



Green Budget
2012



National Funding Priorities for the Environment

GREEN BUDGET
FISCAL YEAR 2012

MARCH 2011

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GREEN BUDGET

INTRODUCTION

This report, referred to as the *Green Budget*, highlights the environmental communities' Fiscal Year 2012 National Funding Priorities. The Green Budget, prepared annually by a coalition of national environmental and conservation organizations,¹ illustrates how an infusion of federal money can help meet the environmental challenges of climate change, develop our clean energy resources, and sustain our nation's lands, waters and other natural resources.

Use this document when developing and considering federal budget and appropriations proposals. This report includes a short background on the benefits and challenges for dozens of important environmental and energy programs as well as corresponding funding recommendations. As stewards of our surroundings we have a responsibility to act now and sufficiently fund the programs that help ensure the water we drink is clean, the air we breathe is pure, the energy we use is renewable and sited responsibly, and the wild landscapes and wildlife we care about are protected for the enjoyment of countless Americans today and in the future.

ALASKA WILDERNESS LEAGUE • AMERICAN BIRD CONSERVANCY •
AMERICAN HIKING SOCIETY • AMERICAN RIVERS • ASSOCIATION OF FISH &
WILDLIFE AGENCIES • CHESAPEAKE BAY FOUNDATION • CONSORTIUM FOR
OCEAN LEADERSHIP • DEFENDERS OF WILDLIFE • EARTH DAY NETWORK •
ENVIRONMENT AMERICA • ENVIRONMENTAL DEFENSE FUND •
ENVIRONMENTAL INVESTIGATION AGENCY • FRIENDS OF THE EARTH •
LEAGUE OF CONSERVATION VOTERS • MARINE CONSERVATION BIOLOGY
INSTITUTE • MARINE FISH CONSERVATION NETWORK • NATIONAL
AUDUBON SOCIETY • NATIONAL ESTUARINE RESEARCH RESERVE
ASSOCIATION • NATIONAL FISH AND WILDLIFE FOUNDATION • NATIONAL
PARKS CONSERVATION ASSOCIATION • NATURAL RESOURCES DEFENSE
COUNCIL • NATIONAL TRIBAL ENVIRONMENTAL COUNCIL • NATIONAL
TRUST FOR HISTORIC PRESERVATION • NATIONAL WILDLIFE FEDERATION •
OCEAN CONSERVANCY • PHYSICIANS FOR SOCIAL RESPONSIBILITY •
POPULATION ACTION INTERNATIONAL • RESTORE AMERICA'S ESTUARIES •
SIERRA CLUB • SMART GROWTH AMERICA • THE TRUST FOR PUBLIC LAND
• UNION OF CONCERNED SCIENTISTS • U.S. CLIMATE ACTION NETWORK •
THE WILDERNESS SOCIETY • WORLD WILDLIFE FUND

¹ The organizations listed on the back cover do not necessarily endorse or have expertise on every recommendation in this report. Please refer to the Program Contacts at the end of this document for more information on a particular program.

FISCAL RESPONSIBILITY & ENVIRONMENTAL SENSIBILITY

“...to win the future, we’ll need to take on challenges that have been decades in the making”.

President Barack Obama, 2011 State of the Union

The U.S. is currently facing tough fiscal challenges. As the Congressional Budget Office reported in its Budget and Economic Outlook for 2011-2021, “the sharply lower revenues and elevated spending deriving from the financial turmoil and severe drop in economic activity...have caused budget deficits to surge in the past two years. The deficits of \$1.4 trillion in 2009 and \$1.3 trillion in 2010 are...the largest since 1945—representing 8.9 percent of the nation's output.” It is with this extremely challenging background that Congress will debate and decide upon funding levels for all manner of discretionary programs as part of the Fiscal Year 2011 and Fiscal Year 2012 budgets.

We understand that tough decisions will need to be made in the upcoming years. However, when deciding on funding that affects hundreds of millions of Americans, we must take into account the full economic, social, environmental and cultural value of the many programs managed by the federal government. The programs outlined in this Green Budget support millions of jobs, improve our infrastructure, encourage economic investment in local communities, boost our global competitiveness, and keep our air breathable, our water clean and our wildlife and outdoor spaces protected, and in many ways make our country unique and prosperous. The resources protected by these programs support the abundant natural wealth that has helped to make our nation a great power in the world.

The budgets for Fiscal Years 2009 and 2010 demonstrated that leadership from the President and from Congress can truly help our country transition to a green energy economy, create jobs, conserve our natural resources, and protect wildlife. After years of limited investments, 2010 restored hope and optimism that we can drive sustainable economic growth while protecting our environment. These initial investments are already paying dividends through the doubling of our renewable energy generation. Their future success depends on continued, more adequate levels of funding in 2011 and 2012.

Providing these critical funds for important energy, water, marine, and natural resource programs will be no easy task as budget deficits and unemployment remain high. Solutions to our country’s deficit require economic reform and strategic decision-making. Many are calling for drastic cuts in discretionary spending. While we aggressively support increasing the efficiency and effectiveness of government programs, we would just as aggressively argue against indiscriminate discretionary cuts as a “solution” to our budget deficit. As we all know, domestic spending represents little more than 12% of the federal budget.

Protecting public health and the environment provides net benefits to our U.S. economy by substantially reducing costs, including health care, ecosystem restoration, and water treatment, while ensuring active job creation through renewable energy research and development, protection of ecosystem services, and fostering and preserving public lands and wildlife dependent recreation. The cost of these programs is a relatively small portion of the federal budget and thus a very small percentage of the average American family’s tax expenditures, yet the benefits are extraordinary: clean air for children to breathe, clean water for families to drink, healthy public lands and rivers for people to recreate in, clean oceans to support healthy fisheries, pollinators that help sustain American farms

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and a renewable energy future that ensures long-term, wise investments that keep our nation on the cutting edge.

It makes little sense to decimate vital environmental and energy programs that protect our health and well-being, and increase our economic competitiveness while at the same time, continuing to fund programs that will lead to the opposite outcome. Our nation's outdated energy policies are a good place to start. As the President said, "I'm asking Congress to eliminate the billions in taxpayer dollars we currently give to oil companies...So instead of subsidizing yesterday's energy, let's invest in tomorrow's." This document underscores the need for critical spending cuts and offers a number of examples of programs whose funding must be limited or discontinued. Eliminating subsidies for programs that pollute and harm our land, water, and wildlife can have a double benefit, as we also reduce the need for programs that solely provide support in the aftermath of ecosystem degradation.

PROMISING INVESTMENTS

Green Budget 2012 programs have the ability to enhance our public welfare, contribute to the growth of our economy, create millions of well-paying jobs and, most importantly, protect the value behind our natural capital and ecosystems. To allow funding levels to be severely cut would leave critical natural resource programs unable to manage day to day operations. Therefore, the upcoming fiscal year 2012 budget provides a great opportunity to protect the economic benefits of efficient and valuable programs.

The Green Budget supports fiscally responsible investments in natural resources we cannot afford to lose. As Congress strategizes how to successfully address the national deficit and spending, while building a stronger and more competitive America, the Green Budget advocates investing in the strong foundation of a green economy that can become and remain self-sufficient, innovative and globally secure. However, over the years, devastating cuts to environmental programs have impeded the potential contributions these programs can make to our national economy. The past two years have improved this situation, but we still have decades of neglect to address.

Integral to this discussion is the constant and careful reassessment of conservation program benefits, as well as the full, life-cycle costs of those programs to ensure results are in line with the efficient use of taxpayers' investments. Green Budget 2012, with compiled expertise from over 30 different organizations, examines conservation programs' benefits and costs, and provides funding recommendations to achieve maximum effectiveness and efficiency. Many nationwide energy, water, marine and natural resource programs are crucial facilitators in strengthening our national economy and mitigating future deficit increases.

HEALTH, AIR & WATER

For forty years, polluting industries have accused the EPA of pursuing policies that would hurt the economy. Almost every rulemaking or public statement by the Agency has been followed by comments from industry representatives stating that the Agency's activities would make America less competitive and throw people out of work. These statements have almost always been proven false.

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The George W. Bush Administration required EPA to show that the benefits of their rules would outweigh the costs. In addition, the Office of Management and Budget (OMB) prepared a report, using OMB metrics, to evaluate the costs and benefits of rules that were finalized ten years in the past. This ten-year look back showed that EPA rules had cost more than \$7 billion dollars, but that the benefits were between 3 and 24 times the cost, primarily due to health benefits.² Time has shown that environmental rules not only increase the livability of our communities, but are instrumental in incentivizing new industries and jobs to make industry and government less polluting and more efficient. With the proper scientific analyses, EPA can continue to use its authority to improve life for all Americans. We must continue to support a proper scientific approach to regulatory requirements.

EPA rulemaking, and the enforcement of those rules by EPA and its state partners, need to be properly funded so that the Agency can carry out its job as outlined in numerous congressional statutes: to protect the nation's public health and environment.

The American Recovery and Reinvestment Act significantly increased funding for key EPA programs during 2009-2010. The job-creating programs in the Act total more than \$6.6 billion and provide local communities with significant funds for sewers, drinking water, brownfield development, and Superfund cleanups. While this was a substantial down payment on America's infrastructure needs, states and localities have billions of dollars in backlogged projects that need only an infusion of support to begin creating jobs and improving our environment and public health.

LAND

From healthy lands, including federal and state publicly held lands, providing natural flood prevention to soil formation, ecosystem services are valuable to our national and individual welfare in a quantitative and qualitative way. A conservative estimate of the economic value behind U.S. ecosystem services is projected to be over \$241 billion annually.³ For example, National Forests protect watersheds that supply drinking water to approximately 66 million Americans, over 900 cities and 3,400 public drinking water systems.⁴ New York City, since the beginning of this year, has taken proper advantage of its 1997 land-acquisition program aimed at buying acres of land around upstate reservoirs. By spending \$541 million in the past 13 years on land purchases and maintenance, the city has ensured a substantial water supply for 9 million residents. In addition to this tangible benefit, the city has avoided spending more than \$10 billion to build an upstate filtration plant. This endeavor prevents a cost which would otherwise have likely been passed on to city residents and taxpayers, while simultaneously creating new areas for hiking, hunting, fishing and observing wildlife. Similar investments in open space and protected wilderness around urban areas not only increase real property and resale values, but also decrease the need for increased property tax rates.⁵ In regions surrounding

² 2008 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities

http://www.whitehouse.gov/sites/default/files/omb/assets/information_and_regulatory_affairs/2008_cb_final.pdf, p 96-98.

³ Phillips, S. 2004. The Economic Benefits of Wilderness: Focus on Property Value Enhancement. PhD. Dissertation. Virginia Polytechnic Institute and State University, Blacksburg, VA.

⁴ United States Department of Agriculture. Forest Service. *Fiscal Year 2012 Budget Overview*. 2011. Fiscal Year 2012 Budget Overview. Web. 25 Feb. 2011. p.9 <<http://www.fs.fed.us/aboutus/budget/2012/justification/FY2012-USDA-Forest-Service-overview.pdf>>.

⁵ Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors: A Resource Book. Fourth Revised. National Park Service. 1995. eBook.

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the Green Mountain National Forest in Vermont, for example, land values are almost 19 percent higher in townships that border wilderness than in ones that do not.⁶ The direct and indirect values of investing in land conservation far outweigh the initial or alternative expenses, providing a model that will yield more beneficial results as land conservation programs are expanded.⁷

In addition to the quality of life and health benefits for Americans, gateway communities and outdoor industries benefit substantially from this recreational spending. For example, a recent study commissioned by the National Parks Conservation Association found that every dollar invested in national parks generates at least four dollars in direct economic impact to the local economy—supporting approximately \$13 billion of local private-sector economic activity and nearly 270,000 private sector jobs. And a recent study by the Outdoor Industry Association determined that active outdoor recreation contributes \$730 billion annually to the US economy. Investments in public lands management also ensures preservation of our natural and cultural heritage that draw millions of people annually from around the world.

WILDLIFE

To protect wildlife, its habitat must be protected. By doing this, we are also protecting the health of the natural systems that provide clean air and water, food, medicines, and other products that are required of a healthy American life. Federal programs that protect imperiled species, migratory birds, wildlife refuges, forests, parks, wilderness areas, and other lands essential to wildlife all are helping to ultimately ensure the health and well-being of the American people. Birds and bats are pollinators and seed dispersers – pollination is worth billions each year to the agricultural industry. Bats also eat vast numbers of insects, including pests that damage crops such as corn, cotton, and potatoes and carry dangerous diseases like West Nile virus, reducing the need for toxic pesticides. Wildlife provides far-reaching benefits to treat human disease – the Gila monster lizard provides a drug that helps treat diabetes; chemicals secreted by the Houston toad are used as medicines to treat heart and nervous disorders while crocodile blood is being studied for an antibiotic, desert pupfish for kidney disease, and black bear for osteoporosis. Programs that protect endangered species and other vulnerable wildlife from pesticides, heavy metals, endocrine disruptors, industrial chemicals and numerous other pollutants protect people at the same time. And since the link between wildlife smuggling, organized crime and drug trafficking is well documented⁸, money spent fighting the illegal wildlife trade is money spent on the global war against crime.

Wildlife also makes an important contribution to the economy through wildlife-related consumer spending. According to the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, 87.5 million U.S. residents participated in wildlife-related recreation, contributing more than \$120 billion to outdoor recreation economies.⁹ More specifically 71.1 million of these people

⁶ Phillips, S. 2004. Windfalls for Wilderness: Land Protection and Land value in the Green Mountains. PhD. Dissertation. Virginia Polytechnic Institute and State University, Blacksburg, VA.

⁷ "New York City Steps Up Land Purchases in Upstate Watershed." *The Daily Freeman: Serving the Hudson Valley since 1871* (DailyFreeman.com). 18 July 2010. Web. 19 Jan. 2011.

⁸ CRS Report for Congress, International Trade in Wildlife: Threats and U.S. Policy, Liana Sun Wyler and Pervaze A. Sheikh. Updated August 22, 2008.

⁹ United States. Department of Interior. U.S. Fish and Wildlife. *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation Errata Sheet for National Report*. 2006. Web. 19 Jan. 2011.

<<http://www.census.gov/prod/2008pubs/fhw06-errata.pdf>>.

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were wildlife watchers who contributed nearly \$46 billion in recreation expenditures, from purchasing bird-watching equipment to eating at local restaurants, while \$75.5 billion was generated from hunting and fishing.¹⁰ National wildlife refuges alone generate nearly \$1.7 billion and \$27,000 private sector jobs in local economies.¹¹ Investments in wildlife and its habitat help to ensure the present and future well-being of our communities and families for generations to come.

OCEANS, COASTS & WATERWAYS

Oceans, coasts, and waterways contain ecosystems that sustain and improve our economy. According to the National Ocean Economics Program, the US ocean and coastal economy contributes more than \$138 billion to the nation's GDP annually from living marine resources, tourism, recreation, transportation, construction, and mineral extraction. Additionally, over 2.3 million jobs in the US depend on the marine environment. Tourism and recreation alone account for over \$69 billion and over 1.7 million jobs of this total amount.¹² Beyond the recreational services that oceans and waterways provide, U.S. commercial fishing generated \$103 billion in national sales and supported 1.5 million jobs in 2008.¹³

Coastal state counties were home to over 108 million people, provided jobs to over 48 million people contributed \$5.7 trillion to the US economy in 2007.¹⁴ For instance, a single acre of wetland generates over a \$150,000 in economic value of services, from processes of controlling erosion to harboring 75 to 90 percent of commercially valuable fish and shellfish in the United States.¹⁵ Resource management of our oceans, coasts, and waterways is a key investment to ensuring the health and sustainability of these natural resources and the services they provide remain a major component in our nation's health and road to recovery.

ENERGY

Coupled with the management of natural resources, Congress can facilitate the large-scale growth of a domestic clean energy industry that will promote our economic recovery. U.S. Secretary of Energy Steven Chu has implored the United States to mobilize clean energy innovation and investment to meet what he called the new "Sputnik Moment," a call which consumers, business owners and investors alike have begun to take seriously.¹⁶ According to Bloomberg New Energy Finance, venture

¹⁰ United States. Department of Interior. U.S. Fish and Wildlife. *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation Errata Sheet for National Report*. 2006. Web. 19 Jan. 2011. <<http://www.census.gov/prod/2008pubs/fhw06-errata.pdf>>.

¹¹ United States. Department of the Interior. U.S. Fish and Wildlife. *Banking on Nature 2006: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation*. <http://www.fws.gov/refuges/about/bankingonnature.html>

¹² "State of the U.S. Ocean and Coastal Economies, 2009." *National Ocean Economics Program*. Web. 3 Feb. 2011. <http://www.oceaneconomics.org>.

¹³ "State of the U.S. Ocean and Coastal Economies, 2009." *National Ocean Economics Program*. Web. 3 Feb. 2011. <http://www.oceaneconomics.org>.

¹⁴ "State of the U.S. Ocean and Coastal Economies, 2009." *National Ocean Economics Program*. Web. 3 Feb. 2011. <http://www.oceaneconomics.org>.

¹⁵ "Economic Benefits Report, Safeguarding the Environment: The Trust for Public Land." *The Trust for Public Land--Conservation and Parks for People*. Web. 19 Jan. 2011. <http://www.tpl.org>

¹⁶ United States. Department of Energy. *Secretary Chu: China's Clean Energy Successes Represent a New "Sputnik Moment" for America*. 29 Nov. 2010. Web. 19 Jan. 2011. <<http://www.energy.gov/news/9829.htm>>

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capital investment in American cleantech companies accounted for 90% of global cleantech venture capital, while the past four quarters from 3Q10 have seen over \$20 billion in new financial investment in clean energy in the US (although unfortunately a number that still pales in comparison to China's \$50 billion in clean energy investments in 2010).¹⁷ As the American Solar Energy Society estimates, "renewable energy industry can generate up to 4.5 trillion in revenue in the US and create 40 million jobs by 2030." At the same time, resources are needed to ensure that renewable energy development moves forward in a balanced way that protects fish, wildlife, land, water, and other sensitive resources. Developed, implemented, and regulated properly, renewable energy has the means and potential to revitalize the national economy.¹⁸

CONCLUSION

Despite the myriad challenges facing our country in 2011, there is still an important opportunity to effectively invest in conservation and clean energy programs that will positively impact both our nation's public welfare and our economy. The Green Budget 2012 supports investments in renewable energy, as well as land, wildlife and water conservation while outlining budget cuts to programs that subsidize the dirty fuels industry and other ineffective conservation policies. As Americans nationwide have put themselves on a budget and made difficult decisions, the Green Budget does the same, while still looking to invest in the future health of our country. With our nation only slowly recovering from economic distress, now is the time to support prudent investments with substantial, long-term public benefits. At the same time, we must maintain fiscal responsibility through modest investments and strategic cost-cutting efforts aimed at inefficient policies and programs that compromise a long-term course towards sustainable economic health.

¹⁷ Bloomberg New Energy Finance: Clean energy investment 2010 - fact pack presentation, January 25, 2011; Bloomberg New Energy Finance: ACORE Phase II: Six Myths and a Truth about US Clean Energy, presentation by Ethan Zindler, 12/9/10

¹⁸ "Economic Drivers." American Environmental Energy. Web. 19 Jan. 2011. <<http://www.americanenvironmental.com/power-parks/economic-drivers>>.

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OFFSETS

OFFSETS

ARMY CORPS OF ENGINEERS

Cut Funding for Wasteful and Environmentally Damaging Corps of Engineers Water Projects

The FY 10 Energy and Water Development Appropriations and FY 11 Continuing Resolution legislation included numerous wasteful and damaging projects that should be cut from the budget in FY 12. These projects are among the most controversial projects -- whose future-year costs threaten to engulf the potential for other worthy projects to ultimately receive funding. These include projects such as the \$450 million Grand Prairie Region Irrigation Demonstration Project (\$9.7 million, in FY 10), AR, which would siphon off water from the White River in Arkansas for rice farming, threatening damage to two of the nation's premier National Wildlife Refuges and inaugurating the Corps into the irrigation business at a potential ultimate cost of billions for what has never before been a Corps mission, in one of the wettest regions of the U.S., along with a similarly expensive Bayou Meto project in the Arkansas River Basin and numerous others being contemplated. Important Agriculture Department NRCS programs provide alternative assistance to farmers to improve on-farm storage and water efficiency at far less cost and damage to the environment. They also include the \$331 million Delaware River Main Channel Deepening Project that threatens environmental resources of the Delaware Bay and River and has engendered lawsuits from the States of Delaware and New Jersey in opposition (\$4.8 million in FY 10). They also include stream channelization and land drainage projects in the Yazoo River basin, MS, (\$40 million in FY 10), St Johns Bayou/New Madrid Floodway, MO (\$200,000, ultimately more than \$100 million) as well as numerous costly water and wastewater treatment "environmental infrastructure" projects, ultimately costing billions that are not the Corps' mission, are generally local in nature and often compete unfairly with EPA revolving loan water programs. If eliminated these would save \$129 million annually. In addition many beach sand-pumping projects are principally state or local projects, often for beaches with little public access and which provide no substantial flood-related benefits. If eliminated these would save up to \$90 million annually, according to CBO. Both the *National Commission on Fiscal Responsibility and Reform* and *Bipartisan Policy Center Debt Reduction Task Force* make recommendations of savings by cutting low value and low priority Corps construction projects, with estimated savings equal to or above \$ 1 billion annually.

FY 12 Recommendation:

Cuts wasteful and environmentally damaging and low priority Corps projects; annual savings of \$1.0 billion by 2015.

Inland Waterway Trust Fund Receipts (User Fees)

Currently, the Inland Waterway Trust Fund is essentially bankrupt due to annual expenditures for inland waterway new construction and rehabilitation projects in recent years substantially exceeding annual receipts from the Inland Waterway Fuel Tax. U.S. taxpayers are continuing to pay in excess of 90 percent of the annual costs of constructing, operating and maintaining the inland waterway system. This level of public subsidy far exceeds all other forms of transportation, including highways, rail and air travel. Recently federal taxpayers were asked to pay 100 percent of the inland waterway-related costs associated with economic stimulus funding. It is time that commercial inland waterway users begin to shoulder considerably more of the costs of constructing and operating the inland waterway system. Both the *National Commission on*

OFFSETS

ARMY CORPS OF ENGINEERS

Fiscal Responsibility and Reform and the *Bipartisan Policy Center Debt Reduction Task Force* make recommendations that Congress should “change inland water systems to be self-funded.” An additional fee system or setting the tax on fuel consumed by towboats at the level to cover the full federal costs of construction, operation and maintenance of commercial inland waterways, would also encourage scheduling of lock usage, would have the immediate effect of reducing or eliminating congestion and increasing efficiency, and would provide revenues for system investments.

FY 12 Recommendation:

Enact IWW User fees to increase annual IWWTF revenues to cover full costs of construction, operations and maintenance of IWWTF at a Federal taxpayer savings of \$800 million annually. CBO estimates fees to cover full costs of IWW maintenance will raise and save Federal taxpayers \$1.875 billion over five years.

OFFSETS

DEPARTMENT OF AGRICULTURE

Market Access Fund

The Market Access Program (MAP) uses funds from the U.S. Department of Agriculture's (USDA) Commodity Credit Corporation (CCC) to aid in the creation, expansion, and maintenance of foreign markets for U.S. agricultural products. Since its inception more than two decades ago, the MAP has spent \$3.4 billion of taxpayer money subsidizing ad campaigns for corporations like McDonalds, Nabisco, Fruit of the Loom, and Mars. Cutting this wasteful program could save taxpayers \$1 billion over 5 years.

FY 12 Recommendation:

Eliminate funding for the Market Access Program. In FY 10 \$202 million was appropriated for the Program and the President's FY 12 budget requests \$204 million. This program should be eliminated, saving taxpayers over \$1 billion over five years.

Wildlife Services “Livestock Protection Program” – Cut Multi-million Subsidy for Predator Killing

The federal funding of a little known government program housed within the U.S. Department of Agriculture, known as Wildlife Services, has increased since FY 96 from nearly \$19 million to \$98 million in FY 10—a 415% increase. While the Wildlife Service's program conducts some important work that benefits taxpayers, such as the removal of birds from airports, nearly half of its annual appropriation is dedicated to “Agricultural Protection.” Included in this category is the controversial Livestock Protection program that annually poisons, traps and shoots tens of thousands of coyotes, bears and mountain lions primarily for the benefit of sheep and cattle ranchers who pay little or nothing for this service. Funding for this program has increased from \$13.5 million in FY1996 to \$23.7 in FY 09—an increase of 76%.

The livestock protection program of today operates much the same way it did when Congress passed the Animal Damage Control Act in 1931. After just a few years of its operation, the American Society of Mammalogists began raising concerns about the effect that Wildlife Services' extensive poisoning, trapping and shooting program was having on western ecosystems. Beginning in the 1960s, a series of congressionally appointed commissions studied the program and heavily criticized it, even calling for its abolishment. The reviews resulted in few changes to the program. Over the past decade, Congress has directed Wildlife Services to employ non-lethal methods as the methods of choice, but such direction has been largely ignored by Wildlife Services administrators who claim the directives are unfunded mandates. This defiance of the will of Congress is more remarkable given that Congress provides more than \$10 million each year to support the work conducted at Wildlife Services' research facilities, which over the years have conducted cutting edge research on non-lethal alternatives. More recently, a detailed study by the Wildlife Conservation Society found that other factors besides predators are responsible for the decline of the sheep industry and that the industry needs to develop alternative mechanisms to address these factors and not simply kill native carnivores.

In this era of fiscal conservatism, it is time again to question the killing of native carnivores by the federal government and its subsidization of this service for the benefit of the ranching industry.

OFFSETS

DEPARTMENT OF AGRICULTURE

FY 12 Recommendation:

- Option 1: Reduce federal funding of Wildlife Services' livestock protection program.*
- Option 2: Restructure its one-line item budget to establish a new and separate line item for non-lethal control funded by a reduction in the lethal control expenditures for livestock protection.*
- Option 3: Reduce lethal control expenditures for livestock protection and use the savings to provide funding to USDA's Natural Resources Conservation Service or other USDA programs for non-lethal assistance to livestock producers.*

OFFSETS

DEPARTMENT OF ENERGY

Reactor Concepts RD&D

Reactor Concepts RD&D, previously called Generation IV, is a program to develop the next generation of nuclear reactors, including small modular reactors and the Very-High Temperature Reactor (VHTR), and to research extending the life of currently operating reactors. Small modular reactors are unlikely to solve the costs, safety, and radioactive waste problems of large reactors. For 40 years, the nuclear industry has been pursuing larger and larger reactors to try to make nuclear power economically competitive – the pending applications at the NRC are the biggest reactors yet in the United States. These economies of scale are lost if size is greatly decreased: physics dictates that smaller reactors will tend to be more expensive than larger reactors given similar safety features. These cost increases are unlikely to be offset even if the entire reactor is manufactured at a central facility and some economies of scale are achieved compared to large reactors assembled on site. Mass manufacturing also raises new safety, quality, and licensing issues. For example, how will recalls work if there is defect and how will the NRC certify safety if the reactors are made abroad? Finally, small reactors would create a complex waste problem, because the waste would be located in many more sites.

The Very-High Temperature Reactor (VHTR) has not been a commercial success in the US. Neither of the two VHTRs that operated commercially in the United States, Peach Bottom in Pennsylvania and Fort St. Vrain in Colorado, is still operating. The Fort St. Vrain reactor had a lifetime capacity factor of 14.5 percent and was the country's worst operating commercial reactor. The most researched VHTR is the pebble bed design. Ironically, the DOE is pursuing this design at the very moment that the South African government has cancelled its investment in the program due to escalating costs and lack of investors. Many countries, including United States, Germany, France, Japan, and Britain, have tried and failed to develop the pebble bed modular reactor.

FY 12 Recommendation:

Congress should not appropriate any money for the Reactor Concepts RD&D program. This would save taxpayers \$213 million in FY 12 as compared to what was appropriated in FY 10 for the Generation VI program. Over 5 years this would save taxpayers over \$1 billion.

Nuclear Power 2010

Nuclear Power 2010 (NP2010) is a program to subsidize the industry's cost of new reactor license applications. The Obama administration stated its intention to terminate this program after FY10, which is the original sunset of the program, and requested no additional funding in FY 12. Several proposed bills have reauthorized funding for the program.

The NP2010 program has been a giant waste of taxpayer money. It funded the design certification and detailed standardized plant designs for Westinghouse's AP1000 and General Electric Hitachi's (GEH) ESBWR and for NuStart's reference license application for the AP1000. In October 2009, the NRC announced that it was concerned that the amended AP1000 reactor design, slated for 14 of the 22 proposed reactors in the U.S., cannot withstand severe weather such as hurricanes, tornados and earthquakes. There is currently no schedule for the AP1000 certification. DOE informed Entergy in 2008 that the ESBWR design would not be eligible for

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loan guarantees. Three of the four sites proposing the ESBWR subsequently abandoned the design.

Historically, the NP2010 program has also funded three Early Site Permits that have been approved by the NRC at the North Anna site in Virginia, the Clinton site in Illinois, and the Grand Gulf site in Mississippi. An Early Site Permit establishes that a site is environmentally suitable for new reactors and, these issues cannot be raised again in the subsequent Construction and Operation License proceeding. Of the three Early Site Permits, no license application has been submitted to build a reactor at Clinton or Grand Gulf. North Anna project changed its design from the ESBWR to the APWR and there is currently no schedule for reviewing the revised application.

FY 12 Recommendation:

Eliminate Funding for Nuclear Power 2010 in FY 12, saving taxpayers \$102 million over FY 10, and \$510 million over five years.

Fuel Cycle Research and Development

Globally, over \$100 billion has already been spent globally in unsuccessful attempts to commercialize reprocessing and transmutation technologies.¹ Reprocessing is expensive, polluting and proliferating. According to the National Research Council, a reprocessing and fast reactor program that processes only existing U.S. spent fuel would cost \$700 billion (2007\$). Reprocessing actually increases the number and complexity of the radioactive waste streams that must be managed. Globally, commercial reprocessing has produced nearly 250 metric tons of separated plutonium, which is vulnerable to theft or diversion and enough to make 30,000 nuclear weapons. Even NNSA's non-proliferation analysis of DOE's R&D program confirmed that none of DOE's proposed schemes for mixing plutonium with other radionuclides would significantly reduce the risk of theft or diversion compared to pure plutonium.²

DOE continues to pursue this nuclear alchemy under the Fuel Cycle R&D program.³ The scope of the program, however, is supposed to be broader than its previous incarnations to also include research on storage technologies, security systems, alternative disposal pathways (e.g. salt formation and deep borehole) and geologic storage. Another important change to the program is a shift of the focus from demonstration projects to small-scale experiments. The Green Budget recommends eliminating this program.

¹ Arjun Makhijani, *Plutonium End Game Managing Global Stocks of Separated Weapons-Usable Commercial and Surplus Nuclear Weapons Plutonium*, Institute for Energy and Environmental Research, January 2001, p. 27, <http://www.ieer.org/reports/pu/index.html>.

² Office of Nonproliferation and International Security, *Draft Nonproliferation Assessment for the Global Nuclear Energy Partnership Programmatic Alternatives*, December 2008, pages 68-70, http://nnsa.energy.gov/nuclear_nonproliferation/documents/GNEP_NPIA.pdf

³ This program has had several incarnations: Advanced Accelerator Applications (AAA) Program (FY2001-2002); Spent Fuel Pyroprocessing and Transmutation Program (FY2003); and the Advanced Fuel Cycle Initiative (AFCI) (FY2004-2009).

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FY 12 Recommendation:

Congress should eliminate funding for the Fuel Cycle Research and Development Program. This would save taxpayers \$132 million over FY 10 levels and \$660 million over five years.

Nuclear Energy Enabling Technologies

Nuclear Energy Enabling Technologies is a new program to research and develop “cross-cutting” technologies related to new reactor and fuel cycle concepts. First proposed by the President in FY 2011, it is redundant to other existing DOE nuclear R&D programs and should not be funded.

FY 12 Recommendation:

Congress should not appropriate any money for this program in FY 12. This would save taxpayers \$97 million over what the President has requested in his FY 12 budget, and it would save taxpayers \$485 million over five years.

Yucca Mountain

The DOE has informed the NRC that it is no longer seeking a license for a high-level nuclear waste repository at Yucca Mountain in Nevada, and has filed a motion to withdraw the application, pursuant to NRC procedural rules. The Yucca Mountain program and site have been deactivated by DOE, and the NRC license application review process has been halted. Several parties have filed lawsuits challenging the Administration's authority to halt the project, but final court action will take a year or more.

FY 12 Recommendation:

The Yucca Mountain budget should be zero, as proposed in the Administration's FY2011 Budget Proposal.

Mixed Oxide (MOX) Fuel

The Administration is aggressively pursuing the construction of a facility to make surplus weapons plutonium into fuel for reactors, called MOX. MOX fuel undermines nonproliferation goals, complicates reactor operations, increases the public health impact of a reactor accident, and costs more and takes longer than the alternative, immobilization (glassification) of the separated plutonium in existing high-level waste. The MOX Fabrication Facility, which is currently being built at the DOE's Savannah River Site in South Carolina and is facing a licensing challenge by public interest groups, is estimated to cost \$4.9 billion, an increase of \$43 million since FY2009. The building to solidify radioactive waste from the MOX plant, the Waste Solidification Building, is estimated to cost \$344 million, an increase of \$66 million since FY2009. Even if the MOX facility is completed, there is a real risk it will sit idle, because no utility in the U.S. is licensed to use the MOX fuel in its reactors and only TVA is expressing interest. The only utility that had a license to test MOX fuel, Duke Energy, decided to let its contract with DOE lapse after a failed test of MOX fuel assemblies. In parallel with the US program, DOE is supporting MOX development and use in Russia. The Russian MOX program is integral to Russia's pursuit of

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sodium-cooled plutonium “breeder” reactors, which can produce more plutonium than they consume and thus present an exceptional proliferation risk which the US must not support. Rather than throwing hundreds of billions more at this dangerous and costly project in the U.S. and Russia, the Obama administration should zero out funding for the MOX facilities and focus on immobilizing the separated plutonium.

FY 12 Recommendation:

Congress should stop funding this program, saving taxpayers \$612 million in FY 12 and almost \$2.4 billion over the next five years.

Ultra-deepwater Drilling Research and Development Subsidy

The Energy Policy Act of 2005 mandated a new oil and gas research and development program called the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources Program. The program is directed to increase the supply of oil and natural gas. Industry does enough of its own research on how to get oil and gas out of the ground. Federal funding should only step in where research is desperately needed and not being sufficiently conducted by the private sector—data about environmental and health impacts and development of technologies to best protect the environment and human health.

FY 12 Recommendation:

Repealing this giveaway will save taxpayers \$190 million over five years.

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DEPARTMENT OF THE INTERIOR

Bureau of Land Management and Forest Service Public Lands Grazing

The public land grazing program administered by the Forest Service and the Bureau of Land Management is highly subsidized and benefited only two percent of the nation's livestock operators. According to the Government Accountability Office, the grazing programs cost taxpayers roughly \$136 million to operate, but only earned \$21 million. Below-cost grazing fees encourage overgrazing and, along with other problematic features of the existing federal program, have resulted in extensive and severe environmental damage to public lands and riparian areas, resulting in reduced ecologic resiliency and ability to adapt to a warming western climate. In FY 07, the fee dropped to a ludicrous low of \$1.35, the lowest allowable amount by law. To put that in perspective, the first uniform federal grazing fee that was established in 1934 was set at \$1.23.

FY 12 Recommendation:

Charge grazing fees equal to those of the state where the land is situated, saving taxpayers \$20 million in FY 12 and \$105 million over 5 years.

Bureau of Land Management Oil and Gas Program

In FY 10 \$45.5 million was appropriated for processing applications for permits to drill. In recognition of the increasing costs of this program, and the vast profits going to the oil and gas industry from this program, Congress imposed a "cost recovery fee" of \$6,500 per drilling permit application to defray the BLM's administrative costs that reduced the amount appropriated for the program.

FY 12 Recommendation:

Charge a cost recovery fee high enough to adequately cover the entire cost of administering the program.

Bureau of Land Management Hardrock Mining Reforms

The 1872 Mining Law is the granddaddy of federal subsidies. Enacted under President Ulysses S. Grant, the 1872 Mining Law was intended to promote western settlement. Now, 138 years later, this anachronistic law remains unchanged, providing an enormous subsidy to the biggest mining operators in the world. Under the 1872 law mining companies pay no royalties for the minerals they remove from federal lands and can purchase federal land for no more than \$5 per acre. Taxpayers receive nothing for the \$1 billion worth of minerals mining companies extract annually from federal lands. To compare, the oil, gas, and surface coal industries pay royalty rates of at least 12.5 percent, still among the lowest in the world.

FY 12 Recommendation:

Charge a 12% royalty fee, saving taxpayers \$600 million over 5 years.

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DEPARTMENT OF THE TREASURY

Fossil Fuel Tax Breaks

The federal tax code contains billions of dollars in tax breaks for the oil and gas industry. Tax incentives range from new tax breaks in the Energy Policy Act of 2005 in addition to a host of incentives that existed prior to passage of the energy bill. President Obama's first budget proposed to do away with over \$30 billion giveaways to these giant multi-national corporations. President Obama went a step further at the G20 in Pittsburg, calling for an end to all subsidies for fossil fuels. Additionally President Obama's budget called for a new tax on oil producers in the Gulf of Mexico to fix a Clinton era mistake that is costing taxpayers billions of dollars. Between 1996 and 2000, the Interior Department awarded offshore drilling leases to companies drilling for oil and natural gas in the Gulf of Mexico. The new tax would be in lieu of these royalty payments. Congress should follow his lead and act immediately to end these giveaways to the oil and gas industry and invest this money in environmental protection.

Oil and Gas Percentage Depletion Allowance

This oil and gas depletion allowance allows independent oil companies to deduct 15 percent of their sales revenue to reflect the declining value of their investment. This flat deduction bears little resemblance to the actual loss in value over time and companies often end up deducting more than the value of their initial investment.

FY 12 Recommendation:

Removing the oil and gas percentage depletion allowance would save taxpayers \$4.3 billion over 5 years

Manufacturing Tax Deduction For Oil and Gas Companies

In 2004, Congress passed H.R. 4520, the American Jobs Creation Act of 2004. The intent of the bill was to bring U.S. export subsidies into compliance with global trade laws. During the legislative process, provisions were added to the bill that classified oil and natural gas production as a manufactured good. The change allowed oil and gas companies to claim billions of dollars of new tax deductions, effectively lowering their tax rate.

FY 12 Recommendation:

Eliminating this deduction would return more than \$6.2 billion to the federal treasury over 5 years.

Levy Excise Tax on Gulf of Mexico Oil and Gas

In the late 1990s leases in the Gulf of Mexico that waived the payment of royalty fees to the federal government were purchased by oil and gas producers, allowing producers to extract taxpayer's resources without payment. In an oversight the leases did contain any clause ending the waiver when oil and gas prices are high. An excise tax of 13 percent on Gulf of Mexico oil and gas production that allows producers credit against the tax for royalties paid would allow the government to recoup the losses from these lease giveaways. This is modeled after a plan proposed by Senate Energy and Natural Resources Chairmen Jeff Bingaman (D-NM).

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FY 12 Recommendation:

The proposal would begin return \$6.9 billion to taxpayers over 5 years.

Last in, First Out Accounting

For more than 70 years, the oil and gas companies have used an accounting method known as “last in, first out,” or “LIFO,” to minimize their tax liability. Using LIFO accounting, oil companies can sell the last oil (and currently most expensive) placed into their reserves first, before selling longer-held and cheaper reserves. By using this method, when oil prices are high companies are able to minimize the value of their reserves and therefore their tax burden.

FY 12 Recommendation:

Repealing the LIFO accounting method would save consumers \$31.0 billion over 5 years, though not all of this would come from oil companies.

Intangible Drilling Costs

Integrated oil companies such as ExxonMobil are allowed to immediately deduct 70 percent of “intangible drilling costs” such as the cost of wages, supplies, and site preparation, rather than capitalizing them. Smaller, independent oil and gas producers are allowed to immediately deduct all of their intangible drilling costs.

FY 12 Recommendation:

Repealing this tax giveaway will save the treasury \$8.9 billion over 5 years.

Geological and Geophysical Expenditures

This tax break was created in the Energy Policy Act of 2005 and allows companies to deduct the costs associated with searching for oil. President Obama’s budget increases the amortization period for independent producers from 5 to 7 years.

FY 12 Recommendation:

Repeal this tax giveaway to save taxpayer \$698 million over 5 years.

Passive Loss

This tax break allows owners and investors in oil and gas properties to use losses from the oil and gas business to shelter other income.

FY 12 Recommendation:

Fixing this giveaway would save taxpayers \$105 million over five years

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Deduction for Tertiary Injections

The deduction for tertiary injections allows oil and gas companies to get a deduction equal to any cost or expense for advanced oil recovery.

FY 12 Recommendation:

Getting rid of this giveaway will save taxpayers \$34 million over five years.

Expensing Property Used To Refine Liquid Fuels

The provision, created in the Energy Policy Act of 2005, allows 50 percent of the cost of building or upgrading a refinery to be expensed as a tax deduction. Even worse, this credit can be used for refiners to upgrade and take Canadian tar sands oil, one of the dirtiest sources of oil.

FY 12 Recommendation:

Eliminate this subsidy and save \$1.2 billion over 5 years.

Producing Fuels from an Unconventional Source

This tax credit gives a fifty cent a gallon tax credit for producers of liquid coal. Liquid coal has twice the life-cycle greenhouse gas emissions of conventional oil, all of the environmental impacts of coal mining and it requires massive inputs of water. We should not be subsidizing this dirty and dangerous fuel.

FY 12 Recommendation:

Eliminate this subsidy and save \$1 billion over 5 years.

Tax Breaks for Biofuels

Currently, the biofuels industry is lavished with generous tax credits, with no heed to the environmental and social costs that biofuels can cause. Depending on where, from what and how they are produced, biofuels can cause an increase in global warming emissions over gasoline (or diesel). The vast majority of today's biofuels fall into this category. In addition, widespread production of monoculture crops, such as corn for corn ethanol, requires massive fertilizer and other agrochemical inputs and result in water pollution and siltation. Ethanol production has been subsidized for nearly 30 years, and the cost of this subsidization to tax payers is sharply growing. Over the next five years, the biofuels industry could garner nearly \$40 billion from US taxpayers. On top of this, biofuels are further subsidized by a guaranteed market created through the Renewable Fuels Standard (RFS), which mandates the consumption of increasing levels of biofuels through 2022 and reaching 36 billion gallons in that year.

The Volumetric Ethanol Excise Tax Credit

The most egregious of these tax credits is the Volumetric Ethanol Excise Tax Credit (VEETC), enacted in the 2004 American JOBS Act and extending a similar credit that originated from 1978. A recent report by the Government Accountability Office (GAO) concluded that VEETC

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was no longer stimulating the additional ethanol consumption above the RFS levels and was “duplicative to the RFS with respect to ethanol use.”⁴ Additionally, the GAO also noted that the tax credit did not actually have any effect on corn grower’s income, but instead was assisting motor fuel blenders (oil companies), and ethanol producers (many of which are oil companies).⁵ Presently, this subsidy credits \$0.45 per gallon to the blender (oil industry) per gallon of ethanol blended into gasoline, and is eligible for both domestic and internationally produced ethanol. If this credit was repealed, \$29.7 billion could be saved over the next five years (assuming RFS consumption mandate continues unchanged) from subsidizing corn ethanol. An additional \$1.2 billion could be saved from other forms of ethanol, such as sugar, not including from cellulosic technology. In total, repealing this credit could result in \$30.9 billion in avoided expenditures.⁶

The Volumetric Biodiesel Excise Tax Credit

Enacted in the 2004 American JOBS Act, the Volumetric Biodiesel Excise Tax Credit (VBETC) credits \$1.00 per gallon of biodiesel blended into petroleum diesel fuel. The credit is not limited to domestic producers, meaning that palm oil biodiesel from plantations within the Borneo Rainforests can also receive the credit. Because the RFS mandate provides a guaranteed market for biodiesel this tax credit is extraneous. Over the next five years, this VBETC could benefit the biodiesel industry \$4.45 billion (assuming RFS consumption mandate continues unchanged).⁷

FY 12 Recommendation:

Do not extend tax credits for conventional biofuels (VEETC and VBBTC), worth over \$42 billion over the next 5 years.

Domestic Manufacturing Deduction for Coal and Other Hard Mineral Fossil Fuels

In 2004, Congress passed H.R. 4520, the American Jobs Creation Act of 2004. The intent of the bill was to bring U.S. export subsidies into compliance with global trade laws. Extraction of coal qualifies for this provision, allowing coal companies millions of dollars of tax deductions and effectively lowering their tax rate.

FY 12 Recommendation:

Eliminating this deduction would save taxpayers \$176 million in FY 12 and return almost \$990 million to the federal treasury over five years.

⁴ The Government Accountability Office. “Biofuels: Potential Effects and Challenges of Required Increases in Production and Use.” GAO-09-446 August 25, 2009, p. 105.

⁵ The Government Accountability Office. “Biofuels: Potential Effects and Challenges of Required Increases in Production and Use.” GAO-09-446 August 25, 2009, p. 105.

⁶ Figure calculated by assuming that RFS mandate levels for conventional (corn) ethanol and other advanced ethanol, excluding the cellulosic carve out, remained unchanged. This would result in a total of 68.75 billion gallons of ethanol consumed. This figure is then multiplied by the value of the credit, \$0.45 per gallon.

⁷ Figure calculated by assuming that RFS mandate levels for biodiesel remained unchanged. This would result in a total of 4.45 billion gallons of biodiesel blended and consumed. This figure is then multiplied by the value of the credit, \$1.00 per gallon.

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Percentage Depletion for Hard Mineral Fossil Fuels

This provision of the tax code allows coal companies to deduct 10 percent of their sales revenue to reflect the declining value of their investment. This flat deduction bears little resemblance to the actual loss in value over time and companies often end up deducting more than the value of their initial investment. Fixing this tax break will save taxpayers \$465 million over five years.

FY 12 Recommendation:

Eliminating this tax giveaway will save taxpayers \$79 million in FY 12 and \$465 million over the next five years.

Expensing of Exploration and Development Costs for Hard Mineral Fuels

In 1951 Congress passed this provision to encourage mining, and expanded it in 1966 to include mine exploration. This handout allows firms engaged in mining to expense (to deduct in the year paid or incurred) rather than capitalize (i.e., recover such costs through depletion or depreciation) certain exploration and development costs.

FY 12 Recommendation:

This treatment should be eliminated, saving taxpayers \$47 million in FY 12 and \$215 million over the next 5 years.

Royalty Taxation of Coal

In 1951 the tax code was changed to allow owners of coal mines to treat income from coal mines as a capital gain to increase coal production. Because of the graduated individual rate structure, the flat capital gains tax rate is most beneficial for those who make a higher income. The current maximum rate is 15%, less than half the top individual income tax rate of 35%.

FY 12 Recommendation:

Fixing this tax break would save taxpayers \$33 million in FY 12 and \$290 million over five years.

ARMY CORPS OF ENGINEERS

ARMY CORPS OF ENGINEERS

Introduction

With Congress' and the Administration's high concern to identify areas of potential savings and offsets, there is much potential within programs managed by the U.S. Army Corps of Engineers to directly reduce current spending, to identify areas where shifting approaches can result in increased benefits while costing far less, and in other areas, to shift substantial costs away from U.S. taxpayers appropriately to those who directly benefit from Corps' spending. Corps of Engineers' programs were recently identified by the *National Commission on Fiscal Responsibility and Reform* and the *Bipartisan Policy Center Debt Reduction Task Force* as having substantial potential for such savings. Reductions of spending are easily identified by eliminating earmark spending for many low value projects and for projects that are outside the basic Corps' mission areas, such as rejecting massive projects for irrigating already wet areas in the Eastern U.S. for agriculture, building wastewater and drinking water treatment systems that directly compete with loan programs for the same purposes run by the U.S. Environmental Protection Agency, and building beach sand-pumping projects for mostly local recreational and minimal flood control benefits, which should generally be treated as non-federal responsibilities.

In addition, it has been repeatedly noted that the costs of operating and maintaining the federal inland waterway system is now borne entirely by U.S. taxpayers, and the total current taxpayer subsidy level for inland waterway barge transportation (including new construction and rehabilitation) is now annually averaging approximately 90 percent, a far greater percentage than any other form of transportation, including airways, rail or roadways. Substantial savings could be gained appropriately by shifting more of these costs directly to the waterway users. In addition, for decades the nation has experienced ever-upwardly spiraling costs of damages and federal disaster assistance due to flooding, which in turn, has been caused by increasing high-risk development and redevelopment in floodplains, despite the government's having spent hundreds of billions on "flood control" projects (which then lure even more "at-risk" development into floodplains). Numerous new approaches to water resource management are aimed at improving "floodplain management" to both reduce flood losses and improve environmental quality. These projects often cost far less than traditional structural Corps flood control projects. Greater investments should be made in such approaches, which will save costs and lives both now and in the future.

Project Modification for Improvement of the Environment

The Project Modification for Improvement of the Environment program (Section 1135) allows the U.S. Army Corps of Engineers (Corps) to restore the health and productivity of river systems degraded by existing Corps projects. Under Section 1135, the Corps can modify and improve existing dams and flood control projects to increase habitat for fish and wildlife and restore areas and natural functions, increasing the overall benefits of projects to the public. Non-federal interests must provide for 25 percent of project costs, and modifications must not interfere with a project's original purpose. The need for funding of such modifications through the Corps' Continuing Authorities program has escalated in recent years with many new projects being identified and authorized without commensurate funding for implementation. WRDA 2007 authorized the program at \$40 million, due to the significant increase in both subscriptions to this Continuing Authorities Program (CAP) as well as projects that have received specific authorization.

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Aquatic Ecosystem Restoration

Established in 1996, Section 206, the Aquatic Ecosystem Restoration program, allows the Corps to undertake small-scale projects to restore aquatic habitat, even in areas not directly harmed by past Corps projects. Projects carried out under this program must improve the quality of the environment, be in the public interest, and be cost-effective. Individual projects may not exceed \$5 million, and non-federal interests must contribute 35 percent of project costs. Many of these projects contribute to key strategies for improving water quality and managing stormwater runoff, reducing risk of flooding, restoring critical natural functions of floodplains and watersheds, and enhancing fish and wildlife, often reducing the need for costly structural flood control projects. Many such projects are already planned and await funding allocations to help the communities. WRDA 2007 authorized an additional 43 projects above the already backlogged account and increased the annual programmatic ceiling to \$50 million.

Estuary Restoration Program

The Army Corps of Engineers' Estuary Restoration Program is a comprehensive program for the restoration of our nation's estuaries, authorized through the Estuary Restoration Act. Among the most productive ecosystems on earth, estuaries provide vital habitat to fish and wildlife species, and important environmental, cultural, and recreational benefits to human populations. The Act encourages coordination among all levels of government, and engages the unique strengths of the public, non-profit, and private sectors. The Act ensures a strong federal commitment and resources to restore estuary habitat by authorizing \$25 million for the Army Corps for implementation of on-the-ground restoration projects. A modest increase of \$4.0 million over FY 2012 budget for a total of \$5.0 million is recommended to enhance the ability of the Army Corps to conduct additional on-the-ground restoration projects nationwide.

Floodplain Management Services and Planning Assistance to States

Two increasingly important Corps of Engineers continuing authorities programs, Flood Plain Management Services (FPMS) and Planning Assistance to State (PAS), have been especially valuable in helping to reduce the nation's flood risk through nonstructural flood damage reduction solutions, while at the same time often promoting protection and restoration of the environment. Both these programs have been underfunded and highly subscribed, but can provide critically needed assistance sought by communities and states to address flood-related problems through floodplain management and land use planning, development of open space and greenways, building elevations, and flood proofing. This can often be accomplished at far less cost than traditional and environmentally-damaging structural methods such as dams, levees, stream channelization, jetties and sea-walls. These programs can significantly stretch and substantially leverage limited federal dollars for a wide range of flood damage reduction and environmental benefits as well as reduced future federal disaster relief and assistance costs.

Flood Hazard Mitigation and Riverine Restoration

Escalating flood losses are and continue to be a growing national concern. Over the past 25 years, the federal government has spent more than \$140 billion for traditional structural flood control projects and flood damage recovery. Flooded communities are increasingly seeking and implementing nonstructural solutions to reduce these increasing costs and to help meet many other goals, including improving water quality, expanding opportunities for recreation, and improving and restoring wildlife habitat. This flood damage reduction program was authorized in WRDA 1999 and reauthorized in WRDA 2007. It was designed to allow the Corps of Engineers to carry out non-structural flood control approaches, such as projects that buyout or relocate vulnerable homes and businesses (voluntary basis) in smaller communities, restore floodplain wetlands, increase opportunities for riverside recreation, and improve quality of life in riverside communities. It authorizes the Corps to work with other federal agencies to help local governments reduce flood damages and conserve, restore, and manage riverine and floodplain resources, with local communities providing 35 percent of project costs. Widespread need exists for such funding across the nation, including through many specifically authorized non-structural projects, and especially in places such as Coastal Louisiana and Gulf Coast communities devastated by hurricanes. The program is authorized to receive up to \$20 million.

Upper Mississippi Environmental Management Program: IL, IA, MN, MO & WI (Upper Mississippi River Restoration)

More than half of the fish and wildlife habitat created by the Mississippi River's backwaters and side-channels could be lost by 2035 if the management of the river does not improve. This would lead to a catastrophic collapse of the nation's most productive and diverse inland fishery. Loss of river habitat also threatens a \$1.2 billion river-recreation industry, which supports 18,000 jobs. Since 1986, the Upper Mississippi River Environmental Management Program (EMP) has been the primary habitat restoration and monitoring program on the Upper Mississippi river and among the nation's first major habitat restoration efforts. In the latest report being prepared for Congress, the Corps and ten partner agencies report that "[f]ish and wildlife habitat on the Upper Mississippi River System has been declining in quantity, quality and diversity for decades. Much of this decline is caused by human activity throughout the basin, including upland land use and development, and changes wrought by the system's 9-foot channel navigation project. . . . [EMP projects] . . . are seeking to improve the river's floodplain structure and function to counteract the effects of an aging impounded river system." EMP has to date improved 94,100 acres of aquatic and floodplain habitat distributed among 52 completed projects. As of October 2010, the EMP had five projects under active construction to improve an additional 19,980 acres of fish and wildlife habitat, and an additional 35 projects under planning and design to benefit another 77,550 acres, which, when completed, will bring total improved habitat to 175,000 acres in 88 separate projects (7 percent of Upper Mississippi River floodplain). Habitat of the Upper Mississippi River has hemispheric-level importance, particularly for major migratory waterfowl populations that utilize and depend on the Mississippi River flyway. Support for this program is essential to continue progress to stem and reverse decline of this vital U.S. natural system. Failure to fund the program at \$33 million will significantly inhibit the Corps' ability to perform this necessary restoration work.

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Missouri River Fish and Wildlife Recovery Project: IA, NE, KS & MO

The Missouri River Fish and Wildlife Recovery Project is the primary habitat restoration program for the lower Missouri River between Sioux City and St. Louis. Congress established the program primarily to help reverse the long-term impacts and deterioration of fish and wildlife habitat due to the federally sponsored channelization and stabilization projects of the Pick-Sloan era. Supporting the Missouri River Fish and Wildlife Recovery Project at \$73 million will continue to implement river management plans and help to reverse the decline of river wildlife by restoring historic chutes, side channels, wetlands, backwaters, and other habitat that Missouri River fish and wildlife require for survival.

Lower Columbia River Ecosystem Restoration OR & WA

Coastal estuaries in the Pacific Northwest play a vital role in supporting healthy stocks of wild salmon and steelhead trout and other species and improving the quality of life of countless communities. They provide critical habitat for other fish and wildlife, offer abundant recreational opportunities, support the cultural and subsistence practices of the region's Indian tribes, and improve water quality by filtering out toxic contaminants, sediments, and other pollutants. The Northwest Coastal Estuary Program, run by the Corps, is a stakeholder driven program that offers a great opportunity to enhance fish and wildlife habitat on the Lower Columbia River and Tillamook Bay. The program, which needs at least \$4.5 million, is designed to restore more than 16,000 acres of critical fish and wildlife habitat, augment existing monitoring efforts, and help citizens protect and manage resources by bringing together local governments, state, Indian tribes and federal agencies, environmental groups, ports, and citizens.

Water Resource Priorities Study

Authorized in the WRDA 2007, this study is intended to assist in identifying regional and national flooding vulnerabilities, the effects of existing programs on floodplain development patterns and improvements to programs to reduce flooding risks. Floods continue to be the most common and among the most costly and deadly form of natural disaster. Failure to fund this modest investment in data collection could lead to additional federal subsidizing of risky floodplain development, perhaps inadvertently, and paying out exponentially higher claims after flooding.

DEPARTMENT OF AGRICULTURE

DEPARTMENT OF AGRICULTURE

FARM BILL CONSERVATION PROGRAMS

Natural Resources Conservation Service and Farm Service Agency

The Natural Resources Conservation Service (NRCS), the conservation arm of the Department of Agriculture, oversees a number of programs designed to help private landowners comply with USDA environmental regulations and/or incentive the transition from agricultural production to conservation. The Food, Conservation, and Energy Act of 2008, the most recent reauthorization of the Farm Bill, authorizes \$7.9 billion in appropriations for NRCS. Examples of such programs are:

- **Environmental Quality Incentives Program:** provides incentives for producers to address a number of environmental issues that stem from agricultural production as well as monetary assistance to comply with environmental regulations.
- **Wildlife Habitat Incentives Program:** provides funding and incentives for producers to improve and restore wildlife habitat on private land.
- **Wetlands Reserve Program:** provides cost-share assistance and establishes easements to help landowners and producers restore wetlands degraded by agricultural activity to their natural state.
- **Conservation Reserve Program:** provides funding and incentives for agricultural producers to plant grasses and trees in farmed wetlands and other agricultural areas susceptible to erosion.

The 2008 Farm Bill also includes authorization for \$438 million in spending over five years on protection and restoration of the Chesapeake Bay region. Both the Bay, the tributaries that feed it, and the watershed region have been greatly degraded by agricultural activities.

Congress has yet to fully fund the spending authorized by the 2008 Farm Bill. The aforementioned programs have extensive backlogs of landowners and producers willing to contribute to the conservation effort but unable to proceed because of lack of funding. The FY12 budget should include full funding for NRCS conservation programs as well as \$50 million for the Chesapeake Bay program, the maximum amount authorized for the coming fiscal year.

USDA Energy Program

The 2008 Farm Bill includes funding for energy programs that help farmers, ranchers and rural communities develop and adopt energy efficiency and renewable energy technologies. At a time when energy independence, efficiency, and rural development are more important than ever, these programs have shown great success and should continue to get funded at levels authorized by the 2008 Farm Bill. To date, there are still some programs that were authorized, but have yet to be funded. These programs should be funded. Key programs include:

Community Wood Energy Program

The Community Wood Energy Program provides grants to state or local governments to plan and install wood energy systems to provide power or heat for community facilities such as schools or hospitals. It is a small scale program that can be expected to produce significant economic benefits and jobs in small communities. Congress authorized \$5 million per year in discretionary

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funding for this program under the 2008 Farm Bill; however, to date no funding has ever been appropriated.

Biomass Crop Assistance Program

The Biomass Crop Assistance Program (BCAP) pays producers up to 75 percent of the cost of establishing and planting crops to be used in a biomass facility, plus annual payments to help compensate for lost income while the crops are established. The program also provides cost-share payments for collection, harvesting, storage, and transportation costs up to \$45 per dry ton of biomass. Congress provided that USDA could spend “such sums as are necessary” for the program from Commodity Credit Corporation funds. Up until very recently, only the collection, harvest, storage and transportation portion of the program had been implemented, and it was implemented without an environmental review. USDA has only just recently issued the final rule for the annual payments portion of the program, and producers have begun applying to establish next generation feedstocks under this portion of BCAP. This program is critical to support development of the next generation of biofuels and bioenergy, and defunding the program before it is fully implemented would be devastating to next generation bioenergy.

