Green Budget 2013

National Funding Priorities for the Environment

GREEN BUDGET

FISCAL YEAR 2013

MARCH 2012

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INTRODUCTION

This report, referred to as the *Green Budget*, highlights the environmental and conservation communities' Fiscal Year 2013 National Funding Priorities. The Green Budget, prepared annually by a coalition of national environmental and conservation organizations,[1] illustrates how federal investments can help meet the environmental challenges of a changing climate, 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 FORESTS • AMERICAN HIKING SOCIETY • AMERICAN RIVERS • ASSOCIATION OF FISH & WILDLIFE AGENCIES • BAT CONSERVATION INTERNATIONAL • CHESAPEAKE BAY FOUNDATION • DEFENDERS OF WILDLIFE • EARTH DAY NETWORK • ENVIRONMENT AMERICA • ENVIRONMENTAL DEFENSE FUND • FRIENDS OF THE EARTH • LEAGUE OF CONSERVATION VOTERS • MARINE CONSERVATION INSTITUTE • MARINE FISH CONSERVATION NETWORK • NATIONAL AUDUBON SOCIETY • NATIONAL FISH AND WILDLIFE FOUNDATION • NATIONAL PARKS CONSERVATION ASSOCIATION • NATIONAL WILDLIFE REFUGE 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.*

RESPONSIBLE INVESTMENT IN OUR NATURAL HERITAGE

The budget battles which have dominated headlines in the U.S. and around the world for the past two years have been some of the most contentious in recent history. In calendar year 2011, eight continuing resolutions were needed to keep the government from shutting down as intensely partisan debate led to short term solutions and last-minute deals. The Budget Control Act of 2011 was signed into law in August, avoiding default on the nation's debt while putting austere spending caps on discretionary spending for the next ten years. The bill also created the Joint Select Committee on Deficit Reduction, which was tasked with finding additional deficit reduction before the end of the year. In failing to find common ground, this "supercommittee" fell back on the automatic trigger of sequestration, which mandates deeper cuts to discretionary and defense spending accounts beginning in 2013.

Due to Congress' inability to move other pieces of legislation, the annual appropriations process has also become the battleground for a significant number of contentious policy issues that threaten our environment. These policy provisions are either included as 'riders' in the draft legislation or proposed as amendments during committee and floor consideration of spending legislation. The cumulative effect of this pervasion of policy issues has been to stall and taint what has traditionally been an amicable and healthy debate about the importance of federal government programs and at what level they should be funded each year. This hijacking of the appropriations process must cease so that policy issues can be debated and voted on in their proper forum, allowing equally important budget decisions to be made on their own merits.

It is in this political backdrop that congressional decision makers must approach the 2013 federal budget. In a presidential election year in which the state of our nation's economy will likely be the deciding factor, Congress must return to a state of normal budgeting while making prudent investments in programs and priorities. We understand that tough decisions will need to be made in this and future years. However, when deciding on funding that affects hundreds of millions of Americans and the resources on which they rely, we must take into account the full economic, social, environmental, and cultural value of the many programs managed by the federal government.

With federal spending on land, water, ocean, and wildlife programs just 1.26% of the federal budget in 2010, it is clear that this spending is not a primary cause of the current federal budget crisis. This proportion has actually declined over the last 30 years as funding for conservation programs has grown only 2% in real dollars over this entire period while other federal expenditures have increased dramatically.

The programs outlined in this Green Budget 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. They protect the places that define our history as a nation, that encourage tourism investments from abroad, and provide the quality-of-life benefits that support millions of U.S. businesses and jobs.

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 and protection of ecosystem services. These protections foster and preserve public lands and wildlife-dependent

recreation and the U.S. share of the international tourism industry. It also keeps businesses here in the U.S. and supports healthy economies in gateway communities that surround protected areas.

The cost of these programs is a 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, and a renewable energy future that will make our nation a world leader in the global clean economy..

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. This document underscores the need for critical spending cuts and offers a number of examples of programs for which the funding for which 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.

DEBILITATING SPENDING CUTS

Conservation, natural resource, and renewable energy programs have in most cases remained flat funded or have taken cuts over the last two fiscal years. This spending downturn is made worse by the prospect of nearly ten percent across-the-board funding cuts that will be triggered in January of 2013 without additional congressional action. The 2013 edition of the Green Budget is meant to underscore what those spending cuts would mean in real-world terms.

Further cuts to natural resource and conservation programs inhibit their 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. Allowing funding levels to be severely cut would leave critical natural resource programs unable to manage day-to-day operations. Therefore, the upcoming fiscal year 2013 budget spending levels are critical to protect the economic benefits of efficient and valuable programs.

The Green Budget supports fiscally responsible investments in natural resources that 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.

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 2013, 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.

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 totaled more than $6.6 billion and provided 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

Healthy lands, including federal and state publicly held lands, provide ecosystem services, like natural flood prevention and soil formation, which are valuable to our national and individual welfare in a quantitative and qualitative way. According to a Southwick and Associates report from September 2011 "The value of ecosystem services provided by natural habitat in the 48 contiguous United States amount to about $1.6 trillion annually, which is equivalent to more than 10% of the U.S. GDP."

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[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.

RESPONSIBLE INVESTMENT IN OUR NATURAL HERITAGE

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.[3] 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 nine 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, which offer their own set of economic benefits. 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.[4] In regions surrounding 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.[5] 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.[6]

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 benefits for the local economy—supporting more than $13 billion of local private-sector economic activity and nearly 270,000 private sector jobs. Similarly, 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 ensure the preservation of our natural and cultural heritage that draws 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 for the health of American families and communities. 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. A study published last year in *Science* estimates that bats save U.S. farmers at least $3.7 billion per year by preventing crop damage and limiting the need for pesticides. Wildlife also provides far-reaching

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[3] 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>.
[4] Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors: A Resource Book. Fourth Revised. National Park Service. 1995. eBook.
[5] 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.
[6] "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.

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 documented[7], 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.[8] More specifically, 71.1 million of these people 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.[9] National wildlife refuges alone generate nearly $1.7 billion and $27,000 private sector jobs in local economies.[10] 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 & RIVERS

Oceans, coasts, and rivers contain ecosystems that sustain and improve our economy. According to the *National Ocean Economics Program*, the U.S. 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 U.S. depend on the marine environment. Tourism and recreation alone account for over $69 billion. 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.[11]

Coastal state counties were home to over 108 million people, provided jobs to over 48 million people, and contributed $5.7 trillion to the US economy in 2007.[12] For instance, a single acre of wetland

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[7] CRS Report for Congress, International Trade in Wildlife: Threats and U.S. Policy, Liana Sun Wyler and Pervaze A. Sheikh. Updated August 22,2008.
[8] 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>.
[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>.
[10] United States. Department of the Interior. U.S. Fish and Wildlife. *Banking on Nature 2006: The Economic Beneifts to Local communities of National Wildlife Refuge Visitation. http://www.fws.gov/refuges/about/bankingonnature.html*
[11] "State of the U.S. Ocean and Coastal Economies, 2009." *National Ocean Economics Program*. Web. 3 Feb. 2011. http://www.oceaneconomics.org.
[12] "State of the U.S. Ocean and Coastal Economies, 2009." *National Ocean Economics Program*. Web. 3 Feb. 2011. http://www.oceaneconomics.org.

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.[13]

Adequate funding is needed to maintain ongoing protection, maintenance, and restoration of our nation's oceans, coasts, and rivers. Resource management 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 taps American ingenuity and entrepreneurial spirit to continue our economic recovery, create hundreds of thousands of new jobs, strengthen our global competitive standing, and protect our environment. U.S. Secretary of Energy Steven Chu[14], business leaders like Bill Gates, John Doerr, and Jeff Immelt[15], our military[16], and nine in ten Americans[17]—including 85 percent of Republicans and 89 percent of independents—say developing renewable energy should be a priority for the President and Congress. According to Bloomberg New Energy Finance, total U.S. clean energy investment in 2011 rose 35% from the previous year to a record $55.9 billion, as the U.S. recaptured its leadership in this category, overtaking China for the first time since 2008. According to a recent Brookings report, employment in the wind and solar industries grew 10-15% annually, between 2003 and 2010. Solar is the economy's fastest-growing sector and now employs 100,000 people in more than 5,000 companies. The wind industry employs 85,000 American workers, and 38 states host large wind power projects. Bottom line – our country is making significant progress towards a renewable future, and we must continue to move forward.

At the same time, we must also remember that 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. By funding processes that compel upfront analysis of the best places to develop our nation's renewable resources and encourage early stakeholder engagement, we can avoid potential siting conflicts for individual projects. Developed, implemented, and managed properly, renewable energy has the means and potential to revitalize the national economy.[18]

CONCLUSION

Despite the myriad challenges facing our country in 2012, it remains critically important to effectively invest in conservation, environmental, and clean energy programs that will positively impact both our nation's public welfare and our economy. The Green Budget 2013 supports investments in renewable

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[13] "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
[14] http://energy.gov/articles/secretary-chu-speaks-ge-solar-facility
[15] http://www.americanenergyinnovation.org/
[16] http://www.serdp.org/News-and-Events/News-Announcements/Program-News/Department-of-Defense-announces-new-installation-energy-technology-demonstrations-for-FY-2012
[17] environment.yale.edu/climate/publications/PolicySupportNovember2011/
[18] Economic Drivers." American Environmental Energy. Web. 19 Jan. 2011. <http://www.americanenvironmental.com/power-parks/economic-drivers>.

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energy, as well as land, wildlife, and water conservation while outlining budget cuts to programs that subsidize the fossil fuels industry and other ineffective 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 health of our country. With our nation beginning to recover from the economic downturn of the last two years, now is the time to support prudent natural resource and other environmental 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.

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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 $2 billion over 10 years.

FY 13 Recommendation:
Eliminate funding for the Market Access Program. In FY 10 $202 million was appropriated for the Program. This program should be eliminated, saving taxpayers over $2 billion over ten 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.

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OFFSETS

DEPARTMENT OF AGRICULTURE

FY 13 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.*

1 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 U.S. 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 13 Recommendation:
Congress should not appropriate any money for the Reactor Concepts RD&D program. This would save taxpayers $125 million in FY 13 as compared to what the President requested. Over 10 years this would save taxpayers over $1.25 billion.

Fuel Cycle Research and Development

Globally, over $100 billion has already been spent 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

[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.

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.

FY 13 Recommendation:
Congress should eliminate funding for the Fuel Cycle Research and Development Program. This would save taxpayers $155 million over FY 12 requested levels and $1.5 billion over ten 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 13 Recommendation:
This would save taxpayers $97 million over what the President has requested in his FY 12 budget, and it would save taxpayers $970 million over ten 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 13 Recommendation:
The Yucca Mountain budget should be zero, as proposed in the Administration's FY2012 Budget Proposal.

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[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).

OFFSETS

DEPARTMENT OF ENERGY

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 $4.85 billion.

The building to solidify radioactive waste from the MOX plant, the Waste Solidification Building, is estimated to cost $344 million. 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 text MOX fuel, Duke Energy, decided to let its contract with DOE lapse after a failed test of MOX fuel assemblies. In parallel with the U.S. 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 U.S. 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 13 Recommendation:
Congress should stop funding this program, saving taxpayers $637 million in FY 13 and almost $1.6 billion for the project.

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 13 Recommendation:
Repealing this giveaway will save taxpayers $50 million over the President's requested levels for FY12 and $500 million over the next 10 years.

OFFSETS

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 13 Recommendation:
Charge grazing fees equal to those of the state where the land is situated, saving taxpayers $5 million in FY 13 and $160 million over 10 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 13 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 13 Recommendation:
Charge a 12% royalty fee, saving taxpayers $1.2 billion over 10 years.

OFFSETS

DEPARTMENT OF THE TREASURY

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 13 Recommendation:
Removing the oil and gas percentage depletion allowance would save taxpayers $945 million if FY 13 and $10.7 billion over 10 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 13 Recommendation:
Eliminating this deduction would return more than $1.3 billion to the federal treasury in FY 13 and $15.9 billion over 10 years.

Repeal Last in, First Out Accounting for oil and gas companies

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 13 Recommendation:
The LIFO accounting method would currently cost taxpayers$69.0 billion over 10 years. It is estimated that most, though not all, of these savings could be achieved by repealing LIFO only for oil and gas companies.

OFFSETS
DEPARTMENT OF THE TREASURY

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 13 Recommendation:
Repealing this tax giveaway will save the treasury $1.4 billion in FY 13 and $8.3 billion over 10 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 13 Recommendation:
Repeal this tax giveaway to save taxpayers $698 million over 5 years.

Passive Loss

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

FY 13 Recommendation:
Fixing this giveaway would save taxpayers $157 million if FY 13 and $1 billion over ten years.

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 13 Recommendation:
Getting rid of this giveaway will save taxpayers $8 million in FY 13 and $68 million over ten years.

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OFFSETS

DEPARTMENT OF THE TREASURY

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 13 Recommendation:
Eliminate this subsidy and save $600 million in FY 13. The provision is set to sunset at the end of 2013, but, if extended, it could cost taxpayers $6 billion over 10 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 13 Recommendation:
Eliminating this deduction would save taxpayers $189 million FY 13 and return almost $2.2 billion to the federal treasury over ten years.

DEPARTMENT OF AGRICULTURE

2 DEPARTMENT OF AGRICULTURE

FARM BILL CONSERVATION PROGRAMS

Natural Resources Conservation Service and Farm Service Agency – Conservation Programs

The Natural Resources Conservation Service (NRCS), the conservation arm of the Department of Agriculture, oversees a number of programs designed to help private landowners improve environmental quality by adopting conservation practices on working lands. The Farm Service Agency (FSA) administers the Conservation Reserve Program, which provides farmers with incentives to take highly erodible and other environmentally sensitive lands out of production and plant grasses or trees. The Food, Conservation, and Energy Act of 2008, the most recent reauthorization of the Farm Bill, provided mandatory funding for both CRP and the conservation programs administered by NRCS. Each fiscal year since its enactment, however, appropriators in the House and Senate have capped spending for some important conservation programs at levels below those set in the 2008 Farm Bill and used the savings to fund other priorities. Since 2008, in fact, cuts by appropriators have reduced the overall funding that the 2008 Farm Bill provided for conservation programs by almost $3 billion. In FY12 alone, appropriators cut almost $1 billion from Farm Bill conservation programs. During this year's appropriations process, we are likely to see similar efforts to cut conservation funding. In addition, the Farm Bill is now due for reauthorization again, and pressure to reduce the federal budget deficit means that conservation programs will be threatened in that context as well.

The voluntary, incentive-based conservation programs funded through the Farm Bill and administered by NRCS and FSA are some of the most successful conservation programs in the nation, and are vital for the health of soil, water, and wildlife resources on farm, forest, and ranch lands across the country. As America's working lands are under increasing pressure to meet growing global demand for food, fiber, and fuel, these programs are more important than ever for maintaining and improving soil and water quality, as well as for re-invigorating rural communities.

Farm Bill conservation programs include both working land programs that offer financial incentives and technical assistance to farmers for implementing conservation practices, as well as land retirement and easement programs. Examples of these important conservation programs include:

- *Environmental Quality Incentives Program:* provides incentives for farmers, ranchers, and private forest landowners to address a number of environmental issues that stem from agricultural production and to meet local, state, or federal environmental regulations where these apply.
- *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.
- *Conservation Reserve Program:* pays farmers annual rental payments to set aside marginal land for 10-15 years. The program also provides cost-share for conservation practices that address soil erosion, water quality, wetland and forest enhancement, and wildlife management.
- *Grassland Reserve Program:* enables landowners to restore or protect native or other grasslands threatened with conversion through long-term or permanent easements. As of

April 2010, this program had a backlog of over 800,000 applications, demonstrating the popularity of the program among landowners.

- *Chesapeake Bay Watershed Initiative*: provides additional authority and resources for NRCS to focus implementation of Farm Bill conservation programs to assist producers in the Chesapeake Bay region in efforts to improve water quality. Both the Bay and the tributaries that feed it have been greatly degraded by agricultural activities.

The aforementioned programs have extensive application backlogs. Many more farmers, ranchers, and private forest landowners offer each year to contribute to conservation efforts around the country than there is funding to assist them. In order to better address the demand from producers for conservation assistance and increase the environmental benefits that the owners and managers of America's private working lands can provide, Congress must fully fund farm bill conservation programs in FY13.

USDA Farm Bill Energy Programs

The 2008 Farm Bill provided funding for energy programs that help farmers, ranchers, and rural communities develop and adopt energy efficiency and renewable energy technologies. The 2008 Farm Bill authorizes both mandatory and discretionary funding for farm bill energy programs, and there has been an increasing trend during the appropriations process to cap mandatory funding for these programs. 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. 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 funding for this program under the 2008 Farm Bill, although this money is rarely 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. The annual payments portion of the program has only begun to be implemented over the past year and a half, and USDA has begun to fund producers 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 project areas portion of the program before it is fully implemented would be devastating to

next generation bioenergy. Despite the unlimited mandatory funds authorized for the program, in FY12, BCAP was capped at just $17 million, which represented approximately a 60% cut compared to the amount of funds that was set aside for the program for the year.

Rural Energy for America Program

The Rural Energy for America Program provides grants for on farm energy audits and renewable energy projects. The program provides grants and loan guarantees to small businesses and farmers & ranchers located in rural areas to help them purchase renewable energy systems, make improvements in energy efficiency, and perform renewable energy feasibility studies. REAP also funds an energy audit and technical assistance program. REAP is a highly popular program, but funding support from Congress has been dwindling in recent years. REAP is authorized to receive both mandatory funding ($70 million in FY12) and discretionary funding ($25 million). In FY12, REAP received of 31%, or $22 million, of the farm bill mandatory funding that the program was authorized for the year.

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. This program was funded at $0 in FY 12. In FY 13, Congress should fund this program at 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.

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 appropriated $14 million for the SARE program.

In FY 13, 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.

2 DEPARTMENT OF AGRICULTURE
FOREST SERVICE

FOREST AND 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. The work of FS R&D reaches far beyond the National Forest System, providing contract work for other interested agencies and a platform for research within the academic community.

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 integrated with emerging research areas that cut across the programs' work, 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 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 from energy development 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 and beyond. 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 is working to develop methods to not only stop the spread of the deadly white nose syndrome (WNS) in bats, but to find a cure. The WNS outbreak currently spreads from the northeast all the way to Oklahoma killing an estimated 5.7 - 6.7 million bats, and it is only getting worse. Bats are important for agriculture because they eat pests, providing at least $3.7 billion in pest management services to the agriculture industry each year.

Threats to birds and bats from wind energy are another significant area of research at Wildlife R&D. FS R&D has contributed to wind energy related risk assessments for sage-grouse, migratory birds, bats, bald eagles and more. These assessments help inform smart wind development siting. From there, tools that predict bat activity at wind energy facilities, developed by FS R&D, help to avoid the worst impacts on bats from wind energy facility operation.

Wildlife and Fish R & D is also contributing to current efforts, along with other agencies, to protect and conserve the greater sage-grouse. The sage-grouse is warranted for listing under the ESA, and a final decision regarding whether or not to list the species will be made in just a few short years. In the meantime, FS R&D is doing fundamental research into the bird's nesting and breeding, generating information that will reduce risk and uncertainty as agencies work to conserve the sage-grouse and avoid the need for ESA listing.

DEPARTMENT OF AGRICULTURE

FOREST SERVICE

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, key research is answering the question of how changes in snow pack will impact wolverines. Climate vulnerability assessments, along with targeted research like the wolverine project, are necessary for the Forest Service to adequately respond to changing conditions on the ground. In addition, it is crucial that the FS and the U.S. Geological Survey National Global Warming and Wildlife Science Center work together to coordinate their use of resources and research activities, but FS R&D can only contribute to these partnership, thereby gaining from efficiencies, if they have enough capacity to do so.

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, water used by 66 million Americans. Like many areas of FS R&D, watershed research is at risk of suffering as scientists retire and the funds are not available to hire replacements. Important work happening now cannot carry on without the flexibility to fill research positions as they open.

Forest Service R&D also runs a network of experimental forests within the National Forest System that serve as real world laboratories and have been providing new research and information for fifty years. These experimental forests are not just used by the Forest Service, but the entire scientific community. For example, there have been 5,000 scientific publications produced using research from just one experimental forest. The experimental forests are a social and economic benefit to surrounding communities all across the country, drawing in researchers and academics. One experimental forest in West Virginia, for example, has hosted significant experiments on the impacts of fluids from hydraulic fracturing, contributing a great deal to our knowledge on that subject.

The FY 12 enacted level for Forest and Rangeland Research was $231 million.

DEPARTMENT OF AGRICULTURE

FOREST SERVICE

STATE AND PRIVATE FORESTRY

Forest Legacy

The Forest Service's Forest Legacy Program (FLP), authorized in the 1990 Farm Bill, provides matching funds to assist states in conserving working forests - those that provide an array of environmental services and products. FLP supports timber sector jobs and sustainable forest operations while ensuring permanent protection of air and water quality, wildlife habitat, access for recreation, and other public benefits provided by forests. Since its inception, the Forest Legacy Program has provided nearly $550 million in matching funds to 43 states and territories for the conservation of over 2.2 million acres of forests valued at over $1.2 billion. This is a strategic partnership program that supports federal, state, and local priorities. About 89% of all FLP-funded acres are adjacent to other protected lands (federal/state/local/private), and approximately 150,000 acres of waterbodies and 2,500 stream miles have been protected through FLP. The program's federal-nonfederal leveraging ratio 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 13, over $168 million in FLP funding has been requested for 67 projects totaling over 253,000 acres with an estimated value of over $328 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, between 44 and 57 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, but, with cuts imposed through the FY 11 Continuing Resolution, the program experienced a 33% cut, down to $53 million. The FY 12 President's budget proposed $135 million. We urge Congress to support the President's budget level for FLP in FY 13 to help restore funding to this critical program and ensure the permanent conservation of important working forests across the nation.

Community Forest and Open Space

The Forest Service estimates that between 44 and 57 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 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.

The Final Rule for the Community Forest and Open Space Conservation Program was posted in the Federal Register in October 2011. Already appropriated FY10 and FY11 funds totaling $1.5 million will be combined with $2 million appropriated in FY12 and made available for grants through a nationally competitive Request for Proposals in early 2012. We support the President's FY13 recommendation, which will provide the agency with funds at a level scale necessary to successfully implement this new program.

Urban and Community Forestry

The Urban and Community Forestry (U&CF) program provides 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 FY10, the U&CF program funded at $30.4 million delivered technical, financial, educational, and research assistance to 7,102 communities in all 50 states, the District of Columbia, U.S. territories and affiliated Pacific Island nations. The program leveraged an additional $40 million in state and local support and provided 1,250 small grants to local communities.[1]

Urban forests in the U.S. contain about 3.8 billion trees with an estimated structural asset value of $2.4 trillion.[2] However, urban areas have lost more than 600 million trees to development over the last 30 years. The U&CF program assists cities, suburbs, and towns across the country in improving the condition and coverage of community trees and forests. Forest Service researchers have shown that investments in urban tree planting projects will return substantial net benefits over time. The net benefits to communities planting 10,000 trees will be approximately $20 million to $30 million over a 40-year period, generating $2-$5 dollars in benefits for every dollar spent. Active management of these assets secures the greatest economic, social, and environmental benefits for 80 percent of the nation's population.[3]

The following list some key of those benefits of urban forests to the American people[4]:

[1] http://www.urbanforestcoalition.com/doc/SUFC_2012_Budget_Recs_Cov_Ltr_Senate_Final.pdf
[2] Vibrant Cities 2011 Report
[3] http://www.fs.fed.us/publications/budget-2011/fy-2011-usfs-budget-justification.pdf
[4] http://www.urbanforestcoalition.com/doc/SUFC_2011_UF%20BudgetRecs%20Leave%20Behind%20FINAL.pdf

- *Energy*: Planting and preserving trees in communities is more cost effective than building new power plants. Properly placed, mature shade trees help save as much as 30% on summer electric cooling bills for homes. Tree windbreaks reduce residential heating costs 10-15%.
- *Water*: Urban trees reduce storm water runoff and help municipalities meet EPA Clean Water requirements. Washington DC's public trees alone provide storm water management benefits of $3.7 million annually.
- *Air Quality*: Trees absorb carbon dioxide, sulphur dioxide, nitrous oxides and other pollutants, and shade cars and parking lots reducing ozone emissions from vehicles. Houston's regional urban forest contains nearly 663 million trees that remove approximately 60,575 tons of air pollutants each year, valued at $300 million a year.
- *Green Jobs*: The green industries -- urban forestry, arboriculture, horticulture, landscape design and maintenance, and other professions that support the urban forest landscape -- have an estimated annual economic impact of $147.8 billion and are growth industries that can provide tens of thousands of new jobs.
- *Regulatory Compliance*: Increasing tree cover by 10% in New York City would meet over 1/3 of the city's federal air quality compliance needs for ground level ozone.
- *Risk Management*: Professional urban forest management contains threats in the "urban interface"—such as invasive species, exotic pests, and fire—that pose a risk to forestlands.
- *Public Health*: Access to trees, green spaces, and parks promotes greater physical activity, reduces stress, improves mental health and reduces asthma risks.

Urban forests are integral to any community striving to reinvest in itself, to encourage an active and healthy citizenry, and to create a more sustainable environment and economy with green infrastructure. The U&CF program is vital for protecting and restoring important urban landscapes and for connecting urban people to the natural landscapes in which they live. In addition, this program is becoming increasingly important as urban areas are expected to increase over the next 50 years and as climate change affects forest conditions. As this program is strongly supported by diverse stakeholders, our FY12 recommendation of $32.4 million was significantly exceeded by the actual need for improving urban and suburban landscapes. We support the President's FY13 proposal and should help the Forest Service work with local partners to address the growing need for open space, trees and other vegetation that comprise the "green infrastructure" in urban areas.

State Fire Assistance

State Fire Assistance is the primary federal program that provides funding assistance to states to support local wildland firefighting preparedness, capacity building, and wildland fire mitigation. This program is vital to preparing first responders who can quickly and efficiently respond to wildland fires, thereby reducing the threat to fire-prone communities, human life, and personal property. It is an essential response tool in addressing the threat of wildland fire associated with the accumulations of hazardous fuels and increasingly populated wildland-urban interface areas. The State Fire Assistance program directly addresses the concerns over rising wildland fire suppression costs by directing resources to wildland fire preparedness and community fuels mitigation work that help reduce the number of large wildland fires.

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.[5] Fire suppression costs are growing because of increasing development and homebuilding around rural communities, which expands the wildland-urban interface (the focus of wildfire suppression) and creates greater wildfire risks to properties and lives.

Taking proactive steps towards fire preparedness by investing in State Fire Assistance will mean a reduction in 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 expected in the U.S. over the next ten years. We urge Congress to support the President's FY13 budget proposal for State Fire Assistance.

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 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,

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

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 13, 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.

DEPARTMENT OF AGRICULTURE

FOREST SERVICE

NATIONAL FOREST SYSTEM

Integrated Resource Restoration (IRR)

IRR Pilot Program

The logic behind creating a consolidated budget line item for restoration is compelling: a consolidated budget line item created from several line items that currently fund restoration activities, but with specific restoration-oriented sideboards and performance measures added, has the potential to push the agency to engage in restoration in a much more focused manner. Too often in the past, performance measures and targets for separate line item programs have driven land management accomplishments. Staff collaboration on integrated projects was often driven by individual programs coincidentally having similar targets, and the restoration goals of collaborative projects were often a function of which individual program had more money to define the objectives. Actions that should have been taken in order to mitigate adverse effects of projects were often not implemented for lack of funds in a particular budget line item. A single fund code with clear direction to drive a suite of restoration objectives should provide enhanced opportunities for the types of integrated, holistic ecological restoration projects necessary to sustain and restore forest health.

The FY12 appropriations bill contained a 3-region test pilot of the IRR concept for Regions 1, 3, and 4 at a total authorized funding level of $146.585 million. In these regions, monies from the National Forest System (such as Vegetation & Watersheds Management, Wildlife & Fisheries Habitat Management, and Forest Products), Legacy Roads & Trails, and Hazardous Fuels line items will be collapsed into a single pot. This single pot will fund activities that meet criteria, including having restoration as their primary goal, outlined in guidance to be issued by the Forest Service Washington Office to the test pilot regions.

We support the 3-region test pilot of IRR and recommend that it be continued in the same regions at the same or similar funding levels in FY13. Taking the time to understand the outcomes of the pilot project and to adjust budgeting and guidance as necessary will be critical to the IRR test pilot's success. We do not recommend that the program be expanded until the test regions have had several years to prove that IRR can create improved restoration outcomes without a loss of program transparency and accountability. We strongly urge the Forest Service and the test regions to provide a consistent approach to implementation, effective program sideboards, transparency, assurance of fairness for regional allocations, and a strong focus on holistic restoration, not just traditional thinning and vegetation management projects.

Watershed Condition Framework and Watershed Restoration Action Plans

On June 3, 2011, USDA Secretary Vilsack announced the completion of the first step of the Forest Service's six-step Watershed Condition Framework (WCF). The first step of the WCF was creating a national map that characterizes the health and condition of National Forest System (NFS) lands in more than 15,000 sixth-field watersheds across the country. This was the agency's first national assessment of watershed health across all 193 million acres of NFS lands. The Forest Service also made giant strides in FY 2011 toward completing steps two and three of the

WCF – identifying Priority Watersheds and preparing Watershed Restoration Action Plans (WRAPs) for each Priority Watershed.

In FY 2013, the Forest Service needs funding to take the crucial fourth step in the WCF process – beginning to implement the WRAPs. Each national forest and grassland has now identified its highest Priority Watersheds and prepared WRAPs for them. More than 250 WRAPs are now completed and ready to guide restoration activities in many of the Nation's most valuable and sensitive watersheds, which would greatly benefit drinking water supplies and other watershed uses across more than 40 states.

Now that the Forest Service has identified the Priority Watersheds and developed WRAPs for them, the agency is able to present a far more compelling case for funding watershed restoration. However, there is currently no dedicated funding source for implementation. The President's FY11 and 12 budgets requested $50 and $80 million respectively for a new Priority Watersheds and Job Stabilization program as part of the IRR. While we support the concept of dedicated funding to implement WRAPs, due to budget constraints the creation of a new program in FY13 may not be feasible. That does not mean, however, that WRAP implementation should go unfunded. In IRR pilot regions, we recommend that WRAP implementation be the top priority for IRR funds. In other regions, we recommend that projects identified in the WRAP be prioritized for funding from the full spectrum of available budget line items.

Land Management Planning

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. 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. Without an up to date plan, inefficient project by project amendments are required for many activities on national forests – if a plan is outdated, the types of projects that can be completed under it will be too.

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. Forest planning has already taken a significant reduction in funding in recent years and cannot sustain any further cuts. The FY 12 level is nearly 45 percent below the FY 03 level, which was the high water mark for the program,and is less than half the FY 03 level adjusted for inflation. 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.

As proposals for renewable energy projects on Forest Service lands increase, the Service has the opportunity in the planning process to improve upon a project-by-project approach to review by analyzing upfront lands with excellent wind, solar and geothermal resources, as well as lands that should be precluded from development. The Department of Interior has developed a ‘smart from the start’ approach to siting renewable energy projects that could serve as a model for the Forest Service. This approach uses geo-spatial tools to identify lands with high energy potential for each renewable technology, as well as important wildlife, ecological, and cultural resources that should be avoided. It also requires early and upfront engagement with stakeholders including local citizens, the conservation community, and tribes to determine the best places to site projects. A ‘smart from the start’ approach can lead to better Forest Service plans by incorporating the energy potential and feasibility of lands for renewable energy development.

In this coming year, the Forest Service will finalize and begin to implement a new forest planning rule. The success of this rule would mean stabilization of the planning process and an increase in plan revisions, leading to a more modern set of forest plans nationally. This is only possible with continued funding of the planning program. The priority of the agency is to finalize those plans that are currently under revision, with six completions planned under the old rule this year. In order to initiate planning under the new rule, the planning budget must, at a minimum, be maintained at the current level so that the agency can carry its current revisions through to completion *and* initiate revisions under the new rule to carry out the agency’s vision for better forest plans.

The FY 12 enacted level for Land Management Planning was $40 million.

Inventory and Monitoring

Sustaining our nation’s forests, wildlife, and water resources requires dedicated funding for critical inventory and monitoring activities, including the assessments that will be fundamental to the implementation of the new planning rule. 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 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 prevent the land use planning process from moving forward and 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.

The FY 12 enacted level for Inventory and Monitoring was $161 million.

Recreation, Heritage & Wilderness

Recreation and Wilderness

The recreation and wilderness programs are responsible for ensuring quality experiences for the over 173 million visits to our national forests every year. Recreation is the most ubiquitous use of our forest lands, connecting with more people and occurring on more acres than any other use, as well as accounting for more than half of all job and income affects attributable to Forest Service programs (over 224,000 jobs and $13 billion in spending by visitors). The Recreation and Wilderness programs, in accordance with the Forest Service's new Sustainable Recreation Framework, are tasked with ensuring 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.

Funding for this program has held relatively steady over the past several years (the FY12 funding level of $281.67 million is 1.2 percent below FY10), but a long term downward trend in funding, aging recreation infrastructure, and increased recreation demands from rapid population growth in areas near national forests (counties containing at least 10 percent National Forest lands are growing in population at a faster rate than most other counties in the U.S., largely because of recreational and other amenities[6]) has put an enormous strain on the program. In order to stretch limited dollars in the face of growing needs, the recreation and wilderness programs have grown increasingly reliant on partnerships to accomplish work. While beneficial in terms of leveraging funds and community outreach, this has the side effect of making the program particularly vulnerable to budget cuts.

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[6] Johnson, K.M.; Stewart, S.I. 2007. Demographic Trends in National Forest, Recreational, Retirement, and Amenity Areas. Proceedings: National Workshop on Recreation Research and Management p. 187-199 in Kruger, L. E.; Mazza, R.; Lawrence, K.; (eds). Proceedings: National Workshop on Recreation Research and Management , Gen Tech. Rep. PNW-GTR-698, Pacific Northwest Research Station, Portland, OR.

For example, the wilderness program accomplishes the majority of its work through partnerships and training programs (such as the 10-year wilderness stewardship challenge and a variety of youth training programs) that leverage millions of dollars in non-federal matching funds and in-kind labor, often in the form of critically-needed trails maintenance. As a result, every $1 cut from this program would result in the loss of many more dollars in non-federal resources, with effects far beyond what the amount cut from the federal budget might suggest.

Off-road vehicle management efforts would also be hard hit by cuts to this program, which is responsible for outreach, signage, and public education regarding the new rules on off-road vehicle travel. By the beginning of FY13, 95 percent of forests are expected to have completed off-road vehicle travel plans, which identify the system of roads and trails that are open for motorized use. Visitors will be responsible for staying on the designated system, but cuts to the recreation program could jeopardize national forests' ability to cover the estimated $17-24 million in management costs, including installing signage and providing education and maps to help visitors understand the new route system. Inability to do this work would result in confusion for public users, a loss enforcement authority for the Forest Service, and effectively place effective implementation of the last six years of travel planning on hold.

