

**COMMERCE, JUSTICE, SCIENCE, AND RELATED  
AGENCIES APPROPRIATIONS FOR FISCAL YEAR  
2010**

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**HEARINGS**

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

ON

**H.R. 2847**

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF COMMERCE AND JUSTICE, SCIENCE, AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2010, AND FOR OTHER PURPOSES

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**Department of Commerce  
Department of Justice  
National Aeronautics and Space Administration  
Nondepartmental Witnesses**

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**COMMERCE, JUSTICE, SCIENCE, AND RE-  
LATED AGENCIES APPROPRIATIONS FOR  
FISCAL YEAR 2010**

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**THURSDAY, APRIL 23, 2009**

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Reed, Pryor, Shelby, Alexander, and Murkowski.

DEPARTMENT OF COMMERCE

SECRETARY OF COMMERCE

**STATEMENT OF HON. GARY F. LOCKE, SECRETARY**

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. The Subcommittee on Commerce, Justice, and Science of the Senate Appropriations Committee will come to order.

This is our first hearing on the fiscal year 2010 appropriations for this subcommittee and for the 111th Congress.

Today, we are beginning with the Commerce Secretary, Gary Locke. Secretary Locke brings an incredible background and has an incredible agency to do it.

First of all, I believe that President Obama made a very good pick. Secretary Locke was formally the Governor of the State of Washington. He is well known for his commitment to innovation in his own State, to being a stickler for far-reaching management, and really comes with a commitment to innovation and experience in dealing with the Pacific Rim where so much of the future of the economy is tied.

He has a compelling personal narrative as well, and we are just glad to have him.

The Commerce Department itself is a very unique agency, and it was created to promote commerce, but the commerce of the old century is not the commerce of the new century. This is why the Secretary, bringing a very forward-looking viewpoint and a President who has put the resources in, put the people in, really wants to have that commitment.

This should be the innovation agency. It should be the agency that really fosters the idea of an innovation-friendly Government,

whether it is ensuring that people do not stand forever in order to get a patent, or that we protect our intellectual property and we view it as part of our homeland security. Additionally, agencies like the National Institute of Standards and Technology develop the standards for the new ideas and the new technologies so that our private sector can invent the new products to create jobs here and compete in the world.

We also know that the agency is being called upon in the area of NOAA, which is so important to providing jobs to us in the coastal States—not providing jobs, but overseeing those things that impact on jobs. And we all know every single Senator depends on NOAA, whether it is to warn us of tornadoes, hurricanes, or to provide the information that farmers, factories, and people need. We also know that it is all part of green science which President Obama is advocating.

Last but not at all least, it also has the important Census Bureau, and we in this committee believe that everybody counts in this country and everybody should be counted. So these are the big jobs of this agency.

But we have had unrealistic funding for science programs, very little funding for technology and manufacturing partnerships, and then there have been really incredible management and cost overrun issues in terms of the NOAA satellites and also the census.

This hearing today will be reviewing both the appropriations request and also what this Secretary wants to do with accountability.

We know that the Department of Commerce was allocated sufficient funds for the stimulus package. We will be asking both today and in the days ahead how is the stimulus really promoting commerce in our country on issues like broadband and increased funding.

But we also want to see increased accountability on the management issues facing the Commerce Department. The primary one that has such an immediate urgency is the 2010 census. The other has been the poor oversight of NOAA's satellite programs, and then both with this Secretary and his predecessor, our ongoing conversation about the need to reform the patent and trademark process. While our friends in Judiciary oversee patent law, we have to make sure there is a Patent Office infrastructure so that we have an innovation-friendly Government.

Once again this year, I am pleased to say my ranking member will be Senator Richard Shelby. Senator Shelby and I have served in both the House and the Senate together. We have worked on this subcommittee now for more than 4 years, and we bring a spirit of bipartisanship, absolute civility and cooperation and consultation, and we intend to continue that. We believe that when we work together, we govern best.