Access to Local Foods and School Gardens

The Child Nutrition and WIC Reauthorization Act (PL 108-625, Title I, Section 122) authorizes a grant program for schools to receive grants of up to \$100,000 to cover start-up costs for a farm to cafeteria project. These competitive, one-time grants will allow schools to purchase adequate equipment to store and prepare fresh foods, develop vendor relationships with nearby farmers, plan seasonal menus and promotional materials, start a school garden, and develop hands-on nutrition education demonstrating the importance of nutrition and agriculture. Use of local produce in school meals and educational activities provides a new direct market for farmers in the area and mitigates environmental impacts of transporting food long distances. At the same time, the program helps children understand where their food comes from and how their food choices impact their bodies, the environment, and their communities at large. In FY 12 Congress should fund this program at least \$10.0 million.

Sustainable Agriculture Research and Education

The Sustainable Agriculture Research and Education (SARE) program (authorized in USC Title 7, Chapter 88, Subchapter I) is the flagship research and education program for sustainable agriculture administered by the U.S. Department of Agriculture’s (USDA) Cooperative State Research, Education, and Extension Service. SARE is a competitive grant program providing grants to researchers, agricultural educators, farmers, ranchers, and students in the United States. Education grants range from \$30,000 to \$150,000 and fund projects that usually involve scientists, producers, and others in an interdisciplinary approach. SARE’s strength is based on unique features of cost-effective and equitable regional administration, combined with strong farmer participation, practical, outcome-oriented research results, and top-rated public outreach.

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SARE's Professional Development Program (PDP) grants provide information and training on sustainable systems to a wide array of USDA personnel, extension agents, and others who provide technical assistance to farmers and ranchers. PDP provides sustainable agriculture education and outreach strategies for Cooperative Extension agents, Natural Resources Conservation Service staff, and other agricultural educators who work directly with farmers and ranchers. PDP funds have been used for both state-specific planning and competitive grants for learning opportunities.

In FY 12 Congress should fund SARE and its PDP at \$25 million to allow funds to be used for an authorized federal-state matching grants program that would integrate campus education with the research and extension work currently underway.

Rural Collaborative Investment Program (RCIP)

RCIP is a new program designed to provide rural areas with flexible investment vehicles in order to achieve measureable community and economic prosperity and sustainability. The program would provide local officials, business leaders, and community representatives with incentives to work together regionally across program sectors, build on existing assets and foster the work of existing USDA Rural Development programs. The Rural Collaborative Investment Program is authorized for \$135 million over 5 years, and the funding recommendation for FY 12 for this program is \$27 million.

Historic Barn Preservation Program

Barns are not only important historic structures of rural America, they are also practical, functional buildings that can be rehabilitated to meet modern agricultural needs. This program promotes the continued use and/or preservation of historic barns by allowing the USDA to provide grants to rehabilitate, repair, or preserve historic barns as well as identify, document, or conduct research on a historic barn. The Historic Barn Preservation Program is authorized for 'such sums as may be necessary' with an emphasis on funds for barn inventory surveys. It is recommended this program be funded at \$20 million for FY 12.

Rural Innovation Initiative

An Obama Administration proposal, the Rural Innovation Initiative focuses on making USDA's investments more efficient and effective by rewarding strategic regional approaches to sustainable rural development that allow regions to build on their unique assets. The program promotes economic opportunity and job creation in rural communities. The FY 11 budget set aside more than \$130 million to allocate funds competitively among regional pilot projects tailored to meet local needs.

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USDA Forest Service Introduction

Committing to a Watershed Restoration Agenda

As Secretary Vilsack said in his speech on a vision for America's forests, "Restoration means managing forest lands first and foremost to protect our water resources." We wholeheartedly agree, and applaud the Secretary, the Department of Agriculture, and the Forest Service for their progressive vision of clean water for all. Since that speech in 2009, the Forest Service has taken several key steps towards implementing a watershed restoration agenda. It is conducting rapid watershed assessments, scheduled for completion by spring 2011, that will assess the condition of all watersheds within national forests and will serve as the basis for future priority setting and aquatic restoration work. In addition, the Forest Service has begun the process of addressing one of the most significant threats to water quality: the oversized and decaying road system. By 2015, the Forest Service intends to have completed the planning necessary to transform the Forest Service's radically oversized, fiscally irresponsible and environmentally harmful road system into a smaller, more sustainable system capable of meeting 21st century needs and challenges. Both the watershed assessments and roads "rightsizing" initiative will result in long-term fiscal savings, the creation of high-wage, rural green jobs, cleaner water, and healthier fisheries.

However, a true commitment to watershed restoration requires more than a few individual programmatic gains. The Administration must look holistically across all budget line items and restoration activities, and tie together a suite of activities and goals into a meaningful watershed restoration agenda. This agenda must have strong leadership, staffing and budget strategies, performance measures, targeted goals, and transparent accountability.

A watershed restoration agenda can and should be funded using a broad suite of budget line items, all of which affect water quality and watershed health. These include the proposed Integrated Resources Restoration program, Legacy Roads and Trails Remediation Fund, Vegetation and Watershed Management, Planning, Roads, and Deferred Maintenance, along with a variety of others. By integrating watershed restoration into activities across the Forest Service budget, we can create a multi-disciplinary and robust watershed restoration agenda that will drive and be accountable for achieving watershed and fisheries restoration goals and transforming the oversized transportation system to a smaller, sleeker, and sustainable one.

FOREST & RANGELAND RESEARCH

U.S. Department of Agriculture Forest Service Forest and Rangeland Research (FS R&D), comprised of five regional stations, as well as dozens of other local sites, provides land managers and policy makers with relevant information and tools to support sustainable management of National Forest System lands as well as non-federal forestlands.

FS R&D conducts research in targeted strategic program areas such as wildlife and fish research, forest inventory and analysis (FIA), and wildland fire, among others. These individual research areas are then integrated with emerging research areas such as climate change, watershed management, and biomass energy. By strategically directing focused research into these critical issue areas, we can ensure that research information will be directly applied to solving pressing

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management challenges. For example, targeted investigations into wildland fire and biomass energy support the development of management actions to restore fire dependent forests while providing economic benefits to local communities.

Wildlife and Fish Research and Development – The Wildlife and Fish strategic program area is of critical importance. This research activity supports science-based fish and wildlife management on National Forest System lands. Wildlife and Fish R&D plays a critical role in transferring information from emerging areas of research to management. For example, Wildlife and Fish R&D’s Pacific Southwest Research Station is working to maintain wildlife diversity in the coastal and intermountain west by providing managers with tools for assessing the condition of animal populations. These improved methods will support the use of wildlife as indicators of forest health to ensure effective forest planning and management.

Climate Change - The Climate Change Emerging Research Area provides forest managers with the tools to adapt to and mitigate the impacts of climate change. For example, integrated wildlife and climate research enables the development of tools to help sustain our forests, wildlife and water in the face of changing conditions. To ensure that forest management strategies are truly effective in mitigating climate change, integrated climate research can investigate the impacts of management actions on carbon storage in forests. Information can also be produced on predicted climate changes on forest and aquatic ecosystems. A better understanding of the drivers of land-use change is critical to maintaining and increasing the diversity of native animals and plants as well as forest carbon stores by “keeping forests as forests.” In addition, it is crucial that the FS and the US Geological Survey National Global Warming and Wildlife Science Center work together to coordinate their use of resources and research activities.

Water Management and Restoration – The Water Management and Restoration Emerging Research Area produces applied information to protect and restore watersheds. For example, the development of watershed management best management practices will play a vital role in protecting the quantity and quality of water coming out of our national forest watersheds. Millions of Americans get their drinking water from our national forests, and Forest Service research into practices that protect our water resources will ultimately lead to better public water sources across the nation. Integrated research into this key area can support the Forest Service initiative of watershed restoration by providing the scientific basis for successful restoration projects throughout the national forest system.

Wildlife and Fish R&D received at total of \$30.5 million in FY 10. The program is in need of a \$2 million increase that should be allocated to wildlife and fish related research in the Climate Change and Water Management and Restoration Emerging Research Areas.

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STATE AND PRIVATE FORESTRY

Forest Legacy Program

The Forest Service's Forest Legacy Program (FLP), authorized in the 1990 Farm Bill, provides matching funds to assist states in conserving private working forests - those that provide an array of environmental services and products. These include clean air, clean water, carbon sequestration, a variety of critical fish and wildlife habitats, recreational opportunities, and timber and other forest products. Since its inception, the Forest Legacy Program has provided over \$500 million in matching funds to 43 states and territories for the conservation of over 2 million acres of forests valued at over \$1 billion. The program's federal-nonfederal leveraging ratio well exceeds the program's required 75-25 match and shows the tremendous support for the program in communities in almost every state in the nation.

Currently, 50 states and territories are active in the program, with four more in the planning stages. In recent years, the identified demand from participating states has exceeded \$200 million annually, and the program has grown rapidly as new states have joined the program. This trend shows no sign of dissipating; in fact, for FY 12, 40 states and one territory have requested over \$230 million in FLP funding for projects totaling almost 375,000 acres with an estimated value of over \$480 million. At current program levels, less than a third can be funded. This leaves thousands of acres of valuable working forest lands at risk of development and fragmentation. Research by the USFS has projected that, due to increased populations and expanding urban center demands on our forests, over 44 million acres of private forests are likely to see increased conversion pressure over the next three decades. With ownership of large forested properties changing hands frequently, a concerted effort to keep forests intact is needed and the Forest Legacy Program is the nation's premier program dedicated to that end.

The FY 10 enacted level for the Forest Legacy Program was \$79.5 million. The FY 11 President's budget proposed \$100 million and the FY 12 budget proposes \$135 million. We urge Congress to support the President's budget level for FLP in FY 12 to ensure the permanent conservation of important working forests across the nation.

Community Forest and Open Space Program

The Forest Service projects that more than 44 million acres of U.S. private forests will be converted to development by 2030, severing treasured community connections to the land and threatening important natural resources and economic activities. Local governments, Indian tribes, and local non-profits are eager to purchase these threatened forestlands from willing sellers to help protect their water supplies, support a timber-based economy, and enhance recreational opportunities, scenic beauty and quality of life for local residents. The Community Forest and Open Space Program will help make this financially possible by providing 50-50 matching grants to these entities to acquire forest areas that are economically, culturally, and environmentally important to that locality and threatened by conversion to non-forest uses. This program provides federal grants directly to local governments and non-profits exclusively for full fee acquisition, not conservation easements, and the program's criteria are built around evaluation of a project's community impact even above its natural resource value. As part of this community focus, the

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new program requires public access and active community engagement in forest planning for parcels. The program also emphasizes opportunities for vocational-technical education in forestry and other forest-based education programs as well as active demonstration sites for model forest stewardship to educate private landowners about forest management.

A Federal Register notice for the Community Forest and Open Space Conservation Program Proposed Rule has been posted with comments needed by early March, 2011. In addition, the President's FY12 Budget includes a \$5M request for this critical program. The FY 12 recommendation will provide the agency with funds at the scale necessary to implement the program through project matching grants.

Urban and Community Forestry Program

The Urban and Community Forestry program assistance to promote the stewardship of urban and community trees and forest resources. This program is critical in providing urban populations with access to open spaces. With an urban population of over 225 million individuals, this program has the potential to reach a large portion of the American public. In FY 08, this "little" program reached 177 million people through community assistance in planting, protecting and managing urban and community trees and forests. This is yet another program that is becoming increasingly important as climate change affects forest conditions and is strongly supported by diverse stakeholders. Our recommendation of \$40 million is significantly exceeded by the actual the need for improving open space and the opportunities for urban and suburban.

International Program

Forests cover nearly 30 percent of the globe, providing much needed goods and services, including water, food and income generation, to hundreds of millions of households around the world. These households comprise many of the world's poorest communities. Despite the services that they provide, forest cover is declining at a rate of roughly 12.9 million hectares per year. Widespread deforestation and degradation is due to a variety of causes, including human encroachment, unsustainable wood harvesting practices, and conversion to agriculture. Deforestation is significant global issue and is the source for nearly 20 percent of global greenhouse gas emissions.

Forest restoration around the globe will require a complex array of interventions, including international cooperation, incentives and policies. The International Programs of the U.S. Forest Service (USFS/IP) are uniquely positioned to promote global forest conservation by engaging the agency's diverse workforce of scientists, resource managers, international specialists, conservation biologists and partners from the global conservation community.

The Forest Service works closely with other government agencies and non-governmental organizations in a diverse set of landscapes to protect forests, grasslands, biodiversity, migratory species, advance protected area management, assist with landscape level planning, provide wildfire management expertise, prevent illegal logging, promote forest certification and reduce the impacts of extractive forestry. Forest Service engagement overseas provides tremendous

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benefits to its own workforce, diversifying experiences and offering opportunities for its experts to contribute around the globe while also bringing lessons back home.

State Fire Assistance Program

State Fire Assistance is the primary federal program that can help communities reduce their fire risk. This program provides funding to help states and communities prepare for and respond to wildland fires, including funding for firefighter training, hazardous fuels reduction near communities, the Firewise program, and Community Wildfire Protection Planning – all of which contribute to the workforce. Congress has directed that State Fire Assistance funds should be used preferentially to support community wildfire protection planning and plan implementation. Many states and communities lack the resources to fully design and implement fire management programs on their own.¹ In fact, skyrocketing suppression expenditures suggest that taxpayers already foot the bill for private landowners who have not taken the necessary steps to protect their properties. Taking proactive steps towards fire preparedness by investing in State Fire Assistance will mean a reduction in these fire suppression costs. Appropriately funding State Fire Assistance continues to be an important request, particularly due to the significant increase in population and home building in the wildland urban interface (WUI) expected in the US over the next ten years. The State Fire Assistance program levels should at the very least be maintained from the enacted level of FY 10.

Conservation Education Program

The Conservation Education program is a vital component of the Forest Service, serving as a critical link between the people and their public lands. The program is committed to develop an environmentally literate citizenry to sustain the Nation's forests and grasslands, public or private. With over a hundred years tradition in the teaching and practicing conservation, the Forest Service Conservation Education program works with partners to coordinate the development and delivery of high-quality, science-based education materials, products, and services to pre-kindergarten through 12th grade students and their educators, in both formal and non-formal settings.

The Forest Service Conservation Education program is guided by a strong strategic plan that involves students and teachers and provides outdoor laboratories that support school curricula. It emphasizes coordinating and delivering high-quality conservation education programs and materials; providing strong leadership and management of the agency's conservation education program; and, maximizing partnership opportunities to ensure the success of the program deliverables. More than eight million people, most of which come from underserved groups, benefit every year through programs, activities, products, and services provided by the Forest Service Conservation Education program.

Conservation Education program offerings and deliverables are diverse. The agency's programs identify a three-pronged approach to: 1) Engage youth in public service, 2) Enhance science-based programs offered through schools and community partners, and 3) Improve curricula of national environmental education programs. Conservation Education programs and Interpretive

¹ Mall, A. and Matzner, F. (2007). *Safe at Home: Making the Federal Fire Safety Budget Work for Communities*. Natural Resources Defense Council.

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Services throughout the nation offer opportunities for environmental education at the forest, ranger district, research stations, wilderness areas, and in urban areas. Our conservation education efforts support the Forest Service's and USDA's missions and emphasize the use of the best educational practices based on established educational guidelines. Successful deliverables are achieved thanks to the strong partnership strategies established with States, Municipalities, schools, non-profit organizations, sister agencies, and non-traditional partners such as the Department of Health and Human Services Office of the Head Start, just to mention a few of the more than 300 conservation education related programs and activities conducted on a yearly bases.

For decades the Forest Service has made education a priority by funding efforts through multiple channels and programs at headquarters and in the regions. In FY 12 Congress should create a line item for Conservation Education through the State and Private Forestry mission area and fund this successful program at \$40.0 million.

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NATIONAL FOREST SYSTEM

Land Management Planning Program

Given the significant land and resource management challenges of the coming decades — including the complex task of sustaining our forests, wildlife and water resources in a changing world — it is imperative to support intelligent planning for our national forests and grasslands. Effective Land and Resource Management Plans, which are reflective of changing conditions and which can effectively respond to emerging management challenges, form the basis for the smart management of our forests, wildlife and water that guarantees healthy resources for future generations. Forest plans must be maintained and revised with sufficient regularity to ensure that plans are relevant. In addition, forest planning efforts should be coordinated to the extent possible with other state and federal land management planning efforts, a common sense practice that would result in significant efficiencies as we move to landscape level management. It is of critical importance that current data and information is applied to planning efforts, including information and tools derived from the FS R&D program, and that forest planning is integrated effectively with inventory and monitoring actions.

Failing to invest in meaningful land management planning is a recipe for implementation problems at the project level – effective ground level projects are dependent upon the baseline direction found within the overarching forest plans. Strong, effective forest plans streamline the analysis and decision-making process at the project scale because that work has already been accomplished up front, for example by designating key locations and prescribing methods to restore damaged forests and recover wildlife. Between FY 03 and FY 10, Land Management Planning funding fell by \$26.3 million, more than one-third, and nearly \$40 million below the FY 03 level adjusted for inflation, as the prior administration deemphasized the role of planning in forest management. Avoiding the planning process carries significant risks. Very few plans were actually completed over the past decade due to significant controversy associated with forest planning regulations that attempted to make forest plans irrelevant. New planning regulations under development by the administration must be sufficiently robust to support strong on the ground management actions. Adequate funding is needed to address the backlog of 37 plans currently undergoing revisions and the additional 33 plans due for revision, and meet the broad ecological challenges facing our national forests and grasslands. To maintain an effective planning program that is able to respond to today's management challenges, \$75 million per year is needed – this amount is still \$10 million less than the FY 03 inflation adjusted level. Despite the tremendous need, the Green Budget requests a modest increase of \$5 million over the FY 10 enacted level of \$45.9 million for FY 12.

Inventory and Monitoring Program

Sustaining our nation's forests, wildlife, and water resources requires dedicated funding for critical inventory and monitoring activities. In fact the Forest Service's new vision for forest planning and management is based on a feedback between assessments of current conditions, management actions to achieve desired conditions, and monitoring to evaluate how well management is doing. Failure to invest in inventory and monitoring thus deprives managers of the information they need to make and modify management decisions. A lack of information also

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stalls the implementation of key on the ground actions, as managers are forced to seek and fill information gaps as opposed to actually taking management action. Such delays in project implementation have social, economic and ecological consequences.

The Forest Service Inventory and Monitoring program funds the collection and analysis of baseline data and trend information that is used in making and evaluating forest management decisions, for example, by identifying priority areas for watershed restoration or fuels reduction projects. Lack of inventory and monitoring information can result in ineffective and inefficient projects that fail to accomplish management objectives and waste taxpayer dollars. Inventory and monitoring resources also are critically important for making intelligent renewable energy siting decisions, for example, by assessing wildlife populations and habitats that could be exposed to risk due to improperly located wind energy development. Investments in monitoring can be leveraged by encouraging the Forest Service to partner with other organizations and agencies involved in land management, including state agencies, Indian tribes, the Bureau of Land Management, and other assessment and monitoring efforts associated with landscape level planning and management. To sustain wildlife and water resources on our national forests and grasslands, it is especially important that the Inventory and Monitoring program provide robust support to the Watershed, Fish, Wildlife, Air and Rare Plants program for the purposes of assessing and monitoring the condition of fish and wildlife populations and their habitats. FY 10 funding for the program was \$3.7 million below the amount allocated in FY 03, or more than \$30 million less when adjusted for inflation. While an increase of \$20-30 million is needed to fully fund the program, the Green Budget request is a modest \$2 million increase over the FY10 enacted level of \$170.5 million.

Recreation, Heritage & Wilderness Program

The Recreation, Heritage and Wilderness program provides many of the services that directly affect public visitors' experiences on our national forests, and is also responsible for protecting our most rare and valuable cultural and wilderness resources. The FY 10 total for the entire program was \$290.1 million. We are requesting that funding be kept level, despite critical needs that go well beyond current funding levels, as described below.

Recreation Program

The Recreation Program is responsible for providing recreation – from front-country to remote wilderness trails -- on our national forests and grasslands. Recreation is the most ubiquitous use of our forest lands, connecting with more people and occurring on more acres than any other use. This program has the heavy responsibility of ensuring that Americans have rewarding outdoor experiences, while protecting the places they are visiting. The Forest Service must make it a priority to ensure quality recreational opportunities for visitors with a variety of skill levels, backgrounds, and means, while ensuring that the ecological integrity of the forests and grasslands is maintained. This is not an easy balance to strike, and requires science-based planning, vigilant management and monitoring, development of partnerships with recreation groups and communities, and integration of resource management, engineering, and recreation program staff. Furthermore, with the imminent threat of climate change, actions will be necessary to not only

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ensure that our forests and grasslands can adapt but also that Americans help by reducing their recreation climate footprint.

Off-road Vehicle Travel Management: The process of designating routes for off-road vehicle use has been a major priority for the Forest Service over the past six years. All forest units are scheduled to have completed these off-road vehicle travel plans by the end 2011. The route designations, however, are only one step in the process of managing off-road vehicles, and effective on-the-ground implementation will remain a challenge. Without a concerted effort to implement the plans and a strong level of continued on-the-ground management, damage to the environment from off-road vehicles will continue and conflict between users will grow. Implementation expenses—not including capital expenses like signage and trailheads—include motorized user education, on-the-ground visitor assistance and education, volunteer management, and additional enforcement. The Forest Service estimates one-time initial startup needs of \$10.5 million, and ongoing additional management needs of \$17-24 million. In our difficult budget climate, we recognize that it is not possible to cover the full costs of off-road vehicle travel plan implementation, but it is critical to make some additional investment, so that the millions of dollars the Forest Service has already invested in travel planning do not go to waste for lack of implementation.

Sustainable Recreation Planning: The Forest Service has indicated its intent to plan for sustainable recreation opportunities, releasing its Framework for Sustainable Recreation in 2010 and including sustainable recreation as a key element in the National Forest Management Act regulation revisions. Yet as of today, the Forest Service has virtually no comprehensive recreation plans that systematically plan and provide for quality sustainable recreation. Nor does the Forest Service have sufficient resources to undertake critical steps necessary to implement sustainable recreation. For example, lack of funding for Recreation Capacity Analyses has kept groups, including those serving key constituencies like youth and minorities, from being able to receive recreation permits. Public safety remains at risk due to lack of proper facilities planning and siting, as noted in the recently released Public Safety Action Plan. And trail access remains at risk because of a shortage of both trail crews to perform maintenance and landscape designers and engineers to perform trail planning and design. The Forest Service must make the connection between its good intentions and actual planning and implementation. It should demonstrate—preferably using a few test locations as national models—its new principles for sustainable recreation, specifically showing how to work with partners and communities to develop an environmentally sound recreation system in popular recreation destinations and treasured places. This will require a meaningful investment of resources in both recreation planning and the skilled staff necessary to implement the plans.

Heritage Program

Forest Service lands contain an estimated 2 million cultural resource sites, including 27 National Historic Landmarks, and 325,000 identified cultural resource sites. Among these many sites are sacred sites, historic lookout towers, Civilian Conservation Corps (CCC) camps, Native American archeological sites, and Revolutionary and Civil War battlefields. According to the USFS Manual, “National Forests contain much of the undisturbed evidence of early habitation in America. The remoteness of much National Forest land has limited the impact on these cultural

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resources. Increasing public use of the outdoors and the intensified development of public lands are increasing the probability that cultural resources may be damaged or lost.” In the Forest Service Strategic Plan for FY 2004-2008 the Forest Service acknowledges, “. . . the fastest growing projected outdoor recreation activities are visiting historic places.” Additionally, cultural resources managed by the Forest Service face a variety of threats including increased hardrock mining, a dramatic rise in irresponsible recreational off-road vehicle use and a rise in deferred maintenance for historic structures. At the end of fiscal year 2006, the Forest Service had identified more than \$31 million in deferred maintenance of cultural resources that would be needed to return these sites to acceptable condition. Of this total, more than \$8.5 million was deemed to be critical.

The Forest Service has taken positive steps to provide increased funding for Heritage Resources for the implementation of the Preserve America Executive Order 13287, which is a multi-year effort to provide challenge cost share funding to the field to manage more of their priority assets to standard. According to the FY 2011 Budget Justification, “the majority of the priority assets currently managed to standard had little-to-no deferred maintenance, making it fairly easy to bring them to standard. In future years, managing priority assets to standard, with more expensive deferred maintenance, will become more challenging to accomplish.” The need for deferred maintenance is great, and the amount of funding that reaches the field for projects is nebulous. Therefore, it is important to maintain level funding of \$33.4 million for Heritage Funding at the FY 10 level, with increased budget clarity for heritage expenditures and accomplishments. Based on the Forest Services’ own justification on the need for deferred maintenance, direct \$8 million of this allocation exclusively for expenditures for deferred maintenance pertaining to historic and cultural resources in compliance with Preserve America and the multi-year budget goals.

Wilderness Program

The Forest Service manages operational, educational and research-based initiatives to help better protect wilderness areas. These include analyzing visitor use and impacts, coordinating wilderness education and outreach opportunities, performing information management, “protecting wilderness character for designated wilderness, and protecting free-flowing conditions for wild and scenic rivers through collaborative public, private, and interagency management”.²

Wildlife and Fisheries Habitat Management Program

National forests and grasslands play an essential role in the conservation of the nation’s wildlife and habitat. More than 420 animals and plants listed under the Endangered Species Act and an additional 3,250 at-risk plants and animals are found on Forest Service lands. These lands encompass an amazing array of habitats, from alpine tundra to tropical rainforest, deciduous and

² USDA Forest Service. *FY 2012 Budget Justification*, Section 7-23.
<http://www.fs.fed.us/aboutus/budget/2012/justification/FY2012-USDA-Forest-Service-budget-justification.pdf>

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evergreen forests, native grasslands, wetlands and various size streams, lakes, and marshes. National forests often contain significant headwaters and stream reaches important to freshwater creatures like fish, mussels and crayfish, a higher percentage of which are considered at-risk than other species. Many of the larger animals in the U.S. such as grizzly bear, wolverine, elk, Canada lynx, and bighorn sheep persist because of National Forest System (NFS) lands. Since national forests often represent intact connected habitat, they are ideal places for recovery and reintroduction of rare creatures and form the backbone of many large-scale conservation plans. Fish and wildlife on our national forests are important to people all across the nation— about 40 million visits per year are primarily for hunting, fishing or wildlife viewing. Visits to our national forests contribute a great deal to the \$730 billion outdoor recreation industry, which includes \$75.5 billion spent on big game hunting and fishing, and nearly \$45 billion on wildlife viewing. This economic activity, totaling more than the movie industry, depends on healthy wildlife populations and habitats to draw millions of Americans outside each year.

The Forest Service Wildlife and Fisheries Habitat Management program works with partners to inventory and monitor, manage, and restore habitat on national forests and grasslands in four program areas: 1) Threatened, Endangered, and Sensitive Species; 2) Wildlife; 3) Fisheries; and 4) NatureWatch (wildlife viewing and education). Wildlife and Fisheries Habitat program dollars also contribute to the restoration of national forests and the creation of jobs. For example, in the Clearwater National Forest in Idaho, a major watershed restoration project was undertaken in 2010. The project brought in dollars from Forest Service partners, created jobs within the local economy to manage and complete the restoration work, and had multiple positive outcomes, including increasing the quality of habitat for fish and wildlife, and reducing the sedimentation within the drinking water supply for the nearby town of Elk River. The benefits of watershed restoration projects like this one go way beyond the habitat and water supplies that are restored – between 13 and 29 jobs are created or retained and more than \$2.1 million in economic activity generated for every \$1 million invested in watershed restoration work.

Despite the broad array of fish and wildlife and habitat on NFS lands that require stewardship efforts and restoration, the budget for this program has substantially eroded and currently is nearly \$16 million below the FY 01 inflation-adjusted level. The program has 222 or 19.5 percent fewer botanists and fisheries and wildlife biologists than in 1995. As biologists retire, erosion of funding results in regions not filling positions, consolidating them, or maintaining them only at the regional office rather than at the forest level, which significantly hinders active programs at the forest level.

The program is also declining in a number of areas including recovery work for threatened and endangered plants and animals; habitat restoration in riparian areas, wetlands, prairies and grasslands; corridors and connectivity for large carnivores; habitat conservation and inventory and monitoring for climate susceptible species and habitats; and partnerships and involvement with implementation of plans such as State Wildlife Action Plans and Bird Conservation Joint Ventures. The program has little ability to effectively respond to emerging issues such as the move to expand renewable energy development and energy corridors on national forest lands, which could pose grave risks to wildlife populations and habitat if improperly sited. Adequate funding for this program will ensure that harmful conflicts are avoided and, if necessary, properly mitigated. On other emerging issues, such as White-Nose Syndrome (WNS) that is ravaging bat populations, response is hindered. The program has established a brief WNS interim strategy and

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informational brochures and letters for forest managers, but as WNS spreads throughout the country (now spanning from the northeast to Oklahoma), only a comprehensive response from the Wildlife and Fisheries Habitat Management program and ability to coordinate with other agencies will be able to protect severely declining bat populations.

With current staff levels, the program could effectively use an additional \$107 million over the FY10 enacted level of \$143 million, to carry out needed on-the-ground projects. The budget for this program should gradually increase to meet at least this level. However, the Green budget request is a modest increase of \$5 million.

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Law Enforcement Operations Program

In July 2004, former Forest Service Chief Dale Bosworth identified unmanaged recreation – especially unmanaged motorized recreation – as one of the top four threats to America’s forests and proposed a rule change governing off-road vehicle (ORV) use on National Forest System land. The rule, adopted in November 2005, requires all national forests to designate travel routes for ORVs. Previously, use in the 155 national forests and 21 grasslands was managed at the discretion of the unit and cross-country travel was permitted. Once travel plans have been completed in 2010, most ORV use must take place on a road or motorized trail. While designated ORV routes are a major step forward, there is little evidence to indicate the Forest Service will have the capacity to enforce the travel plans once they are completed, leading to a continuation of current resource damage and conflicts with other land users. Most Forest Service units do not have a law enforcement strategy for travel plan enforcement. In 2009, 73 percent of Forest Service field units reported that they lack sufficient resources for enforcement.³ According to the Forest Service, there were over 12,400 ORV-related offenses in National Forests in 2007, accounting for roughly 13 percent of all crime. Law Enforcement Officers (LEOs) logged 44,000 hours addressing ORV issues during the same period. We recommend an increase of \$27 million in the law enforcement program specifically allocated to hiring additional officers to enforce the just completed off-road vehicle plans, which equates to an additional officer for every half million acres.

CAPITAL IMPROVEMENT & MAINTENANCE

The Forest Service manages approximately 375,000 miles of system roads, 47,000 miles of motorized trails, and has an estimated 60,000 additional miles of illegally created unauthorized routes (often created by off-road vehicle use). The official road system alone has resulted in a maintenance backlog that the Forest Service estimates to be between \$4-8 billion, highlighting that the collective cost of this motorized network far outstrips the Forest Service’s financial capacity. While an efficient and streamlined road system would protect recreational access and forest management, retaining the current oversized and failing system is simply fiscally irresponsible.

Compounding this problem, roads are considered by ecologists to be one of the most significant stressors on watersheds and ecosystems. The Forest Service’s irresponsibly oversized road system degrades water quality and delivers millions of tons of sediments into streams, killing fisheries and clogging municipal water supplies. In addition, the vast network of forest roads fragments wildlife habitat and reduces the capacity for wildlife to migrate effectively both on an annual basis and in the context of climate change.

“Rightsizing” the road system by identifying an ecologically and fiscally sustainable system, and then decommissioning unneeded roads, would be a major step towards balancing the Forest Service budget. It would also create family-wage rural jobs, improve watershed health and fish habitat, assist in climate adaptation, reduce wildlife habitat fragmentation, aid in restoring

³ United States Government Accountability, GAO-09-509, Enhanced Planning Could Assist Agencies in Managing Increased Use of Off-Highway Vehicles (June 2009).

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stability and resilience to large tracts of forests, and decrease the incidence of illegal off-road vehicle driving damage.

The Forest Service took the first step towards rightsizing the road system in November 2010, when Chief Tidwell directed all forests to comply with the travel management regulations at 36 C.F.R. 212.5(b). These regulations require the Forest Service to identify the “minimum necessary” road system for each national forest, along with a list of roads that should be decommissioned or converted to trails to protect land and water resources and reduce the fiscal burden of road maintenance. This process of identifying a fiscally and environmentally-sustainable road system is the first step in rightsizing, and is scheduled for completion by the end of FY15. However, the rightsizing analysis will require a significant investment of resources and no specific funding sources have been allocated for the work.

The second step in rightsizing the road system is to carry out on-the-ground work to reclaim unneeded roads and repair needed roads starting in priority watersheds. Several existing budget line items can be used to support this work, including:

- Roads
- Deferred Maintenance & Infrastructure Improvement
- Legacy Roads and Trails Remediation
- Vegetation and Watershed Management
- Fish and Wildlife

Roads

The Roads budget line item within the Capital Improvement and Maintenance budget pays for annual roads maintenance (not including backlogged or emergency maintenance), decommissioning, and improvement (upgrading and construction of new roads). The Forest Service reports that it currently requires at least \$649 million to meet its annual road maintenance needs. However, the FY10 budget allocated only \$162 million for maintenance, providing less than 25% of the needed amount.

This drastic maintenance funding shortfall indicates two problems: First, that roads maintenance funding is woefully inadequate to maintain even a small percentage of the Forest Service road system, parts of which provide key visitor, recreation and management access. And second, that the road system needs to be rightsized in order to be more commensurate with the Forest Service’s maintenance budget and ensure long-term fiscal responsibility. Further, the failure to adequately maintain the road system leads to a cascade of ecological impacts which only increase over time. These impacts are expensive, typically funded with emergency appropriations to fix the catastrophic problems. These problems, in many instances, could have been avoided in the first place if the agency had the funds and capacity to rightsize the road system to a level they can afford to fully maintain.

The twin demands – providing sufficient money to maintain needed roads, while rightsizing the road system to shrink total system maintenance costs – inform our budget recommendation for FY12. Reducing the size of the road system will help decrease system maintenance costs while allowing for improved maintenance on critically important roads. However, completing the rightsizing analysis and implementation necessary to shrink the system to match maintenance

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funding will require an up-front investment. In addition, as noted above, road maintenance funding levels have been far below the amount needed to maintain the most critical roads for visitor, recreation and management access.

Therefore, while we believe the roads budget should be a priority for increase in the long-term, in the context of current budget constraints it is critical the FY12 road budget remain level with FY10 spending. Any cuts to this already drastically underfunded line item would undercut the roads rightsizing process necessary to shrink long-term road maintenance costs, as well as to ensure ongoing critical roads maintenance needs are met.

However, within the constraints of FY10 funding levels, the allocations of monies within the Road budget line item should be changed to reflect the new focus on roads rightsizing and maintaining the most critical roads. As the FY11 President's Budget appropriately suggested, building new roads or upgrading roads (e.g. paving roads that are currently dirt) should not be a Forest Service priority. The Forest Service has sufficient roads of every type, and should focus instead on decommissioning unneeded roads and maintaining needed roads at their current maintenance levels. Therefore, a significant percentage of the \$69.6 million earmarked in the FY10 budget for new roads/road upgrading should be reallocated within the Capital Improvement:Roads and/or Legacy Roads and Trails budget line items to cover costs associated with rightsizing, critical road maintenance, and road decommissioning. .

Deferred Maintenance & Infrastructure Improvement

The Forest Service should address its enormous road maintenance backlog—which the Forest Service estimates to be between \$4-8 billion —by decommissioning unneeded roads, repairing roads that represent the most dire threats to public safety and water quality, and assisting in the implementation of a road system rightsizing initiative. The Deferred Maintenance program, which was funded at \$9.1 million in FY10, should prioritize spending based on threats and benefits to water quality, endangered species needs, and public safety.

Legacy Roads and Trails Remediation Fund

In 2007, Congress created the Legacy Roads and Trails Remediation Fund (LRTR) to provide funding dedicated to decommissioning unneeded and environmentally problematic roads and trails, and undertaking repairs on needed roads and trails. As such, LRTR is also a critical part of creating a responsible and sustainable Forest Service budget by reducing the untenable cost of the current road system.

Between 2008 and 2010, Congress appropriated \$179.4 million to the fund. Fund expenditures have been hugely successful. By the end of FY11, projections indicate that Legacy Roads funds will have decommissioned 2,970 miles of system and unauthorized roads —saving taxpayers millions of dollars in maintenance costs, improved or maintained 10,959 miles of roads, and maintained or improved to standard 2,260 miles of trails. In addition, based on FY10 allocations, Legacy Roads creates or retains 1,197 - 1,548 jobs every year. These jobs are mainly high wage and provide important economic stimulus to rural America.

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LRTR is also a critical component of a rightsizing initiative, since it can be used to perform decommissioning and urgent repair work on National Forest System roads and trails and non-system routes. The Forest Service should use minimum road system analyses performed pursuant to 36 C.F.R. 212.5(b) (see ‘Capital Improvement and Maintenance’ introduction, above, for more details) as a guide to ensure LRTR dollars are spent as efficiently and effectively as possible, and are not spent on maintaining roads ultimately slated for decommissioning. Because rightsizing the Forest Service’s 375,000-mile road system will both decrease long-term costs for the Forest Service, and require an up-front investment to do so, as well as result in a major improvement in forest and watershed health, we recommend that the LRTR be permanently authorized and that FY10 funding levels of \$90 million be continued.

Trails

The Forest Service trails system serves Americans with over 50 million visitor days of cross-country skiing, hiking, horseback riding, mountain biking, and off-road vehicle use each year. The National Forest System is responsible for all 153,000 miles of trails, but only 21 percent are currently maintained to standard. The trail maintenance backlog had reached \$234 million as of FY 2007, and the backlog continues to grow despite the fact that the trails program leverages thousands of hours of trail work from volunteers and youth organizations each year. For the last several years the trails program has been focused on motorized trails due to the off-road vehicle travel planning process, but this planning process is now almost completed. One-time capital expenditures for signage and maps will be required in order to implement the motor vehicle travel plans, and cost estimates for this work have been as high as \$40 million. While it may not be realistic for the Forest Service to absorb this entire cost in a single year, some funding for signage and maps should be allocated to ensure that the millions of dollars the Forest Service has already invested in motorized planning do not go to waste for lack of implementation. However, to reflect the near completion of motorized travel planning, in FY 2012 the Forest Service should transition to a stronger focus on maintaining and improving trails for non-motorized users. These users represent the overwhelming majority of users on forest service trails, and have been shortchanged during the extended motorized route planning process.

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WILDLAND FIRE MANAGEMENT

Preparedness Program – Wildland Fire Decision Support System (WFDSS) Training

The Forest Service requires and is already committed to managing fire for resource benefit, which permits fire managers to take on a certain level of risk and allow wildfires to run their natural courses for landscape restoration where it is safe, and to suppress wildfires or portions of wildfires in areas that have the potential to adversely affects nearby communities and structures. This new system called the Wildland Fire Decision Support System (WFDSS) is an approach to firefighting that treats each fire individually, accounting for threats to lives and property first, but also weighing factors like ecology and landscape and then applying the appropriate response – which can include the full range of tactical responses from monitoring to aggressive attack. This change will lead to healthier landscapes and less costly fire seasons in the future. However, the agency must train fire managers so that they are armed with this new system. This means investing in a 21st century fire management force – an investment on par with the one made in hazardous fuels reduction. A key aspect of this investment must be funding designated for training and staffing to equip Incident Management Teams to implement the full range of management responses from suppression to capturing resource benefits of wildland fire. Just a one percent increase in the preparedness line item dedicated to training would result in a well-trained and ready wildfire management workforce.

Cohesive Wildfire Management Strategy

In response to a Government Accountability Office report, Congress added to the FLAME Act (discussed below) 43 USC 1748b which requires the Forest Service to develop a cohesive wildfire management strategy that identifies the most cost-effective means for allocating fire management budget resources, reinvests in non-fire programs, employs the appropriate management response to wildfires, assesses the level of risk to communities, prioritizes hazardous fuels reduction , assesses the impacts of climate change on wildfire, and studies the effects of invasive species on wildfire risk. The legislation requires the agency complete this strategy by the end of FY 10, and then to revise it at least once every five years. Sound land management planning must overlap a comprehensive cohesive wildlife management strategy. We recommend congress remain engaged in this strategy.

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RESTORATION

Collaborative Forest Landscape Restoration (CFLR) Program

The Collaborative Forest Landscape Restoration (CFLR) Program⁴ encourages the collaborative and science-based ecosystem restoration of priority national forest landscapes while benefiting local communities. The best method to ensure that projects achieve the goals of this important legislation is by fully funding the Forest Landscape and Restoration Act line item at \$40 million for FY 11. At full funding, the agency to implement will be able to keep their commitment to fund the ten restoration projects that were selected in FY10. Those ten projects cover millions of national forest and non-federal lands. In addition, full funding will allow the Forest Service to recommend and implement additional projects. Full funding for the State & Private Forestry, National Forest System and Research programs that support on-the-ground work and key research programs is also critical for addressing landscape level restoration needs.

The Collaborative Forest Landscape Restoration Program is the first national restoration program for the Forest Service. As this program matures, communities will benefit from improved watershed function, restored fish and wildlife habitat, and ecosystem health in the forests they enjoy and depend on. Communities will also be better protected from uncharacteristic wildfires. In turn, the activities under the CFLR Program are expected to reduce future wildfire suppression and restoration treatment costs, while improving the health, safety, and productivity of our nation's forests, including helping forests adapt to climate change. As wildfire suppression costs continue to rise, the Forest Service must be provided tools to restore the forests to a system that is able to tolerate wildfire. Currently, the CFLR program is funded through the hazardous fuels line item under Wildfire Management. However, for this initiative to be most effective the CFLR program must be funded separately and housed under the National Forest System as part of a greater restoration initiative as described in the following proposal. We, along with the diverse CFLR Coalition, strongly support the full-funding level of \$40 million in FY12 for the CFLR program.

Tongass National Forest Watershed Restoration Program

The Tongass is one of the world's largest remaining tracts of old-growth temperate rainforest. Not only is it important to a wide range of old-growth dependent species, such as brown bears and Sitka black tailed deer, it also provides critically important spawning and nursery habitat to commercially vital runs of Pacific Salmon in the region. Moreover, many of the residents in Southeast Alaska are particularly dependent on the fish and game provided by the Tongass to meet their annual subsistence needs. For decades the Tongass timber program has been built on road construction and old-growth clear-cutting in the very roadless watersheds of the forest that are important to fish and wildlife.

Moreover, the Tongass has been the largest money loser in the entire National Forest System for decades. Between 1982 and 2005 the Tongass timber program lost over \$850 million. The Tongass continues to lose approximately \$40 million annually on a program that from FY 01

⁴ Established through the Forest Landscape Restoration Act or FLRA, title IV of Public Law 111-11

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through FY 09 sold and harvested, on average, less than 40 million board feet of timber each year. Road construction costs alone often far outstrip the payments received for timber. On the subset of timber sales where pre-roading contracts were issued between 2002 and 2008, the Forest Service spent \$29.9 million on those road construction contracts for timber sales that returned \$2.2 million for the taxpayer. It is not surprising the House of Representatives has three times passed a measure to prohibit the use of taxpayers' funds to pay for road construction for Tongass timber sales.

The U.S. Department of Agriculture and the Forest Service have recently stated that they would like to help transition the timber program on the Tongass away from old-growth and into second-growth. They have also indicated a desire to create sustainable jobs in the Tongass focused on watershed restoration that requires the same skills provided by traditional timber workers. The conservation community strongly supports remedial watershed work and an end to old-growth logging and therefore recommends the creation of a Tongass National Forest Watershed Restoration Fund. A funding level of \$15 million in FY 11 would pay for restoration work in previously logged and roaded riparian zones and other important wildlife and fish habitats in the Tongass. In addition, the \$2.5 million Tongass timber pipeline fund in the FY 10 Interior appropriations bill should be redirected to a Tongass watershed restoration pipeline fund whose sole purpose would be to provide the planning and staffing resources necessary to ensure that an adequate supply of approved watershed and habitat restoration projects is ready for implementation in FY 12 and beyond.

Federal Land Assistance Management and Enhancement (FLAME) Fund

The USDA Federal Land Assistance Management and Enhancement (FLAME) Fund was established to reduce the need to transfer funds from non-fire accounts when suppression funds run out. Congress passed the legislation with guidance stating that allocations to this fund should not be at the expense of other agency programs. Additionally, the fund requires the agency to report to Congress quarterly on the status of the fund to ensure the agency is appropriately funded for emergency wildfires and to avoid the need to transfer. In FY 10, Congress stated that the funded level for FY 10 is intended to provide the agency flexibility as it develops a new method for calculating funding estimates for emergency wildfires. The FLAME account should be appropriately funded based on updated funding requests by the agency.

General Forest Restoration Program

The administration proposed a new restoration line item in FY2011, the Integrated Resources Restoration Program (IRR), which consolidates three existing Forest Service line items and then broken down into multiple sub-line items, including a general fund, CFLRP and another new proposal, the Watershed and Jobs Stabilization Initiative. In the FY2012 proposal, IRR includes a fourth item; Legacy Roads and Trails Remediation. While integrated restoration projects can be cobbled together using a suite of different BLI's, making restoration funds available under a single BLI with its own targets and performance measures would help ensure that all needed activities were funded and allow for more effective control and disclosure of activities and results. However, the IRR proposal failed to provide sufficient accountability for ensuring

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meaningful restoration results, and did not sufficiently incentivize the types of activities that are critical to conducting true ecological restoration.

Rather than relying on the complete merger of a few programs, a general forest restoration program should be created by consolidating portions of the budget from a number of National Forest System programs that facilitate forest restoration, including Forest Products, Wildlife and Fisheries, Legacy Roads and Trails Remediation Fund, Vegetation and Watershed Management, Planning, Roads, and Deferred Maintenance, along with a variety of others. An effective program must provide a mechanism for every National Forest System unit to engage in integrated restoration, including planning and implementing watershed restoration projects on acreage less than 50,000 acres in size and in non-fire dependent ecosystem. At a minimum, all should have a purpose and need with a primary focus on ecological restoration activities⁵, project maps which clearly identify the locations where restoration activities are to take place, pre- and post-project effectiveness monitoring plan with defined objectives for understanding the extent to which project restoration goals were met and any impediments to success, and a defined budget which includes the costs for salaries/benefits, supplies, etc. and a methodology to track actual expenses to inform public involvement/collaboration and planning for future projects.

Through the activities in a general forest restoration program, ecological restoration will provide unique benefits to the American public including, cost savings to communities in the form of avoided drinking water filtration and treatment costs, improving fish passage, restoring habitat connectivity, supporting and protecting local economies by creating green jobs (in both the restoration and tourism industries), a resilient landscape that will be better prepared to withstand or adapt to climate change, and the possibility of identifying common ground for forest management among traditional adversaries.

No increase in funding level is recommended within the overall Forest Service budget. Instead, a reallocation of funds from existing programs would create a substantially funded restoration program. Additionally, the program must be accompanied by report language that directs the agency on the functions and reporting mechanisms of a new restoration program that include sideboards that ensure ecological restoration.

⁵ Activities include, but are not limited to, reducing road density on the forest, monitoring and evaluation (including species population monitoring, general conditions inventory and monitoring, multiparty effectiveness monitoring and pre- and post project monitoring), reducing sediment loss to area streams, increasing the resiliency of the landscape to withstand or adapt to climate change, improving aquatic conditions, including facilitating fish passage and enhancing in and near channel habitats and stream function, elimination of aquatic and terrestrial invasive species, large-tree retention and old growth retention and restoration, restoration of natural fire processes, improving status of threatened and endangered (T&E) species .

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LAND ACQUISITION

Land and Water Conservation Fund (LWCF)

In 1964, Congress established the Land and Water Conservation Fund (LWCF) to preserve natural areas and wildlife and ensure that all Americans have access to quality outdoor recreation. It is a simple idea and an elegant one: dedicate revenues from offshore oil and gas drilling to support the conservation of America's lands and waters. The LWCF demonstrates Congress' bipartisan recognition of the importance of safeguarding open spaces and natural areas and providing outdoor recreation opportunities for all Americans. Conservation of our natural resources is critical to maintaining the health of our public lands, our quality of life, our recreational opportunities and our economic well-being.

Unfortunately, LWCF has been woefully underfunded over the years. "Since 1977, \$900 million has been collected annually into the fund, and is available, subject to appropriation, to fund Federal land acquisition; conserve threatened and endangered species; and provide grants to States. A total of \$31.7 billion has been collected into the fund since its inception in 1964, of which \$16.5 billion remains in balances in the fund." (Interior Budget in Brief 2012). This chronic underfunding has led states and federal land management agencies to postpone or cancel many important projects, leading to incompatible development and missed opportunities to enhance public access to parks and open spaces.

Despite inadequate funding, LWCF remains the premier federal program to conserve our nation's land, water, historic, and recreation heritage. It is a critical tool to acquire inholdings, expand public lands, and protect national parks, national wildlife refuges, national forests, wild and scenic river corridors, national scenic and historic trails, the Bureau of Land Management lands and other federal areas. The companion LWCF state grants program provides crucial support for state and local park acquisitions, recreational facilities, and trail corridors. The Stateside program is the government's primary investment tool for ensuring that children and families have access to close-to-home recreation. The LWCF stateside program has funded over 41,000 projects including sports fields, outdoor recreation facilities and trails touching all fifty states.

The LWCF has long enjoyed strong and bipartisan support. Over the past year, the House of Representatives passed H.R. 3534 - the Consolidated Land, Energy, and Aquatic Resources (CLEAR) Act of 2009 - which included a provision dedicating full funding of LWCF at \$900 million each year. In the Senate, bipartisan legislation from Senators Jeff Bingaman (D-NM) and Max Baucus (D-MT), also provided full and dedicated funding for the Land and Water Conservation Fund (LWCF) at the authorized level of \$900 million annually. That bill (S.2747) received bipartisan support and included 26 cosponsors.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) applies to major federal agency actions that may significantly affect the environment. To comply with NEPA, the Forest Service must assess and disclose the potential environmental effects of its actions in an Environmental Assessment or Environmental Impact Statement. In preparing these documents, the Forest Service must

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consider and summarize the environmental impacts of each proposed action and reasonable alternatives, as well as their interrelated economic, health, or social effects. This process provides citizens an opportunity to learn about the actions that federal agencies are proposing and offers the Forest Service an opportunity to receive informed input from the public, state and local governments, other agencies, and other stakeholders. The information and alternatives that NEPA generates are essential to meaningful collaboration, to mitigation of adverse impacts, and to sound long-range stewardship of public lands. NEPA plays a major role in the Forest Service's management of National Forests and National Grasslands; as part of its planning process, the Forest Service prepares, on average, 150 environmental impact statements per year.

The Forest Service has faced tight budget constraints over the past several years, constraints that have directly limited the funds available for NEPA implementation. Due to this lack of adequate funding, the Forest Service has historically faced many challenges when conducting NEPA reviews. The most difficult challenges for the Forest Service have been to adequately staff NEPA projects and provide training NEPA training opportunities for staff. In response to these challenges, the Forest Service has been investing in technology that will build more efficiencies into the NEPA review process. By instituting more online training opportunities and creating centralized databases for NEPA planning and review, the Forest Service is decreasing the amount of time staff spends on administrative tasks and increasing the amount of time available for substantive NEPA review. These Forest Service efforts have saved money, increased public transparency of NEPA review, and increased the amount of staff time available to focus on NEPA projects. Although these initiatives alleviate some of the stress of understaffing, the Forest Service is still in need of increased funding to prevent delays in NEPA implementation and finalization of NEPA documents.

It is important that the Forest Service perform valuable NEPA analysis and continue to meet its NEPA requirements. One ongoing challenge the Forest Service will face is how to respond to climate change. The United States Department of Agriculture (USDA) recognized the challenges presented by climate change in its Strategic Plan for FY 2010-2015 and, consequently, has made making the nation's forests more resilient to climate change one of its four stated goals for the next five years.⁶ The Forest Service will need additional resources to ensure that it effectively and appropriately considers climate change in its NEPA analysis and documentation.

In order to address the challenges outlined above, a modest increase of \$3.3 million in funding will provide the Forest Service with significant additional resources to dedicate to NEPA implementation. The increase in funding would allow the Forest Service to hire and replace much needed staff in 18 regional offices. In order to ensure that such funds are in fact allocated to NEPA implementation, the Forest Service should include NEPA compliance as a separate line item in future budgets to allow the public and other agencies to track what the Forest Service spends on NEPA related activities.

⁶ USDA Strategic Plan for FY 2010-2015. Available at: <http://www.ocfo.usda.gov/usdasp/sp2010/sp2010.pdf>

DEPARTMENT OF ENERGY

Introduction

The Department of Energy (DOE) made significant progress this past year in advancing its mission to position the U.S. as a leader in the 21st century global clean energy economy—pursuing ground-breaking scientific and technological research, investing in innovative clean, renewable energy technologies and deploying reliable, clean and affordable energy sources. In addition to implementing the President’s new vision for a clean energy economy, DOE, led by Secretary Chu, ramped-up multiple successful deployment programs for renewable energy (originating out of the American Recovery and Reinvestment Act of 2009), and provided billions of dollars in R&D funding for innovative new energy technologies.

The benefits of this strategic effort have been considerable. By the end of 2010, the wind industry had added 15 gigawatts (GW) of capacity since the start of 2009, increasing total capacity by 60 percent.¹ During that same period, solar power doubled its aggregate capacity.² Other innovative technologies, such as smart grid and energy storage, are being demonstrated in pilot programs. These results are leading to tens of thousands of new jobs around the country, including good-paying permanent jobs in manufacturing and assembly in areas hit hard by the recession in the Midwest and elsewhere. These successes are ensuring that the U.S. stays at the forefront of the burgeoning global clean energy industry and doesn’t forfeit its competitive edge to or become reliant on European or Asian manufactured energy technologies.

However, our growing domestic clean, renewable energy industry faces a number of challenges in the next few years. Due to a recession-induced reduction in electricity consumption, still-constrained capital markets, and a decrease in natural gas prices, many clean energy projects are confronting a number of obstacles getting off the ground. Several renewable technologies (especially wind and solar) are at key inflexion points in their ability to compete with conventional energy technologies and need support to ensure manufacturing facilities, supply chains and labor resources remain viable and accessible here in the U.S. Constraints on spending and the potential elimination of key DOE programs to deploy renewables and energy efficiency could very likely exacerbate a fall off in clean energy investment.

In his recent State of the Union speech, President Obama laid out a plan to significantly boost funding for clean energy in order to spur development of new clean technologies and bring them to market. Our DOE recommendations in the FY 12 Green Budget build on the Administration’s call to action. We believe that the work of DOE in catalyzing a clean, renewable energy transformation will be a source of hundreds of thousands of new American jobs and renewed economic prosperity. These efforts will go a long way toward building our competitive edge, fostering our energy independence, reducing energy and carbon intensity across our economy, and securing America’s leadership in the 21st century global clean energy economy.

We believe that Congress can grapple with current fiscal constraints, while still funding vital DOE programs. One primary tactic will be to shift priorities and resources away from carbon-intensive technologies and less-effective programs to the more promising areas we recommend below. Reducing DOE funding and eliminating clean energy initiatives that are clearly surpassing

¹ “U.S. Wind Industry Year End 2010 Market Report”, AWEA, January 2011

² “Commercial Sector Drives U.S. Solar Market with 38 Percent Growth in Third Quarter”, SEIA, December 16, 2010

their goals would represent a serious step backwards and damage our nation's ability to compete in the global marketplace. Instead, we support the aggressive expansion of funding for transformative clean technologies that will play a vital role in ensuring the continued health and global competitiveness of the U.S. economy.

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ENERGY EFFICIENCY & RENEWABLE ENERGY

Biomass and Biorefinery Systems R&D Program

Reducing our dependence on foreign oil, enhancing our national security, and curbing the harmful impacts of carbon pollution depend on the U.S. having a comprehensive and responsible strategy to deploy biomass as a clean energy resource. DOE's Biomass and Biorefinery Systems R&D Program is playing a critical role in shaping such a strategy by supporting targeted RD&D aimed at transforming domestic biomass resources into cost-competitive, high performance, and clean biofuels. Leveraging public and private partnerships, the program is working to position biomass sources to meet the Energy Independence and Security Act (EISA) Renewable Fuel Standard's (RFS) target requiring 36 billion gallons per year of the nation's fuel supply to come from renewable fuels by 2022--21 billion gallons of which need to meet advanced biofuels benchmarks. Doing so will significantly displace use of fossil fuels from foreign sources (causing oil imports to drop by as much as 770 million barrels by 2030, spurring consumer savings of \$60 billion by 2030, and reducing CO₂ emissions by 200 million metric tons by 2030 just from the program's activities).³

Biomass power funding should support cleaner combustion, gasification, pyrolyzation, and digestion technologies for electric generation with biomass. A variety of feedstocks should be tested for lifecycle GHG emissions impacts (including direct and indirect emissions) within these technologies with an emphasis on distributed generation with small biomass systems. Programs should work together to develop a biorefinery or polygeneration plant that can be operated in the U.S. to produce clean fuel, power, and chemicals. The biofuel program should concentrate on sustainably-sourced, non-food feedstocks, such as oil producing crops and cellulosic materials grown on land that is marginal, degraded or otherwise not suitable to food production.

The supply of truly sustainable biomass is limited and should therefore be allocated to its highest value end use. The program should thus develop bioenergy for applications, where few sustainable alternatives exist, such as aviation fuels. In developing these resources, it is critical that the program estimate the environmental impacts of candidate technologies at broad commercial deployment. Understanding the individual and aggregate direct and indirect impacts of feedstock cultivation through product end use will provide a clearer comparison of technology pathways and will enable a sustainable foundation on which to build viable industries and help limit exposure to regulatory and political risks once these technologies achieve mass deployment.

In addition, the biomass and biorefinery systems program should focus on cost reductions for next generation drop-in biofuels, cellulosic biofuels and fermentation, gasification or pyrolyzation of cellulosic biomass and biomass waste streams into biofuels, bioproducts, and biopower.

In FY 10, total funding for the program was \$222.0 million (and an additional \$786.5 million in ARRA funding). The Green Budget request is to increase funding to \$295.3 million in FY12 which should be targeted to ensure maximum return. By comparison, taxpayers spent roughly \$5.5 billion in 2010 alone subsidizing corn ethanol, a mature, mainstream technology with greenhouse gas emissions higher than oil and other serious environmental impacts (under current policies), through the main corn ethanol tax credit—the Volumetric Ethanol Excise Tax Credit

³ Department of Energy, FY 2011 Congressional Budget Request, February 2010, pp.98-100, via <http://www.mbe.doe.gov/budget/11budget/Content/Volume%203.pdf> (accessed 2/2011).

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(VEETC). For just a fraction of the cost of the VEETC, this program could support critical innovation in bioenergy production so that the most promising low-carbon bioenergy technologies can be brought to market as quickly as possible.

Funds should be allocated towards research, development and demonstration of advanced biofuels such as algae, building on existing efforts. These funds should go towards establishing information resources for all stakeholders; specifying sustainability metrics; encouraging industry collaboration; establishing precautionary principals with regards to synthetic biology and other genetic technologies used for fuel production; and conducting lifecycle analysis (LCA) of multiple algae fuel production processes. Appropriations associated with biomass power should be directed towards industry commercialization partnerships so that the most promising low-carbon bioenergy technologies can be brought to market as quickly as possible.

Increased funding should be provided for sustainability research, which will focus on limiting the lifecycle environmental impacts of biofuels production. Sustainability initiatives are currently supported within the Feedstocks Infrastructure and Strategic Priorities and Impact Analysis sub-programs. The Feedstocks sub-program manages field-based research to evaluate nutrient and carbon cycling and develops sustainability criteria. Strategic analysis activities include conducting lifecycle analysis of GHG emissions (including direct and indirect emissions), and analyzing land-use change and water usage and degradation impacts from biofuels production and use. Funding in the past few years has been limited for these programs – around \$5 million in FY 10. We specifically recommend increasing funding for sustainability projects and programs specifically through the Feedstocks Infrastructure and Strategic Priorities and Impact Analysis subprograms to \$25 million per year.