Heritage

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 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-highway 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. According to the FY11 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 funding to bring these priority assets to standard will escalate as the buildings remain neglected and to further deteriorate. Dedicating $8 million of the Heritage Funding allocation to deferred maintenance for historic and cultural resources will begin to address these most critical deferred maintenance needs.

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 multi-year

effort to provide challenge cost share funding to the field to manage more of their priority assets to standard; however, without knowledge of actual expenditures and accomplishments, it is difficult to evaluate the effectiveness of any increased expenditures.

Wildlife and Fisheries Habitat Management

National forests and grasslands play an essential role in the conservation of the nation's wildlife and habitats. 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 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 in our National Forests are important to people and economies all across the nation. A recent report estimates that the economic impact of hunting, fishing, and wildlife watching associated with National Forests totals $9.5 billion in annual retail sales, supports 189,400 jobs, and provides $1.01 billion in annual federal tax revenues.[7]

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).

Despite the broad array of fish and wildlife and habitat on NFS lands that require stewardship efforts and restoration, the budget for the Wildlife and Fisheries Habitat Management program has substantially eroded and currently is nearly $25 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.

This dramatic decrease in capacity has led to declines 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. Additional cuts to the program would further hinder this important work.

The FY 12 enacted level for Wildlife and Fisheries Habitat Management is $140 million.

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[7] "The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States", For the National Fish and Wildlife Foundation, Southwick Associates, September 2011

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Collaborative Forest Landscape Restoration Program

The Collaborative Forest Landscape Restoration Program (CFLRP) [8] encourages the collaborative and science-based ecosystem restoration of priority forest landscapes while benefiting local communities. CFLRP is unique among government programs in that is was established specifically to create job stability, achieve reliable wood supply, restore forest health, and reduce the costs of fire suppression in overgrown forests. The ultimate goal of CFLRP is to collaboratively achieve improved forest benefits for people, water, and wildlife in a way that can be shared across the Forest Service's 193 million acres, and beyond.

The ten projects funded in the program's first year have cumulatively[9]:

- Created and maintained 1,550 jobs
- Produced 107 million board feet of timber
- Generated nearly $59 million of labor income
- Removed fuel for destructive wildland fires on 90,000 acres near communities
- Reduced destructive wildland fires on an additional 64,000 acres
- Improved 66,000 acres of wildlife habitat
- Restored 28 miles of fish habitat
- Enhanced clean water supplies by remediating 163 miles of eroding roads

The best method to ensure that projects continue to achieve the goals of this important legislation, the Forest Landscape Restoration Act, is by fully funding the Collaborative Forest Landscape Restoration Program line item at $40 million for FY 13. At full funding, the agency will be able to implement and to keep their commitment to fund the ten restoration projects that were selected in FY10. In addition, full funding will allow the Forest Service to recommend and implement additional projects – in 2011 the number of applicant sites was 26 projects in 18 states.
The Collaborative Forest Landscape Restoration Program is the first national restoration program for the Forest Service. As this program matures, communities will continue to 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 further 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.
We, along with the diverse CFLR Coalition, strongly support the full-funding level of $40 million in FY13 for the CFLR program.

[8] Established through the Forest Landscape Restoration Act or FLRA, title IV of Public Law 111-11
[9] People Restoring America's Forests: A Report on the Collaborative Forest Landscape Restoration Program, November 2011

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The Tongass National Forest Transition and Watershed Restoration

Alaska's Tongass National Forest contains a large portion of the world's last remaining old-growth temperate rainforest. Regarded as the "crown jewel" of the nation's forest system, the Tongass provides vital habitat for all five species of North America's wild Pacific salmon, as well as Steelhead. In addition, the wildlife resources of the Tongass, including brown bear, black bear, wolves, mountain goats, Sitka black-tailed deer, Bald Eagle, and other wildlife, are a major visitor attraction. Many residents throughout Southeast Alaska also depend upon the fish and game provided by the Tongass to meet their annual subsistence harvest needs.

Alaska's Salmon Forest

The salmon fisheries of southeast Alaska provide the economic cornerstone for the region, contributing nearly $1 billion to the economy each year and accounting for more than one in ten jobs. The Tongass, with more than 5,500 salmon-producing streams, provides the majority of Chinook, coho and chum salmon caught in Alaska. The 2011 commercial salmon fishery in southeast Alaska was the most valuable in the state, with the ex-vessel value exceeding $200 million. Commercial fishing and seafood processing account for 10.8% of employment in southeast Alaska. Exceptional sport fishing opportunities help to support the regional tourism/recreation industry, which presently accounts for about 15% of employment.

By contrast, old-growth logging in the Tongass has had significant adverse impacts on fish and wildlife habitat, damaged important salmon-producing watersheds, and cost taxpayers more than $850 million dollars. The Tongass timber program continues to cost U.S. taxpayers an average of $25.2 million annually while supporting less than 1% of the jobs in the region.

Investing in the Tongass Transition

In 2010, the Obama Administration initiated the Tongass Transition to help support the southeast Alaska economy. Some key objectives of the Tongass Transition include: moving rapidly away from old-growth logging while staying out of roadless areas, transitioning as rapidly as possible to sustainable second-growth timber harvest, and investing in watershed restoration to rehabilitate riparian habitat damaged by logging.

By reallocating funds within the Forest Service budget to invest in on-the-ground watershed restoration projects and putting in place new targets for the Tongass timber program to promote sustainable young-growth management, the Forest Service can move past "boom-and-bust" old-growth dependent logging. The Tongass Transition will also help avoid conflicts with other important parts of the southeast Alaska economy (fishing, subsistence, and tourism/recreation).

In the recently published *Tongass Investment Strategy*, the Forest Service reports that more than $100 million is needed for watershed restoration work to correct "major problems affecting wild salmon production on the Tongass." [10] In addition, the Tongass Investment Strategy has identified

[10] USDA Investment Strategy in Support of Rural Communities in Southeast Alaska 2011-2013 (November 2011). See: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5339075.pdf

needed investments to support and expand the visitor services sector. Specific recommendations for the Tongass National Forest budget include:

- *Watershed Restoration and Visitor Services:* To support needed investments, one-third of the current Tongass timber program funds should be reallocated over a four-year period to watershed restoration and visitor services. This will enable the Forest Service to invest in the important initiatives it has identified to create quality jobs and sustainable economic opportunity in Southeast Alaska. (Note: Even if the additional budget needs identified in Table 1 for FY 13 were fully funded it would represent a reduction in expenditures relative to past investments because of one-time funds available from the American Recovery and Reinvestment Act.)

Table 1. Investing in the Tongass Transition: Watershed Restoration & Visitor Services [11]

Category	Investments Made FY10-11	Investments Planned FY12-13	Additional Funding Needed			
			FY13	FY14	FY15	FY16
Watershed Restoration	$10.6 M	$3.6 M	$1.9 M	$3.8 M	$5.7 M	$7.5 M
Visitor Services	$14.8 M	$1.9 M	$0.2 M	$0.4 M	$0.7 M	$0.9 M
Total Amount Reallocated to both Categories:			$2.1 M	$4.2 M	$6.3 M	$8.4 M

Source: USDA Investment Strategy in Support of Rural Communities in Southeast Alaska 2011-13 (Nov 2011).

- *Maintain Other Conservation Funding:* In addition to the reallocation of funds reflected in Table 1, the Forest Service should maintain or increase funding in the existing budget lines for: restoration of forest lands; legacy roads; wildlife and fisheries habitat management; and vegetation and watershed management.
- *Refocus Timber Budget to Support Young-growth Management:* The Forest Service should establish new timber targets and refocus the remaining timber program budget to emphasize projects that support sustainable young-growth management and collaborative community forestry projects.

[11] Investments Made (FY10-11) and Investments Planned (FY12-13) from the USDA Investment Strategy, Tables 2, 5 and 7.

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CAPITAL IMPROVEMENT AND 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, with annual costs exceeding budgets by about 400%, highlighting that the collective cost of this motorized network far outstrips the Forest Service's financial capacity.

Compounding this problem, roads are considered by ecologists to be one of the most significant stressors on watersheds and ecosystems. The Forest Service's 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.

After more than a decade of delay, the Forest Service has begun to take the necessary steps to address the problem, beginning the process to "rightsize" the road system. The first step is to create a blueprint for a sustainable system in compliance 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. 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.

A rightsized road system would represent 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 stability and resilience to large tracts of forests, and decrease the incidence of illegal off-road vehicle driving.

The rightsizing analysis process is scheduled for completion by the end of FY15 and implementation will continue for many years afterward. However, no specific funding sources have been allocated for this important work.

Several existing budget line items can be used to support this work, including:

- Integrated Resource Restoration (IRR) – in Regions 1, 3 and 4
- Roads
- Deferred Maintenance & Infrastructure Improvement
- Legacy Roads and Trails Remediation
- Vegetation and Watershed Management
- Fish and Wildlife

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Legacy Roads & Trails

In 2007, Congress created the Legacy Roads and Trails Remediation program to provide funding dedicated to decommissioning unneeded, environmentally problematic roads and trails and repairing important, high priority roads and trails. As such, Legacy Roads and Trails is a critical part of creating a responsible and sustainable Forest Service budget by reducing the untenable cost of the current road system.

In FY11, Legacy Roads and Trails took the biggest cut of any program in the Forest Service, dropping from $90 million in FY10 to $45 million in FY11 – a 50% cut. Despite this, in FY11 the Forest Service used Legacy Roads and Trails funding to decommission 581 miles of roads, maintain 1,172 miles of roads, improve 498 miles of roads, construct or reconstruct 57 bridges, and perform aquatic organism passage restorations at 143 sites. Legacy Roads and Trails funds were also used to perform a significant amount of trails maintenance and improvement, though final numbers for FY11 are not yet available. Unfortunately, the 50% program cut significantly reduced the number of rural jobs the program is capable of supporting. Forest Service economists estimate that for every $1 million spent on forest watershed restoration a range of 13 to 17 direct and indirect jobs are created nationally and 16 to 24 are created in Region 6. Roughly $270 million has been appropriated to Legacy Roads and Trails since FY08, resulting in an average of $54 million per year. This helped create or maintain 702-1,296 jobs annually. These jobs are mainly high wage and provide important economic stimulus to rural America, though, at FY11 and FY12 funding levels, many of these jobs are likely to disappear.

The massive cut to Legacy Roads funding, especially coupled with significant cuts to the general roads budget, came at a particularly bad time as Hurricane Irene in the east and record snowpack and spring flooding in the west generated millions of dollars in additional, unexpected needs. In the White Mountain National Forest, road and trail damage from Hurricane Irene alone neared $8 million. As of July, flood damage in Regions 1, 5, and 6 topped $29 million.

Legacy Roads and Trails funding held even at $45 million in FY12, despite strong recommendations from both stakeholders and members of Congress that the program be returned to a more reasonable funding level of $75 million (still a 17% cut from FY10). We continue to urge that Legacy Roads and Trails funding be at least partially restored in FY13.

We also recommend that the Forest Service use the 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 Legacy Roads and Trails dollars are spent as efficiently and effectively as possible and to ensure they are not spent on maintaining roads ultimately slated for decommissioning.

We further note that in FY12, $13 million of the Legacy Roads and Trails funding is available to be transferred into the Integrated Resources Restoration (IRR) account in the three test pilot regions (see above for more discussion in IRR). As one of the biggest threats to water quality and habitat connectivity on the forests, road decommissioning and repair should be a major part of any restoration effort. Accordingly, we highly recommend that any Legacy Roads funds transferred into the IRR test pilot be separately tracked and accounted within IRR in order to

ensure the critical roads work for which the fund was created is being carried out by the IRR program.

Roads and Deferred Maintenance

The Roads and Deferred Maintenance budget line items within the Capital Improvement and Maintenance budget pays for annual roads maintenance, decommissioning, improvement (upgrading and construction of new roads), and backlogged maintenance.

We have noted above the tremendous fiscal strain the road system is placing on the Forest Service budget. In FY12, the roads maintenance budget (which is part of the larger "roads" budget line item and responsible for annual maintenance and upkeep) was cut 7.4%, down to $155.491 million. Even in FY11, which itself represented a significant cut from previous levels, funding levels were insufficient to meet even basic needs. For example, according to the Forest Service roads accomplishment reports, the agency maintained about 16% of their road system in FY11 – on par with recent years, all of which have hovered near 20%. 57% of the passenger vehicle roads were maintained to standard, which ,while better than the system-wide percentage, is still not sufficient. Passenger car access has already been reduced from 82,000 miles in 2002 to 65,000 miles in 2009 largely due to lack of maintenance. Only 7% of the high clearance and/or closed roads were maintained in FY11. Not only do high clearance and/or closed roads make up the bulk of the Forest Service road system (55% / 27% respectively), they are also the roads most likely to fail, and most likely to cause significant environmental and water quality impacts when left unmaintained or undermaintained. We understand why the agency concentrates limited road maintenance dollars on passenger vehicle/recreational access roads, but it is important to recognize the significant ecological consequences that can result.

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.

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 FY13 roads and deferred maintenance budgets remain level with FY12. Any additional 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, the allocations of monies within the roads 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 $27.327 million allocated in FY12 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.

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 153,000 miles of trails, but only 21% are currently maintained to standard. The trail maintenance backlog had reached $296 million as of FY 2010, 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. The miles of trails have grown 56.9% since 1977 to accommodate the 376% growth in annual visitor-days on the trail system. However, the trails maintenance and reconstruction budget line item has remained flat since the 1980s, increasing only 1.75% after adjusting for inflation. This incongruity will continue to produce disproportionate amounts of work needed versus work being done. In addition, the lack of sufficient funds to maintain trails to standard continues to leave trails closed or unsafe for visitors and creates avoidable environmental degradation that is costly to undo. Despite these tremendous and growing needs, in FY12, the trails budget was cut 4% to $81.982 million.

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WILDLAND FIRE MANAGEMENT

The past two decades have seen the rapid escalation of severe fire behavior, home and property loss, higher costs, increased threats to communities, and worsening conditions on the lands. As of November 27, 2011, the National Interagency Fire Center reported 66,303 non-prescribed wildland fires in the United States in 2011, burning 8,296,664 acres of land. Challenges of fire management are growing more complex as management of wildland fire represents one of the most complex and highest risk activities in natural resource management. Fire managers and analysts need support and training to make and implement safe, effective, and efficient risk-based wildfire management decisions.

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

The Forest Service is committed to managing fire for both safety and resource benefits, which permits fire managers to take on a certain level of risk and allow wildfires to run their natural courses for landscape restoration where there is little potential to adversely affects nearby communities and structures. The Wildland Fire Decision Support System (WFDSS) assists fire managers and analysts making strategic and tactical decisions during fire incidents. WFDSS streamlined and improved the analysis and reporting processes and continuously takes advantage of improvements in technology, fire modeling, and geospatial analysis. It is easier to use, more intuitive, and offers a progressive and swift decision documentation and analysis process that allows immediate response to changing situations.

Fires have dramatically increased in size and complexity, often stretching the capacity of the management systems in place. The agency must train fire managers so that they are armed with an approach to firefighting that treats each fire individually, accounting for threats to lives and property first, but also ecology and landscape benefits when applying the appropriate response. In 2010, there were close to 7,000 users within WFDSS. As more fire managers applied WFDSS for decision support, the number of completed fire behaviors analysis increased almost two-fold. Further implementation could involve an expansion to a much larger user set, if state and local agencies decide to use WFDSS for decision support, decision documentation, and implementation planning.

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. Appropriate funding in the preparedness line item dedicated to training will support managers in making wildland fire decisions that ensure the safety of firefights and the public, protect structures and natural resources, and efficiently use firefighting resources, thereby reducing costs and potential losses while creating healthier landscapes.

2 DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Cohesive Wildfire Management Strategy

In response to a Government Accountability Office report, Congress added 43 USC 1748b to the FLAME Act (discussed below), which requires the Forest Service to develop a Cohesive Wildfire Management Strategy (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, studies the effects of invasive species on wildfire risk, and advances effective post-fire recovery and restoration.

The Forest Service released its first Strategy in October 2011, which builds a science-based framework promoting resilient ecosystems, protecting communities, and providing effective response to wildfire. It recognizes that sound land management planning – protecting and restoring forests– must overlap a comprehensive wildfire management strategy. Wildfire crosses all boundaries and jurisdictions. The Strategy aims for all communities to be resilient to fire-related disturbances where human populations and infrastructure can withstand a wildfire without loss of life and property. As of 2010, there were already 3,574 communities with reduced risk from catastrophic wild fires. The challenges of wildfire management require an all-lands, all-hands approach that will leverage the expertise of partners. The Strategy promotes an inclusive, collaborative process with active participation of all stakeholders – federal, state, tribal, local, and others – in making and implementing safe, effective, and efficient risk-based wildfire management decisions. It also creates and utilizes quantitative models to help inform fire management actions on the ground. The International Association of Fire Chiefs believes it will have a lasting positive response on our nation's response to wildland fires.

It is a dynamic approach to planning for, responding to, and recovering from wildland fire incidents. And this is only the beginning. Congress required not only the production of Cohesive Wildfire Management Strategy, but continuous 5-year revisions to the Strategy. There is tremendous amount of science to be considered and incorporated and differences to be resolved. Continued support guarantees a national wildland fire management policy that achieves safer, more efficient, cost-effective public and resource protection goals and more resilient landscapes.

Federal Land Assistance Management and Enhancement (FLAME) Fund

The USDA Federal Land Assistance Management and Enhancement (FLAME) Act brought about an important change in the funding mechanism for wildland fire suppression with the establishment of the FLAME Fund. Congress' intent in passing the FLAME Act in October 2009 was to eliminate the need to transfer monies from other DOI and USFS programs to meet the escalating wildland fire suppression costs. This practice undermined the ability of the agencies to implement other important programs including those designed to help reduce the threat of wildland fire.

FLAME funds can be used if the Secretary declares that an individual wildfire covers at least 300 acres or threatens lives, property, or resources, or cumulative wildfire suppression and emergency response costs will exceed, within 30 days, appropriations for wildfire suppression, and emergency responses. 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.

Since it was enacted, the practice of borrowing money to pay for suppression activities has ceased; however, failure to adequately fund the FLAME account could have a disastrous impact on other programs should the agencies be forced to revert to that old practice. The FY12 President's Budget request for FLAME was $315.9 million, and FY10 enacted was $413 million. The FLAME account should be appropriately funded in FY13 based on updated funding requests by the agency and the FY13 President's Budget.

DEPARTMENT OF AGRICULTURE

FOREST SERVICE

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 a small portion of revenues from offshore oil and gas drilling to support the conservation of America's lands and waters. 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. Most critically, in challenging economic times, small, leveraged investments in conservation can pay big dividends. The conservation, outdoor recreation, and historic preservation sector contributes $1.06 trillion annually to the American economy, supporting 9.4 million jobs (1 out of every 15 U.S. jobs). Whether manufacturing, retail, or service related, most of these jobs are sustainable resource or tourism-based jobs and cannot be exported, with magnified impacts in local and rural communities.

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. LWCF also funds two other important state grant programs – the Forest Legacy Program and Cooperative Endangered Species (Section 6) programs – that ensure permanent conservation through fee and easement of important forest lands and threatened and endangered species' habitat.

The LWCF has long enjoyed strong and bipartisan support. Over the past year, the House of Representatives passed a $25 million increase for LWCF in the Interior Appropriations bill via amendments on the House Floor, despite an overall budget-cutting climate that generated deep cuts to most programs. In the Senate, bipartisan legislation from Senators Jeff Bingaman (D-NM) and Max Baucus (D-MT), also would ensure full and dedicated funding for the Land and Water Conservation Fund (LWCF) at the authorized level of $900 million annually. That bill (S.1265) has bipartisan support from 27 cosponsors.

DEPARTMENT OF ENERGY

3 DEPARTMENT OF ENERGY

Introduction

The Department of Energy (DOE) continues to help move the U.S. clean energy economy forward at a rapid pace. Building on its recent efforts in the past few years, DOE added a notable collection of research announcements and program initiatives in 2011, across a range of technologies, including solar, battery storage, advanced vehicle, energy efficiency, biofuels, and "smart grid" technologies. Over 600,000 low-income homes have been weatherized (three months ahead of schedule) through the Energy Efficiency and Renewable Energy (EERE) Weatherization program. The Advanced Research Projects Agency – Energy (ARPA-E) provided over $150 million in funding for exciting new energy research projects. Recently a Better Buildings Initiative was announced to leverage public and private commitments to building efficiency totaling $4 billion. The list of announcements and accomplishments is impressive.

The paybacks from these efforts can be seen in a number of areas. Investments made in early stage research are attracting significant funds from the public sector. Eleven ARPA-E funded research projects have received $200 million in private capital (at over a five to 1 multiple). Wind and solar installation continue to grow impressively, with wind providing over three times the electricity it did four years ago[1], and solar having ten times more capacity than it did seven years ago. [2] Meanwhile, over the last five years, US investments in energy efficiency have seen unprecedented growth, reaching levels of $6.8 billion in 2011,[3] while a variety of new electric vehicle models launched this year. Total U.S. clean energy investment has continued to increase, rising 35% to a record $55.9 billion in 2011, as the U.S. recaptured its leadership in this category, overtaking China for the first time since 2008.[4]

Perhaps most importantly in this difficult economic climate, clean energy is providing jobs to hundreds of thousands of Americans. According to a recent Brookings report, employment in the wind and solar industries grew 10-15% annually, between 2003 and 2010, while the overall clean economy (of which clean energy is an important part) added 500,000 jobs total.[5]

DOE also weathered setbacks, including the failure of one company provided a loan guarantee and a punishing budget cycle. These developments provided political fodder and led to an elimination of further funding for the loan guarantee program, but were a very small part of the scope of DOE activities. DOE has primarily completed its allocation of research and project funding from the Stimulus Act (ARRA), but will now be challenged to continue funding these projects due to budget constraints, denying important research initiatives critical long-term certainty.

Beyond that, while there have been strong growth and impressive successes occurring every day in the U.S. clean energy economy, the U.S. faces strong global competition in the coming years. China, Germany, and South Korea (among many other countries) continue to focus heavily on clean energy (witness China's commitment to focus most of $1.7 trillion in new spending over

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1 http://www.eia.gov/cneaf/electricity/epm/epm_sum.html
2 http://www.seia.org/galleries/pdf/SMI-Q3-2011-ES.pdf
3 http://www.cee1.org/ee-pe/AIRindex.php3
4 http://www.bnef.com/PressReleases/view/180
5 http://www.brookings.edu/reports/2011/0713_clean_economy.aspx

five years in clean energy[6]). America is once again at a competitive crossroads when it comes to developing renewable energy technology.

We believe that America can and should be the world leader in renewable energy. America has led every major technological revolution over the last 100 years, from airplanes to the internet, and sold the products from these advances to the world, making us richer and improving our lives. Why shouldn't America lead the clean energy revolution as well?

We also 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 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.

Our DOE recommendations build on the call to action we've heard from investors, entrepreneurs, and workers. We must move forward with building a future that secures America's leadership in homegrown clean energy, drives economic growth and jobs, and provides a cleaner, healthier life for us and our children.

[6] http://www.reuters.com/article/2011/11/21/us-china-us-idUSTRE7AK0MT20111121

DEPARTMENT OF ENERGY

ENERGY EFFICIENCY & RENEWABLE ENERGY

Biomass and Biorefinery Systems Research &Development 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 broadly sustainable and low-carbon biomass as a clean energy resource. DOE's Biomass and Biorefinery Systems Research &Development (R&D) Program plays a critical role in shaping such a strategy by supporting targeted research, development, and demonstration (RD&D) aimed at transforming domestic biomass resources into cost-competitive, high performance, clean biofuels. Leveraging public and private partnerships, the program is working to improve the technological and environmental viability of advanced biofuel systems. Improving and deploying these technologies in the right way can reduce global warming pollution, increase energy security, and provide ecological services.

Biopower funding should support cleaner combustion, gasification, pyrolization, 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 biofuels, from feedstock cultivation through product end use, will provide a clearer comparison of technology pathways, enable a sustainable foundation on which to build viable biofuel 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 pyrolization of cellulosic biomass and biomass waste streams into biofuels, bioproducts, and biopower.

Taxpayers spent roughly $6 billion in 2011 alone subsidizing corn ethanol, a mature, mainstream technology with greenhouse gas emissions higher than gasoline and other serious environmental impacts, through the main corn ethanol tax credit—the Volumetric Ethanol Excise Tax Credit (VEETC). The VEETC expired at the end of 2011, but for just a fraction of its annual cost, DOE's Biomass and Biorefinery Systems R&D Program could support critical innovation in bioenergy production so that the most promising low-carbon technologies can be commercialized as quickly as possible.

Funds should be allocated towards research, development, and demonstration of advanced biofuels made from feedstocks, such as algae, and 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 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 research on promising biomass feedstock sources and cropping systems, 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, 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 recommend increasing funding for sustainability projects and programs through the Feedstocks Infrastructure and Strategic Priorities and Impact Analysis subprograms.

Solar Energy Technologies Program

The Solar Energy Technologies (SET) program supports research and development on solar photovoltaics (PV) and concentrating solar power (CSP), while pursuing market transformation initiatives that facilitate the integration of solar technologies into our electricity systems. This collection of SET sub-programs has continued to meet objectives and expectations with deliverables that are on-time and on-budget.

The U.S. solar industry now includes a vibrant and growing domestic solar manufacturing base and is bringing a host of generation technologies to market. Solar PV now stands on the cusp of "grid parity" in a number of states, an important cost-metric that basically means it can compete effectively with existing fossil-fuel generation. Large CSP projects are being built and could usher in an entirely new segment of utility-scale renewable projects. All of these developments have roots specifically in the solar program initiatives fostered and managed by DOE. This support is part of a larger federal policy strategy to deploy U.S. manufactured solar at significant levels, all of which has led to strong investor interest and several years of impressive solar growth. According to the Solar Foundation, the U.S. solar industry employs over 100,000 solar workers in more than 5,000 companies,[7] while according to the Solar Energy Industries Association, total solar capacity has now reached well over 3,000 MW, more than ten times the capacity from just seven years ago.[8]

Solar is an engine of U.S. economic growth. We recommend fully maximizing our domestic solar energy potential by building on existing successful efforts with a significant increase in

[7] National Solar Jobs Census 2010, Solar Foundation, October 2010; http://www.solarelectricpower.org/media/157830/final%20tsf%20national%20solar%20jobs%20census%202010%20web%20version.pdf
[8] http://www.seia.org/galleries/pdf/SMI-Q3-2011-ES.pdf

funding and commitment of other resources through this DOE program. President Obama and Secretary Chu have devoted considerable attention to the importance of increasing funding for research and development that can bring the installed cost of solar power down to $1 or less per watt.[9] 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 in areas that have been screened for environmental and cultural resource conflicts. 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.

Given recent developments, it is important to note that the SET program is separate and distinct from the DOE's Loan Guarantee Program, which has been successful overall in its efforts to get new clean technologies to market but has also attracted scrutiny. Unlike the Loan Guarantee Program, the SET program's focus is on research, development, and demonstration of solar technologies – not providing capital to scale up a solar manufacturing facility.

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

By the end of 2011, 46 GW of wind energy capacity had been installed in the United States with an additional 8,300 MW under construction.[10] DOE's Wind Energy program has played a significant role in scaling up wind energy, supporting RD&D for a variety of wind technologies,

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[9] "DOE Pursues SunShot Initiative to Achieve Cost Competitive Solar Energy by 2020"; February 4, 2011, DOE. http://www.energy.gov/news/10050.htm
[10] American Wind Energy Association (2011). [http://awea.org/learnabout/industry_stats/index.cfm]. (accessed 1/17/12)

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. DOE should prioritize wind power policies and projects that prioritize early environmental review to prevent siting challenges down the road.

Due to the lingering effects of the economic recession and other challenges, such as low electricity demand and near-term lower-cost fossil fuels, especially natural gas, federal investment in wind energy remains vital to the short- and long-term growth of the industry. According to AWEA, the domestic 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 20 percent of the nation's electricity mix was provided by wind energy. 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 11 funding for the wind program was $80.0 million, the same as in FY 10. Increased funding (in addition to the 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. Research at LBNL has shown that rotor scaling for low wind class turbines has significantly reduced the cost of electricity in class 3&4 wind regimes[11], and DOE funds could help to further accelerate the development of this technology. Making lower wind class sites economic increases available wind resources considerably and expands the supply of viable wind resource sites with 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

[11] http://eetd.lbl.gov/ea/ems/reports/lbnl-5119e.pdf

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.[12] Also in 2010, the first offshore wind farm lease was awarded from DOI, and many more offshore wind developers are 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. DOE has since launched a geospatial map that represents 2011 grants for offshore wind power available at: http://energy.gov/maps/2011-grants-offshore-wind-power. This important tool provides a visual that supports DOE's investment in offshore wind research and development. This program must be supported at a level commiserate to the vast offshore wind resource that complements state and federal government regulatory efforts, and should therefore receive a significant amount of new funding. Additional recommendations that will have an impact on the deployment of offshore wind are included in the Water Energy program section below and separately the BOEM section in the Department of Interior chapter.

Water Energy Program

The Water Energy program includes 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 the potential to serve as a domestic source of clean energy and jobs, the water energy sector, a less mature industry, will require significant startup costs and continue to experience regulatory changes. 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 11, the Water Energy program received $30.0 million in funding, a decrease of 40% from FY 10. We recommend increasing FY 13 funding. An increase in the 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 as the United States seeks to develop water energy sources that can be competitive with our international partners while advancing its commitment to a clean energy future.

[12] 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).

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. Important 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 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, while the timeline has yet to be determined for how CMSP will be applied to future projects. 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 remains a critical element to advancing America's water energy potential. Hydropower energy accounted for about 7 percent of total U.S. electricity generation and 70 percent of generation from renewables in 2009[13]. Funding for the hydropower program should continue to 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. A map of 2011 grants for advanced hydropower technologies is available at: http://energy.gov/maps/2011-grants-advanced-hydropower-technologies.

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.[14] 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

[13] Energy Information Administration: Annual Energy Outlook 2011. http://www.eia.doe.gov/oiaf/aeo/electricity.html
[14] "Technology S-curves in renewable energy alternatives: Analysis and Implications for industry and government", Melissa A. Schilling, Melissa Esmundo, Energy Policy 37 (2009)

megawatts of geothermal power are available with existing technologies, with potential new Enhanced Geothermal Systems (EGS) resource availability stretching to over 500,000 megawatts.[15] 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 is in the process of studying the potential impact of 10% geothermal energy penetration by 2030 (covering all geothermal technologies) – the *Geothermal Vision Study*. We look forward to this analysis that we hope will examine the critical hurdles to achieving this goal. One area that should receive more study is seismicity risk and strategies for mitigating that risk (see below).

- **Seismicity.** The occurrence of so-called “induced seismicity” – seismic activity caused by human actions – in conjunction with fluid injection or extraction operations is a well-documented phenomenon. Empirical evidence has shown that fluid injection volume and earthquake magnitude are strongly correlated. Researchers have evaluated the probability of inducing an earthquake of a given magnitude based on injection pressure, time, and geologic and geophysical properties of the injection site. Further work is needed to develop strategies and protocols for systematically investigating and mitigating induced seismicity risk that can be implemented at fluid injection projects.

- **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 continue to 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.

FY11 funding for the Geothermal Technology program was actually lower than FY10 funding. We recommend that DOE build on its existing efforts 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 and fund this initiative with a significant increase in support.

[15] “The Future of Geothermal”; Massachusetts Institute of Technology, 2007: http://geothermal.inel.gov/publications/future_of_geothermal_energy.pdf

DEPARTMENT OF ENERGY

ENERGY EFFICIENCY & RENEWABLE ENERGY

Vehicle Technologies Program

As the economy recovers, DOE's Energy Information Administration (EIA) predicts rising gasoline prices, surpassing $3.00 per gallon and steadily increasing thereafter. Extreme volatility in the oil market that has been seen historically but not captured in forecasts also make fuel costs unpredictable. To help working families and businesses reduce their fuel bills, curb carbon pollution, and reduce the U.S.'s dangerous dependence on oil, a top priority must be to increase motor vehicles fuel efficiency. DOT and EPA have proposed new fuel economy and greenhouse gas emissions standards for light duty vehicle that reach 54.5 miles per gallon in 2025, approximately double the efficiency of today's on-road vehicles. Achieving these improvements will require a range of advanced technologies that include lighter-weight, high-strength materials and greater vehicle system electrification through hybrid and plug-in electric drivetrains. Federal advanced vehicle research and development by DOE works in conjunction with these standards to develop lower-cost, high-efficiency vehicle components that will accelerate the mass-market adoption of advance vehicle technologies and support future strengthening of the standards.

Improved vehicle efficiency is a central plank of President Obama's "Blueprint for a Secure Energy Future." The blueprint describes a set of actions to cut oil imports by one-third and to keep U.S. manufacturing a leader in technology innovation. DOE should continue to fund robust research in vehicle technologies that cut petroleum fuel consumption and global warming pollution. Avoiding the worst effects of global climate change requires boosting fuel efficiency to at least 54.5 mpg by 2025 with continuous improvements beyond. The Vehicle Technologies Program should prioritize research to 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, 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 about two-fifths 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.[16] The DOE Building Technologies Program recently added solar heating, cooling, and lighting to its portfolio. These

[16] "Energy Research At DoE: Was It Worth It?" The National Academies. July 2001.

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.

Historically, the Building Technologies Program has been chronically underfunded. However, progress has been made in recent years with Congressional increases in funding. Congress should maintain funding for the Building Technologies Program, in particular for building codes and standards, ENERGY STAR, appliance and equipment standards and analysis, the Commercial Buildings Initiative (CBI), and the Building America Program. Congress should also increase funding for EIA data collection, including funding for the Commercial Building Energy Consumption Survey (CBECS).

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).[17] A 2011 study also found that existing Federal appliance standards have created and maintained 340,000 jobs to date.[18] The study also found that 100,000 additional jobs will be created by 2030 by standards to be enacted through 2013. Developing standards is an analysis-intensive process, and DOE needs adequate resources to carry out its responsibilities.

