economic growth.

The Benefits and Costs of Federal Regulation in FY 2011

Each year, OMB reports to Congress agencies’ estimates of the benefits and costs of major regulations. Table 9–1 presents the benefit and cost estimates for the 234 major non-budgetary rules reviewed by OMB in FY 2011.¹ Of those, agencies monetized both the benefits and costs for 12.

¹ FY 2011 is the most recent period for which such a summary is available. These estimates were reported in OMB, 2012 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. A detailed description of the assumptions and calculations underlying these estimates is provided in that Report.

Table 9–1. ESTIMATES OF THE TOTAL ANNUAL BENEFITS AND COSTS OF MAJOR RULES REVIEWED BY OMB IN 2011

(In billions of 2001 dollars)

Rule	Agency	Benefits	Costs
Institutional Eligibility under the Higher Education Act of 1965; Student Assistance General Provisions	ED	Not Estimated	0.1
Program Integrity: Gainful Employment Measures	ED	Not Estimated	0.1
Energy Efficiency Standards for Clothes Dryers and Room Air Conditioners	DOE	0.2–0.3	0.1–0.2
Energy Efficiency Standards for Residential Furnaces, Central air conditioners and Heat Pumps	DOE	0.7–1.8	0.5–0.7
Energy Efficiency Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers	DOE	1.7–3.0	0.8–1.3
Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act Amendments Act	EEOC	Not Estimated	0.1–0.2
Administrative Simplification: Adoption of Authoring Organizations for Operating Rules and Adoption of Operating Rules for Eligibility and Claims Status (CMS–0032-IFC)	HHS	0.9–1.1	0.3–0.6
Medical Loss Ratios	HHS	Not Estimated	0.1
SAFE Mortgage Licensing Act: Minimum Licensing Standards and Oversight Responsibilities (FR–5271-F–03)	HUD	Not Estimated	0.1–0.6
Increased Safety Measures for Oil and Gas Operations on the Outer Continental Shelf (OCS)	DOI	Not Estimated	0.1
Migratory Bird Hunting; 2011–12 Migratory Game Bird Hunting Regulations: Early Season	DOI	0.2–0.3	Not Estimated
Migratory Bird Hunting; 2011–12 Migratory Game Bird Hunting Regulations: Late Season	DOI	0.2–0.3	Not Estimated
Improved Fee Disclosure for Pension Plan Participants	DOL	0.8–3.3	0.2–0.4
Statutory Exemption for Provision of Investment Advice	DOL	5.8–15.1	1.6–4.2
Wage Methodology for the Temporary Non-Agricultural Employment H–2B Program	DOL	Not Estimated	Not Estimated
Ejection Mitigation	DOT	1.5–2.4	0.4–1.4
Real-Time System management Information Program	DOT	0.2	0.1
Commercial Medium- and Heavy-Duty On-Highway Vehicles and Work Truck Fuel Efficiency Standards	DOT and EPA	2.2–2.6	0.3–0.5
Management of Federal Agency Disbursements	TREAS	0.1	Not Estimated
Regulations Governing Practice Before the Internal Revenue Service	TREAS	Not Estimated	Not Estimated
Cross State Air Pollution Rule (CAIR Replacement Rule)	EPA	20.5–59.7	0.7
Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule Requirements - Amendments for Milk Containers	EPA	0	–0.1
Water Quality Standards (Numeric Nutrient Criteria) for Florida’s Lakes and Flowing Waters	EPA	<0.1	0.1–0.2

Most of the benefits and costs reported in Table 9–1 are expressed as ranges, and sometimes as wide ranges, because of uncertainty about the likely consequences of rules. Quantification and monetization raise difficult conceptual and empirical questions. Prospective benefit-cost analysis requires predictions about the future—both about what will happen if the regulatory action is taken and what will happen if it is not. What the future holds is typically not known for certain. A standard goal of the agency’s analysis is to produce both a central “best estimate,” which reflects the expected value of the benefits and costs of the rule, as well as a description of the ranges of plausible values for benefits, costs, and net benefits. These estimates inform the decisionmakers and the public of the degree of uncertainty associated with the regulatory decision. The process of public scrutiny can sometimes reduce that uncertainty. Despite these uncertainties, benefit-cost analysis often reduces the range of reasonable approaches—and simultaneously helps to inform the decision about which approach is most reasonable.

Cost-per-life-saved of Health and Safety Regulation

For regulations intended to reduce mortality risks, another analytic tool that can be used to assess regulations, and to help avoid unjustified burdens cost-effectiveness analysis is. Some agencies develop estimates of the “net cost per life saved” for regulations intended to improve public health and safety. To calculate this figure, the costs of the rule minus any monetized benefits other than mor-

tality reduction are placed in the numerator, and the expected reduction in mortality in terms of total number of lives saved is placed in the denominator. This measure avoids any assignment of monetary values to reductions in mortality risk. It still reflects, however, a concern for economic efficiency, insofar as choosing a regulatory option that reduces a given amount of mortality risk at a lower net cost to society would conserve scarce resources compared to choosing another regulatory option that would reduce the same amount of risk at greater net costs.

Table 9–2 presents the net cost per life saved for recent health and safety rules for which calculation is possible. The net cost per life saved is calculated using 3 percent discount rate and using agencies’ best estimates for costs and expected mortality reduction where those were provided by the agency.

This table is designed to be illustrative rather than definitive, and continuing work must be done to ensure that estimates of this kind are complete and not misleading. For example, some mortality-reducing rules have a range of other benefits, including reductions in morbidity, and it is important to include these benefits in cost-effectiveness analysis. Other rules have benefits that are exceedingly difficult to quantify but nonetheless essential to consider; consider rules that improve water quality or have aesthetic benefits. Nonetheless, it is clear that some rules are far more cost-effective than others, and it is valuable to take steps to catalogue variations and to increase the likelihood that scarce resources will be used as effectively as possible.

Table 9–2. ESTIMATES OF THE NET COSTS PER LIFE SAVED OF SELECTED HEALTH AND SAFETY RULES REVIEWED BY OMB IN FISCAL YEARS 2010-2011

(In millions of 2001 dollars)

Rule	Agency	Net Cost per Life Saved	Notes
Cranes and Derricks in Construction	DOL/OSHA	\$4.9	The agency estimates that the rule will prevent 22 fatalities and 175 nonfatal injuries annually. Total costs associated with the rule are \$150 million annually (using 3% discount rate). The monetized value of the injuries prevented is \$11 million and the property damage prevented is valued at \$7 million.
Ejection Mitigation	DOT/NHTSA	\$0.2	The agency estimates that the rule will prevent 374 equivalent lives (using 3% discount rate).
Pipeline Safety: Distribution Integrity Management	DOT/PHMSA	Negative	Benefits from reduced injuries, reduced property damages, and reduced lost gas exceeds costs.
Positive Train Control	DOT/FRA	\$235.1	The agency estimates the present value of fatality reduction benefits is \$267 million over 20 years using a VSL of \$6 million. The agency also estimates the total non-fatality related benefits over 20 years of \$407 million. The total costs associated with the rule are \$880 million annually.
Cross State Air Pollution Rule (CAIR Replacement)	EPA/AR	Negative	Morbidity and visibility benefits exceed costs.
Lead; Amendments to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program	EPA/OPPTS	Negative	Morbidity benefits exceed costs.
National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants	EPA/AR	Negative	Morbidity benefits exceed costs.
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (Diesel)	EPA/AR	\$0.9 - \$2.2	The agency estimates that the rule will prevent 110 to 270 fatalities annually. Total costs associated with the rule are \$355 million annually at 3% discount rate. The monetized value of the morbidity benefits is \$66 million.
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (Existing Stationary Spark Ignition Gas Fired) ..	EPA/AR	\$1.2 - \$3.1	The agency estimates that the rule will prevent 56 to 140 fatalities in 2013. Total costs associated with the rule are \$244 million annually at 3% discount rate. The monetized value of the morbidity benefits is \$36 million.
Review of the National Ambient Air Quality Standards for Sulfur Dioxide	EPA/AR	Negative	Morbidity benefits exceed costs.