I would like to just say a few words now about the census. We take our constitutional obligation very seriously to have an accurate census. In 2009, we provided \$3.14 billion to do it, \$2.4 billion through the regular appropriations process and \$1 billion in the American Recovery Act. Senator Shelby and I have deep, deep concerns about the census management. We are concerned about the techno-boondoggle that has occurred, the tremendous loss of money, and the tremendous loss of opportunity. We learned that

handheld computers could not be fully implemented. Census had to go back to pen and paper. Well, we might as well go back to the stylus and papyrus. I mean, this is the United States of America. It is being conducted under the Commerce Department, which is supposed to be the innovation agency, and we cannot get a handheld computer to work right to go knock on a door and “say are you the person that really lives here?” So we are really cranky about this.

Moving beyond cranky into really absolute frustration is the accountability at the Patent and Trademark Office. We know that we have to have a well functioning Patent Office. My State is not only home to so much of our biotech innovation, the home to NIH and FDA, but a vibrant private sector that develops biotech companies as well.

If we had our biotech executives here, they would say we stand in two lines in order to move our research into the clinical area. We stand in the FDA line for safety and efficacy. We want to be able to do that. But we also stand on the PTO, the Patent Office, and while we are standing in line, waiting sometimes 5 years, other people are in line overlooking our shoulder stealing our ideas. We cannot have that. The biggest intellectual theft in the world is going on, and it is because we have a stagnant operation there.

So we have talked about reform. The talk is over. Now it is time for action.

Then we have the NOAA satellite situation. Satellites at NOAA account for 25 percent of their total funding. Satellites are critical to predicting and warning about weather and observing changes in the Earth’s climate. With an expected \$1.3 billion request, we want to get value for our dollar. We have now triggered a Nunn-McCurdy-like process to get our satellites under some type of fiscal discipline, and we need to know how is the Department going to handle the independent recommendations that have been made to put it back on track.

We know you have a commitment to these. We know, Mr. Secretary, you have a commitment to it. We know that the President has a commitment to it. You bring a great deal of management know-how. We want to make sure we put the money in the checkbook in order to be able to accomplish these goals of ensuring jobs in America and saving our planet and also counting the people that are in our country so we know who we are, where we are and where we need to go.

I would like to now turn to my able colleague, Senator Shelby, for his opening statement.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you, Madam Chairwoman. Welcome, Mr. Secretary.

As Senator Mikulski has said, we have worked extremely well together on this subcommittee sharing many of the same goals and expectations for the agencies that this committee oversees. Senator Mikulski, I am pleased to serve beside you once again, and I look forward to working with you in a bipartisan fashion.

Mr. Secretary, as I just said, welcome to the committee. I look forward to learning more about the soon-to-be-released 2010 budget request and look forward to working with you in the years ahead.

The Nation relies heavily on the Department of Commerce to maintain America's competitiveness within the markets around the world. The Department provides revenues to promote the products and services of U.S. businesses and then helps to level the playing field by expanding, strengthening, and enforcing our international trade agreements. Through the Department of Commerce, our country is able to maintain high technical standards as well as staying on the cutting edge of scientific research, all of which, Mr. Secretary, as you know well, are fundamental to our Nation's leadership in the global market.

The Department of Commerce plays a vital role in our Federal Government and is in dire need of a leader to oversee the programs and agencies that are in distress. I believe they have found one. Within the past year alone, we have learned of failures at the Census, cost and schedule overruns within NOAA's satellite acquisition programs, insufficient fee collections at the Patent and Trademark Office, as well as numerous IT failures and mismanagement cues.

The most serious looming crisis is the census crisis, which Senator Mikulski alluded to. Time is running out and there is great uncertainty for what was predicted to be the most modern and accurate census ever conducted. Census managers, Mr. Secretary, spent 8 years struggling to automate the information collection process by implementing the use of handheld devices that would produce more accurate data to save time and tax dollars. Managerial failures and incompetence have caused those plans to be scrapped and the census will once again be taken, it is my understanding, with paper and pencil. The price tag for this ineptitude raises the cost of the 2010 census.