Advanced Manufacturing Office (formerly known as the Industrial Technologies Program)

The U.S. manufacturing sector is a cornerstone of our nation's economy and is critical to our future competiveness, economic prosperity, and leadership in developing and producing innovative new technologies. The sector not only provides millions of good-paying jobs, but also produces high-quality goods which accounted for 60 percent of total U.S. exports or $1.1 trillion national income in 2010 and 11.2 percent of our gross domestic product in 2009.[19] It is also one of the largest energy-using sectors of our economy, accounting for approximately one-third of total energy use in the U.S.[20]

While the economic downturn shuttered many factories across the country, the industrial sector is beginning to gain some ground for the first time since the late 1990s, adding jobs for two consecutive years.[21] However, additional support is urgently needed to rebuild our

[17] "The Power of Appliance Standards." American Council for an Energy-Efficient Economy (ACEEE) and the Appliance Standards Awareness Project. 2009.
[18] http://www.aceee.org/press/2011/01/appliance-and-equipment-standards-money-maker-and-job-cr
[19] Department of Commerce, The Competitiveness and Innovative Capacity of the United States, p. 6-1, available via http://www.esa.doc.gov/sites/default/files/reports/documents/thecompetitivenessandinnovativecapacityoftheunitedstates.pdf, (accessed on January 17, 2012).
[20] Energy Information Administration, Annual Energy Outlook 2010, December 2010, available via http://www.eia.gov/forecasts/aeo/pdf/0383er%282011%29.pdf, (accessed January 15, 2012).
[21] Floyd Norris, "Manufacturing is Surprising Bright Spot in U.S. Economy," The New York Times, January 5, 2012, available via http://www.nytimes.com/2012/01/06/business/us-manufacturing-is-a-bright-spot-for-the-economy.html, (accessed on January 18, 2012).

manufacturing sector. Measures to help reduce energy costs and boost productivity and efficiency within the sector can support U.S. manufacturers and their ability to compete—keeping jobs and supply chains operating here in the U.S. The Energy Information Administration's Annual Energy Outlook for 2011 projects that the largest increase in energy consumption from 2009 to 2035 will be in the industrial sector, which is projected to grow by 7.2 quadrillion Btu or 19 percent.[22] There is tremendous potential to offset this growth by unlocking the potential for industrial energy efficiency improvements and combined heat and power in the sector. According to its July 2009 report, McKinsey & Company estimates that we can reduce primary industrial energy consumption by 21 percent by 2020, saving U.S. industry $47 billion per year.[23]

Industry, however, needs financing, technical assistance, and technological developments to capture such savings and benefits, particularly in what is still a difficult economic climate. Consequently, we believe sustained and increased funding for DOE's Advanced Manufacturing Office (AMO) is absolutely essential to fully realize this potential and secure short- and long-term growth and prosperity for our manufacturing sector.

AMO, formerly known as the Industrial Technologies Program, 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 and reduce their energy bills. The Office is a critical part of the Advanced Manufacturing Partnership, a cross-agency initiative with private sector industry and universities to rebuild and retool the manufacturing sector that was announced in June 2011.[24]

The Office has a goal to reduce the life-cycle energy consumption of manufactured goods by 50 percent in 10 years. AMO is working toward this goal by: (1) developing and demonstrating new, advanced energy-efficient processing and materials technologies; and (2) deploying advanced technologies and better energy management practices at industrial facilities.[25]

AMO's research and development activities are primarily focused on supporting innovative, pre-competitive, cost-shared projects.[26] The Innovative Manufacturing Initiative, which provided $120 million in funding last year to the development of advanced manufacturing materials and processes, is the primary source of funding for AMO's R&D work.[27] The Office collaborates closely on these projects with industry, academia, and the national laboratories and also leverages resources from the Department of Defense, other agencies, and industry. AMO also continues to invest in cross-cutting technologies that benefit a wide range of industries.[28] AMO's R&D work has provided significant benefits to the US manufacturing sector and is helping innovative

[22] Energy Information Administration, Annual Energy Outlook 2011, available via http://www.eia.gov/forecasts/aeo/pdf/0383%282011%29.pdf, (accessed on January 15, 2012).
[23] McKinsey & Co, Unlocking Energy Efficiency in the U.S. Economy, July 2009, http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/US_energy_efficiency_full_report.pdf
[24] Department of Energy, "Advanced Manufacturing Partnership," available via http://www1.eere.energy.gov/industry/amp/, (accessed on January 18, 2012).
[25] Department of Energy, "Mission and Goals," available via http://www1.eere.energy.gov/industry/about/goals.html, (accessed on January 15, 2012).
[26] Department of Energy, "About Research & Development," available via http://www1.eere.energy.gov/industry/about/rd.html, (accessed on January 18, 2012).
[27] Department of Energy, "Innovative Manufacturing Initiative," available via http://www1.eere.energy.gov/industry/financial/solicitations_detail.asp?sol_id=422, (accessed on January 18, 2012).
[28] Department of Energy, "About Research & Development."

technologies cross the valley of death. From 1990 to 2010, AMO R&D awardees commercialized over 200 new technologies, received over 50 R&D 100 awards, and obtained over 250 patents.[29]

The rest of the Office's activities are focused on deploying advanced technologies and establishing best energy management practices and tools at companies' facilities and across their supply chains. These activities include the Superior Energy Performance (SEP) certification program which was launched in 2011 and provides industrial facilities with tools, best practices, and a platform for continuous energy efficiency improvement that conform to the new ISO 50001 standards.[30] The Office also runs the Better Buildings, Better Plants Initiative (formerly known as the Save Energy Now LEADER 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 reach that target. AMO has recruited 110 major 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.[31] In addition, the Office works to deploy combined heat and power technology through its Clean Energy Application Centers, which have educated more than 25,000 facilities on the value of the technology and provide technical support to more than 700 CHP activities that together account for 1.5 GW of installed or soon to be installed generation capacity.[32]

The Office's technology deployment work also provides industrial energy savings assessments to facilities large and small and workforce training. AMO has demonstrated the value of its tools and training during energy assessments at more than 33,000 industrial facilities from 1990 to 2010 and, as of October 2011, AMO energy assessments had identified $1.6 billion in savings at 1,000 large plants and 2,300 small and mid-sized plants. The Office's Industrial Assessment Centers also have trained over 3,000 students to be energy management professionals since 1980.[33]

AMO 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. A 2005 report by the National Research Council of the National Academies highlighted that AMO has "evolved over time into a well-managed and effective program."[34] Likewise, a February 2009 Peer Review of AMO, with the evaluators consisting of 10 prominent third-party experts, also determined that the Office "effectively uses its resources to achieve *significant results*, despite its recent, continually declining budget… The Technology Delivery program was found to be deserving of particularly high praise." In addition, the peer review panel

[29] Department of Energy, "Advanced Manufacturing Office: Accomplishments," available via http://www1.eere.energy.gov/industry/about/accomplishments.html, (accessed on January 18, 2012).
[30] Department of Energy, "Advanced Manufacturing Office: About Technology Deployment," available via http://www1.eere.energy.gov/industry/about/tech_deployment.html, (accessed on January 18, 2012).
[31] Department of Energy, "Advanced Manufacturing Office: Announcing Better Buildings, Better Plants," available via http://www1.eere.energy.gov/industry/newsandevents/news_detail.html?news_id=17940, (accessed on January 18, 2012).
[32] Department of Energy, "Advanced Manufacturing Office: Accomplishments."
[33] *Id.*
[34] 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 in January 2011).

concluded that more funding and commitment by the Administration and Congress would be needed for ITP to achieve its current goals.[35]

In FY 11, AMO received $108,241,400 in funding, a 12.7% increase over FY 10. Sustaining and increasing the Office's funding will go a long way toward reducing energy costs for manufacturers, preserving and creating high-paying manufacturing jobs, and ensuring that the next generation of technologies are manufactured domestically.

Federal Energy Management Program

The federal government is the single largest energy consumer in the U.S. The Federal Energy Management Program (FEMP) works with agencies to reduce wasted energy in federal buildings and vehicles while increasing the percentage of energy that comes from clean sources. FEMP 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. In 2011, President Obama announced plans for an additional $2 billion in Energy Savings Performance Contracts over the next 24 months, which allow agencies to partner with energy services companies (ESCOs) to implement energy saving measures without upfront costs. Reducing wasted energy in Federal buildings not only reduces pollution, but also saves tax payers money on their energy bills.

Weatherization Assistance Program

In FY 09, the Obama administration called on DOE to ramp up the Weatherization Assistance Program (WAP) 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. In December 2011, DOE reached its goal of weatherizing 600,000 low-income homes three months ahead of schedule.[36] To continue to make significant progress towards the Obama Administration's goal, the WAP budget should be increased. This level of funding reflects the existing WAP installation capacity of 300,000 homes per year that was developed through ARRA funding. This is a small fraction of the roughly 20 million households eligible for WAP.

On average, weatherization reduces heating bills by up to 35 percent and reduces heating and cooling costs by more than $400 per year. During the last 27 years, WAP has provided weatherization services to more than 5 million low-income families. 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.

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[35] Stephen Ban 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).
[36] http://www1.eere.energy.gov/buildings/news_detail.html?news_id=17961

DEPARTMENT OF ENERGY

ENERGY EFFICIENCY & RENEWABLE ENERGY

State Energy Program

The State Energy Program (SEP) provides grants and technical assistance to states to address their energy priorities, implement carbon emissions reduction initiatives, and fund energy efficiency and renewable energy projects and programs. An Oak Ridge National Lab study found that every dollar of federal SEP funds results in $7.22 in annual energy cost savings.[37] Prior to ARRA, much of the program's resources had 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, 89 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. It will be important to ensure that the one-time ARRA increase does not impact longer-term SEP initiatives.

The Energy Efficiency and Conservation Block Grant Program

The Energy Independence and Security Act of 2007 established a new Energy Efficiency and Conversation 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 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

[37] http://www.naseo.org/programs/sep/index.html

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, 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

The growing clean energy economy (valued globally at $260 billion in 2011) is the primary focus of DOE's international activities, which are under the International Subprogram in the Office of Energy Efficiency and Renewable Energy and coordinated by the Office of Policy and International Affairs. The subprogram was initially allocated a budget of $10 million in FY2010 in order to advance U.S. goals for climate, energy security, and economic matters; accelerate clean technology innovation; and transform energy efficiency and renewable energy markets in key developing countries. Since then, DOE has signed 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 leveraging resources globally toward greater deployment of clean energy.

The increasing demand for high-paying manufacturing and innovation jobs ensures that the International Subprogram will play a strategic role in achieving U.S. goals, such as the National Export Initiative. Expanding the International subprogram's budget significantly would provide much-needed support for the following international activities:

- **Technical R&D and Policy Research on Clean Energy with China and India.** The five-year U.S.-China Clean Energy Research Centers (CERC) in electric vehicles, building efficiency, and advanced coal were established in 2009, and promote public-private partnerships on common energy challenges. In 2011, the final technology transfer agreements were signed, protecting intellectual property of all partners and helping further develop these promising manufacturing and job-making industries. With India, the U.S. has launched three joint clean energy R&D centers in addition to numerous trade missions on renewable energy and low-carbon technologies under the Partnership to Advance to Clean Energy (PACE).

- **Major Economies Forum (MEF) Clean Energy Ministerial.** Launched in 2010, this global forum is the key coordinating body of ministers of energy and environment on clean energy policies and is an important pillar of U.S. climate diplomacy. Eleven working groups ranging from electric vehicles to smart grid are tackling technical challenges of global deployment. DOE should continue its leadership in this area. DOE's budget should allow for administration of this initiative, rather than having to rely on the Department of State for funding.

- **Climate and Energy Engagement with Western Hemisphere.** The Energy and Climate Partnership of the Americas (ECPA), established in 2009, brings together 32

Western hemisphere countries to promote low-carbon growth. Regional Clean Energy Centers facilitate joint clean energy R&D by teams of scientists and engineers from the U.S. and partner countries. To date, ten countries have initiated projects under ECPA.

- **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. A 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 Department and other agencies.

DEPARTMENT OF ENERGY

NUCLEAR

Fuel Cycle Research and Development

Globally, over $100 billion has already been spent globally in unsuccessful attempts to commercialize reprocessing and transmutation technologies.[38] 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.[39]

DOE continues to pursue this nuclear alchemy under the Fuel Cycle R&D program and requested $155 million in FY12.[40] 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 requested $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 FY2013 budget requested $49.6 million for the Next Generation Nuclear Plant Demonstration Project, currently proposed to be demonstration of the Very-High Temperature Reactor (VHTR), which has not been a commercial success in the U.S. Neither of the two

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[38] 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.

[39] 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

[40] 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).

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. Many countries, including United States, Germany, France, Japan, and Britain, have tried and failed to develop the pebble bed modular reactor.

LWR SMR Licensing Technical Support

The FY201 budget requested $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 FY2012 request was for $97.3 million. This program 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 design from the ESBWR to the APWR and the schedule for reviewing the revised application is moving very slowly.

3 DEPARTMENT OF ENERGY

NUCLEAR

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 text 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.

DEPARTMENT OF ENERGY

ELECTRICITY DELIVERY AND ENERGY RELIABILITY

Electricity Delivery and Energy Reliability

This program develops technologies and implements policies that will improve the reliability, energy efficiency, system efficiency, and security of the nation's energy delivery system. Unfortunately, funding for the Office of Electricity Delivery and Energy Reliability (OE) has dropped precipitously in the past two fiscal cycles, following a boost of funds from ARRA to invest in smart grid technologies. Instead of reducing investment in critical electricity infrastructure, we should bolstering that support 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.

A number of programs could also benefit from an increase in funding. 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.

Separately, ARRA funds were used to develop 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. Interconnection-wide planning in Texas, WECC in the West and EIPC in the East are set to wind down this year, leaving OE with a reduced role in planning going forward. In order to leverage the lessons learned to the greatest extent possible and build upon the interconnection-wide planning to date, the Administration should consider a funding request of $1.5 million for determining best practices to incorporate wildlife and cultural resource identification and mitigation plans into transmission planning. This could leverage the lessons learned from congestion studies exercised under Section 1221 of EPACT 2005 and from the ongoing work of the interagency Rapid Response Team for Transmission (RRTT) led by CEQ.

Finally, increased funding should be provided to address issues related to transmission system and distribution feeder operations 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 keeping pace with these challenges will be an essential piece of meeting the nation's energy and environmental goals.

SCIENCE

Office of Science

DOE's Office of Science (OS) is an essential cog in the U.S. innovation ecosystem and supports a broad portfolio of research 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. For example, much basic research done at DOE's Advanced Photon Source helped lead to the breakthrough that enabled the Chevy Volt Battery.[41] Unfortunately, funding in FY11 was significantly lower than FY10 funding, and FY12 funding remains lower than FY10. We propose a significant increase in funding to allow OS to 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.

One crucial budget that has come under attack is Biological and Environmental Research (BER). While opponents have highlighted its efforts in climate change research, BER actually invests in much broader research that can have significant long-term benefits. For example, the Human Genome project was originally launched in BER. Additionally, BER invests in research that is crucial for clean energy, such as biofuels. Basic Energy Sciences (BES) is a similarly crucial area of focus. The large scientific facilities ("Light Sources") that DOE supports through BES are also used by a wide range of industries, including the biological community, the auto industry, and pharmaceutical industry. These light sources are today's microscopes and provide infrastructure that other agencies and industries cannot invest in. A large amount of the research into lithium ion batteries is directly traceable back to BES and, in fact, A123 Systems, Inc. has its roots in Argonne National Laboratory.

Another priority is the Fellowship program at the Office of Science. ARRA provided funding for one cohort of fellows – if further funding is provided, this important program could be finished. This program was called for in the original COMPETES Act and produces talent in key disciplines in the energy fields.

Recently, OS has been looking to better leverage its non-monetary resources, for example, by 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 provides 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.

[41] http://science.energy.gov/stories-of-discovery-and-innovation/127006/

DEPARTMENT OF ENERGY

ADVANCED RESEARCH PROJECTS AGENCY - ENERGY

Advanced Research Projects Agency - Energy

The Advanced Research Projects Agency - Energy (ARPA-E) is a small and nimble research entity, designed to sponsor transformational energy research and development that has been screened out by risk-averse institutes and labs. It can further help to bridge the gap between basic research (especially at universities) and commercialization. ARPA-E has focused on two types of funding opportunities: near-commercial existing technologies; and next generation technologies that could provide a transformational leap over current approaches.

Since its launch with a significant block of funding from ARRA, ARPA-E has issued seven Funding Opportunity Announcements targeting "electrofuels" (non-biomass based next generation transportation fuels), battery storage for vehicles, building efficiency, power conversion, materials, and grid-scale energy storage. As of September 2011, ARPA-E has made $521.7 million in awards to 180 projects, with funding provided to start-ups and universities in approximately equal amounts.[42] Additionally, ARPA-E reports that at least eleven companies have received follow-on private capital funding at over a five to one multiple.[43] Potential future programs could include solar research for $1 / watt solar, rare earth minerals, and high performance renewable energy grid integration among many other options.

So far, the program has received bipartisan praise for its success in quickly staffing up and allocating funding in an expeditious manner, selecting recipients in a transparent fashion, and pursing new approaches within the historically conservative DOE framework. While difficult to track, it seems ARPA-E is succeeding in expanding a new culture of innovation in clean energy, reaching scientists, engineers, and entrepreneurs in new ways. In FY12, funding for ARPA-E was boosted significantly from FY11. We support this increase and believe further increases in funding are appropriate.

In general, we strongly 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 RDD&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.

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[42] http://arpa-e.energy.gov/media/news/tabid/83/vw/1/itemid/39/department-of-energy-awards-%24156-million-for-groundbreaking-energy-research-projects.aspx
[43] http://arpa-e.energy.gov/media/news/tabid/83/vw/1/itemid/35/vice-president-biden-announces-new-private-sector-backing-for-five-pioneering-energy-companies-.aspx

DEPARTMENT OF ENERGY

ENVIRONMENTAL CLEANUP

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, additionally, at 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 FY13 should remain at $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, provides 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 $4.94 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 the 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

available. In a related matter, ARRA requires transparency and accountability provisions that should be required for all DEC programs. The administration should use 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 (HLW). 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 focused on removal of all 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 the 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 FY13 should remain at $244.7 million.

3

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 strongly endorse EIA's work and recognize the value it provides for non-traditional stakeholders participating in federal, regional, state, and local processes. Their Annual Energy Outlook, International Energy Outlook, monthly and annual electric power updates, wholesale power data, and power plant database, among many other data sources, help make our jobs possible.

Unfortunately, in FY11, EIA's budget was cut[44], and, while some of this funding was restored in FY12 appropriations, this will still have material, lasting impacts on the ability of non-governmental organizations and public interest groups to provide meaningful input into public processes. The loss of the International Energy Outlook will impair international advocacy as well. This data provides a vehicle for groups to vet the claims and assumptions of industry. Without these sources, our nation's energy data will be limited to confidential databases held by private companies. Transparent data inputs are a prerequisite for open, democratic processes and our ability to challenge the assumptions and claims of incumbent industry players.

One priority that would facilitate improved data collection would be to expand funding for 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 greater accuracy for secondary uses of the data by other federal agencies.

Funding for EIA and the invaluable information it provides should be commensurate with the importance and quality of its products.

[44] Cuts outlined on EIA's webpage at http://205.254.135.7/about/budget_performance.cfm

3 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 the Department of Energy (DOE). In FY 13, Congress should fund this program at the authorized level of $750.0 million in federal assistance for renewable energy and energy efficiency projects at institutions of higher education, public school districts, local governments, or municipal utilities. The program allows the Department of Energy 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 limits 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 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 administrated by the Department of Energy, in coordination with the Department of Labor. In FY 2013, Congress should pass the Community College Energy Training Act and fund the program at $100 million.

COUNCIL ON ENVEIORMENTAL QUALITY
DEPARTMENT OF HOME LAND SECURITY
DEPARTMENT OF STATE
U.S AGENCY FOR INTERNATIONAL
DEVELOPMENT

COUNCIL ON ENVEIORMENTAL QUALITY
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4 EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY

Council on Environmental Quality

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. In addition, CEQ has been instrumental in ensuring the timely completion of projects essential for the nation’s economic health while also protecting our environment and the health of our communities through the environmental review process required under NEPA. .

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 23 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 13, 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 and expertise in reviewing, assessing, and developing policies that bridge environmental and socioeconomic factors and effectively uses its experience in 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.

EXECUTIVE OFFICE OF THE PRESIDENT

COUNCIL ON ENVIRONMENTAL QUALITY

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 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 task force initiated and 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. In March, CEQ released implementing instructions for federal agency adaptation planning. In October 2011, the task force released a report documenting federal agencies progress in increasing the nation's capacity to respond to extreme weather events and other climate change impacts. The task force will continue to meet in 2012 and oversee climate change adaptation activities that will ensure the protection of vital natural resources.

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 in 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 Role in Transitioning to a Clean Energy Economy.** Upgrading the nation's transmission system is an important and necessary component of unlocking renewable resources and ensuring a reliable supply of electricity. In 2011, CEQ established the Interagency Rapid Response Team for Transmission (RRTT), following a 2009 Memorandum of Understanding (MOU) between nine federal agencies to better coordinate reviews of electric transmission on federal lands. The Administration created the RRTT to "ensure that their processes for reviewing infrastructure proposals work efficiently to protect our environment, provide for public participation and certainty of process, ensure safety, and support vital economic growth." The RRTT is comprised of staff from the Department of Agriculture, the Department of Commerce, the Department of Defense, the Department of Energy, the Department of Interior, the Environmental Protection Agency, the Federal Electric Regulatory Commission, the Advisory Council on Historic Preservation, and the White House Council on Environmental Quality. The team has identified seven pilot transmission line projects with a goal of working towards coordinated statutory permitting, review, and consultation schedules and processes among involved federal and state agencies, and tribal governments, resolution interagency conflicts, and insurance that permitting timelines are met. The work of the

RRTT should not be limited to the seven specific pilot projects alone, but rather be funded and resourced to draw lessons from these projects to improve the quality of decisions made in reviewing needed new transmission lines to ensure they avoid conflict with local communities and sensitive natural and cultural resources wherever possible.

- **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, 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 NEPA's 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: efficient and expeditious compliance with NEPA during emergencies; when and how to consider greenhouse gases in federal decisions; the use and development of categorical exclusions; proper implementation of mitigation and monitoring; and, most recently, draft guidance on improving the process for preparing effective and timely environmental reviews under NEPA. In addition to the new guidance on implementing NEPA, CEQ will be initiating five pilot projects aimed at improving the efficiency of the NEPA process. CEQ will continue this effort to guide agencies in their NEPA implementation practices.

- **U.S. Marine Mammal Commission.** The U.S. Marine Mammal Commission is an independent U.S. government agency reporting to the Council of Environmental Quality at the White House charged with the oversight of the marine mammal conservation policies and programs carried out by federal agencies. Recently, the MMC has completed an assessment on the long-term effects of the BP Deepwater Horizon Oil Spill on marine mammals in the Gulf of Mexico; conducted an international workshop on attaining marine biodiversity observations and; reported on establishing protected areas for Asian freshwater cetaceans. The MMC has also funded an international team of scientists that unveiled the largest genetic study of humpback whale populations ever conducted in the Southern Hemisphere. $3.5 million is recommended for the MMC in FY 13 to continue to oversee and provide expertise on marine mammal conservation. The MMC will utilize these funds to enhance scientific cooperation on marine mammal research, exploration and conservation; they will support other U.S. government processes that deal with marine mammals in the international policy arena; and will continue to invest in priority regions in the U.S. and around the world to recover marine mammal populations, address key threats and identify long-term strategies for conservation.

- **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), which 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 modest increase in funding to CEQ would 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.

- **CEQ Role as Environmental Advisor.** 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, CEQ will continue its leadership on several initiatives including: the America's Great Outdoors program aimed at securing lasting conservation of the Nation's outdoor spaces; the Interagency Rapid Response Team for Transmission which is working to build the needed transmission infrastructure for the energy sector; and Clean Water Framework aimed at building local partnerships to protect the integrity of America's water resources which are vital to the economy and local communities.

An increase in overall funding for CEQ will greatly enhance CEQ's ability to manage these vital projects by restoring necessary staff and resources to the historically adequate levels.

4 DEPARTMENT OF HOMELAND SECURITY

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Introduction

The 2011 catastrophic flooding resulted in over $10 billion dollars in damages, 78 deaths, and 58 federal disaster declarations covering 33 states. Preliminary estimates for damages due to the 500-year record flooding on the Mississippi River ranges from $3-4 billion, for the flooding due to historic record water flows along the Missouri River roughly $2 billion, and for the multiple 100-year and greater flood events during Hurricane Irene an estimated $7-10 billion. Flood control structures that are in some cases more than a century old and in a state of disrepair are simply inadequate to deal with the effects of climate change on our nation's rivers. Lives, property, and taxpayer dollars are all at risk if we fail to meet these threats head on. The increase frequency and intensity of flood events demands an investment in FEMA's flood insurance and hazard mitigation programs.

The Stafford Act, 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.

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).

The National Flood Insurance Act, 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.

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.

Flood Map Modernization (Map Mod) and Risk Mapping, Assessment, and Planning (Risk MAP)

Obsolete, almost antiquated maps pose one of the greatest challenges to safeguarding communities from repeated flooding, protecting floodplains, and maintaining solvency of the National Flood Insurance Program. Through the Map Modernization effort, FEMA is producing up-to-date and modernized flood maps in cooperation with local, regional, or state agencies for areas at high risk of flooding. Estimated to be used over 30 million times each year, these maps are critical as they are used to assign risk-based premiums for flood insurance rates, inform disaster response planning, and are widely recognized as an essential floodplain management tool for keeping people out of harm's way and protecting floodplains. Also a collaborative effort with states and communities, Risk MAP is improving the data and technology used in flood maps and increasing public awareness which leads to mitigation actions that reduce risk to life and property.

Dam Safety and Security Act, National Dam Safety Program

There are more than 79,000 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 11,000 high hazard dams (meaning that failure will likely result in loss of life) and more than 4,000 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.

4 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. This is of particular concern as the Japanese tsunami debris makes its way across the Pacific Ocean with expected landfall in the Northwestern Hawaiian Islands in early 2012 and along the U.S. West Coast in 2013.

DEPARTMENT OF STATE

INTERNATIONAL ORGANIZATIONS AND PROGRAMS (IO&P)

International Conservation Programs

Through the State Department's International Conservation Programs, the U.S. government provides core financial support to international organizations and programs that address global challenges through cooperation, including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Ramsar Convention on Wetlands, the World Conservation Union (IUCN), the International Tropical Timber Organization (ITTO), and the UN Convention to Combat Desertification (UNCCD).

U.S. contributions to these agreements and organizations are especially important to curbing illegal trade in rare and threatened wildlife. This multi-billion dollar illegal trade threatens worldwide efforts to protect endangered species and reduce the loss of biodiversity. It also undermines sustainable livelihoods, weakens the rule of law, and can harm U.S. businesses by introducing illegally harvested products into markets for goods such as timber. To combat this illegal trade, the United States has raised public awareness and the political profile of the issue through the establishment of wildlife enforcement networks. Through its work with IUCN and the Coalition Against Wildlife Trafficking (CAWT), the United States has bolstered efforts in southern Africa to combat the illegal trade in rhinoceros horn. The U.S. helps gather experts and officials from range and consumer states to develop anti-trafficking and demand reduction strategies. Through CAWT, the United States has also supported the South Asia Wildlife Enforcement Network (SAWEN) and the ASEAN Wildlife Enforcement Network (ASEAN-WEN). Due in part to U.S. support, ASEAN countries have improved their interdiction of trafficked wildlife products and have made increased numbers of arrests.

IO&P programs also preserve globally significant wetlands, promote the conservation and sustainable management of the world's forests and provide forums for international debate and discussion on key conservation topics. Separately, the IO&P Account includes funding for the UN Environment Programme and the World Heritage Convention, both of which also have mandates that emphasize nature conservation in developing countries. ICP was funded at $7.9 million in FY12.

For more information, go to: http://www.state.gov.

Multilateral Funds to Combat Climate Change

International investments to deal with the increasing challenges of climate change and extreme weather variability are essential to promote national security and minimize instability, enhance economic opportunities for U.S. businesses and workers, provide major cost savings through disaster prevention, protect critical forest areas and biodiversity, and preserve decades of U.S. investments in global development.

Extreme weather variability spurred by climate change will exacerbate food insecurity, water scarcity, challenges to human health, and natural disasters in some of the most volatile regions of the world. A report released in November 2011 by the Intergovernmental Panel on Climate Change (IPCC) verifies that the "changing climate leads to changes in the frequency, intensity,

spatial extent, duration, and timing of extreme weather and climate events, and can result in unprecedented extreme weather and climate events."

Such climatic changes could have significant implications for U.S. national security. In a letter to Congress specifically about the international climate programs, Former Chairman of the Joint Chiefs of Staff General Hugh Shelton and 18 other retired General Officers stated: "Cuts to these essential civilian-led programs…will undermine our national security by weakening our ability to address growing challenges in vulnerable and fragile countries**."**

In 2010, the United Nations Framework Convention on Climate Change (UNFCCC) established a framework for a Green Climate Fund (GFC) that would be capitalized by donor countries and used to support climate change mitigation and adaptation projects in developing nations. The fund would complement, or perhaps replace, many of the existing multilateral climate change funds, becoming UNFCCC's primary financial mechanism. At the UNFCCC Conference of Parties in Durban, South Africa in 2011, the Republic of Korea, Germany, and Denmark committed funds to help with the start-up costs of the GCF. The U.S. should contribute $5 million to these start-up efforts.

Adaptation

Extreme weather variability spurred by a warming planet will exacerbate food insecurity, water scarcity, poor health conditions, and natural disasters. Some of the most vulnerable regions of the world are also some of the most volatile. We are witnessing today how frequent droughts are impacting the lives of some 12 million people who are fighting for survival in the Horn of Africa. Building resilience and increasing disaster-preparedness among poor communities will help avert instability due to migrations and conflicts over resources, saving both lives and the number U.S. dollars that need to be spent on emergency relief and military engagement. Data on disaster risk reduction show that up-front investments in preparedness could result in a cost savings of $7 to every $1 spent.

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 designed to support least developed countries in addressing the most immediate and urgent adaptation needs. The LDCF has provided grants to prepare and implement urgent National Adaptation Programs of Action (NAPAs). As of December 2011, LDCF has approved some U.S. $217 million for projects and mobilized more than U.S. $919 million in co-financing. The Fund has enabled 48 of the world's most vulnerable countries to access resources for NAPA preparation; 46 of these countries have completed them, with only two -Angola and Myanmar- remaining in final stages. The Fund now supports 52 projects and programs in 42 of the least developed countries – the largest porfolio of adaptation projects of its kind. Thirty-three projects have started implementation on the ground, generating real adaptation benefits to some of the world's poorest and most vulnerable communities.

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 11, the U.S. contributed $30 million to the LDCF and $20 million to the SCCF.

Forests and Land-Use

Maintaining critical forest ecosystems is essential to mitigating losses in natural resources and biodiversity that lead to food and water insecurity, regional instability, and increases in greenhouse gas emissions. Protecting international forests helps to promote sustainable economic development, foster economic linkages with strategically important economies, and support developing countries in their efforts to reduce carbon emissions.

The State Department supports international REDD+, an acronym for reducing emissions from deforestation and forest degradation plus sustainable management of forests to conserve and enhance forest carbon stocks, efforts through the World Bank's **Forest Carbon Partnership Facility (FCPF).** The FCPF plays an important role in preparing countries for REDD. It is the only multilateral program developing pay-for-performance incentives to reduce deforestation in tropical countries. It has pioneered a Social and Environmental Standards Assessment process for countries and established a Common Approach to Social and Environmental Safeguards for Multiple Delivery Partners for REDD Readiness activities. These approaches, developed through extensive consultative processes, are expected to provide important guidance for transparently and equitably preparing countries to participate in REDD. Continued U.S. engagement in the FCPF is important as a means of assuring U.S. input into a global process that may significantly influence the rules of the road for REDD.

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 CO_2 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 FY12, the U.S. provided $10 million through the State Department to support the UNFCCC and the IPCC.

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 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. In FY12, the U.S. contributed $27 million to the Montreal Protocol Multilateral Fund.

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 robust portfolio of conservation and forestry programs. These help protect some of the largest and most at-risk natural landscapes and the livelihoods of millions of people who directly depend on natural resources for their survival and economic growth. By maintaining and restoring the natural resources that supply fertile soil, clean water, food and medicine, these USAID programs play an important role in long-term U.S. foreign policy objectives. USAID assistance for conservation is focused on addressing priority threats to biodiversity, but in the process helps promote rural peace and security, boost health, combat global warming, build democracies, secure environmental resources, and improve livelihoods. In doing so, these programs enhance the economic and national security interests of the United States by reducing conflict over resource scarcity and improving the economic security and stability of our trading partners in the developing world.

USAID's biodiversity programs empower developing countries to tackle the drivers of biodiversity loss and resource degradation, such as the illegal extraction of natural resources, overfishing, pollution, poor agricultural practices, weak governance, and wildlife poaching and trafficking. They also strengthen the capacity of countries to manage their natural resources effectively and sustainably while also strongly promoting economic development. By carefully managing their natural assets, countries are more able to move up the development ladder, investing more and more in manufactured capital, infrastructure and "intangible capital" like human skills and education, strong institutions, innovation, and new technologies – investments that benefit countries directly while also strengthening local and global markets. USAID biodiversity programs help to strengthen U.S. national security by mitigating conflicts over resource scarcity. They also promote the competitiveness of U.S. businesses by ensuring sustainable supply chains, strengthening trade relationships and emerging economies, and preventing illegal products from flooding and undermining international markets.

It is more important than ever that U.S. investments in biodiversity conservation be strategic and catalytic, working to accomplish several objectives while leveraging scarce resources. For example, a recent USAID marine biodiversity program in the Philippines increased fish abundance of selected fisheries by 13 percent, improved management of 375,000 hectares of municipal waters, and established 30 public-private partnerships in support of sustainable and profitable fishing. In Kenya, USAID assistance helped 21,500 individuals in wildlife-rich areas benefit from conservation-related enterprises, and leveraged over $3 million in private sector and community investment, resulting in seven new conservancies and four eco-lodges. In 19 countries around the world, USAID's Sustainable Conservation Approaches in Priority Ecosystems (SCAPEs) program supports large-scale approaches to conservation in vast trans-boundary landscapes in which Agency and partner funds strengthen the capacity of local communities and government agencies to conserve and benefit from biodiversity through improved natural resources governance, monitoring and management.

From grasslands and forests to mountains and coasts, USAID biodiversity programming conserves a broad array of ecosystems that span the developing world. These conservation activities address priority threats to biodiversity, generate tangible economic and social development results, and improve the sustainability of other U.S. foreign assistance by securing

the natural capital underlying all development sectors. In addition, many of these programs have been successful in leveraging significant private sector support and investment. They also increase goodwill towards the United States in the developing world. Partnerships forged by USAID, foreign governments, the private sector, local peoples, and conservation organizations are key to this success. In FY12, USAID directed $200 million towards its Biodiversity Conservation Programs, developing policies and practices to preserve our planet's ecological diversity while sustaining local communities and promoting U.S. interests abroad.

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

Sustainable Landscapes Program

USAID's Sustainable Landscapes program was created to mitigate the drivers of deforestation and forest degradation in the world's largest and most biologically diverse tropical forests. Forests cover 30 percent of the planet's land area, house up to 90 percent of all terrestrial species, regulate the planet's climate, and directly sustain the livelihoods of 1.6 billion people worldwide. According to the U.S. National Cancer Institute, 70 percent of the plants identified as having anti-cancer characteristics are also found only in tropical forests. Reducing deforestation through sustainable management practices is vital to protecting these essential storehouses of biodiversity and carbon, as well as the essential goods and services that they provide people around the globe, including in the United States.

Deforestation also contributes approximately 15 percent of global greenhouse gas emissions. Action to address deforestation, and prevent forest conversion to agriculture along with other land use changes are cost-effective and readily available solutions to mitigating global emissions. Sequestration through forest restoration and preservation can also substantially enhance efforts to slow climate change while preserving livelihoods and biodiversity.