III. BENEFIT-COST ANALYSIS OF BUDGETARY PROGRAMS

As noted, Executive Orders 13563 and 12866 require agencies, to the extent permitted by law, to “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” OIRA works actively with agencies to promote compliance with this requirement.

Historically, benefit-cost analysis of Federal budgetary programs has been more limited than that of regulatory policy. Increasingly, though, the Federal Government explicitly employs benefit-cost analysis to ensure that projects and spending programs have benefits in excess of costs, maximize net benefits, and allocate federal dollars most efficiently across potential projects.

In the 1936 Flood Control Act, for example, Congress stated as a matter of policy that the Federal government should undertake or participate in flood control projects if the benefits exceeded the costs, where the lives and social security of people are at stake. By the late 1970s, the Army Corps of Engineers had begun to use benefit-cost analysis to improve the return on investment at a given project site. The Corps did this by designing projects based on increments of work whose benefits exceeded their costs. More recently, the Budget has used benefits and costs, along with other criteria, to develop an overall program for the Corps that yields the greatest net benefits or cost effectiveness.

Benefit-cost analysis can also be used to evaluate programs retrospectively to determine whether they should be either expanded or discontinued and how they can be improved. Chapter 8, “Program Evaluation and Data Analytics”, in this volume discusses current efforts to improve program evaluation. Evidence that an activity can yield substantial net benefits has motivated the creation and expansion of a number of programs. For example,

longitudinal studies have shown that each dollar spent on quality pre-school programs serving disadvantaged children yields substantially more than a dollar (in present value) in higher wages, reduced crime, and reduced use of public services. These findings motivated an expansion of funding for high-quality pre-school programs. Evidence has also spurred the decision to expand funding for nurse-family partnerships, finding that each dollar spent in the program leads to more than a dollar of benefits mostly in reduced government expenditures on health care, educational and social services, and criminal justice, and that the highest returns were present in serving the most disadvantaged families. Similarly, GAO has concluded that the Women, Infants, and Children (WIC) program produces monetary benefits that exceed its costs by reducing the incidence of low birth weight and iron deficiency, which are linked to children’s behavior and development.

The Regulatory Right-to-Know Act requires OMB to report the social costs and benefits of the budget rules. These rules implement Federal budgetary programs as required or authorized by Congress. Budgetary programs primarily cause income transfers, usually from taxpayers to program beneficiaries. In FY 2011, OMB reviewed 30 budgetary rules. Of these, the Department of Health and Human Services promulgated 15 rules, and the Department of Agriculture seven rules.² We recognize that markets embed distortions and that the transfers are not lump-sum, thereby creating social benefits or costs by altering prices.

² The estimates of budgetary effects were reported in OMB, 2012 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. A detailed description of the assumptions and calculations underlying these estimates is provided in that Report.

IV. IMPROVING BENEFIT-COST ANALYSIS

A Culture of Retrospective Review

Prospective analysis of benefits and costs is an indispensable means of obtaining an understanding of the likely consequences of regulation. But that analysis, even if done carefully and subject to public scrutiny, will rest on assumptions that may change over time. Regulations should be reviewed retrospectively to ensure that they are achieving their intended goals and are not producing excessive costs or unintended adverse effects. Executive Order 13563 expressly recognizes this by requiring agencies to undertake “retrospective analysis” of existing significant rules.

Building on Executive Order 13563, Executive Order 13610, “Identifying and Reducing Regulatory Burdens”, issued in May 12, 2012, institutionalizes the regulatory lookback and requires agencies to prioritize lookback “initiatives that will produce significant quantifiable monetary savings or significant quantifiable reductions in paperwork burdens.”³ The Executive Order calls on

agencies to “give special consideration to initiatives that would reduce unjustified regulatory burdens or simplify or harmonize regulatory requirements imposed on small businesses.” Additionally, agencies are required to focus on “cumulative burdens” and to “give priority to reforms that would make significant progress in reducing those burdens.”

Retrospective review is most naturally understood as a way of assessing rules that have been in operation and on the books for a sufficient period to allow careful study. A retrospective analysis can show that a rule that was well-designed at the inception is now excessive, redundant, or producing unintended harm, perhaps as a result of changed circumstances, such as new technologies or new regulations. Retrospective review can also be critical in evaluating the validity of assumptions or methods used in prospective analysis.

³ See Executive Order 13610, May 10, 2012, available at [http://](http://www.whitehouse.gov/the-press-office/2012/05/10/executive-order-identifying-and-reducing-regulatory-burdens)

www.whitehouse.gov/the-press-office/2012/05/10/executive-order-identifying-and-reducing-regulatory-burdens

For example, the EPA has eliminated the obligation for many states to require air pollution vapor recovery systems at local gas stations because duplicative vapor recovery system have been built into modern vehicles. The anticipated annual savings are about \$87 million.

Retrospective analysis has long been recommended by those interested in empirical assessment of regulations, including Michael Greenstone, former chief economist at the Council of Economic Advisers: “The single greatest problem with the current system is that most regulations are subject to a cost-benefit analysis only in advance of their implementation. This is the point when the least is known and any analysis must rest on many unverifiable and potentially controversial assumptions.”⁴ To address this problem, retrospective analysis can help show what works and what does not, and in the process can promote the streamlining or elimination of less effective rules as well as the strengthening or expansion of those rules that are more effective.

Clear Summaries and Tables with Key Information

In order to improve analysis of the potential effects of regulations, and simultaneously to improve accountability, OMB has called for a clear, salient, publicly accessible executive summary of both benefits and costs. The summary should be written in a “plain language” manner designed to be understandable to the public. For all economically significant regulations, Executive Orders 13563 and 12866 require agencies to provide a description of the need for the regulatory action and a clear summary of the analysis of costs and benefits, both qualitative and quantitative. The summary often includes an accounting of benefits and costs of alternative approaches, and where relevant, an analysis of distributional impacts on subpopulations (such as disabled people or those with low income). As noted, some benefits and costs can be quantified and monetized, while some can be described in qualitative terms.

⁴ Greenstone, Michael. “Toward a Culture of Persistent Regulatory Experimentation and Evaluation.” In *New Perspectives on Regulation*, David Moss and John Cisternino (Eds.). Cambridge, MA: The Tobin Project, Inc., 2009. P. 113.

Public Participation and Collaboration in the Regulatory Process

Executive Order 13563 states that “regulations shall be based, to the extent feasible and consistent with law, on the open exchange of information and perspectives....” To promote that open exchange, Executive Order 13563 directs agencies to provide the public with timely access to regulatory analyses and supporting documents on *regulations.gov* to ensure a meaningful opportunity for public comment.

The Internet provides an ideal vehicle for making information public and, under Executive Order 13563, the Administration has committed to publish as much as possible online in a format that can be retrieved, downloaded, indexed, and searched by commonly-used web search applications. Importantly, this commitment promotes public accessibility of the analysis of benefits and costs, together with the supporting materials, in order to ensure that the analysis is subject to public scrutiny. That process of scrutiny can help to improve the analysis, thereby refining our understanding of the anticipated effects of regulation.