Solar Energy Technologies Program

The Solar Energy Technologies (SET) program supports research and development on technologies such as solar photovoltaics (PV) and concentrating solar power. The solar industry has benefited considerably from several ARRA programs that have supported continued growth in the sector through the recession, including cash grants in lieu of tax credits, manufacturing tax credits, and subsidized loan guarantees. This support, combined with increased investor interest, innovative new financing mechanisms, and a significant decrease in manufacturing costs, builds on several years of impressive solar growth and has the potential to dramatically increase solar deployment. According to the Solar Foundation and Green LMI Consulting, the U.S. solar industry employs 93,000 solar workers, a number that is expected to grow to nearly 120,000 in the coming year. U.S. solar manufacturers employ 25,000 workers alone and expect to increase that number by a third to 34,000 in 2011.⁴

In FY 10, total funding for the program was \$225.0 million. To fully maximize our domestic solar energy potential, we support a significant increase in funding to achieve a number of key priorities, and request funding be increased to \$450.0 million in FY12. President Obama and Secretary Chu have devoted considerable attention to the importance of increasing funding for

⁴ National Solar Jobs Census 2010, Solar Foundation, October 2010; <http://www.solarelectricpower.org/media/157830/final%20ts%20national%20solar%20jobs%20census%202010%20web%20version.pdf>

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research and development that can bring the installed cost of solar power down to \$1 or less per watt.⁵ A key barrier to the wide-scale adoption of solar is its cost relative to other technologies and we strongly support this commitment to boost funding for SET.

We also support maintaining resources and funding for the wide range of other programs that SET is pursuing. A holistic approach to solar deployment should provide R&D funding to bring down costs, while building the necessary infrastructure to support a rapid, scalable and efficient build-out. Market transformation remains an important opportunity and should continue to be pursued by SET, as a limited expenditure of funds can provide significant returns. Examples of market transformation efforts that should be encouraged within SET include the outstanding Solar America Communities program, engagement with utilities and states, and education, training, and workforce development activities

SET has also supported domestic PV manufacturing through an initiative that seeks to foster cooperation across the solar industry on common issues, fund innovative R&D across the PV manufacturing supply chain, and facilitate collaboration among scientists, engineers and others within the academic community. Similarly to SET's market transformation activities, domestic manufacturing is an important priority and should continue to be a focus for the program.

Finally, with the rise in solar installations and permits, especially for utility-scale projects, the challenge of managing environmental permitting and siting issues has emerged as an increasingly important issue within and without the industry that demands SET involvement. We support the rapid deployment of those renewable energy sources that are needed to help stabilize the climate, provided that it occurs in ways that also protect wildlife, land, water and air. In order to ensure that large-scale deployment occurs quickly and sustainably, we support expanding SET's efforts in this area with additional funding in order to advance model state and regional renewable energy projects.

Wind Power Program

In 2010, nearly 5 GW of wind power generating capacity was added to the United States' electricity grid, bringing total domestic wind capacity to just over 40 GW. DOE's Wind Energy program has played a significant role in scaling up wind energy, supporting RD&D for a variety of wind technologies, including large and small turbines and offshore wind; improving domestic manufacturing processes; facilitating grid integration of wind power, and addressing siting and permitting issues. Continued rapid deployment of wind generation, balanced with sustainability priorities that protect wildlife, land, water, and air, is absolutely critical in the next few years and should continue to be a focus of the Wind Energy Program.

Due to the lingering effects of the economic recession and other challenges, federal investment in wind energy remains vital to the short- and long-term growth of the industry. In 2010, wind energy developed at its slowest rate since 2007 in part due to the poor economy, low electricity demand and lower-cost fossil fuels, especially natural gas. According to AWEA, the domestic

⁵ "DOE Pursues SunShot Initiative to Achieve Cost Competitive Solar Energy by 2020"; February 4, 2011, DOE. <http://www.energy.gov/news/10050.htm>

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wind industry currently employs some 85,000 workers. This workforce could triple in size by 2030, according to DOE's 20 percent Wind Energy by 2030 report (DOE 20% Wind), if we are able to meet a national goal of 20 percent wind energy.⁶ The wind industry can help lead our country out of the recession and provide good-paying jobs to states across the country, particularly in hard-hit regions like the Midwest, but federal support for wind is necessary if we are to grow and expand wind energy and secure the job and economic benefits it can provide.

FY 10 funding for the wind program was \$80.0 million (with an additional \$118.0 million in ARRA funding). Increased funding to \$88.0 million in FY12 (in addition to a separate offshore wind recommendation below) will allow DOE to continue to encourage the success of the wind industry through research that drives new innovations into the marketplace and advances domestic manufacturing of wind power. As the DOE 20% Wind report found, meeting the 20 percent goal requires capital costs to decrease by 10 percent and capacity factors to increase by 15 percent. Technology improvements through federal research and development and programmatic funding to overcome these challenges are crucial.

Furthermore, with insufficient transmission transfer capacity to access remote wind resources, infrastructure constraints will continue to be one of the most critical barriers to the continued expansion of wind energy, both on and offshore. DOE can play a critical role by funding research to reduce the cost of wind power, especially for wind turbines designed to access lower wind speeds. Making lower wind class sites economic would increase available wind resources considerably and open up vast areas with access to existing transmission capacity. This could enable an accelerated expansion of wind in the near term, while new transmission is planned and built for the next generation of development. The National Renewable Energy Laboratory has already taken important first steps toward pursuing this low wind speed turbine technology research and an acceleration of the program could likely be undertaken quickly. However a renewed commitment to its funding is required to achieve this potential.

Along with additional funding for research and development, the DOE wind energy program would benefit from additional funding and staff for identifying market barriers and engaging stakeholders to promote wind power. As more wind farms are constructed across the country, more people are coming into contact with this clean energy technology. Sometimes these projects are met with skepticism and even opposition because not enough information has been provided to the local stakeholders. The Wind Powering America initiative is an excellent tool to engage stakeholders and identify market barriers and will be instrumental in promoting the newly developing offshore wind industry.

A National Renewable Energy Laboratory report released in September 2010 notes that each megawatt of offshore wind capacity built could generate up to 20 direct jobs, and that the United States has over 4,000,000 megawatts of offshore wind energy potential.⁷ Just last year, the first offshore wind farm lease was awarded from DOI, and many more offshore wind developers are

⁶ Office of Renewable Energy and Energy Efficiency, Department of Energy, "20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply, July 2008, available via <http://www1.eere.energy.gov/windandhydro/pdfs/41869.pdf> (accessed 2/2011).

⁷ National Renewable Energy Laboratory, "Large Scale Offshore Wind Power in the United States: Assessment of Opportunities and Barriers," September 2010, available via <http://www.nrel.gov/wind/pdfs/40745.pdf> (accessed 2/2011).

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lining the coasts. Each offshore wind farm is likely to provide many hundreds of megawatts of capacity, each potentially creating thousands of jobs, but will require billions of dollars of private investment to be developed. In light of the substantial private investment required for offshore wind, significant federal investment is vital for this industry.

In September 2010, DOE announced a new offshore wind program – the Offshore Wind Innovation and Development Initiative (OSWIND). This program is meant to cover basic offshore wind R&D, market barrier removal and advanced pilot projects. The FY2011 budget request for the OSWIND program was \$49 million. This program must be supported at a level commiserate to the vast offshore wind resource and considerable market barriers, and should therefore receive a significant amount of new funding to \$98 million in FY2012. Additional recommendations for offshore wind are included in the Water Energy program section below.

Water Energy Program

The Water Energy program includes offshore wind, marine and hydrokinetic energy sources. New technologies that can capture energy from the oceans, such as wave, tidal, ocean current, and ocean thermal energy conversion (OTEC) power hold great promise for reducing worldwide fossil fuel use and GHG emissions. While this industry has potential to serve as a domestic source of clean energy and jobs, the water energy sector is struggling against significant startup costs and regulatory uncertainty. Federal support is essential to ensure the U.S. does not fall behind other nations that have made significant investments to help launch marine and hydrokinetic energy projects.

In FY 10, the Water Energy program received \$50.0 million in funding. We recommend raising FY 12 funding to \$60.0 million, provided the OSWIND program is fully funded as recommended in the previous section (*Wind Power Program*) of this chapter. As a nascent industry around marine and hydrokinetic energy grows, this level of funding is needed for baseline monitoring data that can inform environmental analyses. Continued investment in basic research and development, and incentives for pilot and demonstration projects is critical. The urgency of this need was recently demonstrated as robust potential players in the market have had to abandon or significantly delay projects. For example, PG&E in California abandoned their proposed marine and hydrokinetic energy project as a result of financial, technological and regulatory barriers that made the project financially unfeasible at this time.

Federal funding is imperative to help deploy pilot and demonstration projects; study, monitor and report on common impacts to environment and coastal communities; and ensure development of effective mitigation measures where necessary. Recent increases in funding for the DOE have led to the establishment in 2009 of two National Marine Renewable Energy Centers to assess the potential contribution of marine and hydrokinetic energy sources and to develop siting best practices to minimize environmental and navigational impacts.

DOE should work in conjunction with the National Oceanic Atmosphere Administration (NOAA) on baseline research and monitoring that can advance specific pilot and demonstration projects. In addition, there is a need for R&D funding for technology and project design that will have minimal effects on marine fish and wildlife. The exploration and development of ocean

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renewable energy projects will also benefit from the collection and sharing of information through the spatial planning process described below, and tools such as a publicly accessible database of all available information on projects.

Coastal and Marine Spatial Planning (CMSP), initiated in July 2010 by President Obama and his administration, is a process that will help in the development of offshore renewable energy. Properly administered CMSP is designed to apply ecosystem-based management to comprehensive planning for the many (potentially competing) uses of our oceans. In the context of offshore renewable energy, CMSP can help identify the best places to site these projects, while helping to protect, maintain, and restore ecosystem health. The development of these strategic coastal and marine spatial plans will require significant coordination, and funding.

New investment in existing marine and hydrokinetic energy sources programs is also essential. Hydropower energy accounted for about 7 percent of total U.S. electricity generation and 70 percent of generation from renewables in 2009.⁸ Funding for the hydropower program should be directed primarily to DOE's Advanced Hydropower Turbine System (AHTS) program and related activities. The funding should also support broadening DOE's hydropower program to study other operational and environmental issues related to hydropower production, including the potential of hydrokinetic hydropower (dam-less hydropower) technologies. Funding should also be made available to conduct research and development that will improve the environmental, technical, and societal benefits of hydropower.

While the need for additional research and development is essential to enable domestic marine and hydrokinetic energy industries to mature, there has been progress in offshore wind development in the United States. In October, DOE, DOI's Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), and NOAA announced eight joint research awards, totaling nearly \$5 million, in support of responsible siting and permitting for offshore wind energy facilities, as well as ocean energy generated from waves, tides, currents and thermal gradients.⁹

Further advancements for offshore wind occurred in November 2009 when Massachusetts decided that it is cost-effective for National Grid to purchase power from Cape Wind, once construction is complete on what is anticipated to be the first utility-scale offshore wind farm in America. This decision is a green light from the Department of Public Utilities in Massachusetts to allow American homes and businesses to plug into the clean energy that will be generated by Cape Wind. After a decade-long effort, Cape Wind won federal approval in March 2010, allowing 130 wind turbines to operate in Nantucket Sound, generating domestic clean renewable energy. Massachusetts' approval of Cape Wind's power purchase agreement (PPA) with National Grid was a step forward for offshore wind in the United States.

Also in November 2010, DOI announced its intent, over the next few months, to identify wind energy areas (WEA) that are most promising for potential offshore wind development. The

⁸ Energy Information Administration: Annual Energy Outlook 2011.
<http://www.eia.doe.gov/oiarf/aeo/electricity.html>

⁹ Department of Energy website, "[DOE, BOEMRE and NOAA Announce Nearly \\$5 Million for Joint Environmental Research Projects to Advance Ocean Renewable Energy](http://www.energy.gov/9724.htm)".
<http://www.energy.gov/9724.htm>. October 26, 2010.

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agency has been working with many Eastern states, state-based task forces and stakeholders to determine these areas and identify what they believe will be the best places for siting offshore renewable energy projects. Within the next six months, DOI will continue strategic outreach to “sister agencies” – such as NOAA, DOD, EPA, the Coastguard and other relevant agencies -- about proposed ocean-based renewable energy development sites, requesting additional information to confirm whether these previously identified locations are appropriate areas for renewable marine and hydrokinetic energy development. As CMSP gets underway, that process will help all interested parties in considering the appropriateness of ocean renewable energy in any given location. As a result of the new WEA identification initiative, when lease sales are reviewed, investors and others will have more solid information to help in preparation of a full environmental impact statement, prior to approving any project.

In December 2010, DOI Secretary Salazar announced important modifications and ongoing reforms to the nation’s OCS leasing program. During this announcement, BOEMRE Director Michael Bromwich noted his recent engagement with NOAA to establish an agreement where NOAA would collaborate with BOEMRE in the environmental analyses for OCS planning.¹⁰ In light of the Deepwater Horizon oil spill in April 2010, the investment in agency coordination, environmental safeguards and additional research and development of these technologies and their ecological impact are critical.

Finally, in January, 2011, Secretary Salazar and BOEMRE Director Bromwich announced the restructuring of that agency. While the restructured Bureau of Ocean Energy Management, as currently conceived, contains an office dedicated to renewable energy, there remains uncertainty about how these changes will impact offshore renewable energy project. Certainty and incentives are needed to move offshore renewables forward before the window of investor interest closes. The necessary resources and dedicated staff to assist in the development of these renewable policies are critical to ensuring the success of this new entity and the industries it seeks to support.

Geothermal Technology Program

Geothermal has been historically one of the lower funded renewable technologies but has provided high returns in terms of R&D invested to performance and capacity improvement.¹¹ Domestic geothermal energy provides predictable, baseload, renewable power, and is competitive with conventional energy. A number of reports have demonstrated that tens of thousands of megawatts of geothermal power are available with existing technologies, with potential new Enhanced Geothermal Systems (EGS) resource availability stretching to over 500,000

¹⁰ Department of Interior website, “Salazar Announces Revised OCS Leasing Program, Key Modifications Based on Ongoing Reforms, Unparalleled Safety and Environmental Standards, and Rigorous Scientific Review.” <http://www.doi.gov/news/pressreleases/Salazar-Announces-Revised-OCS-Leasing-Program.cfm>. December 1, 2010.

¹¹ “Technology S-curves in renewable energy alternatives: Analysis and Implications for industry and government”, Melissa A. Schilling, Melissa Esmundo, Energy Policy 37 (2009)

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megawatts.¹² The U.S. needs to continue developing the technology and resource knowledge necessary to tap this opportunity. Key priorities include:

2030 Road Map – The DOE has stated its goal to develop 50,000 MW by 2030 (covering all geothermal technologies). They have released programmatic road maps to 2015. The DOE should sponsor analysis that examines the critical hurdles to achieving this goal focusing on technical, regulatory, financial and transmission concerns.

National Resource Assessment of Supercritical Resources – So called "Supercritical Geothermal" involves the tapping of hydrothermal resources in the supercritical phase, or the development of EGS in supercritical-capable geologic settings. These resources have been shown to be over ten times as productive through their superior thermodynamic efficiency. Supercritical resources present an opportunity for drastically cheaper geothermal, but significant technical challenges remain. A first order problem is calculating the size and distribution of Supercritical Geothermal resources in the U.S. The U.S. should also commit to developing Supercritical technology.

EGS Demonstration Project Support – The EGS concept has been proven technically (i.e. Soultz & Cooper Basin projects), but not fully commercial at scale (there is a 3.8 MW commercial project operating in Landau, Germany). Outstanding technical questions exist concerning long-term reservoir performance and management, multi-well & multi-fracture systems, and comparative performance of EGS systems in different geologic and stress regimes. It is critical that DOE provide substantial and long-term support for multiple novel EGS demonstration projects aimed at achieving technological and economic goals with market relevance. These projects should be commercially oriented, working with an industry partner, as opposed to pure R&D.

FY10 funding for the Geothermal Technology program was \$44.0 million, which included an additional \$400.0 million in ARRA funding. Congress formulated a comprehensive new authorization for geothermal research, as part of EISA 2007. DOE should be directed and funded to implement this new initiative – the Advanced Geothermal Energy Research and Development Act of 2007. This new legislation provides DOE direction to implement a wide-ranging geothermal research program that develops the technology and information needed to tap the potential of geothermal energy across a range of applications. It provides specific direction for research into a series of areas, ranging from developing new exploration technology to enhancing environmental stewardship to EGS technology demonstrations. Congress authorized \$90 million to be spent in FY 11 on these initiatives, and in FY12, these initiatives should be fully funded at the authorized level.

Vehicle Technologies Program

As the economy recovers, DOE's Energy Information Administration (EIA) predicts rising gasoline prices, surpassing \$3.00 per gallon within four years and steadily increasing thereafter. To help working families reduce their fuel bills, curb carbon pollution, and reduce the U.S.'s

¹² "The Future of Geothermal"; Massachusetts Institute of Technology, 2007:
http://geothermal.inel.gov/publications/future_of_geothermal_energy.pdf

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dangerous dependence on oil, increasing the fuel economy of motor vehicles is a top priority. DOT and EPA are devising new fuel economy and greenhouse gas emissions standards for light duty vehicle model years 2017-2025. Analysis by EPA and DOT show that technologically and economically feasible annual performance improvements of 6 percent are achievable with the introduction of advanced vehicle technologies such as electric drivetrains. When fully implemented, standards set based on the 6 percent improvement rate would maximize oil and greenhouse gas savings by achieving roughly 60 miles per gallon. Federal advanced vehicle research and development by DOE works in conjunction with these standards to develop lower-cost, high-efficiency vehicle components that will broaden mass-market adoption of advanced vehicle technologies and support future strengthening of the standards.

A central plank of President Obama's campaign platform was to strengthen America's oil security and energy independence by cutting oil consumption by at least 10 million barrels per day by 2030. Achieving this goal requires boosting fuel economy to at least 60 mpg by 2025 with continuous improvements beyond. Given the immense benefits of reaching this target to our national security and global competitiveness, and as gasoline prices once again near \$4.00 per gallon funding for the Vehicle Technologies program in FY12 should be increased to \$500 million from FY10 funding of \$311 million. The Vehicle Technologies Program should prioritize research to reach the 2030 oil reduction targets and put the transportation sector on a trajectory to meet long-term GHG emissions reduction targets of 80 percent by 2050. To that end, the Vehicle Technologies program should focus on technologies such as advanced lightweight materials, advanced batteries, improved power electronics, electric motors, and advanced combustion engines, and solutions that integrate plug-in vehicles to the grid in a way that maximizes grid security and stability and GHG reductions

Building Technologies Program

Energy use by residential and commercial buildings accounts for over one-third of the nation's total energy consumption, including two-thirds of the electricity generated in the U.S. Residential and commercial building emissions together make up approximately 38 percent of annual U.S. GHG emissions and are growing twice as fast as the overall average.

Of all DOE energy efficiency programs, the Building Technologies Program continues to yield perhaps the greatest energy savings. A National Research Council study found that just three small buildings research and development programs – electronic ballasts for fluorescent lamps, refrigerator compressors, and low-e glass for windows – have already achieved cost savings totaling \$30 billion, at a total federal cost of about \$12 million.¹³ The DOE Building Technologies Program recently added solar heating, cooling, and lighting to its portfolio. These technologies are crucial for further reducing energy consumption and indirect carbon emissions from buildings, but expanded funding will be needed to support scaling up these technologies.

The Building Technologies Program has been chronically underfunded and received \$200 million in FY 10 funding. Given the value of the Building Technologies program, Congress should increase funding across a range of areas including building codes and standards, Energy Star,

¹³ "Energy Research At DoE: Was It Worth It?", The National Academies, July 2001

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appliance and equipment standards and analysis, the Commercial Buildings Initiative (CBI), and the Building America Program. Congress should also establish funding for the new national building rating program and increase funding for EIA data collection. To build on the success of the Building Technologies Program, the program should be funded to \$450 million for FY 12.

Additionally, DOE should re-invigorate the research and development program on equipment, such as heating and cooling, appliances, windows, and building envelope, all of which have been underfunded for several years. The Appliance and Equipment Standards and Analysis sub-account of the Building Technologies Program should also receive a significant increase. Federal appliance standards already save an estimated 7 percent of all U.S. electricity use; existing and draft standards are expected to save consumers and businesses \$123 billion by 2030 (from new standards that have been/will be enacted between 2009 and 2013).¹⁴ A recent study also found that existing Federal appliance standards have created and maintained 340,000 jobs to date.¹⁵ Prior to 2010, DOE had fallen behind on the deadlines for nearly two dozen standards which culminated in a lawsuit against the Department demanding that it issue long overdue minimum efficiency standards required by federal law for many energy-using products. In order to address this backlog of standards, DOE will set new standards for approximately 26 products between now and 2013. The study found that 100,000 additional jobs will be created by 2030 by standards to be enacted through 2013. Developing standards is a costly process and DOE needs adequate resources to carry out its responsibilities.

Industrial Technologies Program

The U.S. industrial sector is a cornerstone of the nation's economy, not only providing millions of good-paying jobs but also contributing \$1.4 trillion in national income and 69% of total U.S. exports in 2008.¹⁶ It is also one of the largest energy-using sectors of the U.S. economy, consuming approximately one-third of delivered energy.¹⁷

The sector has been hard hit in recent years by the economic downturn and faces enormous challenges moving forward. Measures to help reduce energy costs and boost productivity and efficiency within the sector will support U.S. manufacturers—keeping jobs and supply chains operating here in the U.S. According to its July 2009 report, McKinsey & Company estimates that we can reduce primary energy consumption by 21 percent by 2020, saving U.S. industry \$47 billion per year just by unlocking the potential for energy efficiency in the sector.¹⁸ Industry, however, needs financing, technical assistance and technological developments to capture such savings, particularly in this difficult economic climate. Consequently, we believe increased

¹⁴ "The Power of Appliance Standards"; American Council for an Energy-Efficient Economy (ACEEE) and the Appliance Standards Awareness Project; 2009

¹⁵ <http://www.aceee.org/press/2011/01/appliance-and-equipment-standards-money-maker-and-job-cr>

¹⁶ Executive Office of the President, A Framework for Revitalizing American Manufacturing, December 2009, <http://www.whitehouse.gov/sites/default/files/microsites/20091216-manufacturing-framework.pdf>

¹⁷ Energy Information Administration, Annual Energy Outlook 2010, December 2010, <http://www.eia.gov/forecasts/aeo/pdf/0383er%282011%29.pdf>.

¹⁸ McKinsey & Co, Unlocking Energy Efficiency in the U.S. Economy, July 2009, http://www.mckinsey.com/client-service/electricpower-natural-gas/downloads/US_energy_efficiency_full_report.pdf

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funding for DOE's Industrial Technologies Program (ITP) is absolutely essential to fully realize this potential and secure short- and long-term growth and prosperity for our manufacturing sector.

ITP is one of the few remaining government programs leading efforts to boost energy efficiency in the U.S. industrial sector and provide manufacturers with critical research and technology development that will increase their competitive edge. The program has established strategic objectives to reduce the energy intensity of the sector by 25% in 10 years and establish the U.S. as a leader in energy management.¹⁹ ITP is working toward these goals by: (1) sponsoring research, development and demonstration of technologies to reduce energy and carbon intensity; (2) supporting technology delivery to help manufacturers access the latest technologies and best management practices; and (3) promoting a corporate culture that prioritizes energy and carbon management within the sector.²⁰

ITP is divided into two programs—Research and Development (R&D) and Technology Delivery.²¹ The program's budget is significantly focused on funding the R&D program which supports the development and use of more energy-efficient, transformational technologies—some of which are crosscutting technologies that are common to a wide range of industries (e.g., CHP) and some of which are specific to certain high-priority, energy-intensive industries (e.g., aluminum, steel, chemicals, etc.). Due to budget constraints and a focus on investments that will have far-reaching impacts across the sector, the vast majority of R&D resources are currently being allocated toward crosscutting technologies under the Industries for the Future (IOF) (Cross-Cutting) subprogram.²² More limited funding for industry-specific RD&D of advanced technologies is provided through the IOF (Specific) subprogram and a proposed subprogram in the FY11 budget called Manufacturing Energy Systems (MES). Under the IOF (Specific) subprogram, ITP partners with energy-intensive companies to develop industry-specific R&D projects. If the proposed MES subprogram proceeds, the majority of funding for industry-specific RD&D and technology deployment will be redirected to support partnerships with two major universities to rapidly develop industry-specific products and processes that reduce energy intensity and carbon emissions.²³

The rest of the budget is focused on the Technology Delivery program which provides technical assistance and incentives to companies to help them identify and implement energy-saving and carbon-reducing opportunities at their plants.²⁴ The program includes funding for the Save Energy Now Leaders initiative which encourages industrial companies to commit to reducing their energy intensity by 25% over a 10-year period, providing resources and incentives in order to establish the U.S. as a global leader in energy management. ITP has recruited over 100 major

¹⁹ Industrial Technologies Program, Multi Year Program Plan, May 2008, http://www1.eere.energy.gov/industry/about/pdfs/mypp_full_version.pdf

²⁰ Industrial Technologies Program, <http://www1.eere.energy.gov/industry/about/goals.html>.

²¹ Industrial Technologies Program, Multi Year Program Plan, May 2008, http://www1.eere.energy.gov/industry/about/pdfs/mypp_full_version.pdf

²² Department of Energy, FY2011 DOE Budget Request to Congress, <http://www.cfo.doe.gov/budget/11budget/index.htm> AND Industrial Technologies Program, Multi Year Program Plan, May 2008, http://www1.eere.energy.gov/industry/about/pdfs/mypp_full_version.pdf

²³ Ibid.

²⁴ Ibid.

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corporations to participate in this program since its inception and has set a goal to recruit up to 500 companies to join the program by 2015.²⁵

The Technology Delivery program has also provided industrial energy savings assessments, conducting more than 2,400 assessments between 2006 and November 2009 that have identified \$1.3 billion in cost savings.²⁶ The average plant that participated in this process found ways to reduce their energy bills by 8%.²⁷ Small and medium-sized manufacturers have also benefitted from the Industrial Assessment Center (IAC) program—also housed within the Technology Delivery program—which supports 26 centers across the country that provide no-cost energy assessments to these companies and train the next-generation of energy engineers. Although the IAC program has suffered from lack of sufficient funding in recent years, the program has secured significant energy savings over its 28-year history.²⁸ In 2005, for example, \$5 million in funding returned over \$25.5 million in new energy and dollar savings.²⁹ Additional funding should be provided to the IAC program to leverage these significant benefits and energy savings.

In addition to this technical assistance, ITP is also involved in the development of voluntary certification programs, most notably the Advanced Superior Energy Performance program, which will be released this year to help industrial facilities implement best practices to achieve continuous energy efficiency improvements and reductions of 5-15% in energy-intensity over the next 3 years.³⁰

ITP has an established record of success and has effectively leveraged its limited resources through its partnership programs with industrial companies, industry associations, and academic institutions. ITP has led cutting-edge industrial R&D, winning three R&D 100 awards in 2009³¹ and provided assistance and best energy management practices to thousands of industrial facilities. A 2005 report by the National Research Council of the National Academies highlighted that ITP has “evolved over time into a well-managed and effective program”.³² Likewise, a February 2009 Peer Review of ITP4, with the evaluators consisting of 10 prominent third-party experts, also determined that ITP, “effectively uses its resources to achieve *significant results*, despite its recent continually declining budget... The Technology Delivery program was

²⁵ Industrial Technologies Program, Multi Year Program Plan, May 2008, http://www1.eere.energy.gov/industry/about/pdfs/mypp_full_version.pdf AND Industrial Technologies Program, http://www1.eere.energy.gov/industry/saveenergynow/leader_companies.html

²⁶ Statement of Cathy Zoi, Subcommittee on Energy and Water Development Committee on Appropriations, U.S. House of Representatives, March 2010, http://www1.eere.energy.gov/office_eere/testimony_zoi_031710.html

²⁷ Department of Energy, Supply Chain Energy Efficiency Workshop, December 2010.

²⁸ Industrial Technologies Program, Multi Year Program Plan, May 2008, http://www1.eere.energy.gov/industry/about/pdfs/mypp_full_version.pdf

²⁹ Department of Energy, Industrial Assessment Centers (IAC) fact sheet, <http://www1.eere.energy.gov/industry/bestpractices/pdfs/40493.pdf>

³⁰ Advanced Superior Energy Performance, via http://www.superiorenergyperformance.net/pdfs/SEP_Overview.pdf, accessed January 2011.

³¹ http://www1.eere.energy.gov/office_eere/m/testimony_zoi_031710.html

³² National Research Council of The National Academies, *Decreasing Energy Intensity in Manufacturing: Assessing the Strategies and Future Directions of the Industrial Technologies Program*, National Academies Press, 2005, available via http://books.nap.edu/openbook.php?record_id=11243&page=58 (accessed 1/2011).

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found to be deserving of particularly high praise.” In addition, the peer review panel concluded that more funding and commitment by the Administration and Congress would be needed for ITP to achieve its current goals.³³

In FY 10, the program received \$96 million in funding. Given the uniqueness of ITP and its immense value for the domestic economy, for FY 12, we recommend increasing ITP’s budget to \$200 million. While this is a significant increase, this funding would return ITP’s funding to where it stood earlier in the previous decade³⁴, provide critical support to underfunded subprograms like the Industrial Assessment Center program and the R&D subprograms, and leverage current ITP investments that are improving the competitiveness of the U.S. manufacturing sector and fostering better company practices and leadership. This funding would also sustain the significant progress that was made from ARRA funding that provided ITP with \$256 million to support energy efficiency improvements in major industries, \$156 million of which was used to provide grants supporting CHP and other industrial efficiency projects at facilities across the country that preserved manufacturing jobs, created new jobs, and garnered large energy savings.³⁵ This much-needed increase will go a long way toward reducing energy costs for manufacturers, preserving and creating high-paying manufacturing jobs, ensuring that the next generation of technologies are manufactured domestically, as well as meeting long-term goals of fostering energy independence and reducing energy and carbon intensity within the industrial sector.

Federal Energy Management Program

The federal government is the single largest energy consumer in the U.S. In an effort to cut energy consumption by the federal government, the Federal Energy Management Program (FEMP) has worked with federal agencies to cut the energy waste among federal buildings by 24 percent from 1985 to 2001 – a reduction that now saves federal taxpayers roughly \$1 billion each year in reduced energy costs. The program has also helped DOE obtain nearly 7 percent of its energy use from renewable energy sources, surpassing the federal 2.5 percent goal. To build on this success, the FEMP FY12 budget should be maintained at its FY10 amount of \$32.0 million.

Weatherization Assistance Program

In FY 09, the Obama administration called on DOE to ramp up the Weatherization Assistance Program (WAP) to help to achieve the weatherization of 1,000,000 homes each year for the next 10 to 15 years. The first two years of the necessary funding for this came from ARRA, which dramatically increased the WAP budget in order to meet this 7-fold increase in the rate of home weatherization. Under ARRA, capacity to weatherize homes increased dramatically, with new contractors, energy auditors and suppliers scaling up to reach a rate of 300,000 households per

³³ Ban, Stephen et al, DOE Industrial Technologies Program 2008 Peer Review, February 2009, available via http://www1.eere.energy.gov/industry/about/pdfs/itp_peerreview_report2008.pdf (accessed 1/2011).

³⁴ Department of Energy, “OIT Requests \$171 million for FY 2000,” February 1999, available via http://www1.eere.energy.gov/industry/newsandevents/news_detail.html?news_id=7561 (accessed 2/2011).

³⁵ Department of Energy, “Secretary Chu Announces \$256 Million for Industrial Energy Efficiency,” June 2009, available via http://apps1.eere.energy.gov/news/daily.cfm/hp_news_id=168 (accessed 2/2011).

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year, with an investment of about \$2 billion annually. This rapid expansion was not always seamless, which is inevitable for such rapid growth, but now delivers real savings to households that need it, and real jobs to workers, many at an entry level. So far 300,000 low-income homes have been weatherized according to the DOE.³⁶ To continue to make significant progress towards the Obama Administration's goal, the WAP budget should be significantly increased from the FY10 level of \$210 million to at least \$2 billion for FY12.

On average, weatherization reduces heating bills by 31 percent and overall energy bills by \$274 per year. During the past 30 years, WAP has provided weatherization services to more than seven million low-income families. However, much more remains to be done, with more than 38 million eligible low income households. Weatherization reduces an average low income household's \$1,800 annual energy bill by an estimated \$440 at current prices. Importantly, the program has reportedly been highly cost-effective, saving \$1.80 in utility bills for every dollar invested, and an additional \$0.70 to society more broadly. Many of the participating households are in some of the nation's least efficient, least economic buildings – with large air gaps around doors and windows, poorly-performing furnaces, and little insulation.

There may be alternate mechanisms to direct funding to reach the 30 million remaining households, e.g., through utility energy efficiency programs, tax incentives, and other deployment efforts. However, those mechanisms have yet to be developed in sufficient scale to utilize the available expertise provided by the more than 15,000 weatherization workers brought on under ARRA. While it is a big ask, the magnitude of the opportunity, the high apparent cost-effectiveness, the large number of jobs and demonstrated implementation capability that has been hard-won over the past 2 years, and the lack of readily available alternatives all suggest that funding should be continued at current levels in the coming program year – at least until other mechanisms can be brought to bear.

By reducing energy consumption and energy bills, weatherization helps low-income families save money. In addition, maintaining the level of WAP expansion created by ARRA would support the preservation of existing jobs and creation of many more good-paying jobs. As of December 2010, unemployment in the construction sector was still 20.7%.³⁷ In tough economic times, it is federal money well spent.

State Energy Program

Traditionally, the State Energy Program (SEP) provides resources directly to states to address their energy priorities, implement carbon emissions reduction initiatives and fund energy efficiency and renewable energy projects. Prior to ARRA, much of the program's resources have been shifted from grants to the SEP special projects account, which is charged with spurring market transformation and finding crosscutting solutions targeted at market sectors. Specific programs that have been supported by SEP funds include efforts to improve manufacturing efficiency, efficiency retrofits in public buildings, efficiency education, and innovative energy demonstration project pilots. According to one study of one program year, SEP federal funds led

³⁶ “300,000 Homes Weatherized in Recovery Act Milestone”; EERE, January 26, 2011; http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=16679

³⁷ <http://www.bls.gov/iag/tgs/iag23.htm>

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to seven times that amount in state energy cost savings. Additionally, SEP programs were able to leverage other state and private funds at a 10 to 1 ratio.³⁸

Prior to ARRA, much of the program's resources have been shifted from grants to the SEP special projects account, which is charged with spurring market transformation and finding crosscutting solutions targeted at market sectors.

With ARRA however, the State Energy Program received a major one-time boost in allocations of \$3.1 billion. To date, 90 percent of those funds have been obligated by the states, the District of Columbia and U.S. territories to support a range of efficiency and renewables programs.

The states are implementing a range of innovative clean energy projects funded by ARRA, but it is important to ensure that the one-time ARRA increase does not impact longer-term SEP initiatives. A \$125 million appropriation, which is for all 50 states and U.S. territories, is needed to ensure that the momentum provided by the ARRA funding is maintained.

The Energy Efficiency and Conservation Block Grant Program

The Energy Independence and Security Act of 2007 established a new Energy Efficiency and Conservation Block Grant Program within DOE authorized at \$2 billion per year for state and local government initiatives that promote innovative best practices to reduce fossil fuel emissions and energy use and achieve greater energy efficiency in the building, transportation and other appropriate sectors. ARRA appropriated \$3.2 billion to this program, with \$2.7 billion awarded through formula grants, and up to \$453.72 million allocated through competitive grants. The competitive block grants were awarded to those states and municipalities that demonstrated a viable plan to expeditiously establish sustainable and market-transformational building retrofit programs at the community level that create jobs and substantially leverage private capital.

DOE designed its Funding Opportunity Announcement for the competitive grants so applicants have to consider all relevant aspects of creating a functioning retrofit market in their respective communities, including workforce training and development, program design, marketing and delivery, and the development of innovative and sustainable financing mechanisms. DOE's requirement that competitive grant funds be leveraged by at least 5:1 brings significant amounts of private capital to the table. The application process alone generated an entirely unprecedented collaboration among private capital sources, local governments and utilities specifically directed at establishing definable and financeable pipelines of retrofit projects that did not exist before across all real estate sectors.

As a result of the competitive grant FOA, a large number of communities around the country have invested significant resources into developing aggressive and credible retrofit programs. The jurisdictions that have received competitive EECBG awards are well along in the process of establishing the retrofit service delivery channels that are critical to ensuring that the jobs we hope to create actually materialize. However, with only \$390 million awarded under the current

³⁸ An Evaluation of State Energy Program Accomplishments: 2002 Program Year"; Martin Schweitzer, Bruce Tonn, Oak Ridge National Laboratory, June 2005

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program to states and larger municipalities (in amounts ranging up to \$40 million per grant), the competitive portion of the EECBG program has only been able to assist 25 jurisdictions in establishing new retrofit markets – a small fraction of the entities that put together program applications. DOE has already expended considerable resources in carefully designing the competitive EECBG program, and the program could be expanded at marginal additional administrative expense. By substantially expanding the funds dedicated to the competitive EECBG program to at least \$1 billion for FY 12, the federal government could expedite the creation of sustainable retrofit markets in many more communities, and make enduring retrofit jobs a reality in jurisdictions throughout the country.

International Subprogram

In FY 10, the majority of DOE's international activities were under the newly created International Subprogram in the Office of Energy Efficiency and Renewable Energy. The Office of Policy and International Affairs played the key coordinating role in structuring these bi-lateral and multi-lateral initiatives. The subprogram was initially allocated a budget of \$10 million with the objectives of advancing U.S. goals for climate, energy security and economic matters; accelerating clean technology innovation; and transforming the energy efficiency and renewable energy markets in key developing countries. Since then, DOE has signed a series of regional and bi-lateral agreements promoting clean energy technology development and deployment, most notably with China, India and Western hemisphere countries. Through initiatives such as the Clean Energy Ministerial, DOE is also playing a crucial role in promoting the transition to a global green economy.

The increasing need for coordination internationally on climate change, energy security and a green economic recovery ensures that DOE's international activities will play an important role for many years. For FY 12, its budget should be expanded to \$50 million which would account for the limited funding in FY10, and provide significant support for the following international activities:

- **Support of the Major Economies Forum (MEF) Clean Energy Ministerial Process.** The first MEF clean energy forum was successfully held in May 2010, engaging ministers of energy and environment from around the world in coordinating clean energy policies. The Forum represents an important pillar of U.S. climate diplomacy. DOE should continue its leadership in this area, coordinating with the Department of State as a complement to United Nations Framework Convention on Climate Change (UNFCCC) negotiations. DOE's budget should allow for administration of this initiative, rather than having to rely on the Department of State for funding.
- **Technical R&D and Policy Research on Clean Energy with India and China.** With the announcements of the consortia for three U.S.-China Clean Energy Research Centers (CERC) as well as the successful completion of the first Electric Vehicles Forum and Energy Efficiency Forum, China and the U.S. have signaled their willingness to work cooperatively to address energy and climate issues. CERC and the Energy Cooperation Program are some of the DOE public-private partnerships that tackle common energy challenges and create U.S. jobs. Similarly, the U.S. has inked agreements with India

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establishing three Joint Clean Energy R&D Centers. DOE has played a pivotal role in successfully promoting clean energies to these three big emitters by expanding current technical cooperation and providing policy and market analysis for commercialization of promising technologies.

- **Climate and Energy Engagement with Western Hemisphere.** The Energy and Climate Partnership of the Americas, established in 2009, brings together 32 Western hemisphere countries through initiatives promoting sustainable energy use. Regional Clean Energy Centers in partner developing countries facilitate joint clean energy R&D by teams of scientists and engineers from the U.S. and the partner countries. Bilateral agreements on topics of interest in partner countries, such as those already in place, should be increased.
- **Increased International Leadership Through Policy Guidance.** The Office of Policy and International Affairs provides crucial guidance and programmatic support for secretary-level initiatives. The short-staffed office was a limiting factor, for example, in finalizing the US-China CERCs. DOE could also bring about significant progress on climate energy objectives through bilateral and multilateral cooperation on energy efficiency standards. For example, various Latin American countries have appliance and equipment standards programs that are backlogged due to lack of technical expertise. Relatively small expansion of DOE's budget could leverage interest in efficiency standards to significant international effect. In addition, in the context of climate negotiations and international trade disputes, DOE must have sufficiently greater capacity to leverage its expertise in responding to requests from State and other agencies.

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Fuel Cycle Research and Development

Globally, over \$100 billion has already been spent globally in unsuccessful attempts to commercialize reprocessing and transmutation technologies.³⁹ Reprocessing is expensive, polluting and proliferating. According to the National Research Council, a reprocessing and fast reactor program that processes only existing U.S. spent fuel would cost \$700 billion (2007\$). Reprocessing actually increases the number and complexity of the radioactive waste streams that must be managed. Commercial reprocessing worldwide has produced nearly 250 metric tons of separated plutonium, which is vulnerable to theft or diversion and enough to make 30,000 nuclear weapons. Even NNSA's non-proliferation analysis of DOE's R&D program confirmed that none of DOE's proposed schemes for mixing plutonium with other radionuclides would significantly reduce the risk of theft or diversion compared to pure plutonium.⁴⁰

DOE continues to pursue reprocessing under the Fuel Cycle R&D program and has requested \$155 million in FY 12.⁴¹ The Green Budget recommends eliminating this program.

Reactor Concepts RD&D

Reactor Concepts RD&D, previously called Generation IV, is a program to develop the next generation of nuclear reactors, including small modular reactors and the Very-High Temperature Reactor (VHTR), and to research extending the life of currently operating reactors.

The FY2012 budget requests \$28.7 million for R&D on small modular reactors (SMRs). SMRs are unlikely to solve the costs, safety, and radioactive waste problems of large reactors. For 40 years, the nuclear industry has been pursuing larger and larger reactors to try to make nuclear power economically competitive – the pending applications at the NRC are the biggest reactors yet in the United States. These economies of scale are lost if size is greatly decreased: physics dictates that smaller reactors will tend to be more expensive than larger reactors given similar safety features. These cost increases are unlikely to be offset even if the entire reactor is manufactured at a central facility and some economies of scale are achieved compared to large reactors assembled on site. Mass manufacturing also raises new safety, quality, and licensing issues. For example, how will recalls work if there is defect and how will the NRC certify safety if the reactors are made abroad? Finally, small reactors would create a complex waste problem, because the waste would be located in many more sites.

The FY2012 budget requests \$49.6 million for the Next Generation Nuclear Plant Demonstration Project, currently proposed to be demonstration of the Very-High Temperature Reactor (VHTR).

³⁹ Arjun Makhijani, *Plutonium End Game Managing Global Stocks of Separated Weapons-Usable Commercial and Surplus Nuclear Weapons Plutonium*, Institute for Energy and Environmental Research, January 2001, p. 27, <http://www.ieer.org/reports/pu/index.html>.

⁴⁰ Office of Nonproliferation and International Security, *Draft Nonproliferation Assessment for the Global Nuclear Energy Partnership Programmatic Alternatives*, December 2008, pages 68-70, http://nnsa.energy.gov/nuclear_nonproliferation/documents/GNEP_NPIA.pdf

⁴¹ This program has had several incarnations: Advanced Accelerator Applications (AAA) Program (FY2001-2002); Spent Fuel Pyroprocessing and Transmutation Program (FY2003); and the Advanced Fuel Cycle Initiative (AFCI) (FY2004-2009).

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The VHTR has not been a commercial success in the US. Neither of the two VHTRs that operated commercially in the United States, Peach Bottom in Pennsylvania and Fort St. Vrain in Colorado, is still operating. The Fort St. Vrain reactor had a lifetime capacity factor of 14.5 percent and was the country's worst operating commercial reactor. The most researched VHTR is the pebble bed design. The South African government has cancelled its investment in the program due to escalating costs and lack of investors. Many countries, including United States, Germany, France, Japan, and Britain, have tried and failed to develop the pebble bed modular reactor. The Green Budget recommends eliminating this program.

LWR SMR Licensing Technical Support

The FY2012 budget requests \$67 million to pay for part of the design certification and licensing activities for Small Modular Reactors. Given that SMR designs are still in the R&D stage, NRC is not expecting any designs to be submitted for certification until at least 2013, many design certification issues at the NRC have yet to be resolved, and utilities such as Progress Energy are not expecting SMRs to be commercially deployable until 2030s, this program is highly premature and should not be funded.

Nuclear Energy Enabling Technologies

Nuclear Energy Enabling Technologies is a new program to research and develop "cross-cutting" technologies related to new reactor and fuel cycle concepts. Proposed to start in FY2011, it is redundant to other existing DOE nuclear R&D programs. The FY 12 request for \$97 million should not be funded.

Nuclear Power 2010

Nuclear Power 2010 is a program to subsidize the industry's cost of new reactor license applications. The Obama administration stated its intention to terminate this program after FY2010, which is the original sunset of the program, and requested no additional funding in FY2011. Several bills proposed in 2010 would have reauthorized funding for the program.

The NP2010 program funded the design certification and detailed standardized plant designs for Westinghouse's AP1000 and General Electric Hitachi's (GEH) ESBWR and for NuStart's reference license application for the AP1000. DOE informed Entergy in 2008 that the ESBWR design would not be eligible for loan guarantees. Three of the four sites proposing the ESBWR subsequently abandoned the design.

Historically, the NP2010 program has also funded three Early Site Permits that have been approved by the NRC at the North Anna site in Virginia, the Clinton site in Illinois, and the Grand Gulf site in Mississippi. An Early Site Permit establishes that a site is environmentally suitable for new reactors and, these issues cannot be raised again in the subsequent Construction and Operation License proceeding. Of the three Early Site Permits, no license application has been submitted to build a reactor at Clinton or Grand Gulf. North Anna project changed its

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design from the ESBWR to the APWR and there is currently no schedule for reviewing the revised application.

Yucca Mountain

The DOE has informed the NRC that it is no longer seeking a license for a high-level nuclear waste repository at Yucca Mountain in Nevada. The Yucca Mountain program and site have been deactivated by DOE, and the NRC license application review process has been halted. Several parties have filed lawsuits challenging the Administration's authority to halt the project, but final court action will take a year or more. The Yucca Mountain budget should be zero, as proposed in the Administration's FY 12 Budget Proposal.

Fusion Energy

While renewable energies are developing rapidly, fusion energy has been researched for decades with no perceptible advances. Fusion research is unlikely to lead to viable electricity generation that can be commercialized in the next century, if ever. This program is a waste of taxpayer dollars that should be spent on research that can lead to real solutions in the near-term.

Mixed Oxide (MOX) Fuel

The Administration is pursuing the construction of a facility to make surplus weapons plutonium into fuel for reactors, called MOX. MOX fuel undermines nonproliferation goals, complicates reactor operations, increases the public health impact of a reactor accident, and costs more and takes longer than the alternative, immobilization (glassification) of the separated plutonium in existing high-level waste. The MOX Fabrication Facility, which is currently being built at the DOE's Savannah River Site in South Carolina and is facing a licensing challenge by public interest groups, is estimated to cost \$4.9 billion, an increase of \$43 million since FY2009. The building to solidify radioactive waste from the MOX plant, the Waste Solidification Building, is estimated to cost \$344 million, an increase of \$66 million since FY2009. Even if the MOX facility is completed, there is a real risk it will sit idle, because no utility in the U.S. is licensed to use the MOX fuel in its reactors and only TVA is expressing interest. The only utility that had a license to test MOX fuel, Duke Energy, decided to let its contract with DOE lapse after a failed test of MOX fuel assemblies. In parallel with the US program, DOE is supporting MOX development and use in Russia. The Russian MOX program is integral to Russia's pursuit of sodium-cooled plutonium "breeder" reactors, which can produce more plutonium than they consume and thus present an exceptional proliferation risk which the US must not support. Rather than throwing hundreds of billions more at this dangerous and costly project in the U.S. and Russia, the Obama administration should zero out funding for the MOX facilities and focus on immobilizing the separated plutonium.

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ELECTRICITY DELIVERY AND ENERGY RELIABILITY

Electricity Delivery and Energy Reliability

This program works to develop technologies and implement policies that will improve the reliability, energy efficiency, system efficiency and security of the nation's energy delivery system. Following the allocation of \$4.2 billion to smart grid technologies from the ARRA, additional funding will be needed to track the success of this funding. Lessons learned from these programs will be instrumental for future rounds of funds to further accelerate the deployment of smart grid technologies and ensure their benefits to grid security, system reliability, environmental performance and economic payback are adequately realized.

In FY10, the Office of Electricity Delivery and Energy Reliability received \$172.0 million. A number of programs could benefit from an increase in funding to \$220.0 million in FY12. The Energy Storage and Power Electronics Program needs continued increases in funding for storage technology that can provide critical load following and voltage regulation services to ensure reliable grid operation and efficient asset utilization across the system. It is also imperative that funding for interconnection-wide transmission planning be put in place to enable these important processes to continue beyond the period of the current funds. ARRA funds were used for three unprecedented transmission planning efforts at the interconnection level. These processes have been instrumental in bringing together stakeholders across the Eastern, Western and Texas interconnections to plan infrastructure across regional boundaries and beyond typical planning horizons. These activities will be critical for planning the necessary infrastructure to deliver power from location constrained resources and maintain a robust, reliable grid as we transition to new, cleaner sources of power.

Finally, increased funding should be provided to address issues related to transmission system and distribution feeder operation with large quantities of variable generation from renewables (which would previously have occurred in the Renewable and Distributed Systems Integration Program). As the penetration of renewables such as wind and solar continues to increase, the marginal magnitude of their impact on system operation will continue to accelerate. Sustained funding to support these critical priorities and keep pace with these challenges will be an essential piece of meeting the nation's energy and environmental goals.

DEPARTMENT OF ENERGY SCIENCE

Office of Science

DOE's Office of Science (OS) plays an essential role in driving U.S. innovation ecosystem and supports a broad portfolio in the energy and environment sectors. Among other things, it provides 40 percent of the total funding for basic research in the physical sciences, oversees our national laboratories (which represent one of the largest scientific research systems in the world) and is widely involved in science education. In addition, the Office of Science contributes significant funding toward several cross-agency climate-change initiatives.

There is a growing recognition of the disparity between the importance of supporting energy innovation in America, and the limited amount we currently spend in this area. It is vital to increase funding for the OS on a long-term and predictable basis to ensure that America retains its competitive edge, develops the next generation of technologies, and becomes the home of the leading companies in the clean energy industry. FY10 funding for OS was \$4.90 billion. We propose a 10% increase in funding to 5.4 billion, with the preference that this be targeted towards addressing climate change and fostering clean energy technologies. OS efforts should continue to address fundamental energy technology challenges. Furthermore, it should continue to place a strong priority on research. Both Presidents Bush and Obama have endorsed doubling the Office's budget.

Recently, OS has been looking to better leverage its non-monetary resources, by, for example, allowing scientists to use its super computers for energy research and energy systems simulation. This high-performance simulation can be applied across a range of energy technologies (e.g. smart grid, vehicles and carbon capture and sequestration) increases the ability of researchers to model and optimize the performance of their technologies, and ultimately provide a real competitive advantage for U.S. industry. We strongly support this new initiative and hope OS will continue to search for these types of alternative approaches.

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ADVANCED RESEARCH PROJECTS AGENCY - ENERGY

Advanced Research Projects Agency - Energy

As originally conceived, the Advanced Research Projects Agency - Energy (ARPA-E) was designed to serve as a small and nimble research entity, sponsoring transformational energy R&D currently screened out by risk-averse institutes and labs. It would further bridge the gap between basic research (especially at universities) and industrial development, while possessing greater independence and isolation from pressure to deliver short-term results.

Since its launch with a significant block of funding from ARRA, ARPA-E has focused on two different types of funding opportunities: near commercial existing technologies; and next generation technologies that could provide a transformational leap over current approaches. So far, the program has received praise for its success in quickly staffing up, and allocating funding in an expeditious manner, selecting recipients in a transparent fashion and pursuing new approaches within the historically conservative DOE framework. Additionally, six companies have received follow-on private capital funding at a four to one multiple.⁴² In December 2010, the re-authorization of the America COMPETES Act (H.R. 5116) provided \$918 million for ARPA-E, through 2013. Congress should fund this program as authorized.

We support efforts to dramatically and strategically boost clean energy innovation in our country and consider ARPA-E an important step. We also think it imperative that these new and existing programs are driven by a comprehensive, holistic and coordinated energy vision, and that we recognize the continued need for a wide range of RD&D funding in addition to ARPA-E. We are extremely supportive of ARPA-E's efforts to both measure and improve its success rate, and hope it will continue to manage expectations and develop metrics to evaluate the success of this funding.

⁴² "Energy Firms Aided by U.S. Fund Backers"; New York Times; Mathew Wald, February 2, 2011

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Uranium Enrichment Decontamination and Decommissioning Fund

The uranium enrichment decommissioning and decontamination fund (the Fund) was established in the Energy Policy Act of 1992 to clean up three uranium enrichment facilities located at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio; and old mill tailings sites. Revenue for the Fund is generated by taxpayers and previously, by the nuclear industry, which used the plants starting in 1964 to enrich uranium for commercial reactor fuel at electric utility power plants. In 2007, the authorization for the taxpayer and industry fee expired, despite a \$12 billion shortfall in the estimated fund amount required to complete the cleanup. Congress should reauthorize this fee and continue to make the polluters pay for cleanup using the fairly distributed formula from the past program. In addition, the sale of any surplus material on site should be attributed to the government's share of the cleanup. While Congress considers reauthorization of the fee, it is imperative that expenditures from the fund continue so that these sites can be cleaned up and the surrounding communities protected. Funding in FY12 should be the same as the FY10 enacted level of \$573.9 million.

Defense Environmental Cleanup

The Defense Environmental Cleanup (DEC) budget provides funding for the environmental cleanup and public health risk reduction at the more than 130 former nuclear weapons production sites around the country, including the Idaho National Laboratory, Oak Ridge National Laboratory in Tennessee, the Hanford Reservation in Washington, the Savannah River Site in South Carolina, the Waste Isolation Pilot Plant in New Mexico, several National Nuclear Security Administration sites, the federal contribution to the Uranium Enrichment D&D Fund, and of course core funding for Program Direction, Program Support, Technology Development and Deployment, and Safeguards and Security.

The DEC program has been and remains the world's largest and most expensive cleanup program and this year comes in at \$5.6 billion. As noted above, the DEC program has the responsibility to clean up the toxic and radioactive legacy of Cold War nuclear weapons production. In 2010, DOE estimated the total environmental liability to be at least \$329 billion. Even if current funding levels are maintained for the foreseeable future, the cleanup of the most contaminated sites will take decades more. Funding should be adequate to ensure that thorough cleanup continues and the Department does not seek to use relaxed cleanup requirements to save money and abandon waste on site. If funding of \$6.5 billion is not provided, most of the 11,000 jobs created by American Recovery and Reinvestment Act of 2009 (ARRA) funds will be lost.

With respect to radioactive contamination, a fundamental problem remains DOE's self-regulating status with respect to the cleanup of radionuclides, and therefore radioactive contamination. These inappropriate exemptions from environmental laws are not only archaic, but increase the long-term costs and environmental liabilities of the program as they allow for practices such as continued dumping of radioactive materials into unlined soil ditches. Also, it is important to fully fund the cleanup to ensure that cleanup agreements with State and Tribal entities are met. This will not only prevent the spread of additional contamination, but ensure that the federal government does not pay penalties for unnecessarily missing important cleanup milestones. Further, compliance milestones and associated costs to meet those milestones should be publicly

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ENVIRONMENTAL CLEANUP

available. And in a related matter, the ARRA requires transparency and accountability provisions that should be required for all DEC programs. The administration should use the ARRA provisions to institute a new level of transparency on the Energy Department cleanup.

The largest budget item for the DEC program is the ongoing work to address the remediation of the 239 underground tanks containing approximately 90 million gallons of high-level radioactive waste. This cleanup is essential to protect important water resources, such as the Snake River Aquifer, the Tuscaloosa Aquifer, and the Columbia River. For the past several years and during the previous administration, DOE has attempted to reclassify significant portions of this waste on an unfounded technical basis. Such reclassification might save budget dollars in the near-term, but will assuredly cost more over the long-term as abandoning millions of gallons of the most highly radioactive waste in the world will not be tolerated by any State. Thus, we continue to encourage HLW funding to remain focus on removal of all of the waste from the tanks and appropriate vitrification for ultimate geologic disposal.

Additionally, we remain concerned that a still significant portion of DEC's budget is used to maintain weapons infrastructure costs and non-cleanup related missions. For example, the DEC funds could be used for reprocessing of research reactor fuel at the Savannah River Site, even though that activity would increase the stockpile of separated highly-enriched uranium while generating even more highly radioactive liquid wastes. Congress must ensure adequate funding to meet all health, safety and environmental requirements and to comply with legal mandates, while endorsing non-reprocessing options. Money for work unrelated or detrimental to cleanup, such as reprocessing, should be stripped from the budget.

Non-Defense Environmental Cleanup

Non-Defense Environmental Cleanup appropriation provides funding to complete the safe cleanup and risk reduction of the environmental legacy at sites contaminated as a result of civilian nuclear research and fuel production/reprocessing activities. Specifically, money from this account is spent on four programs: (1) Gaseous Diffusion Plants; (2) Fast Flux Test Reactor Facility Decontamination and Decommissioning; (3) West Valley Demonstration Project; and (4) Small Sites including the Argonne National Laboratory, Atlas (Moab) Site, Brookhaven National Laboratory, Closure Sites Administration and Program Support, Energy Technology Engineering Center, Idaho National Laboratory, Inhalation Toxicology Laboratory, Los Alamos National Laboratory, Lawrence Berkeley National Laboratory, Laboratory for Energy-Related Health Research, Oakland Sites, and Stanford Linear Accelerator Center. As the cleanup of these sites progresses, the risk and hazard to human health and the environment is greatly reduced. Funding in FY12 should be the same as the FY10 enacted level of \$244.7 million.

DEPARTMENT OF ENERGY

ENERGY INFORMATION ADMINISTRATION

Energy Information Administration

The Energy Information Administration (EIA) releases the most frequently cited energy reports, and its forecasts and analyses are key drivers of energy policy and investment. We recommend funding for EIA be increased from the FY10 enacted level of \$110 million to \$132.0 million. Funding for EIA and the invaluable information it provides should be commensurate with the importance and quality of its products.

Priority should be placed on EIA's Commercial Building Energy Consumption Survey (CBECS) and the Residential Energy Consumption Survey (RECS), which serve as the baseline for many initiatives designed to reduce energy consumption in both new and existing buildings. In recent years EIA has needed to reduce the frequency and breadth of these surveys due to reduced budgets. As we look to EIA data as the basis for current and future programs it is essential that this data is robust and collected frequently.

With increased funding, EIA could expand the sample size of both the CBECS and RECS surveys, improve the quality of building characteristic and consumption data, and allow for greater breakdown of energy use by end use. Programs with expanded survey designs and frequency would be a vast improvement over current programs because they would permit more complex analysis of key indicators of energy use, publications of more building types, and more accuracy for secondary uses of the data by other federal agencies.

DEPARTMENT OF ENERGY

NEW PROGRAMS

Energy Sustainability and Efficiency Grants and Loans for Institutions

Institutions of higher education, public schools, and local government collectively have a major impact on our nation's energy usage and carbon emissions. Higher education alone spends over \$6 billion on energy each year and \$11 billion annually on building construction and renovation. Energy Sustainability and Efficiency Grants and Loans for Institutions are authorized by the Energy Independence and Security Act (PL 110-140, Title 4, Subtitle F, Section 471) under the jurisdiction of DOE. In FY 2012 Congress should fund this program at the authorized level of \$750.0 million in federal assistance for renewable energy and energy efficiency projects at an institution of higher education, a public school district, a local government or a municipal utility. The program allows DOE to loan up to \$500.0 million for energy efficiency programs and up to \$250.0 million in innovation grants annually. The innovation grant program funds technical assistance, energy efficiency improvements to facilities, and innovation grants for projects that test new techniques in energy efficiency and sustainable energy production. These loans and grants are an investment that will provide significant energy savings to these institutions and limit public expenditures that would normally go towards energy costs.

Community College Energy Training Program

The Community College Energy Training Act, which is expected to pass in the 112th Congress, will provide competitive grants to community colleges who want to initiate workforce training and education in clean energy and energy efficiency industries and practices. The training areas include: alternative energy, including wind and solar energy; energy efficient construction, retrofitting, and design; sustainable energy technologies, including chemical technology, nanotechnology, and electrical technology; water and energy conservation; recycling and waste reduction; and sustainable agriculture and farming. The grant programs in the bill are administered by DOE, in coordination with the Department of Labor. In FY 2012, Congress should pass the Community College Energy Training Act and fund the program at \$100 million.