I am also concerned with the potential for political mischief in the execution of the 2010 census. The administration's announcement that the census would receive direct oversight by the White House staff is troubling. Statistics collected by the census play a critical role in how important decisions are made, including how over \$300 billion in Federal funds are distributed annually. Mr. Secretary, given the broad reach of the data and how it influences the direction of these funds, the 2010 census must remain free of political tampering.

The nominee for Census Director previously advocated the use of mathematical estimates, known as sampling, to lazily back-fill and inaccurately represent the count of our Nation's residents. This approach was reviewed by the Supreme Court during the 2000 Census, and if advocated again for use in the future, a political party could disproportionately steer Federal funding to areas dominated by its own members. This could shift billions of Federal dollars over the next years from some parts of the country to others because of population-driven spending formulas.

By allowing sampling, some States could also potentially end up with more Members of Congress at the expense of others. By overcounting in one State and undercounting in another, manipulation could take place solely for political gain.

The census should be conducted in a fair and accurate manner for all political parties and people using the best methods to determine the outcome. The 2010 census is not an estimate, but a constitutionally mandated count of the entire population.

Mr. Secretary, one of the more important agencies under the Department of Commerce to my home State of Alabama is NOAA, which Senator Mikulski has also referenced. The gulf coast still lacks the infrastructure, research, and support from NOAA that other regions of the country have perpetually received. Just this past Sunday, at least 10 tornadoes touched down in my State of Alabama, killing two people.

You see the chart here, showing billion-dollar climate and weather disasters across the United States from 1980 to 2008. Look where most of them were. In the Southeast.

This NOAA chart—and that is their chart—shows the vulnerability of the southeastern United States to weather-related disasters. It plots the largest instances of billion dollar weather-related catastrophes that have occurred in the United States since 1980. The loss of life and the destruction of property from hurricanes and tropical storms account for more than half of all damages, \$367 billion. If we add the cost of other weather events, such as heat waves, droughts, and flooding, the cost nearly doubles to \$652 billion.

While not all of these events, Mr. Secretary, are limited to the Southeast, NOAA's own research shows that the Southeast experiences more severe weather events than any other part of the country. Yet, federally funded climate and weather research in the region has lagged.

To start to balance this, last year, working with the chairwoman, I provided funding for NOAA to work with the Southeastern universities to establish the Cooperative Institute for Southeast Weather and Hydrology. I am hopeful this will be the beginning of a coordinated effort to better understand the dynamics of weather and hydrology in the region and bring the citizens of the Southeast a semblance of balance in emergency forecasting and research services equal to those provided by NOAA in the Midwest.

Mr. Secretary, I am also disappointed in the Department's lack of oversight on NOAA's satellite programs. NOAA is spending billions of dollars to develop two satellite systems that provide critical weather and environmental data, the National Polar-Orbiting Operational Environmental Satellite system, NPOESS, and Geostationary Operational Environmental Satellite-R series, GOES-R.

The NPOESS satellite system was supposed to cost \$6.5 billion for six satellites. I know you were not here then. It is now estimated that taxpayers will be handed a bill for \$13.9 billion for only four satellites that are less capable than originally planned. Something is amiss. This program is a complete failure for NOAA and an even bigger failure for the taxpayers.

It is also my understanding, Mr. Secretary, that there are internal deliberations at the Department of Commerce to reward the contractor with the option to build two additional NPOESS satellites. My question to you to consider is how can you reward a contractor that has blatantly failed in its mission and cost the taxpayer billions in cost overruns. In other words, how do you evalu-

ate that and how do you reward failure? If you choose to go forward with this effort, I believe that I will oppose it.

The second satellite program is also a grave failure. The GOES-R satellite procurement was a \$6.9 billion program for four satellites which has now ballooned into a \$7.7 billion program for only two satellites with a delivery date 6 years behind schedule.

The acquisition history of these two satellite systems, as well as the failed acquisition of the census handhelds, demonstrates that management and acquisition oversight does not exist at the Department of Commerce. I want to work with you to ensure that you have the tools necessary to perform contract oversight so that the Department can correct the agencies it manages and avoid the mistakes in the future.