USAID's Sustainable Landscapes Program supports REDD+ architecture, national and sub-national frameworks, and demonstration activities to achieve scale on emission reductions from avoided deforestation, providing 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.

In 2009, the U.S. joined with other nations to announce 'fast start' financing to protect tropical forests and the carbon they contain. Specifically, the U.S. committed $1 billion over the 2010-2012 timeframe to help countries that put forward "ambitious REDD+ plans" – a commitment that leveraged additional contributions totaling $3.5 billion from all donors.

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BILATERAL INTERNATIONAL CLIMATE FUNDING

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 analyses 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.

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.

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. 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. By supporting global clean energy innovation and deployment, these USAID programs support the Unites States' foreign and domestic policy goals and help grow the market for American products and business.

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U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

BILATERAL INTERNATIONAL CLIMATE FUNDING

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. At the end of 2011, world population reached 7 billion, and the next billion people is expected to be added within 12 years. Population growth in the developing world remains a contributor to deforestation, desertification, the degradation of oceans and waterways, and loss of biodiversity and endangered species. In light of these factors, it is recommended that funding for USAID's Population Assistance Program not be less than the President's FY 12 budget request of $769.1 million, representing an increase of $159.1 million over the FY 12 enacted level of $610 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 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.

A total of $615 million (of which $40 million is designated for the United Nations Population Fund) was appropriated for U.S. assistance for family planning and reproductive health programs in FY 11. This level of funding made it possible for:

- 37.4 million women and couples to receive contraceptive services and supplies;
- 11.7 million unintended pregnancies and 5.1 million unplanned births to be averted;
- 5.1 million induced abortions to be averted;
- 32,000 maternal deaths to be averted;
- 140,000 fewer children to lose their mothers.

These gains would be seriously jeopardized if this already modest funding for the program were to be cut again. For example, each decrease of $10 million in U.S. international family planning and reproductive health assistance would result in the following:

- 610,000 fewer women and couples would receive contraceptive services and supplies;

- 190,000 more unintended pregnancies, and 82,000 more unplanned births, would occur;
- 83,000 more abortions would take place;
- 500 more maternal deaths would occur;
- 2,300 more children would lose their mothers.

DEPARTMENT OF THE INTERIOR

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BUREAU OF LAND MANAGEMENT

National Landscape Conservation System

27 million acres of congressionally and presidentially designated protected public land 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.

The National Conservation Lands contribute significantly to local economies across the West that are adjacent or near to units within the system. Although representing only 1/10th of the lands administered by the BLM, the National Conservation Lands consistently draws a third of all visitors visiting BLM lands. Of the 59 million visitors to BLM lands in 2010, approximately 20 million visited units within the National Conservation Lands. Furthermore, according to the BLM, recreation activities in the National Conservation Lands created approximately 20,000 jobs in 2010. The National Conservation Lands add these jobs and drive economic development in the mostly rural areas near the units managed as part of this system.

Although the National Conservation Lands make 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 years, funding has averaged $59.6 million, or just $2.20 per acre.

Funding the Conservation Lands at the FY 2012 Administration-proposed levels of $77.7 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 cultural 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 proposed level provides an additional $13.1 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 FY 12 proposal provides the BLM the ability to steward the National Conservation Lands, the most innovative system of protected public land in the United States.

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

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 resources sites exists across all of the BLM public lands as have been found upon those already surveyed, there are likely to be a total of 4.5 million resource sites on 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 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.

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.

In the long term, a 20% survey of BLM's lands most likely to contain cultural resources would be an excellent goal. However, a 15% survey of their lands is constructive, reasonable, and helpful. As noted earlier, the BLM has 8% of their lands surveyed, with a need for an additional 7% systematic survey, or approximately 18 million acres to reach a 15% goal. At an estimated cost of $50 per acre to conduct cultural resource surveys, the cost of bringing BLM's surveyed lands up to 15% if done today would be $900 million.

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 12 enacted budget only funded this account at 16.1 million or less than 65 cents an acre. We greatly appreciate the request in the FY 12 budget for a significant increase in funding up to $25.6 million or $9.5 million over the FY 12 enacted budget.

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

We continue to recommend an increase of $25.6 million for the BLM 1050 account with the entirety of the increase dedicated to Sec. 110 proactive surveys. We appreciate the challenge of that increase in this difficult economic climate, but we know that these surveys to help eliminate uncertainty and conflict as we work together to increase opportunities for renewable energy development and jobs on public lands.

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 geographically extensive lands are required for the development of industrial solar and wind projects.

Of the proposed 17 solar energy zones (SEZs) carried forward in the Supplement to the Draft Solar Programmatic EIS, one has only 48% of its lands surveyed for cultural resources. The remaining SEZs fare far worse:

- One SEZ with 10% survey
- One SEZ with 6% survey
- Eight SEZs with 4% survey
- Six SEZs with no cultural resources surveys at all.

Of the over 285,000 acres proposed for intensive solar energy development within SEZs, only 21,000 acres or just over 7% of these lands have been surveyed for cultural resources. This lack of vital information creates uncertainty for even the most promising areas for development. Increased funding is needed immediately survey these areas to avoid conflicts in these zones.

A different kind of 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 Paleoindian 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% 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.

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, two 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 recent reductions 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 plant and wildlife 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 address this long-standing problem. Increased funding could provide the necessary resources to allow BLM staff to finally eliminate the backlog and ensure that proper NEPA analysis, with multi-stakeholder partnering, is resumed for these grazing permits. Alternatively, increased funding could be used to fund a multi-stakeholder taskforce which would look at streamlining the NEPA process with regard to grazing permitting. This multi-stakeholder task force would be charged with exploring the possibility of a national permitting scheme for landscape-level grazing planning, as opposed to the current allotment by allotment system. The goal of the taskforce would be to increase the efficiency of the grazing permitting system while maintaining a commitment to multi-stakeholder involvement and the health and integrity of the ecosystem.

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*."[1] To meet our energy needs, fulfill the promise of environmentally responsible, utility-scale wind, geothermal, and solar renewable energy output under the New Energy Frontier Initiative, more funding is necessary to complete the growing number of

[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.

environmental reviews under NEPA for projects proposed on public and private lands in a timely manner.

In total, 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, 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 2013.

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 $5,700 for each lease to defray the BLM's costs of assuring that operators comply with their conditions of approval. The BLM estimates a savings to taxpayers of $37,950,000 with this reform. 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.

The Administration also has proposed the imposition of a $4.00 per acre "non-producing lease fee." The fee would help curb the holding of federal leases for speculative purposes. The BLM estimates that the imposition of such a fee would raise $330 million per year.

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 would increase revenue by $4.5 billion over 20 years (Ibid., p. 3).

Wildlife and Fisheries and Threatened and Endangered Species Management

BLM manages 253 million acres, 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 270 plants and animals listed under the Endangered Species Act or awaiting listing, and more than 800 rare 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. Despite its extensive wildlife and habitat management responsibilities, the total amount of funding received by the agency for these two programs amounts to only about 28 cents per acre. Any further cuts to these already meager programs would be devastating.

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, annual BLM funding for recovery of threatened and endangered species on BLM lands comes to only around ten percent of what is required of BLM in endangered species recovery plans. As a strategy for dealing with low funding, BLM is using a Threatened and Endangered Species Recovery Fund to target funding at the highest priority species and make the largest gains in removing species from the list. For example, in California the fund invested around $300,000 in population monitoring and large scale revegetation projects aimed at downlisting the endangered Blunt Nosed Leopard Lizard. The recovery fund is currently funded at $2 million to go toward these high priority projects.

The status of the wide-ranging declining sage grouse is of great concern throughout the West, and any funding cuts to the proactive sage grouse conservation measures currently being developed and implemented would be disastrous. The BLM has undertaken a new sage grouse planning process that will amend upwards of 70 resource management plans across the sage grouse range in order to provide the needed protections to avoid ESA listing. Conserving sage grouse now will allow for recreation, hunting, grazing, mining, and oil and gas production to carry on in the future without interruption for sage grouse related ESA consultation and consideration. For this process to be successful, BLM will need to maintain funding for the project at a level of $8-10 million a year for three years, which will require funding either through the Wildlife and Fisheries Management Activity or the Resource Management Planning Activity. Other needs related to sage grouse include $15 million annually for habitat restoration and $24.8 million annually for sage-grouse habitat mapping, inventory, and assessment in eight states (California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Wyoming).

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

populations and habitat. Of particular concern are renewable energy impacts on wildlife species such as golden eagles, the declining sage grouse, and a variety of bat species from wind energy and desert tortoise from solar energy. Investments in inventory and monitoring are critically needed to fill data gaps and to avoid and mitigate harmful impacts to these and other wildlife species from siting and operations of renewable energy projects.

In addition, resources are needed to investigate and address the effect of white-nose syndrome on bats on BLM lands; the fungus has decimated an estimated 5.7 – 6.7 million bats in the U.S. and Canada in the last several years and continues to spread. It would cost $1.3 million to inventory just 10 percent of the 3,000 caves and 18,000 abandoned mine sites on BLM lands. About $13 million would be needed to inventory all known caves and abandoned mines on BLM lands. Such inventories are needed to track and understand the spread of this deadly disease. 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. Bats are important for agriculture, for example, because they eat pests, providing at least $3.7 billion in pest management services to the agriculture industry each year.

The FY 12 enacted level for Wildlife and Fisheries was $50.3 million and for Threatened and Endangered Species Management was $21.6 million.

Challenge Cost Share

The BLM's Challenge Cost Share program allows it to partner with state and local governments, private individuals and companies, and nongovernmental organizations to restore habitat, monitor fish and wildlife, 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 agency's meager funding for fish and wildlife and threatened and endangered species, crucial conservation work is being accomplished in field offices through Challenge Cost Share partnerships. Even at previous higher funding levels, the agency already annually was turning turn away an average of $20 million in projects that could be leveraged into $60 million for the total program. With further funding cuts, more matching funds will be lost. 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.

The FY 12 enacted level for Challenge Cost Share was $7.4 million.

Plant Conservation

BLM lands are crucial to the conservation of more than 800 rare plant species, yet the agency currently has no specific budget activity or subactivity for plant conservation. The FY 09 Interior, Environment, and Related Agencies bill transferred into the Wildlife subactivity the

approximately $5 million annually devoted to Native Plant Materials Development previously in the Burned Area Rehabilitation account. In FY 11, that funding was moved by the agency again into a new Forest, Range, Riparian, and Plant Conservation Activity, but has no subactivity of its own. There is concern that this move will hinder the plant conservation program's ability to integrate with other species-oriented conservation programs within the BLM.

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. Unfortunately, many restoration projects currently use non-native seeds due to the unavailability of native seeds and a failure on the part of the agency to require that natives be used. Plant Conservation is working to resolve this by gathering information from the field regarding seed use and using that information to develop a strategy to support restoration using native seeds. This is vitally important work for species like sage grouse – restoration efforts in sage grouse habitat are only effective when sage brush seeds native to the ecoregion are used.

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 – Plant Conservation provides a fundamental component of the agency's adaptation strategy.

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 Plant Materials Development program.

The amount allocated to Plant Conservation activities in FY 12 was $7.8 million.

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 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. Plans are the cornerstone of every on the ground action taken by BLM. This program already has been cut by nearly 25 percent since FY 10 and cannot sustain any further reductions.

Currently there are 47 resource management plans under revision and 45 plans waiting in line to be revised, some of them decades old. Additional funding cuts would slow current revisions even

further and prevent the BLM from initiating the revisions each year that will ultimately lead to a full set of revised and modernized BLM plans across the country. Moreover, the crucial funding needed to amend more than 70 plans so that sage grouse conservation can be adequately addressed (discussed above) must be provided either through this activity or the Fish and Wildlife Management activity.

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

The FY 12 enacted level for Resource Management Planning was $38.1 million.

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 other ecological changes as well as 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.

Cooperative Landscape Conservation

The Cooperative Landscape Conservation program supports the development and implementation of strategies to conserve fish, wildlife, and habitat in the face of landscape-level disturbances including climate change, land use change, invasive species, and energy development. The BLM Cooperative Landscape Conservation program is closely linked to other DOI Cooperative Landscape Conservation programs, including the Climate Science Centers (CSCs) and the Landscape Conservation Cooperatives (LCCs). The funding in this program includes the development of ground-breaking 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 fish and wildlife habitat 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 these landscape-level challenges and proactively plan for sustainable development at appropriately large scales. Continued funding of this program 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.

In addition, BLM is actively seeking collaboration with other federal, state, tribal, and private partners to address the management issues that require cross-jurisdictional cooperation. The funding in this program also includes on-the-ground management to implement the strategies being developed. For FY 13, the program should be maintained at the $17.5 million requested for FY 11 and FY 12 to continue this critically important work. This level of funding will also allow the BLM to initiate two additional landscape level assessments in FY 13.

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.

Healthy Landscapes

As a result of drought, altered fire regimes, invasive plant and animal species, and changes in land use associated with energy development and urban growth, BLM lands are experiencing a period of unprecedented environmental change. The Healthy Landscapes program has become an innovative and praiseworthy effort to address these landscape level management challenges by targeting restoration and other conservation activities towards high priority projects at the landscape scale. Healthy Landscapes projects will increasingly be tiered towards areas identified in rapid ecological assessments as they are completed.

The Green Budget recommendation for FY 13 is $7.8 million, which is level funding from the FY 12 budget.

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 modest funding in this program is designed to leverage the data collection in other programs and will be tiered to the rapid ecological assessments as they are completed.

The FY 13 recommendation is $2 million, same as the FY 12 level.

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Energy and Minerals Management: Renewable Energy Subactivity

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. The Department's 2012 Budget Justification noted that one of its goals continues to be to "increase approved capacity for production of renewable (solar, wind, and geothermal) energy resources on DOI-managed lands, while ensuring full environmental reviews, by at least 9,000 megawatts by the end of 2011." BLM has permitted more than 29 wind projects and 9 large solar projects on public lands to help meet that goal.

The final FY 12 Interior, Environment, and Related Agencies appropriations bill transferred funds of $16,735,000 from BLM's Lands and Reality Management to a new Renewable Energy Subactivity under by Energy and Minerals Management. This will allow the BLM to more effectively track and monitor spending. A $3,000,000 increase for the Renewable Energy Management program was proposed in the FY12 budget to "conduct studies and to prepare regional planning studies and environmental reviews of potential wind energy zones in Nevada and Oregon" and to update the Wind Programmatic Environmental Impact Statement (PEIS) completed in 2005. According to the Budget Justification, these funds "will help the Bureau propose future renewable energy zones in the respective states while furthering the strategy to target areas of high resource concentration and avoiding areas with potential conflict." BLM's renewable energy work was subsequently funded at $19.7 million for FY12. An additional increase of $5 million for FY13 could provide for more thorough cultural resource identification to reduce resource conflicts and additional screening for new solar energy zones once the solar PEIS is completed.

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 2011, 2 large-scale solar energy projects were permitted on public lands in California and Arizona, and one wind project in California which received expedited environmental review with funding from the American Recovery and Reinvestment Act. Several more wind and solar projects broke ground in 2011 and more solar and wind projects are set to be permitted in calendar year 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 nearing completion of a Programmatic Environmental Impact Statement (PEIS) for solar energy,

partially funded through American Reinvestment and Recovery Act monies. BLM released a supplement to the draft PEIS on October 27, 2011 and is taking public comment until January 27, 2011. The supplement highlighted many of the joint positions of the solar industry and the conservation community. The issuance and implementation of a Record of Decision for the Final PEIS for solar will be high priorities for the agency in calendar years 2012 and 2013. 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 the 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.

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 Water 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. It is possible that in 2012, there will be substantial progress made on the Yakima River Basin Integrated Water Resources Management Plan that will require substantial support from the Bureau to allow a 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. In order to protect the fragile ecosystem that an estimated 23 million Californians depend upon, CalFed must receive the resources necessary to carry out its mission.

DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

Cooperative Landscape Conservation and Adaptive Science

Threats to the conservation of fish and wildlife and other natural resources are increasingly large-scale and complex. Combined with decreasing resources among federal, state, tribal, and private-sector conservation partners, there is a need to work more effectively and efficiently across jurisdictional boundaries. The Fish and Wildlife Service (FWS) and the Department of the Interior have established a nation-wide network of Landscape Conservation Cooperatives (LCCs) to improve landscape-level coordination of conservation efforts, and to provide science and technical capacity to tackle today's complex environmental problems.

Twenty one LCCs have been established across the country. Many, however, lack funds to offer the science and technical capacity sorely needed. Cuts will hinder crucial projects such as the following:

- In Washington State, the Great Northern LCC is helping fund the identification of essential habitats and corridors expected to be resilient to climate change and to facilitate the movement of wildlife. This information will be shared by all the conservation partners in the LCC to coordinate the protection and restoration of important wildlife corridors.
- The Western Alaska LCC is working on a project to understand the changes in permafrost in the region and the effects on freshwater resources and wildlife habitat. The information will assist with developing habitat conservation plans and assessing the stability of freshwater resources for communities.

The FY 12 enacted level for Landscape Conservation Cooperatives was $32.3 million.

Endangered Species Program

For nearly 40 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. More than 99 percent of all species protected under the Act have been rescued from extinction, an astonishing success rate. And the Act has restored more than twenty 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. And a recent study, *The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States* by Southwick Associates, has estimated that the value of services provided by natural habitats in the United States is more than $2 trillion per year.

Because of human caused changes – habitat destruction and fragmentation, climate change, air and water pollution and more, the Earth is suffering the worst period of species loss since the disappearance of dinosaurs 65 million years ago. Scientists estimate species are being lost at as

much as 10,000 times the natural rate of extinction. For example, nearly 40 percent of North America's fish species are imperiled. Extinction is so tragic because it is a completely irreversible environmental calamity. With each plant and animal species that disappears, a part of creation is erased forever, and with it a part of our natural system that may have unknown benefits. 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.

The U.S. Fish and Wildlife Service (FWS) is one of two federal agencies with primary responsibility for implementing the Endangered Species Act and manages its operations 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. Further cuts will cripple its ability to save plants and animals from extinction.

- To gain protection, a species must be formally listed under the Act. Further cuts in the listing budget will hinder progress in listing more than 250 candidates, many of which have awaited protection for years, including the American wolverine, red knot, Pacific fisher, Pacific walrus, Mojave fringe toed lizard, Yosemite toad, New England cottontail rabbit, and other species desperately in need of protection. In addition, once more species are added to the list, the meager funding for consultation and recovery will have to stretch even further.
- Consultation ensures listed plants and animals will be protected while at the same time allowing crucial projects to move forward. Cuts will result in the delay of ongoing or new consultations including more than 1,000 consultations for renewable energy projects around the country on both public and private lands. Important renewable energy planning efforts such as the Desert Renewable Energy Conservation Plan in California, and the Great Plains Wind Energy Habitat Conservation Plan that covers a 200 mile-wide corridor stretching from Canada to the Gulf of Mexico through Colorado, Nebraska, North and South Dakota, Texas, Kansas, New Mexico, and Oklahoma need consistent funding to be completed. If the Administration is to facilitate a build out of renewable energy at the pace and scale that is needed to combat the worst impacts of climate change, funding for FWS consultation on individual projects and larger planning efforts should increase.
- Funding already is inadequate to address the recovery needs of the nearly 1,400 listed U.S. species and cuts will further undermine crucial work such as inventory and monitoring and establishment of movement corridors for Canada lynx; restoration and enhancement of habitat for the Florida panther and work with local stakeholders to resolve human-panther conflicts; and investigation and management of White Nose Syndrome, a devastating disease that has killed 5.7 to 6.7 million bats in the U.S. and Canada.
- From 1996 to 2011, the Service has worked with stakeholders and other agencies to avert the need to list 42 species such as the Sand Mountain blue butterfly in Nevada, the McCloud River redband trout in California, the Ramsey Canyon leopard frog in Arizona, and the swift fox that occurs in numerous states. Further decreases will seriously impact steps to stop decline of species before listing is needed.

The FY 12 enacted level for the Endangered Species program operation accounts was $176.2 million.

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 556 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 45 million people each year, our national wildlife refuges are economic engines, generating nearly $4 billion and more than 32,500 jobs to regional economies according to a 2011 report, *The Department of the Interior's Economic Contributions*.

Despite its crucial role as an anchor for America's wildlife conservation, outdoor recreation opportunities and economic activity, the Refuge System has long been plagued by chronic and severe funding shortfalls. Small, but incremental, budget increases between FY 08 and FY 10 that began to put the Refuge System on track toward adequate funding are being quickly reversed due to budget cuts in FY 11 and FY 12. If across-the-board sequestration cuts of 9% take effect in FY 13, the impacts to the Refuge System would be devastating and could force FWS to close or end major programs at more than 130 refuges, eliminate more than 200 wildlife management jobs needed for essential habitat management work, cut more than 35 visitor services jobs needed to mobilize the System's 40,000 volunteers and administer recreational programs, and cut law enforcement staff by more than 40 officers to leave a force of only about 170 people to carry out work that the International Association of Chiefs of Police recommends should be done by 845 officers. Even flat funding would impact the System. Indeed, 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 an annual increase of at least $8 million.

Yet the challenges the Refuge System faces are only growing. The 2010 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. Refuge System employees spent more than 150,000 hours responding to the disaster, delaying or halting critical work on refuges nationwide. In 2011, devastating floods, tornadoes, wildfires, hurricanes and tropical storms, an earthquake, and a tsunami left refuges in the direct path of these catastrophes with more than $190 million in damages. Refuges within the Pacific marine national monuments and along the U.S. West Coast are projected to be further impacted as debris from the 2011 tsunami continues to migrate across the Pacific Ocean. Without supplemental funding to cover such costs, the Refuge System must divert funding from its operations and maintenance budget, leaving refuges with even fewer dollars to carry out their most basic functions and forcing important project and staffing needs onto the System's existing operations and maintenance backlog of more than $3.3 billion.

The Cooperative Alliance for Refuge Enhancement (CARE), a diverse coalition of 22 conservation, sporting, recreation, and scientific organizations representing a constituency of

more than 15 million Americans, in a carefully researched yearly analysis, *Restoring America's Wildlife Refuges 2011: Assets for All Americans,* 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 2012. 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: $359 million for mission-critical habitat management, wildlife and visitor services projects and staff; an additional 209 law enforcement officers at a cost of $31 million; $25 million just to partially address the 2.5 million acres overrun with invasive plants and nearly 4,000 invasive animal populations; $18 to $35 million for increased responsibilities to manage all four marine monuments; and $20 million for inventory and monitoring work needed to develop effective programs and guide efficient use of funds.

The FY 12 enacted level for National Wildlife Refuge System operations and maintenance was $486.5 million.

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. The *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, conducted by the U.S. Fish and Wildlife Service (USFWS 2006), reports that birding generated over $82 billion in total industry output, 671,000 jobs, and $11 billion in local, state, and federal tax revenue in 2006. More than 1000 species of birds occupy an array of habitats across the U.S., 251 of which 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 focused on impacts to birds from climate change and found that birds in every habitat will be affected by it, some to a greater 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 2011 report assesses the crucial importance of our nation's public lands and waters for bird conservation.

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.

Further decreases in funding for the Migratory Bird Management program will put at risk crucial bird conservation efforts such as:

- Survey and monitoring for golden eagles to prevent harm from siting of wind turbines and for seabirds which may be vulnerable to energy development;
- Strategic conservation efforts for 139 high-priority species such as the American woodcock (wetlands), long-billed curlew (grasslands), American and black oystercatcher (coasts), tri-colored blackbird (grasslands) and Sprague's pipit (grasslands);
- Urban Treaties that assist cities in conserving birds in urban and suburban areas through means such as education, hazard reduction and habitat improvements in cities in Arizona, Alaska, California, Illinois, Louisiana, Minnesota, Missouri, Montana, Pennsylvania, Tennessee, and Texas;
- Conservation and monitoring work for grassland birds that are declining faster than any other group of North American birds, such as Eastern and Western meadowlarks, Mountain plover, lark bunting and greater prairie chicken;
- Continued monitoring and response to avian diseases to prevent harm to both wild bird populations and transfer of disease to humans and livestock;
- Crucial collaborative work to conserve habitat by the 18 Joint Ventures nationwide, especially new partnerships that have been established in Texas, West Virginia and Oklahoma.

The FY 12 enacted level for Migratory Bird Management was $51.5 million.

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 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 such as the Ramsar Convention on Wetlands of International Importance and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). 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.

DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

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, declines of certain imperiled species, and U.S. participation in treaties and agreements for many of which the Service currently gets almost no funding. Given its meager resources, International Conservation is working to prioritize signature initiatives that have the best long-term impact. Further cuts will undermine work such as:

- Three initiatives in Mexico to train natural resource managers, decision-makers and stakeholders that have resulted in successes such as the training of more than 2,000 famers in the protection of monarch butterfly wintering habitat;
- Training multi-disciplinary teams of wildlife professionals in Africa to address threats such as the unsustainable bushmeat trade and timber harvest;
- Conservation of amphibians in decline of which 40 percent are threatened with extinction;
- Projects to protect critically endangered animals such as the Andean cat in Argentina, the most endangered cat in the Americas and Abbot's duiker, Africa's largest and rarest forest antelope.

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. 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 third in monetary importance just after the drug and arms trade. Money spent supporting legal, rather than illegal, wildlife trade is money spent on the global war against crime. The program, already operating on a shoestring, has been experiencing a growing permitting, research and monitoring workload. Any further cuts will halt or prevent crucial work such as:

- Preventing unsustainable trade in native U.S. species such as freshwater turtles that are sought for food, medicinal purposes and trade, sturgeon and paddlefish that are sought as caviar substitutes, Hawaiian sandlewood that is used for oil, and agave cactus that is increasingly being used for landscaping in European resorts;
- Regulating the currently unregulated snake trade in SE Asia – not only is the U.S. a primary consumer but the removal of snakes removes a control on mice, potentially negatively impacting agriculture in that region and increasing import costs;
- Preventing poaching of endangered rhinoceros and illegal trade in their much sought-after horns.

The FY 12 enacted level for International Affairs was $13 million.

5 DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Office of Law Enforcement

As our world grows increasingly complex, 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 wildlife laws both domestically and internationally. 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, live birds, and numerous species native to the U.S.

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. The 143 wildlife inspectors are the front line of defense in nearly 40 designated and non-designated ports of entry around the country including in Alaska, California, Florida, Hawaii, Illinois, Kentucky, Louisiana, Maryland, Montana, Texas and Washington. In FY 11, they processed about 167,000 declared shipments of wildlife and wildlife products worth more than $2.7 billion. The 219 special agents are expert investigators that break up smuggling rings, stop commercial exploitation of protected U.S. species, and work with states to protect U.S. game species from poaching that steals both state income and hunting and fishing opportunities. In FY 11, OLE special agents investigated nearly 13,000 cases. And the OLE Forensics Laboratory in Ashland, Oregon is unique – it is the only one in the world dedicated to wildlife crimes.

This crucial program is severely underfunded to meet the rapidly proliferating threats. For example, the number of inspectors is inadequate to provide full 24 hour coverage at ports and can only inspect samples of larger mail shipments. Any further reductions will further hinder crucial law enforcement efforts. Recent examples of the kinds of cases that could be impacted include:

- The largest deer poaching case in Kansas history in an operation that led up to 60 clients to illegally kill about 160 deer;
- Smuggling jaguar skins for sale in Florida, Texas, and elsewhere by e-commerce;
- Illegal harvest in Texas of alligator gar, an important sport fish, for sale in Japan;
- Smuggling more than 40 tons of endangered coral into the port of Portland, Oregon;
- Killing and sale of bald and golden eagles in Washington including the seizure of 57 bald and golden eagle tails and 52 golden eagle wings.

The FY 12 enacted level for the Office of Law Enforcement was $62.2 million.

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 their effects, working to prevent exposure, and restoring resources damaged by them. 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 and for which $1 billion in early damages for already has been provided for restoration.

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 will be needed to address numerous Endangered Species Act consultations likely to be triggered by Environmental Protection Agency review of over 1,100 pesticide ingredients under the Federal Insecticide Fungicide and Rodenticide Act by 2022. 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. An amendment to the Oil Pollution Act to dedicate annual funding from the Oil Spill Liability Trust Fund would help the program begin to address these needs.

The program already lacks the funding for current needs and any further cuts will further undermine needed work to prevent harm to vulnerable wildlife from dangerous pollutants, for example:

- New studies have shown that fish and wildlife populations are more seriously affected by mercury than previously known, especially birds such as the American kestrel, American white ibis, snowy egret and tri-colored heron, and other animals that consume fish and insects contaminated by mercury. Investigations are needed to determine the extent of these impacts.
- The number of inland and riverine oil spills is expected to increase in coming years due to the aging of the U.S. oil pipeline infrastructure, much of which is over 50 years old. As

a result, there will be a growing number of damaging spills such as those in the Kalamzoo River in Michigan in 2010 that spilled over 800,000 gallons of oil and harmed wildlife including wood ducks, swans, great blue herons, muskrats, mink, turtles, snakes, frogs and toads and in the Yellowstone River in Montana that spilled about 50,000 gallons of oil and harmed wetlands and wildlife including the endangered pallid sturgeon, waterfowl, and wading birds. Proactive outreach with other agencies before spills occur is absolutely crucial to ensure Contaminants will be called immediately both to protect wildlife in spill areas from harm and to ensure that damages to the public's wildlife are properly quantified for restitution before evidence of the loss dissipates or washes away.

The FY 12 enacted level for the Contaminants program was $13.1 million.

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.

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.

Working with more than 700 partners, the National Fish Passage Program is highly effective at leveraging Federal appropriations, with an average match of $3 in partner funding for each Federal dollar. True to the Service's mission, the work to date has directly benefited over 85 federal trust fish and other aquatic species.

Continuing strong support for this program will allow the USFWS to continue to make cost effective improvements to fish habitat nationwide.

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 its creation, the Coastal Program has protected over 2 million acres of coastal habitat, and it has restored 270,000 wetland acres, 110,000 upland acres, and 1,800 stream miles. 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, shoreline modification, and over-harvesting of resources. 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 serving as a catalyst for economic investment by leveraging an average of $7 for every $1 in federal funds. 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. The program received $15.1 in FY 11. As such, the Green Budget recommendation for FY 13 is $15.4 million, consistent with the President's FY 12 Budget Request. Without ample funding, this program will be unable to begin to address the demonstrated backlog of more than 800 ecologically and economically significant shovel-ready restoration projects totaling $3 billion. The FY 12 enacted level for the Coastal program was $14.9 million.

State and Tribal Wildlife Grants Program

The State and Tribal Wildlife Grants Program (SWG) is the only federal grant program for states and tribes focused on preventing wildlife from becoming endangered. The program resulted in the development of State Wildlife Action Plans in every state and territory and is a principal source of funding for their implementation and revision. State Wildlife Action Plans are used by local, state and federal agencies and private conservation organizations to guide conservation work on over 12,000 species of at-risk fish and wildlife.

The program is used to monitor hundreds of species including Least Terns in Rhode Island, Ribbon and Spotted Seals in Alaska, Pygmy Rabbits in Idaho and Wyoming Pocket Gophers in Wyoming. Monitoring information was used by federal agencies to avert the need to list these and other candidate species. SWG has funded the reintroduction of imperiled mussels in Virginia and Oklahoma, Fishers in Washington, Blanding's Turtles in Minnesota and Red-Cockaded Woodpeckers in Arkansas. These efforts are helping to restore dozens of at-risk species to self-sustaining levels. Native wetlands are being conserved in California to protect the Tri-colored Blackbird (CA supports 99% of the world's population), privately-owned shrublands are being managed for Golden-winged warblers in New York and over 160,000 acres of private habitat are under management to reestablish Arctic Grayling in Montana. Arizona is using SWG to develop Candidate Conservation Agreements with Assurances and for a new mapping tool to improve environmental review. One of the most notable successes of the program in 2011 was the delisting of the federally threatened Lake Erie Water Snake in Ohio whose conservation was funded almost exclusively through State and Tribal Wildlife Grants.

SWG is championed for its flexibility, allowing states, tribes and their partners to address local needs and priorities. Thousands of jobs have been created including employing local heavy equipment operators to restore habitat and biologists to conduct monitoring and habitat restoration on public and private lands. The program has leveraged tens of millions of dollars in state, tribal, local and private funds through partnerships with universities, private conservation organizations, businesses, farmers, ranchers and others. The program is supported by the 6,300 organizations and businesses that make up the Teaming with Wildlife Coalition.

In FY11, the program was cut by 31%. This resulted in the loss of millions in leveraged funds, including over $270,000 in Missouri. The cut in Missouri stopped management on over 3,500 acres of priority forest and prairie habitat and ended technical assistance for many landowners and conservation easements on private land. The planned reintroduction of Topeka Shiners (a federally listed endangered species) has been deferred as have recovery actions for the state endangered greater prairie chicken. Control of invasive feral hogs has been reduced by 50% and a scheduled update of the Missouri State Wildlife Action Plan has been delayed.

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Impacts in Tennessee include ending the purchase of voluntary conservation easements to protect critical habitat for at-risk species, shuttering a program to translocate imperiled mussels, defunding of efforts to control Hemlock wooly Adelgid, feral hogs and other invasive species, ending a comprehensive survey of hellbenders, elimination of prescribed burning for neotropical migratory birds, and the loss of biological staff. The state of Maryland has had to scale back stream surveys that will impact Chesapeake Bay restoration efforts and that could help inform planning for shale gas extraction in the western part of the state. In Nebraska a sub-grant program with universities and private conservation partners has been suspended. Biological staff monitoring least terns, piping plovers, bald eagles, whooping cranes, bats, fish and other at-risk species have been reduced and the number of biologists who work with private landowners could be reduced in the future. The cuts to the program come at a time when citizen interest in at-risk fish and wildlife conservation was very high and results were being demonstrated.

In 2002, Congress authorized FWS to provide funding to tribes under the Tribal Wildlife Grant Program (TWG). 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. Tribal proposals for support often total more than $30 million annually. In FY 2009, FWS only funded 41 TWG proposals out of 101 submitted, awarding $7 million to tribes with a meager average award of $170,000. With 565 federally recognized tribes, competition is severe and tribes rarely receive sufficient funds to fully support important conservation efforts. Since the inception of the TWG program in 2002, no more than $7 million per year has been made available on a competitive basis to the nation's 565 federally recognized tribes. At this low level of funding, very few tribes receive any TWG funding; those receiving TWG funding typically get very little; and no tribe receives sufficient funding to sustain long-term tribal wildlife and natural resource management efforts.

The FY 12 enacted level for the State and Tribal Wildlife Grants program was $61.4 million, including $4.3 million for tribal grants and $5.7 million for state competitive grants. The funding for FY12 is far below what is needed by the tribes and states to effectively conserve wildlife.

Cooperative Endangered Species Fund

The Cooperative Endangered Species Fund provides grants to states for voluntary conservation activities on non-federal lands for species listed as federally endangered and threatened and for species that are candidates or proposed for listing. The program is authorized under Section 6 of the Endangered Species Act. Activities funded by these grants include species status surveys, research, habitat restoration, captive propagation, reintroduction, planning, and habitat acquisition. Much of the work conducted by states is guided by their State Wildlife Action Plans. Requests for the Habitat Conservation Plan and Recovery Land Acquisition programs generally total two to three times the available funding.