COUNCIL ON ENVIRONMENTAL QUALITY

DEPARTMENT OF HOMELAND SECURITY

DEPARTMENT OF STATE

U.S. AGENCY FOR INTERNATIONAL
DEVELOPMENT

EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY

Introduction

The Council on Environmental Quality (CEQ) was established by Congress within the Executive Office of the President through the National Environmental Policy Act of 1969 (NEPA). The Chair of the Council, supported by a small staff, serves as the principal environmental policy advisor to the President. CEQ has broad statutory responsibilities for advising and assisting the President in the development of environmental policies and proposed legislation; identifying, assessing, and reporting on trends in environmental quality and recommending appropriate response strategies; and overseeing federal agency implementation of the environmental impact assessment process under NEPA. CEQ coordinates federal environmental efforts, and acts as a referee for interagency disputes regarding environmental issues.

CEQ thus plays a critical role in the development and implementation of environmental policy within the Executive Office of the President. Its leadership and coordinating role within the federal Executive Branch is of increasing importance, given the urgency and cross-cutting nature of global warming and other environmental challenges. CEQ's leadership role was highlighted in the wake of the BP *Deepwater Horizon* oil spill when it conducted an extensive review of the former Mineral Management Service's (MMS) NEPA procedures. After conducting its own review and soliciting public comments, CEQ issued a report with several recommendations aimed at ensuring the potential environmental impacts of oil activities on the Outer Continental Shelf are properly evaluated and disclosed. The report provided the timely guidance the MMS needed as it reviewed its practices and reorganized into the Bureau of Ocean Management, Enforcement and Regulation.

Unfortunately, CEQ has been severely underfunded and understaffed in recent years. Although CEQ's staff ranged from 50-70 during the 1970s and 80s in both Republican and Democratic Administrations, it is currently staffed by only 24 FTEs, making it increasingly difficult for the office to carry out its responsibilities to advise the President, assist in the development of environmental policies, coordinate federal environmental programs among other federal agencies, and oversee federal NEPA compliance.

Funding increases are needed for:

- **CEQ to Assume a Lead Role on Climate Change and Energy Strategy:** In FY 12, CEQ will continue to exercise its coordination function to address the long term challenges of climate change for federal agencies by helping develop national strategies for climate change and energy. This effort builds on CEQ's statutory responsibility for and expertise in reviewing, assessing, and developing policies that bridge the environmental and socioeconomic factors, and its experience coordinating federal environmental policies across regulatory and management agencies. Among CEQ's responsibilities are issuing guidance for greenhouse gas accounting and reporting; reviewing and approving each agency's targets, and reviewing and evaluating each agency's multi-year Strategic Sustainability Performance Plan.

CEQ is charged with taking a lead role in the implementation of Executive Order, *Federal Leadership in Environmental, Energy, and Economic Performance* signed by President Obama on October 5th, 2009. The Executive Order sets sustainability goals for

EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY

federal agencies and requires federal agencies to set a 2020 greenhouse gas emissions reduction target, increase energy efficiency, reduce fleet petroleum consumption, conserve water, and reduce waste. The Executive Order requires the CEQ, as co-chair of the Climate Change Adaptation Task Force, to provide recommendations on how the federal government can respond to climate change, both domestically and internationally. In that role, the CEQ released an interagency report in October 2010 outlining actions the government can undertake to improve its capacity to understand, prepare for, and respond to climate change. The task force will continue to meet in 2011 and will produce another interagency report in October 2011.

CEQ will also directly be involved in the Administration's effort to retrofit buildings for energy efficiency. In 2009, CEQ convened an interagency Energy Retrofit Working Group to track the progress meeting the recommendations made in the Recovery Through Retrofit Report issued in October 2009. This Report, put together as a joint initiative with Vice President Biden's Middle Class Task Force, contains policy recommendations on how to build the market for home energy retrofits, which creates jobs and reduces household energy bills and greenhouse gas emissions. The Working Group, which is co-chaired by the Department of Energy, the Environmental Protection Agency, the Department of Housing and Urban Development, and the Department of Agriculture, will continue to develop and implement strategies to support expansion of the retrofit market.

- **CEQ to Strengthen the Appropriate Use of the National Environmental Policy Act:** Since 1970, the National Environmental Policy Act (NEPA) has provided the framework for public involvement in and substantive analysis of the environmental and related social and economic effects of federal agencies' proposed actions. The proper application of NEPA ensures that agencies make well-informed decisions. The law ensures that agencies consider the environmental effects of a proposed action and alternatives to that action, the cumulative effects of the proposed action and its alternatives, and concerns raised by the public. CEQ is charged with overseeing more than 85 federal agencies' implementation of the environmental impact assessment process under NEPA. In conjunction with its 40th anniversary, the CEQ initiated a program to modernize and reinvigorate NEPA in 2010. Since announcing the initiative, the CEQ has developed guidance and draft guidance for agencies on: when and how to consider greenhouse gases in federal decisions; enhancing the transparency in decisionmaking and increasing public participation in the decisionmaking process; and on establishing, applying, and revising categorical exclusions. CEQ will continue this effort to guide agencies in their NEPA implementation practices.
- **CEQ Role in the National Ocean Policy:** The National Ocean Council, co-chaired by CEQ, is tasked with the implementation of the National Ocean Policy (EO No. 13547) that strives to ensure protection, maintenance, and restoration of the oceans, coasts and Great Lakes of our nation. This role includes advising the President on the National Policy, as well as coordinating and facilitating the implementation of the National Policy with the all agencies seated on the National Ocean Council, partners in the regional planning bodies, science advisors and stakeholders. A small funding increase to CEQ would provide staff as well as meeting and travel costs for the new National Ocean

EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY

Council, the Governance Coordination Committee, and the Ocean Resources and Research Advisory Panel.

- **CEQ Role as Environmental Advisor Restored:** One of the major duties of CEQ is to coordinate Federal environmental efforts and work closely with agencies and other White House offices in the development of a wide range of environmental policies and initiatives. For example, in FY 11 CEQ will continue its leadership of the Louisiana and Mississippi coastal restoration interagency working group announced by President Obama on the fourth anniversary of Hurricane Katrina. The working group will coordinate the efforts of the federal government and make recommendations on policies to move restoration efforts forward. Lastly, CEQ needs adequate funding to continue its leadership role in revising principles and guidelines that govern America's water resource planning. This effort began in December 2009 with a release of a proposal and draft Principles and Guidelines for water resources.

The total budget for the CEQ in FY 10 was only \$3.159 million. The Green Budget strongly supports the President's Budget recommendation of modestly increasing the CEQ budget by \$285,000 over FY 10 levels to fund additional staff for NEPA oversight and the National Ocean Council. With this small addition to funding, CEQ will be able to more efficiently perform its important role in the development, implementation, and coordination of national environmental policy.

DEPARTMENT OF HOMELAND SECURITY

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Flood Mitigation Assistance Program

Although few real reforms to flood plain management were implemented after the Great Midwest Flood of 1993, one positive change was the creation of the Flood Mitigation Assistance Program (FMA). Enacted as part of the 1994 Flood Insurance Reform Act, this program aims to reduce or eliminate insurance claims under the National Flood Insurance Program (NFIP). Funding through this program is targeted at nonstructural pre-disaster flood reduction solutions that save lives and taxpayer money, including elevation, acquisition, and relocation of NFIP-insured structures. The program can also assist communities through technical assistance and aiding them in the updating of Flood Mitigation Plans. Funding is provided at a 75% federal cost share; participating communities must be NFIP-participating communities.

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) provides grants to state, Indian tribes and local governments, or communities on behalf of individuals, after a presidential disaster declaration in the wake of a significant disaster to implement long-term hazard mitigation measures. The HMGP enables mitigation measures to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. Projects are required to provide long-term and cost-effective solutions to a problem. Funding is provided at a 75% federal cost share. Funds under this program are a primary source of financing for voluntary buy-outs of flood-prone properties—particularly repetitive loss properties—and relocations out of the floodplain to higher ground. To date the program has provided more than \$1.1 billion in mitigation funding for projects including acquisition and relocation of structures from hazard-prone areas, drainage improvement projects, and elevation of flood-prone structures.

National Dam Safety Program

There are more than 78,000 dams in the United States, many of which were built more than 50 years ago and are reaching the end of their expected lifespan. The National Dam Safety Program was established to improve safety and security around dams. About 95% of the nation's dams are monitored and inspected by state dam safety officials, including more than 10,000 high hazard dams (meaning that failure will likely result in loss of life) and more than 3,000 dams that are considered "unsafe." The national program provides funding to states to run their regulatory program, research funding to enhance technical expertise, and training sessions for dam safety inspectors. Often the costs of maintaining safe dams outweigh the benefits the dams provide and communities will choose to remove their obsolete dams. Additionally, the National Dam Safety Program is charged with educating the public, including dam owners, about their responsibility to maintain safe dams and therefore keep their communities out of harm's way.

DEPARTMENT OF HOMELAND SECURITY

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Repetitive Flood Claims & Severe Repetitive Loss Program

The Repetitive Flood Claims (RFC) grant program and the Severe Repetitive Loss Program (SRL) were established in 2004 to reduce or eliminate recurring flood insurance claims from NFIP-insured structures. The Repetitive Flood Claims program serves as a backstop for communities that cannot raise the non-Federal cost-share requirement of the Flood Mitigation Assistance program. Properties qualifying for the SRL program are structures with: four or more flood insurance claims payments that each exceeded \$5,000, with at least two of those payments occurring in a 10-year period, and with the total claims paid exceeding \$20,000 or two or more flood insurance claims payments that together exceeded the value of the property. Under these programs, priority has been given to cost-saving approaches such as relocating flood-prone structures and deed-restricting vacated land for open space uses in perpetuity.

National Pre-Disaster Mitigation Fund

Poorly planned floodplain development has put countless people in danger and eroded natural flood protections. The Pre-Disaster Mitigation Program (PDM), run by FEMA and administered by each state, helps communities dramatically reduce disruption and loss caused by floods and other natural disasters. The goal of the program is to reduce risks to people and structures, thereby minimizing reliance on federal relief in the event of a catastrophe. Under the program, priority should be given to those projects that provide funding for relocation and acquisition of flood-prone properties to move communities out of harm's way. Communities applying for PDM funding for the purpose of flood damage mitigation must be participating members of the National Flood Insurance Program (NFIP).

Flood Hazard Identification Map Modernization

Obsolete, almost antiquated, maps pose one of the greatest challenges to protecting communities from repeated flooding and maintaining solvency of the National Flood Insurance Program. Recently, FEMA has been engaged in a multiyear initiative to modernize the Nation's flood hazard identification maps in cooperation with local, regional, or State agencies. These maps are critical as they are used to assign flood insurance rates. They are also now widely recognized as an essential tool for keeping people out of harm's way and management of natural resources.

DEPARTMENT OF HOMELAND SECURITY

COAST GUARD

Coast Guard Marine Debris

Marine debris causes tremendous harm to the planet's oceans and waterways by contributing to the endangerment of marine and coastal wildlife and the destruction of coral and benthic habitats. The prevention, reduction and removal of marine debris from our oceans are essential to mitigate current and future impacts that marine debris will cause. The United States Coast Guard is an integral player in implementing the Marine Debris Research, Prevention and Reduction Act through its regulation of vessel solid waste disposal at sea and ports. Beyond the range of traditional missions, the Coast Guard also uses a modest amount of its resources to remove marine debris. Despite the \$2 million authorized by the Marine Debris Research, Prevention and Reduction Act, the Coast Guard has received no appropriations specifically for marine debris removal. Without more robust Coast Guard involvement, marine debris will continue causing navigational hazards and vessel damage, wildlife entanglement and ghost fishing, marine habitat damage, and coastal habitat fouling.

DEPARTMENT OF STATE

INTERNATIONAL ORGANIZATIONS AND PROGRAMS (IO&P)

International Conservation Programs

The State Department's International Conservation Programs, run out of the Bureau of Oceans and International Environment and Scientific Affairs, support cooperative approaches to conservation challenges. These include U.S. Government membership in the IUCN-World Conservation Union, a global alliance for the advancement of conservation and sustainable development, and support for international treaties and conventions, including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Ramsar Convention on Wetlands of International Importance, the International Tropical Timber Organization (ITTO), the World Heritage Convention, and the United Nations Convention to Combat Desertification. These essential programs support international efforts to protect species and habitat, including networks to reduce illegal wildlife trade and trafficking, such as the ASEAN-WEN (Wildlife Enforcement Network). Funding for FY 12 should remain at \$7 million, level with FY 10 funding.

Multilateral Funds to Combat Climate Change

Investing in international efforts to deploy clean energy, protect forests and reduce emissions from deforestation and forest degradation (REDD), and assist the most vulnerable in adapting to the impacts of climate change is smart and strategic U.S. policy. Solving climate change requires that we assist developing countries in decoupling development from greenhouse gas emissions through their efforts to deploy clean energy and REDD programs and support the efforts of those countries to address the growing impacts of climate change through both short- and long-term financing. Such support is in keeping with U.S. government pledges made at UNFCCC summits in Copenhagen and Cancun and is in the strategic interest of the U.S., encompassing the following activities:

- Support countries in their efforts to undertake meaningful actions on their own to cut their emissions;
- Help developing countries deal with a climate crisis that is not of their making but which threatens to further impoverish them;
- Build capacity and mobilize early actions to protect forests and reduce deforestation and forest degradation emissions;
- Create opportunities for US companies to lead the way and partner with developing countries in advancing clean energy technologies and services to build resilience to climate impacts;
- Minimize the national and global security implications of destabilized countries and economies hard-hit by climate impacts;
- Protect valuable US investments in health, food and drinking water, as well as supply chains, in vulnerable developing countries;
- Promote the foreign policy interests of the United States by working in partnership with developing countries to solve the shared global challenge of climate change; and
- Ensure that, as the largest historical climate polluter and the world's largest economy, the US does its fair share to address global warming.

DEPARTMENT OF STATE

INTERNATIONAL ORGANIZATIONS AND PROGRAMS (IO&P)

A fair U.S. contribution to the newly established Green Climate Fund at the UNFCCC will be crucial toward achieving these goals and building trust among nations. The U.S. was critical in the establishment of this fund, which will become operational as early as 2012. At present, U.S. climate financing flows through a number of multilateral channels, and several of these are funded through the U.S. State Department. Funds provided to meet international climate financing pledges should be additional to official development assistance (ODA) commitments.

Adaptation

Even with strong global mitigation, past emissions will result in climate change impacts that are unavoidable; countries that have least contributed to climate change are the most vulnerable. With global greenhouse gases emissions accelerating at a rate faster than predicted, scientists are finding that the effects on the climate system are happening sooner and with more severity than expected, particularly in the developing world. These negative impacts – including more severe, intense, and hazardous weather patterns, decreased agricultural productivity, and increased water scarcity – present severe threats to international development progress and national and human security. By helping to manage climate instability and avoid damage to human activities and communities, particularly for the most vulnerable ecosystems and communities, adaptation programs can help prevent climate-driven migration and natural resource disputes, as well as demonstrate much-needed US leadership.

The U.S. Department of State contributes to two multilateral climate funds managed by the Global Environment Facility under the auspices of the United Nations Framework Convention on Climate Change. The **Least Developed Countries Fund (LDCF)** is a multilateral fund that provides resources to the 49 least developed countries to address urgent adaptation needs through the preparation and implementation of National Adaptation Programs of Action (NAPAs). The **Special Climate Change Fund (SCCF)** is an additional multilateral fund that finances projects relating to adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. In FY 10, the U.S. contributed \$30 million to the LDCF and \$20 million to the SCCF. It is recommended that the U.S. continue to support these important funds with \$100 million to the LDCF and \$50 million to the SCCF.

Forests and Land-Use

Emissions from deforestation and land-use change amount to between 15-20% and are the equivalent of the annual emissions from the global transportation sector. Programs that reduce emissions from deforestation and forest degradation (commonly called REDD+)¹ in developing countries can be cost-effective tools to deliver emissions reductions while also helping protect critical rainforest habitats and biodiversity and improving the livelihoods of the world's forest-dependent peoples.

¹ REDD+ is an acronym for reducing emissions from deforestation and forest degradation plus sustainable management of forests to conserve and enhance forest carbon stocks.

DEPARTMENT OF STATE

INTERNATIONAL ORGANIZATIONS AND PROGRAMS (IO&P)

The State Department supports international REDD+ efforts through the World Bank's **Forest Carbon Partnership Facility (FCPF)**. This partnership among donors and 37 REDD+ country participants operates a Readiness Fund to assist developing countries in designing deforestation emissions reduction strategies and is preparing to operationalize a Carbon Fund, which will pilot performance-based incentive payments for REDD programs in approximately five developing countries. In FY 10, the U.S. invested \$10 million dollars in the FCPF. This support should continue and grow in FY 12 at the level of \$35 million. To ensure successful and sustainable results, REDD+ policies and programs must safeguard natural forests, promote improved forest governance, build capacity for community-based forest management as well as recognize and protect the rights of local communities and indigenous peoples. For these reasons, U.S. support for REDD+ programs implemented through the World Bank should emphasize the importance of transparency, good governance, environmental integrity and respect for the rights of indigenous and forest dependent peoples.

International Agreements on Climate Change and Ozone Pollution

The **United Nations Framework Convention on Climate Change (UNFCCC)** was initiated in 1990 by the United Nations and signed at the 1992 Earth Summit in Rio de Janeiro by the heads of 154 countries, including President George H.W. Bush. The U.S. Senate ratified the treaty under President Bush in October 1992. Today, 192 countries have ratified the Convention, which has been in effect since 1994. The Convention acknowledges that increasing anthropogenic emissions of CO₂ and other greenhouse gases threatens to destabilize the global climate system and sets an overall framework for intergovernmental efforts to tackle the challenges created by climate change. The stated goal of the Convention is to stabilize the amount of greenhouse gases in the atmosphere at a level that will allow ecosystems to adapt naturally, not compromise food security, and avoid endangering sustainable social and economic development.

The **Intergovernmental Panel on Climate Change (IPCC)** is the leading international body for the assessment of climate change. This scientific body was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. Thousands of scientists from the IPCC's 194 member countries contribute to its work on a voluntary basis. The IPCC is currently preparing its 5th comprehensive assessment of the state of the science on global climate change, to be released in final form in 2014. The IPCC's 5th assessment will put greater emphasis on assessing the socio-economic aspects of climate change and implications for sustainable development, risk management and potential responses through both adaptation and mitigation. It will also seek to provide more detailed information on regions, including on climate phenomena such as monsoons and El Nino. In FY10, the U.S. provided \$13 million through the State Department to support the UNFCCC and the IPCC. This should be increased to \$15 million in FY12, in part to support development of the Fifth Assessment Report of the IPCC, which is the comprehensive assessment of the state of global knowledge and data on climate change.

The **Montreal Protocol on Substances That Deplete the Ozone Layer** is an international treaty designed to protect the ozone layer by phasing out the production of numerous substances believed to be responsible for ozone depletion. President Reagan signed the treaty in 1987, and it

DEPARTMENT OF STATE**INTERNATIONAL ORGANIZATIONS AND PROGRAMS (IO&P)**

was ratified by the U.S. Senate the following spring. All of the countries in the United Nations have ratified the treaty, which has been called the single most successful international agreement to date. The U.S. provides funding for implementation of the UNFCCC, the IPCC and the Montreal Protocol through the Department of State. The State Department should continue to receive \$25 million in FY12 (level with FY10 levels) in order to support U.S. participation in treaty implementation.

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

BILATERAL INTERNATIONAL CLIMATE FUNDING

Biodiversity Conservation Programs

Most U.S. foreign assistance for on-the-ground conservation is delivered through USAID and its Biodiversity Conservation Programs. These help protect some of the largest and most at-risk natural landscapes, including South America's Amazon Basin, Africa's Congo Basin and the Coral Triangle of Southeast Asia and the Pacific -- home to important biodiversity as well as millions of people who directly depend on natural resources for their survival. USAID assistance for conservation serves the needs of local inhabitants while addressing larger foreign policy objectives -- ensuring clean water, promoting rural peace and security, boosting health, combating global warming, building democracies, securing environmental resources and reducing poverty.

It is more important than ever that foreign assistance dollars work to accomplish several objectives at once. For the 2010 fiscal year, USAID directed \$205.0 million towards its Biodiversity Conservation Programs, developing policies and practices that would preserve ecological diversity while sustaining local communities. U.S. investments in global conservation have a strong track record of delivering results on multiple levels and strategically leveraging support from other donors around the world. USAID's Global Conservation Program (GCP) is a case in point -- a decade-long effort in partnership with six NGOs to support new, landscape-level approaches to conservation of vast landscapes in 27 countries, across park and political boundaries, under management of local stakeholders. A new USAID program -- Sustainable Conservation Approaches in Priority Ecosystems (SCAPES) -- is continuing this landscape/seascape-scale approach to conservation.

From grasslands and forests to high elevations to coastal and marine ecosystems, the USAID biodiversity program continues to provide the core funding for the broad array of ecosystems that span the developing world. In order to continue to support and conserve these ecosystems and their resources, it is recommended that USAID funding for biodiversity be enacted at \$225.0 million for 2012, marking an increase of \$20.0 million over the 2010 enacted levels. Partnerships forged by USAID professionals, foreign governments, the private sector, local peoples and conservation organizations continue to drive the success of the USAID Biodiversity Program. Expanded foreign assistance programs directed toward global conservation can build on this success, helping developing countries meet their future needs while protecting the natural resources upon which their citizens depend and the rest of the world relies.

http://www.usaid.gov/our_work/environment/biodiversity/

Sustainable Landscapes Program

Deforestation results in approximately 15% of global greenhouse gas emissions. Action to address deforestation, forest conversion to agriculture and other land use changes are a cost-effective and readily available solution to mitigating global emissions. Sequestration through forest restoration and preservation can also substantially enhance efforts to slow climate change while preserving livelihoods and biodiversity. In 2009, the U.S. joined with other nations in Copenhagen to announce 'fast start' financing to protect tropical forests and the carbon they contain. Specifically, the U.S. dedicated \$1 billion over the 2010-2012 timeframe to help

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

BILATERAL INTERNATIONAL CLIMATE FUNDING

countries that put forward “ambitious REDD+ plans”² - a commitment which leveraged additional contributions totaling \$3.5 billion from all donors. The FY10 enacted budget of \$152.0 million reflects the U.S. government’s first year of REDD+ commitments with the establishment of the Sustainable Landscapes program, which delivers funding through bilateral and multilateral mechanisms. Much of this funding flows through USAID’s Sustainable Landscapes Program, which supports REDD+ architecture, national and sub-national frameworks, and demonstration activities to achieve scale on emission reductions from avoided deforestation. This architecture will provide access to forest carbon data and analysis tools that will increase coherence, efficiency and transparency around forest carbon monitoring, reporting and verifying processes. National frameworks to enable net emissions reductions as part of REDD+ readiness will include forest cover and emission inventories, monitoring and reporting, institutional and legal reform such as tenure, responses to governance challenges, carbon market investment and revenue distribution, and social and environmental safeguards. Demonstrations will include degraded lands and frontiers in order to promote integrated land management outcomes in agroforestry and restoration of degraded lands. USAID Missions and Regional Hubs have released several large Request for Proposals, beginning the procurement process for FY10 Sustainable Landscapes funding. To ensure the success of these mitigation programs, funding to the Sustainable Landscapes Program should be allocated at \$258.0 million for FY12, an increase of \$106.0 million from funding in FY10.

Adaptation Program

With global greenhouse gas emissions accelerating at a rate faster than predicted, scientists are finding that the effects of climate change are more powerful and happening sooner than expected. These negative impacts – including more severe, intense, and hazardous weather patterns, decreased agricultural productivity, and increased water scarcity – present severe threats to international development progress and national security. The **USAID Adaptation Program** uses science and analysis to develop and disseminate information tools that help decision makers understand how to address climate impacts. These incorporate U.S. satellite and weather data, along with sophisticated climate change projections. The program supports efforts in the developing world to integrate climate resiliency strategies into development plans, national health plans and national and community-based disaster and risk reduction plans. The adaptation implementation strategies that are emerging are helping to strengthen development programs in infrastructure, health, energy, water, agriculture, natural resources management, disaster risk reduction and conflict mitigation. Funding for USAID’s Adaptation Program is helping to mainstream climate resilience and adaptation priorities into its development activities worldwide. In FY10, the Adaptation Program received \$122.75 million in funding. By helping to manage climate instability and avoid damage to human activities and communities, particularly for the most vulnerable ecosystems and communities, adaptation programs can help prevent climate-driven migration and natural resource disputes, as well as demonstrate much-needed US leadership. In order meet these needs and satisfy U.S. commitments made to the developing world to provide fast-track financing for climate adaptation, FY12 funding for USAID’s Adaptation Program should be raised to \$300.0 million.

² REDD+ is an acronym for reducing emissions from deforestation and forest degradation plus sustainable management of forests to conserve and enhance forest carbon stocks

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

BILATERAL INTERNATIONAL CLIMATE FUNDING

Clean Energy Program

According to the International Energy Agency's (IEA) 2009 *World Energy Outlook* report, world primary energy demand is projected to increase by 40 percent by 2030, with developing countries in Asia as the main source of demand. Without substantial changes in energy policies, fossil fuels are likely to account for more than 75 percent of the overall increase in energy use. Funding for USAID's clean energy program helps to reduce climate change by promoting the sustainable use of renewable energy technologies, energy efficient end-use technologies, carbon sequestration, and carbon accounting. In FY10, USAID directed \$108.5 million towards the Clean Energy Program. Supported activities include the development and implementation of Low Emission Development Strategies (LEDS), promoting legal and policy frameworks necessary for energy efficiency, enabling the transfer and adoption of renewable energy technology, such as solar and wind, reforming energy markets to ensure more transparency and encourage investment, and building national and private sector capacity to monitor and manage GHG emissions. This funding enables clean technology cooperation and dissemination needed for developing countries to pursue new pathways that decouple carbon from economic development. Accelerating deployment of clean energy technologies, including renewable energy and energy efficiency, will help developing countries to produce clean, efficient energy while also fighting energy poverty and improving public health. These investments are a crucial step in growing the clean energy economy at home and abroad, and it is recommended that funding be increased to \$139.0 million for FY12. By supporting global clean energy innovation and deployment, these USAID programs support the United States' foreign and domestic policy goals and help grow the market for American products and business.

Population Assistance Program

Since 1995, U.S. aid for family planning in the developing world has declined by more than 30 percent when adjusted for inflation. The number of women in these countries has grown by more than 300 million in the same time period. There are an estimated 215 million women in the most impoverished parts of the world who want to delay or end childbearing but do not have access to modern contraceptives. If the U.S. were to provide its appropriate share of the total financial resources necessary to meet the unmet need for contraception, this sum would total \$1 billion. The lack of access to modern family planning is a key driver of the 75 million annual unintended pregnancies worldwide and the resulting yearly net increase in global population of 83 million people. Population growth in the developing world remains a contributor to deforestation, desertification, the degradation of oceans and waterways. In light of these factors, it is recommended that funding for USAID's Population Assistance Program increase to \$1.0 billion in FY12, representing an increase of \$351.5 million from FY10 funding of \$648.5 million.

Moreover, family planning and reproductive health should be part of larger strategies for climate change mitigation and adaptation. Alongside other necessary efforts to reduce emissions, particularly in developed countries, slower population growth in developing countries will contribute to slower growth of global GHG emissions and make overall reductions easier to achieve while reducing the scale of human vulnerability to the effects of climate change. Further, USAID's successful experience in implementing integrated population, health and environment activities (PHE) can be applied to climate change adaptation and offer lessons on how effective

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community engagement, country-level coordination and cross-sectoral project design can help increase resilience of local communities to climate change, while also promoting sustainable natural resource use. Investment in family planning is critical to the protection of the global environment.

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National Landscape Conservation System

27 million acres of congressionally and presidentially designated wild lands make up the Bureau of Land Management's (BLM) National Landscape Conservation System (National Conservation Lands). This collection of federally protected lands and waters, including National Monuments, National Conservation Areas, Wilderness, Wilderness Study Areas, National Scenic and Historic Trails, and Wild and Scenic Rivers, and other designations contains some of the last places where one can experience the history and wild beauty of the West. The National Conservation Lands provide critical wildlife habitat, clean water, innumerable recreational opportunities and open space near fast-growing cities. Furthermore, it provides countless research opportunities because of astounding cultural, historic, and paleontological resources.

Although the National Conservation Lands make up approximately 10% of its total land holdings, and up to one-third of all visitors to BLM managed lands, insufficient funding has undermined the BLM's ability to steward these significant and popular lands. Pressures to these American treasures include looting of archaeological sites, reckless off-road vehicle use, and the growing number of visitors. Without sufficient funding, the BLM struggles to complete essential resource protection, such as signing trails, closing illegal and unnecessary routes, and inventorying and protecting cultural sites. In the past five years, funding has averaged \$60.8 million, or just \$2.25 per acre.

Funding of \$100 million is needed to prevent critical damage to the resources found in these areas, ensure proper management and provide for a quality visitor experience. This funding level would provide much needed resources for the BLM to hire essential management and law enforcement staff, monitor and protect natural and recreational resources, close unauthorized routes that fragment fragile ecosystems, and undertake needed ecosystem and species restoration projects.

While the National Landscape Conservation System's needs are far greater than the amount it receives, our Green Budget request embraces the modest FY 2012 proposal from the Administration focused on enabling the BLM to meet critical needs now. The President's budget proposal provides an additional \$15 million to the National Conservation Lands to keep these unique lands healthy and open and safe for the public. We are heartened to see the Administration's recognition of the struggles the National Conservation Lands face. The National Conservation Lands' budget has barely kept up with inflation and fixed cost increases, and continues to fail to keep up with basic management needs associated with the increase in visitation and basic resource protection. The Omnibus Public Land Management Act of 2009, for instance, added 1.2 million acres to the National Landscape Conservation System; additional funding is critical for the management and planning of these new designations within the time frame mandated by Congress.

Budget Clarity for the National Conservation Lands

In FY 2008, the Bush administration recognized the overdue need for transparency and accountability in the Lands' budget by creating dedicated accounts for National Monuments and National Conservation Areas. These new subactivities allow the American people, Congress and BLM to better understand budgets needs and to plan for management of those designations. The

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FY10 report accompanying the Senate Interior appropriations bill directed BLM to create a dedicated account for National Scenic and Historic Trails. This request was not met in the President's FY11 budget. BLM must finish the job of ensuring budget clarity for the National Landscape Conservation System by creating dedicated accounts for National Scenic and Historic Trails and Wild and Scenic Rivers.

Wildlife and Fisheries and Threatened and Endangered Species Management

BLM manages more land, and more wildlife and fish habitat, than any other federal agency including half of the remaining habitat for the imperiled sage grouse and almost 15 million acres of prairie grasslands vital to many declining grassland dependent plants and animals. The diverse habitat managed by BLM supports over 3,000 species of fish and wildlife, more than 300 federally proposed or listed species, and more than 1,300 sensitive plant species. The Wildlife and Fisheries Management and the Threatened and Endangered Species Management programs fund inventory and monitoring, habitat restoration, endangered species recovery, and other proactive conservation activities vital to maintaining healthy, functioning ecosystems and fish, wildlife, and plant populations.

Inappropriately, the Wildlife and Fisheries and Threatened and Endangered Species management programs have been forced to pay for the compliance activities of BLM's energy, grazing and other non-wildlife related programs. Funding for compliance work should come from benefiting programs, however, in recent years resources from these two programs have been routinely diverted to other areas, eroding their ability to conduct proactive species and habitat conservation activities and efforts to recover listed plants and animals. While this practice has undergone increased scrutiny in the last several years, no information has emerged to suggest that the situation has been rectified. Consideration should be given to directing the agency to contract with a reputable outside entity knowledgeable in natural resource management to review the problem and make recommendations to resolve it.

Even in the absence of any funding diversion, however, the meager funding still would not be adequate to the task at hand. The BLM has only one biologist per 591,000 acres of land and currently is in need of at least 60 more fish and wildlife biologists and botanists just to address the most basic priorities. In addition, tens of millions of dollars are needed for fish passage restoration, and annual BLM funding for recovery of threatened and endangered species on BLM lands comes to less than 5 percent of the estimated annual cost of recovery tasks assigned to BLM.

The status of the wide-ranging declining sage grouse is of great concern throughout the West, and significant additional resources will be needed for its protection as proactive sage grouse conservation measures are developed and implemented. For example, the program needs to hire a sagebrush habitat specialist to ensure that management actions are effectively applied to sage grouse conservation.

Given the greatly expanded effort to develop renewable energy on BLM lands, it is absolutely crucial that the Wildlife and Fisheries and Threatened and Endangered Species programs have the resources to ensure that development occurs in a balanced fashion that sustains fish and wildlife

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populations and habitat. Of particular concern are renewable energy impacts on wildlife species such as golden eagles and a variety of bat species. Investments in inventory and monitoring are necessary to fill data gaps and avoid and mitigate harmful impacts to these and other wildlife species. Some existing funding from the renewable energy program will be used in the coming spring to conduct surveys to ascertain location of eagle nests, but at least \$4 to 5 million more will be needed in coming years for eagle inventory and monitoring and data management for accurate accounting of nesting activity in order to better address on the ground management activities. Funds could be provided through the Wildlife and Fisheries or through the Renewable energy program under Land and Realty Management.

In addition, resources are needed to investigate and begin to address the effect of white-nose syndrome on bats on BLM lands; the fungus has decimated 1 million bats in the last several years and continues to spread. At least \$1 million will be needed for initial efforts to survey bat presence or absence in approximately 400 caves and mines based on an estimated cost of \$2,500 per cave. The catastrophic losses of bat populations that will occur if a way is not found to control the disease will have far reaching consequences – bats play essential roles in insect control, plant pollination, seed dissemination and the maintenance of healthy cave ecosystems.

Finally, BLM already is seeing changes on the ground from climate change and must have the ability to assist adaptation of wildlife and habitat. Wildlife and Fisheries and Threatened and Endangered Species Management received an allocation of approximately \$7 million in FY 10 and FY 11 from the agency's cross-cutting Climate Change Adaptation initiative to begin to address impacts on wildlife and native plants. It is crucial that this funding allocation be continued in FY 12 at least at the same level, and significant increases will be needed in future years to adequately address the growing harm to wildlife and habitat on BLM lands from climate change.

While the need is far greater, the Green Budget request for FY 12 is a modest one focused only on needed funding for baseline inventories of golden eagles and bats and sage grouse conservation: for Wildlife and fisheries Management, an increase of \$3 million over the FY 10 level of \$50.3 million and for Threatened and Endangered Species Management, an increase of \$2 million over the FY 10 enacted level of \$22.6 million.

Cultural Resources

The Bureau of Land Management (BLM) oversees the largest amount of federal public land in the United States, including 21 National Historical Landmarks, 5 World Heritage Sites, and more than 263,000 documented cultural properties. Assuming the same concentration of cultural resources sites across all of the BLM public lands as have been found to exist upon those already surveyed, there are likely to be 4.5 million cultural sites on all public lands under BLM's purview.

Cultural resources and whole landscapes under BLM management are increasingly endangered by potentially destructive activities such as unregulated and inappropriate recreation, inadvertent visitor damage and even looting. In its 2004 Preserve America report, BLM asserted that it manages "the largest, most diverse, and scientifically most important body of cultural resources

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of any Federal land managing agency,” yet BLM receives the least amount of cultural resources money per acre of any federal agency. Many of these resources are not contained in the National Landscape Conservation System and therefore do not receive increased financial resources for their inventory or preservation.

A stagnant budget for cultural resources has led to fewer staff on the ground. In FY 2003, the BLM had 141 full time staff (FTE) working on cultural resources. Today they have 115 FTEs or a reduction in almost 19 percent of its staff at a time when visitation and damage are increasing. The Cultural Resources budget in 2003 was \$15.257 million. Adjusted for inflation today, that budget would be \$18.1 million, yet the FY 10 enacted budget only funded this account at \$16.1 million or less than 65 cents an acre. In fact, this budget has been so stagnant, that the FY 08 funding was also 16.1 million. The BLM can't manage the largest, most diverse and scientifically most important body of cultural resources of any Federal land managing agency with 65 cents an acre.

In the 34 years since the enactment of the Federal Land Policy and Management Act (FLPMA) only 8% of the land managed by the BLM has been surveyed for cultural resources. Section 110 of the National Historic Preservation Act (NHPA) directs BLM to proactively identify, evaluate and nominate historic properties under its care to the National Register of Historic Places, as well as manage and maintain historic properties in a way that protects and preserves them. On average, the BLM inventories 500,000 acres annually for cultural resources or less than 0.2% of their land base per year, an unacceptable figure in light of the inventory and protection requirements of FLPMA and NHPA and the current demands being placed on BLM land by energy development, recreation and other uses. Largely as a result of this formidable backlog of un-surveyed lands and its attendant cost, BLM can do relatively little proactively, instead relying on a patchwork of National Historic Preservation Act Section 106 surveys. These surveys are carried out within the context, and constraints, of approvals for public land use permits issued by the thousands annually to energy, mining, and grazing companies, for energy and mineral extraction, road, pipeline, and utility rights-of-way, and a host of other private, state and local activities. The result is a spider web of roads and infrastructure developed around a particular cultural site, ignoring the context of the cultural landscape.

At an estimated cost of \$40 per acre to conduct cultural resource surveys, the cost of surveying all remaining BLMs would be over \$9 billion, if done in the conventional piece-meal manner. The BLM needs a significant portion of their cultural resources budget dedicated to the systematic inventory of cultural resources in locations with the potential for energy development or recreational disturbance. A systematic inventory would benefit from economies of scale providing for more lands to be surveyed at a lower cost per acre. The increased inventories will reduce conflicts between historic preservation and other land uses, and create certainty for projects developed on those lands instead of surprises after the project has been permitted. This is of particular importance when more intensive acreage of land use is required for the development of industrial solar and wind projects.

The BLM Cultural Resources 1050 account could make significant improvements with a modest increase of \$3 million over FY 10 and FY 08 funding levels of \$16.1 million to \$19.1 million. With \$3 million specifically dedicated to Section 110 to provide the much needed resources to proactively identify, evaluate and nominate historic properties under its care. The additional

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funding would provide the vital resources to begin the proactive cultural resources survey on lands targeted for energy development and thereby better inform the process, and allow areas rich in cultural resources to be avoided and clear areas with few or no cultural resources for development. Most of the current funding in the 1050 account is allocated for the salaries of professional Cultural Resource (CR) positions. Most BLM Field Offices have at least one CR professional, while some have two or three. Those Field Offices with just one CR professional were considered seriously understaffed. Continued funding from the \$16.1 million level would result in fewer staff in each of these Field Offices leaving that one person to cover the proactive CR work, partnerships, site protection, heritage education, Sec. 106 compliance, site development monitoring, and State Historic Preservation Officer reporting and communications.

A notable example of the need for increased inventory and greater protection is demonstrated by BLM's Monticello Field Office, located in southeastern Utah's San Juan County. For more than 12,000 years, generations of families from Paleo-Indian big game hunters to Mormon settlers traveled to the area and, in particular, to the archaeologically rich, roughly 476,000-acre cultural landscape of Cedar Mesa. Their stories are now buried among Cedar Mesa's estimated 100,000 prehistoric and historic sites—an archaeological record that rivals that of nearby Mesa Verde National Park. San Juan County has seen an estimated 30 percent annual increase in national and international visitors since at least 2006, but BLM has little money to educate visitors about proper site etiquette, no cyclical maintenance money to repair, stabilize and interpret heavily visited sites, and only one law enforcement officer to patrol the entire 1.8 million-acre field office, of which Cedar Mesa is only a part. In FY 2008, the Monticello Field Office received just \$86,000 for its cultural resources program—an average of only 4.6 cents per acre. As a result, many sites are being “loved to death,” with visitors taking surface artifacts and damaging walls and rock art.

Challenge Cost Share

The BLM's Challenge Cost Share program allows the BLM to partner with state and local governments, private individuals and companies and nongovernmental organizations to restore habitat, monitor species, maintain archeological sites, and repair trails, along with other activities. The program, which requires a dollar for dollar match, has been reported by the agency to average a two-to-one match-and for some projects, a three to one match or more-providing tremendous leverage of federal funds. Given the ongoing diversion of resources from the wildlife programs, much of the proactive conservation work being accomplished in field offices is through Challenge Cost Share partnerships. The FY 10 enacted funding level of \$9.5 million is not enough to meet the current needs as the agencies annually turn away an average of \$20 million in projects that could be leveraged into \$60 million for the total program. The FY 10 enacted level of \$19 million eliminated funding for the program pending a review of procedures in response to an Inspector General report which found a lack of effective oversight of non-federal contributions to the program. The Challenge Cost share program is a significant effort that has provided important opportunities for tens of thousands of citizen volunteers to do thousands of stewardship projects on public lands and trails in a way that cannot be duplicated through other federal funding programs. Funding should be maintained at its FY 10 level of \$9.5 million under effective procedures to address the concerns in the Inspector General report.

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Plant Conservation

BLM lands are crucial to the conservation of more than 1300 sensitive plant species, yet the agency currently has no specific appropriation for plants that are rare but not listed under the Endangered Species Act. Some funding from the Wildlife and Fisheries account currently is used for this purpose and the FY 09 Interior, Environment and Related Agencies bill also transferred into the wildlife account the approximately \$5 million annually devoted to Native Plant Materials Development previously in the Burned Area Rehabilitation account. Providing native seeds and seedlings for restoration projects after wildfires and other disturbances is vital to preventing the colonization of invasive plant species that degrade habitat and ecosystem functioning, and ultimately cost more to control than preventive measures. The large-scale development of native seed stock is still in its infancy, and often federal agencies are not able to acquire enough plant materials to meet their demands. Moreover, the ability to collect and store native seed stock in the face of the looming climate change threat is more important than ever before-these precious resources will be a crucial tool in ecosystem restoration.

Given the importance of these plant related programs, it has become increasingly apparent that a specific new budget activity or subactivity is needed for plant conservation in the Management of Lands and Resources account that would encompass both its ongoing efforts to conserve rare plants on BLM lands as well as a comprehensive Native Plants Materials Development program. It is estimated that the annual funding need for the Native Plant Materials Development program would be \$25 million over the next 10-15 years, along with one time construction funding of \$6 million for seed storage facilities, and for an ongoing rare plant program, approximately \$15 million annually. The FY 12 recommendation to provide \$6 million in one-time construction funding for seed storage facilities is a modest first step in addressing this need.

Resource Management Planning

Effective response to the land management challenges of the coming decades, including adapting to the effects of climate change and supporting the responsible development of energy resources, hinges upon timely and informed BLM Resource Management Plans that can guide effective and sustainable land management actions on the ground.

The BLM Resource Management Planning program must have sufficient capacity to respond to changing conditions, identify and protect lands with wilderness characteristics, and address emerging issues such as renewable energy production. Keeping plans relevant and up to date is critical given the many services provided by BLM lands, including energy production and the conservation of wildlife, wildlands and water resources. According to the BLM, out of date plans limit the effectiveness of on the ground actions and raise the likelihood of costly litigation, both of which can prohibit or delay the delivery of important economic and ecological benefits and increase the cost to the taxpayer.

To be more effective, and to realize planning efficiencies, the development of BLM Resource Management Plans should be coordinated with other planning efforts to occur at the landscape level, to assess linkages between habitats and strategically plan management actions across agency boundaries. Development of the Assessment, Inventory and Monitoring (AIM) strategy is

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also critical for creating efficiencies, as is discussed within the Landscape-level Conservation program section.

The program should be funded at no less than the FY 10 level of \$50.0 million. Any reductions below that level would hinder initiation of needed plan revisions.

Landscape-level Conservation

BLM is pursuing a number of program activities at the landscape level in order to effectively meet the complex land management challenges of the 21st century, including responding to climate change and conducting comprehensive energy and conservation planning. BLM's Climate Change Adaptation, Healthy Landscapes, and Assessment, Inventory and Monitoring (AIM) programs all contribute to landscape level management. Planning and managing at a landscape level leads to cost and program efficiencies within and across agency boundaries, and to the degree possible, all federal land management agencies should be encouraged to conduct cross agency landscape level planning and management in consultation with state and tribal land management agencies and other stakeholders.

Adapting to Climate Change

The Adapting to Climate Change program supports the development and implementation of strategies to conserve fish, wildlife and habitat in the face of climate change and other potential stressors including invasive species and energy development. The Adaptation Program is closely linked to other DOI climate change response programs including the Climate Science Centers (CSCs) and the Landscape Conservation Cooperatives (LCCs). For FY 12 the program should be maintained at the \$17.5 million requested for FY 11 and FY 12 to continue this critically important work. Projects underway include collection of native plant seeds for development for future rehabilitation and restoration needs in Alaska, Arizona, California, Colorado, Idaho, and Montana; restoration of five-needle pine in Idaho, Montana, and Wyoming; improvement of wildlife corridors for migratory big game populations in Western Montana; and the study of climate change effects on Canada lynx in Montana.

Healthy Landscapes

Begun in 2007 as a crosscutting BLM initiative, the Healthy Landscapes program has become an innovative and praiseworthy effort to address landscape level planning and management challenges. For example, in 2010 BLM initiated seven rapid ecoregional assessments (REAs) to examine ecological conditions within large landscapes such as the Colorado Plateau or Mojave Basin. REAs synthesize existing information on the condition of the land, for example by mapping important habitat for fish and wildlife, and integrate that information with four primary change agents – climate, wildfire, invasive species, and development, including large scale energy development. Ultimately, the REAs will provide BLM and other land managers with the information they need to develop management strategies that respond to challenges and proactively plan for sustainable development at appropriately large scales. Additional resources will ensure that initiated REAs are completed, new assessments are launched in priority landscapes, and that information contained in the assessments is transferred into useful management direction.

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This type of proactive, strategic and forward looking initiative will be crucial to support the agency in properly managing the unique sagebrush, grassland and other ecosystems it administers; conserving wide ranging species such as the sage grouse; and preparing to meet the threat of global warming which already is a major cause in the spread of noxious exotic weeds, catastrophic wildfires, severe drought, and desertification on BLM lands. A cross-cutting effort that encompasses all of the federal land management agencies, and that is integrated with Landscape Conservation Cooperatives as well as landscape level planning efforts coming from the states, can provide the mechanism to help address the significant ecological changes that are occurring across whole landscapes. The Green Budget recommendation for FY 12 is \$10 million, a modest \$2.2 million increase over the FY 10 level of \$7.8 million.

Assessments, Inventory and Monitoring

The Assessment, Inventory and Monitoring (AIM) program, which integrates assessment and monitoring activities across BLM offices, for example between Resource Management Planning and the Wildlife and Fisheries programs, and among federal and non-federal partners, is critical for creating efficiencies in the collection, analysis and reporting of resource conditions on BLM lands and beyond. Data sharing and integration lead to better, more efficient and effective management actions. If done right, and provided with sufficient direction and resources, the AIM program has the potential to ensure a “proactive and effective wildlife program” that, through efficient operation, can “preclude the need to list species under the Endangered Species Act.” The FY 12 recommendation is \$2 million, same as the FY 10 level.

Land and Realty Management: Renewable Energy Coordination Offices

As our nation transitions toward a clean energy future, it is imperative for our wild places and wildlife that we strike a balance between the near-term impact of renewable energy development and related transmission facilities with the long-term impacts of climate change on biological diversity and natural landscapes. To ensure that the proper balance is achieved, we need smart planning for renewable power that avoids and minimizes adverse impacts on wildlife and wild lands.

The Obama Administration is moving rapidly to develop and deploy renewable energy across the nation, and a large part of the vision is to incorporate public lands as locations for renewable energy siting. In fact, the Department’s FY 2011 “Budget in Brief” noted that one of its High-Priority Performance Goals was to “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.”

The final FY 10 Interior, Environment, and Related Agencies appropriations bill directed the Interior Department and the Forest Service to submit within 180 days a report on the criteria for siting renewable energy projects that was to include a detailed strategic plan on agency coordination an analysis of renewable energy sites and methods for removal of infrastructure when no longer operational. Unfortunately, as of the publication of the Green Budget, no such report has been forthcoming. Nevertheless, given the importance of protecting sensitive resources on lands managed by the Bureau of Land Management (BLM), it is essential that the administration have a coordinated and comprehensive plan to guarantee appropriate siting of

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renewable energy projects and to ensure that sensitive landscapes, sustainable populations of fish and wildlife, and magnificent views on public lands and coastlines are protected.

Aiding our transition to a clean energy future, the BLM Renewable Energy Program is tasked with identifying and permitting renewable energy development on our public lands as well as complying with the agency's multiple-use mandate and protecting the nation's richest ecological and cultural areas. The Renewable Energy Coordination Offices (RECO), established in 2009, are meant to function as the on-the-ground teams responsible for determining how best to strike a balance between renewable energy development and land conservation.

In calendar year 2010, eight large-scale solar energy projects were permitted on public lands in California and Nevada, all of which received expedited environmental review with funding from the American Recovery and Reinvestment Act. More solar, wind, geothermal and transmission projects are in the permitting queue and are set to be permitted in calendar years 2011 and 2012. The Renewable Energy Program must receive adequate funding to undertake environmental analyses that include early stakeholder involvement, adequate alternatives, and rigorous impact assessments.

In an effort to expeditiously develop renewable energy resources on BLM lands, the BLM is undertaking a Programmatic Environmental Impact Statement (PEIS) for solar energy, released in draft form in December 2010. The review, public comment period, and preparation of the Final PEIS will be high priorities for the agency in FY 2011 and FY 2012. A robust and comprehensive PEIS will be critical to defining the Department of the Interior's solar energy program moving forward, as it will define the areas appropriate for renewable energy development and should include a number of important policy objectives such as best management practices and the processing of applications.

Lastly, given the declining status of so many bird species, inventory and monitoring is more important than ever, yet little is known about the population trends of birds in many habitats. Of particular concern is lack of adequate information on golden eagle populations which are vulnerable to impacts from wind turbines. At least \$4 to \$5 million in additional funding is necessary for Golden Eagle inventory and monitoring and data management for accurate accounting of golden eagle nesting activity in order to better address on the ground management activities timely to meet current requirements of the Bald and Golden Eagle Protection Act. Funds could either be provided through this program or through the Wildlife and Fisheries program.

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National Environmental Policy Act

The National Environmental Policy Act (NEPA) applies to all major federal actions that may significantly affect the environment. To comply with NEPA, the Bureau of Land Management (BLM) must assess and disclose the potential environmental effects of their actions in an Environmental Assessment or Environmental Impact Statement. In preparing these documents, the BLM must summarize the environmental impacts of their proposed action and alternatives, as well as the interrelated economic, health, or social effects. This process provides citizens an opportunity to learn about the actions that federal agencies are proposing and offers the BLM an opportunity to receive valuable input from the public, state and local governments, other agencies, and other stakeholders.

The BLM is responsible for carrying out a variety of programs for the management and conservation of resources on approximately 258 million surface acres, as well as 700 million acres of subsurface mineral estate. Although BLM suffers from budget constraints that detrimentally impact the agency's ability to implement NEPA throughout these programs, three components of BLM's responsibilities remain in particular need of increased funding: BLM's management of livestock grazing practices and the oversight of renewable energy development on BLM lands

First, BLM continues to face a backlog of expired grazing permits; currently there are over 3,000 permits that need to be processed. The pending NEPA workload for this backlog is enormous. The ability of the BLM to address this backlog of permits and conduct the required NEPA analysis is further hindered by a nearly 30 percent reduction in staff available to conduct the required analysis. As a result of the size of the backlog and the reduced staffing, it is nearly impossible for BLM to fully process the pending grazing permits with the necessary NEPA analysis. Overgrazing can lead to disastrous results, including the disappearance of vegetative species, an increase in erosion, and decline in water quality. In order to prevent further destruction and degradation of public resources, increased funding is needed to allow BLM staff to finally eliminate the backlog ensuring that proper NEPA analysis for these grazing permits is resumed. A moderate increase in funding is needed to dedicate adequate staff and resources to redress this problem.

Second, BLM is facing new challenges in regulating access to public land energy resources, in particular with respect to its role in development of renewable energy. As a part of Secretary Ken Salazar's New Energy Frontier Initiative, the Department of Interior has the stated High-Priority Performance Goal to "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."¹ As President Obama's FY 2011 Budget recommends, in addition to the 2010 enacted level of \$16.1 million for renewable energy, an additional \$3.0 million dollars is needed to prepare full NEPA environmental reviews.

In addition to processing renewable energy projects, BLM in partnership with the Department of Energy, is continuing to prepare a Programmatic Environmental Impact Statement (PEIS) to

¹ Department of Interior Open Government Plan, p. 16, (italics added). Available at: <http://www.doi.gov/open/loader.cfm?csModule=security/getfile&PageID=28151>

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assess environmental impacts associated with the development and implementation of agency-specific solar programs. BLM needs additional funding to continue in these important efforts that will open public lands to an increasing amount of renewable energy production.

A small overall increase in funding for NEPA implementation will have an enormous impact by giving the BLM the necessary resources to finally address the backlog of expired grazing permits, by providing the BLM with additional resources to prepare needed environmental reviews for renewable energy projects, and by allowing the Washington office to increase staffing levels to the required level for oversight of NEPA implementation.

BLM's Oil and Gas Program

The Administration has taken significant steps to reform the BLM's onshore oil and gas program, in particular by issuing a new policy in May of 2010 that acknowledges that, though oil and gas development is a legitimate use of the public lands, "in some cases, leasing of oil and gas resources may not be consistent with protection of other important resources and values. The new policy also clarifies that, "Under applicable laws and policies, there is no presumed preference for oil and gas development over other uses."

In carrying out further needed reforms in the BLM's oil and gas program, the Administration has asked Congress for additional authority to require the primary beneficiary of the program – the oil and gas industry – to assume a greater share of the administrative costs of the program from which they so richly benefit. For example, Congress authorized the BLM to charge oil and gas operators a \$6,500 fee to help defray the costs of processing applications for drilling permits. Congress should continue to authorize this fee in FY 2012.

Likewise, the BLM has asked Congress to provide it with the authority to charge operators an inspection and enforcement (I&E) fee of up to \$1,500 for each lease to defray the BLM's costs of assuring that operators comply with their conditions of approval. Requiring operators to cover these costs will put the BLM's I&E program on a solid financial foundation for future years, further assure that the beneficiaries of the program help defray its administrative costs, and avert the necessity of "raiding" other BLM programs of appropriations to assure an effective oil and gas inspection and enforcement program.

Finally, Congress should support the Administration's proposal to raise the onshore federal royalty rate to at least the same level as offshore royalties (16.67 percent). As the Government Accountability Office has established, "...the U.S. federal government receives one of the lowest government takes in the world. Collectively, the results of five studies presented in 2006 by various private sector entities show that the United States receives a lower government take from the production of oil in the Gulf of Mexico than do states—such as Colorado, Wyoming, Texas, Oklahoma, California, and Louisiana—and many foreign governments." (GAO-07-676R Oil and Gas Royalties, Summary, p. 2, May 1, 2007) The GAO estimated that such a royalty rate increase revenue by \$4.5 billion over 20 years. (Ibid., p. 3)

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BUREAU OF RECLAMATION

Water Conservation Field Services Program

The Water Conservation Field Services Program partners with water users, States, and other interested parties to improve water resource management and the efficiency of water use in the western United States. The early projects of the Bureau converted desert and arid western lands into some of the most intensely used agricultural areas and urban centers in the world. In order to continue to serve those purposes, more efficient water use is becoming a key component of the water resource management strategy. The program's efforts to implement efficiency not only increases water supply for future use and ecological protection but also reduces the cost of water supply, improves reliability of existing water supplies, increases the resilience to droughts, improves and protects water quality by reducing waste water, and reduces energy consumption.

Yakima River Basin Enhancement Project

The Yakima River Basin is home to Washington's largest Native American tribe and contains one of the largest Bureau of Reclamation projects in the West. The various Reclamation projects in the basin have depleted and polluted river flows, and water rights conflicts in this basin are legendary. Partly as a result, Yakima River bull trout and steelhead are now listed under the Endangered Species Act. Phase II of The Yakima River Basin Water Enhancement Project, authorized by Congress in 1994, was designed to ameliorate these conditions for both fish and farmers. It aims to restore the river and make better use of the existing water supplies. This legislation was a compromise agreed to by the basin's disparate stakeholders, and the program it created is a model for water conservation and water rights acquisition. Providing \$10 million for the Yakima Project will allow the stakeholder-led compromise to be implemented and serve as a model for win-win compromises.

California-Federal Bay Delta Program

The California-Federal Bay Delta Program (CalFed) is a partnership between federal and California agencies to provide a balanced, collaborative approach to the water resource demands on the San Francisco Bay and San Pablo Bay watersheds. The Ecosystem Restoration and Watershed program within CalFed works to restore and improve wildlife habitat throughout the watershed, improve fish passage, integrate flood control and ecosystem restoration, and implement specific watershed restoration projects in conjunction with watershed plans. The Ecosystem Restoration program has funded more than 460 projects restoring 100,000 acres of fish habitat, screening 68 water intake points and initiating 23 comprehensive watershed programs. The Watersheds Program has awarded 116 grants totaling about \$50 million to community-based organizations for projects addressing watershed health, drinking water quality, non-point sources of pollution and watershed protection. If CalFed is funded at \$42 million it will allow a similar number of restoration projects to move forward in FY 11.

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Cooperative Landscape Conservation and Adaptive Science

In September, 2010, the Fish and Wildlife Service (FWS or Service) released its final report, *“Rising to the Challenge: Strategic Plan for Responding to Accelerating Climate Change.”* This bold Strategic Plan calls for a strong, coordinated response, including a national fish, wildlife, and plants climate adaptation strategy; landscape-scale coordination to deal with the large and complex conservation issues associated with climate change and shifting species range; and increased scientific capacity to understand the ecological impacts of climate change, to forecast future impacts for planning, and to develop and implement comprehensive monitoring systems to provide ongoing information necessary for adaptive management. Implementation of the Strategic Plan to assist our nation’s wildlife in coping with the impacts of climate change and other landscape level challenges will require continued investment in FWS climate change programs.

The Service intends to continue building Landscape Conservation Cooperatives (LCCs) in partnership with other Interior Department Bureaus as a cornerstone to implementing the Strategic Plan. Strategic landscape-scale coordination, collaboration, assessment and planning is desperately needed to effectively and efficiently meet the conservation challenges of the 21st century. LCCs will provide technical capacity to the conservation partners in each region to deal with the impacts of climate change and other landscape level challenges. All 21 LCCs have at least one agency lead and personnel assigned to them, though only half have enough funding to begin implementing programs and assessments. Ultimately, approximately \$52 million is needed to fully fund the first phase of all of the LCCs and provide enough capacity and research funding to implement the program. A total of \$37.5 million in FY 12 will allow the FWS to invest in an additional 3 LCCs.

Funding in the FWS Climate Change Adaptive Science Capacity budget also includes FWS staffing of the U.S. Geological Survey and Department of the Interior Climate Science Centers. Including agency funding and personnel for this program will increase coordination and collaboration between the Climate Science Centers, the LCCs, and other FWS programs.

Endangered Species Program

For more than 35 years, the Endangered Species Act has helped to prevent the extinction of our nation’s wildlife treasures, including beloved symbols of America such as the bald eagle, the Florida manatee, and the California condor. Only nine of the more than 1900 plants and animals currently protected by the act worldwide have been declared extinct, an astonishing success rate. And the Act has restored over a dozen species to the point where they no longer require its protection—species including the peregrine falcon, American alligator, and brown pelican. The Act also benefits people by maintaining healthy natural systems that provide clean air and water, food, medicines, and other products that we all need to live healthy lives. For example, extracts from the Rosy Periwinkle plant are used daily to cure Hodgkins and lymphocytic leukemia, and chemicals derived from the saliva of the Gila monster lizard have enabled over 17 million people to treat type-2 diabetes. We owe it to our children and grandchildren to be good stewards of the environment and leave behind a legacy of protecting endangered species and the special places they call home.

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The U.S. Fish and Wildlife Service is responsible for managing the Endangered Species program through four main accounts: Candidate Conservation, Listing, Consultation, and Recovery. The Endangered Species Act's outstanding successes have been achieved despite severe and chronic funding shortfalls that plague the Service's program. FWS resources fall far below what is needed to properly implement the program.