Finally, Mr. Secretary, no NOAA construction funding was provided to the Gulf of Mexico within the stimulus spending bill, while the Pacific Coast received more than \$262 million in construction funds. While I am happy for the Pacific Coast communities, I want to know how and why the gulf coast was neglected and look forward to hearing your explanation.

I am also looking forward to hearing your thoughts on the Department of Commerce's budget request and look forward to working with you as the committee crafts the 2010 budget.

Thank you, Madam Chairman.

Senator MIKULSKI. The committee wants to acknowledge that Senator Alexander from Tennessee is here. Senator, if you would be kind enough to withhold your statement until Secretary Locke makes his, then we will give you extra time to say a few words and go into your questions. Is that agreeable to you, Senator?

Senator ALEXANDER. Yes. I am going to have to leave shortly. But Senator Pryor is here—

Senator MIKULSKI. Yes, but you came before Senator Pryor. We also want to note that Senator Pryor is here, our newest member to the committee. You are way down there, but you are moving up pretty fast.

Senator PRYOR. Thank you.

Senator SHELBY. But we have all been down there, have we not?

Senator MIKULSKI. We have all been down there. And when we hear from Secretary Locke, we all know we have been down that road before too.

Secretary Locke, why don't you present the President's request to us and then we will jump right in with our questions?

#### STATEMENT OF SECRETARY GARY F. LOCKE

Secretary LOCKE. Chairman Mikulski, Ranking Member Shelby, and distinguished members of the subcommittee, Senator Alexander and Senator Pryor, I am pleased to join you today to talk about the Department of Commerce. I would like to make just a very brief opening statement while also submitting more comprehensive written testimony for the record.

It is my top priority to make certain that the Department of Commerce plays an integral role in President Obama's efforts to help America reboot, retool, and reinvent. The President's budget reflects the Department's broad mandate to strengthen the Na-

tion's economy, promote innovation and environmental stewardship.

More than that, I have challenged our employees to establish the Department of Commerce in the eyes of the Nation as a voice for main street businesses and family wage jobs and to work to grow local economies by fostering innovation and opening markets to U.S. products and services.

To that end, the President's 2010 budget for the Department includes some \$13.8 billion in discretionary funds. This is an increase of \$4.5 billion over the 2009 fiscal year appropriation of \$9.3 billion, not counting Recovery Act appropriations. The large increase is due primarily to the decennial census, with extra funding of \$4.1 billion.

While most of the details of the 2010 request are still under development, I am happy to share some highlights, and of course, I look forward to providing the rest in the near future.

This budget contains the resources necessary to complete the 2010 census effectively and on time, counting everyone once, only once, and in the right place. The allocation combined with the \$1 billion that the Congress provided in the Recovery Act will enable us to hire nearly 1.5 million temporary workers over the next year. And I want to assure you that we have instituted numerous management and oversight changes in response to findings by the Government Accountability Office and our Inspector General and the concerns of the Congress.

And I want to indicate to Senator Shelby that we have absolutely no intention, no plans whatsoever to use any type of statistical sampling in the reapportionment issues or the apportionment for the Congress. We will follow the Supreme Court ruling that statistical sampling is not allowed and that we will have a physical hard count of people.

The request includes more than \$1.3 billion for the National Oceanic and Atmospheric Administration satellite programs that capture key weather forecasting and climate data, as well as resources to advance climate and ocean research and support implementation of the Magnuson-Stevens Act.

Our weather satellite programs, as have been noted by the chair and by the ranking member, have been the focus of much concern by the Congress and oversight committees. Progress is being made to implement the recommendations of the GAO and the Inspector General and lessons especially from the NPOESS program have been incorporated with respect to the GOES-R program, but we still have challenges and much more work to be done.

The President's plan includes doubling the funding over 10 years for the National Institute of Standards and Technology's research activities that are critical to the Nation's technology infrastructure, as well as \$125 million for the Hollings Manufacturing Extension Partnership program and \$70 million for the Technology Innovation Program.