In FY 12 the program was cut by about 20% and has been reduced by 44% since FY10. Cuts to the program are resulting in a substantial loss of on-the-ground conservation across the country.

At this reduced funding level, about 90% of Missouri's federally listed species will not have resources available to aid in their recovery. Reductions in funding to the program are negatively impacting the ability of biologists in Minnesota, Arizona and other states to conduct annual monitoring of federally listed species, an activity that is requisite to achieve delisting. The program has been remarkably successful. In Texas about 50,000 acres of private land have been voluntarily conserved through easements and fee-title acquisition to conserve dozens of federally listed species. Opposition to endangered species management by the public has subsided in recent years due in part to the availability of voluntary incentives offered through this program. Reduced funding for this program will jeopardize progress made in positively engaging the public in endangered species management.

The FY 12 enacted level for the Cooperative Endangered Species Fund was $47.8 million.

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.

Recent examples of the kinds of projects that could be impacted by further cuts include:

- Restoration of the Bear Creek fish passage and wetlands in Idaho to benefit the endangered Bonneville cutthroat trout and migratory birds with the Idaho Department of Fish and Game and other stakeholders;
- Assistance to private landowners in South Dakota to help enhance habitat for grassland birds;
- Restoration of the Jocko Tribal River in Montana to benefit species including bull trout, sandhill cranes, and bald eagles with the Confederated Salish and Kootenai Tribes.

The FY 12 enacted level for Partners for Fish and Wildlife was $54.9 million.

Multinational Species Conservation Funds (MSCF)

The United States has a legacy of leading international wildlife conservation efforts, exemplified by the Multinational Species Conservation Fund (MSCF) program, which provides dedicated and effective resources for global conservation of several iconic species: African and Asian elephants, rhinos, tigers, great apes and marine turtles. MSCF programs are the species-specific portion of the *Wildlife Without Borders* (WWB) program at the U.S. Fish and Wildlife Service Division of

International Conservation. Since 1989, the WWB program has awarded over 2,500 grants for international wildlife conservation, targeting key species and regions to ensure the protection of some of the world's most endangered and charismatic animals. The program works at the species, regional and global levels to leverage conservation actions that help restore at-risk wildlife populations, provide local people the capacity to conserve wildlife, foster on-the-ground partnerships and target cross-cutting conservation issues through innovative initiatives.

The five congressionally authorized Multinational Species Conservation Funds support conservation of charismatic megafauna in their natural surroundings through a wide variety of conservation activities, including: capacity building, community conservation, anti-poaching and law enforcement initiatives, habitat and conservation management, mitigation of human-animal conflicts, wildlife health programs, coalition/partnership building, outreach and education, creation of sustainable livelihoods and applied research and monitoring. From 2006 to 2010, the MSCF programs provided over $53 million in conservation assistance and leveraged an additional $84 million in partner contributions.

These programs have consistently commanded very broad-based and bipartisan support, in large part because they are addressing critical needs. Over 500 tigers are being killed each year, and experts estimate that as few as 3,000 tigers now remain in the wild. Rhino populations are undergoing a new wave of poaching in southern Africa, driven largely by black-market demand for rhino parts in Southeast Asia. Africa's great apes face new threats from virulent diseases, such as Ebola, which have wiped out up to 90 percent of affected populations. Funding from USFWS is supporting Ebola surveillance, the training of ecoguards to prevent poaching and the development of a region-wide Central African Wildlife Trade Law Enforcement Plan to protect great apes, elephants and other wildlife. With help from the Multinational Species Conservation Funds, anti-poaching efforts in Chad have reduced African elephant poaching by 80 percent and improved understanding and cooperation around human-elephant conflict helped reduce Asian elephant mortality in Indonesia's Riau province by 27%. In Nepal's Chitwan National Park, support from the Rhino-Tiger Conservation Fund has helped securing a viable rhino population through anti-poaching and habitat restoration efforts, leading to a 23% increase in Nepal's rhino population in just three years. Funding for the five species funds totaled $10.0 million in FY11 and $9.5 million in FY12, down from $11.5 million in FY10. Given the dire situation that these species are facing, we ask that funding remain at least at current levels in FY13.

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 which adversely affects the economy. Hunters and anglers in the United States spend about $76 billion a year. That's $208 million per day pursuing their outdoor passion that has been passed down through generations of Americans since the founding of our country. Overall, hunting and fishing support more than 1.6 million jobs and generate more than $25 billion a year in federal, state, and local taxes. For generations, hunters and anglers have placed high priority on taking care of the land and water so that in return they can support abundant fish and wildlife populations.

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 2011 this grant program has helped to fund more than 2,067 wetland conservation projects supported by 4,500 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 $2.32 billion in matching funds and $1.21 billion in nonmatching funds to conserve approximately over 26.5 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 FY 12 enacted level for the North American Wetlands Conservation Fund was $35.6 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. Birds are important to the economy and also help create jobs. Wildlife watching is big business with millions of Americans participating. The *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, conducted by the U.S. Fish and Wildlife Service (USFWS 2006), reports that birding generated over $82 billion in total industry output, 671,000 jobs, and $11 billion in local, state, and federal tax revenue in 2006. In 2011, a study estimated that nature tourism, which is dominated by birding, brings in over $300 million a year to Texas' Rio Grande Valley economy. This direct economic contribution from Rio Grande Valley nature tourism led to a total county-level economic output of $344.4 million and 4,407 full and part-time jobs annually.

Funding for NMBCA supports 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 include activities that benefit bird populations such as 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. Between 2002 and 2011, partners in 48 U.S. states and more than 35 other countries have been involved in 367 NMBCA-supported projects. More than $39 million in grants has leveraged an additional $152 million to support activities that bring long-term benefits to neotropical migratory birds including songbirds, raptors, shorebirds and waterfowl and affecting more than 3 million acres of bird habitat. While more than 100 worthy proposals are received each year, with the current funding provided, only about one third can be funded.

The program already has been cut by nearly 25 percent since FY 10. With these cuts, the program already will be doing fewer projects. Additional reductions would be devastating to this modest program and will eliminate or delay numerous projects. Conservation of migratory birds

is big business with a significant economic impact on the U.S. economy. Federal, state, and local governments and private money support the conservation of shared species of migratory birds and their habitats in the U.S. Conservation of these migratory birds in Latin America and the Caribbean is critical to protect our investments and to ensure the birds return to the U.S. For a modest investment in conservation of shared species in Latin America and the Caribbean through the Neotropical Migratory Bird Conservation Act, the U.S. government and the taxpayer can have a significant economic impact on the U.S. economy at the national, state, and local levels.

The FY 12 enacted level for the Neotropical Migratory Bird Fund was $3.8 million.

5 DEPARTMENT OF THE INTERIOR
THE LAND AND WATER CONSERVATION FUND

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 a small portion of revenues from offshore oil and gas drilling to support the conservation of America's lands and waters. 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. Most critically, in challenging economic times, small, leveraged investments in conservation can pay big dividends. The conservation, outdoor recreation, and historic preservation sector contributes $1.06 trillion annually to the American economy, supporting 9.4 million jobs (1 out of every 15 U.S. jobs). Whether manufacturing, retail, or service related, most of these jobs are sustainable resource or tourism-based jobs and cannot be exported, with magnified impacts in local and rural communities.

Unfortunately, LWCF has been woefully underfunded over the years. As the Department of the Interior Fiscal Year 2012 "Budget in Brief" document states, "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." This chronic underfunding has led local, state, 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. LWCF also funds two other important state grant programs – the Forest Legacy Program and Cooperative Endangered Species (Section 6) programs – that ensure permanent conservation through fee and easement of important forest lands and threatened and endangered species' habitat.

The LWCF has long enjoyed strong and bipartisan support. Over the past year, the House of Representatives passed a $25 million increase for LWCF in the Interior Appropriations bill via amendments on the House Floor, despite an overall budget-cutting climate that generated deep cuts to most programs. In the Senate, bipartisan legislation from Senators Jeff Bingaman (D-NM) and Max Baucus (D-MT), also would ensure full and dedicated funding for the Land and Water Conservation Fund (LWCF) at the authorized level of $900 million annually. That bill (S.1265) has bipartisan support from 27 cosponsors.

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Our nation's need to invest in critical habitat, working forests, farms and ranches, urban parks and trails, hunting and fishing access, state and local conservation grants, and important needs within our national parks, forests, BLM lands, and wildlife refuges continues to grow. Following discussions with state Governors and local officials across the country, the Department of the Interior released the *America's Great Outdoors Fifty State Report* in November, 2011. It includes two conservation projects in each state that would help create economic opportunity, increase recreational access, and protect critical landscapes by utilizing LWCF and other programs. These projects were identified and shaped by the sentiments of Americans across the country during the 51 listening sessions the Administration held in 2011. The report states that the priority of "conserving large, rural landscapes" is echoed in the public's "deep appreciation for farmers, ranchers, and foresters and for conserving habitat for wildlife. Across the country, we heard about the need to protect river valleys, lands that connect public lands to private lands, and areas that should be set aside for their special values."[2] Many of these conservation opportunities has been hampered by funding constraints; however, a fully funded LWCF would significantly further conservation investments already being made by the states.

Support for LWCF among the American public continues to remain strong and consistent. Recent polling found that 88% of voters support continuing to use offshore drilling fees to fund LWCF. 85% of Americans support fully 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. In 2010 and 2011, while the economy, jobs, and taxes continued to weigh heavily on the minds of voters, state and local ballot measures for conservation continued to enjoy support. Nationwide, 55 of 73 measures passed, or 75%, over this 2 year period. These initiatives generated nearly $2.5 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 Sportsmen’s Foundation.

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[2] America's Great Outdoors Fifty-State Report. Department of the Interior. Nov 2011. http://www.doi.gov/news/pressreleases/AMERICAS-GREAT-OUTDOORS-Salazar-Releases-50-State-Report-Highlighting-Projects-to-Promote-Conservation-Outdoor-Recreation.cfm

5 DEPARTMENT OF THE INTERIOR
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- 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, lands managed by the Department of the Interior hosted 448 million visitors. These visits greatly support the economy and jobs in nearby communities and across the tourism and outdoor recreation sectors. In addition, about 174 million recreation visits are annually made to national forests where tourists spend nearly $13 billion each year and these forests sustain over 224,000 full and part time jobs. (statistics provided by DOI and USFS)

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.

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 13 budget, robust and consistent funding of LWCF must be a high priority. The Obama Administration strongly supports these critical investments and demonstrated its support by requesting $900 million for the Department of Interior and the U.S. Forest Service in the FY 12 budget. Unfortunately, Congress approved only a little more than one-third that amount, with the rest being diverted again from being used for LWCF purposes. A robust investment in LWCF in FY 13 will support public land conservation across our communities that increase access to outdoor recreation, revitalize urban parks and open space, and support community economic investment.

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

5 DEPARTMENT OF THE INTERIOR

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. National parks' visitation has been high by historical standards, with nearly 300 million people visiting the parks every year to learn, recreate and connect with the natural world and our historic and cultural heritage. Americans want to see parks protected even in tight times: with the National Park Service 2016 centennial in mind, 85% of voters surveyed favor giving national parks enough funding so they are fully restored and ready to serve the public for the next 100 years (Hart Research Associates poll conducted June 2010). Nine in ten Americans have visited a national park, and any visit to a national park will show the draw of these special places to international visitors who invest their tourism dollars in the parks and—importantly—in surrounding communities. According to Forbes, national parks comprise eight of the top 25 U.S. travel destinations. This popularity helps explain why—according to a recent study commissioned by the National Parks Conservation Association—every dollar invested in national parks generates at least four dollars in economic value to the public, directly supporting more than $13 billion of local private-sector economic activity and nearly 270,000 private sector jobs.

National parks enjoy bipartisan support because they are among America's most spectacular and compelling places and are a significant part of our national identity. National parks protect tourism to inspiring natural areas and Civil War and other cultural sites that are unique to our shared American history. They also foster 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, and businesses to locate in these communities, bringing jobs with them.

Because of these many uniquely American values that national parks protect, their vast popularity and many economic benefits, now is not the time to cut their funding. On the contrary, jobs can be protected and fostered through consistent investments in these assets that draw international visitors and ensure affordable vacations for American families.

Many parks continue to lack the resources necessary to adequately operate visitors' centers, guide visitors, inventory and protect historic artifacts, combat invasive weeds, prevent the deterioration of significant treasures and purchase inholdings to prevent incompatible development. The National Park Service (NPS) suffers from a $500 to $600 million annual operations shortfall, a nearly $11 billion deferred maintenance backlog, and a roughly $2 billion backlog in land acquisition projects. In today's dollars, overall funding for the National Park Service is more than $400 million—or 14%—less than it was in FY 2002. After a $140 million, 5% cut in FY11 and another $27 million cut in FY12, NPS is already struggling and cannot afford additional cuts.

Operation of the National Park System

The operations account (ONPS) occupies the vast majority of the annual funding for the National Park Service and provides for important staff and maintenance needs. Park rangers are needed to protect resources and guide visitors, many of whom look to them to provide a quality parks experience that will ensure return visits. Interpreters foster tourism by bringing history alive at

Civil War and other historic and natural sites, interpreting the many national significant resources that so many people value. Operations investments in FY08-FY10 restored some of the visitor services that have been cut over the last decade; these restored seasonal rangers, interpreters, and educators have been providing for 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, so an annual operations shortfall persists of $500 to $600 million. This translates into insufficient seasonal rangers and other staff to adequately serve visitors, maintain facilities and steward our national treasures.

National parks are proven economic engines, with four dollars in economic returns for every dollar invested. American families and international visitors love to visit national parks not only because of the extraordinary resources they protect, but also because of the facilities that are maintained by staff and because of the direct interaction they get with rangers. This helps explain why, for example, a 2011 Harris poll showed national parks as among the most popular services and programs in the federal government. The direct visitor interactions that make national parks special require ongoing investments to keep up with cost increases.

Because of the many dedicated staff and facilities at national parks, the vast majority of NPS superintendent's budgets are subject to substantial fixed costs including staff cost-of-living adjustments and increases in rent and utilities costs. As such, even a flat budget generally forces absorption of these costs, and thus cuts in some visitor services. It's critical that at a bare minimum, park operations keep up with fixed costs to prevent the erosion of visitor services and resource protection.

Operation of the National Park System: Cultural Resource Stewardship

Two thirds of our national parks were created to protect historic and cultural resources, and yet from FY 1995 to FY 2008, staffing levels for cultural resources declined by 27.4 percent with a loss of almost 300 full-time cultural resource employees. In order to reverse this trend, an investment of $100 million is needed to rebuild this critical staff resource essential to core operations to preserve the countless irreplaceable historic buildings, archaeological sites, significant landscapes, objects, artifacts, specimens, and archives and places of special meaning in the care of the National Park Service.

Deferred Maintenance Backlog

The deferred maintenance backlog is now $10.8 billion and growing, according to Park Service estimates: annual funding for maintenance and construction falls about $325 million short of the amount necessary to prevent the backlog from growing further. At current levels of investment, the backlog will continue to increase in perpetuity. Addressing this entire backlog would indeed be a mammoth undertaking, but 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) currently stands at

approximately $3.7 billion. It is this subset that is most vital to the return to a healthy National Park System.

Of the nearly $11 billion deferred maintenance need for NPS assets overall, $ 3 billion is for the 27,000 structures in National Parks listed on the National Register of Historic Places (See a report by the Panel of the National Academy of Public Administration, *Saving Our History: A Review of National Park Cultural Resource Programs*, 2008). The National Register is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. In this challenging budgetary climate that includes program cuts, these critical accounts should at a minimum not be reduced, so that there is minimal additional damage to resources or threats to visitor safety.

A substantial portion of the non-road deferred maintenance backlog is funded through the NPS Construction account. Unfortunately, in real dollars, this account has declined by more than 60% over the past decade. An equally important contributor is the park operations budget (see above), which has been receiving small cuts over the past two years. According to NPS estimates, every million dollars invested in Construction ensures 14 to 16 jobs, which is on the upper end of job creation when examining standard economic multipliers. And the secondary impact of construction investments benefits local communities where workers spend their paychecks.

The longer critical maintenance is put off, the more difficult and expensive the work becomes, and the more deterioration and damage occurs to historic buildings, popular trails, and the natural surroundings the parks are meant to protect. Investments in the deferred maintenance backlog are more efficient and cost-effective in the long-run, protect our national treasures and the safety and return visits of park visitors, and support jobs in gateway communities.

Additionally, more than half of the maintenance backlog is related to roads. Critical to ensuring funds to meet the maintenance and repair needs of NPS roads is reauthorization of a transportation bill with continuing investments in the Park Roads and Parkways (PRP) and Paul S. Sarbanes Transit-in Parks programs.

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. By maintaining funding for RTCA, 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.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Elwha River Restoration

The recent investment in the removal of the Elwha and Glines Canyon Dams at Olympic National Park in Washington will provide long-term economic benefits for the region. The restoration of the full 70-mile salmon run of the Elwha River and the replanting of forest lands once covered by reservoirs are expected to significantly boost local business activity and create new jobs across a variety of industries. Some 1,200 new jobs will be created in the county, accounting for an additional $37 million in wages. Restoring the river and native forest will boost tourism, which already supports 2,000 local jobs and $21 million wages. On average, Elwha restoration could boost travel spending by 50 percent, bringing in an additional $57 million a year from 500,000 additional visitor trips to Clallam County. And as more sediments flow downstream, the Ediz Hook Lighthouse will undergo less erosion, saving an estimated $31,000 a year in maintenance and upkeep costs. An estimated $13 million is needed in FY13 to finish this effort.

National Recreation and Preservation Programs (NRPP): Cultural Programs

Within the Cultural Programs activity, 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 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.

NRPP: National Register Programs

The National Register Programs encompass all of the nation’s historic places worthy of preservation including 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. We are grateful for the stable funding for this program and recommend continued level funding of $16.969 million at FY 12 enacted to be able to continue to encourage the preservation of cultural resources by all levels of government and the private sector. Without this funding, a wide range of technical assistant concerning the documentation, protection and addition of historic and archaeological properties would not be added to the National Register, which is an ever growing list of inventoried properties.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

NRPP: Heritage Partnership Programs (National Heritage Areas)

National Heritage Areas (NHAs) are designated by Congress as places where natural, cultural, historic, and scenic resources combine to form a cohesive, nationally-important landscape. National Heritage Areas on average leverage every federal dollar into $5.50 of additional public and private investment. National Heritage Areas also create jobs: it is estimated that NHAs have created 16,520 jobs in 32 states through the $171,163,484 in federal investment. We are most grateful for level funding at the FY 11 level of $17.4 in the FY 12 enacted bill and ask that Congress maintain this level in FY 13.

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 NHA 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 for such a program. Funding for NHAs not only facilitates community participation in preservation of rural areas, boosts tourism, and requires local participation and leadership, but is a smart economic investment as well.

NRPP: 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 within 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. In this challenging economic climate, we would be most grateful for level funding at the FY12 enacted level of $1.968 million to 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.

NRPP: 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 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. We are grateful for the level funding of $3 million in the FY12 enacted budget and ask that Congress continue level funding in the FY13 budget to allow NPS to complete ongoing and previously authorized studies. This funding level 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.

NRPP: American Battlefield Protection Program Assistance Grants

The American Battlefield Protection Program (ABPP) promotes the preservation of significant historic battlefields associated with wars on American soil. ABPP provides vital seed money for projects that lead directly to the identification, preservation, and interpretation of battlefield land and/or historic sites associated with a battle. In the past, project funding has ranged from $5,000 to $80,000. We are grateful for the relatively stable funding for this program, and we hope that the support for this work could continue at FY 11 and FY12 enacted levels of $1.3 million. In FY 10 and FY 11, 25 grants were awarded each year for $1.2 million. Grant amounts vary widely, depending on the cost of the land to be purchased, which is directly affected by the realty market, the location of the tract, and the number of acres. Since 1990, the ABPP and its partners have helped protect and enhance more than 100 battlefields by co-sponsoring 412 projects in 41 states and territories. A complementary program is ABPP's Battlefield Acquisition Grant Program (see 150th Anniversary of the U.S. Civil War section below).

Historic Preservation Fund

The Historic Preservation Fund (HPF) is the principal source of funding to implement the nation's historic preservation programs. It was established in 1976 to carry out the National Historic Preservation Act through a matching grant program. The HPF is authorized at $150 million annually, but subject to appropriations. Like the Land and Water Conservation Fund, its revenues are generated by oil and gas development on the Outer Continental Shelf. We are grateful for the increase in funding for Tribal Historic Preservation Officers and State Historic Preservation Officers with the enacted FY 12 funding of $56 million, however, we are disappointed with the loss of Save America's Treasures program, the only "bricks and mortar" funding for preservation. A modest investment of $61 million or $5 million above the FY12 enacted level will allow these historic preservation programs to continue to operate for FY13 at a bare-bones level. Congress should also consider options to provide "bricks and mortar" grant funding for our most important historic national treasures.

The National Park Service distributes HPF grants to State Historic Preservation Offices (SHPOs) and Tribal Historic Preservation Offices (THPOs) that administer our nation's historic preservation system. Inadequate funding for HPF limits support for preservation activities such as planning, survey, inventory, public education, and project review for the federal Historic Rehabilitation Tax Credit (HTC), State and Tribal Historic Preservation Plans, and the National Register of Historic Places. Notably, insufficient funding for project reviews limits the capacity of the HTC, which is a job-creating and community revitalizing tax credit. For example, in FY09 and FY10, the HTC created over 145,000 jobs and leveraged more than $8.8 billion in private

investment. A lack of HPF funds to SHPOs and THPOs limits or halts job producing activities like permitting power lines and solar energy development on public lands, when increased funding for this work could allow increased staff dedicated to reviewing these proposed 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 more than 110 national park sites associated with the Civil War, about one-third 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. Civil War-related parks bring more than $3.5 billion into local economies and support more than 57,000 jobs -- numbers that are set to rise as we commemorate the anniversary of the war.

The American Battlefield Protection Program (ABPP) 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 (see ABPP section above).

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 $8.986 million in FY12, but should be funded at its fully authorized level in FY 13 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, Richmond and Vicksburg all have urgent needs, many of which are multi-year projects.

5 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), together with the complementary Cooperative Water Program (CWP). provides essential data for habitat preservation, water quality, recreational safety and quality, agriculture, industry, municipal water supplies, navigation, and flood hazard identification.

The nation's need for streamflow, groundwater, tidal surge, precipitation and water quality data increases every year in relation to the land use and economic development needs. Unfortunately, the NSIP and CWP budgets have not kept up with the nation's needs, or with the approximately $160 million contributed annually by over 1,500 Cooperators (non-federal partners).

The NSIP and CWP are proven sources of reliable scientific information that we need on an ongoing basis to support good decision making in both the public and private sectors across a wide variety of water resource and infrastructure functions, including:

- monitoring compliance with federal compact and Native American trust responsibilities;
- designing bridges, dams, levees, and other infrastructure;
- forecasting storm surge, flood and drought conditions and issuing emergency advisories;
- identifying flood-prone areas to protect lives and property and reduce disaster relief expenses;
- protecting water rights;
- managing reservoir releases for water supply, irrigation, hydropower, environmental and navigation uses;
- monitoring and protecting water quality, fisheries, wetlands and endangered species;
- providing safety information for boating and other water-based recreation;
- analyzing climate trends and evaluating community and regional response options; and
- projecting future water needs and availability for agricultural, municipal and industrial uses.

Concern for the long-term continuity and reliability of our national streamgaging data led the Congress to ask USGS for a solution and USGS proposed the NSIP in 1999. NSIP was designed and authorized to operate as a federally-funded "backbone" network supporting approximately 4,750 streamgages and tidal gages necessary to fulfill five specific national purposes. The National Research Council's Committee on Water Resources Research evaluated the NSIP design and concluded that it will provide "a sound, well-conceived program that meets the nation's needs for streamflow measurement, interpretation, and information delivery." However, of the 4,750 streamgages needed to meet those five national purposes, more than 330 have not been installed yet, about 770 were installed and subsequently discontinued, and 88% (3,077) of the 3,465 active NSIP streamgages still do not have NSIP funding and depend upon CWP funds.

While the CWP has served America well for over 110 years, USGS is now able to support less than 1/3 of its cost. In 2009, USGS operated a network of about 7,845 active streamgages nationwide, but more than 850 have been discontinued due to inadequate funding since 2001. Many of those streamgages had over 50 years of continuous record, making their loss much more serious. Another 586 streamgages in 39 states are currently identified as being at risk or have already been recently discontinued.

Failure to fund the NSIP and CWP 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.

Ecosystems

The Ecosystems activity 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 are included under the Ecosystems activity. Located at land grant colleges and universities in 38 states including Alaska, Hawaii, Idaho, Montana and Tennessee, they 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.

Examples of the kinds of work that could be impacted by cuts to the Ecosystems activity include:

- 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, such as tools to estimate fatalities of bats from wind turbines to better evaluate local and cumulative effects of wind developments on bats, scientific modeling to predict golden eagle occurrence to determine the best areas to locate projects to minimize harm, and analyses of California condor use in areas being considered for wind facilities;
- Research into wildlife diseases such as global declines in amphibians from the chytrid fungus avian influenza in ducks and other birds and chronic wasting disease in deer;
- Tools to manage and restore functioning sagebrush ecosystems about which much still is not known.

The FY 12 enacted level for Ecosystems was $161.5 million.

Contaminant Biology

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. The Contaminant Biology program is 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 these pollutants on natural systems, human health, and especially the trust resources of the Department of the Interior. Examples of the kinds of work that could be impacted by cuts include investigations into the effects of reproduction altering endocrine disruptors around the country on species such as the pallid sturgeon in the Missouri River and bass in the Potomac River and the toxic effects of mercury on species such as ospreys along the Columbia River and migratory birds in the San Francisco Bay Ecosystem.

The FY 12 enacted level for Contaminant Biology was $9.1 million.

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 responding to increases in droughts, floods, fires, coastal inundation and other impacts of climate variability and change. For example, one ongoing project is studying the effects of warming water temperatures, increased flooding, and increased wildfire risk on Western trout populations. In Idaho alone,

fishing generates almost $300 million in economic activity, and the single most important game fish is trout. The research and management tools developed through this project will be essential to fisheries managers in conserving trout and providing recreational opportunities.

The National Climate Change and Wildlife Science Center 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. The eight regional climate science centers are housed in partnerships with universities which allow the centers to draw on the expertise and resources of the academic community. As an example of the leveraging power of these partnerships, the $2 million invested from this program into the Southeast regional climate science center is leveraging $130 million in climate-related research being performed by the university partners.

With appropriations from FY 2012, the USGS has established the final three regional centers in its eight-member nation-wide network. These three new centers are in the Northeast, South-Central (based at the University of Oklahoma), and the Pacific Islands. Without an additional $5 million in FY 13 these centers will not have the needed funds for research. The FY 12 enacted level for the National Climate Change and Wildlife Science Center was $25.5 million.

In addition, the USGS has been receiving funding to support the science needs of other Department of the Interior bureaus, in large part to support the Department's Landscape Conservation Cooperatives. In FY 12, this funding is $2.5 million, down from the FY 11 level of $5 million. The Green Budget recommends this funding be transferred from a stand-alone line item in the USGS budget and added to the funding for the National Climate Change and Wildlife Science Center. This will allow for a more strategic and leveraged investment in the science support needs of other agencies.

DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS

Water Management, Planning, and Pre-Development Program

The Bureau of Indian Affairs (BIA) Water Management, Planning, and Pre-Development program (Water Resources) is a Trust Natural Resources program, and funds are used to assist tribes in protecting and managing their water resources. From FY2003 to FY2010, funding for Water Resources declined 33 percent from $8.298 million to $5.624 million. To help meet the significant tribal demand and honor treaty rights, funding should be restored to the FY2003 level of $8.298 million.

Water Rights Negotiation/Litigation Program

The Water Rights Negotiation/Litigation program (Water Rights) is a Real Estate Services program whose funds are used to defend and assert Indian water rights. From FY2003 to FY2010, funding for Water Rights declined 30 percent from $10.923 million to $7.685 million. The need to resolve water rights claims is particularly important for tribes, states, and other stakeholders as population growth and climate change affect water resources supply and demand. We request that funding be restored to the FY2003 level of $10.923 million.

Endangered Species Program

The BIA's Endangered Species Program is the only program that provides tribes with technical and financial assistance to protect endangered species on Indian trust lands. From FY2002 to FY2010, funding for this critical program declined 59 percent to $1.249 million. We request that funding be restored to the FY2003 level of $10.923 million.

Fish and Wildlife Programs

Three key programs that empower tribes to manage reservation fish and wildlife resources across the nation are Tribal Management/Development (TMD); Fish, Wildlife and Parks Tribal Priority Allocations; and Natural Resources Tribal Priority Allocations. These programs help meet the growing national demand for outdoor recreation and tourism and provide aid to protect millions of acres of habitat necessary for the conservation of fish, wildlife, and plant resources.

Tribal Management and Development (TMD) Programs

From FY2002 to FY2010, funding for TMD programs declined 40 percent from $9.333 million to $5.638 million. During the same period, several decades-old recurring TMD programs were eliminated. These included the Lake Roosevelt Management, Upper Columbia United Tribes, Wetlands/Waterfowl Management, and Intertribal Bison Cooperative programs. Congress restored funding for these specific programs in FY2010, and the BIA restored them to its budget structure in FY2011. These actions and the $20 million for base and programmatic funding need to continue in FY2013. These investments will substantially increase tribal conservation successes and meet the federal government's trust responsibility. Of the $20 million requested, $5

million is for Conservation Law Enforcement Officers. The BIA has recognized the critical need that tribes have to enforce fish and game laws on their lands.

Fish, Wildlife and Parks Tribal Priority Allocations

At the request of Congress, BIA conducted an FY2006 comprehensive needs assessment that found $48 million was required to address hatchery and rehabilitation needs. In FY2010, Fish, Wildlife, and Parks received a welcome yet still inadequate $4 million increase for Fish Hatchery Operations and Maintenance projects. For Fish Hatchery Maintenance, we request a $2.148 million increase in funding, to a total increase of $5 million for FY2013, and an additional $1.5 million in operations for FY2013 at 88 tribal fish hatcheries across the country.

The base Tribal Priority Allocations (TPA) that funds tribes' fish and wildlife protection activities has remained flat for years at just under $5 million. Funding for Wildlife and Parks TPA should be increased by just over $15 million in FY2013 for a total of $20 million to expand the capacity of tribal fish and wildlife management departments to meet the needs of their communities and work with federal, state, and local partners.

Natural Resources Tribal Priority Allocations

The Natural Resources program fulfills Indian trust responsibilities through the strategy of improved management, protection, and development of Indian land and natural resource assets. Funding for this TPA program has remained flat for years at just under $5 million. Funding for the Natural Resources program should be increased by just over $15 million in FY2013 for a total of $20 million. This investment will substantially increase tribes' land and resource management capabilities.

Rights Protection Implementation

The BIA Rights Protection Implementation program supports the exercise of off-reservation hunting, fishing, and gathering rights for 49 tribes located in the Pacific Northwest and Great Lakes regions and their five umbrella intertribal fish and wildlife organizations. These rights are secured by treaties and specific legal adjudications.

Congress increased funding for Rights Protection Implementation in FY2010 to $30.451 million; however, it continues to be underfunded. In FY2013, we request an increase of $19 million for a total of approximately $49.5 million. This request is based on the critical role of these resources in tribal economic, subsistence, cultural, and medicinal practices; the direct impact of climate change on these resources (e.g., loss of fisheries habitat, invasive species); and the growing need for intertribal and intergovernmental coordination on natural resource adaptation in response to climate change.

Invasive Species Program

The Invasive Species program (formerly called Noxious Weed Eradication) provides critical funds to tribes to control noxious and invasive species. Invasive species are particularly harmful

to tribes because they affect plants, animals, and other wildlife that are essential to tribal members for sustenance, medicines, ceremonies, cultures, and economic health.

Invasive species cause $120 billion in damage each year across the United States. On average, the Interior Department spends five times more on non-Indian land than on Indian land for invasive species.

This is the only funding stream that provides invasive species protection to Indian trust land. It is a critical element of the Interior Department's Invasive Species Crosscut Initiative, particularly as tribal trust land is often contiguous to other federal lands. Funding for this program declined 50 percent from $2 million in FY2002 to $1 million in FY2009, but increased to $3 million in FY2010. However, persistent inequity in funding compared to non-Indian federal lands and the disproportionate impact of invasive species on Indian trust land justifies a request for $5 million for FY2013.

Forestry

Of the total 95 million acres of tribal lands, 18 million acres are forest lands, within which 5.7 million acres are designated for commercial forestry. In 1993 and 2003, independent reports prepared for Congress on BIA Forestry found that tribal forests received about one-third of the funding provided to forests managed by the U.S. Forest Service (USFS) on a per-acre basis. The 2003 report found that BIA Forestry needed an additional $120 million a year, for a total of $170 million annually, to achieve per-acre funding parity with USFS lands. Since then, the funding disparities have widened.

Between FY2004 and FY2009, comparing programs with roughly equivalent functions, the USFS National Forest System Forest Products Program and the BLM Public Domain Forest Management Program budgets increased more than 25 percent (to $333 million and $10 million respectively), while the funding for the BIA Tribal Priority Allocations for Forestry and BIA Forestry Projects experienced a 3.8 percent increase and 0.7 percent decrease respectively ($25.5 million and $17.6 million), adjusted for inflation. Meanwhile, tribal forests are significantly more productive than USFS forests, generating on a per-acre basis about 250 percent of the harvest on USFS lands. These disparities must be addressed, particularly in light of the federal government's trust responsibility for tribal natural resources, the 2,100 miles of common boundary that USFS and tribal forests share, and the fact that climate change affects all lands—it does not heed political/jurisdictional boundaries.

To remedy historical funding inequities and address the need for co-management of common forests, we request an increase to account for the above-mentioned disparity between federal and tribal forests (during FY2004-FY2009). Specifically, the BIA Forestry Tribal Priority Allocations should be increased by $5.6 million for a total of $31.2 million. The BIA Forestry Projects line item should be increased by $6 million to $23.6 million, to be divided between BIA Forest Development ($5 million) and the Timber Harvest Initiative ($1 million). While this request is far short of the 2003 report recommendation that BIA's total Forestry budget be increased $120 million annually to achieve per-acre parity with the USFS, it is an important step in the right direction.

DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS

Cooperative Landscape Conservation Initiative

In 2009, the Interior Department began the Cooperative Landscape Conservation Initiative (formerly known as Climate Change Adaptation Initiative), an undertaking that Indian tribes support in principle. The $136 million for the initiative in FY 2010 and FY 2011, however, failed to include funding for tribes. The Administration's FY 2012 budget request for the initiative was $175 million. Despite a substantial increase in the overall funding request, the situation for tribes was nearly as bad in the 2012 budget. Of the $175 million, **only** $200,000 (taken from an existing BIA Real Estate Services account) was to be used to involve and assist Indian tribes in the North Pacific cooperative. As such, tribes would have been accorded a mere **.001%** of the funding for participation in only one of twenty-one Landscape Conservation Cooperatives. 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 4 percent of the U.S. land base, but represent a higher percentage if compared to the federal lands involved in the initiative. Tribal lands comprise 95 million acres which, divided by the total 587 million acres of federal land, equals16 percent. Tribal lands include 11 million acres more than NPS, yet the Administration proposed nearly 50 times more funding for NPS in FY 2012.