- Although there have been increases in the Listing account, the Endangered Species program as a whole has lost ground and the FY 11 request still left it over \$7 million below the level needed simply to maintain its FY 02 operational capacity.
- As of the end of 2010, the Listing account, which supports the protection of new plants and animals under the Endangered Species Act and designation of their critical habitat, has a backlog of actions that require approximately \$210 million, far in excess of available funding, with 252 domestic and 20 foreign candidates species awaiting protection. Addressing the listing backlog will require increasing funding well over current levels, as well as more efficient use of funds, given that the Service currently lists far fewer species per dollar today than in 2000
- Staff levels in the Recovery program are more than 16 percent below 2002 levels. Resources also are needed to implement recovery actions on the ground to address priority needs such as threats to Hawaiian bird species, many of which are close to extinction, and white-nose syndrome, a fungal infection that has decimated 1 million bats in the last several years and continues to spread.
- The Consultation program falls far short in its ability to ensure safe use of pesticides and balanced development of renewable energy and transmission projects, which are projected to increase fivefold by 2030. The program needs an additional 56 biologists and other expert staff just to fully address the energy development and transmission workload and another 6 staff to begin to adequately deal with pesticides.
- The FWS has begun to develop the Integrated Planning and Consultation (IPaC) System, a web-based data management and decision support system that will greatly improve monitoring and recovery efforts for listed species while streamlining the consultation process so that projects can move forward more expeditiously. Full scale deployment of the System is estimated to cost \$20 million annually for five years; however, only about \$4 million has been invested to this point. Plans also are underway to expand the IPaC System to cover other FWS trust resources, broadening its application for efficiency, taxpayer savings and conservation far beyond the Endangered Species program.
- The development and implementation of Habitat Conservation Plans (HCPs), intended to allow non-federal activities to proceed while still protecting listed plants and animals, continues to grow, with funding critically needed to help ensure timely and effective development and monitoring of 744 existing HCPs and another 46 under development.
- The Candidate Conservation program is still about 10 percent below FY 02 staff levels, yet pending petitions to list several hundred additional plants and animals may significantly increase the number of candidates well above 252. Furthermore, candidate conservation actions, developed through Candidate Conservation Agreements and Candidate Conservation Agreements with Assurances, may improve conservation status of species such that species either don't require listing or are well on their way to recovery should they be listed.

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- At least \$1 million per year is needed for the Wolf Livestock Loss Demonstration Project to assist livestock producers coexisting with wolves.
- The Department of the Interior has begun to grapple with the staggering impacts of climate change through its new Landscape Conservation Cooperatives and Climate Science Centers. Climate change adds unprecedented complexity to efforts to conserve listed plants and animals, and the Endangered Species program must have the capacity to coordinate with these broader departmental efforts and incorporate new science into decision-making.

The FY 10 total for the entire program was \$179.3 million. While the Endangered Species program needs are far greater than the amount it receives, the Green Budget request is a modest one focused on returning the Candidate Conservation program to FY 10 levels, increasing Listing by \$2.5 million over FY 10 and a respective \$9 million and \$5 million increase over the FY 10 for the Consultation and Recovery programs focused on increasing the number and timeliness of consultations targeted at renewable energy projects and pesticides, expanding recovery efforts to address white-nose syndrome, and funding the Wolf Livestock Loss Demonstration Project.

National Wildlife Refuge System

The National Wildlife Refuge System is the largest land and water system in the world dedicated to wildlife conservation. The Refuge System, with 553 refuges on more than 150 million acres across the country and several U.S. territories, is the key to protecting America's wildlife and ensuring that there are lands where wildlife protection is a priority. There is a refuge in every state and within an hour's drive of most major American cities. Visited by about 41 million people each year, our national wildlife refuges are economic engines, generating nearly \$1.7 billion and 27,000 private sector jobs in local economies.

Despite its crucial role in conserving our nation's wildlife heritage, the Refuge System has been plagued by chronic and severe funding shortfalls. Following increases in recognition of its centennial in 2003, budget cuts in subsequent years brought the Refuge System to a crisis that nearly triggered a massive downsizing, only averted when Congress provided a desperately needed infusion of funding over three years, starting in FY 08. Yet current budget trends could force Refuges right back to the brink. The System's operations and maintenance backlog totals more than \$3.7 billion. To simply maintain the management capability to operate properly – keep fuel in trucks and pay for rising utilities, building rent, and other costs – the Refuge System needs at least a \$15 million annual increase. Even with a flat budget, the Refuge System by the end of FY 11 would be forced to eliminate about one hundred biologist, visitor service, maintenance, and other positions. Continued flat budgets or cuts would be devastating and would lead to closure of roads and visitor centers; neglect of viewing platforms, trails and visitor centers; increased crime due to scarcity of law enforcement officers; elimination of biological, education, hunting and fishing programs; and the inability of the Refuge System to meet its mission.

Yet the challenges the Refuge System faces are only growing. Refuges are becoming ever more important in the fight to help wildlife survive the ravages of climate change and changing habitats. Refuges provide sanctuary from the myriad other threats wildlife face, allowing species to cope with the impacts of climate change free of other stresses. Addressing the impacts of

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climate change on national wildlife refuges will increasingly tax an already stretched System with more floods, droughts, wildfires, forest beetle outbreaks and other invasives, and many other problems. Additionally, with the designation of four extraordinary marine national monuments, encompassing the most unspoiled tropical ecosystems under U.S. trust, the System's sole jurisdiction grew by more than 50 million acres, excluding the co-managed Papahānaumokuākea Marine National Monument's 88 million acres. And the Deepwater Horizon oil spill not only compromised wildlife and habitats on several Gulf Coast refuges, but it also reduced the capacity of refuges across the country as the Refuge System diverted significant resources to coping with its devastation. At the height of response, almost 10% of the entire FWS workforce was deployed to the Gulf, delaying or halting critical work on refuges nationwide.

The Cooperative Alliance for Refuge Enhancement (CARE), a diverse coalition of 22 conservation, sporting, recreation and scientific organizations representing a national constituency of more than 15 million Americans, in a carefully researched yearly analysis, "*Restoring America's Wildlife Refuges 2010: Maintaining Momentum to Solve the Refuge System Funding Crisis*," found that the annual operations and maintenance budget for refuges should total at least \$900 million, a conservative request that provides funding for operations and routine maintenance but still does not address the full backlog. The analysis will be updated in early 2011. CARE believes that this amount is needed to address the crisis facing the Refuge System and provide it with the resources it needs to meet its mission. Some of the annual needs identified in the report include: more than \$355 million in essential habitat management, wildlife and visitor services projects; an additional 209 law enforcement officers at a cost of \$31 million; more than 2,700 additional refuge managers, biologists, visitor service and other staff at a cost of \$247 million; \$25 million just to partially address the 2.3 million acres overrun with invasive plants and the more than 4,400 invasive animal populations; \$18 to \$35 million for increased responsibilities to manage all four marine monuments; and at least \$12 million for climate change response.

Despite the overwhelming needs and challenges facing the Refuge System, the FY 12 Green Budget request is a modest increase of \$8 million over the FY 10 level of \$503.8 million focused only on maintaining current management capability which has been reduced for FY 12 consistent with the federal employee salary freeze.

Migratory Bird Management

Migratory birds are integral to healthy natural systems in many ways, including as predators, prey, seed dispersers, and pollinators, and are actively appreciated and enjoyed by millions of people across the country. Wildlife watching contributes \$122 billion to the U.S. economy every year, and one in three American adults is a bird watcher. More than 800 species of birds occupy an array of habitats across the U.S. and, according to the North American Bird Conservation Initiative more than 30 percent of these are listed under the Endangered Species Act or are of conservation concern. The first *State of the Birds* report in 2009 documented broad declines in U.S. bird populations that include nearly all native Hawaiian birds that have plummeted to the verge of extinction, 39 percent of ocean birds, half of coastal shorebirds, 30 percent of arid land birds, and 40 percent of grassland birds. The 2010 report focuses on impacts to birds from climate change and found that birds in every habitat will be affected by it, some to a greater

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degree than others. Ocean dependent and Hawaiian Island birds are the most vulnerable but coastal birds also will suffer from seal level rise and increased storms; alpine and arctic birds from increased temperatures; island birds from rising sea levels, disease and decreased rainfall; wetland birds from temperature changes; grassland and arid land birds from drought and high temperatures; and forest birds from precipitation changes, fire, disease and pests.

The FWS Migratory Bird Management program is multi-faceted and encompasses survey and monitoring, “Urban Treaty” partnerships with cities to conserve birds, management of permits and hunting regulations, efforts on international treaties, habitat restoration, coordination of work to reduce direct bird mortalities, and implementation of the North American Waterfowl Management Plan as well as other efforts to conserve bird habitat through the Joint Ventures and Federal Duck Stamp programs. In an effort to make more demonstrable progress in on-the-ground conservation to restore bird species to healthy levels, the FWS has developed a list of 139 focal species to receive greater attention in the coming years through development and implementation of specific action plans on each species. Thirty-five action plans have been completed and the program plans to complete 10 additional plans during FY 11 and will begin to focus on implementation of completed plans.

Given the declining status of so many bird species, inventory and monitoring is more important than ever, yet little is known about the population trends of birds in many habitats. Of particular concern is lack of adequate information on golden eagle populations which have recently been discovered to be vulnerable to impacts from wind turbines. Surveys are planned for some areas in the Western U.S., but additional surveys are needed to provide an estimate of the total North American population. In addition, many states have very limited information about golden eagle nesting, roosting, wintering, and foraging locations and movement corridors. Without such crucial information, the Service cannot provide recommendations to ensure better siting of projects that will avoid harm to these iconic birds. Currently there is only one biologist, who also has other responsibilities, devoted to golden eagle issues that have become overwhelming for the program. Resources also are needed for the creation of a national scale landscape database by the Service and the US Geological Survey to assess wind development risk to ecosystems, habitats, and species as recommended by the Wind Turbine Guidelines Advisory Committee, a need that could possibly be met by further development of the Integrated Planning and Consultation System described under the Endangered Species program.

While the need is far greater, the Green Budget request is a modest increase of \$2 million over the FY 10 enacted level of \$54.5 million that would be focused on the response to wind energy projects, other crucial inventory and monitoring needs, implementation of completed focal species plans, and maintaining funding for Urban Treaties.

International Affairs

Conservation of the Earth’s wildlife and habitat is a global priority of the highest urgency. Extinction is among the most irreversible and tragic of all environmental calamities, and is increasing at an unprecedented rate. An effective response to this challenge requires nations to work together cooperatively — wildlife recognizes no political borders. The relative wealth of our country in comparison to desperate situations around the globe means that modest

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investments of U.S. conservation dollars can reap significant returns when invested in the developing world, in recent years leveraging three dollars for every dollar invested by the U.S. government. The FWS is mandated to support U.S. environmental leadership around the globe through numerous statutes and international treaties including the North American Free Trade Agreement (NAFTA), the US-Peru Free Trade Agreement, the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, the Ramsar Convention on Wetlands of International Importance, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on Migratory Species, and the Western Hemisphere Migratory Species Initiative (WHMSI). FWS also provides scientific justification and implementation of permitting for foreign species listed under the Endangered Species Act. International Affairs works to meet its responsibilities through two programs: International Conservation and International Wildlife Trade.

The International Conservation program supports the preservation of endangered and migratory species and habitat by providing capacity building, environmental outreach, education, and training through its Wildlife Without Borders (WWB) programs. At present, WWB regional programs are focused on Africa, Latin America and the Caribbean, China, India, Mexico and Russia and act as an important complement to the project-level efforts funded through the Multinational Species Conservation Funds which also are managed by International Conservation. The developing WWB Global program is targeted at addressing cross-cutting, global threats to wildlife, such as climate change and disease; the Critically Endangered Animals Conservation Fund; the Amphibians in Decline program, a crucial program for the conservation of amphibians of which 40 percent are threatened with extinction; conservation of rare canines and felines and imperiled cranes, and fuller U.S. participation in treaties and agreements, such as Ramsar and WHMSI for which the Service currently gets almost no funding.

International Wildlife Trade carries out the scientific and management requirements of laws and treaties for the conservation of species subject to trade, issuing 15,000-20,000 permits per year. The program, already operating on a shoestring, has been experiencing a growing permitting, research and monitoring workload, including efforts FWS is undertaking for species native to the U.S. such as freshwater turtles and those that are sought for caviar substitutes such as sturgeon and paddlefish. The Exotic Bird Conservation fund was established under the Wild Bird Conservation Act to provide grants for the conservation of exotic birds subject to trade, but it has never been funded.

Funding levels for the entire International Affairs program have been meager and are not proportionate to its importance in conserving wildlife around the globe. In the face of emerging and intensifying global threats to wildlife and habitat such as human-wildlife conflict, wildlife disease, invasive species, climate change and skyrocketing trade, its funding should be significantly increased by at least \$16 million per year. Increased funding is also warranted because illegal wildlife trade has important implications for national security. The link between wildlife smuggling and both organized crime and drug trafficking is well documented. Wildlife trade comes in third place in monetary importance just after drug and arms trade. Money spent fighting illegal wildlife trade is money spent on the global war against crime. Despite the overwhelming need, the Green Budget request is a modest increase of \$2.5 million over the FY 10 level of \$14.4 million, focused only on the WWB Global Critically Endangered Animals

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Conservation Fund, WWB Regional programs and the permitting, research, and monitoring workload for species subject to trade.

Office of Law Enforcement

As our world grows increasingly complex, the protection of wildlife faces escalating criminal threats, including illicit trade, unlawful commercial exploitation, illegal destruction of habitat, and environmental hazards. Growing human populations and accompanying development pressure; expansion of international communication, shipping and travel; rising global commerce; and broadly proliferating access to computer technology along with the evolution of the internet and “e-commerce” all combine to create mounting challenges to enforcement of U.S. and international wildlife laws. The U.S. supports one of the largest markets for both legal and illegal wildlife and wildlife products, and intercepted contraband includes tigers, caviar, coral, elephant ivory, sea turtles and live birds.

The Office of Law Enforcement (OLE) investigates wildlife crimes, enforces regulation of wildlife trade, helps citizens comply with the law, and works with other international and U.S. government entities to carry out its mission. OLE’s wildlife inspectors, the front-line defense against illegal international trade, and special agents, the investigative arm of smuggling rings that target imperiled animals, supported by the National Fish and Wildlife Forensics Laboratory and a new wildlife law enforcement data system, have achieved important successes in many arenas, including reduction of illegal harvest and trade in caviar and cases involving wolves, manatees, endangered migratory birds, and tigers. For example, in the past 5 years OLE has handled more than 300 cases involving illegal imports of tiger parts and products at the nation’s ports of entry and worked closely with foreign enforcement counterparts to share intelligence and provide training to address tiger trafficking around the world. Despite these successes, the program is severely understaffed to meet the rapidly proliferating threats and in recent years has been starved of needed personnel and resources, jeopardizing its effectiveness in enforcing both federal wildlife laws and international treaties. Numbers of all-important special agents which should total 261 plunged from a high of 238 in 2002 to 184 in 2008, a 30 year low. While modest funding increases have brought the agent force up to a current level of about 200, it still falls 23 percent below authorized numbers and 16 percent below its previous high water mark. Maintaining the highly trained special agent force is a complex process given that, on average, 14 are lost each year through attrition due in part to mandatory retirement and the rigorous training requirements that result in a two to three year interval between recruitment and final placement in the field.

The vital port inspection function is far overstretched, and the Forensics Laboratory needs 10 new pathologists. Also, Congress recently passed a groundbreaking law (P.L. 110-246) amending the Lacey Act to ban international imports of illegally sourced plants and plant products – including illegally logged timber and wood products. Enforcement requires a system of electronic declarations for plant product imports, a database system to monitor these imports, and more staff, including port inspectors.

Although the need is far greater, the Green Budget request is a modest increase of \$2 million over the FY10 enacted level of \$65.8 million, focused on additional agents and inspectors.

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Environmental Contaminants

In our modern world, there are a myriad of harmful pollutants, many potentially lethal, that adversely affect fish, wildlife, habitat and people. These include pesticides, endocrine disruptors, heavy metals, prescription drugs, oil and other industrial chemicals, fertilizers, and numerous other products that are released to the environment through spills, disposal, ongoing use, or other means. Pesticides alone have been found more than 90 percent of the time in water sampled and in more than 80 percent of fish sampled and are a potential cause of declines in pollinators and of declines and deformities in amphibians.

The FWS, through its Environmental Contaminants program, is the primary federal agency responsible for protecting fish, wildlife and habitat from damaging pollutants through identifying and assessing the effects of pollutants, working to prevent exposure, and restoring resources damaged by pollutants. One of the most important responsibilities of the program is its leadership in Natural Resource Damage Assessment and Restoration to recover fish, wildlife and habitat injured from oil spills or the release of other hazardous substances. The Contaminants program works to investigate the damage and determine responsibility if not known, negotiate with the responsible parties for restitution, and then, using the funds provided, work with other stakeholders to implement restoration projects for the affected resources. Since 1992, the program has negotiated more than \$785 million in settlements from responsible parties for restoration of natural resources that are held in trust for the American people. This was prior to the damage from the Deepwater Horizon oil disaster, for which damage assessments are currently underway, now widely recognized as the worst oil spill in American history with damage to natural resources likely to total in the billions.

The Contaminant program's funding has been basically flat since 2001, yet its workload has only grown and its small team of expert contaminant biologists is far overstretched. Additional biologists are needed to address the backlog of more than 1100 pesticide re-registration and other water quality criteria consultations under the Endangered Species Act. Additional resources also are needed for readiness and response capabilities for spills and releases including pre-incident planning and training, incident response, and post incident assessment and restoration. When responding to an oil spill, program costs are usually covered through a Pollution Removal Funding Agreement with the Coast Guard National Pollution Fund Center for resources from the Oil Spill Liability Trust Fund. However, the chronic underfunding of regular operations has constrained the ability to maintain enough expert contaminant biologists. Moreover, when a major incident occurs and significant staff resources from the contaminants program are deployed to address it, ongoing restoration efforts from prior incidents often suffer as a result. The increased funding needed for spill readiness and response capabilities could be provided either through a modest boost in appropriations for the program – starting at a \$2 million increase for FY12 over the FY10 enacted level of \$14 million or an amendment to the Oil Pollution Act to dedicate annual funding from the Oil Spill Liability Trust Fund.

National Fish Passage Program

The National Fish Passage Program currently benefits 16 federally endangered and threatened fish species and is helping to prevent numerous other species from being listed as endangered.

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Since its inception in 1999, working with local, state, tribal, and federal partners, the Fish Passage Program has leveraged federal dollars nearly three-to-one. Through this work, the program has opened more than 11,000 miles of river and restored more than 80,000 acres of wetlands for fish spawning and rearing habitat. Restoring fish migration enhances entire watersheds and benefits birds and mammals, such as eagles, ospreys, herons, kingfishers, brown bears, otters, and mink. In FY 08, the Open Rivers Initiative was expanded to supplement the work of the Fish Passage Program by adding \$6 million to its base funding specifically for small barrier removal. The Green Budget request is a modest one of \$1.6 million over the FY 10 level of \$4.9 million.

Coastal Program

The FWS Coastal Program is an effective partnership that brings together FWS scientists, biologists, coastal communities, and other conservation partners to protect and restore habitat in coastal regions and coastal rivers. Since 1994, the Coastal Program has restored 251,000 acres of coastal habitat and 1,600 stream miles, while helping to protect over 1.7 million acres of coastal habitat. These efforts are critical to improving the health of the nation's coasts and estuaries, which has declined drastically due to increasing levels of stress from commercial and residential development, polluted runoff and waste disposal, shoreline modification, and over-harvesting of resources. As shown through the American Recovery and Reinvestment Act, a backlog of 814 shovel-ready restoration projects totaling more than \$3 billion await action where the Coastal Program could be instrumental. Coastal Program efforts are helping to provide vital habitat for fish and wildlife, protect inland areas from erosion, and filter sediment and polluted runoff from watersheds, while cost-effectively leveraging more than double the federal investment for on-the-ground work. In addition, these activities are improving economies in coastal communities by supporting industries that contribute to restoration projects, as well as recreation, tourism, and fishing industries that benefit from healthy coasts. A slight increase of \$1.1 million for a total of \$17.0 million is recommended in FY 12 to allow for the opening of a Gulf of Mexico office to assist with restoration efforts in the wake of the Gulf oil spill.

State and Tribal Wildlife Grants Program

The State and Tribal Wildlife Grants Program is the only federal grant program for the states and tribes focused on preventing wildlife from becoming endangered. The program, now entering its second decade, resulted in the historic development and implementation of State Wildlife Action Plans in every state and territory. The plans are used by many local, state and federal agencies and private conservation organizations to guide conservation work on over 12,000 at-risk species and their habitats.

The State and Tribal Wildlife Grants Program is flexible, allowing states, tribes and their partners to address local needs and priorities. Conservation activities funded through the program include land protection, invasive species management, terrestrial and aquatic ecosystem restoration, wildlife disease, stewardship, species reintroduction, private landowner incentives, research, monitoring, vulnerability assessments, and helping wildlife adapt to climate change. Thousands of jobs have been created and/or are being sustained by this program. These jobs range from local heavy equipment contractors employed to restore wetlands and streams, temporary workers

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who clear trees, put up fencing and conduct prescribed burning to biologists who provide technical expertise that ensure program funds are effective at meeting Wildlife Action Plan priorities.

The State and Tribal Wildlife Grants program leverages state, tribal, local and private funds. The program has spawned hundreds of new collaborations with the conservation, business and farming/ranching communities. Although the 6,300 member Teaming With Wildlife coalition stays committed to reaching the ultimate goal of \$350 million in funding (~\$6.2 million per state/territory annually), because of the current fiscal constraints we recommend that apportioned funding to the states remain level to the FY10 appropriation even though need far exceeds available resources. We recommend that the non-federal match requirement be set at 25% as a no cost way to ensure that insufficient match does not become a barrier to doing needed conservation work in states that are still recovering from the economic downturn.

The State and Tribal Wildlife Grants Program includes two competitive grants programs. The competitive State Wildlife Grants Program facilitates collaboration between states on range-wide or landscape scales and is used to address new emerging issues like white-nosed syndrome in bats. We recommend that funding for competitive grants to the states be increased by \$2.0 million in FY12. The Tribal Wildlife Grants Program provides important funding to conserve at-risk wildlife on tribal lands through technical and financial assistance for the development and implementation of programs that benefit fish and other wildlife and their habitat. The program is available to the nation's 565 federally-recognized tribes but limited funding has resulted in only a handful of tribes using the program. We recommend that funding for tribal grants be increased by \$3.0 million in FY12. This would put the total request for the State and Tribal Wildlife Grants at \$95.0 million for FY12, a \$5.0 million increase for FY12.

Cooperative Endangered Species Fund

Non-federal lands are crucial to the conservation of rare species. At least 65 percent of federally listed plants and animals are found on non-federal lands, with many absolutely dependent upon these lands for their survival. The Cooperative Endangered Species Fund provides grants to states for conservation activities on non-federal lands for listed and candidate plants and animals. States are in great need of the support provided by the Fund to assist in their work to protect imperiled species. Crucial conservation activities funded by these grants include: research, species status surveys, habitat restoration, captive propagation and reintroduction, planning assistance, and land acquisition by states that supports Habitat Conservation Plans and recovery. Requests for the Habitat Conservation Plan and Recovery Land Acquisition programs generally total two to three times the available funding. Twenty-five states received funding under the Cooperative Endangered Species Fund in FY 10 to benefit species including the bull trout, cutthroat trout, Canada lynx, golden-cheeked warbler, black-capped vireo, and San Joaquin kit fox. Although the need is much greater, the Green Budget request is an increase of \$15 million over the FY 10 level of \$85 million.

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Partners for Fish and Wildlife Program

With two-thirds of America's land privately owned, private landowners play an important role in maintaining diverse ecosystems and wildlife for future generations. Through the voluntary Partners for Fish and Wildlife program, the Fish and Wildlife Service provides financial and technical assistance to landowners to restore degraded habitat on their property. The need for Partners for Fish and Wildlife is great. Our nation has lost approximately 70 percent of the nation's streamside habitat, 53 percent of wetlands in the continental United States, and 90 percent of the tallgrass prairie in the Midwest and Great Plains. Not only has important habitat for fish and wildlife been lost, but so has the multitude of other essential functions these habitats provide – reduced floods, decreased sediment and nutrient loads, and protection and improvement of water quality. The modest Green Budget request is an increase of \$2 million over the FY 10 level of \$60 million.

Multinational Species Conservation Funds (MSCF)

The United States has a legacy in leading international wildlife conservation efforts and this is exemplified by the Multinational Species Conservation Fund (MSCF) program which enjoys broad bipartisan support in Congress and reinforcing the United States as the only country to provide dedicated and effective resources for global priority species conservation.

The African Elephant Conservation Fund was the first Multinational Species Conservation Fund (MSCF) to be established by the U.S. Congress, in 1989. Since then, Congress has authorized four additional Funds to help protect Asian elephants, rhinos/tigers, great apes, and marine turtles. MSCF programs are the species-specific portion of Wildlife Without Borders (WWB) program at U.S. Fish and Wildlife Service Division of International Conservation. They support conservation of these charismatic endangered species in their natural surroundings through capacity building, law enforcement, habitat and conservation management, mitigation of human-animal conflicts, applied research and monitoring leading to conservation action, and enhanced protection of at-risk populations. From 2005 to 2009, the MSCF programs provided over \$45 million in conservation assistance and leveraged an additional \$75 million in partner contributions. In addition to providing critical conservation assistance on the ground, the MSCF program support local jobs, helps community-based conservation initiatives and promote U.S. interests in maintaining regional stability in places where these iconic species occur.

These programs command very broad-based support and help FWS to meet critical global conservation needs. Experts estimate that only about 3,000 tigers now remain in the wild, with over 500 being killed each year and only 1,000 of the remaining being breeding females. Africa's great apes have faced new threats from virulent diseases, such as Ebola, that have wiped out up to 90% of affected populations. Conservation partners are working to save these vulnerable species. With help from the Great Apes Conservation Fund, new nature reserves, such as the Kagwene Gorilla Sanctuary in Cameroon, have been established. In Nepal, the Asian Elephant Conservation Fund is helping to prevent the spread of TB from captive Asian elephants to wild populations, leading to the development of a model TB surveillance and control program. The Marine Turtle Conservation Fund is supporting projects to guard against poaching and develop

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turtle-based tourism as an alternative source of income. The Green Budget request for FY 12 is a modest \$2 million increase over the FY 10 enacted level of \$11.5 million.

North American Wetlands Conservation Fund

More than half of the original wetlands in the U.S. have been lost. This has contributed to the steady decline of migratory birds as well as other fish and wildlife species dependent on wetlands. With fewer wetlands, millions have been spent on erosion control, water treatment, and flood protection that natural wetlands used to provide for free. Restoring and protecting wetlands is vital to conserving fish and wildlife species dependent upon such habitat and maintaining healthy watersheds. These areas protect our safety and welfare without having to invest in costly projects, and provide innumerable opportunities for outdoor recreation for people across the nation. Through FY 10 this grant program has helped to fund more than 2,038 wetland conservation projects supported by 4,440 partners in all 50 U.S. states, Puerto Rico, the U.S. Virgin Islands, 13 Canadian provinces and more than 30 Mexican states and leveraged some \$2.24 billion in matching funds and \$1.2 billion in nonmatching funds to conserve approximately over 25.9 million acres of wetlands and associated uplands. The program continues to play a major role in conserving North American wetlands, migratory birds, and other species of fish and wildlife that depend upon such ecosystems. The Green Budget request for FY 12 is a modest increase of \$2.4 million over the FY 10 level of \$47.6 million.

Neotropical Migratory Bird Conservation Fund (NMBCA)

Since 2002, the NMBCA has functioned as a matching grant program to fund projects that conserve neotropical migratory birds—those that breed in or migrate through the United States and Canada and spend the non-breeding season in Latin America and the Caribbean. Monies support partnership programs to conserve birds in the U.S., Latin America and the Caribbean, where approximately 5 billion birds representing over 500 species spend their winters, including some of the most endangered birds in North America. These funds provide an upland complement to the wetland bird conservation work accomplished under the North American Wetlands Conservation Act. Projects may include bird habitat conservation, research and monitoring, law enforcement, and outreach and education. All grant requests must be matched by non-federal funds at least 3 to 1. By law, 75 percent of the funds must be spent internationally. Between 2002 and 2010, partners in 48 U.S. states and more than 36 other countries have been involved in 333 NMBCA-supported projects. More than \$35 million in grants has leveraged some \$150 million in matching contributions and \$7 million in nonmatching funds to support activities that bring long-term benefits to neotropical migratory birds including songbirds, raptors, shorebirds and waterfowl and conserving about 2 million acres of bird habitat. While more than 100 worthy proposals are received each year, with the current funding provided only about 40 can be funded. The Green budget requests a crucially needed FY 12 increase of \$1.5 million over the FY 10 level of \$5 million.

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THE LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund

In 1964, Congress established the Land and Water Conservation Fund (LWCF) to preserve natural areas and wildlife while ensuring that all Americans have access to quality outdoor recreation. It is a simple idea and an elegant one: dedicate revenues from offshore oil and gas drilling to support the conservation of America's lands and waters. The LWCF demonstrates Congress' bipartisan recognition of the importance of safeguarding open spaces and natural areas and providing outdoor recreation opportunities for all Americans. Conservation of our natural resources is critical to maintaining the health of our public lands, our quality of life, our recreational opportunities and our economic well-being.

Unfortunately, LWCF has been woefully underfunded over the years. "Since 1977, \$900 million has been collected annually into the fund, and is available, subject to appropriation, to fund Federal land acquisition; conserve threatened and endangered species; and provide grants to States. A total of \$31.7 billion has been collected into the fund since its inception in 1964, of which \$16.5 billion remains in balances in the fund." (Interior Budget in Brief 2012). This chronic underfunding has led states and federal land management agencies to postpone or cancel many important projects, leading to incompatible development and missed opportunities to enhance public access to parks and open spaces.

Despite inadequate funding, LWCF remains the premier federal program to conserve our nation's land, water, historic, and recreation heritage. It is a critical tool to acquire inholdings, expand public lands, and protect national parks, national wildlife refuges, national forests, wild and scenic river corridors, national scenic and historic trails, the Bureau of Land Management lands and other federal areas. The companion LWCF state grants program provides crucial support for state and local park acquisitions, recreational facilities, and trail corridors. The Stateside program is the government's primary investment tool for ensuring that children and families have access to close-to-home recreation. The LWCF stateside program has funded over 41,000 projects including sports fields, outdoor recreation facilities and trails touching all fifty states.

The LWCF has long enjoyed strong and bipartisan support. Over the past year, the House of Representatives passed H.R. 3534 - the Consolidated Land, Energy, and Aquatic Resources (CLEAR) Act of 2009 - which included a provision dedicating full funding of LWCF at \$900 million each year. In the Senate, bipartisan legislation from Senators Jeff Bingaman (D-NM) and Max Baucus (D-MT), also provided full and dedicated funding for the Land and Water Conservation Fund (LWCF) at the authorized level of \$900 million annually. That bill (S.2747) received bipartisan support and included 26 cosponsors.

Our nation's need to protect critical habitat and to provide recreational opportunities continues to grow. The America's Great Outdoors (AGO) Report released by President Obama in February 2011 showed unequivocally that LWCF is the highest conservation funding priority of this Administration, and that sentiment was echoed by Americans across the country during the 51 listening sessions. "The Land and Water Conservation Fund (LWCF) is a primary source of federal funding for states and federal agencies to protect and conserve America's national treasures and to promote outdoor recreation."² The AGO report recommended a fully funded

² <http://americasgreatoutdoors.gov>

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LWCF at \$900 million dollars annually, which would provide much needed investments for working forests, farms and ranches, urban conservation, hunting and fishing access, state and local conservation grants, and critical needs within our national parks, forests, and wildlife refuges.

Support for LWCF among the American public continues to remain strong and consistent. Following last summer's BP Oil Spill in the Gulf of Mexico, 86% of Americans were supportive of funds from offshore drilling fees going to conservation. A striking 85% say that it is important that funds "from offshore oil and gas drilling are used to protect our forests, rivers, lakes, wetlands, beaches and wildlife habitat." More than three-quarters of Americans – 77% – support funding LWCF at \$900 million a year to protect clean drinking water supplies, support jobs and local economies, reduce fire-fighting costs, and conserve our common heritage and natural areas for wildlife, recreation, and for our children and grandchildren to enjoy. On Election Day 2010, voters demonstrated their support for conservation by approving 30 of 36, or 83%, of new land protection initiatives. These initiatives generated \$2 billion in new state and local conservation funding. LWCF funding leverages and complements these state and local conservation dollars.

These are difficult economic times, which is why investing in LWCF is so important as a driver for jobs and the revitalization of local communities. For instance:

- Hunting and fishing are economic building blocks in our national economy generating more than 1.6 million jobs and more than \$2 billion annually in business earnings and wages
- America's state park system contributes \$20 billion to local and state economies, and for every \$1 million invested in parks and recreation infrastructure, at least 20 jobs are created
- Active outdoor recreation provides a powerful building block in our national economy that supports more than 6.5 million jobs (1 out of 20 jobs in the U.S.) and contributes more than \$730 billion annually, according to the Outdoor Industry Association
- The Trust for Public Land has found that every \$1 spent on LWCF returns \$4 in economic values such as protecting water quality and supply
- In 2006 alone, more than \$70 billion was generated in sportsmen-related retail sales, according to the Congressional Sportsman Foundation
- LWCF helps generate \$88 billion in annual state and national tax revenue along with generating \$289 billion annually in retail sales and services across the U.S.
- In 2008 alone, the Department of Interior lands had 448 million visitors. These visits greatly support the economy and jobs in nearby communities and across the tourism and outdoor recreation sectors. About 174 million recreation visits are annually taken to national forest where tourists spend nearly \$13 billion each year and these forests sustain over 224,000 full and part time jobs

Funding for LWCF helps create this economic opportunity by increasing access to recreational opportunities and providing new areas for people of all ages to enjoy the outdoors.

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THE LAND AND WATER CONSERVATION FUND

The investments needed to achieve these diverse benefits simply cannot wait. Landowners who have made their properties available for public acquisition cannot in fairness be asked to defer their financial needs indefinitely. If public funding for key parcels is unavailable, private sale and development of their lands-- which often are surrounded by heavily used public lands -- can undermine longstanding investments in these areas. To meet the needs of local economies, landowners, and irreplaceable public resources, LWCF funds are needed now.

As Congress begins discussion of the FY 12 budget, robust and consistent funding of LWCF must be a high priority. The Obama Administration strongly supports these critical investments and has clearly shown their support by requesting \$900 million for the Department of Interior and the U.S. Forest Service. These investments will support public land conservation across our communities that increase access to outdoor recreation while revitalizing urban parks and open space.

The LWCF program is a critical conservation tool necessary to ensure that America's national treasures are safeguarded for our future.

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NATIONAL PARK SERVICE

National Park Service

National Park System areas are among the most visible, most beloved and most visited public lands in the country. Nearly 300 million people visit the parks every year to learn, recreate and connect with the natural world and our historic and cultural heritage. National Parks visitation is above average the past two years, with a double-digit increase at some NPS units, perhaps due in part to the increased attention to National Parks from the Ken Burns documentary, the National Parks Second Century Commission, and the increased draw of domestic tourism during challenging economic times. Americans want to see parks protected even in tight times, with a recent survey demonstrating 88% of Americans say it is “extremely important” (69%) or “quite important” (19%) to protect and support major parks such as Yellowstone, Grand Canyon, and the Everglades despite concerns about the current economic situation and the federal budget. Another survey showed that 91% of Americans have visited an NPS unit, with 62% having visited in the past two years, and any visit to a national park will show the draw of those special places to international visitors, who invest their tourism dollars in the parks and—importantly—in surrounding communities. This popularity helps explain why—according to a recent study commissioned by the National Parks Conservation Association (NPCA)—every dollar invested in National Parks generates at least four dollars in economic value to the public, directly supporting approximately \$13 billion of local private-sector economic activity and nearly 270,000 private sector jobs.

National Park System areas enjoy bipartisan support because they are America’s most spectacular and compelling places and are a significant part of our national identity. National Parks foster and protect tourism of tremendous natural areas and Civil War and other cultural sites that are unique to our shared American history, in addition to healthy outdoor recreation that reduces health care costs and contributes to \$787 billion annually in economic activity related to active outdoor recreation. National Parks also ensure the quality-of-life benefits that lead people to want to live in areas surrounding these amenities.

Because of these many uniquely American values, the vast popularity of parks as unique places to visit, and the many economic benefits of NPS investments, now is not the time to reduce these investments. As part of a ten-year budget and park restoration plan, modestly restored operations funding in FY 08, FY 09, and FY 10 provided needed staff like park rangers who provide important visitor services and protect resources. These investments also provided resources to repair and maintain facilities and were critical to help work towards restoring our parks in time for the 2016 Centennial of the National Park System. However, the program stalled after only three years, leaving that vast majority of the job unfinished. Many parks continue to lack the resources necessary to adequately operate visitors’ centers, guide visitors, inventory and protect historic artifacts, combat invasive weeds and prevent the deterioration of significant treasures. Increases are needed to recover from an operations shortfall greater than \$600 million and a deferred maintenance backlog of more than \$9 billion. However, at a minimum, fixed costs must be met in order to prevent the erosion of these important economic drivers.

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Operations of the National Park System

The operations account (ONPS) is the vast majority of the annual funding for the National Park Service, providing for important staff and maintenance needs. Park rangers are needed to protect resources and guide visitors, many of which look to rangers to provide a quality parks experience that will ensure return visits. Interpreters foster tourism by bringing history alive at Civil War and other historic sites and interpreting natural resources that so many people value. Recent operations investments restored some of the visitor services that have been cut over the last decade; these restored seasonal rangers, interpreters, and educators have been providing visitor safety and—among many other services—important outreach to surrounding schools and communities. However, this has been insufficient to recover from years of underfunding. Additional funds can ensure volunteer coordinators to work with local community members to provide service learning opportunities while substantially augmenting parks' operating budgets. Volunteers do needed restoration and maintenance projects and staff visitor centers for a small fraction of the cost of paid staff, meeting needs while saving important taxpayer dollars. Continuing investments can also ensure restoration projects that can protect our parks' many nationally important resources so that Americans can enjoy them over the next hundred years and beyond. Continuing increases of at least \$100 million annually above inflation and fixed cost increases are needed to reduce or eliminate the operations shortfall in time for the Centennial of the National Park Service. However, recognizing deep concerns about discretionary spending, Congress should ensure at least a \$100 million increase over the FY10 enacted level of \$2.262 billion in order to keep up with two years of inflation and substantial fixed costs, which include increases in insurance rates, rent increases and other uncontrollable cost increases.

Operations of the National Park System: Cultural Resource Stewardship

Two-thirds of our National Park System units were created to protect historic and cultural resources and in the past two decades, 30 new parks with predominantly cultural and historic value have been added to the system. The National Park Service cares for countless irreplaceable historic buildings, archaeological sites, significant landscapes, objects, artifacts, specimens, archives, and places of special meaning. These cultural resources throughout the Park System are at risk because of the significant loss of funding for cultural resources staff. Between F Y95 and F Y08, staffing levels for cultural resource protection declined by 27.4 percent, with a loss of almost 300 full-time cultural resource employees. National Academy of Public Administration (NAPA) report "Saving our History: A Review of National Park Cultural Resource Programs" that cultural resources in our National Parks are under-funded and under-staffed. The NPS cultural resource program bears a disproportionate share of the budget and staffing reductions. To bring the Cultural Resource Stewardship program up to par with the Natural Resources program, funding would need to increase by \$100.0 million. This trend must be halted and reversed with a critical reinvestment in cultural resources staff before the Centennial of the National Park Service in 2016. The recommendation for FY 12 is a modest increase of \$5 million over the FY 10 enacted level of \$105.2 million to begin to rebuild this critical staff resource.

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Volunteers-in-Parks

Within the Operations account, modestly enhanced funding should be provided for volunteer management. The National Park Service benefits from nearly 200,000 volunteers per year, a figure that is likely to grow in the coming years with the emphasis on youth programs and the Youth Conservation Corps and as greater attention is paid to the increasing disconnect between America's youth and outdoor recreation. Additional funds are needed to adequately equip and empower all parks with the personnel and training required to leverage and fully engage volunteers and other service opportunities that bring both dollars and workers to the parks while engaging youth and offering service-learning opportunities. The total value of volunteer labor to the NPS in FY 10 was \$133.2 million, the equivalent of nearly 6% of the NPS operating budget for a fraction of the cost.

Enhanced volunteerism should play an important part in augmenting the Park Service's current resources. The FY 12 budget should include \$5.0 million for the Volunteers-in-Parks program, which allows volunteers to work side-by-side in partnership with NPS employees to preserve America's heritage and provide interpretive, educational, and recreational opportunities. Additional resources are needed to increase the current 6.4 million volunteer hours in the National Parks System.

System-wide Strategic Vision for the Parks

The National Parks Second Century Commission called for "the preparation of a new plan for the National Park System that provides a more representative picture of America, and makes the national parks cornerstones in a network of protected areas that safeguard biological diversity and the nation's evolving cultural heritage." The FY 12 budget should include at least \$2 million to begin developing such a plan, which should, as the commission recommended, "Be strategic in identifying places where additions to the system are needed, and where the Park Service can best play the role of partner, assisting and advancing local conservation goals. Such a plan should update the criteria for new national parks to reflect changing environmental and civic needs."

Deferred Maintenance Backlog

The deferred maintenance backlog is currently more than \$9 billion according to Park Service estimates. At current levels of investment, the backlog will continue to increase in perpetuity, and addressing this entire backlog would indeed be a mammoth undertaking. However, within this larger backlog lies a core of projects that are vital to the continued function of parks across the country, and the health and safety of park staff and the visiting public. These "critical systems" include building roofs, plumbing and piping, safety systems and the pavement that covers many park roads. The critical systems deferred maintenance backlog unrelated to roads (non-road CSDM backlog)--the repair and rehabilitation of which is funded through the NPS budget--currently stands at approximately \$2.3 billion. It is this subset that is most vital to the return to a healthy National Park System.

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NPS is working systematically through several accounts and ongoing efforts to identify the most critical needs and—importantly—to prevent the accumulation of additional needs. The cyclic maintenance program ensures preventative maintenance work so that no additional resources fall into disrepair and become deferred maintenance. This regular preventative maintenance ensures that resources meet or exceed their intended life cycle, preventing additional costs that could develop and thus ensuring efficient use of scarce funds. The Repair and Rehabilitation Program focuses on the deferred maintenance of critical systems that may not have been done in a timely manner and thus deteriorated. Projects are designed to restore or improve the life of facilities and can include campground and trail rehabilitation, roadway overlay, roadway reconditioning, bridge repair, wastewater and water line replacement. Repair and Rehabilitation is part of an overall Servicewide Deferred Maintenance strategy that directs funds to the most critical and mission-dependent assets; at a minimum, the FY 10 level of \$97 million should be maintained, but a modest increase over that level would allow for critical projects to prevent irreparable damage and ensure visitor safety. The NPS Line Item Construction Program prioritizes improvements related to maintenance needs in addition to health and safety, resource protection and visitor services. The current operating Five Year plan invests 55 percent of funding towards reducing known critical deferred maintenance needs, with 26 percent to improve visitor services through mission-critical capital improvements and 19 percent used to protect critical resources, improve sustainability, and increase energy efficiency. At a minimum, FY 10 funding of \$150 million should be maintained for line-item construction.

If no special effort is made to address the critical systems beyond annual cyclic maintenance and construction funds, the non-road CSDM backlog will balloon to more than \$3 billion by 2016 at the current rate of deterioration. Additionally, of the substantial deferred maintenance needs for NPS structures, \$3 billion is for the 27,000 historic and prehistoric structures in National Parks listed on the National Register of Historic Places that warrant protection to preserve nationally important historic resources. Investing \$390 million each year until the Centennial would significantly reduce or eliminate the non-road CSDM backlog, placing the parks on a far healthier footing in 2016. However, in a tight budgetary climate that includes program cuts, at a minimum these critical accounts should not be reduced, so that there is minimal additional damage to resources or threats to visitor safety.

More than half of the maintenance backlog is related to roads. Reauthorization of a transportation bill is critical to ensuring funds to meet the maintenance and repair needs of NPS roads.

Support for Public/Private Partnerships

Creative, productive partnerships greatly benefit the Park Service by engaging partners and significantly augmenting NPS operating funds, saving taxpayer dollars. The process of joining philanthropic resources with federal funds in a planned, system-wide program has proven challenging but no less valuable for NPS and for its many philanthropic partners. The program was originally conceived at \$100 million per year in philanthropic contributions matched against \$100 million in federal funds. Thanks to Congress, the first year of the program saw \$25 million in federal funds matched against another \$32 million in philanthropic contributions. One of the program's challenges has been matching the pace of the federal budget process with the pace of interested foundations and charities. In addition, the president's FY 11 request was only \$5

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million. Progress can be made on this if the budget authority for the program is expanded to \$50 million in 2012 with the expectation of outlays of \$25 million in 2013 and \$25 million in 2014. Such a change would allow for project fundraising that spans more than one year – especially needed for smaller “friends of the parks” groups partnering with the Park Service—adding flexibility to the program.

Partnerships and External Programs

The federal government, through the National Park Service, leverages enormous value through several underutilized and undervalued community assistance programs, such as Rivers and Trails Conservation Assistance (RTCA), National Historic Landmarks, National Natural Landmarks, and the National Register of Historic Places. The RTCA program has helped produce some of the best examples of conservation based on local/federal partnerships by helping communities to revitalize riverfronts, protect open space and build trails and greenways. Increasing the funding for RTCA from about \$9 million to \$14 million in 2012, the Park Service can, in the words of the Second Century Commission, “better support state and local governments, tribal, and private-sector conservation and preservation efforts” that foster important preservation ends without the necessity for adding certain resources to the National Park System.

Elwha River Restoration

The Glines Canyon and Elwha dams located inside Olympic National Park in Washington state have nearly wiped out once abundant salmon and steelhead trout populations in the Elwha River, fisheries to which the Elwha Klallam Tribe are guaranteed rights in perpetuity through an 1855 treaty agreement. In 1992, Congress approved federal purchase of the dams and directed the Department of the Interior to study how the river and native fisheries could be completely restored. DOI reported that only dam removal could fully restore the ecosystem. Removal of the two Elwha dams will restore salmon access to the Elwha River’s wilderness heart in the Olympic National Park for the first time in 100 years. This dam removal will produce a landmark in river restoration for our national parks and an unprecedented opportunity to study a large dam removal and its impact on the river and wild salmon populations. Draining of the reservoirs has already begun and dam removal will begin in 2011, taking nearly 3 year to complete. The federal government must uphold its portion of the agreement by providing continuing funding of \$20 million annually for research and post-dam removal restoration projects.

150th Anniversary of the U.S. Civil War

The 150-year anniversary of the U.S. Civil War presents a unique opportunity to increase protection for the 70 national park sites associated with the Civil War, about half of which are battlefields. Leading up to and during the war’s 150th anniversary (2011 – 2015), the National Park Service is working to broaden interpretation of the war, its causes and its consequences; funding is needed to provide this interpretation, which would prove an investment with returns in heritage tourism and its economic impacts.

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The American Battlefield Protection Program encourages and assists States and local communities in preserving, managing, and interpreting significant battlefields that are not already protected in the National Park System. The program administers one grant program that encourages contributing funds to focus on community planning and education projects that help preserve and interpret sites.

The program's Battlefield Acquisition Grant Program (formerly the Civil War Battlefield Grants) is a critical tool to protect battlefield lands outside of established National Park boundaries, including Civil War sites. Grants totaling up to \$10 million a year are authorized through 2014; the program was funded at \$9 million in FY10 but should be funded at its fully authorized level in FY 12 to help ensure these critical acquisitions on this important anniversary.

The Land and Water Conservation Fund should otherwise ensure the National Park Service can protect thousands of acres within its boundaries vulnerable to development. For example, Gettysburg National Military Park has almost 700 acres of private land among the 6,000 acres inside its congressionally-established boundary, all with the potential to undermine the integrity of the historic landscape. Many Civil War sites are threatened with development due to the lack of funding to protect inholdings. Antietam, Cedar Creek and Belle Grove, Fredericksburg and Spotsylvania, Gettysburg, Harpers Ferry, Petersburg, and Richmond all have urgent needs, many of which are multi-year projects.

Historic Preservation Fund

The Historic Preservation Fund (HPF) was established in the enactment of NHPA to carry out the provisions of the Act. The HPF was established in 1977 as a matching grant program, currently authorized at \$150,000,000 per year through fiscal year 2015 from revenues due and payable to the United States under the Outer Continental Shelf Lands Act provided they are appropriated by Congress. Modeled after the Land and Water Conservation Fund (LWCF), the HPF provides dedicated funds to support the programs and activities that were identified in the National Historic Preservation Act. However, unlike LWCF, HPF is a matching grant program. These matching grants leverage non-federal investment and accelerate historic preservation activities nationwide. This partnership consists of a 60/40 match. Each recipient must provide a 40% match of non-federal funds (dollars and in-kind donations). The HPF also stipulates that 10% of each state's federal allocation be passed through to Certified Local Governments (CLGs) in the form of matching grants. Funded activities include planning, survey, inventory, project review and public education.

The National Park Service administers the HPF on behalf of the Secretary of the Interior, a provides vital financial resources for a variety of important preservation organizations and programs that form the foundation of our nation's historic preservation system, including funding State Historic Preservation Offices (SHPOs), Tribal Historic Preservation Offices (THPOs), Historically Black Colleges and Universities (HBCUs) and Save America's Treasures.

State Historic Preservation Offices (SHPOs) are the foundation of preservation in the United States. Established in the 1966 by the National Historic Preservation Act, SHPOs administer the National Historic Preservation Program on behalf of the Secretary of Interior and also administer

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their own State historic preservation programs. These programs help communities identify, evaluate, preserve, and revitalize their historic, archeological and cultural resources.

Important state-level positions and their work rely on the matching funding from HPF to keep their programs running at a time when state budgets are slashed to the bone. For instance in Nevada, the matching fund from this program is vital to keeping the doors open and the lights on in the Nevada State Historic Preservation Office, where they are busy reviewing renewable energy projects and transmission lines on federal public lands. If this office were to close due to lack of funding, reviewing projects on federal lands would significantly slow down and impact job and project development. Recommendation for a modest increase of \$10.9 million over FY 09 levels to \$53.4 million in FY 12.

Under amendments made to the National Historic Preservation Act in 1992, American Indian tribal governments began entering into agreements with the National Park Service to assume the State Historic Preservation Officers (SHPOs) responsibilities and to receive funding from the Historic Preservation Fund to accomplish these tasks. THPOs are responsible for implementing Federal preservation laws on tribal lands, including Federally-mandated archaeological compliance and evaluation and management of tribal historic properties. The THPOs of 105 recognized tribal governments are responsible for historic preservation work on 34 million acres in 28 states, which includes projects to improve Indian schools, health clinics and housing. They are the first responders when a sacred site is threatened, ancestral home is uncovered or when the graves of ancestors are disturbed by development. However, with declining budgets, THPOs do not have the necessary resources to fulfill the NHPA mandate.

When the funding administered by the National Park Service (NPS) began in 1996 there were only 12 NPS- recognized THPOs receiving a share of about \$1 million or approximately \$80,000 per tribe to operate a THPO program. That same funding level adjusted for inflation today would be worth \$116,000 per tribe. While the line item funding for THPOs has continued to increase, so has the number of NPS-recognized THPOs, resulting in less funding per THPO. In FY 10 there were 86 tribes and the enacted budget for THPOs was only \$8 million or an average of \$93,000 per tribe, a funding level that was dropping per Tribe and did not keep pace with original funding levels in 1996. Today there are 105 NPS-recognized THPOs, and if the FY 2010 enacted funding was held level at \$8 million this would result in the erosion of funding to approximately \$76,000 per tribe. With more THPOs expected to join the program next year this level of funding is inadequate to operate a THPO program which is mandated to perform federal compliance work required under NHPA. Inadequate funding places the cultural properties on millions of acres of tribal lands at risk. Therefore we recommend THPO funding of at least \$11 million in order to provide funding for the new tribes joining the program in addition to \$7 million in level funding for competitive tribal heritage grants.

Inadequate funding for HPF also limits the matching grants that are available from SHPOs, THPOs, and HBCUs and reduces support for preservation activities such as planning, survey, inventory, project review and public education. Lack of full funding at the authorized \$150 million deprives funding for smart growth development, technical assistance, the Federal Historic Rehabilitation Tax Credit, State and Tribal Historic Preservation Plans, National Register of Historic Places and Grants-in-Aid.

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On September 16, 2010, in an address to the Advisory Council on Historic Preservation, Secretary Salazar stated that the \$150 million for full funding of HPF was not adequate given the historic preservation needs we have across America. The Historic Preservation Fund deserves an equal footing with the Land and Water Conservation Fund, both of which support the protection of our irreplaceable natural and cultural resources. Recognizing concerns about discretionary spending, we recommend a \$14 million increase over last year's enacted budget of \$80 million, but equal to FY 01 funding levels of \$94 million. The recommended FY 12 funding levels include \$11 million for 105 Tribal Historic Preservation Offices, an increase of \$3 million or \$105,000 per new tribe in the program; level funding for Tribal Heritage Grants at \$7 million; \$53.4 million for State Historic Preservation Offices with a modest increase of \$10.9 million over FY 09; level funding of \$25 million for Save America's Treasures and \$4.6 million for Preserve America.

Heritage Partnership Programs (Heritage Areas)

National Heritage Areas are designated by Congress as places where natural, cultural, historic, and scenic resources combine to form a cohesive, nationally-important landscape. Inaugurated in 1984, the National Heritage Areas movement now encompasses 49 areas, ranging from factory towns and city neighborhoods to farmland and battlefields. Though still relatively new, the National Heritage Area approach has already been incredibly successful in supporting heritage tourism and, creating thousands of new conservation, preservation, and historian jobs in communities across the country. Each year, more and more regions seek recognition under this innovative public/private partnership – a testament to the need of such a program. Such designations and their funding are providing important youth education programs like the Heritage Area that encompasses Maryland, Pennsylvania, West Virginia and Virginia in the Journey Through Hallowed Ground National Heritage Area (JTHG). JTHG's offers programs for teacher immersion and summer camp to educate students by transforming traditional text-book learning into a truly stimulating experience that exists only outside the confines of the classroom. Funding for National Heritage Areas, which often facilitates community participation in preservation of rural areas, boost tourism, and requires local participation and leadership return to FY 10 level funding of \$17 million.

Save America's Treasures

As the only federal "bricks and mortar" grant program available to advance the goals of the National Historic Preservation Act, Save America's Treasures (SAT) has grown into the most successful preservation effort in the country's history, awarding over \$350 million in federal and private funds to restore more than 1,200 nationally significant sites and collections in every state and territory. For every federal dollar granted in the SAT program, there must be at least a non-federal dollar match provided, therefore, these grants are often just the spark or seed money to develop a preservation project. The SAT competitive grant program requires that applicants meet a rigorous set of criteria. These criteria include the property or collection's national significance, the severity of the threat that the property or collection faces, how effectively the proposed project mitigates that threat, and whether or not the project is feasible.

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SAT grant winners are sites we must help preserve or risk losing them forever. SAT has helped save important American artifacts like the Rosa Parks Bus, Mark Twain House, and the West Point Historic Post Office. SAT projects are not limited to non-federal ownership, as some of our most beloved treasures like the Star Spangled Banner, Apollo Space Artifact Collection, Ellis Island Ferry Building, Mesa Verde National Park, and the Historic Jamestown Archeological Collection have been grant recipients. Many SAT projects involve volunteers in outdoor conservation and recreation projects. For example, in southeast Utah, underprivileged Navajo youth are working with employees of the Bureau of Land Management (BLM) to stabilize important pueblo sites that draw thousands of visitors to the area each year. In Philadelphia, Fairmont Park's Strawverry Mansion/Woodford Orchard, hosts special programming to educate children from underserved communities in healthy eating by engaging them in gardening and farming in a historic context. Housed within the Historic Preservation Fund, SAT grants often fund rehabilitation projects that are important community anchors and engines. SAT grant projects stimulate heritage tourism and community engagement and serve as spark plugs for economic revitalization and job creation.

In total, almost 4,000 applications have been submitted over the life of the program to date requesting a total of \$1.54 billion. There have been 1,287 grants awarded with a grant amount of \$245,000. Seventy percent of the grants have been awarded for historic structure repairs and 30 percent have been awarded for museum collection or archives conservation projects. For every \$1 million funded in this program an average of four projects receive grants. We recommend FY 12 funding levels of \$25 million at level funding with FY 10 enacted levels to continue this important grant matching program for bricks and mortar preservation

Preserve America

Preserve America is a federal program that encourages and supports community efforts to preserve and enjoy our priceless cultural and natural heritage. Goals of the program include a greater shared knowledge about the nation's past, strengthened regional identities and local pride, increased local participation in preserving our heritage assets and support for the economic vitality of our communities through partnerships. The goals are carried out through grants which are invaluable seed money to develop sustainable preservation strategies that is unavailable for any other federal source. Funding in FY 08 was \$7.3 million, and enacted FY 10 was \$4.6 million. We recommend level funding for FY 12 at FY 10 levels at \$4.6 million.

National Recreation and Preservation Programs

Cultural Programs Within the Cultural Programs activity the NPS manages the National Register of Historic Places; reviews applications and certifies applications for Federal Tax Credits for Historic Preservation; conducts cultural resources management planning through the National Historic Landmarks program, the Historic American Buildings Survey, the Historic American Engineering Record and the Historic American Landscapes Survey programs; coordinates the Federal archeology programs, the American Battlefield Protection program, the Japanese American Confinement Site Grants program, and the Native American Graves Protection and Repatriation Grants program. The Cultural Programs activity of the National Recreation and

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NATIONAL PARK SERVICE

Preservation (NR&P) account supports the NPS mission by contributing to the goal of ensuring that natural and cultural resources are conserved through formal partnership programs.

National Register Programs

The National Register Programs encourage the preservation of cultural resources by all levels of government and the private sector. A wide range of technical assistance concerning the documentation and protection of historic and archeological properties is offered by the various programs. The National Register of Historic Places is the Nation's official inventory of historic places that have been determined to be worthy of preservation. It includes all historic areas of the National Park System, National Historic Landmarks, and properties nominated by States, Federal agencies, and Tribes. It recognizes buildings, structures, sites, objects, and districts that are significant in American history, architecture, archeology, engineering, and culture at the national, state, and local levels. The National Register is not a static list, but one that grows as properties are inventoried and evaluated as eligible. The program encourages citizens, public agencies, and private organizations to recognize, use, and learn from historic places to create livable and viable communities for today and the future. Funding for the National Recreation and Preservation Programs was \$17.7 million in FY 10, and the FY 11 requested level was \$18.2 million. The recommendation for FY 12 is the requested FY 11 level of \$18.2 million to keep up with fixed costs.

National Center for Preservation Technology and Training

The National Center for Preservation Technology and Training (NCPTT) is a research division of the National Park Service (NPS), and plays an essential role in sustaining America's cultural heritage through research and technology. It is the only NPS program to offer applied research and professional training, technology transfers, and grants in the fields of archeology, architecture, landscape architecture and materials conservation and it is one of very few preservation research entities in the United States. In recent years, NCPTT has been a leader among the preservation community in taking a special interest in climate change mitigation and adaptation, for example funding research projects to test the energy impacts of new versus existing windows, and providing affordable LEED training to preservation practitioners. NCPTT has engaged with the wider preservation and sustainability community to understand and prioritize these research and training priorities, but funding is insufficient. A small increase of 5% over FY 2010 would help meet this need, especially by enabling NCPTT to focus on providing grant and training funds for work on adapting historic buildings to withstand the impacts of climate change that are already occurring or anticipated in the near term. The recommendation for FY 12 is \$2.08 million or a modest \$100,000 over FY 10 enacted.

Japanese American Confinement Site Grants

In FY 2009, Congress appropriated funds for the first time to support a new grant program to preserve Japanese American World War II confinement sites through partnerships with local preservation groups. The preservation, restoration and interpretation of these camps promote the

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healing process for the many internees forced to relocate to these camps. As many of the internees are advancing in age, the long-term preservation of these sites will provide valuable information for thousands of annual visitors and ensure that the public and future generations will better understand this terrible chapter in our nation's history. In FY 09, NPS was able to award 19 matching grants from the \$1 million appropriated for the program. By allowing NPS to complete ongoing and previously authorized studies, this funding increase will give the NPS increased flexibility to conduct special resource studies for Japanese American confinement sites like Tule Lake and Heart Mountain in the future. The recommendation for FY 12 is to maintain level funding with FY 10 enacted of \$3 million.

6 DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

Water Resources Investigations

U.S. Geological Survey (USGS) water resource programs provide a strong and unbiased source of information for those making decisions that affect our water resources, including Congress; federal, state, and local agencies; conservation groups; and industry. The National Water Quality Assessment (NAWQA) program provides historical and current water quality conditions and identifies water quality trends in representative river basins and aquifers nationwide. The NAWQA program's unique design provides a consistent record of information on water resources in 42 important river basins and aquifer systems across the nation.