The Economic Development Administration will provide \$50 million in grants to support the creation of regional innovation clusters and also \$50 million to create a nationwide network of public-private business incubators to promote entrepreneurial activities in distressed areas.

The President's budget also supports the International Trade Administration's efforts to promote exports and eliminate barriers to the sale of U.S. products and services and to continue to give the U.S. Patent and Trademark Office full access to its fee collections.

I want to indicate that I have met with labor representatives of two of the major employee organizations representing POPA, as well as the unit that represents the trademark employees. We simply must work together with the employees and management and the stakeholders to drastically reduce the time it takes to process patents and to have patents issued. Otherwise, we are denying a key part of our economic recovery. It is important to get these innovations commercialized as soon as possible and to allow the American people to benefit from a lot of these technologies, whether drugs or innovations or products.

I want to thank you for entrusting the Department with nearly \$8 billion in Recovery Act funds. We have provided our proposed spend plans and will keep you informed of our progress.

The National Telecommunications and Information Administration, NTIA, will have the biggest challenge: implementing the \$4.7 billion to improve broadband deployment.

Besides planning for the next year and making sure that we use current resources effectively, I am focused on addressing the key management issues facing the Department, and these include conducting a successful 2010 census, improving and shortening the patent process, managing our satellite deployment and acquisition program, and strengthening our overall information technology infrastructure within the Department of Commerce.

#### PREPARED STATEMENT

Your support has been and will be critical to our efforts, and I appreciate the chance to hear your views on these subjects.

Thank you again for the opportunity to come before you today, and I look forward to your comments and your questions. Thank you very much.

[The statement follows:]

#### PREPARED STATEMENT OF GARY F. LOCKE

Chairwoman Mikulski, Ranking Member Shelby, and distinguished Members of the Subcommittee, I am pleased to join you today to talk about the Department of Commerce. It is a privilege to serve the American people and I am grateful for the confidence President Obama has in my ability to lead this great agency. While this is my first opportunity to work with you as Secretary, I realize that the subcommittee has a critical role in achieving the Department's mission.

The Commerce Department has a broad mandate to strengthen the Nation's economy, and promote innovation and environmental stewardship. The means by which we achieve these goals are vast and varied, and the 37,000 public servants under my watch work daily to achieve them. As announced in February, the fiscal year 2010 President's Budget includes \$13.8 billion in discretionary funds for the Department, a major increase over fiscal year 2009 due primarily to the Decennial Census. We look forward to announcing the full details of the President's Budget in the near future.

This budget contains the resources necessary to complete the 2010 Census effectively and on time, with an increase of more than \$4 billion. Combined with the \$1 billion Congress provided in the American Recovery and Reinvestment Act (ARRA), these resources will enable us to conduct the Nation's largest peacetime mobilization by hiring nearly one and a half million temporary workers. The Census Bureau will also focus extensive advertising and partnership activities on hard-to-reach popu-

lations, to encourage a high response rate. All of this will be done with the goal of the most complete and accurate count of the Nation's population to date.

The request provides more than \$1.3 billion for satellites that are essential to the National Oceanic and Atmospheric Administration's (NOAA) ability to capture weather forecasting and climate data. Resources are also provided to advance climate and ocean research, and support implementation of the Magnuson-Stevens Act and its requirement to end overfishing by 2011. These resources build upon the \$830 million provided in the ARRA and will enable NOAA to meet critical mission needs.

This budget supports the National Institute of Standards and Technology's (NIST) advanced measurement and standards activities that are critical to the Nation's technology infrastructure. The President's plan for investments in science includes doubling research funding within NIST over 10 years. The request includes \$125 million for the Hollings Manufacturing Extension Partnership program to enhance the competitiveness of manufacturers by facilitating the adoption of efficient manufacturing processes. The Technology Innovation Program will receive \$70 million to invest in high-impact research that will tackle critical national needs and advance innovation. These two programs had been proposed for termination in the fiscal year 2009 President's Budget. In addition, the ARRA includes \$220 million for NIST's scientific research activities and lab equipment and \$180 million for construction of NIST facilities.