Agencies now publish a great deal of information relevant to rulemaking and benefit-cost analysis, including underlying data, online and in downloadable, as well as traditional, formats. Executive Order 13563 directs agencies to use *regulations.gov* to make the online record as complete as possible and to take all necessary steps to make relevant material available to the public for comment.⁵

Executive Order 13563 requires that the public should generally receive a comment period of at least 60 days for proposed regulatory actions. Even where statutes necessitate shorter comment periods, agencies can seek public comment and respond in a timely fashion to suggestions about potential improvements in rules and underlying analyses.

⁵ Available at: http://www.whitehouse.gov/omb/assets/inforeg/edocket_final_5-28-2010.pdf

10. IMPROVING THE FEDERAL WORKFORCE

The United States has overcome great challenges throughout our history because Americans of every generation have stepped forward to aid their Nation through service, both in civilian Government and in the Armed Forces. A high-performing government depends on an engaged, well-prepared, and well-trained workforce with the right set of skills for the missions the government needs to achieve. Today's Federal public servants come from all walks of life and from every corner of America to carry forward that proud American tradition. Eighty-five percent of Federal employees live and work outside of the Washington, D.C. metropolitan area. Many Federal employees have made remarkable contributions to our society; notably, more than 50 current or former federal employees have received Nobel Prizes. Whether defending our homeland, restoring confidence in our financial system and supporting a historic economic recovery effort, providing health care to our veterans, conducting diplomacy abroad, providing relief to Hurricane Sandy victims, or searching for cures to the most vexing diseases, we are fortunate to be able to rely upon a skilled workforce committed to public service.

Today's Federal workforce confronts tight fiscal resources, rapidly changing problems, and new technologies. This chapter discusses trends in Federal employment, composition, and compensation, and presents the Administration's plans for achieving the talented Federal workforce needed to serve the American people effectively and efficiently.

Trends in Federal Workforce Size

The size of the Federal civilian workforce relative to the country's population has declined dramatically over the last several decades, notwithstanding occasional upticks due, for example, to military conflicts and the administration of the Census. In overall terms, today's workforce remains the size it was under President Reagan.

Since the 1950s and 1960s, the U.S. population increased by 77 percent, the private sector workforce increased 137 percent, while the size of the Federal workforce rose just 10 percent, with 92 residents for every Federal worker. Since the 1980s, both the population and private sector workforce has increased 25 percent, but the Federal workforce has not grown at all, and in the 1980s and 1990s there were 119 residents for every Federal worker. Except for employment peaks associated with the decennial census, Federal employment, in absolute terms, increased slightly in the 1980s and then dropped in the 1990s. This overall downward trend began to reverse itself in 2001, following the September 11 attack. Following that tragic event, the Federal workforce expanded to deal with national security and homeland safety issues and to serve our veterans.

Between 2001 and 2010, security agency employment grew, while non-security employment declined. For example, civilians working for the Department of Defense grew by more than 92,000; the Department of Veterans Affairs (VA) grew by 78,000 with much of that increase attributable to medical care to provide for our returning service members; Customs and Border Protection also grew more than 30,000 to keep our citizens safe at home.

By 2012, the ratio of residents to Federal workers had increased to 148. Relative to the private sector, the Federal workforce is less than half the size it was back in the 1950s and 1960s. Table 10-2 shows actual Federal civilian full-time equivalent (FTE) levels in the Executive Branch by agency for 2011 and 2012, with estimates for 2013 and 2014. Estimated employment levels for 2014 result in an estimated 0.3 percent increase compared to prior year estimates. Most of the growth is in VA to continue strengthening medical care for returning service members. Additional increases are expected at the Department of Justice for enhancements in cybersecurity and increased background checks for firearm purchases, and at the Department of Homeland Security to support the strengthening of border protection and to support immigration reform.

Other increases are narrowly focused and frequently supported by congressionally authorized fees, not tax payer dollars. Increased fee receipts support timely commercialization of innovative technologies through faster and higher-quality patent reviews at the Patent and Trade Office of the Department of Commerce, stronger food safety measures at the Food and Drug Administration of the Department of Health and Human Services, and enhancements to create stronger, more stable financial markets consistent with the Wall Street Reform Act. Commitments to activate new Federal prisons already constructed with funding appropriated as early as 2001 and as recently as 2010 result in limited necessary personnel increases at the Department of Justice in 2013 and 2014. And stepping up Internal Revenue Service (Treasury) program integrity efforts to ensure companies and individuals are paying their fair share is an investment that more than pays for itself.

In contrast, the workforce decreased in agencies such as the U.S. Department of Agriculture (USDA), US Environmental Protection Agency (EPA) and the National Aeronautics and Space Administration (NASA), to correspond with decreases in funding. The Forest Service and the Natural Resources Conservation Service at the USDA are finding workforce efficiencies to meet budget reductions; decreases at the EPA reflect strong efforts in workforce restructuring to better manage and reduce personnel costs; and NASA will reduce its workforce in response

to budget reductions from changes in human space flight missions, including the retirement of the Space Shuttle.

Beneath many of the agency totals are programs that pursue aggressive actions to reduce and reallocate staff from lower to higher priority programs. Some agencies have imposed hiring freezes, and many are offering early retirement and separation incentives. For example, the General Services Administration offered more than 2,400 employee buyouts and early retirement packages in order to contain costs and provide the opportunity to better match employee skills with job requirements.

Chart 10-1 shows Federal civilian employment (excluding the U.S. Postal Service) as a share of the U.S. resident population from 1958 to 2012. The chart shows overall declines in both security and non-security agencies.

In recent years, the Executive Branch has had great success hiring veterans. In November 2009, President Obama signed Executive Order 13518, establishing the Veterans Employment Initiative. Through this initiative and the strategies used by the Council on Veterans Employment, the Executive Branch continues to benefit from retaining the dedication, leadership, and skills veterans have honed in the fast-paced, dynamic environments of the Army, Marines, Navy, Air Force, and Coast Guard.

In FY 2009, veterans made up 24 percent of the total new hires in the Federal Government. By the end of FY 2012, veterans made up 29 percent of new hires. The total number of veterans employed by the Government also increased. In FY 2009, there were 512,240 veterans in the Federal Government – 26 percent of our workforce. By the end of FY 2012, the number of veterans had grown to 611,784, or 30 percent of the Federal workforce.

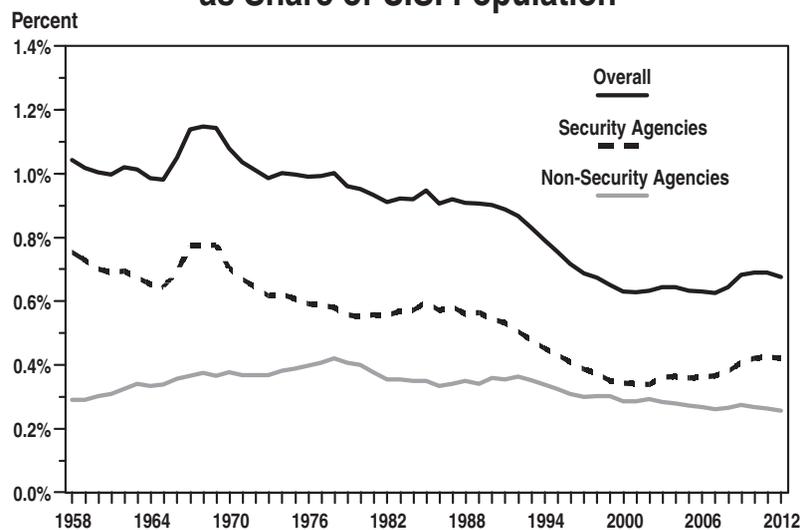
Federal Pay Trends

After more than a decade when the percentage increases in annual Federal pay raises did not keep pace with the percentage increase in private sector pay raises, Congress passed the Federal Employees Pay Comparability Act of 1990 (FEPCA) pegging Federal pay raises, as a default, to changes in the Employment Cost Index (ECI). The law gives the President the authority to propose alternative pay adjustments for both base and locality pay. Presidents have regularly supported alternative pay plans.