The Toxic Substances Hydrology Program carries out long-term research to improve scientific understanding of river and groundwater contamination. Toxic contamination, whether from radioactive waste, petroleum products, sewage, or other sources, can cause considerable damage to rivers, groundwater, people and wildlife. The program has led to improvements in the ability of the government and private sector to clean up existing toxic contamination and protect against future contamination.

Information regarding the quantity and timing of streamflow is of critical importance to protecting, restoring, and safely enjoying our nation's rivers. The nation's stream gauging network, primarily operated through the USGS National Streamflow Information Program (NSIP), provides essential data for habitat preservation, water quality, recreational safety and quality, agriculture, industry, municipal water supplies, navigation, and flood hazard identification. Failure to fund the NAWQA and NSIP programs will lead to the removal of stream gauges which will lead to inaccurate hydraulic data, possibly resulting in a drastic loss of life during an unanticipated flood or bridge collapse. Stream gauges become more valuable as their data records become longer and those that also record sediment loads and water quality are especially valuable.

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U.S. GEOLOGICAL SURVEY

Biological Research/Ecosystems

The core of scientific expertise regarding fish, wildlife and plants within the Department of the Interior has previously been found within the Biological Research Discipline (BRD) of USGS. However, the agency moved to realign its programs in 2010 to pursue a more integrated and multidisciplinary approach. Most of the BRD programs are found under the new Ecosystems budget activity, but several important priority areas are now found under other multidisciplinary budget activities.

Ecosystems

The Ecosystems program includes research, development of analytical tools, and sharing of information for a number of priority areas including fish and other aquatic organisms and their habitat; terrestrial wildlife and plants including endangered species; factors that determine the function, structure and condition of marine, terrestrial and freshwater communities; and detection and methods to deal with invasive species. Demands to address declining or stressed biological resources have increased dramatically over the last decade and the work done by Research Grade Scientists is more critical than ever, yet the agency's ability to maintain an adequate workforce of these scientists has eroded.

The 40 Cooperative Research Units (CRU) also are in the Ecosystems program – located at universities in 38 states, these are crucial to successfully addressing the natural resource management challenges posed by global warming, energy development needs, imperiled species conservation, invasive species, infectious diseases, wildfire, and increased demand for limited water resources. Cooperative Units also will play a critical role in meeting the challenge natural resources management agencies face in replacing the unprecedented number of scientists and other professionals who will be retiring over the next 10 years. The program has established a record of educating new natural resource professionals who are management-oriented, well-versed in science, grounded in state and federal agency experience, and able to assist private landowners and other members of the public. Because each of the Units is a true federal-state-university-private partnership, this program is able to build on its partner contributions to leverage more than three dollars for every dollar appropriated to the program by Congress. The Cooperative Units have suffered from a loss of scientist positions since 2001. While modest increases since 2007 have allowed some of those positions to be filled and additional ones will be filled in FY 11, the program still will have up to 13 vacancies. The Green Budget request for the Ecosystems program is a modest increase of \$5.7 million over the FY 10 level of \$165.6 million.

Contaminant Biology

Formerly in BRD the Contaminant Biology program is now located in the Energy and Minerals and Environmental Health activity. This program is crucial in conducting research and providing information to stakeholders on the effects of pollutants on natural systems and especially the trust resources of the Department of the Interior. Funding for this essential work must be maintained at least as the FY 10 level of \$9.4 million.

Biological Information Management and Delivery Program

The Biological Information Management and Delivery program was previously located in BRD and now is within the Core Science Systems activity. This program makes data and information available for use by decision-makers from all levels of government, the education community,

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and other non-governmental entities. This program provides the backbone for communication of vital information on climate change and other significant impacts to biological resources. Funding should be maintained at least at the FY 10 level of \$24.9 million.

Landscape Conservation Cooperatives

Support for FWS Landscape Conservation Cooperatives had initially been funded, starting in FY 10 through BRD and is now located in the Climate and Land-Use Change activity. Through this effort USGS will provide the expert scientific staffing and information that will assist the LCCs in developing sound and effective projects to address climate and land-use change. Funding should be increased by \$3 million over the FY 10 level of \$5 million.

Support for FWS, NPS, BLM

Previously in BRD, and now located in the Climate and Land-Use Change activity, this work focuses on scientific information needed to help FWS, NPS and BLM make scientifically based resource management decisions. These efforts should be funded at \$4 million over the FY 10 level of \$5 million.

New Energy Frontier/Alternative Energy Studies on Wildlife

Initially funded in FY 10 through BRD, this effort now will be funded through the Energy and Minerals and Environmental Health activity. USGS initially has undertaken work to assess impacts to wildlife from the development and placement of wind energy projects and transmission from direct strikes, habitat fragmentation, and construction and maintenance of infrastructure. Detailed information is crucial so that projects can be sited and implemented in a way that minimizes impacts on vulnerable species such as bats, for which high mortality at wind energy projects already has been observed, and eagles, for which identification of priority habitat and an increased understanding of the mechanisms by wind impacts occur is needed. In the coming year, this work will be expanded to develop a national assessment and the program should work to develop a national framework for assessing the impacts to wildlife and habitat from multiple types of energy development, including solar. The Green Budget request is a total amount of \$4 million, a \$3 million increase over FY 10.

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U.S. GEOLOGICAL SURVEY

National Climate Change and Wildlife Science Center

Established in FY 08, the overall mission of the National Climate Change and Wildlife Science Center is to work with and provide natural resource managers and partners the tools and information they need to develop and execute strategies for successfully adapting to and mitigating the impacts of climate change. The national and the regional climate science centers are partnership driven, leverage resources, and avoid duplication of government programs by housing applied natural resources and climate-related research into one place. Per its strategic plan, the Center envisioned establishing a total of eight regional centers to coordinate research at the appropriate scale for wildlife and land managers across the country. In the fall of 2009, Secretary Salazar issued a Secretarial Order on climate change which expanded the role of these regional centers to conduct research relevant to all the Department of the Interior's bureaus. With Science Center funding from FY 10, the USGS established three of these regional centers, dubbed regional Climate Science Centers, or CSCs, in Alaska, the Pacific northwest, and southeast. Funding in FY 11 will establish two additional regional centers, in the southwest and north central (northern states in the interior West), and will continue providing the essential research and modeling functions of the Center for resource managers. Additional funding is needed in FY 12 to establish two additional CSCs in the south central and northeast, which will allow focused wildlife, ecosystem and climate change science research across the entire country except for Hawaii and the Pacific Islands. A CSC for Hawaii would be established in FY 13.

Funding through the National Climate Change and Wildlife Science Center budget account will only fund research relevant to wildlife and ecosystem climate change impacts and adaptation. Other DOI climate science needs will be funded from other sources. The modest Green Budget request for this crucial need is an increase of \$10.4 million over the FY 10 level of \$15.1 million.

6 DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Climate Change Adaptation Initiative

The Interior Department began a Climate Change Adaptation Initiative in September 2009, an undertaking that Indian tribes support in principle. The \$136 million for the initiative in FY 2010, however, failed to include funding for tribes. This is highly inequitable and unusual, particularly considering the disproportionate effect of climate change on tribes and their homelands.

Sovereign Indian tribes deserve a broader seat at the table in the Climate Change Adaptation Initiative and a more equitable share of the funding. Tribal lands comprise four percent of the U.S. land base (tribal lands represent a higher percentage if compared to the federal lands involved in this initiative; tribal lands = 95 million acres divided by 593 million acres of federal land and tribal land = 16 percent).

We recommend funding for the Climate Change Adaptation Initiative continue at the FY 2010 level of \$136 million. Funding for Indian tribes must be increased, however, as such tribes have been historically underfunded with respect to addressing their natural resources, and there is also no federal program or funding which specifically supports tribal climate adaptation efforts. As such, we also recommend that the funding allocation to tribes via the Bureau of Indian Affairs should be increased to at least \$6.8 million or five percent of the Climate Change Adaptation Initiative.

6 DEPARTMENT OF THE INTERIOR ENVIRONMENTAL EDUCATION

Youth in Natural Resources Program

The Youth in Natural Resources program aims to engage youth in programs that inspire them to consider and work towards careers in public service, particularly in natural resource fields. In FY 10 Congress provided \$20.5 million for these programs, including \$5.0 million at the Bureau of Land Management, \$2.0 million at the U.S. Geological Survey, \$8.5 million at U.S. Fish and Wildlife Service, and \$5.0 million at the National Park Service. While each agency has a different set of programs and initiatives, the ultimate goal is to connect youth with the outdoors and encourage them to seek careers in nature. The DOI Youth Office and this program in particular should grow rapidly in the coming years and we recommend \$41.0 million for the Youth and Careers in Nature Program in FY 12.

DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF THE TREASURY

DEPARTMENT OF THE TRANSPORTATION

OFFICE OF THE SECRETARY

Introduction

The budget recommendations below pertain to programs currently included in the federal surface transportation program, last authorized in legislation known as SAFETEA-LU in 2005 (P.L. 109-59). Many noted transportation policy experts, federal commissions, non-governmental organizations, and lawmakers have called for a reformed program to replace SAFETEA-LU, which expired in September of 2009 and has since been extended several times, most recently through March 4, 2011. The surface transportation bill that is eventually signed into law may result in merger, expansion, elimination, or alteration of any of the programs listed below.

As part of an effort to improve federal transportation policy, many of the organizations supporting these budget recommendations have endorsed broad reforms to the federal surface transportation program, or may do so at a future date. The budget recommendations in this document are made without consideration for any potential changes in the scope, intent, or structure of U.S. surface transportation policy, or any proposals for policy changes from the endorsing organizations.

Interagency Partnership for Sustainable Communities

This is a joint effort between the U.S. Department of Transportation, Department of Housing and Urban Development, and Environmental Protection Agency to promote affordable, environmentally sustainable communities with a high quality of life across the nation. This means helping American families of all income levels gain access to better housing options, more transportation choices, and lower transportation costs. High-level interagency efforts to better coordinate federal transportation and housing investments and to enhance transportation planning and investment strategies also help the three participating agencies to operate more efficiently, making the best use of taxpayer dollars.

Transportation Investments Generating Economic Recovery (TIGER)

The American Recovery and Reinvestment Act of 2009 (ARRA) set aside \$1.5 billion in discretionary grants for transportation projects. These grants to states, local governments, and transit agencies must be awarded competitively for capital investments in transportation that will have a significant impact on the nation, a metropolitan area, or a region. In addition to preserving and creating jobs and promoting economic recovery, these grants are to be awarded based on criteria that include quality of life and sustainability improvements such as improving energy efficiency, reducing dependence on oil, reducing greenhouse gas emissions and benefitting the environment. TIGER has since transitioned to become the National Infrastructure Investments program, which has a similar size, scope, and application process. In addition to funding critical infrastructure projects around the country, this program serves as a way to develop better ways to plan, fund, and construct transportation projects across the country, which will improve the efficiency and effectiveness of both federal and state departments of transportation.

DEPARTMENT OF THE TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION (FHWA)

Congestion Mitigation and Air Quality (CMAQ)

The highly-successful CMAQ program provides flexible funding to state and local governments for transportation projects and programs that help them to meet the requirements of the Clean Air Act. Funding is available for areas that are out of compliance with National Ambient Air Quality Standards, as well as areas that have recently reattained compliance. The funding allocated through this program helps to ensure that millions of Americans have access to clean air, and as a result have a reduced risk of both respiratory and heart disease.

Safe Routes to School

This program is intended to enable and encourage children to walk and bicycle to school. Funding can be used for both infrastructure projects and outreach programs. The goal of the program is to support childhood wellness as well as to reduce traffic, fuel consumption, and air pollution in the areas around schools. Congress should fund Safe Routes to School at \$188.0 million in FY12.

Transportation, Community, and System Preservation Program (TCSP)

State and local governments, metropolitan planning organizations (MPOs), and tribal governments are eligible for discretionary grants to integrate transportation, community development, and system preservation plans and activities. Additionally, the program is meant to identify private sector initiatives that can improve those relationships. A local funding match is required.

Nonmotorized Transportation Pilot Program

The purpose of the nonmotorized transportation pilot program is to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution, within four selected communities.

Recreational Trails Program (RTP)

The Recreational Trails Program (RTP), which was created in 1991 as part of the Intermodal Surface Transportation Efficiency Act, plays an essential role in funding state trail programs and projects all across the country. Funding for the RTP comes from the federal taxes paid on gasoline used in non-highway recreation and is distributed to the states based on a formula that recognizes the program's user-pay/user-benefit character. RTP-funded projects represent investments in vital infrastructure that promote healthy communities and more importantly, healthy people. In addition, the economic impact of these projects is magnified because they improve access to public lands and waters and support both local tourism and recreation businesses, as well as healthy lifestyles. Despite funding from RTP for thousands of projects nationwide, a backlog of good-quality, eligible projects exceed the currently available RTP funding by a ratio of at least three to one. In FY12 Congress should fund RTP at \$100.0 million.

DEPARTMENT OF THE TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION (FHWA)

Transportation Enhancement (TE)

Transportation Enhancements is a critical green program that was not included in this section because it is a subset of a formula program and not subject to budget or appropriation variability. However, for budgeting and appropriations purposed in FY 11, TE should be included in any discretionary or short term spending bill that includes transportation at or above the rate used in the American Recovery and Revitalization Act, and any rescission of transportation funds should include a proportionality provision to protect TE from disproportionate rescissions.

DEPARTMENT OF THE TRANSPORTATION FEDERAL TRANSIT ADMINISTRATION (FTA)

Fixed Guideway Modernization

This program is intended to offer public transit agencies and governments that run public transportation grants to help modernize or improve existing fixed guideway transit systems. Eligible projects include purchase and rehabilitation of rolling stock, track, line equipment, structures, signals and communications, power equipment and substations, passenger stations and terminals, security equipment and systems, maintenance facilities and equipment, operational support equipment including computer hardware and software, system extensions, and preventive maintenance. Fixed guideway systems include heavy rail, commuter rail, light rail, and trolleybus, in addition to others, as well as portions of motor bus service operated on exclusive or controlled rights-of-way, or in high-occupancy-vehicle lanes. The systems that this program helps fund are both some of the most-used and the oldest transit systems in the country. Ensuring that they are both maintained and systematically modernized is essential to keeping the metropolitan engines of our economy burning. Reductions in funding would likely lead to deferral of critical maintenance that could create safety hazards, as well as service cuts and fare increase that could increase Americans' transportation costs or even leave them without a transportation option.

The Federal New Starts program is the federal government's primary financial resource for supporting capital investments in locally new fixed guideway transit systems, or substantial expansion of existing systems. Eligible projects include heavy, light rail, commuter rail, and bus rapid transit. The FTA's New Starts program has helped to make possible hundreds of new or extended transit fixed guideway systems across the country. These rail and bus investments, in turn, have improved the mobility of millions of Americans; have reduced greenhouse gas emissions and oil consumption; have reduced transportation costs for working families; have helped to reduce congestion and improve air quality in the areas they serve; and have fostered the development of safer, more livable communities. New Starts is widely recognized as one of the few federal transportation programs with both performance measurement and cost-benefit analysis, making it one of the most cost-effective.

Bus and Bus Facility Program

The Bus and Bus-Related Facilities program provides capital assistance to states and municipal areas for new and replacement buses and related equipment and facilities. Reducing funding for this program could lead to transit service cuts and fare increase that would increase Americans' transportation costs or reduce their transportation options.

Clean Fuels Grants Program

The Clean Fuels Grant Program accelerates the deployment of advanced bus technologies by supporting the use of low-emission vehicles in transit fleets. The program assists transit agencies in purchasing low-emission buses and related equipment, constructing alternative fuel stations, modifying garage facilities to accommodate clean fuel vehicles, and assisting in the utilization of biodiesel.

DEPARTMENT OF THE TRANSPORTATION FEDERAL TRANSIT ADMINISTRATION (FTA)

Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER)

The American Recovery and Reinvestment Act of 2009 (ARRA) appropriated \$100 million for a discretionary grant program for public transportation projects. These grants are awarded for projects that reduce a transit system's greenhouse gas emissions or result in a decrease in a transit system's energy use.

DEPARTMENT OF THE TRANSPORTATION

FEDERAL RAILWAY ADMINISTRATION

Amtrak

Amtrak provides intercity passenger train service in the United States. Amtrak operates service in forty-six states, and offers one of the most energy efficient forms of intercity travel. According to the Oak Ridge National Laboratory, Amtrak is almost 20 percent more efficient than domestic airline travel and 28 percent more efficient than auto travel on a per-passenger-mile basis. Amtrak carried 27.2 million passengers in 2009. Though this number is lower than the record ridership of 2008, it is an increase of 5.1 percent over 2007. Legislation reauthorizing appropriations for Amtrak through 2013 was passed in 2008 by veto-proof margins in both houses of Congress, and was signed by President Bush on October 16th (P.L. 110-432).

Federal Matching Grants for State Rail Corridor Investments and High Speed Rail

This program, created in the 2008 Amtrak reauthorization, was intended to encourage and assist states seeking to develop passenger rail infrastructure by providing federal matching funds for eligible capital investments. Responding to President Obama's focus on developing a high speed intercity passenger rail network in the U.S., Congress has expanded this program to support state implementation of high speed rail networks. High speed rail is essential to a cleaner, more efficient national transportation system. America is one of the only developed nations in the world without a modern high speed rail network.

The Global Environment Facility (GEF)

An independently operated, international financial facility, the GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants. GEF funding is disbursed through a variety of agencies, including multilateral development banks and UN agencies. The GEF also manages the UNFCCC's Least Developed Countries Fund and Special Climate Change Fund, which help some of the world's most vulnerable populations to meet the challenges of climate change, including adaptation and transfer of clean energy technology.

The GEF recently achieved a record replenishment of \$4.25 billion for 2010-2014, representing a 37% increase compared to the GEF-4 level of US\$3.1 billion. The GEF has been replenished four times since its inception in 1991: \$2.02 billion in 1994, \$2.75 billion in 1998, \$2.92 billion in 2002 and \$3.13 billion in 2006. The GEF unites 181 countries in partnership with international institutions, civil society and the private sector to address global environmental issues in the context of national sustainable development. Both developed and developing countries participate in the GEF's governing structure. For every U.S. dollar invested, about \$24 dollars have been leveraged from other sources.

To date, the GEF has provided \$9.2 billion invested directly, attracting \$40 billion in co-financing, and has supported 2,700 projects in 165 countries. In biodiversity, more than \$3.1 billion invested has attracted \$8.3 billion in co-financing to support more than 1,000 projects in 155 countries. This includes \$1.89 billion invested in the creation and management of protected areas. The GEF has helped achieve the global target of protecting 10% of the world's terrestrial areas: 2,302 protected areas spanning 634 million hectares, with at least 700 globally threatened species and 30 billion tons of stored carbon. The GEF has created 40 conservation trust funds totaling \$300 million. To continue to support these vital programs, it is recommended that the GEF receive funding of \$88.75 million for its General Environmental Programs in FY12, an increase of \$2.25 million over FY10 levels.

As a result of the GEF's conservation work, over 265 million hectares of productive landscapes and seascapes became more biodiversity-friendly. The GEF has been the largest single financier of forest conservation: \$1.6 billion, supplemented by more than \$4.8 billion in co-financing, supporting more than 350 projects focused on forest conservation and management. The GEF's Forest Degradation and Desertification Programs should be funded at \$47 million in FY12. The GEF also supports clean energy programs in countries around the world in order to promote new clean energy technologies and infrastructure and the speed the transition to a clean energy economies. GEF Clean Energy Programs received \$26 million in FY10, and this critical funding should be increased to \$75 million in FY12.

The U.S. remains in arrears on its GEF pledges from past years. Payment of \$55 million in these arrears would free up substantial amounts of additional funds for GEF investments.

www.thegef.org

Tropical Forest Conservation Act (TFCA)

The Tropical Forest Conservation Act (TFCA) was enacted in 1998 to give eligible developing countries the option to relieve official debt owed to the U.S. Treasury while generating funds in local currency for tropical forest conservation activities. Debt reduction occurs in exchange for the debtor government's commitment to make local currency payments for the protection of its forests. The TFCA also works to strengthen civil society by creating local foundations to provide small grants to NGOs and local communities.

The TFCA offers a unique opportunity for public-private partnerships. The majority of agreements have included funds raised by U.S.-based NGOs. As of October 2009, \$135 million of U.S. government appropriations has been used to complete 17 TFCA debt-for-nature agreements, which over time will generate more than \$239 million in long-term commitments for tropical forest conservation. These include individual agreements with Bangladesh, Belize, Botswana, Brazil, and Colombia, El Salvador, Guatemala, Indonesia, Jamaica, Paraguay and the Philippines, and two each with Costa Rica, Panama and Peru. The Nature Conservancy, Conservation International, World Wildlife Fund and an Indonesian Fund (KEHATI) have contributed a total of \$16 million to ten of these agreements.

A reauthorization of the TFCA has been proposed and introduced in previous Congresses that would extend the TFCA model to include coral reef ecosystems, making its application more flexible and encompassing a wider range of opportunities to support international conservation of large-scale terrestrial and marine ecosystems. The new TFCA model would operate at a funding level of \$20.0 million in FY12, remaining constant with the FY10 enacted level. Should this reauthorization Act be reintroduced, we urge Congress to approve it.

www.treas.gov/offices/international-affairs/index.html

www.usaid.gov/our_work/environment/forestry/intro_tfca.html.

Climate Investment Funds (CIFs) at the World Bank

Through the Department of the Treasury, the U.S. contributes to several multilateral funds run out of the World Bank that support actions of developing countries to mitigate and adapt to climate change. Collectively, these constitute the multi-donor trust funds called the **Climate Investment Funds (CIFs)**. The **Clean Technology Fund (CTF)** focuses on mitigation in middle income countries and is intended to promote scaled-up financing for demonstration, deployment and transfer of low-carbon technologies that have significant potential to reduce greenhouse gas emissions over the long term. The **Strategic Climate Fund (SCF)** is itself comprised of three targeted funds: The **Forest Investment Program (FIP)** aims to address the underlying drivers of deforestation in developing countries. Building on existing REDD+ readiness efforts, like the FCPF Readiness Fund, FIP is piloting policies, measures and programs in a limited number of developing countries to develop an overall strategic investment plan for each country. FIP is focused on institutional and capacity-building efforts in the forest sector around the fiscal, legal and institutional reform necessary to reduce emissions from the forest sector, including support for forest carbon inventory and monitoring, land and resource tenure reform, and efforts to

address agricultural intensification and agroforestry. Funding for FIP should be raised to \$115.0 million in FY12, up from \$20.0 million in FY12. The **Pilot Program for Climate Resilience (PPCR)** provides incentives to developing countries for scaled-up action to integrate climate resilience into national development planning, consistent with poverty reduction and sustainable development goals. For FY12, it is recommended that funding levels be reduced \$5.0 million from FY10 levels, marking a total of \$50.0 million in funding for PPCR. The **Scaling Up Renewable Energy Program in Low Income Countries (SREP)** aims to increase energy access in poorer countries through renewable energy, in part by focusing on the private sector. Collectively, investments in CIFs are a strong component of the existing U.S. commitments to help developing countries adapt to climate change and mitigate their future emissions. It is recommended that this new program be funded at \$100.0 million for FY12.

At the December 2010 UN climate summit in Cancun, the US helped establish a **Green Climate Fund**, through which funds will flow to finance effective clean technologies in developing countries and to help those countries transition to clean economies, reduce energy poverty, and decrease greenhouse gas emissions. It is critical that the United States contributes its fair share to this new fund. The World Bank's Climate Investment Funds that focus on technology – the Clean Technology Fund (CTF) and the Program for Scaling-Up Renewable Energy in Low Income Countries (SREP) - are supposed to sunset once the Green Climate Fund is operational (perhaps as early as 2012). We encourage the observation of the Climate Investment Fund sunset clause and so that multilateral climate funding for technology may be directed through the Green Climate Fund as soon as possible.

Adaptation Fund

The UNFCCC's Adaptation Fund finances concrete adaptation projects and programs in developing countries. It is unique among multilateral climate funds in that it allows developing countries to choose whether they wish to access funds directly through national implementing agencies or go through multilateral implementing agencies (like the UN Development Program or the World Bank). The governance structure of the Adaptation Fund is also unique, with specific seats designated for least developed countries and small island developing states. The Adaptation Fund is currently financed through a 2% levy on the Clean Development Mechanism, as well as through developed country contributions; however, the Adaptation Fund received zero funding in FY10. Thus far, limited funds have restricted the Adaptation Fund's ability to meet the demand for assistance with adaptation projects in developing countries. In FY12, it is proposed that \$25.0 million in funding be directed to the Adaptation Fund to ensure its future success.

DEPARTMENT OF THE TREASURY

INCENTIVE FOR PRIVATE LAND CONSERVATION

Making the Enhanced Tax Deduction for Conservation Easement Donations Permanent

From 2006 to 2009, an enhanced tax incentive supported the conservation of private forest, farm and grasslands by encouraging farmers, ranchers and other modest income landowners to retire the development rights on their land. By allowing conservation easement donors to deduct a larger portion of their income over a longer period of time the enhanced incentive has helped America's land trusts increase the pace of conservation by a third to over a million acres a year, but it expired at the end of 2009. Preserving viable farms in our communities provides local access to diverse food products, reduces transportation costs and pollution, and provides a natural buffer against sprawling development. In addition, the carbon sink provided naturally by forests, grasslands, croplands and wetlands offsets 12.5% of our greenhouse gas emissions. Bills to make the incentive permanent in the 111th Congress (H.R. 1831 and S. 812) had 268 House and 41 Senate co-sponsors from all 50 states – including majorities of Democrats and Republicans in the House.

Providing Incentives for Private Land Conservation in Reforms of the Estate Tax

More than 70 percent of America's wildlife gets food and shelter from our working farm, ranch and forest lands, but we're losing these habitats to development at the alarming rate of 4,000 acres each day. The estate tax contributes to this trend by forcing many farmers and ranchers to sell parts of their property to pay the tax, bifurcating the large properties that are so important to watershed health and wildlife conservation. Even at a \$3.5 million unified credit, USDA estimates that 10% of farm estates are likely to owe estate taxes. Even where the land remains intact, estate tax bills can force fire sales of timber, defeating recent gains we've made in encouraging sustainable forestry practices. The American Family Farm and Ranchland Protection Act, introduced by Senators Mark Udall (D-CO) and Mike Crapo (R-ID) and Reps. Earl Blumenauer (D-OR) and Eric Cantor (R-VA), would increase the estate tax exemption for lands protected by a conservation easement up to \$5 million, ensuring that landowners who generously commit their land to conservation will not be forced to sell. Another proposal, the Family Farm Estate Tax Deferral Act, introduced by Senators Dianne Feinstein (D-CA) and Mike Crapo (R-ID) and Rep. Mike Thompson (D-CA), provides an indefinite deferral of estate taxes on family farm, ranch and forest land, with a recapture provision to if these lands are taken out of production or sold out of the family. This deferral means that no one is forced to sell their working lands for development just to pay estate taxes. These proposals would help keep important natural and historic resources intact, and would be valuable contributions to conservation.

ENVIRONMENTAL PROTECTION AGENCY

Health, Land, Air, and Water

For forty years, polluting industries have accused the EPA of pursuing policies that would hurt the economy. Almost every rulemaking or public statement by the Agency has been followed by comments from industry representatives stating that the Agency's activities would make America less competitive and throw people out of work. These statements have almost always been proven false.

The George W. Bush Administration required EPA to show that the benefits of their rules would outweigh the costs. In addition, the Office of Management and Budget (OMB) prepared a report, using OMB metrics, to evaluate the costs and benefits of rules that were finalized ten years in the past. This ten-year look back showed that EPA rules had cost over \$7 billion dollars, more than all the other agencies combined, but that the benefits were between 3 and 24 times the cost, primarily due to health benefits.¹ Time has shown that environmental rules not only increase the livability of our communities, but are instrumental in incentivizing new industries and jobs to make industry and government less polluting and more efficient. With the proper scientific analyses, EPA can continue to use its authority to improve life for all Americans. We must continue to support a proper scientific approach to regulatory requirements.

EPA rulemaking, and the enforcement of those rules by EPA and its state partners, need to be properly funded so that the Agency can carry out its job as outlined in numerous congressional statutes: to protect the nation's public health and environment.

The ARRA significantly increased funding for key EPA programs during 2009-2010. The job-creating programs in the Act total over \$6.6 billion and provide local communities with significant funds for sewers, drinking water, brownfield development, and Superfund cleanups. The over-subscribed "shovel ready" environmental projects that states and communities requested demonstrated the infrastructure weaknesses in communities nationwide.

¹ 2008 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities
http://www.whitehouse.gov/sites/default/files/omb/assets/information_and_regulatory_affairs/2008_cb_final.pdf, p 96-98.

ENVIRONMENTAL PROTECTION AGENCY

SCIENCE AND TECHNOLOGY

Human Health and Ecosystem Research

Healthy Communities and Ecosystems is the key research arm necessary for EPA's regulatory activities. The Science Advisory Board recently said that this area is critical because it "...provide[s] the scientific foundation for the Agency's actions to protect America's public health and the environment." The regulatory decision makers need advance work in the areas of toxicology and other related sciences to assure that standards are appropriate and not unnecessarily burdensome.

The lack of past funding has handicapped critical needs for advance research to provide the data necessary for risk assessment and risk management. There is a need for research to understand key issues, identify knowledge gaps, and answer complex technical questions in order to develop an appropriate regulatory framework that is fully protective of human health and the environment. The FY10 budget was the first increase for this area since 2004 and it is critical to provide sufficient funding to assure the best science possible.

Global Change Research Program

The Science Advisory Board (SAB) believes that EPA needs to increase research for Global Change research programs to provide important methodologies to assist in decreasing global warming. There is an urgent need for research into Life Cycle Assessment methodologies for indirect land use and greenhouse gas emissions from agriculture critical to achieving the Renewable Fuel Standards under EISA. Without better research in this area, inefficient renewables may be given advantages over other sources of energy.

Integrated Risk Information System (IRIS) Database

EPA's assessment of regulated chemicals are publicly available on its database, the Integrated Risk Information System (IRIS), which contains EPA scientific consensus positions on potential human health effects from environmental contaminants. IRIS information is used by regulators at the state, tribal, and federal level, and by the international community, in combination with exposure data to set cleanup standards and various exposure standards for air, water, soil, and food. The database receives more than a half-million visits monthly, from more than fifty countries, underscoring its widespread use. With the possible amendments to the Toxic Substances Control Act, the need for a robust IRIS is clear. This database –critical to industry, researchers, and the public –received \$5.8 million in FY 10.

ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROGRAMS AND MANAGEMENT

Regulatory Programs

The Environmental Programs and Management section of the EPA budget outlines the core of EPA's operations.

Congress intended for EPA to be primarily a regulatory agency to establish the standards critical to implementing the laws that Congress enacts. The scientific, economic, and engineering analyses needed for many of these standard-setting process, requires a team of science and technical experts who can make judgments free from political interference, but under a system of checks and balances including a robust public notice and comment period. Although Congress requires regulations to be published or updated regularly, Executive Orders have added non-statutory requirements that further delay rules and add substantial costs to the process.

EPA currently has a backlog of regulations requiring implementation. For instance, EPA's Office of Water is years behind in complying with Court Orders requiring up to date standards for industrial effluent limitations. The Office of Solid Waste and Emergency Response (OSWER) has not updated the list of hazardous acute and chronic chemicals in 25 years, so the list now primarily contains obsolete chemicals while newer, sometimes more toxic chemicals are not regulated. The Office of Air and Radiation (OAR) needs to prepare for implementing the endangerment finding that carbon dioxide is a pollutant under the Clean Air Act, and complete regulations on ozone and rules for particular classes of major sources such as boilers. Sufficient funding is necessary for completing these tasks in a timely manner.

Enforcement Program

Without a strong civil and criminal enforcement program by EPA and its state partners, polluters would have an economic advantage over responsible companies that do comply with existing standards. The Environmental Protection Agency's ability to enforce environmental laws is critical to protecting and enhancing the nation's public health and natural resources. A key to enforcement is sending inspectors on site at industrial locations to review compliance. Although much of this is conducted by the EPA's state partners, budget cuts at the state level require EPA to provide financial assistance, despite its budget limitations. Lack of enforcement cripples the nation's ability to meet its environmental goals. For instance, the Clean Air Act's New Source Review Program requires installation of modern pollution control technology when industrial facilities undergo changes that increase air pollution by significant amounts. The EPA has uncovered widespread violations of this requirement that has resulted in illegal air pollution releases totaling millions of tons of conventional pollutants from coal-fired power plants, oil refineries and other industrial sectors. In recent years, as a result of court decisions arising from New Source Review enforcement cases against power plants and oil refineries, EPA has achieved air pollution reductions that dwarf any other Clean Air Act enforcement activities undertaken by the agency. In the waste program, EPA's enforcement has deterred improper recycling and has encouraged safe disposal of hazardous waste. After years of neglect, the FY10 budget finally gave priority to enforcement. Additional funds are also needed to take up the slack caused by cutbacks at the state level.

ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROGRAMS AND MANAGEMENT

EPA Endangered Species Act Consultation

The Environmental Protection Agency (EPA) is responsible under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) for regulating the use of pesticides. Section 7 of the Endangered Species Act requires every federal agency to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS), that any federal action is not likely to jeopardize the continued existence of any endangered or threatened species, or destroy or adversely modify critical habitat. ESA implementing regulations clarify that federal agencies must consult with the Services under section 7 anytime a federal action “may affect” a threatened or endangered species. Further, under FIFRA, EPA may not register or continue to authorize a pesticide for use unless it has determined that the pesticide does not pose “unreasonable adverse effects on the environment.” But unlike the ESA’s “jeopardy” standard, FIFRA’s “unreasonable adverse effects” standard is not designed to protect ESA-listed species from the harmful effects of pesticide use. This means that section 7 consultations are absolutely essential to ensuring the safe use of pesticides for imperiled wildlife.

Since 1971, more than 600 pesticidal active ingredients found in nearly 20,000 pesticide products have been registered by EPA, few of which have been the subject of a complete consultation. Thus, EPA has approved the use of literally thousands of toxic pesticides without ever ensuring, through consultation with the Services, that these substances are not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. The impacts of pesticides on our fish, wildlife and natural systems are pervasive and well documented. A U.S. Geological Survey study of United States waters found one or more pesticides in almost every stream sample collected. Of the 83 pesticides analyzed by USGS, 74 were detected at least once in streams or groundwater. Among wildlife most at risk from pesticides are endangered and threatened species. In the Pacific Northwest for example, more than 20 species of salmon and steelhead have been affected, which in turn harms the salmon fishing industry and recreational fishermen. The same high levels of pesticides that harm fish threaten human health as well – watersheds that harbor protected salmon are also the source of drinking water for hundreds of communities..

Due to their failure to consult, EPA has been successfully sued at least 4 times and the courts have ordered EPA to consult with the Services. Despite these court orders, EPA has yet to successfully complete consultations on many of the involved pesticides and has ignored the protective measures required by the few consultations it has completed. The delay is now causing even industry groups to request that EPA initiate consultation in order to prevent future lawsuits, delays, and legal expenses.

EPA currently has sufficient funding to carry out its required consultation tasks. Based on EPA’s schedule, FWS has determined that it needs \$7 million annually to successfully complete the backlog of consultations as well as consultations on new chemicals. The Green Budget request is only a modest increase of \$2 million for FWS Endangered Species Consultation and Environmental Contaminants programs to begin to address the backlog. This funding is needed for FWS to cover the cost of hiring needed full time biologists to process consultations. NMFS received a \$3 million increase for all ESA consultation last fiscal year and such funding should be maintained. In addition, or, alternatively, adoption of a new fee under the Pesticide Registration Improvement Act would provide a pool of money to cover the Services’ consultation costs without adding any new federal spending.

ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROGRAMS AND MANAGEMENT

WaterSense

In 2006 the Bush Administration launched a voluntary water efficient product certification and labeling program called "WaterSense." It is modeled after the highly successful, universally recognized and sought after EnergyStar program. Three quarters of states anticipate local, regional or statewide water shortages by 2013, even under non-drought conditions. Water efficiency is the most cost-effective way to help local markets manage existing water supplies. Maintaining our water supply infrastructure is a major cost across the United States, and improving our water efficiency can lessen the stress and extend the lifespan of both drinking water treatment and wastewater treatment systems. The EPA estimates that if all U.S. households installed water-efficient appliances, the country would save more than 3 trillion gallons of water and reduce Americans' water and sewer bills by one-third, a savings of more than \$18 billion dollars per year. Funding WaterSense at a mere \$10 million would move us closer to the \$18 billion in savings.

The EPA has only a handful of individuals dedicated to the national WaterSense program; they are working with local water utilities, product manufacturers and retailers to encourage the use of water-efficient products and practices among individuals and developers. Additional funding will enhance specification development for products and create efficient testing protocols for new products while enabling the agency and associated partners to create a brand identity so consumers can easily identify water-efficient products, and help local utilities and retailers develop marketing and incentive programs.

Estuary Restoration Program

The Estuary Restoration Program is a comprehensive program for the restoration of our nation's estuaries, authorized through the Estuary Restoration Act. Among the most productive ecosystems on earth, estuaries provide vital habitat to fish and wildlife species, and important environmental, cultural, and recreational benefits to human populations. The Act encourages coordination among all levels of government, and engages the unique strengths of the public, non-profit, and private sectors. The Act ensures a strong federal commitment and resources to restore estuary habitat by authorizing \$2.5 million for the EPA (newly authorized under the Water Resources Development Act of 2007) for implementation of on-the-ground restoration projects.

National Estuary Program

Estuaries are vibrant coastal zones where saltwater meets freshwater, creating some of the most biologically productive areas on Earth. Started in 1987 under amendments to the Clean Water Act, the National Estuary Program protects and restores the nation's estuaries by creating partnerships with local communities. The program focuses not only on improving water quality in an estuary, but also on maintaining the integrity of the whole system – its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values. Since its inception, the program has grown to include twenty-eight programs across the country, but funding levels have stagnated.

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ENVIRONMENTAL PROGRAMS AND MANAGEMENT

Diesel Emissions Reduction Act Implementation

In the Energy Policy Act of 2005, Congress passed the Diesel Emissions Reduction Act (DERA), which authorized \$200 million in annual funding to clean up the nation's diesel trucks, buses, construction equipment, agricultural engines, and other diesel engines. Since then, tens of thousands of diesel engines have been replaced or retrofit with technologies that can reduce harmful particulate matter and/or nitrogen oxides emissions by more than 85 percent – and in some cases, by up to 99 percent. A November 2009 EPA Report to Congress estimated that EPA's FY 2008 grants, which totaled approximately \$50 million, will cut 2,200 tons of particulate matter; conserve 3.2 million gallons of fuel annually; save operators \$8 million annually (under the SmartWay Clean Diesel Finance Program); and generate up to \$30 in health benefits for every \$1 of federal investment. In the American Recovery and Reinvestment Act of 2009, Congress appropriated \$300 million for diesel retrofits. EPA received \$2 billion in grant applications, demonstrating the broad support and demand for additional diesel clean-up funds.

Energy Star

Energy Star is a partnership program between government and industry that identifies and labels energy-efficient products, equipment and buildings. It helps businesses, consumers, and state and local governments save money, protects the environment, saves energy and yields multiple other private and public benefits. EPA works with the Department of Energy (DOE) on the Energy Star program; DOE manages the specification process for approximately seven product categories and EPA manages the specification process for about 55 product categories, the new and existing homes programs, and the commercial and industrial programs. The Energy Star program continues to yield significant results. By providing clear information on which products and practices are energy efficient, Energy Star builds awareness of energy-savings opportunities, and provides recognition and support for organizations that are committed to energy efficiency. The Energy Star Program could accomplish even more with greater funding. Money is needed to add products, increase public outreach, work with more businesses, and expand state and local programs such as the Home Performance with Energy Star Program.

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LEAKING UNDERGROUND STORAGE TANK (LUST)

Leaking Underground Storage Tank (LUST)

In 1986, Congress established the Leaking Underground Storage Tank (LUST) Trust Fund to help the EPA states, and Indian tribes pay the costs of cleaning up leaking petroleum tanks when owners fail to do so, and to oversee LUST cleanup activities. The Trust Fund is financed by a 0.1 cent tax on each gallon of motor fuel sold nationwide. Congress and the administration have repeatedly failed to appropriate sufficient funds from the LUST Trust Fund to pay for cleanups needed leaving a Trust Fund. Unappropriated funds in the trust exceed \$3 billion and over \$100 million of new money comes into the Fund each year. Despite initial strides in addressing leaking petroleum underground storage tanks in the 1990s, a new problem emerged as the gasoline additive MTBE was detected at thousands of LUST sites and in numerous drinking water supplies. Even small amounts of MTBE can render water undrinkable due to its strong taste and odor. In the American Recovery and Reinvestment Act of 2009 (Recovery Act), Congress appropriated \$200 million from the LUST Trust Fund to EPA for cleaning up leaks from USTs. EPA allocated \$190.7 million to states and territories in assistance agreements to address shovel ready sites within their jurisdictions; \$6.3 million for site assessment and cleanup activities in Indian country.

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SUPERFUND

Superfund

The Superfund program was created in 1980 to locate, investigate, and clean up the worst hazardous and toxic sites nationwide. As a mature program, most remaining sites are now in the construction phase of cleanup where steady and adequate funding is necessary. The EPA Inspector General (IG) and others have documented a significant and growing funding shortfall over the past several years. This shortfall is exacerbated by the bankruptcy of the Superfund Trust Fund. In 2003, the Superfund Trust ran out of polluter-contributed funds because Congress had refused to renew the polluter pays tax on the oil and chemical industries that formerly funded cleanups. American taxpayers should not shoulder the costs of all Superfund-led cleanup. The 2009 Stimulus Legislation appropriated an additional \$600 million for cleanups 44 sites benefited from the additional ARRA spending. Property values in many communities will suffer if funding for hazardous waste cleanup is deferred because of budget cuts. In FY10, Superfund received \$1.27 billion.

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STATE AND TRIBAL ASSISTANCE GRANTS

State Revolving Funds

With the passage of the Clean Water Act more than 30 years ago, Congress made a financial commitment to protecting and improving water quality initially through a grant program and later in 1987 through the establishment of the “state revolving loan fund” (SRF), offering grants and low-interest revolving loans to municipalities for construction of wastewater treatment systems. In 1996 the Safe Drinking Water Act created another state revolving fund for drinking water treatment and protection of surface water and groundwater supply areas. There is also a 2 percent set-aside for Indian tribes under each SRF to conduct the same types of activities accorded to states.

The Green Reserve created in the American Recovery and Reinvestment Act and extended in the FY10 Interior Appropriations bill needs to be continued. This reserve fund allocates at least twenty percent of the funds appropriated for the SRFs for green projects such as green roofs, restoration of natural hydrology to a site, water efficiency and environmentally innovative projects that meet the goals of the Clean Water Act. These green solutions to water pollution and water scarcity reduce non-point source pollution, protect estuaries, prevent contamination of drinking source waters, reduce polluted runoff by protecting natural areas and are often more cost-effective than traditional pipe and cement options. These efficiencies return economic advantages to the water utilities and the customers in lower long-term costs.

The restoration of capitalization funding in FY10 by the federal government was a needed investment in efforts to clean up the nation’s water sources and to upgrade our drinking water systems. Unfortunately, that funding is only a step in the right direction in order to rebuild our failing water infrastructure. Recent studies have shown that communities will need an estimated \$300 billion to \$1 trillion over the next 20 years just to repair, replace, or upgrade aging drinking water and wastewater facilities to modern standards. Meanwhile, the EPA projects that there will be a \$535 billion shortfall in financing these projects over that period which will lead to increased sewer failures, interruptions in the dependable water supply and increased health risks. Beyond that a new study by the National Association of Clean Water Agencies and the Association of Metropolitan Water Agencies estimates that an additional \$448-944 billion will be needed by water and wastewater utilities to adapt to the impacts of climate change.

Funding cuts in the Clean Water and Drinking Water SRFs also impact Indian tribes, which as noted above, currently rely upon a 2 percent set-aside under each of these funds. According to the Indian Health Service (IHS), more than 12 percent of tribal homes lack access to sanitation infrastructure and safe drinking water, whereas less than one percent of homes nationwide suffer the same fate. The EPA recognizes this issue as well based on its 2006-2011 Strategic Plan under which the Agency established a 2015 target for both achieving a 50 percent reduction in the number of tribal homes with inadequate wastewater, and a 50 percent reduction in the number of tribal homes without access to safe drinking water. To meet these goals, the annual amount of the set-asides through 2015 would need to be at least \$13.7 million and \$19.95 million respectively, with such amounts highly dependent upon the overall funding levels of the Clean Water and Drinking Water SRFs. Thus far, such funding levels have been too low to meet EPA’s goals with respect to tribes. Therefore, we recommend that the tribal set-aside be raised to 3% from the present 2%.

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STATE AND TRIBAL ASSISTANCE GRANTS

Unfortunately, the problem of providing Indian tribes with adequate sewage systems and safe drinking water is greater than noted above. With respect to the latter issue alone, IHS notes that there is a backlog of more than 3,300 sanitation facility construction projects on tribal lands due to the lack of available funding. To address these projects and to ultimately provide all tribal homes with adequate sewage systems and safe drinking water, IHS estimates the cost would be almost \$2.9 billion. As such, at least a 3 percent set-aside for tribes under each SRF is warranted.

Proper maintenance of the tens of thousands of public drinking water systems around the country is critical to protect the health and wellbeing of families and communities nationwide. A greater investment is needed in order to ensure that our waters are fishable, swimmable and drinkable. Cuts in these two programs either reduce employment for needed infrastructure jobs or place a significant unexpected financial burden on local government and water customers.

Brownfield Program

The Brownfields Revitalization Act was signed into law in 2002, providing a framework to clean up lightly contaminated properties and restore them for more widespread use. The program has the potential to turn unusable areas into engines of prosperity and positive local development. Despite broad support from many stakeholders including the U.S. Conference of Mayors, the National Association of Development Organizations, and the National Association of Industrial and Office Properties, the program has continued to struggle with a lack of funding. Many highly contaminated Brownfield sites are cleaned up under the Leaking Underground Storage Trust Fund. Receiving \$100 million in FY10, an increase will lead to more jobs and better use of existing infrastructure.

Sustainable Communities Program

The Sustainable Communities program, formally known as EPA's Smart Growth program, is operated through the Development, Community, and Environment division within the Office of Policy, of the EPA. It provides critical technical assistance, funding, and research to communities on sustainable development practices that benefit the economy and the environment. Since its inception 10 years ago, the office has provided direct assistance to more than 200 communities and released more than a 20 reports on sustainable development. The Sustainable Communities program is the leading office at EPA working with HUD, USDOT, and other agencies on the Sustainable Communities Partnership, which is designed to better coordinate federal policies and programs to support more energy efficient and economically viable development.

Non-Point Source Management Program, Clean Water Act Section 319

The damage caused by non-point source pollution includes degradation of wildlife habitat and aquatic life, contamination of drinking water, beach and swimming area closures, lost recreational opportunities, fish kills, aesthetic degradation of waterways, and many other severe environmental and human health problems. The Section 319 Non-point Source Management

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Program provides grant money that states, territories, and Indian tribes can use for a wide variety of non-point source pollution reduction activities including technical and financial assistance, education, training, technology transfer, demonstration projects, and monitoring. Funding Section 319 programs at \$220 million will help ensure that non-point pollution is reduced and drinking water sources and critical habitat is protected.

In the case of Indian tribes, less than 10 percent have EPA-approved water quality standards in comparison to 96 percent of states. It is these standards which enable tribes to effectively engage in water pollution control activities, and with a statutory cap on the tribal set-aside for Section 319 funding being one-third of one percent, tribal demand for project monies often exceeds available funds. To help address this problem, the Agency should increase the set-aside to at least 2 percent so as to help increase the number of tribes able to develop their own water quality standards and engage in other projects as allowed for under Section 319.

Total Maximum Daily Loads - Pollution Control – Section 106

The establishment of Total Maximum Daily Loads (TMDLs) under section 303(d) of the Clean Water Act is a sensible and necessary step in accounting for the range of activities and sources that damage and threaten water quality. TMDLs allow states and the Environmental Protection Agency (EPA) to identify all sources of water quality impairment to rivers, streams and lakes that do not meet water quality standards, develop specific goals for improvement, and design plans to reduce pollutant loads into receiving water bodies. TMDLs must be developed in a way that is consistent with the Clean Water Act, is compatible with related water quality programs and regulatory processes, and leads to real improvements, rather than more paperwork and delay. The development of strong TMDLs by the states requires a commitment of adequate resources, for FY 12, \$230 million, to state water quality program management.

CATEGORICAL GRANTS

Our nation's federal environmental laws are mainly enforced by the states, not federal employees. State environmental agencies are responsible for implementing nearly all of the core environmental laws that protect public health and our environment. According to the Environmental Council of the States (ECOS), by 1992, EPA had delegated 40% of the federal programs to the states, by 2007, 96% of these programs had been delegated to the states.

Categorical grants to the states are important in making this delegation possible. States also enforce and regulate their own programs that address state-specific needs. Every state is allowed to formulate and implement more stringent laws than the federal laws, and every state has done that in at least one media. For instance, South Carolina requires reporting on twice as many toxic air pollutants as the federal government.

The core environmental protection activities required by federal (and state) law include permitting, inspections, enforcement, monitoring, standard setting, site cleanup and more. ECOS data shows that states conduct 97% of the inspections at regulated facilities; provide 94% of the data in EPA's six major databases; conduct over 90% of all enforcement actions; and are the first

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responders at spills, cleanups, and natural disasters, with EPA providing most of the remaining work.

To fund these activities, Congress provides assistance to states primarily through State and Tribal Assistance Grants (STAG). State environmental agencies have successfully leveraged funding to support those programs to the point where Federal funding has been reduced to about one-third of the cost of program's operation. While the grants have been stagnated since 2009, states' needs have grown as they have been forced to limit their contributions to these programs due to reduced state budgets. According to EPA, during the period 2001-2009, inflation was about 24% but Categorical Grants rose by only 11%, resulting in a decrease of 13% in purchasing power. Without sufficient funds, states have the option of turning over permitting and enforcement to the federal government. Such a change will inevitably delay permit issuance and decrease inspections and compliance assistance.

BEACH Act Grant Program

Our nation's public beaches are popular destination spots for recreation. The local economies of many coastal communities depend largely on clean and healthy beaches for use by residents and tourists alike. Unfortunately, many of our nation's public beach waters are polluted with bacteria and viruses that can make swimmers ill. Polluted urban stormwater, sewage spills and combined sewer overflows are the major sources of beach water pollution. The number of closing and advisory days at ocean, bay and Great Lakes beaches topped 18,000 for the fifth consecutive year. In 2000, Congress unanimously passed the Beaches Environmental Assessment and Coastal Health Act. The BEACH Act established a grant program for beach water testing and public notification programs. Regular information about beach water quality protects the health of beach-goers and consequently the vitality of coastal, tourism-based economies. Unfortunately, perennial underfunding has prevented full state and tribal implementation, and has left public health at risk in many instances.

Tribal Air Quality Management

Section 301(d) of the 1990 Amendments to the Clean Air Act (CAA) authorized the U.S. Environmental Protection Agency (EPA) to treat Indian tribes "as States" under the Act, and required the Agency to issue a rule specifying the provisions of the Act for which it was appropriate to treat tribes as states. The EPA complied with this requirement in February of 1998 by finalizing the Tribal Authority Rule (TAR), which stipulates that tribes may be treated in a manner similar to states for virtually all provisions of the CAA. Tribes are not only eligible for section 103 grant funding to conduct air quality monitoring, emissions inventories, and other studies and assessments, but they may also obtain section 105 grant funding to implement CAA regulatory programs.

In anticipation of the TAR, the EPA increased its tribal air grant funding during a time when few Indian tribes were conducting air-related activities. This funding, however, remained relatively flat during the next 10 years, specifically between a range of \$10.7 million and \$12.1 million, until the Obama Administration increased the funding to \$13.3 million for FY09 and FY10. At

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the same time, the number of tribes seeking 103 and 105 grant funding has substantially increased to the point that any carryover of tribal air funding from previous years has now been exhausted. The EPA and its regional offices are now being forced to turn away a number of tribes for 103 and 105 grant funding requests. Tribes, however, are facing many of the same air-related issues that neighboring state and local jurisdictions are facing, but are significantly underfunded to address such issues.

Tribal air grant funding must therefore be increased to more accurately reflect the air quality-related needs of Indian tribes. This funding is needed for core air quality management program development and operation important to tribes, such as for work on national ambient air quality standards, toxics, indoor air quality and regional haze. Funding is also needed for tribes to implement EPA's newer initiatives in climate change, renewable energy, energy efficiency, diesel retrofits, woodstove changeouts, carbon sequestration, human and ecosystem health-based research, and monitoring for critical loads.

Tribal General Assistance Program

The Indian General Assistance Program (IGAP) authorizes the U.S. Environmental Protection Agency (EPA) to provide grants to federally-recognized Indian tribes to assist them in planning, developing and establishing environmental protection programs. These grants are especially critical to Alaska Native villages which tend to lack other sources of funding to address their basic environmental needs.

In FY04, the enacted IGAP funding level was \$62.5 million, meaning that Indian tribes on an annual average received \$110,000 in grants, providing most tribes with a minimal level of environmental protection. Unfortunately, IGAP funding steadily decreased from that amount for several years until the Obama Administration restored it under the FY10 budget to a level of \$62.9 million. The cost of running a tribal environmental program has steadily increased over the past 15 years. In addition, some of these programs are now having to forego indirect cost allocations so as to dedicate enough funding to provide the aforementioned minimum level of environmental protection.

While the IGAP has been very successful in allowing Indian tribes to establish an environmental "presence," many of those involved with tribal programs have expressed a desire to be able to implement programs, not just research and educate their people about environmental issues. The purpose of the IGAP – i.e., help a tribe build capacity, define its needs, and then move onto other programs to create an overall sustainable environmental program – has simply not been met, either due to lack of funding for those other programs or other institutional barriers. As IGAP is the only environmental funding that many tribes have available to them, it is time to allow them to use the funding to address their needs beyond just building capacity and engage in program implementation.

Mindful of the cost of running tribal environmental programs, particularly based on the national economic situation, and the desire of Indian tribes to utilize IGAP funds for purposes beyond capacity building that include program implementation, the EPA should change its IGAP formula so as to provide each of the 564 federally-recognized tribes with \$175,000 annually.

ENVIRONMENTAL PROTECTION AGENCY

STATE AND TRIBAL ASSISTANCE GRANTS

Direct Implementation Tribal Cooperative Agreements

A means to help offset the limited dollars available to Indian tribes under the Indian General Assistance Program is the utilization of Direct Implementation Tribal Cooperative Agreements (DITCAs). These agreements allow tribes and intertribal consortia to help the EPA implement federal environmental programs for tribes. DITCAs were initially authorized in the FY 2001 Appropriations Act and must be approved on an annual basis by Congress. As such activities take place under federal authority, DITCAs do not trigger jurisdictional entanglements with other governmental bodies, sometimes a problem when tribes attempt to assert regulatory jurisdiction for their own programs. The DITCAs also provide environmental results and meet strategic targets prized by both tribes and the EPA.

Thus far, the EPA has awarded more than 20 DITCAs to Indian tribes to undertake such activities as Clean Air Act Title V permitting, development of smoke management plans, National Pollution Discharge Elimination System stormwater permitting compliance, water quality monitoring, public water system supervision, and the hiring of a tribal pesticide circuit rider. While there is a strong interest among tribes to enter into more DITCAs, they are constrained by the availability of resources to do so. Specifically, discretionary funding under the Environmental Program & Management account, and State and Tribal Assistance Grants has been the primary vehicle for DITCAs, meaning that such DITCAs must compete with a myriad of other Agency priorities. To assure a consistent level and source of funding for DITCAs, a separate budget set-aside should be established within the EPA.

Multimedia Tribal Implementation Grants Program

The Administration's FY11 budget request for the EPA included a new Multimedia Tribal Implementation Grants program to support on-the-ground implementation of environmental protection on tribal lands. This program would provide \$30 million for tribes to address their most pressing environmental needs, ensuring that tribal environmental priorities are adequately addressed. In addition, the Administration's FY11 budget request included \$2.9 million for tribal capacity building and implementation of this new grant program.

ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL EDUCATION

National Environmental Education Act Programs

The Environmental Protection Agency's Office of Environmental Education implements highly-leveraged, successful nationwide environmental education programs authorized by the National Environmental Education Act (NEEA - PL 101-619), the nation's first environmental education legislation that is still the only federal law devoted solely to environmental education. NEEA supports life-long education and environmental stewardship, helping to ensure that our citizens are environmentally literate and competitive in increasingly important environmental fields. The EPA's Office of Environmental Education supports several highly-leveraged, but under-resourced programs including the Environmental Education and Training Partnership, the National Environmental Education Foundation, an environmental education grant program, the Weather and the Environment program, the Health and the Environment program, National Public Lands Day, the Business and Environment program, Project Learning Tree, the National Audubon Society's education initiatives, and other efforts.

The EPA's environmental education programs have a notable track record of success and provide indispensable tools for teachers, museum staff, business leaders, health care professionals, meteorologists, and others responsible for educating young people, employees, and the public about the environment. Environmental education is increasingly critical as our nation moves towards a clean energy economy and addresses the challenges of global climate change. For Americans to be competitive in the 21st Century workforce, they must have an understanding of the environmental challenges and opportunities that impact our economy, health, and national security. While the benefits of and bi-partisan support for environmental education are well documented and continue to grow, the overall level of federal support for environmental education is woefully inadequate. In addition, these programs and environmental education more broadly has overwhelming public support. Fully 95 percent of American adults and 96 percent of parents support environmental education being taught in the schools according to an environment survey conducted by Roper Starch Worldwide. EPA's environmental education programs meet the highest standards for educational rigor and scientific accuracy.

While funding has remained flat for NEEA at \$9.0 million for several years, Congress has increasingly recognized the benefits of environmental education. In FY10 the Administration included \$9.0 million in the President's budget for the first time in several years and the House FY10 bill included \$10 million for the NEEA programs, while the Senate bill and final conference report kept the level at \$9.0 million. Congress has increasingly recognized the economic, educational, and environmental benefits of strong environmental education programs.

ENVIRONMENTAL PROTECTION AGENCY

NATIONAL ENVIRONMENTAL POLICY ACT

National Environmental Policy Act

The National Environmental Policy Act (NEPA) applies to all major federal actions that may significantly affect the environment. To comply with NEPA, agencies must assess and disclose the potential environmental effects of their actions in an Environmental Assessment or Environmental Impact Statement (EIS). The Environmental Protection Agency's (EPA) Office of Federal Activities is responsible for coordinating EPA's review of all EISs prepared by other Federal agencies, maintaining a national EIS filing system, and assuring that EPA is complying with NEPA in its own actions.

On average, EPA reviews and comments on approximately 500-600 EISs and several hundred environmental assessments annually. EPA makes these comments available to the public and allows for public input as well. Also, a major focus of effort growing within the EPA is their role in helping other agencies develop their EISs, including scoping and following up with an agency if concerns arise over a proposed project.

With the support of additional funding, EPA could increase collaboration efforts between itself and other Federal agencies in the beginning stages of NEPA implementation in order to address potential concerns and speed up the pre-construction process.

NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OIL SPILL RESPONSE AND RESTORATION

Gulf of Mexico Disaster Response Center Operations

In FY 10 Congress provided funding for a new Gulf of Mexico Disaster Response Center (DRC) in Mobile, Alabama. By the summer 2011, the DRC will be operational and become the scientific coordination center for the gulf coast region, serving as a premier coastal crisis support facility. The DRC will allow the National Oceanic and Atmospheric Administration (NOAA) to apply relevant coastal and maritime services to support emergency decision makers whether they are public health officials, on-scene coordinators, fire chiefs, emergency management directors, or national security officials. We recommend the amount of \$3 million in funding for operations and staffing at the new Center; a Center which would provide a hub for NOAA's emergency preparedness, response, and recovery operations.