Agency	Acres (in millions)
BLM	258
FWS	150
BIA/Tribes	95
NPS	84
Total	587

We recommend funding for the Cooperative Landscape Conservation Initiative to continue at the FY 2010 level of $136 million. 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 Cooperative Landscape Conservation Initiative.

DEPARTMENT OF THE INTERIOR
ENVIRONMENTAL EDUCATION

Youth in the Great Outdoors

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. The Department of the Interior Agencies funded through this initiative includes the Bureau of Land Management, U.S. Geological Survey, U.S. Fish and Wildlife Service, and 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 in the coming years and we recommend $50.0 million for the Youth in the Great Outdoors Program in FY 13.

DEPARTMENT OF THE INTERIOR

BUREAU OF OCEAN ENERGY MANAGEMENT

Bureau of Ocean Energy Management

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.[3]

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 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.[4] 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.

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[3] 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. October 26, 2010.

[4] 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.

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.

DEPARTMENT OF TRANSPORTATION
DEPARTMENT OF THE TREASURY

6 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 31,2012. The surface transportation bill that is eventually signed into law may result in the 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. The budget recommendations in this document are made regarding current law and may not apply to a reauthorized transportation program.

Interagency Partnership for Sustainable Communities

The is a joint effort between the U.S. Department of Transportation (DOT), Department of Housing and Urban Development (HUD), and Environmental Protection Agency (EPA) 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.

The fiscal year 2012 budget passed by Congress reduced the effectiveness of the Partnership by zeroing out funding for HUD’s Sustainable Communities Initiative, including grants for innovative and environmentally beneficial projects and initiatives across the country. This funding should be reinstated since it leverages federal taxpayer dollars, generating economic, social, and environmental benefits and supporting good models for communities across America.

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. This kind of merit-based, performance-driven program which relies on virtuous competition is laudable and sadly unusual for a national transportation program that relies far too much on simple formulas for distributing federal taxpayer dollars

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. Since ARRA, the program has been reauthorized three times and is exceedingly popular. The most recent round of applications for federal investment – the $527 million TIGER III program – attracted an overwhelming 828 applications requesting a total of $14.1 billion, an oversubscription rate of 27-to-1. Congress provided $500 million in investment for TIGER IV, and it should provide at least that much for another round of grant-making. 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 improves 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 re-attained compliance. The funding allocated through this program is a potent complement to public-health-based Clean Air Act requirements for transportation plans and projects and helps to ensure that millions of Americans enjoy cleaner air and reduced risk of both respiratory and heart disease.

Safe Routes to Schools

This program makes it safer for children to walk and bicycle to and from school. The vast majority of funding is spent on infrastructure improvements, such as sidewalks, bike paths and crosswalks, near schools. This program has galvanized a new focus on prioritizing safety around schools, and is helping schools and communities reduce safety risks to children, decrease traffic congestion, lower busing costs, and increase physical activity. Thus far, an estimated 11,000 schools and 4.8 million children have benefited from these funds. Congress should fund Safe Routes to School at its current level of $183 million /year.

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 FY 2013, if Congress approves transportation funding at SAFETEA-LU levels, Congress should retain RTP as a stand-alone program with dedicated funding of $85 million, the amount of funding approved for the last year of SAFETEA-LU.

Transportation Enhancement (TE)

Transportation Enhancements is a critical green program; however, it is not subject to budget or appropriation variability. Congress should reauthorize the transportation law dedicated funding for TE with increases on par with other parts of the bill in order to help meet growing demand for safe, affordable, and healthy transportation. A tiny sliver of federal transportation funds—less than 2 percent-- has created jobs and economic development, saved lives (47,000 Americans died

while walking or bicycling in the last decade), and spurred a renaissance of active transportation and healthy recreation. In addition, any rescission of transportation funds should include a proportionality provision to protect TE from disproportionate rescissions.

National Highway Traffic and Safety Administration

This Administration is responsible for developing and implementing, along with the Environmental Protection Agency, the landmark national program of greenhouse gas and fuel economy standards for light-duty vehicles. It is also tasked with establishing other historic performance standards for heavy-duty vehicles, as well as tire and fuel efficiency. And it must continue balancing this robust and environmentally important workload with important vehicle and traffic safety mandates. Therefore this agency deserves at least as much funding as provided under current law.

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 (e.g., commuter rail, light rail). 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. The systems that this program helps fund are both some of the most used and 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.

New Starts and Small Starts Programs

The Federal New Starts program is the federal government's primary financial resource for supporting capital investments in new local, fixed guideway transit systems, or substantial expansion of existing systems. Eligible projects include heavy, light rail, commuter rail, and bus rapid transit. The 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.

Small Starts projects require less capital investment (below $250 million total investment with a $75 million federal share, anything above that is a New Start) and is a program enacted in SAFETEA-LU with expedited project delivery procedures. Many Small Starts are bus rapid transit lines, a cost-effective option that can reduce pollution and maximize use of existing highway capacity.

These popular, performance-driven programs should receive at least as much funding -- $1.9 billion – as in FY 2012.

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.

6 DEPARTMENT OF THE TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION (FTA)

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 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 a record 30-million passengers from October 2010 to October 2011, with ridership up 5 percent and ticket revenue up 8 percent. Yet Congress cut Amtrak funding by $68 million for FY 2012, slashing an Administration request for $4 billion *more* in investment in order to fulfill the President's commitment to continue expanding the nation's passenger rail capacity. Funding should be restored, and more, in FY 2013. The President's request for $4.401 billion in funding this FY should be honored.

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. through ARRA and other policies, Congress has expanded this program to support state implementation of high speed rail networks. America is one of the only developed nations in the world without a modern high speed rail network, and the FY 2012 budget hamstrings the nation further by zeroing out funding for it entirely, in the face of the President's request for an $8.046 billion commitment. The President's request should be honored in the FY 2013 budget.

The Global Environment Facility (GEF)

The Global Environment Facility (GEF) is an independently operated, international financial facility that provides grants for projects related to biodiversity, international waters, land degradation, climate change, the ozone layer, and the elimination of persistent organic pollutants. GEF funding is disbursed through ten international organizations, including multilateral development banks and UN agencies, all of which are required to meet rigorous fiduciary standards. The GEF also manages the Least Developed Countries Fund and Special Climate Change Fund, which help the world's poorest countries and most vulnerable populations adapt to climate change.

The GEF unites 182 countries in partnership with international institutions, civil society, and the private sector to address global environmental issues in the context of national sustainable development. To date, the GEF has invested approximately $10.2 billion directly, attracting $46.6 billion in co-financing, in over 2,900 projects in 165 countries. To date, total U.S. Government contributions to the GEF Trust Fund equal approximately $1.55 billion, compared to total combined project investment of $60.8 billion. This means that for every U.S. dollar invested, the GEF leverages about $36 from other sources.

The GEF has invested more than $3.3 billion in biodiversity activities, attracting $9.9 billion in co-financing in support of more than 1,000 projects in 155 countries. This includes approximately $1.89 billion invested in the creation and management of protected areas. As a result, the GEF has been key to achieving the global target of 10% of the world's terrestrial areas under protection: 2,302 protected areas spanning 1.6 billion acres (an area 3.7 times the size of Alaska), containing at least 700 globally threatened species and 30 billion tons of stored carbon. Biodiversity has also been enhanced or protected on over 654 million acres of productive landscapes and seascapes (an area 3.8 times the size of Texas). With GEF leadership, 40 conservation trust funds have been created totaling $300 million.

The GEF has been the world's largest single financier of forest conservation, providing $1.6 billion, supplemented by more than $4.8 billion in co-financing, in support of more than 350 projects focused on forest conservation and management. During the past two years, the GEF has invested $232 million in forest conservation efforts that aim to protect biodiversity, enhance livelihoods, and help regulate the climate. Through mid-2014, the GEF is aiming to invest a further $770 million in forest conservation and sustainable forest management. The GEF has also been a pioneer investor in payments for ecosystem services, with successful projects in Costa Rica, Mexico, and elsewhere.

Reflecting the GEF's strong record of efficiency and project results, GEF donor countries agreed in 2010 to a record replenishment of $4.25 billion for the GEF Fifth Replenishment period (2010-2014), representing a 37% increase over the previous replenishment period. The United States committed $575 million toward the Fifth Replenishment, to be paid in four annual installments of $143.75 million. In FY12, the U.S. provided at least $89 million in direct payments to the GEF.

DEPARTMENT OF THE TREASURY

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 November 2011, $194 million in U.S. government funding has been used to complete 18 TFCA debt-for-nature agreements in 14 countries. Over time, this will generate more than $295 million in long-term commitments for tropical forest conservation in Bangladesh, Belize, Botswana, Brazil, Colombia, Costa Rica, El Salvador, Guatemala, Indonesia, Jamaica, Panama, Paraguay, Peru, and the Philippines. The Nature Conservancy, Conservation International, World Wildlife Fund, and an Indonesian fund (KEHATI) have contributed a total of $22 million to 11 of these agreements. In FY12, Congress appropriated $12 million for the TFCA, which was significantly lower than its historical funding level of $20 million.

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. 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. 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.

DEPARTMENT OF THE TREASURY

Historic Rehabilitation Tax Credit

Historic preservation is an important component of promoting energy efficiency and sustainable development. The conservation and improvement of our existing built environment, including re-use of historic and older buildings, greening of existing building stock and reinvestment in older and historic communities, is crucial to combating climate change, preserving open space and preventing urban sprawl. Buildings account for approximately 40% of carbon dioxide emissions each year in the United States. Enhancing existing incentives to promote energy efficiency in our existing building stock will help to secure a sustainable built environment for the 21st century.

During the 112th Congress, proposals have been made recommending the elimination or reduction of various federal tax credits. One of these tax credits, the Historic Tax Credit (HTC), is essential to community revitalization and job creation. Enacted in 1978, the HTC program has demonstrated a strong record of success with the creation of **two million jobs, $90 billion in leveraged investment and the rehabilitation of more than 37,000 existing buildings.** Most significantly**,** these gains come from an incentive that more than pays for itself. The $17.5 billion cost over the lifetime of the HTC program has been more than offset by the $22.3 billion in federal taxes these rehabilitation projects have generated. In addition, historic rehabilitation projects often create more, better-paying jobs than new construction.

In the 112th Congress, Reps. Aaron Schock (R-IL) and Earl Blumenauer (D-OR) introduced H.R. 2479, the “Creating American Prosperity through Preservation Act” (CAPP). The bill includes significant enhancements to the HTC that would improve both the sustainability and economic benefit aspects of the credit. Under CAPP, energy efficiency and cost savings would be increased by raising the 20% historic and the 10% non-historic rehabilitation tax credits by two percentage points for projects that increase energy efficiency by at least 30%. Another proposed improvement under CAPP would change the building age requirement from pre-1936 to a straight “50 years or older.” This would greatly increase the potential pool of post-World War II buildings eligible for rehabilitation. Finally, CAPP would also increase the historic tax credit from 20% up to 30% for smaller “Main Street” scale projects ($5 million or less in qualifying project costs). This will enable small towns and rural communities to take advantage of the HTC’s job generation and economic development benefits. All of these enhancements to the HTC would help make for a more sustainable built environment through expanded use of an existing job creating community revitalizing tax incentive.

6 DEPARTMENT OF THE TREASURY
INCENTIVE FOR PRIVATE LAND CONSERVATION

Making the Enhanced Tax Deduction for Conservation Easement Donations Permanent

From 2006 to 2011, 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. Preserving viable farms and forests protects important wildlife habitats, 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. A bill to make the incentive permanent in the 112th Congress (H.R. 1964) has 293 co-sponsors from 47 states, including the chairman, ranking democrat, and majorities of both parties on the Ways & Means Committee. The one-year extension in President Obama's FY 12 budget request was scored at $117 million by the Joint Committee on Taxation. The ten-year score for making the incentive permanent is $915 million.

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 an alarming rate. The estate tax contributes to this trend by forcing many farmers and ranchers to sell parts of their property to pay the tax, dividing up 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 (S. 1901), introduced by Senators Mark Udall (D-CO) and Mike Crapo (R-ID), 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. The Joint Committee on Taxation has scored this provision as costing $132 million over ten years (based on 2009 estate tax rates).

Another proposal, the Family Farm Preservation and Conservation Estate Tax Act (H.R. 390), introduced by Rep. Mike Thompson (D-CA), provides an indefinite deferral of estate taxes on family farm, ranch, and forest land, with a recapture provision 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. The Joint Committee on Taxation has scored this provision as costing $4.2 billion over ten years (based on 2009 estate tax rates), including the provisions of S. 1901.

ENVIRONMENTAL PROTECTION AGENCY

7 ENVIRONMENTAL PROTECTION AGENCY

Health, Land, Air, and Water

Over 40 years ago, Congress realized that pollution would not be controlled by the unfettered free enterprise system if companies could externalize their costs by spewing their wastes to the population at large rather than internalize the costs. Having states set their own standards was not practical as employers would force a "race to the bottom" the same way companies now have localities compete by offering tax abatements and other inducements to move from one community to another.

For almost 40 years, there has been strong bipartisan support for programs that would improve our environment through federal laws that have been mostly implemented by states. The success has been dramatic, but with a growing population and a world where pollution does not stop at borders and more people around the world wanting energy-intensive lifestyles, there is a great need to limit our pollution.

The underlying authorities for our environmental programs are the laws passed by Congress. These laws require regulations to carry out the specific directions of the Congress. Over the past 40 years, 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. A 1997 study of 12 rules found a pattern that costs were exaggerated. The study found that costs were overestimated anywhere from 29 percent to 2,900 percent.[1]

The George W. Bush Administration required EPA to show that the benefits of its 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. 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.

During the past year, there have been an unprecedented number of attacks on environmental laws. There have been attempts to stop EPA from proposing, finalizing, and implementing rules. Rather than proposing to repeal the very popular environmental laws, such as the Clean Air Act (CAA) and the Clean Water Act (CWA), there have been efforts to force the same impact in a less obvious way by stopping the Agency from carrying out its statutory duty through policy riders and amendments aimed at weakening or delaying updated environmental standards.

Another source of attack is to burden the regulatory system itself. The standard setting process is very complicated, requiring numerous analyses on technical feasibility, cost benefit, and impacts on certain sectors of the population, and economy. This system makes it difficult for EPA to issue any regulations in less than six years. To further cripple this process, many generic regulatory changes proposed during the last Congress would so burden the regulatory system that virtually

[1] Hodges, Hart, Economic Policy Institute, *Falling Prices: Costs of Complying with Environmental Regulations Almost Always Less than Advertised*. (1997) at 4 and 12. http://www.epi.org/publication/bp69/

no regulations would ever become final even with a dramatic increase in regulatory staff which is an unlikely proposition. For instance, EPA has been unable to regulate any chemical under the Toxics Substances Control Act (TSCA) in a dozen years because the courts have essentially said the statutory requirements are impossible for EPA to meet. The TSCA sections that have shown to be ineffectual have been proposed to apply to every regulation from every department of the federal government.

Another way to cripple the standard setting process and our advances towards environmental goals of clean and healthy water and air is to cut the Agency budget. The EPA budget is a tiny part of the federal budget, *i.e.,* only 1 cent of every federal dollar goes to protect our land, water and air.

7 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 advanced 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 advanced research to provide the data necessary for risk assessment and 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 provided the first increase for this area since 2004 and it is critical to provide sufficient funding to assure the best science possible. The sequestration cuts will weaken the necessary scientific basis that the Agency needs to regulate and find less expensive alternatives for regulation.

7 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 processes 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 (OSW) 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 implementation of the endangerment finding that carbon dioxide is a pollutant under the CAA, and complete regulations on ozone and rules for particular classes of major sources such as boilers. Further, 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 and tribal partners, polluters would have an economic advantage over responsible companies that comply with existing standards. EPA'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 EPA's state and tribal partners, budget cuts at the state and tribal 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 CAA's New Source Review (NSR) Program requires installation of modern pollution control technology when industrial facilities undergo changes that increase air pollution by significant amounts. 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 NSR enforcement cases against power plants and oil refineries, EPA has achieved air pollution reductions that dwarf any other CAA enforcement activities undertaken by the Agency. In the OSW program, EPA's enforcement has deterred improper recycling and has encouraged safe disposal of hazardous waste.

The Budget Agreement with sequestration will have a significant impact on the core of EPA's regulatory and enforcement program. A 9% across-the-board cut would require the Agency to fire as many as 1,300 enforcement and standard-setting staff. This cut would clearly compromise the Agency's ability to protect public health and the environment.

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 successful and widely recognized EnergyStar program. Maintaining and upgrading our water and wastewater 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 and wastewater treatment systems. 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 for WaterSense has remained flat for the last three years at approximately $2.4 million, a tiny fraction of what consumers and communities could save if water-efficient products were in wider use today.

EPA has only a handful of individuals dedicated to the national WaterSense program. These individuals work with local water utilities, product manufacturers, and retailers to recognize products whose levels of water efficiency and overall performance make them eligible for the WaterSense label. A modest increase in funding -- as little as $500,000 -- would allow more types of products to become eligible for the label. This would enable the Agency and its many non-federal partners to strengthen the brand identity of WaterSense so consumers can more easily recognize water-efficient products, and local utilities and retailers can broaden their marketing and incentive programs with the WaterSense label.

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 EPA (newly authorized under the Water Resources Development Act of 2007) for implementation of on-the-ground restoration projects.

Diesel Emissions Reduction Act Implementation

In the Energy Policy Act of 2005, Congress passed the Diesel Emissions Reduction Act 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 (ARRA), 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, tribal, 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, tribal, and local programs such as the Home Performance with Energy Star Program.

ENVIRONMENTAL PROTECTION AGENCY
LEAKING UNDGERGROUND STORAGE TANK (LUST)

Leaking Underground Storage Tank (LUST)

In 1986, Congress established the Leaking Underground Storage Tank (LUST) Trust Fund to help 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 such that today the fund balance exceedS $3 billion, even with over $100 million of new money added to the Fund each year. Despite initial strides in addressing petroleum LUSTs 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 ARRA, Congress appropriated $200 million from the LUST Trust Fund for EPA to clean up LUSTs. EPA allocated $190.7 million to states and territories in assistance agreements to address shovel ready sites within their jurisdictions and $6.3 million for site assessment and cleanup activities in Indian country.

State Revolving Funds

With the passage of the CWA 40 years ago, Congress made a financial commitment to protect and improve water quality across the country—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 to construct 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. In addition, two percent of each SRF is set aside for Indian tribes to conduct the same types of activities accorded to states.

The Green Reserve, which was created in the ARRA and extended by the FY10 Interior Appropriations bill, also needs to be continued. This reserve fund allocates at least 20 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 other environmentally innovative projects that meet the goals of the CWA. 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 mean lower long-term costs and other economic advantages to water utilities and their customers.

Restoring 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. While this funding is a step in the right direction for rebuilding our failing water infrastructure, more is necessary. 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, 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 dependable water supply and increased health risks. Further underscoring the problem, 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 two percent set-aside under each of these funds. According to the Indian Health Service (IHS), approximately 12 percent of tribal homes lack access to sanitation infrastructure and safe drinking water, whereas one percent of homes nationwide suffer the same fate. 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.

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 3,400 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 $3 billion, which means that each SRF needs at least a three percent set-aside for tribes.

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 LUST Trust Fund. The Brownfield Program, a source of necessary shovel ready projects, would be significantly harmed with a 9% sequestration cut that would adversely impact economic recovery in cities, states, and on tribal lands around the country.

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 the U.S. Department of Housing and Development, U.S. Department of Transportation, and other federal 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 (CWA) 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 1987 amendments to the CWA established the

Section 319 Non-Point Source Management Program that funds state, tribal, and local programs for a wide variety of activities including installation of best management practices, development of total maximum daily loads, technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific non-point source implementation projects. The *National Water Quality Inventory: Report to Congress: 2002 Reporting Cycle* demonstrated that non-point sources are the most significant single source of water pollution in the United States, accounting for almost half of all impairments in water quality. According to EPA's *Clean Watersheds Needs Survey 2008 Report to Congress*, non-point source funding needs total $22.8 billion over 20 years or $1.14 billion annually on average. During FY11, EPA shifted $25 million in congressionally appropriated funds from CWA Section 319 to other programs, decreasing the amount of funding for projects that directly reduce non-point source pollution. Since most of the funds are funneled to local communities to address their critical non-point source needs, further cuts in this program for non-point pollution will adversely impact states and tribes as they try to meet the nation's water quality goals.

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 and by 2007, 96% of these programs had been delegated to the states. The states' role cannot be overstated: 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 first responders at spills, cleanups, and natural disasters, with EPA providing most of the remaining work directly.

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.

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.

ENVIRONMENTAL PROTECTION AGENCY

STATE AND TRIBAL ASSISTANCE GRANTS

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 (BEACH) 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 vulnerable.

Tribal Air Quality Management

Section 301(d) of the 1990 Amendments to the CAA authorized EPA to treat Indian tribes “as States.” EPA subsequently increased its tribal air grant funding at a time when few Indian tribes were engaged in air-related activities. In 1998, EPA finalized the Tribal Authority Rule (TAR) which provides 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.

After implementation of the TAR, EPA tribal air funding leveled off for ten years between a range of $10.7 million and $12.1 million. During this same time, the number of tribes seeking 103 and 105 grant funding grew substantially to the point that any former funding carryovers from previous years were now being exhausted. Further, EPA regional offices were being forced to turn away a number of tribes for funding requests. However, tribes were being forced to address the same air-related issues that neighboring state and local jurisdictions were facing in an environment of increasing regulations. While the Obama Administration increased tribal air funding in FY2009 and FY2010 to $13.3 million and $13.273 million in FY2011, tribes continue to be underfunded in addressing their respective air issues, including those related to new regulations (*e.g.,* Tribal Minor New Source Review rule).

Tribal air grant funding must be increased to more accurately reflect the air quality-related needs of Indian tribes. Funding is required for core air quality management program development and operations important to tribes (*e.g.,* national ambient air quality standards, toxics and indoor air quality) and implementation of 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. We request an increase to the Section 103/105 grants for Indian tribes of $8.727 million for a total program budget of $22 million.

ENVIRONMENTAL PROTECTION AGENCY
STATE AND TRIBAL ASSISTANCE GRANTS

Tribal General Assistance Program

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

In FY2004, the enacted IGAP funding level was $62.5 million with each Indian tribe receiving an average of $110,000 to provide them with a minimal level of environmental protection. IGAP funding thereafter decreased steadily for several years until the Obama Administration increased it to $62.9 million in FY2010 and $67.739 million in FY2011. At the same time, the cost to tribes for adequate environmental protection steadily increased. Further, a number of tribes were forced to forego indirect cost allocations in order to dedicate funding sufficient to provide the aforementioned minimum level of environmental protection.

While IGAP has helped Indian tribes establish an environmental "presence," many of those involved with tribal programs have expressed a desire to be able to implement programs. The goal of IGAP (*e.g.*, build tribal capacity, define a tribe's needs and move onto other programs to create overall sustainable environmental programs) has not been met, either due to limited funding or other institutional barriers. As IGAP is the only environmental funding available to many tribes, it is time to allow them to use the funding to 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, EPA should annually provide each of the 565 federally-recognized tribes with $175,000 in IGAP funding. As such, we request an increase of $31.136 million to the Indian General Assistance Program for a total program budget of $98.875 million.

Direct Implementation Tribal Cooperative Agreements

A means to help offset the limited dollars available to Indian tribes under the IGAP is the use of Direct Implementation Tribal Cooperative Agreements (DITCAs). DITCAs allow tribes and intertribal consortia to help EPA implement federal environmental programs for tribes. DITCAs were initially authorized in the FY 2001 Appropriations Act and must be approved annually by Congress. Because they are under federal authority, DITCAs do not trigger jurisdictional entanglements between tribes and other governmental bodies that might otherwise occur if tribes attempted to assert regulatory jurisdiction for their own programs. Further, DITCAs provide environmental results and meet strategic targets valued by both tribes and EPA.

Thus far, EPA has awarded more than 20 DITCAs to Indian tribes to undertake such activities as CAA 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, EPA is constrained by the availability of

resources to do so. Discretionary monies from the Environmental Program and Management account, and STAG have been the primary vehicle for DITCAs which must also compete with a myriad of other EPA priorities. To assure a consistent level and source of funding for DITCAs, a separate budget set-aside should be established within EPA. We request an increase to the overall EPA budget of $10 million to be set-aside for DITCAs.

Multimedia Tribal Implementation Grants Program

The Obama Administration's FY2012 budget request for 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 $20 million for Indian tribes to adequately address their most pressing environmental needs. We request that EPA budget be increased by $20 million to be set-aside for the Multimedia Tribal Implementation Grants Program.

ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

RE-Powering America’s Lands Initiative

The U.S. Environmental Protection Agency (EPA) is currently tracking approximately 490,000 sites and almost 15 million acres of potentially contaminated properties across the United States. These contaminated properties present significant opportunities for renewable energy development and EPA is working with DOE’s National Renewable Energy Laboratory to identify contaminated sites with high solar, wind, geothermal, and/or biomass energy potential. So far, EPA has identified over 11,000 Superfund, Resource Conservation and Recovery Act (RCRA), Brownfields, and abandoned mine lands with energy potential. Twenty renewable energy projects have been built on these contaminated sites and more are underway. The reuse of contaminated lands present tremendous environmental and economic benefits including existing infrastructure such as transmission lines and roads; economic incentives for lands with significant cleanup costs; alternatives to developing undisturbed and sensitive landscapes; and job generation opportunities.

EPA can play a critical role in our clean energy future in a way that is smart for local economies and the environment, create unified federal approach to promote siting of renewable energy on contaminated land, and improve communication and data sharing on siting renewable energy on contaminated land. EPA requires additional resources to both identify those sites appropriate for development and increase education and outreach with interested stakeholders including state, tribal, and federal agencies, and project developers and land owners. The success of this program will ensure the Administration’s interest in a clean energy future is realized. This work was included as part of EPA’s FY2012 Budget and should be prioritized and funded as a formal initiative within EPA's FY2013 budget.

7 ENVIRONMENTAL PROTECTION AGENCY
EDUCATION PROGRAMS

National Environmental Education Act Programs

EPA'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 lifelong education and environmental stewardship, helping to ensure that our citizens are environmentally literate and competitive in increasingly important environmental fields. EPA's Office of Environmental Education supports several highly-leveraged, but underresourced 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.

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 bipartisan 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.

Congress has increasingly recognized the economic, educational, and environmental benefits of strong environmental education programs to keep America competitive. NEEA was funded at $9.7 million in FY 12. In FY 13, Congress should fund NEEA programs at the authorized level of $14.0 million.

7 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 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. A cut in this program because of sequestration will slow down required approval and putting people back to work.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

8 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Introduction

Our nation's oceans, coasts, and Great Lakes provide immense economic, environmental, and recreational benefits. The *National Ocean Economics Program* has estimated that the U.S. ocean and coastal economy contributes more than $118 billion annually to the nation's Gross Domestic Product (GDP) through fisheries and seafood production, tourism, recreation, transportation, and construction. Additionally, over 2.3 million jobs in the US depend on the oceans and coasts, 1.7 million of which come from tourism and recreation.

As the agency that monitors and forecasts climate and weather, manages our nation's living marine resources, and protects and restores marine and coastal habitats, adequately funding the National Oceanic and Atmospheric Administration (NOAA) is critically important to our ocean and coastal habitats and the associated economies and communities.

NOAA's satellite and weather programs are vital in alerting citizens to oncoming tornadoes, hurricanes, floods, and other weather events. Therefore, NOAA's satellite and weather programs must continue to be funded, but not at the expense of NOAA's ocean and coastal programs. Adequate funding is needed to maintain ongoing protection, maintenance, and restoration of our nation's ocean and coastal habitats.

Smart decisions will be more critical than ever as we all attempt to do more with less. Decisions should take into account how programs contribute to long-term goals, leverage federal funds, develop resilient and strong coastal communities and economies, contribute to needed ecosystem services, and provide data for decision-making processes.

We recommend focusing funding on three priority areas: protecting and restoring regional ecosystems, ending overfishing, and implementing the National Ocean Policy.

Regional Ecosystem Protection and Restoration

Ocean, coastal, and Great Lake ecosystems continue to suffer significantly from urban and rural development, living resources exploitation, habitat destruction from man-made disasters, and other human activities. Additionally, these threats are being exacerbated by impacts of increased ocean acidity, increased temperatures, and sea level rise.

NOAA plays a key role in addressing the problems and management challenges for our nation's estuaries, wetlands, coral reefs, and ocean ecosystems. The three large ecosystems of greatest concern include the Gulf of Mexico, the Chesapeake Bay, and the Arctic. Protection and restoration of these areas are needed to combat threats and stresses they are currently facing and could potentially face. The Deepwater Horizon disaster highlighted NOAA's lack of scientific knowledge of our nation's ecosystems. Additionally, new and improved response tools and protocols are still needed to increase the effectiveness of natural disaster response and improve natural resource damage assessments, as well as determine the long-term recovery needs if another disaster were to occur in our nation's waters. Without adequate and sustained funds, NOAA's work to protect and restore vital habitats will be minimized or even lost, impacting regional resources, ecosystems, and associated economies.

8 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Ending Overfishing

Managing fisheries in a sustainable manner is vital to ensure the health of our coastal economies and eco systems. NOAA's National Marine Fisheries Service (NMFS) has made great strides toward ending overfishing as mandated by the *Magnuson-Stevens Fishery Conservation and Management Act*. This is in large part due to the new requirements for annual catch limits (ACLs) and accountability measures in all US fisheries that are aimed at ending overfishing. The regional fishery management councils are currently on track to implement a system of ACLs and accountability measures by the end of 2011 or early 2012. Information provided by core data collection, catch monitoring and stock assessment programs within the NMFS is critical to the success of this endeavor.

Maintaining adequate investments in these interrelated activities is not only essential for informed decision-making and stewardship of the nation's fisheries resources, but for realizing the full potential of our nation's fisheries in order to sustain businesses and communities whose livelihoods depend on healthy fisheries.

National Ocean Policy

Approximately 20 federal agencies now administer more than 140 different and often conflicting laws and regulations that impact the oceans and Great Lakes. In addition, diverse state laws add further complexity. These different government programs have inconsistent goals and conflicting mandates and suffer from dysfunctional decision-making processes.

In response, the Administration's *National Policy for the Stewardship of the Ocean, our Coasts, and the Great Lakes* directs agencies to coordinate and implement a strategy for the oceans, coasts, and Great Lakes and strives to reduce complexity, redundancies, and develop efficiencies among agencies. This policy provides for the protection, maintenance, and restoration of coastal and marine resources and habitats, enhances associated economies, preserves maritime history, and provides for adaptive management of these areas so that all Americans may continue to enjoy these resources.

As the agency principally responsible for the stewardship of the nation's coastal and marine environment, NOAA is a key player in the execution of this policy. Without adequate funds to carry out its leadership duties, this policy will fail, the oceans will continue to be inefficiently managed, and valuable taxpayer money will be wasted.

On the following pages you will find specific NOAA programs we identified as vital to the success of the three identified objectives, as well as critically important to our ocean and coastal economies and communities.

8 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL OCEAN SERVICE

Coastal and Marine Spatial Planning

As new uses of coastal, ocean, and Great Lakes waters become a reality, there are increasing demands on the available space and resources. Coastal and Marine Spatial Planning (CMSP) is a tool to identify the most suitable areas for human activity in the ocean and Great Lakes to sustain economic, ecological, and cultural resources for future generations. CMSP focuses on the spatially explicit nature of activities and resources. Combined with effective coastal management and stakeholder processes, it is used to inform management decisions by evaluating tradeoffs of different spatial scenarios based on how they meet the specific goals.

A funding level of $6.7 million for CMSP in FY 13, including possible grants for the states and territories to engage in new and build upon existing planning activities in their respective waters and at the regional level. With a long track record of working in close coordination with federal agencies, local communities, industry, and stakeholders on management and planning, coastal states are critical in balancing competing uses in coastal waters and moving towards comprehensive, ecosystem-based management.

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, nor their consequences, which can make it difficult to adequately prepare for, manage, and adapt to future change. Furthermore, in light of the recent BP Deepwater Horizon oil spill, the need for ocean observations in order to understand and predict ocean conditions is even more evident.

In addition, the newly created executive National Ocean Council (NOC) 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 BP 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, operates 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 in order to fully assess their impact on commerce, transportation, weather, 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 US Navy, are participating in the oil spill response.

There are executive and legislative policy drivers to fully fund 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 work together to fulfill the nation's need for quality and timely information about our oceans, coasts, and Great Lakes.

Overall, NOAA IOOS was appropriated $37.5 million in FY 12 and the program requests level funding for FY 13. The FY 11 budget includes a reprogramming $11.5 million to the IOOS budget for marine sensor technology innovation grant program.

The requested $37.75 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; provide operational support for real-time surface current data for the Coast Guard's Search and Rescue Program; and ensure the development of sensors to address critical water quality needs. This investment will ensure information continues to support safe and efficient marine operations, preparations for and mitigation from coastal hazards, public health, and healthy ecosystems. The Marine Sensor Technology Innovation Program will aid many ocean programs such as ocean acidification, hypoxia, and harmful algal blooms by improving our ability to measure and monitor the oceans with efficient and effective technology. 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.

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Coastal Services Center

The Coastal Services Center (CSC) supports projects in states and territories that address specific and national management issues, including initiatives such as coastal hazard and climate resilient communities, regional governance efforts, Coastal Storms, and the Digital Coast. The translation of data and information collected by federal agencies into useable tools, as well as training opportunities for these tools, is key to turning data into decision-making for sustainable communities and economies. The FY 12 appropriation of $37.1 million is seen as reasonable level for the CSC in this time of fiscal restraint, but moving toward a funding level of $56 million will allow the Center to better address coastal management support.

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. A 2011 study reveals the estimated total economic value of coral reefs on the main Hawaiian Islands to the US population is $34 billion.[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 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 (CRCP), with the US Coral Reef Task Force (USCRTF), focuses on improving the understanding of tropical coral reef ecosystems and minimizing the threats to their health and viability. However, effectively conserving coral reefs in the United States cannot be accomplished through domestic efforts alone because most US coral reefs are ecologically connected to reefs abroad and some of the most significant threats to reefs (e.g., climate change and ocean acidification) are global in nature. The US National Action Plan to Conserve Coral Reefs calls for the US government to collaborate with international partners to conserve international coral reefs and associated habitats while sustaining the human communities that depend on them. To support international coral reef conservation initiatives, NOAA provides training, technical support, coordination, competitive small grants, and larger scale cooperative agreements.