The Economic Development Administration (EDA) will support economically distressed communities in their efforts to develop strategies for long-term growth with higher-skilled and higher-wage jobs. EDA will provide \$50 million in regional planning and matching grants to support the creation of regional innovation clusters. EDA will also use \$50 million to create a nationwide network of public-private business incubators to promote entrepreneurial activities in distressed areas. Oversight of the \$150 million provided to EDA in the ARRA for economic adjustment assistance and infrastructure funding, with priority for areas experiencing severe job losses, will remain active during fiscal year 2010.

In fiscal year 2010, the National Telecommunications and Information Administration (NTIA) will continue its important work of managing the Federal use of spectrum and performing cutting-edge telecommunications research and engineering, including resolving technical telecommunications issues for the Federal Government and private sector. In addition, NTIA will be administering the \$4.7 billion provided in the ARRA to expand broadband deployment and adoption, and will soon have completed the coupon program for the transition to digital television funded in the ARRA and the Digital Television Transition and Public Safety Act.

The President's Budget will also fully support the International Trade Administration's efforts to promote exports from small businesses and eliminate barriers to sales of U.S. products, and give the U.S. Patent and Trademark Office full access to its fee collections, which will provide resources to strengthen the Office's ability to encourage innovation and safeguard the value of intellectual property through more efficient and higher quality patent and trademark examinations.

While most of the details of the fiscal year 2010 request are still under development, I would also like to discuss and listen to your perspectives on the key management challenges facing the Department. Our Inspector General has identified several issues for my immediate attention, including overcoming the setbacks experienced in reengineering the 2010 Census, better positioning the Department to address information security risks, effectively managing the development and acquisition of NOAA's environmental satellites, establishing a safety culture at NIST, and ensuring NTIA effectively carries out its responsibilities for the digital transition. I'm pleased to report some progress in those areas, as the Census has entered its address canvassing phase using handheld computers, and NTIA has eliminated its coupon backlog since receiving ARRA funds, for example.

Some challenges are unique to Commerce, and some are common in the Federal Government and the Nation as a whole. The Department has to upgrade its aging infrastructure, and effective management is critical to these efforts. We are very pleased that the administration plans to use ARRA funds appropriated to the General Services Administration for the next stages in the multi-year renovation of our headquarters, the Herbert C. Hoover Building.

In closing, since its creation the Department of Commerce has played a pivotal role in a wide range of efforts important to the Nation. While we are currently facing challenging economic times domestically and internationally, to quote President Obama "the time has come to usher in a new era of responsibility that lays a new foundation of growth on which we can renew the promise of America." I am excited about leading the Department into that era.

Thank you for the opportunity to come before you today, and for your continuing support of the Department of Commerce and its programs. I look forward to your questions.

Senator MIKULSKI. Thank you, Secretary Locke.

We want to acknowledge that our colleague, Senator Alexander, is one of the candlelighters at the Holocaust Memorial remembrance that will occur very shortly. So Senator Shelby and I, as a courtesy, would like to turn to Senator Alexander. We know you have a very poignant job to do in a few minutes. So why do you not go first and then it will come back to us.

Senator ALEXANDER. That is a great courtesy, Madam Chairman. Senator Shelby, I thank you. I will only make two comments and then turn it back to the chairman.

Well, first, I thank Governor Locke for coming by to visit. I told him, Madam Chairman, that I always welcome the addition of Governors to the Senate and to the administration. I think it brings a can-do spirit to the Nation's capital that we always like to see.

And I look forward to working with you. This is a very important subcommittee. It works well together, focuses on our competitiveness and the implementation of the America Competes Act, which we all worked on and passed in 2007, which has received some additional funding this year. But we would like to keep the parts of that that belong in the Department of Commerce moving at a good rate. There is a very bipartisan focus on that and strong support out in the country for those efforts.