Oil Spill Response Research, Development and Recovery

The BP Deepwater Horizon disaster has highlighted many gaps in response capability, as well as insufficient scientific and regulatory frameworks for post-disaster marine resource management. New and improved response tools and protocols are needed to increase the effectiveness of oil spill response and improve natural resource damage assessment, while setting the stage for long-term recovery of the Gulf marine ecosystem. Important research needs include the fate and effects of oil and other contaminants, evaluation of ecosystem impacts from different contaminants, the effectiveness of different response and restoration alternatives, and developing new methods for setting appropriate post-spill management goals. We recommend \$10 million in funding which could be provided through a competitive grants program within NOAA to fund multi-disciplinary marine science and engineering, marine policy, and social science aspects of oil spills. Partnerships with other research and development or management organizations, including the other NOAA line offices, USCG, EPA, BOEM, DOI, industry, and states would be an important aspect of this effort, as would be partnerships with other universities and non-governmental organizations with similar topical emphases. International partnerships would also be important. With increasing demands for offshore oil exploration and potential for substantial increases in maritime commerce, the Arctic is an area of heightened importance for oil spill research and development. The DRC in Mobile, Alabama could also be a forum for research and development.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE

Ocean, Coastal and Great Lakes Observations, Mapping and Infrastructure

Today, many changes occurring in the oceans, from sea level rise and coastal flooding to harmful algal blooms and dead zones, have profound effects on our society. At present, we do not fully understand the magnitude of these changes, their causes, and their consequences, which can make it difficult to adequately prepare for, manage, and adapt to future change. Furthermore, in light of the recent Gulf of Mexico oil spill, the need for ocean observations to understand and predict ocean conditions is even more evident.

In addition, the newly created executive National Ocean Council has listed ocean observing as one of its nine national priority objectives: “Ocean, Coastal, and Great Lakes Observations, Mapping, and Infrastructure: Strengthen and integrate federal and non-federal ocean observing systems, sensors, data collection platforms, data management, and mapping capabilities into a national system, and integrate that system into international observation efforts.” Given the political, economic, and environmental consequences of the Deepwater Horizon disaster and renewed momentum behind the President’s National Ocean Policy, federal agencies and Congress are poised to advance and strengthen ocean observing systems.

NOAA, along with other agencies and organizations, operate satellites, tide gauges, ocean buoys, and other observing systems to collect data to monitor these changes and describe the health and condition of our oceans and Great Lakes. However, current efforts only scratch the surface of what we need to know about our oceans and coasts to fully assess their impact on commerce and transportation, weather and climate, and ecosystems.

The Integrated Ocean Observing System (IOOS) is a coordinated network of people and technology that work together to generate and disseminate continuous data on our coastal waters, Great Lakes, and oceans. By collecting and bringing data together in a way that ensures the information can be used with other data sets, IOOS will make a broader suite of data available to scientists, allowing them to develop a more complete characterization of our oceans and coasts. IOOS is a major shift in the nation’s approach to ocean observing, drawing together many networks of disparate, federal and non-federal observing systems to produce data, information, and products at the scales needed to support decision making. Once complete, IOOS will be a nationally important infrastructure enabling many different users to monitor and predict changes in coastal and ocean environments and ecosystems. This infrastructure is critical to understand, respond, and adapt to the effects of severe weather, global-to-regional climate variability, and natural hazards.

The Integrated Ocean Observing System (IOOS) is a federal, regional and private-sector partnership working to enhance the ability to collect, deliver and use ocean information. IOOS delivers the data and information needed to increase understanding of our oceans and coasts, so decision makers can act to improve safety, enhance the economy and protect the environment. IOOS regional programs from the Gulf Coast, Southeast, mid-Atlantic, Northeast, Southern California and Northwest regions as well as the U.S. Navy are participating in the oil spill response.

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There are executive and legislative policy drivers for fully funding IOOS. The President's Ocean Policy Task Force officially recommended that the National Ocean Council strengthen and integrate Federal and non-Federal ocean observing systems, sensors, data collection platforms, data management, and mapping capabilities into a national system, and integrate that system into international observation efforts. The Integrated Coastal and Ocean Observing Systems Act (ICOOS Act) passed in early March 2009. Under the ICOOS Act, NOAA IOOS, the Regional Associations, and the Interagency Ocean Observing Committee have responsibilities including, but not exclusively:

- Establish an IOOS office within NOAA;
- Conduct an annual process to define observing gaps;
- Lead a merit-based competitive funding process to support non-federal assets;
- Implement a public education and outreach program to improve awareness of global climate change and effects on the ocean, coasts and Great Lakes;
- Establish protocols for Data Management and Communications;
- Recommend revisions to the System Plan;
- Ensure collaboration among federal agencies.

Overall, NOAA IOOS was appropriated \$33.5 million in FY 10 and the program requested an increase to receive \$40 million in FY 11. \$40 million is recommended in FY 12 to continue to support Regional and National IOOS.

\$34.5 million will support continued operation of the national network of eleven regional coastal ocean observing systems that provide up-to-date information on our oceans, coasts and Great Lakes to those who depend on that information for their lives and livelihoods. This investment will ensure information continues to support safe and efficient marine operations, preparations and mitigation from coastal hazards, public health and health ecosystems. In addition, the investment will help "response-ready" regions prepare to aid and respond to emergencies. \$6.5 million is requested for national IOOS to expand the data integration and modeling capacities.

Coral Reef Conservation Program

Tropical coral reefs are often called the "rainforests of the sea" given that they possess 25% of the biodiversity found in the oceans. Coral reefs are among Earth's oldest communities and take thousands of years to grow into magnificent habitats. Coral reefs provide essential habitat for other marine animals enabling these species to hide from predators and to feed, spawn and develop. Coral reefs also play important roles in the protection of coastlines from storms and support coastal economies through recreation and tourism. Coral reefs are estimated to provide \$375 billion in environmental and economic services.¹

However, tropical corals face many threats including damaging fishing practices, harmful land-based pollution, vessel groundings and anchor damage, overuse of reef resources, and climate

¹ Costanza, R., et al. The value of the world's ecosystem services and natural capital. *Nature* **387**, 253-260 (1997).

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change impacts such as ocean acidification and sea level rise. Recent science regarding the threat of ocean acidification to corals, extended episodes of coral bleaching, and the listing of coral species as threatened under the Endangered Species Act, illustrate a dire need for managers to better understand and protect these resources.

NOAA's Coral Reef Conservation Program, with the U.S. Coral Reef Task Force, focuses on improving the understanding of tropical coral reef ecosystems and minimizing the threats to their health and viability. As corals continue to face a multitude of threats including climate change impacts, destructive fishing practices, and land-based pollution (key threats prioritized by the program), it becomes even more apparent the need to adequately fund this conservation program.

A modest increase of \$3 million over FY 10 enacted funding would allow for the program to enhance current initiatives and develop new ones. These initiatives include combating land-based sources of pollution; researching and identifying the effects marine protected areas have on coral reef ecosystems; monitoring and forecasting ocean acidification and coral bleaching impacts; expanding international coordination; continuing shallow water coral habitat mapping; and improving program management.

Damage Assessment, Remediation, and Restoration Program

Through NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP), the agency acts on behalf of the public to assess, remediate, and restore coastal and marine resources injured by oil spills, hazardous substance releases, and physical impacts such as ship groundings. Since 1989, NOAA has restored over 6,300 habitat acres and helped clean up over 500 waste sites. Current funding levels are not sufficient to enable NOAA to continue to properly respond to the many coastal areas damaged by oil spills and hazardous waste sites. NOAA effectively holds responsible parties liable for damages to the natural resources. Over the past 15 years, the program and its partners have collected nearly \$500 million in settlements for restoration projects such as removing river blockages, creating oyster reefs, restoring oiled wetlands, and reattaching broken coral. Funding for DARRP provides support for the up-front environmental assessment process and short-term restoration needs while NOAA works to settle each case.

Most recently, the DARRP program has been under a heavy strain since the beginning of the Gulf of Mexico oil spill, given the geographic scale of the spill, its duration, the variety of habitats and resources impacted, the number of co-trustee agencies involved, and the very high public, media and political interest. DARRP has played a critical role in quickly responding on-scene and organizing co-trustees in five states and six federal agencies to collect pre and post spill data to document oiling of the public's resources. This has required most DARRP staff nationwide to be relocated/redirected to work on the spill for significant portions of their time –many are full time on the spill. This redirection of staff will continue well into the future, causing delays in moving Natural Resource Damage Assessment (NRDA) cases nationwide, especially in the Gulf where state and federal co-trustee staff are similarly diverted. With the spill capped, the most important work remains, i.e., proving and quantifying injuries (how much was lost) and choosing and

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scaling restoration projects. This will be a labor-intensive, highly technical, high profile and potentially contentious effort that will likely continue for several years. An increase of \$1.7 million for a total of \$11.0 million is recommended in FY 12 as a modest step to hire additional staff to conduct a full assessment and restoration for this historic spill.

Estuary Restoration Program

The Estuary Restoration Program is a comprehensive interagency program for the restoration of our nation's estuaries, authorized through the Estuary Restoration Act. Among the most productive ecosystems on earth, estuaries provide vital habitat to fish and wildlife species, and important environmental, cultural, and recreational benefits to human populations. The Act encourages coordination among all levels of government, and engages the unique strengths of the public, non-profit, and private sectors.

The Act ensures a strong federal commitment and resources to restore estuary habitat by authorizing \$4 million for NOAA, which includes \$2.5 million for implementation of on-the-ground restoration projects and \$1.5 million for the acquisition, maintenance, and management of monitoring data on restoration projects. A slight increase of \$1.0 million for a total of \$4 million is recommended in FY 12 to enhance the ability of NOAA to conduct additional on-the-ground restoration projects.

Marine Debris

Marine debris has become one of the most widespread pollution problems facing the world's oceans and waterways. Research has demonstrated that persistent debris has serious effects on the marine environment, marine wildlife, the economy, as well as human health and safety. Marine debris in its various forms, including derelict fishing gear and plastics, causes wildlife entanglement and ghost fishing, destruction of habitat (including the breaking and smothering of corals), and is ingested by wildlife. In addition, it presents navigational hazards, causes vessel damage, and pollutes coastal and marine areas. Reported deaths of endangered and threatened seals, sea turtles, and seabirds from marine debris continue to grow and bring to light the urgency of immediate action to control this pernicious form of pollution. The oceans are vital to our survival, and marine debris is threatening their overall health.

The NOAA Marine Debris Program (MDP), mandated by the Marine Debris Research, Prevention, and Reduction Act in 2006, has an important role in addressing marine debris affecting the ocean and coastal environment in the U.S. In accordance with this legislation, the MDP conducts reduction, prevention, and research activities, as well as supports grants, partnerships, and contracts to address marine debris. While the quantity of marine debris in our oceans has steadily increased, funding for NOAA's MDP has remained well below the authorized level of \$10 million. An increase of \$1 million for a total of \$5 million is recommended in FY 12 as a modest step towards reaching the authorized level of \$10 million needed to adequately fund this program. Additional resources are needed to enhance the ability of NOAA to assess the

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amount, sources, and impacts of marine debris; maintain support to current removal projects; develop management practices; reduce derelict fishing gear; and conduct education and outreach measures to prevent future occurrences.

Coastal Zone Management Grants

For more than thirty years, the Coastal Zone Management Program has helped states to manage the nation's coasts, islands, and Great Lakes. This innovative partnership offers an effective mechanism for federal and state managers to address important national coastal objectives. It has resulted in the establishment of 34 coastal management programs, which have reduced environmental impacts of coastal developments, resolved significant conflicts between competing coastal uses, and provided critical assistance to local governments in coastal planning. States are empowered by the Coastal Zone Management Act (CZMA) to make their own management decisions, and all federal activities within a state's coastal zone must comply with the state plan once it is approved at the federal level. The CZMA is a true financial partnership, with each federal dollar matched by a state dollar and often leveraged for additional funds from local and private investment. In regionally advancing Coastal and Marine Spatial Planning (CMSP), the CZMA serves as a proactive tool to link land-based activities with CMSP planning efforts and to coordinate with existing state policies and activities. The Coastal Zone Management Program was funded at \$67.5 million in FY 10. A modest \$70 million is recommended for the program in FY 12 as a step towards adequately funding it at \$91 million.

National Estuarine Research Reserve System

The National Estuarine Research Reserve System (NERRS) is a network of protected areas established for long term research, education, training, and stewardship. Through an effective partnership between NOAA and coastal states, the NERRS plays a critical role in sustaining resilient coasts and coastal communities. The reserves conduct research, monitoring, restoration, education, and training designed to improve our understanding and management of estuaries. There are currently 27 reserves, many of which are in small towns along the coasts of 22 states.

Additional funding is essential to support local research, education, and training programs, and collaborative research and technology development to support coastal managers. An increase of \$9.5 million for a total of \$33.0 million is recommended for NERRS in order to support local research, education, and training programs, and collaborative research and technology development to support coastal managers. In addition, NERRS Construction and Acquisition funding is critical to maintain, upgrade, and construct facilities and acquire priority lands for conservation. An increase of \$11.1 million for a total of \$15 million is recommended to allow for expansion of the NERRS to new estuaries in Wisconsin and Connecticut. In addition, this funding will also be used to maintain operations at five Gulf coast reserves, each of which will be heavily focused on research and recovery from the Gulf of Mexico oil spill.

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Marine Protected Areas Program

Marine protected areas (MPAs) are an important tool for maintaining marine biological diversity, protecting ocean habitats, and managing marine resources (including fisheries). They also provide opportunities for scientific research, education, and recreation when compatible with the objectives of the MPA. The National Marine Protected Areas Center was established within NOAA to undertake the essential task of developing an integrated national system of MPAs which advances the conservation of our nation's vital natural and cultural marine resources. Currently, 250 areas have been included in the national system of MPAs which is comprised of federal, state and territorial marine protected areas. Appropriated funding has been inadequate to implement an effective national system of MPAs. The MPA Center must have its funding restored to 2004 levels to adequately support MPA Center functions, advance stewardship and science initiatives, allow for scientific analysis to understand and demonstrate existing marine protected area benefits, identify gaps for additional protection, and increase public participation. The MPA Center is also leading the effort to develop methodologies to collect standardized data on human uses of the ocean in a spatially explicit format, including consumptive, non-consumptive, military and industrial uses, which will inform future ocean planning and management. The FY 10 enacted funding level was \$3.0 million. The program's needs exceed both the amount it receives as well as our recommendation of \$4.0 million (which is still less than FY 2004 funding levels). Specifically, this funding level will specifically allow for necessary research and management to better fulfill the executive mandate of a national system of MPAs and to best plan for future ocean management.

Marine Sanctuaries Program

NOAA's Office of National Marine Sanctuaries (ONMS) manages 14 marine protected areas, including 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument, that encompass more than 150,000 square miles of ocean and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. Our National Marine Sanctuary System protects vibrant ocean ecosystems such as coral reefs and kelp forests, conserves essential habitat for endangered and commercially-important marine species, and safeguards historically significant shipwrecks and cultural resources. Ranging in size from less than one square mile to 137,792 square miles, each sanctuary site is a unique place needing special protections.

Providing stable and sufficient appropriations for ONMS will ensure that sanctuaries can continue to directly benefit communities from coast to coast through cutting-edge research initiatives, meaningful public education programs, essential community partnerships, and sustainable management of activities affecting sanctuaries. Furthermore, sufficiently investing in national marine sanctuaries will continue to produce wide-ranging economic benefits: recreation and tourism centered in the Florida Keys National Marine Sanctuary supported 32,000 jobs and \$2.23 billion in economic activity during the 2007-2008 season alone.

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Allocating adequate resources to ONMS will enable the National Marine Sanctuary System to meet new challenges while fulfilling its existing responsibilities. Increased funding will help reverse recent reductions in visitor center hours, elimination of research programs, and diminishing enforcement capacities, ensuring that ONMS can fulfill its important statutory mandates.

A more robust budget, at just \$10 million over current enacted funding level, will allow ONMS to finalize overdue management plans and effectively maintain and utilize important assets needed for sanctuary management. For example, Congress recently provided resources for acquisition of the vessel R/V Manta to enhance management of the Flower Garden Banks National Marine Sanctuary – an area of vital importance to our nation’s energy security and economy – but that vessel has been largely inactive due to a lack of funding for fuel and operations. A projected 10% reduction in FY 11 vessel days-at-sea – the result of chronic underfunding – has negatively impacted university, state, and Federal partnerships in all sanctuaries, and the System continues to struggle with a 177% increase in operations and maintenance costs since 2003. Minimally, extending funding levels from FY 10 will maintain continuation of base science, education and conservation activities of the program.

Coastal and Estuarine Land Conservation Program

According to NOAA, coastal counties constitute only 17 percent of the nation's land area, but account for 53 percent of its population. This longstanding trend has led to intense development pressure along our once-pristine coastlines. In response, Congress created the Coastal and Estuarine Land Conservation Program (CELCP) in 2002 to provide state and local governments with matching funds to protect significant coastal and estuarine areas. Since the program's inception, CELCP has proven to be an integral coastal conservation tool. To date, Congress has appropriated over \$255 million for CELCP. This funding has allowed for the completion of more than 150 conservation projects in 28 of the nation's 35 coastal states and territories and has preserved upwards of 50,000 acres of threatened coastal habitat.

In March 2009, the CELCP program was formally authorized by Congress to receive up to \$60 million annually as part of the Omnibus Public Lands Management Act. The authorization bill also makes it a requirement that at least 15 percent of appropriated funds be available to those projects that benefit National Estuarine Research Reserves. The CELCP program is leveraged by at least an equal amount of non-federal funds, which demonstrates the program's broad appeal and effective application by state and local governments. In FY 11, requests for over \$71 million for 43 proposals from 24 states were entered into the national competition. While the program received \$20.0 million in FY 10, an increase of \$10.0 million for a total of \$30.0 million is recommended in FY12 as a modest step toward meeting the demand of this popular program.

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Marine Mammals

Marine mammals are managed primarily by the National Marine Fisheries Service (NMFS) and all marine mammals are protected under the Marine Mammal Protection Act. There are 13 domestic species of marine mammals protected under the Endangered Species Act. NMFS's research and management programs carry out critical stock assessments to determine abundance of species, study the impacts of ocean noise and sonar on marine mammals, and work with the shipping industry, fishing industry, citizen groups, and others to reduce user conflicts with marine mammals.

In light of the Gulf of Mexico oil spill, it is even more imperative that the marine mammal program receive increased funding. 25 species of marine mammals are found in the Gulf and as of August 3, 2010, 69 marine mammals have been found injured or dead. The full impact of the spill may never be known because of lack of good baseline information on marine mammal populations in the Gulf of Mexico. Increased funding is needed for updated stock assessments and research cruises, determining impacts of the oil spill, fishery bycatch monitoring and reporting, research on avoidance and bycatch reduction techniques, the formation of take reduction teams, and implementation and enforcement of conservation measures for marine mammals. It is highly questionable whether NOAA can continue to meet legal requirements with continued budget cuts that jeopardize the survival of imperiled marine mammals.

The marine mammal program was funded at \$49.5 million in FY 10. In order to continue work to reduce bycatch in commercial fisheries as well as research needs, this program needs \$5 million more than FY 10 levels.

Marine Turtles

All six sea turtles species that swim in U.S. waters are listed as endangered or threatened under the Endangered Species Act, yet populations of sea turtles continue to decline. Sea turtles are managed on land by the U.S. Fish and Wildlife Service and while at sea by the National Marine Fisheries Service (NMFS), yet conservation efforts are hampered by inadequate scientific information about the various sea turtle species, including a lack of understanding of the cumulative impact of all authorized takes on sea turtle populations.

Since the BP Deepwater Horizon disaster, five sea turtle species have been exposed to surface oil, chemical dispersants and subsea oil plumes. While as of August 30, 2010, a shocking 1,086 sea turtles have been found injured or dead, and it is still unclear what the long term impact of the spill will be on marine turtles. Gulf fisheries continue to interact with these protected species, and better conservation programs are needed to ensure that their populations can rebound after this disaster. In addition to the spill, NMFS allows thousands of sea turtles to be killed annually by destructive fishing gear. Additional resources are needed to conduct enhanced sea turtles stock assessments, place fisheries observers to document turtle bycatch in state and federal fisheries, develop and implement bycatch mitigation methods and protect important habitat.

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The sea turtle program was funded at \$14.5 million in FY 10 which is well below the current need to carry out duties of this program including implementing the recovery plans to help rebuild all six species of sea turtles. An increase of \$5 million above current levels would provide the NMFS with the resource to improve science, management and conservation of sea turtles.

Hawaiian Monk Seal

Hawaiian monk seals are one of the most endangered marine mammals and the only tropical seal in the world. Additionally, the Hawaiian monk seal is the only marine mammal whose entire distribution range lies within the jurisdiction of the United States. Over the last 50 years, the Hawaiian monk seal population has declined by more than 60% and is now at its lowest level in recorded history, with around 1,100 individuals remaining. Human and environmental factors contributing to the decline include habitat loss, shark predation, entanglement in marine debris, and human disturbance. Adequate and sustained management is needed to mitigate these threats as outlined in NOAA's Hawaiian Monk Seal Recovery Plan (2007).

For example, maintaining funding at the FY 10 level of \$5.5 million is needed for NOAA to continue public outreach and education efforts to improve understanding of the species and prevent negative interactions, thereby increasing the seal's chances for survival. Sustained funding would also sustain essential research and species recovery activities. The *Recovery Plan* identifies funding needs at \$36 million over five years.

Highly Migratory Species

Little attention has been paid to Gulf of Mexico shark populations in the wake of the BP Deepwater Horizon oil disaster. However, several stocks of these highly migratory species are overfished and/or experiencing overfishing. The directed fishery also interacts with additional shark species of concern. An investment of \$2.0 million in new conservation and management programs, along with better data collection and monitoring, would improve the environmental performance of the fishery while getting NOAA closer to its goal of ending overfishing.

National Catch Share Program

Effective fisheries management is fundamental to protecting and restoring the health of the public's fishery resources. Catch share fisheries management can restore depleted fisheries. FY 12 funding at the President's requested level of \$54.0 million is needed to ensure that the transition to catch shares in key fisheries around the country is successful for restoring vibrant fisheries and coastal communities, including New England groundfish, Pacific groundfish, and Gulf of Mexico reef fish. Catch share programs can also help speed the recovery of Gulf fisheries and communities affected by the BP oil disaster.

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Expand Annual Stock Assessments (EASA)

The expanded requirements of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA) for Annual Catch Limits (ACL) in all U.S. fisheries increase the need for timely, reliable fisheries data and stock assessments compared to past years. Quantitative stock assessments provide the scientific and technical basis for setting numerical catch limits that avoid overfishing. Absent significant new funding for stock assessment development, many fishery ACLs will be determined without assessments or using assessments that are infrequently updated. Without a current knowledge base and more data, fishery managers will have to set ACLs lower to account for the high degree of uncertainty in estimates. Thus, funding to improve stock assessments increases certainty and therefore may allow increased fishing opportunities. Additionally, a major priority in responding to the Gulf of Mexico oil spill is for fishery stock assessments to determine the impact on fish stocks and response needed. The spill also highlighted the need to have robust baseline stock assessments in place before a disaster occurs, so that they may serve as a benchmark for setting appropriate post-spill management goals.

The Omnibus Appropriations Act of 2009 funded this program at NOAA's requested FY 10 level of \$50.9 million, and the President's FY 12 budget requests a significant increase of \$51.4 million over the FY 10 funding level. Increased investments are needed to achieve the agency's goal of developing stock assessments for all 230 major stocks in the Fish Stock Sustainability Index (FSSI).² Additional increases in funding will be needed in future years for the following reasons: (1) based on analysis in the NOAA budget request from recent years, only 128 of the 230 major stocks in the FSSI were considered to have adequate assessments in 2007; (2) personal communications with NMFS scientists indicate that it costs approximately \$1 million per stock assessment; and (3) it will take approximately \$100 million in additional funding to develop assessments for all 230 FSSI stocks. NOAA's own analysis indicates that the number of major stocks with adequate assessments would increase only marginally over five years to 2014 with recent funding levels and that less than 60% of the 230 stocks in the FSSI would have adequate assessments through FY 2014 if funding remains level at the requested amount.³ The President's FY 12 request of \$67.1 million for expanded stock assessment development will provide critically needed resources to ramp up the capacity toward the goal of providing stock assessments for all 230 major fishery stocks, which will also provide important benchmarks for setting appropriate post-spill management goals in the Gulf of Mexico fisheries.

Because science-based catch limits are crucial investments in the long-term sustainability of recreational and commercial fisheries, the President's request for an appropriation of \$67.1 million to expand annual stock assessments is an important step forward and is recommended in FY 12.

² The 230 FSSI stocks represent less than half of the stocks reported to Congress annually but comprise a large (>90%) share of the total annual U.S. catch.

³ See NOAA FY 10 President's Request, Submission to Congress, Exhibit 13, pp. 215-217.

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Fisheries Statistics

The President's FY 12 budget requests \$24.4 million for the Fisheries Statistics line, an increase of \$3 million over the FY 10 enacted level. The increased funding is intended for the Marine Recreational Information Program (MRIP), the new and improved national data collection program for recreational saltwater fisheries that is intended to address the shortcomings identified in a 2004 review of existing recreational data collection programs by the National Research Council (NRC). In response to this NRC review and new provisions in the reauthorized Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, NMFS has launched a number of pilot studies to test new recreational fisheries survey methods and is also completing the implementation of a new saltwater angler registry. Additional funding will be necessary to complete the pilot studies and implement new sampling methodologies that will improve the precision and timeliness of recreational catch statistics for use in fishery management. Many of the current survey programs currently collect survey data in waves at 2 month intervals but, in some fisheries, there is pressure to move to monthly wave frequency in order to manage recreational fisheries to an annual catch limit closer to real-time. Funding would also bring recreational fisheries management into the 21st century by supporting the rollout of electronic reporting programs. MRIP was funded at a level of approximately \$9 million in FY 10, through the Fisheries Statistics and the Fisheries Research and Management Programs lines. NMFS has indicated that approximately \$20 million is needed to fully implement the program, and the Fisheries Statistics line has been identified as the appropriate line for additional funding for MRIP. The President's FY 12 budget requests a funding level of \$24.4 million for Fisheries Statistics, reflecting an increase of \$3 million over the FY 10 funding level that is intended to increase the MRIP budget from \$9 million to \$12 million.

As an incremental step toward full funding of the objectives of the Marine Recreational Information Program (MRIP), we support the President's funding level of \$24.4 million for Fisheries Statistics in FY 12.

Fish Information Networks

Fisheries information networks (FINs) are regional co-operative state-federal programs to design, implement and conduct marine fisheries statistics data collection programs and to integrate those data into a data management system that addresses the needs of fishery managers, scientists, and fishermen.

RECFIN funds recreational fisheries surveys in the Pacific, Atlantic and Gulf of Mexico, including economic surveys in these regions. Region-specific FINs include GULF FIN and the Atlantic Coastal Cooperative Statistics Program (ACCSP), which also dedicate a portion of funding to recreational surveys. Thus, vital regional recreational fisheries data collection programs are supported in part by the Fish Information Networks.

At a minimum, level funding is needed to support the current capabilities of the Fishery Information Networks. The President's FY 12 request for \$22.2 million represents the minimal

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level of investment needed to maintain current program activities of the FINs, therefore at least \$22.2 million is recommended for FINs in FY 12.

Survey and Monitoring Projects

The Omnibus Appropriations Act of 2010 funded this program at NOAA's requested FY 10 level of \$23.7 million and the President's FY 12 budget requests \$24.2 million. This activity supports the collection of essential resource survey data needed for developing and updating stock assessments, including funding for resource surveys of red snapper, bluefin tuna, bluefish, striped bass, Alaska pollock and others. However, many regions and fisheries continue to experience chronic underfunding of basic data collection (both fishery-independent resource surveys and fishery catch sampling and monitoring) to support stock assessment development. It is recommended that FY 12 funding for this program should be increased to at least \$30 million in order to support increased collection of catch data and expanded stock assessment development in all regions, for both commercial and recreational fisheries.

The President's FY 12 request for \$24.2 million will maintain essential data collection programs for stock assessments and fishery management, therefore an appropriation of \$24.2 million for Survey and Monitoring Projects is recommended for FY 12.

Essential Fish Habitat: Reducing Fishing Impacts on Essential Fish Habitat; Refine EFH Designations; and Fisheries Research and Management

The Magnuson-Stevens Fishery Conservation and Management Act of 1996 gave fishery managers a clear mandate to identify and protect Essential Fish Habitat (EFH), but the enacted FY 10 level of \$4.9 million speaks to the low priority currently given to this program area. EFH-related funding in the enacted FY 10 budget consists of \$3.3 million in direct funding for EFH-related activities and \$0.53 million for reducing fishing impacts on EFH under the Fisheries Research and Management program, as well as \$1.1 million to refine EFH designations under the Habitat Conservation and Restoration program. A higher level of funding is necessary to identify and conserve vulnerable EFH. For instance, a recently published Habitat Assessment Improvement Plan (HAIP) concludes that full implementation of the plan will require a 250% increase in staff and substantial increases in funding for program operations, tools, technology, and infrastructure (NMFS 2010).⁴ Healthy fish habitat is an essential precondition for rebuilding overfished stocks and sustaining fisheries over the long-term, and therefore program funding should reflect that importance. Congress should appropriate no less than \$5 million in FY 12 for EFH conservation and management as part of a plan to ramp up program funding toward the level needed to implement the HAIP and achieve the MSA's mandate for protection of EFH. In the absence of a more specific funding target from NMFS, Congress should aim to increase funding steadily in coming years to the \$15 million per year level recommended by the U.S. Commission on Ocean Policy in 2004.⁵

⁴ NMFS, Marine Fisheries Habitat Assessment Improvement Plan, A Report of the National Marine Fisheries Service Habitat Assessment Improvement Plan Team, U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-108, May 2010. 115 pp.

⁵ See USCOP (2004), Table 30.1 and Appendix G.

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Essential fish habitat is critical to ensuring the long-term health and productivity of our nation's fisheries. At a minimum, an appropriation of \$5.0 million for FY 12 is requested for Essential Fish Habitat conservation.

Reducing Bycatch

Bycatch, the incidental catch of non-target fish and other marine life, is a continuing problem in fisheries management. Greater funding is needed to develop and test bycatch reduction technologies, to support cooperative research activities with fishermen, and to collect and process reliable fisheries bycatch information for use in stock assessments and management decision-making. The President's FY 12 budget request seeks \$3.482 million for this critical activity, only slightly above the FY 10 enacted funding level of \$3.398 million. Given the critical importance of the Bycatch Reduction Initiative and other activities addressing fisheries bycatch, this program should be funded at a level of at least \$5 million in FY 12 as part of a long-term plan to ramp up program funding toward the \$30 million per year level recommended by the US Commission on Ocean Policy.⁶

To reduce the incidental catch of non-target fish and other marine life and improve estimation of fishing mortality for compliance catch limits, an appropriation of at least \$5 million is recommended for FY 12.

Illegal, Unreported, and Unregulated Fishing

Illegal, Unreported, and Unregulated (IUU) fishing, as defined by NOAA, are fishing activities that "violate applicable national or international laws or rules; have not been reported in areas where such reporting is required; or are inconsistent with relevant international laws or rules, but either the activities are not regulated, or the involved fishing vessels are not able to be regulated because they are flying the flag of a State that is not party to the relevant regional fishery management organization or they are flying no flag at all." IUU fishing and related activities are a major threat to fisheries sustainability, marine habitat, and the livelihood of local communities, fishermen, and crews. According to the Marine Resources Assessment Group, in 2002, about 20% of global catch, valued between \$2.4 and \$9.5 billion U.S. dollars, was caught through IUU practices. These numbers can be higher when looking at individual, highly valued stocks. For example, in 1999, roughly 80% of all Patagonia toothfish sold were caught illegally. This funding would significantly improve NOAA's ability to implement the provisions to tackle IUU fishing, as provided by the High Seas Driftnet Fishing Moratorium Protection Act under the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. An increase of \$3.0 million over the FY 10 enacted level of \$6.0 million is requested for FY 12.

⁶ U.S. Commission on Ocean Policy (2004). An Ocean Blueprint for the 21st Century Final Report. Washington, DC. Appendix G.

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Fisheries Enforcement

The Omnibus Appropriations Act of 2010 funded this program at NOAA's requested FY 10 level of \$65.6 million – 15% higher than the enacted FY 09 funding level of \$56.4 million. This included additional funding for the Enforcement and Surveillance budget line to address Illegal, Unregulated and Unreported (IUU) fishing on the high seas as required by the MSRA of 2006. While these increases in funding for enforcement are greatly appreciated, the new Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 requirements will require greater commitments of funding in order to ensure compliance with annual catch limits and other management objectives in *all* regions and fisheries. The President's FY 12 request of \$67 million is marginally higher than the FY 10 enacted funding level of \$65.6 million, but additional increases are needed to address IUU fishing on the high seas as well as support the expanded deployment of cost-effective technologies such as vessel-monitoring systems (VMS) on fishing vessels, as recommended by the U.S. Commission on Ocean Policy.⁷

The President's FY 12 request of \$67 million for Enforcement represents the minimum funding level needed to maintain current capabilities to monitor compliance and is recommended for FY 12.

Fishery Observers and Training

At-sea observers are considered the most reliable source of information about fishery catch, bycatch and at-sea discards, and they are a central pillar of the national fishery bycatch strategy.^{8,9} Observers also monitor the incidental entanglement and mortality of protected marine mammals, seabirds and sea turtles. The President's FY 12 budget requests \$39.1 million to the national fishery observer program, a cut of nearly \$2 million from the enacted FY 10 level. Current funding levels support at-sea observer programs in 40 broadly defined fisheries nationwide, only 23 of which are considered by NMFS to have adequate levels of observer coverage. The agency's goal for observer coverage is approximately 85 fisheries, based on a list of fisheries prioritized for observer coverage in a 2004 national bycatch report.¹⁰ In light of the inadequate observer coverage in a majority of U.S. fisheries, the Administration's FY 12 request for fishery observers would mean a significant loss in the capability of the program to deploy observers where needed. In 2003, the Fisheries Service estimated that the observer program required at least \$100 million to meet its goals for coverage via the national observer program. Since then, mandates for annual catch limits and limited access privilege programs (also known as "catch shares") have increased

⁷ U.S. Commission on Ocean Policy. An Ocean Blueprint for the 21st Century Final Report. Washington DC, pp. 293-295.

⁸ NOAA/NMFS, Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs, NOAA Technical Memorandum NMFS-F/SPO-66, October 2004. 108 p.

⁹ National Standard 9 (NS9) of the MSA requires fishery managers to minimize bycatch and to minimize the mortality of bycatch that cannot be avoided (16 U.S.C. 1851(9)). Section 303 of the MSA requires Fishery Management Plans to establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and to include measures consistent with NS9 to minimize bycatch (16 U.S.C. §§ 1853(11)).

¹⁰ See NOAA FY 10 Budget Request (Blue Book), Exhibit 13, p. 245. The full list of fisheries prioritized for observer coverage in 2004 can be found in: U.S. Dep. of Commerce/NOAA/NMFS, *Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs*, NOAA Technical Memorandum NMFS-F/SPO-66, October 2004. 108 p.

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the need for observer coverage to improve catch accounting and provide reliable estimates of total fishing mortality, including discards of fish at sea. The recent restructuring of the North Pacific groundfish observer program (NPGOP) will also require additional federal support to supply start-up funding in the initial phase of the program until industry fees have been collected in sufficient amounts to cover the remaining program costs. It is estimated that the NMFS observer budget will need to be approximately doubled in order to ensure that the national program can provide effective administration, data quality control, and training to all new observers. These increases will also create jobs for an expanded professional observer corps.

To ramp up the capacity to achieve adequate observer coverage in all major fisheries and provide reliable estimates of catch and bycatch for management purposes, a funding level of at least \$50 million (\$9 million above the FY 10 enacted funding level) for fishery observers and observer training is recommended for FY 12.

Pacific Marine National Monuments (Pacific Remote Islands Marine National Monument, Rose Atoll Marine National Monument, and Marianas Trench Marine National Monument)

Three marine national monuments (Pacific Remote Islands Marine National Monument, Rose Atoll Marine National Monument, and Marianas Trench Marine National Monument) were established in 2009. Together with Papahānaumokuākea Marine National Monument (established in 2006), they protect approximately 331,797 square miles of marine habitat.

These areas include some of the most pristine tropical islands and coral reef ecosystems in the world and contain vast amounts of shallow water reef building coral species, hundreds of fish species, and dozens of species of seabirds. Migrating fish, turtles, birds and marine mammals frequent the islands, including endangered and threatened green and hawksbill sea turtles, whales, and large migratory fish. Many of these islands are also important to Polynesian and Micronesian, military and aviation history.

With the establishment of these monuments comes the responsibility of developing and implementing appropriate management measures to adequately protect these biologically and historically significant areas. Papahānaumokuākea Marine National Monument is managed collectively by NOAA, USFWS, and the State of Hawaii. The management responsibility for the newest monuments was assigned primarily to the Secretary of the Interior. The Secretary of Commerce, through NOAA, has primary management responsibility for fishery-related activities found within the newest monuments. Without adequate and sustained resources, the primary objective of protecting these areas will not be fulfilled. Funding for Papahānaumokuākea Marine National Monument is directed to the National Marine Sanctuaries Program (mentioned in the NOAA - National Ocean Service section), while the funds for the newest monuments are allocated to the NMFS. At half the FY 10 funding level of Papahānaumokuākea and just \$1 million over their FY 10 funding level, the newest marine national monuments will be able to implement fishery management plans, conduct ecosystem surveys, execute enforcement measures, and provide critical research grants. However, maintaining the FY 10 funding level

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will provide the funds necessary to continue the baseline management of our newest marine national monuments.

Deep Sea Corals

Corals are usually associated with shallow tropical waters, however coral ecosystems are also found on the deep sea floor. Unfortunately, these ecosystems are not yet well understood and are vulnerable to many threats, including destructive fishing practices. Deep sea corals provide havens for economically and ecologically important fish species as well as a wide variety of other marine life. Scientists have begun to discover that deep water coral communities may contain valuable components, from which medicines treating cancers and HIV may be developed.

The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA) directed NOAA to establish a Deep Sea Coral Research and Technology Program. This program was established to locate and map deep sea coral habitats, as well as help scientists understand deep sea coral biology and ecology. Deep sea coral regional mapping and research cruises occur over three consecutive years per region. The Deep Sea Coral Research and Technology Program has recently completed the second year of research and mapping corals in the SE Atlantic and the first year along the West Coast. With additional funds, more regions can be mapped every year. It has been made clear with the recent BP Deepwater Horizon disaster, that baseline information of our ocean's resources, such as deep sea corals, is needed to understand the impacts of activities in the ocean and disasters like BP Deepwater Horizon has on our nation's ecosystems. Program activities, such as mapping and research cruises, are intrinsically linked to other MSRA activities, such as advising the Regional Fishery Management Councils as they protect and conserve deep sea coral habitats as valuable and vulnerable marine ecosystems. Additionally, the Deep Sea Coral Research and Technology Program provides critical program support in achieving NOAA's goal of ecosystem-based management. At a minimum, maintaining current funding levels is key for sustaining ongoing research and management activities of the program, which support many other management activities within NMFS.

Fisheries Habitat Restoration

NOAA's Fisheries Habitat Restoration Program, which includes the Community-based Restoration Program (CRP) and Open Rivers Initiative (ORI), accomplishes on-the-ground, community-based projects to restore the nation's coastal, marine, and migratory fish habitat. Through CRP, NOAA provides needed scientific expertise, funding, and technical support to national and regional partners and local conservation organizations in order to restore coastal and marine habitat. By working collaboratively with more than 1,500 organizations, CRP has funded more than 2,000 projects to restore over 65,000 acres of habitat. The program has involved more than 180,000 volunteers in projects, resulting in more than 1 million volunteer hours contributed. In addition, NOAA projects have generated approximately \$150 million in cash and in-kind contributions by using only \$65 million in NOAA funds, effectively leveraging more than double

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the federal investment. However, CRP's annual budget request is woefully inadequate given the Program's approximately \$75 million in annual requests coupled with the \$3 billion/800 project backlog of ecologically and economically significant habitat restoration projects demonstrated through the American Recovery and Reinvestment Act. In addition, funding will also be used for monitoring and baseline assessment in the Gulf of Mexico in efforts to recover from the oil spill. NOAA's Open Rivers Initiative provides technical expertise and financial assistance to remove dams and other stream barriers in coastal watersheds. There are an estimated 2.5 million stream barriers in the United States. Tens of thousands, of these structures are obsolete and in great disrepair but they continue to block fish—such as shad, river herring, salmon, and sturgeon—from their native spawning habitat in rivers and streams. Since its inception in 2006, ORI has removed more than 90 dams and stream blockages, re-opening more than 1,700 miles of river habitat for fish and other river animals to survive and thrive. These efforts restore healthy river ecosystems, eliminate public safety hazards, revitalize riverfront communities, provide new recreational opportunities, and improve populations of commercially and recreationally important fish. ORI has received 290 requests totaling \$77 million from communities across the country, but NOAA has only been able to address 81 projects so far due to limited funding. Given the overwhelming project backlog yet mindful of the current budget climate, we request an increase to \$47 million for NOAA's Fisheries Habitat Restoration, of which \$35 million is available for CRP and \$12 million for Open Rivers.

Cooperative Research

This program involves fishermen in the collection of fisheries data to improve stock assessments, estimates of bycatch, and other information. Cooperative research funding supports additional fish assessments and increases the amount of data collected on bycatch and total fishing mortality. It will also fund partnerships that involve key stakeholders, lead to more well-informed and supportive fishing communities, and create employment opportunities in these communities. There was significant concern expressed in response to the proposed cuts to the Cooperative Research budget in the FY11 President's budget request, given the strong support the program has from fishermen, conservationists and scientists. Substantial new opportunities for cooperative research remain untapped and therefore a net increase of \$2.5 million from the enacted FY 10 level (\$12.9 million above the President's FY 11 request) is recommended for a total budget of \$20 million.

National Environmental Policy Act Implementation

The National Environmental Policy Act (NEPA) applies to all major federal actions that may significantly affect the environment. To comply with NEPA, NOAA must assess and disclose the potential environmental effects of their actions in an Environmental Assessment or Environmental Impact Statement. In preparing these documents, NOAA must summarize the environmental impacts of their proposed action and alternatives, as well as the interrelated economic, health, or social effects. This process provides citizens an opportunity to learn about the actions that federal agencies are proposing and offers NOAA an opportunity to receive

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valuable input from the public, state and local governments, other agencies, and other stakeholders.

NOAA's NEPA compliance is coordinated in the Office of Program Planning and Integration. The NOAA NEPA Coordinator and staff provide information, training, and advice to staff across the agency in order to ensure NOAA's compliance with NEPA. All agencies within NOAA are required to comply with NEPA when appropriate.

Over the last few years, NMFS has experienced a significant increase in NEPA-related workload, including environmental reviews for projects led by other agencies, such as the Minerals Management Service, now the Bureau of Ocean Management, Enforcement and Regulation, and the Federal Energy Regulatory Commission. This workload is likely to further increase as the number of permits and projects for coastal and ocean energy projects requiring NEPA review increase. Further, a challenge NMFS will have to face is analyzing the repercussions climate change will have on the marine ecosystem. To ensure that NMFS can continue to provide quality NEPA review and consultation with other agencies, and to ensure that the public has opportunity to comment on the permits in a timely manner, NMFS must receive adequate funding for its NEPA activities. A modest increase of \$1.54 million, over the FY 10 enacted level of \$8.456 million, for NEPA implementation would significantly enhance NOAA's ability to manage its increasing NEPA workload and ensure permits are issued in a timely manner.

Pacific Coastal Salmon Recovery Fund

Wild Pacific salmon and steelhead are national treasures of tremendous environmental, economic, and cultural significance. These important species are in decline due to a variety of factors such as dams, unsustainable logging and agricultural practices, urban sprawl, and poor hatchery practices. Twenty-six of the 51 salmon and steelhead stocks along the West Coast from Washington to California are listed under the Endangered Species Act (ESA). The Pacific Coast Salmon Recovery Fund, funded through the NOAA, is aimed at restoring and protecting habitat for these imperiled fish. This program provides much-needed assistance to state, local, and tribal governments in Washington, Alaska, Oregon, California, Idaho and Nevada. These funds are matched dollar-for-dollar at the state and local level, and can be used for habitat restoration, preservation, and acquisition, as well as for monitoring the health of salmon populations and watersheds.

Citizens, watershed groups, Native American tribes, and federal and state agencies from across the nation have been working to bring these species back from the brink of extinction and set them on the road to recovery. With dozens of new salmon recovery plans in effect or about to take effect, it is imperative to fund them at levels that will allow for their full implementation to successfully recover wild salmon and steelhead. The recommendation of \$90 million is an excellent starting point; however, in order to provide an adequate federal contribution for the completion and implementation of remaining recovery plans from Southern California to Alaska to Idaho, funding of the PCSRF will need to increase to \$200 million per year by 2015.

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National Sea Grant College Program

Coastal and Great Lakes communities in the United States are home to more than 50 percent of the U.S. population and source of more than 50 percent to the nation's GDP, but also face truly daunting environmental challenges. These include anticipated and unprecedented climate-related environmental changes such as sea level rise, continuing degradation of shoreline and fishery resources, stresses on shoreline area infrastructure, and emerging coastal energy opportunities and concerns. Sea Grant is poised to continue and enhance the role it has long played in meeting national challenges such as these through university-based research and outreach programs. Through Sea Grant's research and outreach activities, the intellectual power of more than 300 universities and thousands of scientists and extension specialists are brought to bear. This integrated system allows Sea Grant to quickly deploy and focus a vast university-based network of professionals, and helps citizens and localities become better stewards of shoreline resources, thus creating more resilient and environmentally responsible coastal communities.

Armed with unbiased research results, and energized by a corps of outreach specialists who work in coastal communities, Sea Grant can help the states and nation respond to both opportunities and urgent or emerging coastal issues. The program's response in engaging and guiding stakeholders impacted by the Gulf of Mexico oil spill has been recognized as an outstanding example of communicating and assisting the public in times of crisis. However, the program's base fiscal resources have not kept pace with the need to generate new information and to educate coastal audiences on wise resource stewardship and development. It is recommended that the National Sea Grant College Program receive \$79.0 million total in FY 12.

Ocean Exploration and Research

In March 2009, Public Law 111-11 was signed by President Obama and authorizes both the Ocean Exploration and National Undersea Research Programs (NURP). These programs are key mechanisms for exploring the Earth's largely unknown oceans for the purpose of discovery and the advancement of knowledge, using state-of-the-art technologies in evolutionary and revolutionary ways. Ocean research activities, conducted through NOAA's ocean exploration and research programs, are invaluable to our greater understanding and proper management of the marine environment. NOAA's Office of Ocean Exploration and Research provide grants to academic researchers to further enhance understanding of our oceans and Great Lakes, in direct support of the managers responsible for protecting and managing fisheries, corals and other undersea ecosystems. It is actively involved in advancing underwater technologies to facilitate research and allow scientists to discover new realms of the ocean world. NURP consists of six regional Centers and one Institute (NIUST) that maintain the responsibility of soliciting and supporting undersea research and technology development proposals.

Despite the benefits of NOAA's exploration to the nation through the advancement of science to better understand the best ocean management practices, the funding for NURP and Ocean Exploration has been severely below the authorizing levels of Public Law 111-11 including the 40 percent cut in FY 06 which halted important marine research. NOAA was appropriated

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\$30.17 million in FY 10, \$27.38 million below the FY 10 authorizing level, and the President requested the program receive \$27.84 million in FY 11, which is \$33.17 million below the FY 11 authorized level. NURP was moved into the Ocean Exploration and Research budget line item and therefore the FY 12 recommendation includes both programs. \$70.28 million is recommended in FY 12 to enable NOAA's Office of Ocean Exploration and Research to advance science and technology and provide vital information on sound ocean management practices.

Forecasting the Impacts of Climate Change

The ocean is influential in the climate system as it absorbs, retains and transports vast amounts of the Earth's heat, water and carbon dioxide (CO₂) across the globe. In fact, just the top ten feet of the ocean holds as much heat as the entire atmosphere. Beyond driving the climate system, the ocean itself is being affected by a rapidly changing environment. Ocean waters are warming and becoming more acidic, ocean currents are shifting, and sea levels are rising, all of which have significant implications for our economy, the health of our oceans and human society.

While we know the climate and our oceans are changing, we have very limited capacity to accurately forecast the size, scope and time scales for these alterations. Ultimately, the only long term solution to reducing the impacts of both climate change and ocean acidification is to substantially reduce greenhouse emissions in the U.S. and around the world. However, even if greenhouse gas emissions were significantly reduced in the near future, the world will need to cope with the damages that have already occurred.

Increased research is needed to better understand climate impacts and to more accurately forecast and model the climate system. Furthermore, the nation needs climate services and products to help prepare for the effects of climate change. Climate programs in NOAA are vital to these efforts. Since the ocean and climate systems are interlinked, NOAA is tackling the changing climate issue all across the agency. Most line offices have incorporated climate initiatives to understand the impacts on its current programs and regulatory processes. However, the funding levels provided in FY 10 are not adequate to meet the urgent and critical climate observational, research, and modeling needs. Therefore, it is recommended climate initiatives in NOAA are strongly supported in the FY 12 budget. While there are many in NOAA, some of the key climate programs and research to support in the FY 12 budget include:

- Regional Climate Assessments
- NOAA Climate Service Initiative
- Global Ocean Observing System
- Integrated Ocean Observing System
- Climate Research
 - Arctic Watch
 - Earth System Modeling
 - Carbon Observing and Analysis System

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Also, recently unveiled presidential initiatives specifically support the need for a coordinated effort to promote resiliency and adaptation. The progress report recently released by the Interagency Climate Change Adaptation Task Force recommends federal agencies work together to research and prepare for the impacts of climate change, including ocean acidification. In conjunction, the National Ocean Council, established by Executive Order, identified strengthening the resiliency and adaptation of the marine and Great Lake environments to climate change and ocean acidification is one of the nine identified priority objectives to be addressed as part of the newly established National Ocean Policy. Funding many of the marine conservation research and management programs above and throughout this document will help in fulfilling the requirements of these presidential initiatives.

Integrated Ocean Acidification Program

About a quarter of all carbon dioxide emissions are absorbed by the earth's oceans, and the impact of that is just starting to be understood. Over the last decade, scientists have discovered that this excess carbon dioxide is actually changing the chemistry of the sea and proving harmful for many forms of marine life. This process is known as ocean acidification. A more acidic ocean could wipe out species, disrupt the food web and impact fishing, tourism and other human endeavors that rely on the sea.

The change is happening fast. Over the last 250 years, oceans have absorbed 530 billion tons of carbon dioxide, triggering a 30 percent increase in ocean acidity. Before people started burning coal and oil, ocean pH had been relatively stable for the previous 20 million years. This rapid rate of change is triggering profound changes within our oceans, but the science on ocean acidification is still in its infancy.

The Federal Ocean Acidification Research and Monitoring (FOARAM) Act, passed in early 2009, demonstrated Congress' intent to address this economic and environmental threat, and to accelerate the study and understanding of the effects of ocean acidification. Under FOARAM, Congress instructed NOAA to establish an ocean acidification program to coordinate research, establish a monitoring program, identify and develop adaptation strategies and techniques, improve public education outreach, and provide critical research project grants to improve the understanding of ocean acidification's ecological and socioeconomic impacts. NOAA was appropriated \$5.5 million in FY 10 and the program has been recommended by the President to receive \$11.6 million in FY 12. In FY 10, NOAA issued its strategic action plan, which outlines how the activities mandated by Congress will be achieved. As the implementation plan is in place, \$20 million – the amount authorized for FY 12 under FOARAM - is recommended in FY 12 to support NOAA's obligations under law.

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Environmental Education Initiatives

The National Oceanic and Atmospheric Administration's (NOAA) Office of Education oversees several Environmental Education Initiatives, the largest being the Environmental Literacy Grants (ELG) program which helps to establish new partnerships that deliver educational materials to thousands of teachers and students. The ELG program enables NOAA to partner with the top science centers, aquaria, and educators in the country to educate the public about vital issues related to our changing planet. The program also allows NOAA to leverage a vast array of climate science findings to improve the quality of education in critical areas and raise public awareness. These funds are awarded on a competitive basis and are increasingly used to build educational capacity at the national and regional levels.

Funding NOAA Environmental Education Initiatives at \$20.0 million, of which \$18.0 million is for Environmental Literacy Grants, will enable NOAA's Office of Education to implement the education recommendations requested in the U.S. Ocean Action Plan. These recommendations will strengthen collaboration between the public and private sectors, states and regions, scientists and educators, and the federal agencies. The competitive grants would also further leverage the existing capabilities of formal and informal education partners and help coordinate regional education efforts in critical areas, such as the Gulf of Mexico. These funds represent virtually all of the discretionary funds available to NOAA's Office of Education for addressing annual NOAA education goals mandated in the America COMPETES Act.

Bay Watershed Education and Training Programs

Administered by the National Oceanic and Atmospheric Administration (NOAA) since 2003, the Bay Watershed Education and Training (B-WET) program offers competitive grants to leverage existing environmental education programs, fosters the growth of new programs, and encourages development of partnerships amongst environmental education programs within watershed systems. In April 2010, this country witnessed the worse environmental disaster in history with the massive oil spill in the Gulf of Mexico that spewed millions of gallons of oil for more than 4 months into our waters. This spill highlighted the fragility of our food web and the importance of the fishing industry to the stability of our economy. The Gulf Coast B-WET program responded to this "teachable moment" by issuing a request for FY 2011 proposals related to the BP/Deepwater Horizon oil spill. The B-WET program is vital to our understanding of watersheds and our ability to manage our watershed resources sustainably. The BP/Deepwater Horizon oil spill illustrated the need for increased environmental education and training to ensure the stability of our natural resource based economy.

NOAA implements B-WET's rigorously evaluated by region, allowing the unique environmental and social characteristics of the region to drive the design of targeted activities to improve community understanding, promote teacher competency, and enhance student interest and achievement in science. A fundamental goal of the program is to demonstrate how the quality of the watershed affects the lives and welfare of the people who live in it. B-WET supports programs for students and professional development for teachers, while sustaining regional

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OFFICE OF EDUCATION

education and environmental priorities. B-WET awards have provided environmental education opportunities to more than 100,000 students and 10,000 teachers.

Through an increase in funding in FY 08, B-WET expanded from the Chesapeake Bay, California, and Hawaii to also include the Pacific Northwest, the northern Gulf of Mexico, and New England. An increase of \$4.3 million in FY 12 will enable this successful program to expand to additional watersheds in the Great Lakes and Alaska.

Climate Change Education Grant Program

Implementation of comprehensive global climate change policies being considered by Congress will require coordinated and effective federal efforts to help improve broad public understanding of the core ecological, social, and economic concepts and principles involved in climate change mitigation and adaptation. The National Oceanic and Atmospheric Administration's (NOAA) Office of Education has specific legislative authority for climate education initiatives through the Omnibus Public Land Management Act of 2009 I (PL 111-11 SEC. 12304 (c)(3)) Funding in FY 12 at \$10.0 million for a new Climate Change Education Grant Program will enable NOAA to leverage the vast array of climate science being undertaken at the agency as part of developing strategies for addressing the gaps between the state of climate change education and the state of public climate change literacy. Grants would contribute to improving the climate literacy of the nation's citizens, students, workforce, and decision- and policy- makers by systemically and strategically strengthening climate change education in formal and informal education at all age levels.

DEPARTMENT OF EDUCATION

DEPARTMENT OF LABOR

DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT

University Sustainability Program

Interest in sustainability is exploding on college campuses across the nation, and institutions are making remarkable changes to try to reduce campus carbon footprints and energy use. However, despite increasing interest and demand from students, sustainability education programs on college campuses are on the decline according to an independent study released in August 2008. Environmental curriculum requirements are slipping and today's students may be less environmentally literate when they graduate than their predecessors.

Congress recently authorized a new University Sustainability Program (USP) at the Department of Education as Part U of the recently enacted Higher Education Opportunity Act of 2008 (HR 4137). This program has the potential for high impact, high visibility, broad support within higher education, and is responsive to an important national trend in higher education. Sustainability on college campuses is critical, from education in the classroom to facility operations. Higher education produces almost all of the nation's leaders in all sectors and endeavors, and many college campuses are virtually small cities in their size, environmental impact, and financial influence. Campuses use vast amounts of energy to heat, cool, and light their facilities. In all, the nation's 4,100 campuses educate or employ around 20 million individuals and generate over three percent of the nation's GDP. The economic clout of these schools is further multiplied by the hundreds of thousands of business suppliers, property owners, and other commercial and nonprofit entities involved with higher education. Funding for the newly authorized USP is necessary to help provide difficult-to-get seed funding to launch sustainability education programs and to help support mainstream higher education associations in including sustainability in their work with their member institutions.

In FY 10 Congress appropriated \$28.8 million for the University Sustainability Program and seven other programs as "invitational priorities" under the Fund for Improvement in Postsecondary Education. We recommend that in FY 12 Congress fund the University Sustainability Program as a standalone program at \$50.0 million.

No Child Left Inside Act

The 112th Congress is expected to authorize the No Child Left Inside (NCLI) Act as part of the reauthorization of the Elementary and Secondary Education Act. The NCLI Act supports teacher training, improves student achievement and health, prepares youth for the workplace, and ensures every student graduates from high school environmentally literate. The House passed a modified version of the bill by a bipartisan vote of 293-109 in September 2008.

Environmental education has a measurably positive impact on student achievement in science, reading, math and social studies as well as increased motivation, critical thinking and interest in science and math as future career pathways. Environmental education with experiential learning in school curriculum gets kids outside contributing to healthy lifestyles. Environmental education is essential for the success of the U.S. in the global economy. The leaders of the 21st Century global economy will be the countries that develop innovative energy sources and the latest technologies that harness clean energy. In order for the United States to remain competitive

globally and a leader in innovation, we must invest in environmental education and prepare all Americans for 21st Century jobs.

Funding in FY 12 at \$100.0 million for No Child Left Inside is critical for states to develop and implement state environmental literacy plans, train teachers, and provide classroom environmental education and outdoor experiences to ensure that all high school students graduate environmentally literate.

Healthy High Performance Schools Program

The Healthy High Performance Schools Program seeks to facilitate the design, construction and operation of high performance schools: environments that are not only energy and resource efficient, but also healthy, comfortable, well lit, and containing the amenities for a quality education. This grant program is critical at a time when energy costs for America’s elementary and secondary schools are skyrocketing. Investment in FY 12 at \$25.0 million will aid in creating a 21st Century learning environment for students. Research clearly shows that improving specific factors such as school indoor environmental quality improves attendance, academic performance, and productivity.

The No Child Left Behind Act (PL 107-110, Title 5, Part D, Subtitle 18) authorized grants to state education agencies to advance the development of “healthy, high performance” school buildings. States may use the funds to provide information, technical assistance, monitor, evaluate, and provide funding to local education agencies for healthy, high performance school buildings. In turn, local agencies may use the funding to obtain technical assistance, develop plans that address reducing energy and meet health and safety codes, and conduct energy audits. Funds may not be used for construction, maintenance, repair or renovation of buildings. This program has yet to be funded by Congress. While it would seem to be a given that we are providing our children with a healthy learning environment, many of the nation’s 150,000 public school buildings fall far short of this standard. Research clearly shows that improving specific factors such as school indoor environmental quality improves attendance, academic performance, and productivity.

Energy Efficiency and Renewable Energy Worker Training Program

The Green Jobs Act (GJA), Title X of the Energy Independence and Security Act, authorizes \$125.0 million per year in grants for an Energy Efficiency and Renewable Energy Worker Training Program. The GJA identifies needed skills, develops training programs, and trains workers for jobs in a range of green industries, but has a special focus on creating “green pathways out of poverty.” The Energy Efficiency and Renewable Energy Worker Training Program is administered by the Department of Labor in consultation with the Department of Energy. The program responds to already existing skill shortages. The National Renewable Energy Lab has identified a shortage of skills and training as a leading barrier to renewable energy and energy efficiency growth. This labor shortage is only likely to get more severe as baby-boomers skilled in current energy technologies retire; in the power sector, for example, nearly one-quarter of the current workforce will be eligible for retirement in the next five to seven years.

The program received \$500.0 million for FY 09 and FY 10 through the American Recovery and Reinvestment Act, a critical, first-time investment to help prepare worker for jobs in the clean energy economy targeted towards the industries as defined in the Green Jobs Act. As the economic recovery funding winds down after FY 10, it is critical that Congress continues funding at the authorized amount of \$125.0 million in FY 10.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Interagency Partnership for Sustainable Communities

The is a joint effort between the U.S. Department of Transportation, Department of Housing and Urban Development, and Environmental Protection Agency to support more sustainable communities. This means helping American families gain better access to affordable housing, more transportation options, and lower transportation costs. In particular, HUD is working to support more comprehensive regional planning that results in more sustainable development patterns, expand affordable housing near cleaner transportation options, and create more energy-efficient homes.