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[1] Bishop, R. C., Champman, D. J., Kanninen, B. J., Krosnick, J. A., Leeworthy, B., & and Meade, N. F. (2011). *Total Economic Value for Protecting and Restoring Coral Reef Ecosystems.* Silver Spring: National Oceanic and Atmospheric Administration.

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NOAA international coral conservation efforts are focused primarily in four priority regions based on their interconnections with US reef ecosystems and interests: the Wider Caribbean, Micronesia, Southwest Pacific (with an emphasis on Samoa), and the Coral Triangle. NOAA focuses on supporting regional initiatives, such as the Micronesia Challenge and the Coral Triangle Initiative (CTI), as well as building local capacity for successful MPAs. As part of the five-year, $40 million USAID-funded program for the CTI, NOAA provides technical support and training in management, fisheries, and climate change adaptation.

As corals continue to face the multitude of threats mentioned above including climate change impacts, destructive fishing practices, and land-based pollution (key threats prioritized by the program), the need to adequately fund this conservation program becomes even more apparent. A modest increase of $350,000 over FY 12 enacted funding would allow for the program to continue current initiatives to combat land-based sources of pollution; research and identify the effects marine protected areas have on coral reef ecosystems; monitor and forecast ocean acidification and coral bleaching impacts; strengthen international coordination; continue shallow water coral habitat mapping; restore a portion of the funding for the Coral Reef Institutes (CRIs); and improve program management.

In addition, non-budget cost opportunities for the program include such things as establishing a Cooperative Institute (with no administrative allocation), which is a competitive award for a group of institutions who work with NOAA. The existing CRIs, individually and collectively, yield a proven and respectable track record for bridging outstanding science research with practical management of coral reefs, and leveraged funding within US waters. The CRIs have yet to be recognized through a Cooperative Institute agreement and are desirous of this status. The four CRIs are: the National Coral Reef Institute, the Caribbean Coral Reef Institute, the Western Pacific Coral Reef Institute, and the Hawaii Coral Reef Initiative. The applied research conducted by each Institute is essential to local management needs, and is shared for application in the tropical/subtropical environment.

At a level below $27.1 million, specific impacts to the program would likely include a loss of coral research and monitoring in low-income areas, an effort by the program to encourage local tourism and livelihoods; short-term project contractors; efforts to bridge western science with traditional management in our nation's territories to help reduce impacts on coral reef ecosystems; efforts to strengthen international coordination; collaboration opportunities at the jurisdiction level through the Coral Reef Institutes; and fellowship opportunities across the seven coral reef jurisdictions.

Response and Restoration

NOAA's Office of Response and Restoration (OR&R) is a critical component of our ability to respond to oil spills and releases of other hazardous substances. OR&R not only provides scientific and technical expertise guidance during an oil spill response effort, but they are a lead trustee in assessing and recovering natural resources damages, as well as designing and

implementing restoration efforts. Since 1989, NOAA has restored over 6,300 habitat acres and helped clean up over 500 waste sites. NOAA effectively holds responsible parties liable for damages to 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 OR&R provides support for the up-front environmental assessment process and short-term restoration needs while NOAA works to settle each case. We recommend sustaining the FY 12 President's Budget level of $22.57 million for this important office.

The BP Deepwater Horizon disaster highlighted the important services NOAA provides and the potential impact of oil spills on coastal fisheries, economies, and communities. OR&R is continuing to dedicate significant resources to the assessment and restoration planning for Natural Resources Damage Assessment (NRDA). This has required many OR&R staff nationwide to be relocated/redirected to work on the spill for significant portions of their time – many work 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. Any reductions in funding for OR&R will cause further delays in NRDA cases throughout the country, as well as weaken NOAA's ability to ensure that BP and others are held fully responsible for the damages done by the BP Deepwater Horizon disaster in the Gulf. This has implications for the long-term health of the Gulf ecosystem, as well as the jobs and communities that depend on a healthy Gulf.

In addition, the BP Deepwater Horizon disaster 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. The Administration includes a modest increase in the FY 12 President's Budget for oil spill response and restoration research and development. While significantly more funding could be directed to this effort, the amount requested in FY 12 is a step in the right direction. We recommend sustaining this funding in FY 13 for a competitive grants program to fund multi-disciplinary marine science and engineering, marine policy, and social science aspects of oil spills.

Estuary Restoration Program

Authorized through the Water Resources Development Act of 2000 and reauthorized by Congress in 2007, the Estuary Restoration Act (ERA) establishes a comprehensive interagency program for the restoration of the nation's estuaries. The ERA's Estuary Habitat Restoration Council, comprised of the five primary federal restoration agencies, is leading a coordinated approach to enhance efforts to restore estuary habitat nationwide. As current Council Chair, NOAA is leading efforts through their Estuary Restoration Program, while also maintaining an interagency ERA

project database that serves as a useful and cost-effective clearinghouse for all agency restoration information. NOAA is authorized at $4 million annually for the Estuary Restoration Program, 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. The program received $1 million in FY 12 to better coordinate agency efforts that will yield improvements in on-the-ground restoration activities. In FY 13, we strongly recommend $1.188 million for the program to ensure continued collaboration and coordination across agencies while minimizing duplicative agency efforts.

Marine Debris

Marine debris has become one of the most widespread pollution problems facing the world's oceans and waterways. The March 2011 Japanese tsunami tragedy severely added to this pollution problem, particularly impacting the United States. Research indicates that tsunami debris could impact the Northwestern Hawaiian Islands in spring 2012 and the West Coast of the United States in 2013.

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 destructive form of pollution. The oceans are vital to our survival, and marine debris is threatening their overall health.

The NOAA Marine Debris Program, mandated by the *Marine Debris Research, Prevention, and Reduction Act i*n 2006, has an important role in addressing marine debris which affects the ocean and coastal environment in the U.S. In accordance with this legislation, the Marine Debris Program conducts reduction, prevention, and research activities, and supports grants, partnerships, and contracts to address marine debris. While the quantity of marine debris in our oceans has greatly increased, funding for NOAA's Marine Debris Program has remained well below the authorized level of $10 million. The community was pleased to see an additional $1 million for marine debris removal in FY 12. However, additional resources are needed to enhance NOAA's ability to assess the amount, sources, and impacts of marine debris from the tsunami and beyond; maintain support to current removal projects; develop management practices; reduce derelict fishing gear; and conduct education and outreach measures to prevent future occurrences.

In FY 13, we strongly recommend $6 million for the program to sustain current efforts, while also coordinating efforts to remove the debris from the tsunami tragedy in Japan. At a level below current appropriations, specific impacts to the program would likely include a reduction of marine debris removal in the Northwestern Hawaiian Islands; regional and national collaborative efforts;

basic research efforts to understand what types of marine debris are causing the greatest damage, both to the ocean and to human health; and outreach and education partnership grants geared to altering human behavior.

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 manage their federally approved coastal programs, and all federal activities which affect a state's coastal zone must comply with the state plan. 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. The success of the Coastal Zone Management Program is a direct result of the states' ability to work with communities to design coastal management programs that address specific issues and priorities affecting local areas.

The Coastal Zone Management Program engages approximately 1,000 state and local staff, implements nearly 700 coastal management projects and activities nationwide, provides federal funding matched by the states, and leverages significant input, investment, and resources from local and private sectors. Projects and activities include:

- Providing hands-on training to local communities to safely evacuate citizens prior to a coastal storm
- Monitoring and increasing the distance at which homes are built from the shoreline to enhance the protection of person and property, dunes and seagrass, and the preservation of beaches
- Improving septic tank maintenance to reduce underground pollution leaking into coastal waters
- Investing in computer models to help local communities plan for future storm events and shoreline change
- Identifying and conserving waterfront property for storm protection, water-filtering benefits, fish nurseries, or recreation
- Assisting local governments to address salt water intrusion which threatens drinking water supplies
- Participating in research to understand recreational boating patterns and trends
- Reviewing a company's application for an offshore energy facility to be consistent with state policy
- Assisting in the removal and relocation of homes on retreating beaches due to sand erosion or sea-level rise

- Working with local citizens and community leaders to preserve waterfront property for businesses—such as seafood harvesters and processors, freight and fuel companies, boat builders, ferries, cruise boats, kayak outfitters, and marinas—dependent upon access to the water to flourish

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. For the past decade, funding for state CZMA grants has been maintained at the middle to upper $60s million (funded at $66.02 million in FY 11 and $66.146 million in FY 12). This flat-lining of funding is already limiting the states' ability to maximize this legislative mandate, and further cuts will endanger the program's ability to continue, which in turn threatens coastal economies and communities. Maintaining capacity for coastal management is critically important to maintaining coastal communities and economies and cannot be done without adequate funding. While $91 million is needed to return the program to 2001 level funding (accounting for inflation), sustaining the $65-68 million funding sees these programs through a difficult fiscal time without endangering current and future sustainable, coastal economic development.

Coastal Zone Management and Stewardship

The Coastal Zone Management and Stewardship funds allow for the administration of national programs that manage and conserve ocean and coastal resources, including the Coastal Zone Management Program. These funds allow NOAA's Office of Ocean and Coastal Resource Management (OCRM) to provide the necessary and invaluable administrative, planning, and technical support to the states and territories. Historically funded between $6.7 and $8.5 million, the CZM and Stewardship Fund is a critical component of NOAA's "boots-on-the-ground" activities and ensures consistency through state and federal activities. Maintaining current funding levels will ensure the federal-state partnership programs continue successful efforts to ensure safe and sustainable coastal communities.

Regional Ocean Partnership Grants

To meet our ocean and coastal challenges, states have voluntarily established six Regional Ocean Partnerships throughout the continental US and are working to establish similar partnerships in the Pacific, Caribbean, and Alaska. Through a place-based focus, Regional Ocean Partnerships serve as regional forums to develop shared priorities and to take critical action on a diversity of ocean, coastal, and Great Lakes needs. These partnerships work to enhance the ecological and economic health of the regions, and ultimately the nation, on the belief that multi-sector, multi-state management decisions will result in an improved ocean environment and ocean-related economy. While each partnership is unique and tailored to the needs and concerns of one region, priorities are similar across regions, including habitat conservation and restoration, planning for and recovery from dangerous storms, climate change adaptation, water quality improvement,

support of critical research and monitoring programs, environmental education, and coastal and marine spatial planning (CMSP).

These partnerships will likely form the basis for Regional Planning Bodies identified in the Framework for Coastal and Marine Spatial Planning. We recommend $10 million in FY 13 to more fully allow state and regional partners to participate in implementing the National Ocean Policy at the regional level. Through these partnerships, states link their activities with federal programs to meet not only regional, but also national goals. With this funding, NOAA can provide support to regions positioned to move forward to address pressing issues that are real and relevant to those regions. In some cases the focus will be developing baseline science and ocean assessments, while in others it may be looking at planning scenarios for renewable energy development. By providing competitive funding at the regional and state levels, NOAA will be able to target the regions and the projects that will best advance the National Ocean Policy on the ground. Without this investment, CMSP will not have robust participation and buy-in from state and regional partners, and thus will not ultimately be successful in improving the effectiveness and efficiency of facilitating ocean uses while maintaining ocean health.

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 program grew in 2010 to 28 reserves, many of which are in small towns along the coasts of 22 states and Puerto Rico.

The reserves conduct research, monitoring, restoration, education, and training designed to improve our understanding and management of coasts and estuaries. The 28 reserves and the public's use of these places have significant local, regional, and national benefits because the lands are publicly owned and function as living laboratories and classrooms that are used by scientists, decision makers, educators, and people of all ages. $22.3 million is recommended and necessary for the program to support the addition of a new reserve, as well as respond to the steep rising state costs associated with maintaining these coastal areas for hazard protection, clean water, and practical help to the public and coastal communities. This funding will also be used to maintain operations at five Gulf coast reserves, each of which has been heavily focused on research and recovery from the Gulf of Mexico oil spill. In addition, a total of $1.69 million, consistent with enacted FY12 budget for NERRS conservation and facilities funding (PAC), is recommended. PAC is a competitive program that provides funding to acquire critical lands for conservation and construct and upgrade site facilities. NERRS conserved lands and facilities are national resources available to the public as intended by Congress.

NERRS is a NOAA program in the communities that plays a vital role in advancing the National Ocean Policy. Specifically, reserves are a great example of a program that connects NOAA to local communities where around the country these reserves manage protected land, monitor water quality, restore habitat by promoting ecosystem based management, serve as sentinel sites that are

indicators of environmental change, conduct research in response to information needs of the coastal management community, provide decision makers with science-based information, technology, and best management practices, enrich K-12 education, and engage the public in stewardship of their estuaries. In addition, the NERRS program is implemented by the states at the local level where all levels of government are brought together in these living laboratories.

The work at each reserve goes beyond its property boundaries by creating a number of environmental and economic benefits for the communities and regions where they exist. For example, in South Carolina, a state with two reserves, economic benefits from healthy natural resources support one-third of the state's GDP, generating $30 billion and sustaining 236,000 jobs annually. Also, the Weeks Bay National Estuarine Research Reserve (NERR) in coastal Alabama brings on average about a million dollars per year directly to the community. Likewise, in the Delaware NERR, the estuary contributes over $30 billion in annual economic activity and is responsible for over 400,000 Delaware Valley jobs.

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, and the jobs and communities they sustain. MPAs 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 to advance the conservation of our nation's vital natural and cultural marine resources by creating partnerships among management agencies, improving management practices, and engaging ocean stakeholders. Currently 297 areas have been included in the national system of MPAs, comprised of federal, state, and territorial marine protected areas.

In addition to building the National System of MPAs, a few of the Center's recent accomplishments include establishing training partnerships with NOAA's Office of National Marine Sanctuaries and Coral Reef Conservation Program to expand the capacity of MPA managers to effectively manage their sites, and developing information and tools to assess existing MPAs and identify important areas in need of added protection. The MPA Center is also working collaboratively with coastal states to map human uses of the ocean, including consumptive, non-consumptive, military and industrial uses, to inform future ocean planning and management for a wide range of applications from alternative energy to emergency response.

However, appropriated funding has been inadequate to implement a truly effective national system of MPAs. The MPA Center received reduced funding levels in 2011 ($2.1 million) and in 2012 ($2.0 million). These continued budget shortfalls will force the program to cut as many as six full-time positions. This loss of positions will eliminate the Center's already minimized ability to engage key stakeholder groups on the development and implementation of the National System of MPAs; increase capacity of MPA managers and staff to collectively address emerging threats, human and natural disasters, and competing uses; and provide scientific analysis to identify critical gaps in protection of ecologically and economically important areas. The research

and management tools developed through the MPA Center are essential to efficiently and effectively manage the National System of MPAs, as well as the management of marine resources more broadly. At minimum, the MPA Center needs its funding restored to the 2010 level of $3.0 million to continue the many benefits associated with developing a National System of MPAs.

National Marine Sanctuary Program

NOAA's Office of National Marine Sanctuaries (ONMS) protects ocean recreation opportunities that fuel coastal economies, conserves essential habitat for endangered and commercially-important marine species, and safeguards historically significant shipwrecks and cultural resources within 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument – home to some of the most pristine coral reef ecosystems remaining on the planet and recognized for its natural and cultural heritage by the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

Providing a stable and sufficient budget for national marine sanctuaries, at $49 million in FY 13, will continue to produce wide-ranging economic benefits: the Florida Keys National Marine Sanctuary's healthy marine ecosystems, including coral reefs, form the backbone of an ocean recreation and tourism industry that accounts for at least 10% of total employment in Florida's two sanctuary-adjacent counties, providing over 106,000 jobs and $2.27 billion in annual wages. In the three Michigan counties adjacent to the Thunder Bay National Marine Sanctuary, home of the Great Lakes Maritime Heritage Center, visitor spending in 2000 was estimated at $110 million, generating $36 million in income to residents and supporting 1,700 local jobs. And in Massachusetts, over 700,000 tourists spent a total of $126 million on commercial whale-watching trips to the Stellwagen Bank National Marine Sanctuary during 2008, supporting 31 local businesses and almost 600 jobs.

We are very concerned that ONMS has not received sufficient appropriations for several consecutive budget cycles. As a result of these shortfalls, continued underfunding in FY 13 will force ONMS to cut treasured public access and recreation opportunities, cancel collaborative efforts with museums and universities that leverage private funds for taxpayer benefits, and dismantle successful education initiatives that save taxpayers money by focusing on low-cost prevention instead of expensive restoration or remediation. In addition, lack of funds will likely require the termination of contractors who perform FTE-equivalent duties and comprise nearly 50% of ONMS' total work force; eliminate most vessel days-at-sea; close or reduce operations at visitor centers; and purge contingency funding needed in case of emergencies like oil spills.

Our National Marine Sanctuary System needs adequate resources to meet new challenges while fulfilling its existing mandates. Closing visitor centers, eliminating research programs, diminishing enforcement capacities, and dismantling education initiatives will prevent ONMS from implementing sanctuary management plans – driven and informed by local communities and constituents – for yet another year. We strongly urge you to remedy this situation by funding the National Marine Sanctuary Program Base at $49 million in FY 13 and allowing the National Marine

Sanctuary System to continue serving coastal communities and promoting sustainable, multiple uses of sanctuaries as intended by Congress.

Coastal and Estuarine Land Conservation Program

Nowhere in the nation are the threats of sprawl, habitat loss, and the break-up of interconnected lands and water more significant than along our nation's coasts. They are under enormous pressures from unplanned and unmitigated development. From Maine to Alaska, increasing numbers of people are flocking to the coast to build first and second homes, to play, and to work. Our attraction to these areas is warranted, but this affinity is consuming coastal land at a rapid rate, before we can plan for or understand the long-term consequences.

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 implemented cooperatively with willing sellers and matched with state and local funds. It is critical for our nation's economic and environmental health that Congress support $20 million in funding for CELCP. While our nation's coastal protection need is far greater, an investment of $20 million will allow the program to continue to address our nation's most pressing coastal resource needs. For the FY 12 competition, the CELCP program received 36 project proposals totaling more than $58 million.

Marine Sanctuaries Construction Base

NOAA’s Office of National Marine Sanctuaries’ (ONMS) Procurement, Acquisition and Construction (PAC) account funds the purchase, overhaul, and restoration of assets, including facilities and vessels, across all 14 sites managed by ONMS. These outlays create jobs and help sustain local economies through the construction and operation of vessels, visitor centers, and other facilities, which serve as the public face of the entire NOAA organization, promote the tourism and recreation industry, and are a vital link between sanctuaries and the millions of Americans who visit the coast each year.

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Funding the Marine Sanctuaries Construction Base at $5.495 million in FY 13 will allow ONMS to focus on the completion of current projects, including ongoing renovations at the Hawaiian Islands Humpback Whale National Marine Sanctuary facilities on Maui and the Gulf of the Farallones National Marine Sanctuary's Crissy Field campus. Furthermore, providing sufficient funding will enable ONMS to continue optimizing the use of underutilized federal facilities such as Florida's Truman Annex Navy Facility, which now houses the Florida Keys Eco-Discovery Center, and deploying green technologies that lower operations costs over time, such as the geothermal heating system installed at Stellwagen Bank National Marine Sanctuary's Scituate campus. Appropriate funding levels will also support the maturation of ONMS' fleet of small boats, which provide an inexpensive and readily accessible alternative to the use of NOAA ships and enable the program to meet its resource protection, research, and public education mandates.

Our National Marine Sanctuary System needs adequate resources to meet new challenges while fulfilling its existing mandates. Stalling or cancelling the construction of visitor centers and interpretive signage, eliminating collaborative partnerships that provide cost-effective means of reaching the American public, and diminishing on-water enforcement capacities that protect legal fishermen by guarding against illegal fishing will prevent ONMS from implementing sanctuary management plans – driven and informed by local communities and constituents – for yet another year. We strongly urge funding the Marine Sanctuaries Construction Base at $5.495 million in FY 13.

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Hawaiian Monk Seal

Hawaiian monk seals are one of the most endangered marine mammals and the only truly 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 1,000 individuals remaining. While most of the population suffers from steep declines in the Northwestern Hawaiian Islands, a small population of seals in the Main Hawaiian Islands is increasing.

Human and environmental factors contributing to the overall 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).

Increased funding to the program in FY 09 and FY 10 to levels more closely in line with the Recovery Plan's recommendation ($36 million over 5 years) allowed the program to continue necessary recovery activities such as field camps, outreach campaigns, and translocation efforts. Among other things, the additional funding also gave the program the funds to hire a Hawaiian monk seal recovery coordinator, hire a cultural liaison to explore and explain the importance of the monk seal in Native Hawaiian culture, deploy specialists to the Northwestern Hawaiian Islands to remove predatory sharks, and conduct necessary research on monk seal foraging behavior and nutritional needs.

Unfortunately, the program took a 50% cut in FY 11, undercutting all the progress made in FY 09 and FY 10. Minimally, reinstating funding at the FY 10 level of $5.5 million is needed for NOAA to continue the progress they have made to increase the seals' chances for survival.

Expand Annual Stock Assessments

In response to the recommendation of the Stock Assessment Improvement Plan of 2001, National Marine Fisheries Service (NMFS) created the Expand Annual Stock Assessment (EASA) budget line to consolidate and focus its resources for increasing stock assessment capabilities. Funding for EASA provides critically needed resources to assess priority fish stocks as fishery managers implement the new requirement for annual catch limits (ACLs). The survey and monitoring and stock assessment activities funded under EASA give fishery managers greater confidence that their ACLs will avoid overfishing while providing optimal fishing opportunities. In 2011, only 133 of the 230 major stocks in the Fish Stock Sustainability Index (FSSI),[2] comprising 90% of total US marine fish landings annually,[3] had adequate stock assessments. With increases in EASA funding in FY 10 and FY 11, NMFS anticipates increasing that number to between 140-150 in 2012 and 2013. Because the information provided by stock assessments is so vital to the

[2] NMFS 2010 Status of US Fisheries, Report to Congress, http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm.
[3] President's FY 2009 Budget Submission to Congress, Exhibit 13, p 159-160.

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MSA's near-term implementation of ACLs and long-term goals for sustainable management of US fisheries, increased funding for stock assessments should remain among the highest priorities in FY 12 and beyond.

To achieve the immediate assessment needs for high-priority stocks related to the implementation of ACLs, both the President's FY 12 budget request and the House Appropriations Committee's mark would increase EASA funding substantially. The President's FY 12 funding request of $67.1 million for FY 13 is the minimum needed to maintain and expand recent progress in stock assessment capability.

Fisheries Statistics: Marine Recreational Fisheries Monitoring

Despite their often sizeable economic and biological impacts, much less data are collected from recreational saltwater fisheries than commercial fisheries due to the sheer number of participants and limited sampling of anglers' catches.[4,5] The low level of data collection and lack of timely reporting of data in these fisheries is a large source of uncertainty and has become a flashpoint for controversy in regions where catch restrictions have been adopted to rebuild overfished stocks, particularly in the Southeast. By all accounts, improved sampling and timelier reporting of catch data are needed for successful management of marine recreational fisheries.[6] NMFS began collecting marine recreational fishery catch, effort and participation data in 1979 through a program known as the Marine Recreational Fisheries Statistics Survey (MRFSS), which is now being replaced by the Marine Recreational Information Program (MRIP) with the goal of providing better regional monitoring of recreational fishing participation, catches, landings, and releases of finfish species in marine waters and estuaries for all 50 states and the US territories and Commonwealths.[7] Since its inception in 2008, MRIP funding has increased incrementally to expand the program's capability, but significant additional funding is needed to provide more frequent and timely data for effective in season management of recreational fishery ACLs.

The MRIP was funded at a level of approximately $9 million in FY10, through the Fisheries Statistics and the Fisheries Research and Management budget lines. NMFS has indicated that at least $20 million could be needed to fully implement the program, and the Fisheries Statistics line has been identified as the appropriate place for additional funding for MRIP. As an incremental step toward full implementation of the MRIP that will provide additional resources for ACL implementation in recreational saltwater fisheries, an increase of $3 million to MRIP for a funding level of $24.4 million for Fisheries Statistics is needed in FY 13.

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[4] The U.S. Commission on Ocean Policy (2004). An Ocean Blueprint for the 21st Century. Final Report.
[5] Will F. Figueira and Felicia C. Coleman (2010), Comparing Landings of United States Recreational Fishery Sectors, Bulletin of Marine Science, 86(3): 499-514.
[6] National Research Council (2006). Review of Recreational Fisheries Survey Methods.
[7] NMFS (2010). MRIP Implementation Plan Update 2009-2010, https://www.countmyfish.noaa.gov/aboutus/organization/downloads/2009-2010_MRIP_Impl_Plan_Update_FINAL.pdf.

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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 that 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), and these each dedicate a portion of funding to recreational surveys. The enacted FY 12 level of $22.1 million represents the minimum level of investment needed to maintain current activities of the FINs; therefore, at least $22.1 million is recommended for FINs in FY 13.

Survey and Monitoring Projects

The Survey and Monitoring budget supports the collection of vital fishery-independent survey information required for the development and updating of stock assessments in some of the nation's most important fisheries, including red snapper, bluefin tuna, bluefish, striped bass, and Alaska pollock. These resource monitoring programs are designed to provide unbiased estimates of population size for a variety of species over a geographic range that is independent of the fisheries being managed. Over time they provide the most reliable index of stock abundance trends and other critical data for stock assessments and the catch-setting process. Assessments utilizing survey data in addition to fishery-dependent data generally yield more robust results with lower uncertainty, giving scientists more confidence to reduce uncertainty buffers when making catch limit recommendations for the ACL-setting process. In FY 08 and FY 09, cuts in funding to several components of the Survey and Monitoring budget line forced NMFS to use increases in funding from the EASA budget to cover the shortfall in order to maintain critical data streams for use in assessments. Maintaining adequate funding for this critical component of data collection is essential to the goal of expanding stock assessment capabilities.

The President's FY 12 budget requested $24.2 million for Survey and Monitoring Projects. To maintain adequate funding for this critical source of data for stock assessments and avoid a scenario where EASA funding must be used to cover shortfalls in data collection activities funded by survey and monitoring projects, the President's FY 12 funding request of $24.2 million is needed for FY 13.

Essential Fish Habitat (EFH)

The Magnuson-Stevens 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 and the President's FY 11 budget request of $4.9 million speak to the low priority currently given to this program area. EFH-related funding in the enacted FY 10 budget consisted of $3.3 million in direct funding for EFH-related activities and $0.53 million for reducing fishing impacts on EFH, both under the Fisheries Research and Management program, as well $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).[8] 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 13 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.[9]

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 Bycatch Reduction Initiative and other activities addressing fisheries bycatch should be funded at a level of at least $10 million in FY 13 as part of a plan to ramp up program funding toward the $30 million per year level recommended by the US Commission on Ocean Policy (USCOP 2004). This compares to only $3.4 million appropriated in FY 12.

OMAO Operations and Maintenance

Base funding for NOAA's Office of Marine and Aviation Operations (OMAO) supports the deployment of a fleet of 10 Fishery Research Vessels (FSVs) whose primary mission is to provide baseline information on the abundance of fish populations that is critical to the development and regular updating of fishery stock assessments for the catch-setting process. More than 80% (108/133) of stock assessments for species in the FSSI rely on data from fishery-independent surveys. According to information obtained from the NMFS Office of Science and Technology (OST), more than half of the 78 fishery surveys conducted in 2009 (41/80) were conducted with NOAA FSVs using OMAO base funding, and OMAO accounted for 43% of the total survey funding for those 80 surveys.

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[8] 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.

[9] See USCOP (2004), Table 30.1 and Appendix G.

In recent years, however, rising operating costs (largely attributable to rising fuel costs) and budget constraints have sharply reduced the base-funded days at sea (DAS) for NOAA's fleet of FSVs. The number of OMAO base-funded DAS for FSVs declined 40% between 2006 and 2011 (from 2,012 sea-days to only 1,209), forcing NMFS to spend its own program funds to "buy back" days at sea not covered by OMAO in order to maintain its regularly scheduled surveys.[10] The nine currently active FSVs are scheduled to undertake an average of 134 DAS per vessel in 2011 compared to the maximum operating tempo of 235 DAS per year per vessel.[11] Assuming a target utilization rate of 235 DAS/year/vessel, the difference between the target and actual DAS across all FSVs in 2011 is 909 days. Using OMAO data for variable costs of ship time in 2012, more than $9.6 million would be required to increase the FSV utilization rate from the 2011 level of 134 DAS/vessel to 235 DAS/vessel. Adding this amount to the President's FY 12 request for OMAO O&M ($159.2 million) in FY 13 would increase the FY 13 O&M budget to nearly $169 million, but this increase would not be adequate to achieve full utilization of NOAA's entire fleet (17 active vessels). Assuming that the total fleet utilization rate and operating cost is comparable to that of FSVs, the cost of bringing the entire NOAA fleet closer to full utilization could be in the range of $20 million or more. In the interest of improving the utilization of FSVs for fisheries resource monitoring and stock assessments, *at least* $10 million above the President's FY 12 budget to the OMAO O&M budget line is requested for a total of $169.2 million.

Fisheries Enforcement

NOAA's Office of Law Enforcement is responsible for enforcing the laws that conserve and protect our nation's fisheries, threatened and endangered marine life, and national marine sanctuaries and monuments. The office is also responsible for enforcing the United States' international commitments to fight illegal, unregulated and unreported (IUU) fishing, a practice that threatens to undermine global fish stocks and the economy. In FY 10 and FY 11, NOAA's Office of Law Enforcement has received increased levels of funding ($65.6 million in FY 10 and 66.8 million in FY 11) – substantially higher than the enacted FY 09 funding level of $56.4 million. This much-needed increase allowed NOAA to address additional enforcement mandates under the reauthorization of the Magnuson-Stevens Fishery Conservation Act (MSRA) of 2006, including an expansion of Vessel Monitoring Systems, cooperative law enforcement programs with the States and Territories to protect stressed fish stocks, and creation of analytical and investigative capacity to combat IUU fishing on the high seas. In FY 12 the Office of Law Enforcement continued these activities and also plans to evaluate pilot programs initiated in New England to develop a model compliance assistance program that can be implemented on a national scale. These programs and others supported by NOAA will ensure an effective and fair system of marine law enforcement to protect our fragile and protected marine species and ecosystems, and support future sustainable fishing and economic growth. Funding NOAA's

[10] NMFS unpublished data. The difference between OMAO's base-funded days at sea for FSVs and the actual number required to conduct fishery-independent surveys has amounted to as much as $5 million/year in Program Funded Days (PFDs) that NMFS has been forced to expend to cover OMAO's budget shortfalls in recent years.
[11] Explained in the 2008 OMAO Fleet Recapitalization Plan, Appendix D, based on Mission Days (at sea): http://www.omao.noaa.gov/publications/08_ship_recap_plan.pdf.

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Office of Law Enforcement at the FY 12 funding level of $66.8 million represents the minimum funding level needed to maintain current capabilities and is recommended for FY 13.

Fishery Observers and Training

Catch monitoring is essential to provide managers and scientists with reliable estimates of fishing mortality, as well as basic information on composition of the catch and biological data used in stocks assessments. The MSA's mandates for ACLs and bycatch minimization as well as the growing use of quota-based "catch share" programs place a premium on reliable catch accounting and monitoring information. Trained at-sea observers provide the most reliable means of quantifying bycatch and at-sea discards (including endangered, threatened, and protected species) and verifying self-reported logbook data, but innovative electronic and video camera technologies may be cost-effective alternatives (sometimes the only options) in some fisheries. Recent NMFS fishery observer program funding has supported at-sea observer programs in more than 40 broadly defined fisheries nationwide,[12] but as many as half of the nation's ocean fisheries have negligible levels of observer coverage (1-3% of fishing trips) or none at all.[13] Expanding at-sea monitoring of fishing trips is of among the highest priorities for reducing scientific and management uncertainty in many US fisheries. For FY 13, the $39.1 million for the national fishery observer program contained in the President's FY 12 request is the minimum needed to maintain current capacity.

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 only beginning to be 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 final year of research on, and mapping of, corals in the SE Atlantic, and the second year along the West Coast. With additional funds, more regions can be mapped every year.

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[12] NOAA/NMFS, National Observer Program FY 2008 Annual Report (2009). 30 pp.

[13] Marine Fish Conservation Network (MFCN), *Meeting the Information Demands of 21st Century Fisheries: A Needs Assessment for Fisheries Observer Programs* (MFCN 2010).

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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 have 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 eco systems. Additionally, the Deep Sea Coral Research and Technology Program provide critical program support in working to achieve 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 (Open Rivers & CBRP)

NOAA's Fisheries Habitat Restoration, comprised of the Community-based Restoration Program (CBRP) and the Open Rivers Initiative (ORI), accomplishes on-the-ground projects to restore the nation's coastal, marine, and migratory fish habitat. As described below, these programs are essential to improving the nation's degraded coastal and riverine habitats while creating jobs and benefiting local economies. More than 2,300 projects in 26 states and territories have contributed to the recovery of threatened and endangered species as well as spawning and nursery areas for commercial and recreational fish. In addition, the restoration projects have been shown to create more than 30 jobs for every $1 million invested. The resulting healthier habitats strengthen and revitalize America's communities by buffering against storms, preventing erosion, protecting vital infrastructure, eliminating public safety hazards, and providing new recreational opportunities. The program received $22.229 million in FY 12 funding, which is only a fraction of what is needed to begin addressing the demonstrated project backlog of more than 800 ecologically and economically significant shovel-ready restoration projects totaling $3 billion. As such, we strongly recommend the program receive $30.806 million in FY 13 (roughly $24 million for CBRP and $6 million for ORI).

The Community-based Restoration Program provides 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, CBRP has helped to fund more than 2,000 projects to restore over 69,000 coastal acres. The program has involved more than 180,000 volunteers in projects and generated nearly $150 million in cash and in-kind contributions by using only $65 million in NOAA funds, effectively leveraging more than double the federal investment.

The Open Rivers Initiative provides technical expertise and financial assistance to remove obsolete dams and other stream barriers in coastal watersheds that currently block fish from their native spawning habitat. Since its inception in 2006, ORI has removed more than 90 dams and stream blockages, re-opening more than 2,300 coastal river miles – the same distance from Washington, DC to Los Angeles, CA.

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Cooperative Research

The Omnibus Appropriations Act of 2010 funded Cooperative Research at NOAA's requested FY 10 level of $17.5 million to expand a regionally-based competitive grants program that funds partnerships between fishermen and scientists in order to advance the science and management of the nation's fisheries. Grants awarded to qualifying projects leverage the expertise fishermen to support the acquisition of fishery data, improve our understanding of fish populations, and test innovative fishing gear designs and other technologies which can increase fishery performance, reduce operational costs, enhance safety at sea, and save fishing jobs in coastal communities.[14] Cooperative research partnerships can increase the confidence of fishermen in data used in decision-making and create employment opportunities in fishing communities. The enacted FY 12 amount of $11 million is $6.6 million below the FY 10 enacted funding level for Cooperative Research. Substantial new opportunities for cooperative research remain untapped, and therefore we recommend reinstating funding to a level of $17.5 million for Cooperative Research in FY 13.

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.

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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[14] For program details, go to: http://www.st.nmfs.noaa.gov/st4/NationalCooperativeResearchCoordination.html.