Chart 10-2 shows how the Federal pay scale has compared to the ECI since 1976. Prior to FEPCA the Federal pay scale fell sharply relative to the ECI. The Federal pay scale rose relative to the ECI in the early 1990s, but fell relative to ECI during most of the middle and late 1990s. The Federal pay scale rose quite a bit relative to ECI in the 2000s, but has fallen sharply relative to ECI in the last few years.

In late 2010, as one of several steps the Administration took to put the Nation on a sustainable fiscal path, the President proposed and Congress enacted a two-year freeze on across-the-board pay adjustments for civilian Federal employees, saving \$60 billion over 10 years. The President also issued a memorandum directing agencies to freeze pay schedules and forgo general pay increases for civilian Federal employees in administratively determined pay systems. Additionally, on his first day in office, the President froze salaries for all senior political appointees at the White House, and in 2010, the President eliminated bonuses for all political appointees across the Administration. The Office of Personnel Management (OPM) and the Office of Management and Budget (OMB) directed agencies to limit individual performance awards for almost all employees starting in fiscal years 2011 and 2012.

Chart 10-1. Federal Civilian Workforce as Share of U.S. Population



Source: Office of Personnel Management.

Notes: Security agencies include the Department of Defense, the Department of Homeland Security, the Department of State, and the Department of Veterans Affairs. Non-Security agencies include the remainder of the Executive Branch.

For 2014, the President proposes a one percent pay increase for General Schedule employees, which is below the private sector Employment Cost Index increase of 1.8%. This increase reflects the tight budget constraints we now face while also recognizing the critical role these employees play in our everyday lives. In comparison to the baseline, the 1.0% pay increase saves approximately \$18 billion over 10 years and \$1 billion in FY 2014 within the BCA caps, which can then be reallocated to programs and services the American people depend on.

The 2014 budget also continues last year's proposal to dedicate an additional 1.2 percent of employees' pay (phased-in at 0.4 percent over three years) toward their pensions. This proposal would require existing employees, or those rehired with five or more years of creditable service, to contribute 1.2 percentage points more to their pensions. During 2012, the Middle Class Tax Relief and Job Creation Act increased employee contributions to Federal defined benefit retirement plans, including the Federal Employees' Retirement System, by 2.3 percentage points, effective for individuals joining the Federal work force after December 31, 2012 who have less than five years of creditable civilian service. Neither this proposal nor the 2012 Act would change the amount of each employee's benefit. This proposal would result in \$20 billion in mandatory savings over 10 years.

Composition of the Federal Workforce and Factors Affecting Pay

Federal worker compensation receives a great deal of attention, in particular, in how it compares to that of private sector workers. Comparisons of the pay and benefits of Federal employees and private sector employees, for example, should account for factors affecting pay, such as

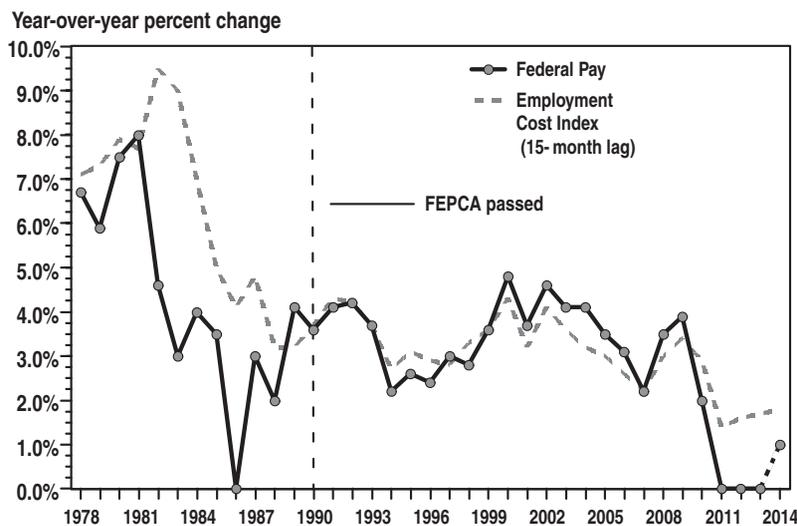
differences in skill levels, complexity of work, scope of responsibility, size of the organization, location, experience level, and exposure to personal danger.

A series of reports done in January 2012 by the Congressional Budget Office (CBO) accounted for some, but not all, of the factors described above. CBO found that Federal pay, on average, was slightly higher (2.0 percent) than comparable private sector pay. However, this study was done before Federal employees began a pay freeze. Overall public sector compensation was, on average, substantially higher, but CBO noted that its findings about comparative compensation relied on far more assumptions and were less definitive than its pay findings. The reports also emphasized that focusing on averages is misleading, because the public/private differentials varies dramatically by education and complexity of job. Compensation for higher educated Federal workers (or those in more complex jobs) is lower than for comparable workers in the private sector, which were not the CBO findings for less educated workers.

Some of the factors affecting compensation are:

Type of occupation. The last half century has seen significant shifts in the composition of the Federal workforce, with related effects on pay. Fifty years ago, most white-collar Federal employees performed clerical tasks, such as posting Census figures in ledgers and retrieving taxpayer records from file rooms. Today their jobs are vastly different, requiring advanced skills to serve a knowledge-based economy. Professionals such as doctors, engineers, scientists, statisticians, and lawyers now make up a large portion of the Federal workforce. More than half (55 percent) of Federal workers work in the nine highest-paying occupation groups as judges, engineers, scientists, nuclear plant inspectors, etc., compared

Chart 10-2. Pay Raises for Federal vs. Private Workforce



Source: Public Laws, Executive Orders, and the Bureau of Labor Statistics.

Notes: Federal pay is for civilians and includes base and locality pay. Employment Cost Index is the wages and salaries, private industry workers series.

Table 10–1. OCCUPATIONS OF FEDERAL AND PRIVATE SECTOR WORKFORCES
(Grouped by Average Private Sector Salary)

Occupational Groups	Percent	
	Federal Workers	Private Sector Workers
Highest Paid Occupations Ranked by Private Sector Salary		
Lawyers and judges	1.8%	0.6%
Engineers	3.9%	1.9%
Scientists and social scientists	4.8%	0.7%
Managers	11.3%	13.3%
Doctors, nurses, psychologists, etc.	7.5%	5.4%
Miscellaneous professionals	15.5%	8.2%
Administrators, accountants, HR personnel	7.0%	2.6%
Inspectors	1.4%	0.3%
Pilots, conductors, and related mechanics	2.0%	0.8%
Total Percentage	55.0%	33.8%
Medium Paid Occupations Ranked by Private Sector Salary		
Sales including real estate, insurance agents	1.2%	6.4%
Other miscellaneous occupations	3.5%	4.5%
Automobile and other mechanics	1.7%	2.9%
Law enforcement and related occupations	8.9%	0.8%
Office workers	2.3%	6.3%
Social workers	1.4%	0.5%
Total Percentage	18.9%	21.4%
Lowest Paid Occupations Ranked by Private Sector Salary		
Drivers of trucks and taxis	0.7%	3.3%
Laborers and construction workers	4.3%	9.9%
Clerks	13.7%	11.3%
Manufacturing	2.5%	7.7%
Other miscellaneous service workers	2.6%	6.1%
Janitors and housekeepers	1.5%	2.4%
Cooks, bartenders, bakers, and wait staff	0.9%	4.1%
Total Percentage	26.1%	44.9%

Source: 2008-2012 Current Population Survey.

Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive, Legislative, and Judicial Branches. However, the vast majority of these employees are civil servants in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes state and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 annual hours of work.

to about a third (33 percent) of private sector workers in those same nine highest paying occupation groups. In contrast, 45 percent of private sector workers work in the seven lowest-paying occupation groups as cooks, janitors, service workers, clerks, laborers, manufacturing workers, etc. About 26 percent of Federal workers work in those seven lowest-paying occupation groups. Between 1981 and 2011, the proportion of the Federal workforce in clerical occupations fell from 19.4 percent to 5.1 percent of the workforce, and the proportion of blue-collar workers fell from 22.0 percent to 9.7 percent.

Today, Federal employees must manage highly sensitive tasks that require great skill, experience, and judgment. They need sophisticated management and negotiation skills to effect change, not just across the Federal Government, but also with other levels of government, not-for-profit providers, and for-profit contractors. Using data from the Current Population Survey 2008-2012 of full-time, full-year workers, Table 10-1 breaks all Federal

and private sector jobs into 22 occupation groups and shows that the composition of the Federal and private workforce are very different.

Education level. The size and complexity of much Federal work – whether that work is analyzing security and financial risks, forecasting weather, planning bridges to withstand extreme weather events, conducting research to advance human health and energy efficiency, or advancing science to fuel further economic growth – necessitates a highly educated workforce. Chart 10-3 presents the comparative differences in the education level of the Federal civilian and private sector workforce. About 22 percent of Federal workers have a master's degree, professional degree, or doctorate versus only 10 percent in the private sector. Only 19 percent of Federal employees have not attended college, compared to 40 percent of workers in the private sector.

Size of organization and responsibilities. Another important difference between Federal workers and private sector workers is the average size of the organization in which they work. Federal agencies are large and often face challenges of enormous scale, such as distributing benefit payments to over 60 million Social Security and Supplemental Security Income beneficiaries each year, providing medical care to 8.8 million of the Nation's veterans, and managing defense contracts costing billions of dollars. Workers from large firms (those with 1,000 or more employees) are paid about 13 percent more than workers from small firms (those with fewer than 100 employees), even after accounting for occupational type, level of education, and other characteristics. It is reasonable to assume that the size of these organizations and the larger salaries associated with their size is also associated with greater complexity of their work.

Demographic characteristics. Federal workers tend to have demographic characteristics associated with higher pay in the private sector. They are more experienced, older and live in higher cost metropolitan areas. For example, 21 percent of Federal workers are 55 or older – up from 17 percent 10 years ago and significantly more than the 16 percent in the private sector. Chart 10-4 shows the difference in age distribution between Federal and private sector workers.

Challenges

The Federal Government faces specific human capital challenges, including a personnel system that requires further modernization, an aging and retiring workforce, and the need to continuously engage and develop person-

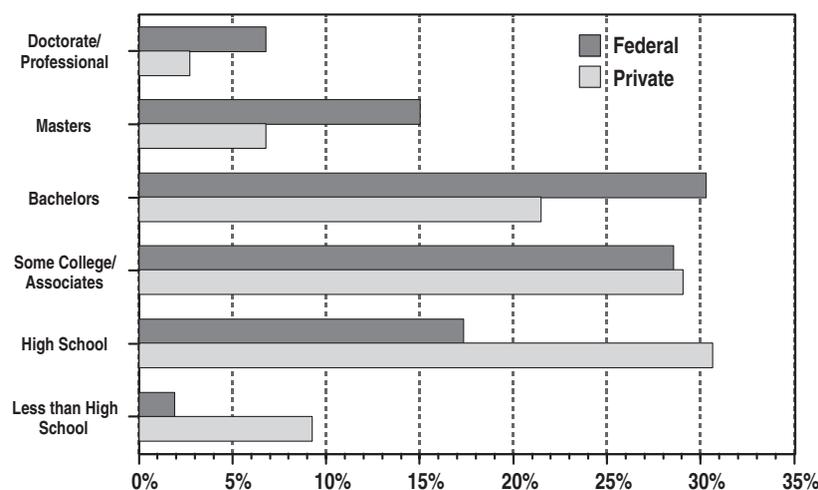
nel to maximize performance. If the Government loses top talent, experience, and institutional memory through retirements, but cannot recruit, retain, and train highly qualified workers, Government performance suffers. The age distribution and potential for a large number of retiring workers poses a challenge, but it also creates an opportunity to streamline the workforce and to infuse it with new – and in some cases lower-cost – workers excited about Government service and equipped with strong technology skills, problem-solving ability, and fresh perspectives to tackle problems that Government must address.

Outdated Personnel System

In the past sixty years, the private sector has innovated towards more flexible personnel management systems, but the Federal personnel system has not kept up and remains inflexible and outdated. While recent hiring reform efforts are showing significant progress in simplifying hiring, additional reforms are needed to update the pay, classification, and benefits systems. The General Schedule (GS) pay system has been in effect since 1949. Enacted in 1951, aspects of the current benefit and leave laws are out of date and do not always provide adequate flexibility for the increasing responsibilities of family caregivers in our workforce. An alternative, cost-effective system needs to be developed that will allow the Government to compete for and reward top talent, while rewarding performance and encouraging adequate flexibility to caregivers.

To address issues in the long-term, Federal managers and employees need a modernized personnel system. To that end, the Administration proposed to the Joint Select Committee on Deficit Reduction that the Congress establish a Commission on Federal Public Service Reform

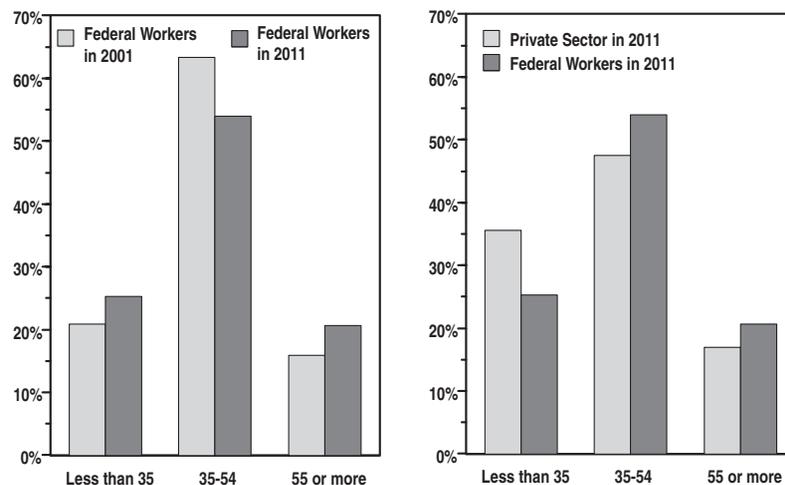
Chart 10-3. Education Level Distribution in Federal vs. Private Workforce



Source: 2008-2012 Current Population Survey.

Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive, Legislative, and Judicial Branches. However, the vast majority of these employees are civil servants in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes state and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 hours of work.

Chart 10-4. Federal Age Distribution in 2001 and 2011 and Federal vs. Private Age Distribution in 2011



Source: 2002 and 2012 Current Population Survey (covering calendar years 2001 and 2011).
 Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes State and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 annual hours of work.

comprised of Members of Congress, representatives from the President's National Council on Federal Labor-Management Relations, members of the private sector, and academic experts. The purpose of a Congressionally chartered Commission would be to develop recommendations on reforms to modernize Federal personnel policies and practices within fiscal constraints, including – but not limited to – compensation, staff development and mobility, and personnel performance and motivation.