Brownfields Economic Development Initiative (BEDI)

The Brownfields Economic Development Initiative (BEDI) is a key competitive grant program that HUD administers to assist cities with the redevelopment of abandoned, idled and underused industrial and commercial facilities, where expansion and redevelopment is burdened by real or potential environmental contamination. BEDI grant funds are primarily targeted for use with a particular emphasis upon the redevelopment of brownfields sites in economic development projects and the increase of economic opportunities for low- and middle-income persons as part of the creation or retention of businesses, jobs and increases in the local tax base. Redeveloping these sites helps conserve valuable open space and farmland in regions across the country. BEDI is designed to complement Section 108 loans; eligibility is limited to communities using Section 108 funds.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Section 108 Loan Guarantee Program

Section 108 is a loan guarantee provision of the Community Development Block Grant (CDBG) program, which provides communities with a source of financing for economic development, housing rehabilitation, public facilities, and large-scale physical development projects, including brownfields redevelopment projects. This program allows communities to transform a small portion of its CDBG funds into federally guaranteed loans that help revitalize neighborhoods and underutilized sites, prioritizing investment in existing communities instead of greenfield sites.

Choice Neighborhoods

The Choice Neighborhoods initiative aims to transform distressed neighborhoods into viable and sustainable mixed-income neighborhoods by linking housing improvements with appropriate services, schools, public assets, transportation, and access to jobs. Choice Neighborhoods grants build upon the successes of public housing transformation under HOPE VI to provide support for the preservation and rehabilitation of public and HUD-assisted housing, within the context of a broader approach to concentrated poverty. The program's focus on the revitalization and redevelopment of existing communities, as well as its link to cleaner and affordable transportation services, will help more people live in energy efficient neighborhoods with better access to jobs, services, and education opportunities.

CORPORATION FOR NATIONAL AND
COMMUNITY SERVICE

NASA

NATIONAL SCIENCE FOUNDATION

CORPORATION FOR NATIONAL AND COMMUNITY SERVICE

Clean Energy Service Corps

In 2009 Congress passed and the President signed the Edward M. Kennedy Serve America Act (Public Law 111-13), which reauthorized America's national service programs operated by the Corporation for National and Community Service and created a new Clean Energy Service Corps program to engage Americans in energy conservation and service to the environment. The Clean Energy Service Corps, built on the legacy of the depression-era Civilian Conservation Corps and modeled after today's Service and Conservation Corps, stands ready to address the nation's energy and transportation infrastructure needs while providing work and service opportunities for disadvantaged youth. In a manner similar to the Civilian Conservation Corps of the 1930s, disconnected young people can be mobilized to retrofit, weatherize, and otherwise improve the energy efficiency of residential and public facilities that account for more than 40 percent of carbon emissions. In FY 12, Congress should fund the Clean Energy Service Corps at \$100.0 million.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION CLIMATE CHANGE EDUCATION

Climate Change Education Grant Program

While public awareness and concern for climate change continues to rise, the vast majority of the public remains illiterate about how climate change works, how it impacts their lives, and how their decisions and actions contribute to it. In FY 08, Congress appropriated funds for the first time to address this issue by providing funding for climate change education grants through the National Aeronautics and Space Administration (NASA). In August 2008, NASA announced a Request for Proposals for a first-ever competitive grant program seeking applications from educational and nonprofit organizations to use NASA's unique contributions to climate and earth system science. The goals of the program include: improving the teaching and learning about global climate change in elementary and secondary schools and on college campuses, increasing the number of students using NASA earth observation data/NASA earth system models to investigate and analyze global climate change issues, increasing the number of undergraduate students prepared for employment and/or to enter graduate school in technical fields relevant to global climate change, and increasing access to high quality global climate change education among students from groups historically underrepresented in science. Congress should fund this grant program in FY12 at \$15.0 million.

11 NATIONAL SCIENCE FOUNDATION RESEARCH AND RELATED ACTIVITIES

Climate Change Education Grant Program

Climate change education (and research) has been identified as a presidential priority area for NSF. While public awareness and concern for climate change continues to rise, the vast majority of the public remains demonstrably illiterate about how climate change works, how it impacts their lives, and how their decisions and actions contribute to it. Yet climate change education (CCE) is newly emerging as a field, with few materials, curricula, models, standards, or professional development opportunities to fill the void. Furthermore, CCE is inherently interdisciplinary; and as a result, it often falls through the cracks in traditional science education.

NSF initiated the Climate Change Education grant program in FY 09. This program is aimed at improving K-12 to graduate education in climate change science and increasing the public's understanding of climate change and its consequences. Congress should fund this grant program in FY12 at \$30.0 million to aid in the development of the next generation of environmentally-engaged scientists and engineers by supporting awards in the following areas: increasing public understanding and engagement; development of resources for learning; informing local and national science, technology, engineering, and mathematics (STEM) education policy; preparing a climate science professional workforce; and enhancing informed decision-making associated with adaptation to and mitigation of climate change impacts. These emerging priorities lie at the intersection of social/behavioral/economic and Earth system sciences.

CROSS-CUTTING PROGRAMS

CROSS-CUTTING PROGRAMS

OCEANS POLICY IMPLEMENTATION

National Ocean Policy Implementation

We applaud and support the steps the Administration has taken to address ocean and coastal threats through the establishment of a National Ocean Policy (NOP). Executive Order 13547 identified several key priorities for ocean and coastal management and is a critical first step towards comprehensive management of our ocean and coastal resources. Implementation of the NOP is critical to ensure the efforts of the Interagency Ocean Policy Task Force move the nation towards comprehensive federal ocean management and away from the sectoral approach that has proven to be detrimental to both ocean health, and sustainable use of our ocean resources. A comprehensive, ecosystem-based national ocean policy that uses coastal and marine spatial planning can ensure the protection, maintenance, and restoration of the health of ocean, coastal, and Great Lakes ecosystems and resources that are important contributors to our national economy and a fundamental part of American life. To date, responsibility for managing marine and coastal activities has been fragmented among state and federal agencies. The NOP can improve this regime by utilizing ecosystem-based management, planning, and coordination and evaluating cumulative impacts of the many uses of the ocean. Coastal and marine spatial planning allows us to maximize the economic and social benefits the ocean provides, while protecting our marine ecosystems. Our recommendations here include 81.25 million for implementation of a National Ocean Policy across many agencies and include funding for the National Ocean Council and regional ocean partnerships. Funding for the NOP implementation tool of coastal and marine spatial planning can be found in this cross-cutting section below.

Regional Ocean Ecosystem Assessments and Planning

A total of \$15 million is recommended for NOAA (\$8 million), EPA (\$3 million), and USGS (\$4 million) to provide the additional capacity to complete comprehensive assessments in each region by evaluating data on ecosystem health and potential threats within three years. The assessments would provide a baseline for developing regional strategic plans, and would also inform marine spatial planning, and climate change adaptation planning. Assessments would also help guide prioritization of additional data needs and policy issues in each region. Both offshore and near shore marine areas should be evaluated. These assessments should describe the structure, functioning, composition, and important ecological areas of the ecosystem; develop and evaluate indicators of ecosystem health; and identify current and emerging threats. Regional assessments should also provide information on key characteristics of each region's social, economic, and cultural features and describe current and emerging human uses in the region. While these assessments will be primarily based on existing data, additional funding is needed to collect new information to address the highest priority data gaps, as well. In addition, the agencies should work to include coastal vulnerability assessments, to help identify needs and prioritize planning to address impacts from climate change and other coastal hazards.

Regional Ocean Partnership Grants

This recommended funding of \$30 million would provide grants to address priority marine and coastal issues within each region, with a priority on implementing coastal and marine spatial planning. Most areas of the coast have already established regional ocean partnerships, many of

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OCEANS POLICY IMPLEMENTATION

which are likely to form the basis for Regional Planning Bodies identified in the *Framework for Coastal and Marine Spatial Planning*. The Administration should provide financial support to these entities and use them as place-based lenses through which to focus funding for marine and coastal priorities. Funding should also be provided through competitively awarded grants for specific projects to implement regional strategic plans and joint regional-federal priorities, with a priority focus on implementing coastal and marine spatial planning. In addition, up to 5% of the funding for each region should be available to pay for administration of the regional body (staff time, meeting and travel costs), to help ensure that these entities become enduring institutions that can guide regional efforts.

LIDAR and Coastal Imagery

Funding is needed for Light Detection and Ranging (LIDAR), high resolution photography, and hyperspectral imaging in priority coastal areas to understand the effects of sea level change. This data will support coastal change and coastal vulnerability analysis, as well as provide detailed elevation data to inform planning for coastal hazards and adaptation to climate change. Agency staff estimate that LIDAR for the entire US coast will cost upwards of \$250 million. We recommend \$20 million of funding to enable USGS and NOAA to make progress in priority areas in each region over multiple years.

National Ocean Council

The National Ocean Council, co-chaired by Council on Environmental Quality and Office of Science and Technology Policy (OSTP), is tasked with the implementation of the National Ocean Policy (EO No. 13547) that strives to ensure protection, maintenance, and restoration of the oceans, coasts and Great Lakes of our nation. This role includes advising the President on the National Policy, as well as coordinating and facilitating the implementation of the National Policy with the all agencies seated on the National Ocean Council, partners in the regional planning bodies, science advisors and stakeholders. \$0.25 million is recommended for OSTP to provide staff as well as meeting and travel costs for the new National Ocean Council, the Governance Coordination Committee, and the Ocean Resources and Research Advisory Panel. Funding recommendations for the Council on Environmental Quality's co-chairmanship of the National Ocean Council can be found in the Council on Environmental Quality section of this document.

Data Integration and Decision Support Tools

Much of the existing data on oceans and coasts is spread across multiple federal, state and private entities, and the data are not in readily compatible formats. These data need to be integrated and made accessible for decision-makers. Funding should be provided to NOAA (\$4.75 million), USGS (\$2 million), and BOEM (\$0.75 million) to support existing data integration efforts, such as the Multipurpose Marine Cadastre, to develop a common platform for data and mapping programs. Decision support tools need to be developed so that planning entities and stakeholders can display and work with data to evaluate tradeoffs among different planning scenarios. A

CROSS-CUTTING PROGRAMS

OCEANS POLICY IMPLEMENTATION

portion of this funding should be made available to other federal, tribal, and state partners to integrate data from external sources into a national system.

Maps and Analyses

The foundation for Coastal and Marine Spatial Planning (CMSP) are the maps and charts of marine habitats, uses, and management authorities. We recommend \$7.15 million of funding for NOAA (\$5 million), USGS (\$2 million), and BOEM (\$0.15 million) to begin the synthesis and modeling of existing data to create maps that characterize habitat and identify important ecological areas. In addition, current area-based management authorities will need to be mapped and their implications for planning evaluated. Finally, funds are needed to map human use patterns (e.g. shipping, recreational fishing, military areas, pollution, etc.) and to assess the conflict, compatibility, and/or dependence among uses and ecosystem characteristics. The California Ocean Uses Atlas project is one model that could be expanded nationally.

Renewable Energy Siting and Permitting

Funding of \$0.5 million to BOEM would facilitate the development of BOEM's offshore renewable energy activities within the context of coastal and marine spatial planning efforts.

Agency Coordination

Funding of \$0.85 million to NOAA and other relevant federal agencies would allow these agencies to begin to coordinate on CMSP implementation at national, regional, and state levels. This funding is key to ensuring that each actor can understand other federal, regional, tribal, state, and local priorities and concerns, while actively promoting the national ocean policy and ensuring compatibility with individual agency missions and goals.

CROSS-CUTTING PROGRAMS

NATIONAL FISH AND WILDLIFE FOUNDATION

National Fish and Wildlife Foundation

The National Fish and Wildlife Foundation (NFWF) is a private, non-profit organization established by Congress to conserve fish, wildlife, plants and habitats through multi-sector partnerships. The primary function of NFWF is to support wildlife and habitat conservation in partnership with the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, and other Federal Agencies through competitive grant programs using privately matched funding. This collaborative model has leveraged more than \$530 million in federal funds into over \$1.8 billion for conservation since NFWF was established in 1984. NFWF continues to excel in grant making while emphasizing accountability, measurable results, and sustainable conservation outcomes. With continued appropriations, NFWF will multiply the effect of federal funds with non-federal matching funds to expand well-established partnerships focusing on select species of birds, fish and sensitive habitats in need of immediate conservation action.

In fiscal year 2012, the Foundation plans to use appropriated funding for new and existing wildlife and habitat conservation partnerships. Appropriated funds will be matched at least one-to-one by private funding sources.

- Funding of \$8.5 million through the U.S. Fish and Wildlife Service, Resource Management, as requested in the President's FY12 budget, will expand matching grants partnerships with the Service that benefit the Service's spotlight species and produce measurable population results.
- Funding of \$3 million through the Bureau of Land Management, Management of Land and Resources, as requested in the President's FY12 budget, will expand matching grants partnerships with the Bureau for the protection of wildlife corridors, enhancement of wildlife habitat, and species recovery in fractured landscapes.
- Funding of \$3 million through the U.S. Forest Service, National Forest System, as requested in the President's FY12 budget, will expand matching grants partnerships with the Service to restore wet meadows, conserve riparian areas and improve fish passage in critical habitats.

CROSS-CUTTING PROGRAMS

BORDERLANDS ENVIRONMENT PROTECTION

Borderlands Environment Protection

America's nearly 2,000 mile long border with Mexico includes many national parks, forests, wildlife refuges, wilderness areas, tribal reservations and other environmentally important areas of federal, state, tribal, and private lands and waters. Several nationally significant federal protected areas are found here, including Big Bend National Park, Organ Pipe Cactus National Monument, and Santa Ana and Buenos Aires National Wildlife Refuges (NWR). These federal protected lands provide essential habitat for hundreds of imperiled species, including nearly 40 species listed or proposed for listing under the Endangered Species Act in Arizona alone. Much of this country's most spectacular wildlife, including jaguar, ocelot, pronghorn, and hundreds of bird and butterfly species, and the substantial economic benefit these species provide to local communities, depend upon maintaining connected and intact habitat on borderlands - public and private.

Illegal border crossings and related enforcement activities - both infrastructure such as barriers and roads and ongoing operations - are placing a tremendous burden on federal land management agencies and are causing serious long-term damage to natural and cultural resources. In addition, natural and cultural resources on private property, tribal lands, and state lands, all have been adversely impacted by large-scale construction projects, including more than 650 miles of border barriers and roads. Barriers have been constructed on protected federal lands, including at Buenos Aires NWR and San Pedro Riparian National Conservation Area in Arizona, and on the Lower Rio Grande Valley NWR in Texas. The effects of large-scale border security infrastructure across sensitive areas have adverse effects on people and wildlife, such as erosion and sedimentation that impairs water quality and stream habitat, elevated risk to wildlife and human safety from increased floods, untamed wildfires, and the many devastating ancillary effects of fragmenting wildlife populations in previously unbroken and vast habitat and redirecting disturbance caused by illegal traffic and law enforcement interdiction into more remote and ecologically sensitive areas.

Ordinarily, these construction projects and operations would have been carefully analyzed under a variety of environmental and other provisions of law and regulations, including public input and, as a result, would have avoided sensitive areas altogether or, at least, included careful steps to avoid, minimize, or mitigate for any adverse impacts on sensitive natural and cultural resources. In addition, under normal circumstances, the agency responsible for the actions (here, the Department of Homeland Security (DHS)) would bear the cost of both the analyses and the "avoid, minimize, or offsetting" measures before, during, and after the projects and activities.

However, as a result of exercise of the DHS waiver authority provided by provisions of the REAL ID Act, these full and rigorous assessments were not conducted. Accordingly, now attempts must be made after the fact to minimize or offset the impacts resulting from the security-related construction and other activities previously taken or ongoing in these sensitive borderland areas, such as: damage from barrier and road construction in the Otay Mountain Wilderness in California; fragmentation of habitat for jaguars, black bear, desert tortoise and many other species and blockage of desert washes from infrastructure construction resulting in exacerbated seasonal flooding and natural resource damage in protected areas of southern Arizona (e.g. Organ Pipe Cactus National Monument and San Pedro Riparian National Conservation Area); construction of barriers across the Nature Conservancy's Southmost Preserve in Texas that will divide ocelot

CROSS-CUTTING PROGRAMS

BORDERLANDS ENVIRONMENT PROTECTION

and jaguarundi habitat; and construction-induced siltation in the Tijuana River Estuary in California.

Despite the controversial nature of border walls and waivers, DHS declares that it maintains a strong commitment to environmental stewardship and sustainability. Because the environmental disturbances caused by border enforcement activities, tactical infrastructure, surveillance and other technologies affect an expansive, ecologically diverse and sensitive region, and because the impacts are in many cases long-term and cumulative in nature, mitigation dollars need to be appropriated consistently through time, compensatory with the magnitude of known impacts. Because DHS is the agency directly responsible for border operations and infrastructure, funding from its Border Security Fencing, Infrastructure, and Technology account within the Customs and Border Protection Agency budget should be allocated specifically for the purpose of implementing environmental mitigation projects, which may be carried out in conjunction with other federal and state agencies, tribal nations and private land owners, and for any additional costs, including overhead, that the land managing agencies bear in addressing the impacts of DHS activities.

Despite the specific commitment of funds for this purpose in FY 09 and 10, and an FY 11 request, adequate funding has not as yet been provided to the land managing agencies by DHS. The administration and, if necessary, Congress, should take action to ensure that those previously-provided funds are transferred without further delay to the land managing agencies for appropriate monitoring and mitigation activities.

In FY 12 and the outyears the budget should include a cross-cutting initiative to ensure that funding adequate to fully address the adverse impacts of border security infrastructure and operations is budgeted by, and provided to, DHS on an ongoing, regular basis via the annual DHS appropriations. In addition, the Office of Management and Budget should take steps to ensure that such funding is transferred by DHS to federal land managing agencies on a timely basis for implementation (to include overhead) of the measures required.

In addition to mitigating for border security infrastructure impacts, this budget initiative should include adequate funding for:

- More staff for law enforcement, environmental review of border-related projects and interagency coordination to facilitate the dual missions of border protection and the conservation of sensitive resources on public lands along the border.
- Appropriate infrastructure improvements for resource agencies such as security improvements to buildings; environmental and cultural sensitivity training for Border Patrol and other non-land management agency law enforcement agents; needed facilities and vehicles; and improving visitor services.
- Biological research, habitat restoration, and monitoring programs, including funding for understanding and mitigating impacts on endangered species, other wildlife and habitat; and restoration of degraded habitats.
- Resource protection, including the removal of trash and abandoned vehicles; cleaning and protecting fouled water sources; blocking hundreds of miles of illegal roads; using surveillance and deterrence technology; fighting fires associated with border crossers; monitoring hydrological impacts (e.g. erosion, sedimentation, debris and water conveyance)

CROSS-CUTTING PROGRAMS

BORDERLANDS ENVIRONMENT PROTECTION

and restoring impaired hydrological function across the border; and protection and restoration of important historic, cultural, and anthropological structures and artifacts.

Although at least \$50 million is needed annually, the Green Budget request is a modest one of only \$25 million, \$15 million less than the FY 10 enacted level.

CROSS-CUTTING PROGRAMS

ARCTIC RESEARCH AND ASSESSMENTS

Independent Arctic Science Gap Analysis and Research Plan

The \$1 million in recommended funding to the USGS would provide funding for a comprehensive gap analysis by a reputable independent body, such as the National Research Council (NRC), to evaluate the current level of understanding about the Arctic marine environment, particularly in relation to the levels of information required to make sound decisions and regulations that will protect Arctic ecosystems and people.

One of the principal challenges confronting Arctic managers and decision-makers is the lack of information about the composition, structure, and functioning of Arctic marine ecosystems. According to the U.S. Arctic Research Commission, the Arctic is “the least studied and most poorly understood area on Earth.” In particular, the Arctic Ocean is the least understood of all the world’s oceans. Without adequate information about the marine environment, managers cannot responsibly make informed decisions concerning whether industrial activities should occur in the Arctic, and if so, when, where, and how.

DOI has acknowledged the need to better understand science gaps in the Arctic and has tasked the USGS to conduct a preliminary review of Arctic science and report to the Secretary by April of 2011. DOI should use the preliminary USGS science review to set the stage for a more comprehensive gap analysis and research and monitoring plan. Portions of this review may be appropriate for review by an independent entity such as the NRC, as called for by the 2010 Department of Interior Appropriations bill conference report and the Arctic Ocean Research and Science Policy Review Act of 2009 (S. 1562) introduced by Alaska Senator Mark Begich.

In conjunction with other relevant Departments and agencies, DOI should develop an integrated research plan to fill the gaps identified by the USGS and other science reviews. The research plan should incorporate local and traditional knowledge and be designed to provide a better understanding of Arctic marine ecosystems and the likely impacts of industrial activities on those ecosystems. These analyses and the development of scientific research plans should be coordinated with the National Ocean Council processes described above and should be largely completed before decisions are made about whether and how offshore industrial activities should proceed.

Arctic Oil Spill Prevention and Response Assessment

An independent evaluation of spill response system operating limits for Arctic Ocean environmental factors, such as wind, sea state, sea ice, visibility, etc., and an analysis of the frequency, duration, and timing of conditions that would preclude a response in the vicinity of proposed oil and gas development operations. We recommend \$2 million in funding to provide NOAA with the increased capacity for such efforts.

From October to June, the Arctic Ocean is dominated by moving packs of sea ice, extreme storms, darkness and sub-zero temperatures. The fleeting Arctic summer isn’t much kinder with high temperatures in the 40s, gale-force winds, week-long storms, and heavy fog restricting visibility.

CROSS-CUTTING PROGRAMS

ARCTIC RESEARCH AND ASSESSMENTS

Some oil and gas leases in the Chukchi Sea lie more than 100 miles offshore. Docks large enough to manage cleanup vessels aren't available on nearby shores. If a catastrophic spill occurred, response boats and equipment would likely have to be brought from 400 miles away. Under the best circumstances, removing oil from the sea is extremely challenging. Operating boats in moving ice is challenging and oil can only be ignited in such conditions for a few days at most. Worse still, collecting oil in the open areas of sea ice, called polynyas, would mean exposing the most biologically active part of the Arctic Ocean ecosystem to a toxic substance. Polynyas are full of microorganisms, the base of the food web, to say nothing of many vertebrates, such as marine mammals and birds.

The industry acknowledges that there will be times when the harsh arctic conditions make an oil spill response impossible. Yet there have been no attempts to quantify this information, or to base operational decisions on spill response considerations. The federal government must initiate an independent review of existing spill prevention and response standards and develop a suite of measures based on best available technology designed to prevent and respond to oil spills in the Arctic Ocean as identified in Senator Begich's Arctic Oil Spill Research and Prevention Act of 2009 (S. 1564). Realistic field tests are critical to the evaluation.

Arctic Environmental Assessments and Surveys

While a few research projects and environmental assessments in U.S. Arctic waters are currently underway there is a need for considerably more research and environmental assessments and surveys. Although a comprehensive plan can only be developed after a thorough gap analysis, some new field work can be initiated now. As one example, a comprehensive survey of species occupying each marine habitat, including communities in the benthic, pelagic and littoral zones, and ice-associated communities should be undertaken for U.S. Arctic waters. We recommend \$15 million of funding which would provide NOAA (\$5 million), NSF (\$5 million), and USGS (\$5 million) the ability to conduct relevant assessments and surveys.

In addition, to plan effectively we must first understand where important ecological areas (IEAs) are located. Not all areas are of equal value in biological and ecological terms. IEAs are geographically delineated areas which by themselves or in a network have distinguishing ecological characteristics, are important for maintaining habitat heterogeneity or the viability of a species, or contribute disproportionately to an ecosystem's health, including its biodiversity, function, structure, or resilience. For example, IEAs could include subsistence use areas; areas of high productivity or diversity; areas that are important for feeding, migration, or other parts of the life history of species; or areas of biogenic habitat, structure-forming habitat, or habitat for endangered or threatened species. Identification of IEAs areas is critical to help ensure that the function, resilience, and health of the ecosystem are considered throughout any planning process.

CROSS-CUTTING PROGRAMS

CLEAN ENERGY AND CONSERVATION

Clean Energy and Conservation

The Obama Administration, led by Secretary of the Interior Ken Salazar and Department of Energy Secretary Steven Chu, have proposed to accelerate the deployment of utility scale solar, wind, and geothermal projects on public lands and offshore wind development along the Atlantic coastline as a part of a strategy to address climate change, produce jobs, and transition to a clean energy economy. Given their size and scale, many of the renewable energy projects proposed for the public lands could have a significant effect on wildlife, habitat, water, wild lands and other natural resources. Some of the solar projects planned and approved in this calendar year approached 8,000 – 10,000 acres in size; a scale of energy development for specific projects never before seen on public lands. While the climate change and related benefits of clean energy can be significant and warrant strong support, proper siting, management, and mitigation of these projects is essential to avoid significant impacts on wildlife and other natural resources. Secretary Salazar has advocated for, and the conservation community supports, a “Smart from the Start” approach to planning, siting, designing, managing, and monitoring renewable energy generation and transmission. This approach, if properly implemented, will provide added certainty for project developers, investors, conservationists and other stakeholders by accelerating clean energy development and avoiding, minimizing, and mitigating environmental impacts that can result in conflicts and increase project costs and time delays.

As a Nation, we have learned much from our past experiences with conventional and renewable energy development. Most importantly, we have learned that a strategic approach to addressing the impacts of energy development at the beginning stages of project planning not only allows us to maximize energy development, but can help us preserve the rich natural and cultural heritage that our public lands provide. And in this way, we can increase the certainty for project developers, investors, conservationists, and other stakeholders that we can meet our clean energy goals in an environmentally-friendly way.

A more thoughtful, environmentally-sound, and strategic approach to designing and developing renewable energy generation and transmission projects is needed if natural resource and energy development conflicts are to be avoided and projects successfully developed. For this reason, leaders in the conservation community have advocated for the adoption of a “Smart from the Start” approach to renewable energy development through which state and federal agencies maximize clean energy benefits while avoiding or minimizing impacts on wildlife, water, wild lands, and other natural resources.

To successfully develop and implement a strategy for renewable energy project siting and permitting that is truly “smart from the start” will require the coordinated and collaborative efforts of a number of federal departments and agencies with the assistance of the Council on Environmental Quality in conjunction with a number of state agencies, private sector developers, investors, conservation organizations, and other interested parties.

With regard to the role that the federal government can play in promoting, evaluating, permitting, and monitoring renewable energy, a number of programs are essential:

- The Bureau of Land Management (BLM): BLM is responsible for over 253 million surface acres of land, of which approximately 22 million acres has been identified in

CROSS-CUTTING PROGRAMS

CLEAN ENERGY AND CONSERVATION

BLM's preferred alternative for solar energy development and 20 million acres for wind development. In addition, BLM also leases public lands, including National Forest lands, for geothermal energy development that amounts to over one-third of the Nation's geothermal energy capacity. Despite this significant responsibility, programs responsible for renewable energy development remain severely underfunded. These include: The Division of Fish, Wildlife, and Plant Conservation and the Renewable Energy Coordinating Offices (RECO's) to improve the project permitting process; BLM's ability to evaluate developers' capacity to successfully implement and mitigate projects; and to conduct thorough site-specific and landscape-level analysis of clean energy projects' potential environmental impacts, including their cumulative impacts, before they are approved. In addition, resources are needed to complete regional ecosystem assessments in order to provide essential data to guide projects to areas of high clean energy potential and minimal conflicts with wildlife, wild lands, water, and other important natural resources and land uses of the surrounding environments.

- The Fish and Wildlife Service (FWS): Additional resources are critical for completing project consultations to ensure that threatened and endangered species and their habitats are avoided in project siting decisions and to develop measures to minimize impacts to wildlife species where impacts are unavoidable. The agency needs additional capacity to gather data on present and potential impacts of renewable energy projects on wildlife species, in particular golden eagles which are especially vulnerable to improper siting, in order to be able to develop alternative management strategies to avoid harm and to develop habitat conservation plans where they can reduce potential threats to wildlife in order to facilitate clean energy development.
- The United States Geological Survey (USGS): USGS has undertaken work to assess impacts to wildlife from the development and placement of wind energy projects and transmission from direct strikes, habitat fragmentation, and construction and maintenance of infrastructure. Detailed information is crucial so that projects can be sited and implemented in a way that minimizes impacts on vulnerable species such as bats, for which high mortality at wind energy projects already has been observed, and golden eagles, for which identification of priority habitat and an increased understanding of the mechanisms by which wind impacts occur is needed. In the coming year, resources are needed to expand this work and to develop a national assessment; the program also should work to develop a national framework for assessing the impacts to wildlife and habitat from multiple types of energy development, including solar.
- The U.S. Forest Service (USFS): Additional resources are critical to respond effectively to the expansion of renewable energy development and energy corridors on national forest lands, which could pose grave risks to forest wildlife populations and habitat if improperly sited. Adequate funding for this program will ensure that harmful conflicts are avoided and, if necessary, properly mitigated.
- Department of the Treasury, Treasury Grant Program: Extended for one year to the end of calendar year 2011, this should be further extended to provide capital that is essential to cover the costs of project design and development as a means of encouraging effective and environmentally-sound clean energy development. This funding will help to further the economic benefits and employment opportunities associated with clean energy development while ensuring proper project design and management, and that effective mitigation measures are developed and required to compensate for unavoidable site-specific and regional impacts.

CROSS-CUTTING PROGRAMS

CLEAN ENERGY AND CONSERVATION

- The Environmental Protection Agencies' REnew Lands Initiative: Intended to encourage the development of brown fields, abandoned mine sites, and disturbed lands for renewable energy production, this initiative has the advantage of encouraging clean energy production on lands of low ecological value that are generally near areas where energy demand is high and provides the potential for employment often in economically-depressed communities. This program warrants additional funding and should be closely linked to the efforts of DOI through their RECO offices.
- The Council on Environmental Quality: Should be granted the resources and authority needed to improve coordination and collaboration among the various federal departments and agencies working on renewable energy generation and transmission issues in order to improve coordination, ensure thorough site specific and landscape level environmental reviews, develop and require effective mitigation measures, and assure early and ongoing input and coordination with interested stakeholders, including project developers, regulators, tribes, conservation groups and other members of the public as well as with appropriate federal, state and local decision makers.

CROSS-CUTTING PROGRAMS

CHALLENGE COST SHARE

Challenge Cost Share Crosscutting Account

The Challenge Cost Share (CCS) funding program provides funding to the Bureau of Land Management (BLM), Fish and Wildlife Service (FWS) and National Park Service (NPS) to leverage private funding and program support from groups that share the agencies' missions to preserve natural and cultural resources. Under the CCS Program, the bureaus select projects for funding from project proposals submitted by the various field offices and park units. Generally, only projects that meet the matching cost-share criteria of dollar for dollar (1:1) are selected for funding. Some bureaus use the 1:1 match on a project by project basis, while others do it on an aggregate basis, such as by geographic location. Projects exceeding the required 1:1 match and also meeting other bureau-specific project selection criteria are viewed as maximizing the leveraging of appropriated federal dollars and have a higher chance of being selected.

CCS grants allow citizen volunteers, universities and researchers to do thousands of stewardship projects on public lands and national trails. For example, CCS funds have enabled volunteers to help rehabilitate historic ranch buildings for educational and recreational use at the White Grass Dude Ranch in Wyoming's Grand Teton National Park, and they have allowed visually impaired youth to experience history by walking portions of the Lewis & Clark National Historic Trail in Montana.

The CCS has provided important opportunities for tens of thousands of citizen volunteers to do thousands of stewardship projects on public lands and trails by leveraging these federal funds in a way that cannot be duplicated through other federal funding programs. Eliminating this program would punish non-profit national and local partners dedicated to improving our irreplaceable historic, cultural and natural resources on our federal lands. For example, Friends of Agua Fria National Monument in Arizona leveraged scarce dollars with the BLM to stabilize, preserve and interpret the historic Teskey Home Site on Agua Fria National Monument in the National Landscape Conservation System. The Friends groups leveraged \$24,171 in CCS funds with \$27,000 match in volunteer hours to save the site from vandalism, off highway vehicle damage, shooting and continued misuse by visitors.

The Inspector General Report's findings of the agencies' failure to verify partner contributions, plan CCS projects, and communicate program availability and results are cause for concern. We propose the agencies adopt the Inspector General's recommendations for the BLM, FWS and NPS to collaborate, develop and implement consistent policies and procedures for the CCS to accurately document partner contributions and accomplishments and report them to Congress. We support the recommendations to communicate program availability and results and documentation of projects with commitment letters, project proposals, written agreements and reports.

CCS is a value to the taxpayer. The value of the program is in the leveraged labor costs donated by the tens of thousands of volunteers that document a rock art site, restore habitat, interpret an historic trail, or remove fence from a new Wilderness area. The Challenge Cost Share program also allows Americans to get out and enjoy the outdoors promoting exercise and recreation. It builds sweat equity and pride in our natural and cultural resources. This program also includes local government participation and plays an important role in educating the public.

CROSS-CUTTING PROGRAMS

CHALLENGE COST SHARE

The program leverages our taxpayer dollars, turning a \$19 million investment into at least \$38 million in completed projects. With all of these attributes, this program would be nearly impossible to duplicate through existing programs. Therefore, we ask for reinstatement of the Challenge Cost Share program in the U.S. Department of the Interior Budget for BLM, FWS and NPS with level funding of \$19 million in FY 2012 with all necessary requirements to repair the program that we all know to be of the highest value. Reduced or no funding for this program means fewer leveraged dollars invested in hands-on projects and improvements for our public lands , and thousands of hours of volunteer labor and expertise turned away from agencies that are already stripped to the bone in program funding.

CROSS-CUTTING PROGRAMS

FEDERAL ENERGY REGULATORY COMMISSION HYDROPOWER RELICENSING

Hydropower Relicensing

The Federal Energy Regulatory Commission (FERC) issues 30-50 year operating licenses for non-federal hydroelectric dams, setting the rules for how these dams may be operated. When issuing these licenses, FERC is required by law to look beyond power production and give equal consideration to fish and wildlife, recreation, environmental protection, and other public values. When these licenses expire, Americans get a once-in-a-lifetime opportunity to protect and improve the health of the rivers that flow through their communities.

Federal resource agencies play a very important role in FERC's hydropower licensing process. Congress has given these agencies the authority to recommend license conditions that will minimize the harmful impacts that dam operations have on public resources. The Energy Policy Act of 2005 (EPAAct) gave these agencies significant new obligations associated with protecting public assets affected by hydropower dams. In particular, agencies must now hold costly "trial-type" administrative hearings for disputed license conditions. Federal resource agencies need funding sufficient to allow them to uphold their congressionally authorized duties to protect public resources with license conditions when appropriate and hold hearings mandated by EPAAct when the factual basis of the conditions are being reviewed. If adequate funding for the hydropower relicensing requirements that EPAAct 05 placed on NMFS, USFWS, BIA, BLM, US Forest Service, the National Park Service, and FERC is not provided, it will lead to the continued failure of these agencies to meet their statutory responsibilities.

CROSS-CUTTING PROGRAMS

WILD AND SCENIC RIVER MANAGEMENT

Wild and Scenic River Management

The Wild and Scenic Rivers Act protects free-flowing rivers with outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Four federal agencies share responsibility for administering designated rivers, conducting studies to determine if rivers qualify for wild and scenic river designation, and developing wild and scenic river management plans: the Bureau of Land Management, U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service. Unfortunately, none of these agencies receives sufficient funding to adequately protect the Wild and Scenic Rivers System and ensure that it represents a broad diversity of river types, as Congress intended. Although 84,500 stream miles are potentially eligible for designation, only about 252 rivers covering about 12,000 miles are currently designated. With modest increases in funding, these agencies could complete management plans and studies to identify additional rivers that qualify for designation. Additional funding would also allow them to better manage and protect designated rivers and promote their values to the public.

CROSS-CUTTING PROGRAMS

COASTAL LOUISIANA RESTORATION

Coastal Louisiana Restoration

In the region where the Mississippi River joins the Gulf of Mexico lies a complex group of ecosystems that contribute a great deal to the economic, ecological, and cultural vitality of Louisiana, the Gulf region, and the entire nation. The deltaic and wetland areas formed by the interaction of these two great bodies of water support a staggering amount of biodiversity, a seafood industry vital to the US food supply, one of the largest port systems in the nation, and a human population whose rich cultural heritage and way of life depends on the ecological health of the coastal wetlands. However, over 70 years of mismanagement of natural resources and industrial development with complete disregard for the ecological well-being of the Louisiana coast have caused one of the most serious environmental problems facing our nation today. The Mississippi River is shackled within its banks, isolating the delta and wetland areas from the annual influx of sediment and nutrients that maintain their fertility and vitality. Over 2300 square miles of land have eroded into the Gulf of Mexico since the 1930s. These barrier islands and marshes would have served as vital buffers for recent disasters like Hurricane Katrina and the Deepwater Horizon oil spill. Unless this damage is mitigated, similar natural and human-induced events will have equally devastating impacts in the future.

The need for restoration in coastal Louisiana is urgent. Conservative estimates say that if substantial changes are not made in the next decade to the management of the Mississippi River and reverse this process of land loss in the region, the window of opportunity to reverse the damage will close forever. As such, the following spending is recommended for FY12:

Barataria Basin Barrier Shoreline	\$75,000,000
Terrebonne Basin Barrier Shoreline	
Project	\$40,000,000
MRGO Ecosystem Restoration	\$30,000,000
Medium Diversion at White's Ditch	\$5,000,000
Demonstration Projects	\$15,000,000
Beneficial Use Dredge Program	\$15,000,000
	\$180,000,000

CROSS-CUTTING PROGRAMS

NATIONAL FISH HABITAT ACTION PLAN

National Fish Habitat Action Plan

The mission of the National Fish Habitat Action Plan (2006) is to “protect, restore, and enhance the nation’s fish and aquatic communities through partnerships and foster fish habitat conservation and improve the quality of life for the American people.” This is a science-based, non-regulatory program to benefit fish and aquatic habitat conservation.

The delivery architecture for on-the-ground conservation projects are Fish Habitat Partnerships (analogous to Joint Ventures in the migratory bird community); 17 such FHP’s have been endorsed by the National Fish Habitat Board to date and another four FHP’s are considered Candidates. Many federal agencies are engaged with implementation of the Plan. Key leadership roles reside within the U. S. Fish and Wildlife Service (Fish Habitat Partnership support), the U. S. Geological Survey, Biological Resources Division (science and data support), and the National Marine Fisheries Service (Board support and coastal assessments). The U.S. Fish & Wildlife Service requested and was appropriated \$7.2 million in its 2010 Fisheries Program budget to implement the Action Plan.

CROSS-CUTTING PROGRAMS

EVERGLADES ECOSYSTEM RESTORATION

Everglades Ecosystem Restoration

The Everglades ecosystem of central and southern Florida is one of the world's most diverse and productive wetlands, but is also one of the most imperiled natural wetland ecosystems. The "River of Grass" has been drained and diverted through canals and no longer supports the web of life that depends upon it. Development, agriculture, and a massive water engineering and drainage project reduced this irreplaceable subtropical wilderness to half its former size. Wading bird populations in Everglades National Park have declined by over 90 percent and 68 species of Everglades plants and animals are threatened or endangered. In 2010, the United Nations put Florida's Everglades National Park back on its list of the world's most treasured or endangered sites.

Restoration of the Everglades is at a critical juncture and keeping Everglades restoration on schedule requires significant federal investment in the coming year. Currently, 13 Comprehensive Everglades Restoration Plan (CERP) projects are under construction including the Picayune Strand Restoration and the Site One Impoundment. Additionally, the construction of initial bridging on Tamiami Trail, part of the Modified Water Deliveries project and considered a critical first step toward implementing restoration, began in December 2009. Sustained funding to keep these projects on schedule is critical to avoiding collapse of the ecosystem and economy of 7.5 million South Floridians.

Successful restoration of the Everglades is critical to Florida's economy and environment. A recent report by Mather Economics found that every \$1 investment in Everglades restoration generates \$4 in return in ecosystem benefits such as drinking water supply, tourism, park visitation, recreation, and wildlife habitat.

Comprehensive Everglades Restoration Program

The Comprehensive Everglades Restoration Plan (CERP) is an unprecedented undertaking aimed at protecting and preserving the water resources of central and southern Florida and bringing the Everglades back to life. CERP is a federal-state partnership that is designed to improve natural water flow and water quality by removing levees, filling in canals, and reducing agricultural and urban runoff. The Mather Economics report found that CERP is projected to produce more than \$46 billion in benefits to South Florida and create 442,664 jobs over 50 years.

To continue moving forward with Everglades restoration, the U.S. Army Corps of Engineers (USACE) needs continued funding in FY 2012 CERP projects and other ongoing restoration projects. We recommend the following amounts to USACE for FY 2012: \$30 million for the CERP-Indian River Lagoon South restoration project; \$47 million for CERP-Picayune Strand restoration project; \$33 million for CERP-Site One Impoundment project; \$50 million for CERP design; \$20 million for C-111 South Dade to restore water to Florida Bay; \$25 million for C-51/STA 1-E for wetlands creation; and \$50 million for Kissimmee River restoration.

The Department of the Interior is also a major federal partner in restoring the Everglades. We recommend the following levels for FY 2012 funding to continue moving forward with key projects: \$55 million for Everglades National Park Operations; \$15 million for the Modified

CROSS-CUTTING PROGRAMS

EVERGLADES ECOSYSTEM RESTORATION

Water Deliveries to Everglades National Park; \$3 million for planning for Tamiami Trail Next Steps bridging; \$12 million for U.S. Fish and Wildlife Service; and \$7 million for U.S. Geological Survey.

CROSS-CUTTING PROGRAMS

GREAT LAKES RESTORATION

Great Lakes Restoration

The Great Lakes, one of America's Great Waters, are a wonder of the world. They hold one-fifth of the world's fresh surface-water supply. More than 30 million people rely on the Lakes for their drinking water, and millions more from the commerce and businesses they support in agriculture, industrial manufacturing, steel production, commercial and sport fisheries, and recreation and tourism. The economic benefits in the Great Lake states are more than \$15 billion for hunting, fishing, and wildlife watching. The Brookings Institution also reported that Great Lakes restoration creates jobs in the short-term while laying the foundation for long-term prosperity—providing \$2 in economic benefit for every \$1 investment in restoration.

Despite their overwhelming greatness and their vast expanse, the Great Lakes, which have helped shape the identity of the politically important Midwest, are fragile and in peril. Raw sewage contaminates beaches, invasive species threaten native fish, and toxic mercury makes fish unsafe to eat. These problems have reached a critical tipping point. Scientists say that action must be taken now or the entire Great Lakes' ecosystem will be damaged beyond repair.

In 2005, the region produced a blueprint to protect and restore the Great Lakes. The Great Lakes Regional Collaboration, which was made up of over 1,500 leaders from around the region, identified goals to restore this fresh water resource. In 2009, President Obama announced his Great Lakes Restoration Initiative (GLRI), which 1) seeks to implement the recommendations of the GLRC and restore and protect the Great Lakes, 2) coordinate actions between federal agencies and federal agencies and nonfederal partners, and 3) ensure accountability that ensures results.

In fiscal year 2012, we recommend Congress provide the following funding levels: \$475 million for the Great Lakes Restoration Initiative, the same level appropriated in fiscal year 2010. The GLRI provides important funding not only for the Great Lakes National Program Office and the Great Lakes Legacy Act, it also enhances activities at other agencies and allows the EPA to coordinate Great Lakes restoration across the Federal government.

Congress must also support core programs that contribute to Great Lakes restoration, including, but not limited to, the following: Army Corps of Engineers' Great Lakes Fishery and Ecosystem Restoration program, Tributary Modeling Program and Remedial Action Assistance program (Sec. 401); U.S. Fish and Wildlife Service's Great Lakes Fish and Wildlife Restoration program; U.S. Geological Survey's Great Lakes Science Center; NOAA's Great Lakes Environmental Research Laboratory and Great Lakes Habitat Restoration Program; the Great Lakes Fishery Commission (funded under the U.S. Department of State); Natural Resources Conservation Service's Great Lakes Basin Program for Soil Erosion and Sediment Control

CROSS-CUTTING PROGRAMS

LACEY ACT AMENDMENT

Lacey Act Amendment

Illegal logging threatens some of the world's most biologically diverse and vulnerable forests as well as the communities that depend upon those forests, while harming the legal forest products trade by significantly depressing global timber prices. In 2008, the U.S., the world's largest consumer of forest products, became the first country to ban trafficking of all products containing illegally sourced wood. Through an amendment of the Lacey Act, commerce of plants and derivative products – including all timber and wood products – that have been illegally taken or traded is now prohibited. Additionally, the new law requires importers to declare the genus, species, and country of harvest in an effort to increase wood supply chain transparency and focus law enforcement efforts.

Full implementation and enforcement of the Lacey Act is one of the most cost effective actions available to save the world's forests while also reducing global greenhouse gas emissions and supporting American jobs. Recent studies have emphasized the key role legislation such as the amended Lacey Act has played in reducing illegal logging by as much as 25% worldwide over the past decade – and as much as 50%-75% in key countries. However, much remains to be done, and full and effective implementation of the Lacey Act will be critical to build on this success. The Lacey Act amendment is helping to slow global climate change; the global reductions in illegal logging are estimated to have spared 17 million hectares from deforestation, which equates to between approximately 1.2 billion and 14.6 billion tons of avoided carbon dioxide emissions. At the low end of this range it equals more than 20% of what was pledged during the first Kyoto commitment period and at the higher end it is nearly double the U.S.'s annual emissions. Actions to improve governance and stem the trade in illegal timber will also prove critical to the success of programs designed to reduce emissions from deforestation and degradation.

Fully enforcing the Lacey Act will also have a significant positive impact on the U.S. forest products industry. Since illegal logging depresses global prices for timber and timber products by an average of 7 – 16 percent, reducing the supply of illegal wood and wood products would raise the value of U.S. forest products exports, boosting the value and strength of the U.S. industry and supporting U.S. jobs. Without illegal logging, U.S. exports of sawnwood, wood panels and roundwood exports is estimated to increase by over \$460 million per year. Eliminating suspected illegal shipments of roundwood from global markets would increase the value of U.S. wood product shipments by \$500-\$700 million per year.

The amended law requires U.S. importers of wood products to file a declaration identifying the species name and country of harvest. This is a critical measure intended to increase supply chain transparency and assist U.S. agencies with their enforcement efforts. Such declarations have already demonstrated their value as a necessary tool in the government's investigations over the first two years. Both the prohibition on illegal trade and the declaration requirement affect a wide array of American companies, so it is vital that the declaration process generates data in a streamlined, cost-effective manner without unduly burdening legitimate trade. To that end, USDA/APHIS needs **\$5.5 million** in FY 12 to build an electronic declarations database and to add internal capacity to perform data analysis required for monitoring and enforcement. Of this amount, \$5 million should be directed to creation of a streamlined declaration database, and \$500,000 should go towards supporting additional data analysts.

CROSS-CUTTING PROGRAMS

LACEY ACT AMENDMENT

USAID and the Department of State Bureau of Oceans and International Environment and Scientific Affairs (OES) are undertaking international outreach efforts to explain the requirements of the expanded Lacey Act and its implications for businesses in producer countries seeking to supply timber, plants and wood products to the U.S. These efforts are translating signals sent by Lacey into positive impacts for forests and industry practices. Funding for these programs should be increased to **\$4 million** in FY12 over the FY10 level of \$2 million.

The expansion of Lacey to cover plants and plant products also requires additional funding for the Fish and Wildlife Service to carry out enforcement activities. The law is effective in part through the deterrent effect it has on bad operators, who perceive their risk of being prosecuted or having goods seized. To this end, periodic public enforcement cases are critical. We recommend an increase of at least **\$4 million** in FY 12 for the USFWS Law Enforcement budget to accommodate this additional mandate.

CROSS-CUTTING PROGRAMS

PUBLIC LANDS CORPS

Public Lands Corps Program

Since its authorization in 1993, the Public Lands Corps program has enabled thousands of youth to work and do environmental service on Department of the Interior and USDA Forest Service lands. While making important improvements to our nation's public lands, such as trail and campground building and maintenance, habitat and watershed restoration, invasive species removal, tree and native species planting, hazardous fuel removal, and wildfire mitigation, Public Lands Corps members receive an education, acquire job and life skills, and gain an appreciation for our nation's natural resources. Many of these young people go on to pursue further education and careers in land and resource management. An increased investment in this important program would allow agency partners, including youth programs like Service and Conservation Corps, to engage more young people, complete many more backlog maintenance projects, and develop the next generation of land managers and public lands stewards.

In the 111th Congress, the Public Lands Service Corps Act, legislation designed to expand and improve the existing PLC program, passed on the house floor and was approved by the Senate Committee on Energy and Natural Resources. Hundreds of young people expressed a desire to learn and work on public lands during the America's Great Outdoors (AGO) listening sessions across the country in 2010. In FY 12, Congress should pass the Public Lands Service Corps Act and provide \$100.0 million for the Public Lands Corps program.

CROSS-CUTTING PROGRAMS

WHITE-NOSE SYNDROME

National Strategy to Address White-nose Syndrome

White-nose Syndrome (WNS) poses a grave threat to the United States' bats. Since its discovery in 2006, the disease has killed well more than one million bats. It is named for a cold-loving white fungus that is thought to cause the disease, typically found on the faces and wings of infected bats. WNS induces them to awaken more often during hibernation and use up fat reserves needed for winter. Infected bats often emerge early from hibernation, before the return of warm weather and insect food sources, only to freeze or starve to death. First reported in New York State, the disease or its associated fungus has spread to 15 states and two Canadian provinces.

Biologists consider the WNS die-off North America's most precipitous wildlife decline in the past century. Hibernating bats – those that sleep through the winter in caves and mines – constitute 25 of the nation's 46 bat species. Because thus far WNS has affected each hibernating bat species in its geographic path, scientists believe any hibernating bat could be at risk. The disease or its associated fungus currently affects nine species, including the endangered Indiana and gray bats. Moreover, infected sites experience mortality rates of up to 90 to 100%. So drastic is the loss that researchers are predicting regional extinctions of the little brown bat, one of North America's most common mammals, in the northeastern United States within 16 years.

The loss of bats will likely have serious ecological and economic consequences. As primary predators of night-flying insects, bats are critical to maintaining the balance of nature. They eat vast numbers of insects, including pests that damage crops such as corn, cotton, and potatoes. Without bats to regulate insects, farmers will need to use more pesticides, placing financial strain on farming families, raising the price of food for consumers, and releasing more chemicals into our environment. Insects that bats eat also carry diseases such as West Nile Virus. Research on bat biology has yielded important products, including an enzyme that cleans pollutants and a medicine for stroke victims. Finally, should more bat species be listed on the Endangered Species Act due to WNS, industries such as mining, energy development, and tourism will suffer.

Federal agencies play a critical role in WNS response. The Fish and Wildlife Service is the lead agency, coordinating the nationwide effort to combat the disease. The Geological Survey is conducting research vital to understanding this previously unknown disease. The National Park Service, Bureau of Land Management, and Forest Service are involved on their lands in monitoring and surveying bat populations, implementing decontamination measures with visitors, managing and closing caves, improving bat habitat, educating the public about WNS, and other activities. The Department of Defense monitors, surveys, and implements conservation measures for bat populations on its lands as well. Finally, the Fish and Wildlife Service has granted federal monies to state wildlife agencies to assist in their WNS response.

Despite the nearly overwhelming challenge posed by WNS, the Green Budget request is a modest increase over the FY 10 request for each of the agencies involved: for the Fish and Wildlife Service an increase of \$1.5 million for a total of \$5.2 million; for the U.S. Geological Survey, an increase of \$2 million for a total of \$2.4 million; for the National Park Service, an increase of \$20,000 for a total of \$200,000; for the Bureau of Land Management, an increase of \$1 million for a total of \$1 million; for the Forest Service, an increase of \$722,220 for a total of \$722,220; and for the Department of Defense, an increase of \$100,000 for a total of \$300,000.

CROSS-CUTTING PROGRAMS

Chesapeake Bay Restoration

Chesapeake Bay Restoration

Congress has recognized that the Chesapeake Bay is a “national treasure and resource of worldwide significance.” **Respected economists have valued the Bay at over one trillion dollars related to fishing, tourism, property values, and shipping activities.** Hence, the protection and restoration of the Chesapeake is essential for a healthy and vibrant regional economy. Failure to “save the Bay” threatens this economic driver and, in fact, economic losses have already occurred due to water-quality degradation throughout the watershed. More importantly, investing in clean-water creates jobs, generates economic activity, and saves money in the long run.

On May 12, 2009, President Obama issued an Executive Order 13508 concerning restoration and protection of the Chesapeake Bay. The Order directed seven agencies of the federal government to develop recommendations for restoring the Chesapeake Bay. With oversight from the EPA Administrator, those agencies were to develop a final strategy for Bay restoration and protection. On May 12, 2010, such a strategy was issued. One of the goals of the strategy was for EPA to develop a Bay wide Total Maximum Daily Load (TMDL) for nitrogen, phosphorus, and sediment pollution, by December 2010 with full implementation by 2025. The proposed TMDL, and its finalization by December 31, 2010, will implement this important goal of the Executive Order and restoration strategy. This historic effort will ensure unprecedented Federal support for efforts to restore the Bay and to meet the TMDL.

Making significant progress in addressing pollution from all sources is an essential element of the overall restoration strategy for the Chesapeake and the rivers that feed it. Pollution reductions and ultimately recovery of the Chesapeake Bay will require substantial levels of federal funding to ensure the success of this historic federal and state cooperative effort to save this National treasure.

Necessary funding for Chesapeake Bay restoration is included in several federal agencies:

Environmental Protection Agency

Chesapeake Bay Program – \$75 million

Chesapeake Bay Targeted Watershed Grants - \$14 million

USDA Natural Resources Conservation Service

Watershed Rehabilitation Program - \$50 Million

Strategic Watershed Action Teams - \$30 million

National Oceanic and Atmospheric Administration

NOAA Chesapeake Bay program Office - \$7 million

Chesapeake Bay Oyster Restoration - \$6 million

All other programs that support Chesapeake Bay restoration should continue to be funded at current levels.

CROSS-CUTTING PROGRAMS

Long Island Sound Restoration

Long Island Sound Restoration

The Long Island Sound Restoration Act strives to protect and restore the environmentally and economically vital resources of the Sound. In 1985, the Sound was one of the first estuaries recognized under the National Estuary Program because it provides feeding, breeding, nesting and nursery areas for a diversity of plant and animal life, and contributes an estimated \$5.5 billion per year to the regional economy from commercial fishing, sport fishing, and recreational activities. More than eight million people live in the Long Island Sound watershed, and the resultant development has led to increasingly poor ecosystem health. Future funding will allow regional conservation groups to continue their implementation of programs aimed at restoring the health of the Sound through improvements in water quality, the control of invasive species, the restoration of and/or reclamation of natural areas, and the bolstering of native species populations. In 2006, Congress passed the Long Island Sound Stewardship Act which will build on the ongoing work of restoring the Sound.

CROSS-CUTTING PROGRAMS

SECTION 106 OF NHPA

Section 106 of the National Historic Preservation Act

The National Historic Preservation Act (NHPA) was signed into law in 1966, and is the most far-reaching preservation legislation ever enacted in the United States. At the heart of the NHPA is Section 106, which is similar to the National Environmental Policy Act (NEPA) in that it requires federal agencies to follow a process designed to identify and resolve effects on important resources before moving forward with proposed actions. However, unlike NEPA, which requires federal agencies to evaluate impacts on cultural as well as natural resources, the NHPA and Section 106 focuses strictly on addressing effects to cultural and historic resources. .

Under Section 106, federal agencies must evaluate the impact of all federally funded or permitted projects on historic properties through a process informally known as “Section 106 review.” As part of this process, which is outlined in the Section 106 regulations, the agencies must consult with the Advisory Council on Historic Preservation, State Historic Preservation Officers and Native American tribes, along with other “interested” parties, and must make a “reasonable and good faith effort” to identify historic properties that may be affected by their proposed actions. Also, as the final step in the Section 106 process, the agencies must develop measures to “avoid, minimize or mitigate” the adverse effects of their proposed actions on historic properties.

Although many federal agencies follow Section 106 in good faith, certain agencies do not always give serious consideration to alternatives that would “avoid, minimize or mitigate” harm to historic properties. This lack of consideration seems to occur more frequently with federal agencies that lack an explicit historic preservation mandate in their organic acts or where historic preservation is seen as an impediment to the agency’s core mission. Often the problem can be attributed to an agency’s failure to initiate Section 106 consultation at an early stage in a project’s review process—in other words, compliance is deferred until after initial agency decisions have been made. In such cases, Section 106 consultation is little more than an exercise to identify minimal mitigation for projects that could have been planned to avoid significant impacts to historic resources in the first place.

Two federal agencies in particular—the Bureau of Land Management (BLM) and U.S. Forest Service (Forest Service)—have struggled to meet the requirements of Section 106 while also satisfying the demands of competing programs and initiatives. Neither of these two agencies, as a matter of course, completes intensive, cultural resources surveys prior to designating off-road vehicle routes and approving renewable energy and transmission line projects, primarily due to the cost and time associated with completing those surveys. As a consequence, BLM and the Forest Service are routinely failing to make a “reasonable and good faith effort” to identify historic properties before allowing potentially damaging or destructive activities to move forward.

The effectiveness of agency Section 106 compliance is not a new issue or concern; however, the need for strong protection strategies coming out of the Section 106 consultation process is especially critical today, particularly given the enormous amount of infrastructure work being generated through economic stimulus and recovery funding. And other federal funding priorities—ranging from military base realignment to disaster assistance programs—will continue to place great pressure on Section 106 review at the state and local levels. There is reason to be concerned that the pressure to spend federal funds very quickly will lead to a tendency for agencies to “game” the system, that is, to make decisions first and go through the motions of

CROSS-CUTTING PROGRAMS

SECTION 106 OF NHPA

Section 106 consultation as an afterthought. Thus, there is a strong need—both in the short term, as well as the longer term—for more effective and timely Section 106 compliance.

Funding for Section 106 compliance work is supposed to be paid for through funds derived from “benefitting accounts” or subactivity accounts like Oil and Gas, Lands, Planning, Fire, Mining, Recreation, Range and Maintenance. In theory at least, each of these sub-accounts should be able to cover the costs of Section 106 compliance work that results from agency actions in these areas. However, this is often not the case, as agencies frequently draw from money allocated to their cultural resources budgets to cover the cost of Section 106 compliance. Thus, we are requesting additional funding for Section 106 compliance, both to improve the effectiveness of the Section 106 review process and to alleviate the strain placed on federal agencies’ cultural resources budgets by the need to comply with Section 106.

12 Environmental Protection Agency

National Environmental Policy Act

National Environmental Policy Act Implementation

The National Environmental Policy Act (NEPA) applies to all major federal actions that may significantly affect the environment. To comply with NEPA, NOAA must assess and disclose the potential environmental effects of their actions in an Environmental Assessment or Environmental Impact Statement. In preparing these documents, NOAA must summarize the environmental impacts of their proposed action and alternatives, as well as the interrelated economic, health, or social effects. This process provides citizens an opportunity to learn about the actions that federal agencies are proposing and offers NOAA an opportunity to receive valuable input from the public, state and local governments, other agencies, and other stakeholders.

NOAA's NEPA compliance is coordinated in the Office of Program Planning and Integration. The NOAA NEPA Coordinator and staff provide information, training, and advice to staff across the agency in order to ensure NOAA's compliance with NEPA. All agencies within NOAA are required to comply with NEPA when appropriate.

For example, over the last few years, NMFS has experienced a significant increase in NEPA-related workload, including environmental reviews for projects led by other agencies, such as the Minerals Management Service, now the Bureau of Ocean Management, Enforcement and Regulation, and the Federal Energy Regulatory Commission. This workload is likely to further increase as the number of permits and projects for coastal and ocean energy projects requiring NEPA review increase. Further, a challenge NMFS will have to face is analyzing the repercussions climate change will have on the marine ecosystem. To ensure that NMFS can continue to provide quality NEPA review and consultation with other agencies, and to ensure that the public has opportunity to comment on the permits in a timely manner, NMFS must receive adequate funding for its NEPA activities.

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