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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 NMFS. Maintaining the FY 11 funding level in FY 13 will provide the funds necessary to continue implementation of the fishery management plans, conduct ecosystem surveys, execute enforcement measures, and provide critical research and outreach grants.

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, rising water temperatures, and poor hatchery practices; 28 salmon and steelhead stocks along the West Coast and in Idaho are now listed under the Endangered Species Act (ESA). The Pacific Coast Salmon Recovery Fund (PCSRF), established by Congress in FY2000 and funded through NOAA, aims to restore and protect 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. PCSRF 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.

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Over the past decade, PCSRF-funded projects have restored, protected, or reconnected salmon to nearly 870,000 acres of habitat. Further, more than 5,300 miles of stream have been opened up to fish passage by PCSRF projects, and 240 million salmon and steelhead have been tagged or marked to help gather data for improved stock identification, more accurate abundance estimates, and better management of selective fisheries. To date, PCSRF has funded over 8,000 projects that help prevent extinction and improve the status of threatened and endangered salmon; many of these projects also support and protect healthy salmon populations – an investment that keeps currently-robust stocks from becoming imperiled.

PCSRF has had a positive impact on local economies as well as salmon restoration. For example, a 2009 study by the Ecosystem Workforce Program of the University of Oregon assessed the potential economic and employment impacts of watershed restoration activities proposed by the Oregon Watershed Enhancement Board (an entity that leverages PCSRF support). That study found that OWEB's proposed $40 million investment in watershed restoration projects would create or retain nearly 600 jobs and generate over $72 million in total economic activity in Oregon and leveraging additional funding could create or retain an additional 570 to 885 jobs and $71 to $110 million in additional total economic activity.[15] An extrapolation of these figures indicates that every $1million invested in watershed restoration results in the creation of 29-37 jobs and a total economic impact of $3.6-4.5 million.

Citizens, watershed groups, Native American tribes, and federal and state agencies from across the Pacific salmon states rely on and leverage PCSRF support to bring salmon back from the brink of extinction and set them on the road to recovery. However, PCSRF funding has dropped sharply since a decade ago (it was funded at $110 million in FY02), despite the addition of two eligible states (Idaho and Nevada) and a significant increase in need; further cuts could jeopardize existing restoration efforts while leaving dozens of new and pending salmon recovery plans in a state of full or partial limbo, further harming ESA-listed species. The FY13 recommendation of $90 million is an excellent starting point for ensuring continued progress toward the shared goal of restoring abundant, self-sustaining wild salmon to the Pacific salmon states.

[15] https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/10791/bp13.pdf?sequence=1.

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OFFICE OF OCEANIC & ATMOSPHERIC RESEARCH

National Sea Grant College Program

Coastal and Great Lakes communities in the United States are home to more than 50 percent of the US 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.

According to the National Sea Grant College Program Office within NOAA, the National Sea Grant program delivered nearly $163 million in economic benefits to the nation, which represents better than a 2.5 to 1 return on the federal investment; 71 new businesses were created, 580 businesses were retained, and over 3,800 jobs were created or retained due to Sea Grant efforts; over 400 communities across the nation have adopted more sustainable economic or environmental development practices and policies; over 150 communities adopted hazard resiliency practices with Sea Grant assistance to be better prepared to cope with or respond to hazardous coastal events; over 3,000 individuals or businesses received new certifications in hazard analysis and critical control point (HACCP) handling of seafood products, improving the safety of seafood consumption by Americans across the country; over 30,000 acres of degraded ecosystems were restored as a result of Sea Grant activities; almost 800 undergraduate and over 500 graduate students were supported by Sea Grant, and some 420,000 K-12 students were reached with information about marine and Great Lakes science and resources; and some $88 million in additional non-federal resources were leveraged in support of Sea Grant efforts.

The community's request for the National Sea Grant College Program for FY13 is $65 million, well below the level authorized by the National Sea Grant College Program Act.

Integrated Ocean Acidification Program

About a quarter of all carbon dioxide emissions are absorbed by the earth's oceans, and the impact of this is just beginning 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 to 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 activities that depend on the oceans.

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, with a slight increase to $6.3 million in FY 11 and FY 12. The recent issue of NOAA's strategic plan outlines how the activities mandated by Congress will be achieved. With this implementation plan in place, $20 million is the amount authorized under FOARAM to support NOAA's obligations under law. However, understanding the difficult fiscal times, we recommend at minimum $17 million in FY 13. This funding would equip current mooring sites with additional pH instruments to expand monitoring efforts in the Atlantic and Pacific oceans, as well as in the estuaries, areas not currently being monitored. Funds would also continue the development of response research, increase monitoring efforts in order to develop an early warning system for vulnerable fisheries and other economically important marine species, enhance synthesis and data products, and support new technologies.

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 ocean and climate systems are interlinked, NOAA is tackling the issue of a changing climate 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 11 are not adequate to meet the urgent and critical climate observational, research, and modeling needs. Therefore, it is recommended that climate initiatives and research in NOAA are strongly supported in the FY 13 bud get. While there are many within NOAA, some of the key climate programs and research to support in the FY 13 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

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; this initiative 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.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

OFFICE OF EDUCATION

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, including $18.0 million 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 programs 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 education and environmental priorities. B-WET awards have provided environmental

education opportunities to more than 100,000 students and 10,000 teachers. We recommend $14.0 million for all B-WET programs combined in FY 13.

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 11 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. We recommend $10.0 million for a NOAA Climate Change Education program in FY 13.

DEPARTMENT OF EDUCATION
DEPARTMENT OF LABOR

9 DEPARTMENT OF EDUCATION

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, and 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 13, Congress fund the University Sustainability Program as a standalone program at $50.0 million.

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 13 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 monitor, evaluate, and provide information, funding, and technical assistance 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.

No Child Left Inside Act

The NCLI Act should be an important component of the reauthorization of the Elementary and Secondary Education Act (ESEA) as the 112th Congress continues to consider it. 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. Last year, in a historic move, the Senate Health, Education and Labor Committee included environmental education literacy as part of a major reform of the Elementary and Secondary Act. The move to include environmental education under the "Well-Rounded" competitive grants program -- which will allow federal education funds to be used to support environmental literacy in America's public schools -- enjoyed strong bipartisan support.

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.

We recommend funding in FY 13 at $265 million for well-rounded education, of which $50 million should be directed for environmental education. This funding 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.

9 DEPARTMENT OF LABOR

Green Jobs Innovation Fund (formerly the 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. This program was renamed the Green Jobs Innovation Fund in FY 11. The GJIF 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 Green Jobs Innovation Fund is administered by the Department of Labor in consultation with the Department of Energy. The program responds to preexisting 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. In FY 11 the Green Jobs Innovation Fund and was incorporated into the Workforce Innovation Fund with other programs and received \$40 million. However, in FY 12, the program received \$0. In order for the U.S. to remain competitive in the 21st Century global economy, it is critical that Congress fund the Green Jobs Innovation Fund at the authorized amount of \$125.0 million in FY 13.

CORPORATION FOR NATIONAL AND COMMUNITY SERVICE
NASA
NATIONAL SCIENCE FOUNDTION

10 CORPORATION FOR NATIONAL AND COMMUNITY SERVICE

Clean Energy Service Corps

As directed by the Serve America Act (Public Law 111-13), the Corporation for National and Community Service has designated Environmental Stewardship as one of five "focus areas" for national service programming in its Five Year Strategic Plan. To fulfill the environmental stewardship goals associated with the plan, the Corporation should fund Clean Energy Service Corps - built on the legacy of the depression-era Civilian Conservation Corps and modeled after today's Service and Conservation Corps - to address the nation's energy and 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 protect, improve, and conserve our nation's natural resources. In FY 13, Congress should fund the Clean Energy Service Corps at $100.0 million.

10 NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

CLIMATE CHANGE EDUCATION

NASA 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 FY 13 at $15.0 million.

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 his grant program in FY 13 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.

ARMY CORPS OF ENGINEERS

11 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 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.

11 ARMY CORPS OF ENGINEERS

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 awaiting 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 to implement on-the-ground restoration projects.

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, 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. 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. Habitat of the Upper Mississippi River is critical 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 its the authorized level will significantly inhibit the Corps' ability to perform this necessary restoration work.

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

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.

Congress should also provide funding to allow the Missouri River Authorized Purposes Study (MRAPS) to move forward. MRAPS is a study authorized in WRDA 2007 but subsequently halted by Congress that would comprehensively study the river's nine often conflicting authorized purposes, last updated in the 1940's, with a goal of improving flood control and ecosystems.

11 ARMY CORPS OF ENGINEERS

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 while 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 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, states, Indian tribes and federal agencies, environmental groups, ports, and citizens.

CROSS-CUTTING PROGRAMS

12

CROSS-CUTTING PROGRAMS

COASTAL AND MARINE SPATIAL PLANNING

Coastal and Marine Spatial Planning

We recommend sustaining the $12.2 million for implementing Coastal and Marine Spatial Planning (CMSP) in the FY 13 across NOAA ($6.7 million), USGS ($4.5 million), and BOEMRE ($1 million). This funding is required to implement the National Ocean Policy and facilitate smarter, more efficient use and conservation of our ocean resources. With this limited funding, we recommend that the agencies be directed to focus on a small number of priority regions that are best positioned to move forward with CMSP.

This funding is needed to support the federal agencies in providing the basic building blocks of data, maps, assessments, and tools necessary to inform a CMSP process and ensure that these efforts are truly science-based. NOAA and USGS already partner on a variety of geospatial efforts. This funding will allow for further collaboration between the agencies and outside partners to develop the suite of information and tools that the Regional Planning Bodies will need to rely on (see NOAA section for specific NOAA funding needs for Coastal and Marine Spatial Planning).

Regional assessments that describe the structure, function, composition, and important ecological areas of the ecosystem, develop indicators of ecosystem health, and identify current and emerging threats are needed to provide the baseline for developing regional CMSP. 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.

Existing data that is spread across multiple federal, state, and private entities needs to be integrated in order to produce the maps and decision support tools that regions will need to assess conflicts and tradeoffs among potential uses as well as evaluate potential implications for ocean health. Maps are needed that characterize habitat and identify important ecological areas. Human-use patterns (e.g. shipping, recreational fishing, military areas, pollution, etc.) need to be mapped and potential conflict, compatibility, and/or interdependence among uses and ecosystem characteristics need to be assessed. Decision support tools should be utilized so that planning entities and stakeholders can display and work with data to evaluate tradeoffs among different planning scenarios.

Finally, as BOEMRE moves forward with the Smart From The Start (SFTS) initiative to stand up offshore wind in the Atlantic, additional funding is needed so that they can comply with the National Ocean Policy and incorporate the principles of CMSP – namely stakeholder engagement, use of spatial data, and coordination with other agencies, states, and tribes – into the SFTS effort.

12 CROSS-CUTTING PROGRAMS

COASTAL AND MARINE SPATIAL PLANNING

National Ocean Council

The recommended funding of $0.5 million to the Council on Environmental Quality (CEQ) would provide staff as well as meeting and travel costs for the new National Ocean Council (NOC), the Governance Coordination Committee, and the Ocean Research Advisory Panel.

In particular, funding is needed to hire a Director and Deputy Director of the NOC, as envisioned in the Final Recommendations of the Interagency Ocean Policy Task Force. The work of the NOC is facing a critical phase, with upcoming timelines for completing the nine Strategic Action Plans and moving forward with CMSP. Filling these positions will help ensure the smooth operation of the NOC as it oversees and coordinates with the various agencies the day-to-day work needed to carry out these important tasks.

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 $576 million in federal funds into over $2 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 2013, 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 $7.5 million through the U.S. Fish and Wildlife Service, Resource Management, 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, 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, will expand matching grants partnerships with the Service to restore wet meadows, conserve riparian areas, and improve fish passage in critical habitats.

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 have all 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 analyses and "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 divide ocelot 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 should 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, 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. H.R. 2017, the FY 2012 House DHS appropriations bill had included language intended to help in the transfer of the promised funds, but the language was stricken in an amendment offered on the House floor.

To adequately address borderlands conservation and mitigation needs, 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 of the measures required.

In addition to mitigating for border security infrastructure impacts, such a 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 cleaning and protecting fouled water sources; blocking hundreds of miles of illegal roads; the removal of trash and abandoned vehicles; using

surveillance and deterrence technology; fighting fires associated with border crossers; monitoring hydrological impacts (e.g. erosion, sedimentation, debris and water conveyance) and restoring impaired hydrological function across the border; and protection and restoration of important historic, cultural, and anthropological structures and artifacts.

CROSS-CUTTING PROGRAMS

ARCTIC SCIENCE

Arctic Science

The Arctic is a special and unique ecosystem that is particularly vulnerable and prone to rapid change – by some estimates it is warming at twice the rate as the rest of the planet. The region has profound significance for climate and the functioning of ecosystems around the globe. With increasing temperatures, loss of sea ice, and shifts in ecosystems, we are challenged to address environmental, economic, and national security issues that will have significant impacts for human lives, livelihoods, and coastal communities. NOAA must play a key role in developing a better understanding of the region and ongoing changes to inform decision making and new management challenges. The Administration should move forward to implement the strategic goals identified in NOAA's Arctic Vision and Strategy (Feb. 2011) and maintain and protect funding to address these priorities:

- Forecast sea ice (improving models, predictions, projections, links between changes in sea ice and weather and climate)
- Strengthen foundational science: (marine distributed biological observatory)
- International and National partnerships: (working to expand protection at the international level)
- Stewardship and management: (ongoing assessment programs for marine mammals, fish, and shellfish; expand Bering-Aleutian Salmon International Survey and RUSCLCA surveys)
- Healthy communities and economies: (expansion of environmental response management application (ERMA) tool to areas of key concern in Beaufort and Chukchi seas; overhauling the Arctic geospatial framework, surveying and mapping, spill trajectory modeling, etc.)

Oil and gas development is perhaps one of the most pressing threats to the Arctic. We recommend providing an additional $1.5 million for a reputable independent body, such as the National Research Council (NRC), to analyze the US Geological Survey's "Evaluation of the Science Needs to Inform Decisions on Outer Continental Shelf Energy Development in the Chukchi and Beaufort Seas, Alaska" (June 2011).

Secretary Salazar tasked the USGS with preparing its evaluation of Arctic science in 2010. At the time, the Secretary noted that "the Arctic Ocean is the least understood of all the world's oceans. Without adequate information about the marine environment, managers can not responsibly make informed decisions concerning whether industrial activities should occur in the Arctic, and if so, when, where, and how." The USGS completed its work and published its evaluation in June 2011. The USGS evaluation identified a wide array of "gaps" in our understanding of Arctic marine eco systems. An independent entity, such as the National Research Council (NRC), should analyze the USGS evaluation, identify the highest-priority gaps, develop a research plan designed to fill those gaps, and make recommendations about how best to evaluate risks and inform policy decisions in the Arctic. 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.

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 taken actions 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. Solar projects planned and approved in 2011 continued an aggressive pace and scale for renewable energy development never before seen on public lands. 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, along with the assistance of the Council on Environmental Quality and full cooperation 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 20 million acres have been identified in BLM's preferred alternative for solar energy development in a six state region and 20

million acres for wind development in a final EIS. 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. The FY 12 budget for BLM included $19.7 for renewable energy sub-activity of Energy and Minerals Management called Renewable Energy Management. This positions the BLM to improve work on permitting projects. . Despite this significant responsibility, programs responsible for renewable energy permitting 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 and permits 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. As USGS scientists recently reported in the peer-reviewed literature, detailed information is crucial but lacking 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. 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. The first-ever wind project on USFS lands has already generated significant controversy. Adequate funding for the agency to undertake an assessment of appropriate locations for renewable energy development will ensure that harmful conflicts are avoided and, if necessary, properly mitigated.
- The Environmental Protection Agency's REnew Lands Initiative: Intended to encourage the development of brownfields, abandoned mine sites, and other 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 served by existing infrastructure and 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 that also meet 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. Cutting 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 a $27,000 match in volunteer hours to save the site from vandalism, off-highway vehicle damage, shooting, and continued misuse by visitors.

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.

The program leverages our taxpayer dollars, doubling the federal investment toward completed projects. With all of these attributes, this program is unique in its ability to engage the public in the stewardship of public lands. Therefore, the Challenge Cost Share program in the U.S. Department of the Interior Budget for BLM, FWS, and NPS deserves level funding of $19 million in FY 2013, as enacted in FY 2010 and 2011, and requested in 2012. 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 (EPAct) 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 sufficient funding to allow them to uphold their congressionally authorized duties to protect public resources with license conditions when appropriate and hold hearings mandated by EPAct when the factual basis of the conditions are being reviewed. If adequate funding for the hydropower relicensing requirements that EPAct 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.

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 2,300 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

NATIONAL FISH HABITAT PARTNERSHIP

National Fish Habitat Partnership

Since 2006, National Fish Habitat Partnership investments have generated nearly $1 billion in economic value and supported over 20,000 jobs. In 2011 alone, the value of National Fish Habitat Partnership conservation projects was over $185 million, supporting 3,600 jobs.[1]

The mission of the National Fish Habitat Action Plan, now the National Fish Habitat Partnership, is to protect, restore, and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people. This mission is achieved by:

- Supporting existing fish habitat partnerships and fostering new efforts;
- Mobilizing and focusing national and local support for achieving fish habitat conservation goals;
- Setting national and regional fish habitat conservation goals;
- Measuring and communicating the status and needs of fish habitats;
- Providing national leadership and coordination to conserve fish habitats.

The delivery architecture for on-the-ground conservation projects happens through Fish Habitat Partnerships (analogous to Joint Ventures in the migratory bird community); 17 Fish Habitat Partnerships have been endorsed by the National Fish Habitat Board to date, with four additional candidate partnerships working toward recognition.

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 National Fish Habitat Action Plan (2006) is in the process of revision, determining new objectives aimed at the continued conservation of our nation's aquatic communities.

[1] National value estimates produced by National Fish Habitat Partnership board member Brad Gentner of Gentner Consulting Group, Inc. based on original work and Charbonneau, J.J. and J. Caudill. 2010. Conserving America's Fisheries: An Assessment of Economic Contributions from Fisheries and Aquatic Resource Conservation. U.S. Fish and Wildlife Service White Paper. Business Management and Operations, Division of Economics. September 2010. Arlington VA. 42pp."

Everglades Ecosystem Restoration

Recognized as a World Heritage Site, an International Biosphere Reserve, and a Wetland of International Importance, the Everglades are one of the world's most diverse and productive wetlands and are a tremendous economic generator for Florida. In 2009 alone, Everglades National Park created nearly 3,000 jobs, of which more than 2,300 jobs were in the local private sector. It generated more than $165 million in visitor spending. Further, a report by Mather Economics found that every dollar invested in Everglades restoration generates four dollars in return in ecosystem benefits such as drinking water supply, tourism, park visitation, recreation, and wildlife habitat.

While the Everglades is an ecological treasure and economic engine, it is 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 World Heritage in Danger.

Restoration of the Everglades is at a critical juncture, and keeping Everglades restoration on schedule will require significant federal investment in the coming year. Without continued funding, delays will occur and problems will get worse, making restoration more expensive in the future.

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.

Currently, 17 restoration projects are under construction, including groundbreakings in 2011 at the Picayune Strand -Faka Union Pump Station and the Indian River Lagoon-South C-44 Intake Canal. 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 and has produced more than 1,200 regional jobs through an $81 million contract. Over the last three years, Everglades restoration projects have generated 10,500 jobs. Sustained funding to keep these projects on schedule is critical to avoiding collapse of the ecosystem and economy of 7.5 million South Floridians.

To continue moving forward with Everglades restoration, the U.S. Army Corps of Engineers (USACE) needs continued funding in FY 2013 for CERP projects and other ongoing restoration projects. We recommend $180 million for USACE, which would be used on the following projects: CERP-Indian River Lagoon South, CERP-Picayune Strand, CERP-Site One Impoundment, C-111 South Dade to restore water to Florida Bay, C-51/STA 1-E for wetlands creation, and Kissimmee River restoration.

EVERGLADES ECOSYSTEM RESTORATION

The Department of the Interior (DOI) is also a major federal partner in restoring the Everglades. We recommend $75 million for FY 2013 for agencies within DOI to continue moving forward with key projects, which includes $8 million for Modified Water Deliveries project to Everglades National Park and funding for water quality monitoring and modeling and invasive species eradication.

12 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 these lakes for their drinking water, and the lakes also support important commerce and business activity in the sectors of agriculture, industrial manufacturing, steel production, commercial and sport fisheries, and recreation and tourism.

The economic benefits of the Great Lakes are well documented. The Brookings Institution 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. Economists at Grand Valley State University in Michigan concluded that a $10 million investment to restore Muskegon Lake in Michigan is generating more than $66 million in returns on investment through higher property values, increased tourism, and an expanded tax base. More than 1.5 million U.S. jobs are directly connected to the Great Lakes, generating $62 billion in wages annually, according to an analysis by Michigan Sea Grant at the University of Michigan.

Despite their significance and 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 seeks to 1) implement the recommendations of the GLRC and restore and protect the Great Lakes, 2) coordinate actions among federal agencies, or federal agencies and nonfederal partners, and 3) ensure accountability that ensures results. The Great Lakes Restoration Initiative is producing results by supporting more than 900 local projects in Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin aimed at restoring the Great Lakes.

Both the President and Congress have demonstrated ongoing, bi-partisan support for the GLRI and other Great Lakes restoration programs. In Fiscal Year 2010, Congress appropriated $475 million to the U.S. Environmental Protection Agency for the GLRI, part of which the EPA passed through to other federal agencies in order to attack the most urgent threats facing the lakes according to the Great Lakes restoration plan: invasive species like Asian carp; toxic pollution contaminating rivers and bays; habitat and wetland loss; and urban and farm runoff that leads to algal blooms and degraded water quality. Congress appropriated $299.4 million in fiscal year 2011 and $300 million in fiscal year 2012.

Congress should provide additional funding for the GLRI in fiscal year 2013 that is on par with the average amount of funding over the past three fiscal year years.

The GLRI is a model for collaboration. This is especially true for Native American Tribes in the Great Lakes region, which have joined together to establish a model of federal-state-tribal

collaboration. There is great interest in replicating this across the country. Of the $475 million allocated for the GLRI in FY10, $3 million was allocated to tribes. Funding for tribes under the Great Lakes Restoration Initiative should be maintained in FY2013 at similar levels.

In addition to EPA's funding, base funding for programs at other agencies also need support in order to maintain current levels of restoration: the Army Corps of Engineers' Great Lakes Fishery and Ecosystem Restoration program, Remedial Action Assistance program (Sec. 401), and activities to prevent Asian carp from invading the Great Lakes; the U.S. Fish and Wildlife Service's Great Lakes Fish and Wildlife Restoration program; the U.S. Geological Survey's Great Lakes Science Center to support base level activities at each agency; NOAA's Great Lakes Environmental Research Laboratory; and the Great Lakes Fishery Commission, which is funded through the Department of State.

Lacey Act Amendment

Illegal logging plays a central role in driving tropical deforestation and degradation in the developing world. It also undermines businesses in the U.S.by approximately $1 billion annually due to underselling by cheaper, illegal timber supplies. In recognition of these threats, Congress amended the Lacey Act in 2008 to expand its protections to a broader range of plants and plant products. In September 2011, this amendment was recognized internationally, receiving the World Future Council's silver medal as one of the three most inspiring and innovative pieces of national legislation to protect the world's forests. The European Union, Australia, and other countries are closely following the U.S. lead.

After three years, the 2008 amendments are already showing impressive results. Illegal logging is on the decline, as much as 25% worldwide, with reductions as high as 50-70% in some key countries. Companies around the globe are changing the way they make sourcing decisions and monitor their supply chains. Consistent enforcement over time is essential to solidify these new behaviors so they become common practice.

In order for the law to continue delivering, it is essential that $13.5 million be dedicated to support Lacey Act implementation in FY13, channeled through several agencies. These include $5.5 million for the U.S. Department of Agriculture's Animal and Plant Health Inspection Services (APHIS) to build an electronic declarations database and to add internal capacity to perform data analysis for monitoring and enforcement.

USAID and the State Department are undertaking international outreach to explain the implications of the expanded Lacey Act to producer countries. Funding for these efforts, which impact industry practices around the world, should be increased to $4 million. The Fish and Wildlife Service also needs funding to carry out enforcement activities, including periodic public cases that are critical to deter bad operators. At least $4 million is needed by the USFWS' Office of Law Enforcement to accommodate this mandate.

12 CROSS-CUTTING PROGRAMS
PULIC 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.

The Administration's report, "America's Great Outdoors," calls for the creation of a 21st Century Conservation Service Corps to engage young Americans in public lands and water and a Federal Advisory Committee has just been named to provide recommendations to the Administration regarding the establishment of the 21st CCSC. In addition, legislation has been introduced in both the House and Senate to improve and expand the Public Lands Corps Program. Finally, a recent study by the National Park Service indicates that work done with Service and Conservation Corps costs 44 percent less than work done in-house or by contract, enabling NPS to accomplish more work at a fraction of the cost. This program was funded at $5 million in FY 12. However, in FY 13, Congress should pass the Public Lands Service Corps Act and, working with the Federal Land Management Agencies and other partners, dedicate $100 million from new or existing streams to double the number of corps members currently engaged in PLC projects.

CROSS-CUTTING PROGRAMS

WHITE-NOSE SYNDROME

National Strategy to Address White-Nose Syndrome

White-Nose Syndrome (WNS) poses the gravest threat ever faced by North American bats. Since its discovery in 2006, this disease has killed 5.7 to 6.7 million bats in the United States and Canada. It is named for the cold-loving white fungus that causes the disease, typically found on the faces and wings of infected bats. WNS disrupts bats' hibernation patterns, depleting fat reserves needed for winter. Infected bats often emerge early from hibernation, before the return of warm weather and their insect prey, only to freeze or starve to death. First reported in New York State, the disease or its causative fungus has spread to 19 states and four Canadian provinces.

Biologists describe the WNS die-off as North America's most precipitous wildlife decline of the past century. Bats that hibernate through the winter in caves and mines constitute 25 of the nation's 47 bat species. Because the WNS fungus thrives in the cold, damp environment of caves and mines, scientists believe any hibernating bat could be at risk. The disease or its causative fungus currently affects nine species, including the endangered Indiana and gray bats. WNS mortality exceeds 90% at many sites. Losses are so drastic that researchers are predicting regional extinctions of the little brown bat, once among North America's most common mammals, in the northeastern United States within 15 years. In response to these declines, the Fish and Wildlife Service is conducting a status review of the little brown bat, as well as listing reviews for two other bat species.

The loss of bats would 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 expensive pests that damage such crops as corn, cotton, and potatoes. A study published last year in *Science* estimates that bats save U.S. farmers at least $3.7 billion per year by preventing crop damage and limiting the need for pesticides. Without bats, farmers would face new financial strains, consumers would likely see higher food prices, and more chemicals would be released into our environment. Insects consumed by bats also carry diseases such as West Nile virus.

This is a critical moment for WNS funding. The disease and the fungus that causes it were unknown to science until just five years ago. Since then, the bat research and conservation community has mobilized impressively to answer the basic science and management questions about the disease. Now researchers and managers are on the cusp of using this knowledge to explore potential solutions and mitigation strategies.

Cuts to WNS funding in Fiscal Year 2013 will impair efforts to capitalize on this hard-won progress. Last year, the Fish and Wildlife Service published the National Plan for Assisting States, Federal Agencies, and Tribes in Managing White-Nose Syndrome in Bats. FWS is coordinating implementation of this plan to maximize efficient use of resources, prevent redundancy, and facilitate effective action. Six federal agencies, as well as state agencies and other entities, have ambitious Fiscal Year 2013 goals for contributing to the plan's seven action areas. The Geological Survey, at the forefront of research into WNS epidemiology, diagnostics, management, and recovery plans to begin research on a possible vaccine for WNS. The National Park Service intends to conduct decontamination procedures for visitors to its caves to help prevent the spread of the fungus. The Forest Service aims to manage forests on its lands to improve summer habitat for bats, while the Bureau of Land Management proposes an inventory

of bat populations in caves and abandoned mines in western states not yet affected by the epidemic. The Department of Defense anticipates conducting research on bats that survive WNS on military installations to inform recovery efforts. In addition, state wildlife agencies rely on FWS grants for essential WNS surveillance and management. Without funding, these efforts will come to a standstill.

In FY 2012, Congress directed FWS to allocate at least $4 million from its Recovery fund for WNS research and response. Congress also directed FS and BLM to prioritize WNS research and the inventory and monitoring of bat resources on the agencies’ lands.

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 ultimate 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.

12 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 $7 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.

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

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.

PROGRAM CONTACTS

PROGRAM CONTACTS

OFFSETS

Friends of the Earth
Ben Schreiber
bschreiber@foe.org
202-222-0752

DEPARTMENT OF AGRICULTURE

FARM BILL CONSERVATION PROGRAMS

National Wildlife Federation
Aviva Glaser
glasera@nwf.org
202-797-6616

Environmental Defense Fund
Sarah Hopper
shopper@edf.org
202-572-3379

FOREST SERVICE

The Wilderness Society
Anne Merwin
anne_merwin@tws.org
202-556-2920

Defenders of Wildlife
Mary Beth Beetham
mbeetham@defenders.org
202-772-0231

American Forests
Rebecca Turner
rturner@americanforests.org
202-737-1944, ext. 221

DEPARTMENT OF ENERGY

Natural Resources Defense Council
Cai Steger
csteger@nrdc.org
212-727-2700

Physicians for Social Responsibility
Morgan Pinnell
mpinnell@psr.org
202-587-5232

The Southern Alliance for Clean Energy
Simon Mahan
simon@cleanenergy.org
202-375-9771

COUNCIL ON ENVIRONMENTAL QUALITY

The Partnership Project
Stephen Schima
Stephen@saveourenvironment.org
202-429-2642

PROGRAM CONTACTS

DEPARTMENT OF HOMELAND SECURITY

American Rivers
Jim Bradley
jbradley@americanrivers.org
202-347-7550

DEPARTMENT OF STATE

World Wildlife Fund
Will Gartshore
will.gartshore@wwfus.org
202-495-4344

World Wildlife Fund
Vanessa Dick
vanessa.dick@wwfus.org
202- 465-4501

US Climate Action Network
Lara Levison
llevison@climatenetwork.org
202-957-9010

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

World Wildlife Fund
Will Gartshore
will.gartshore@wwfus.org
202-495-4344

World Wildlife Fund
Vanessa Dick
vanessa.dick@wwfus.org
202- 465-4501

US Climate Action Network
Lara Levison
llevison@climatenetwork.org
202-957-9010

DEPARTMENT OF INTERIOR

BUREAU OF LAND MANAGEMENT

The Wilderness Society
Ben Friedman
bfriedman@tws.org
202-429-2641

Defenders of Wildlife
Mary Beth Beetham
mbeetham@defenders.org
202-772-0231

BUREAU OF RECLAMATION

American Rivers
Jim Bradley
jbradley@americanrivers.org
202-347-7550

PROGRAM CONTACTS

FISH AND WILDLIFE SERVICE

Defenders of Wildlife
Mary Beth Beetham
mbeetham@defenders.org
202-772-0231

World Wildlife Fund
Will Gartshore
will.gartshore@wwfus.org
202-495-4344

National Wildlife Refuge Association
Desiree Sorenson-Groves
dgroves@refugeassociation.org
202-290-5593

LAND AND WATER CONSERVATION FUND

The Wilderness Society
Alan Rowsome
alan_rowsome@tws.org
202-429-2643

Trust for Public Land
Kathy DeCoster
kathy.decoster@tpl.org
202-543-7552 ext. 13

NATIONAL PARK SERVICE

National Parks Conservation Association
John Garder
jgarder@npca.org
202-454-3395

U.S. GEOLOGICAL SURVEY

Defenders of Wildlife
Mary Beth Beetham
mbeetham@defenders.org
202-772-0231

American Rivers
Jim Bradley
jbradley@americanrivers.org
202-347-7550

BUREAU OF INDIAN AFFAIRS

National Wildlife Federation
Garrit Voggesser
voggesser@nwf.org
303-441-5161

BUREAU OF OCEAN ENERGY MANAGEMENT

The Southern Alliance for Clean Energy
Simon Mahan
simon@cleanenergy.org
202-375-9771

PROGRAM CONTACTS

<u>DEPARTMENT OF TRANSPORTATION</u>

Natural Resources Defense Council
Deron Lovaas
dlovaas@nrdc.org
202-289-6868

<u>DEPARTMENT OF THE TREASURY</u>

World Wildlife Fund
Will Gartshore
will.gartshore@wwfus.org
202-495-4344

World Wildlife Fund
Vanessa Dick
vanessa.dick@wwfus.org
202- 465-4501

US Climate Action Network
Lara Levison
llevison@climatenetwork.org
202-957-9010

<u>ENVIRONMENTAL PROTECTION AGENCY</u>

American Rivers
Jim Bradley
jbradley@americanrivers.org
202-347-7550

National Tribal Environmental Council
Bob Gruenig
bgruenig@ntec.org
505-242-2175

Natural Resources Defense Council
Scott Slesinger
sslesinger@nrdc.org
202-289-2402

<u>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</u>

Marine Conservation Institute
Emily Douce
emily.douce@marine-conservation.org
202-546-5346

Restore America's Estuaries
Jeff Benoit
jbenoit@estuaries.org
703-524-0248

Ocean Conservancy
Ellen Bolen
ebolen@oceanconservancy.org
202-429-5609

Marine Fish Conservation Network
Ken Stump
kstump@conservefish.org
202-543-5609

PROGRAM CONTACTS

DEPARTMENT OF EDUCATION/LABOR/ HOUSING AND URBAN DEVELOPMENT

National Wildlife Federation
Danielle A. Moodie-Mills
moodied@nwf.org
202-797-6634

ARMY CORPS OF ENGINEERS

American Rivers
Jim Bradley
jbradley@americanrivers.org
202-347-7550

CROSS-CUTTING PROGRAMS

National Fish and Wildlife Foundation
Greg Knadle
greg.knadle@nfwf.org
202-595-2485

Defenders of Wildlife
Mary Beth Beetham
mbeetham@defenders.org
202-772-0231

Audubon
Brian Moore
bmoore@audubon.org
202-861-2242

National Wildlife Federation
Danielle A. Moodie-Mills
moodied@nwf.org
202-797-6634

National Wildlife Federation
Josh Saks
saksj@nwf.org
202-797-6631

American Rivers
Jim Bradley
jbradley@americanrivers.org
202-347-7550

Marine Conservation Institute
Emily Douce
Emily.douce@mcbi.org
202-546-5346

National Parks Conservation Association
Chad Lord
clord@npca.org
202-454-3385

Alaska Wilderness League
American Bird Conservancy
American Forests
American Hiking Society
American Rivers
Association of Fish and Wildlife Agencies
Bat Conservation International
Chesapeake Bay Foundation
Defenders of Wildlife
Earth Day Network
Environment America
Environmental Defense Fund
Friends of the Earth
League of Conservation Voters
Marine Conservation Institute
Marine Fish Conservation Network
National Audubon Society
National Fish and Wildlife Foundation
National Parks Conservation Association
National Wildlife Refuge 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