Aging Workforce

The Federal workforce of 2012 is older than Federal workforces of past decades and older than the private sector workforce. The number of Federal retirements is on a steady increase, rising from 95,425 in 2009 to 96,133 in 2010 to 98,731 in 2011 and 112,817 in 2012. Increases in retirement are expected to continue. Nearly twenty-two percent of the over 687,000 respondents to the 2012 Federal Employee Viewpoint Survey (EVS) expressed an intent to retire during the next five years. Given these demographics, the Federal Government faces a few immediate challenges: preparing for retirements to maximize knowledge transfer from one generation to the next, succession planning to assure needed leadership and hiring and developing the next generation of the Government workforce to accomplish the varied and challenging missions the Federal Government must deliver.

Developing and Engaging Personnel to Improve Performance

One well-documented challenge in any organization is managing a workforce so it is engaged, innovative,

and committed to continuous improvement, while at the same time dealing with poor performers who fail to improve as needed or are ill suited to their current positions. Federal employees are generally positive about the importance of their work and express a high readiness to put in extra effort to accomplish the goals of their agencies. Results from the 2012 Federal Employee Viewpoint Survey (EVS) indicate that nearly 97 percent of respondents answer positively to the statement “When needed I am willing to put in the extra effort to get the job done.” However in contrast, Federal employees have repeatedly identified the inability to deal with poor performers as an area of weakness over the past 10 years. In 2012, only 30 percent of employees who participated in the EVS answered positively that “In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.” In addition, only 39 percent agreed that “creativity and innovation are rewarded”.

Addressing the Challenges

The Administration has made considerable progress improving employee performance and human capital management. Multiple efforts are underway, including: building a workforce with the skills necessary to meet agency missions, developing and using personnel analytics to drive decision making, new programs to infuse talent into agencies, heightened attention to a diverse and inclusive workforce, continued focus on the Senior Executive Service (SES) performance appraisal system, and strengthened labor-management partnerships.

Mission Focused and Data Driven Personnel Management

The Administration is committed to strengthening Federal agencies' capacity to analyze human resources data to address workplace problems, improve productivity, and cut costs. OPM, in conjunction with OMB, is implementing several key initiatives that will lead to better evaluation and management of Federal employees. These efforts include recasting the EVS as a diagnostic tool to improve an organization rather than a snapshot that simply describes it, more agencies conducting data-driven HRStat review sessions, greater alignment between human capital and mission performance, and quarterly updates of key HR performance indicators on Performance.gov.

OPM administers the Government-wide EVS to gather employee perceptions about whether, and to what extent, conditions characterizing successful organizations are present in their agencies. The survey is a valuable management tool that helps agencies identify areas of strength and weakness and informs the implementation of targeted action plans to help improve employee engagement and agency performance. In 2012, for the first time, OPM administered the survey to nearly all civilian Federal employees and received responses from over 687,000 Federal employees. This is the largest number of participants since the survey was first administered in 2002, more than double the number of respondents from any previous EVS survey, making this the most inclusive survey to date. Even more importantly, agencies now have greater ability to drill down to understand employee viewpoints in smaller organizational units; nearly five times the number of office-level components within agencies received office-specific results in 2012 compared to the 1,687 components that received results in 2011. The increased response and reporting granularity enables agencies to identify areas of strength, offering possible models for others, and areas of weakness needing attention. Agencies across Government are using EVS data to develop and implement targeted, mission-driven action plans to address identified challenges.

One area in which the EVS has given us new insight is the impact of telework. The 2012 EVS indicates that teleworkers (82 percent) are more likely than non-teleworkers (79 percent) to know what is expected of them on the job, more likely to feel empowered (52 percent versus 45 percent), and more likely (75 percent compared to 68 percent of non-teleworkers) to be satisfied with their jobs. Finally, employees who telework are more likely to want to stay with their agencies (72 percent compared to 68 percent of non-teleworkers) and to recommend their agencies to others (74 percent compared to 66 percent of non-teleworkers). As documented by OPM's 2012 report on the status of telework, the percentage of eligible Federal employees who participated in routine telework grew to 21 percent as of September 2011, compared to 10 percent during calendar year 2009. However, there is still more work to be done in breaking down barriers to the effective use of telework.

Agencies have also begun testing HRStat (Human Resources Statistics) reviews. HRStat reviews are data driven and focus on agency specific human capital performance; key human resources management metrics that drive agency performance and align with mission accomplishment. Agencies have incorporated a range of management metrics into their HR Stat review, including performance management, succession planning, and strategic workforce planning. The HRStat review is intended to enable quick course correction, if needed, to help ensure progress is being made on key human resources issues.

In addition, Performance.gov provides agencies and the public a window on key human resources data – including Government-wide and agency specific hiring times, applicant and manager satisfaction, employee engagement and retention, and hiring rates from diverse candidate pools.

Closing Critical Skills Gaps

The demands of the workplace necessitate new and agile skill sets in the Federal workforce. OPM's mission is to ensure that the Federal Government recruits, retains, and honors the talent agencies require to serve the American people. In 2011, OPM partnered with the Chief Human Capital Officers (CHCO) Council to take on the challenge of closing skills gaps across the Government. This initiative responds to the President's Cross-Agency Priority Goal to close skills gaps, as well as GAO's designation of human capital as a Government-wide high risk. The Department of Defense joined OPM in chairing an inter-agency workgroup that designed a sustainable strategic workforce planning method to identify and close skills gaps in mission-critical occupations. Based on rigorous data analysis, the workgroup identified the following mission-critical occupations for gap closure: IT-Cybersecurity Specialists, Acquisition Specialists, Economists, Human Resources Specialists, and Auditors. In addition, the workgroup identified STEM (science, technology, engineering, and mathematics) as a sixth functional area covering multiple occupations, which requires sustained strategic attention across Government.

To close skills gaps in these areas, OPM designated sub-goal leaders from agencies whose missions critically depend on these occupations. Together with these sub-goal leaders, OPM is developing and executing strategies to close skills gaps in these occupations. The sub-goal leaders meet quarterly with the OPM Director to apprise him of their progress, including by providing updated metrics that will be reported on www.performance.gov.

One of the ways OPM is addressing skills gaps among human resources professionals is through HR University. Developed in 2011 by the CHCO Council, HR University provides an excellent foundation for human resources professionals to receive training to help them become more effective. HR University is a source of centralized training that takes courses and resources Federal agencies have already developed and provides a platform for cross-agency sharing.

HR University uses an HR Professional Framework, which helps HR professionals identify where they are in relation to the roles outlined in the framework. It also

helps them think about their desired career path and provides a mechanism for determining how they need to develop to achieve their goals. This mechanism leads to an Individual Development Plan (IDP) designed specifically for the HR professional to create more targeted development plans. HR University also offers a Managers' Corner to help supervisors and managers with their human resources management responsibilities. Finally, HR University is working to obtain accreditation as a full-service university.

HR University has more than 19,000 registered users who have completed more than 12,000 online training courses, with a cost savings of over \$41.4 million, realized through the sharing of resources and economies of scale. In addition, HR University ensures that courses meet OPM's high standards by vetting each course through a very rigorous quality review.

In partnership with the CHCO Council, OPM will continue to expand HR University's offerings. This effort may include more partnerships with colleges and universities, development of HR certifications, accreditation of courses, greater use of social media, website enhancements, and more courses on key topics that will close identified skill and competency gaps in the human resources field.

Individual agencies are also identifying and targeting critical skills gaps as a priority. The State Department and US Agency for International Development (USAID) identified overseas vacancies as an agency Priority Goal to help achieve operations and consular efficiency and effectiveness, transparency and accountability; and secure US presence internationally. This initiative aims to modernize and strengthen State/USAID so that they can meet the most pressing development challenges with a high-quality workforce to move towards the larger goals of these organizations.

Recruiting and Developing an Agile Workforce

To maximize effectiveness and potential, the Federal Government must continue to prepare its talent for challenges on the horizon. New cost-effective programs are being implemented to develop current employees, foster collaboration with innovators from the private sector, promote career pathways into Federal service, and enhance institutional knowledge transfer through a phased retirement program. These efforts are essential for developing a nimble, efficient 21st Century workforce that can help ensure agencies achieve their important missions under a tightening fiscal climate.

Leadership Development. In 2011, the President's Management Council (PMC) and the Chief Human Capital Officers (CHCO) Council launched the PMC Interagency Rotation Program to bolster cross-agency exposure for high-potential GS 13-15s. Through 6-month developmental assignments, this program enables emerging Federal leaders to expand their management skills, broaden their organizational experience, and foster networks they can leverage in the future. Now preparing for its fourth cohort, the program has grown from 10 agencies and 28 participants to 15 agencies, 4 interagency councils, and 45 participants, with likely expansion in the upcoming cycle.

Innovation Fellows. The Presidential Innovation Fellows program pairs top innovators from the private sector, non-profits, and academia with top innovators in government to collaborate on solutions to high-impact challenges and deliver significant results in six months. The results of these projects are intended to save taxpayer money, fuel job growth, save lives, and provide tangible benefit to the American people. Each team of innovators is tasked with working on a specific high-impact issue using a focused but agile approach. This unique initiative focuses on tapping into the ingenuity, know-how, and patriotism of Americans from every sector of our society.

Pathways Programs. Under the Administration's leadership, the Government has taken steps to help students and recent graduates join the Federal service. As part of the Administration's hiring reform efforts, the President issued Executive Order 13566, which created the Pathways programs to create clear paths to Federal service for students and recent graduates. OPM issued final regulations implementing Pathways last year and has been working closely with agencies to help them transition to the new programs. Pathways consists of three streamlined developmental programs: the Internship Program for students; the Recent Graduates Program for people who graduated within the preceding 2 years; and the Presidential Management Fellows (PMF) Program for people who obtained a graduate or professional degree within the preceding two years. Internship and career opportunities for students and recent graduates provide meaningful training and career development opportunities, promote employment opportunities for a new generation of public servants, and help agencies address recruiting challenges and infuse new skills into the Federal workforce.

Provide phased retirement to eligible Federal employees. The Administration proposed and Congress passed a phased retirement law to help facilitate the transfer of valuable knowledge between retiring and non-retiring employees. The phased retirement program will make it easier for the most experienced employees to enter into part-time retirement arrangements, providing expertise while mentoring other employees.

A Diverse and Inclusive Workforce

The American people are best served by a Federal workforce that reflects our rich diversity and encourages collaboration, fairness, and innovation. Under the President's Executive Order 13583, of August 2011, the first Government-wide Diversity and Inclusion Strategic Plan was issued and provides agencies with the shared goals of workforce diversity, workplace inclusion, and sustainability. Since the issuance of the Executive Order, the percentage of people with disabilities who are Federal employees has increased to 11.86 percent, an all-time government high. The percentage of Hispanic (8.2 percent) and Asian American/Pacific Islander (6.1 percent) employees is steadily increasing with all other groups remaining at the same levels, and the diversity of the SES has improved. Moreover, the FY 2012 EVS reflected that 65 percent of Federal employees answered positively

when asked if their supervisor or team leader is committed to a workforce that represents all segments of society.

In addition to supporting a diverse and inclusive workforce, the Federal Government has also made progress towards pay equality. Pay differentials by gender, after accounting for education and occupation, tend to be about half as small in the Federal sector as in the private sector. Differentials by race are also smaller in the Federal sector than in the private sector.

Government-wide SES Appraisal Model

Drawing from leading practices in Federal agencies and the private sector, representatives from 29 organizations developed a Government-wide Senior Executive Service (SES) performance appraisal model in 2011. Under this system, agencies can rely upon a more consistent and uniform framework to communicate expectations and evaluate the performance of SES members.

Anchored to a set of clearly-defined competencies (OPM's Executive Core Qualifications) and balancing achievement of results with demonstration of leadership behaviors, this approach enhances clarity, transferability, and equity in performance standards development, feedback delivery, and ratings derivation. Since the introduction of the new SES appraisal model in January 2012, OPM approved implementation in 38 agencies (51% of all SES appraisal systems Government-wide). By FY14, it is anticipated to be 96%.

Strengthening Labor-Management Relations

The Administration continues to fulfill the robust vision laid out in Executive Order 13522, Creating Labor-Management Forums to Improve Delivery of Government Services. This Executive Order created a national Council, which meets regularly to coordinate Government-wide efforts, and nearly 1000 forums around government where agency management and union representatives work collaboratively to improve service delivery to the public.

In recent Council meetings representatives from both management and labor have presented on their successful efforts to improve productivity at naval shipyards, in VA appeals, and in Securities Exchange Commission (SEC) enforcement activities. For example, at the Nuclear Regulatory Commission (NRC), they are moving approximately 1400 workers and managers to a new building management involved workers and their unions in the design process. Important points for employees were included in the designs right from the start such as – access to natural light, noise levels, and workstation layouts. These are factors that deeply affect both productivity and morale. By engaging early, the NRC could approach business decisions with a problem-solving attitude.

In another case, there was enormous productivity increases at the Naval Sea Systems Command, NAVSEA. These are the employees who build, buy and maintain the Navy's ships and submarines and their combat systems. NAVSEA leadership asked their unions and workers, through their labor-management forum, to put forward ideas to save an hour of time out of each workday. Workers identified the most wasteful part of their day: waiting in line to get the tools and parts they needed for their projects. Management and labor devised with a solution – a kit, prepared in advance and handed to you on arrival. In the kit, workers receive the tools needed and the exact number of nuts, bolts, and parts for any project that day. With this and other changes, NAVSEA projects to save one hour per day for about 8,000 mechanics and engineers across four shipyards – which translates into enormous savings. It has also helped reduce overtime hours, further increasing cost savings. A next challenge in the labor management partnership is to spread these successes to other agencies and locations around government.

Goals-Engagement-Accountability-Results (GEAR)

Over the years, there have been numerous attempts to reform and improve employee performance management in the Federal sector, with the ultimate goal of improving the performance of the organizations in which the employees work. Drawing from practices in the Federal sector and private sector, representatives from various Federal agencies, labor unions, and management organizations from the National Council on Federal Labor-Management Relations and the CHCO Council developed recommendations to strengthen the existing system of employee performance management. These recommendations are known as the GEAR framework. They are based on the idea that successful organizations must have clear, aligned goals, engaged employees and supervisors, and accountability for every employee at every level.

Five agencies are currently implementing the GEAR framework: OPM, the Department of Energy, the Department of Housing and Urban Development, and components of the Department of Veterans Affairs and the U.S. Coast Guard. The CHCO Council is currently reviewing the progress of GEAR and lessons learned in these agencies and identifying other leading practices across the Federal sector and private sector with the goal of broader application of the GEAR framework across the Federal Government. The ultimate goal is to ensure that Federal employees are engaged and enabled to deliver and improve Government services.

Table 10–2. FEDERAL CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH
(Civilian employment as measured by full-time equivalents (FTE) in thousands, excluding the Postal Service)

Agency	Actual		Estimate		Change: 2013 to 2014	
	2011	2012	2013 CR	2014	FTE	Percent
Cabinet agencies:						
Agriculture	95.9	91.7	92.4	90.7	-1.7	-1.8%
Commerce	41.3	39.9	42.6	43.0	0.4	0.9%
Defense	771.3	765.2	777.2	765.0	-12.2	-1.6%
Education	4.4	4.3	4.2	4.3	0.1	2.4%
Energy	16.1	15.7	15.7	15.9	0.2	1.3%
Health and Human Services	68.8	69.3	71.3	72.6	1.3	1.8%
Homeland Security	179.5	184.0	190.1	191.0	0.9	0.5%
Housing and Urban Development	9.5	9.3	9.3	9.2	-0.1	-1.1%
Interior	70.5	70.0	69.7	69.8	0.1	0.1%
Justice	116.3	115.1	115.7	117.7	2.0	1.7%
Labor	16.9	17.2	17.4	17.5	0.1	0.6%
State	32.4	33.0	33.1	33.2	0.1	0.3%
Transportation	57.4	56.9	57.3	57.6	0.3	0.5%
Treasury	110.7	106.3	107.1	112.7	5.6	5.2%
Veterans Affairs	295.7	301.4	311.1	319.3	8.2	2.6%
Other agencies—excluding Postal Service:						
Broadcasting Board of Governors	1.9	1.9	1.9	2.0	0.1	5.3%
Corps of Engineers—Civil Works	23.7	23.1	22.7	22.7	0.0	0.0%
Environmental Protection Agency	17.3	17.0	17.0	16.9	-0.1	-0.6%
Equal Employment Opportunity Comm	2.5	2.3	2.2	2.3	0.1	4.5%
Federal Deposit Insurance Corporation	8.3	8.1	8.0	7.6	-0.4	-5.0%
General Services Administration	12.7	12.5	12.8	12.5	-0.3	-2.3%
International Assistance Programs	5.2	5.6	5.6	5.8	0.2	3.6%
National Aeronautics and Space Admin	18.6	18.1	18.2	17.9	-0.3	-1.6%
National Archives and Records Administration	3.3	3.2	3.2	3.2	0.0	0.0%
National Labor Relations Board	1.7	1.6	1.7	1.7	0.0	0.0%
National Science Foundation	1.4	1.4	1.4	1.5	0.1	7.1%
Nuclear Regulatory Commission	4.0	3.8	4.0	3.9	-0.1	-2.5%
Office of Personnel Management	5.4	5.3	5.5	5.7	0.2	3.6%
Railroad Retirement Board	1.0	0.9	0.9	0.9	0.0	0.0%
Securities and Exchange Commission	3.8	3.8	4.2	4.8	0.6	14.3%
Small Business Administration	3.4	3.4	3.4	3.5	0.1	2.9%
Smithsonian Institution	5.2	5.0	5.2	5.3	0.1	1.9%
Social Security Administration	67.6	64.7	65.1	65.3	0.2	0.3%
Tennessee Valley Authority	12.4	12.8	13.6	13.3	-0.3	-2.2%
All other small agencies	16.3	16.9	18.0	18.6	0.6	3.3%
Total, Executive Branch civilian employment * ...	2,102.4	2,090.7	2,128.8	2,134.9	6.1	0.3%

* Totals may not add due to rounding.

Table 10–3. TOTAL FEDERAL EMPLOYMENT
(As measured by Full-Time Equivalents)

Description	2012 Actual	2013	2014	Change: 2013 to 2014	
		CR	Request	FTE	Percent
Executive Branch Civilian:					
All Agencies, Except Postal Service	2,090,679	2,128,768	2,134,948	6,180	0.3%
Postal Service ¹	587,310	569,782	546,203	-23,579	-4.1%
Subtotal, Executive Branch Civilian	2,677,989	2,698,550	2,681,151	-17,399	-0.6%
Executive Branch Uniformed Military:					
Department of Defense ²	1,501,807	³ 1,466,664	⁴ 1,330,944	-135,720	-9.3%
Department of Homeland Security (USCG)	43,027	43,017	42,029	-988	-2.3%
Commissioned Corps (DOC, EPA, HHS)	6,935	7,065	7,062	-3	-0.0%
Subtotal, Uniformed Military	1,551,769	1,516,746	1,380,035	-136,711	-9.0%
Subtotal, Executive Branch	4,229,758	4,215,296	4,061,186	-154,110	-3.7%
Legislative Branch ⁵	30,634	34,260	34,402	142	0.4%
Judicial Branch	34,523	34,313	34,502	189	0.6%
Grand total	4,294,915	4,283,869	4,130,090	-153,779	-3.6%

¹ Includes Postal Rate Commission.

² Includes activated Guard and Reserve members on active duty. Does not include Full-Time Support (Active Guard & Reserve (AGRs)) paid from Reserve Component Appropriations.

³ FY 2013 reflects the FY 2013 President's Budget request.

⁴ FY 2014 excludes Overseas Contingency Operations (OCO) funded activated Guard and Reserve members on active duty and OCO funded non-ending strength of 33,885 for Army and 9,787 for the Marine Corps.

⁵ FTE data not available for the Senate (positions filled were used).

Table 10-4. PERSONNEL COMPENSATION AND BENEFITS

(In millions of dollars)

Description	2012 Actual	2013 CR	2014 Request	Change: 2013 to 2014	
				Dollars	Percent
Civilian Personnel Costs:					
Executive Branch (excluding Postal Service):					
Direct compensation	176,133	178,980	185,562	6,582	3.7%
Personnel Benefits	68,117	68,723	71,842	3,119	4.5%
Subtotal	244,250	247,703	257,404	9,701	3.9%
Postal Service:					
Direct compensation	36,398	35,059	34,141	-918	-2.6%
Personnel benefits	15,128	16,007	8,502	-7,505	-46.9%
Subtotal	51,526	51,066	42,643	-8,423	-16.5%
Legislative Branch: ¹					
Direct compensation	2,053	2,098	2,153	55	2.6%
Personnel benefits	670	654	667	13	2.0%
Subtotal	2,723	2,752	2,820	68	2.5%
Judicial Branch:					
Direct compensation	3,140	3,180	3,244	64	2.0%
Personnel benefits	1,071	1,147	1,169	22	1.9%
Subtotal	4,211	4,327	4,413	86	2.0%
Total, Civilian Personnel Costs	302,710	305,848	307,280	1,432	0.5%
Military personnel costs:					
Department of Defense					
Direct compensation	100,189	101,196	93,393	-7,803	-7.7%
Personnel benefits	51,505	52,113	45,350	-6,763	-13.0%
Subtotal	151,694	153,309	138,743	-14,566	-9.5%
All other executive branch, uniformed personnel:					
Direct compensation	3,234	3,235	3,181	-54	-1.7%
Personnel benefits	809	739	706	-33	-4.5%
Subtotal	4,043	3,974	3,887	-87	-2.2%
Total, Military Personnel Costs ²	155,737	157,283	142,630	-14,653	-9.3%
Grand total, personnel costs	458,447	463,131	449,910	-13,221	-2.9%
ADDENDUM					
Former Civilian Personnel:					
Retired pay for former personnel	76,196	82,087	87,534	5,447	6.6%
Government payment for Annuitants:					
Employee health benefits	10,683	10,698	11,163	465	4.3%
Employee life insurance	47	46	45	-1	-2.2%
Former Military personnel:					
Retired pay for former personnel	52,495	53,851	55,572	1,721	3.2%
Military annuitants health benefits	8,736	9,283	9,499	216	2.3%

¹ Excludes members and officers of the Senate.² Amounts in this table for military compensation reflect direct pay and benefits for all service members, including active duty, guard, and reserve members.