In that line, I am very supportive of NOAA's recent decision to locate its supercomputer for climate change research at the Oak Ridge National Laboratory. Governor Locke is well aware of Oak Ridge and of our national laboratory system since he comes from Washington State. I would say publicly what I said to him privately. I would invite you to visit Oak Ridge and see the computer operation there and see other activities that might fit within the Department's mission.

Finally, I would like to encourage you and the administration to support the Colombia Trade Promotion Agreement and let us get that settled and behind us. I was glad to see the President in Latin America last week. Some of those countries are better friends of ours than others right now, and Colombia is one of our best friends. The Colombia Trade Promotion Agreement would end a one-way benefit for Colombia because most Colombian goods already enter the U.S. duty-free. We would like for ours to do the same. It tends to isolate us from them and forces them toward other countries in the world when we want to encourage a friendship.

So it is good for American business, good for American farmers, good for our State, good for Washington State, all States. So I would hope that the President and you, working with the Congress, could find a way to make the Colombia Trade Promotion Agreement something that the Congress can agree to.

So welcome to Washington. I look forward to working with you. I thank the chairman for her courtesy.

REFOCUSING ON DEPARTMENT OF COMMERCE MISSION

Senator MIKULSKI. We will be seeing you shortly, Senator.

Secretary Locke, the first thing that I want to just acknowledge is that I am very proud of the fact that a substantial number of agencies within the Commerce Department portfolio are headquartered in my State. They are NOAA, NIST, and Census. And I had the opportunity to interact with the leadership there as well as the staff. I want you to know that throughout your agency, there are what I call the worker bees, those wonderful people that under the old pay scale were the GS-5s through the 15s. They really have kept our Government going. In some instances, they have had good leadership and in some instances not.

In our hearings, we tend to focus on “the problem agencies” but I hope we also take a look at all of the agencies and acknowledge the tremendous assets that we have in our Civil Service population. When you go over to NIST, which I hope we will have a chance to go together, you will see a civil servant that is a Nobel Prize winner. A civil servant is a Nobel Prize winner, and he is on the job right now today not only winning prizes but thinking the thoughts to win the markets.

That is why I was so pleased that you met with the Patent Office staff. We have to look at the fact that our workers are not problems, but they are part of the solution. I believe that some of the issues around contracting out, lack of resources and so on, were at times very demoralizing to our staffs.

So, therefore, what I am saying to you, as we look at it, what we need to do is look at the mission of the agency, what it is that the President wants to do, but also we need to look at the three R's, which is to reinvigorate our Civil Service, and we do it by the right leadership, respect and resources. This is not hard to do but it takes a real commitment to do it.

Then I think we need to refocus on the mission of the agency while we dig our way out of the problems, but also where it is working like at NIST and other agencies, we really need to keep the momentum going.

So I just want to thank you for it. It was refreshing to hear that you met with the Patent Office workers there. So we are going to work with you on this.

#### CENSUS MANAGEMENT CHALLENGES

But having said those sweet things, I have got to get to a problem child which is the census. We are very concerned about the census. My first question goes to the fact that we put money, working with Secretary Gutierrez and in the stimulus, to right the wrong. But what we would like to know now is what are the resources that it is going to take for you to be able to do the census. We have two issues: the short term, which is to make sure we get the census done, and then the step of procurement reform and what are we going to do about this contractor that had this cost-plus contract and which we are out billions of dollars.

So can you tell us if we have the assurance that the census is going to be done right? What do we need to do to be able to help you do that?

#### COMMERCE EMPLOYEES

Secretary LOCKE. Thank you very much, Madam Chair.

With respect to your overall comments about reinvigorating and respecting our employees, as well as refocusing our mission, I first want to indicate that I have already been out to NIST and met with the employees and toured the facility and met with the great scientists that are there. I have also been out to the Census Bureau already and met with all the employees there and toured their facilities. I have not yet been to NOAA.

But I do want to say that, first of all, the Secretaries come and go and the political leadership of these agencies come and go. They know that we come and go. And we know that they are there for many, many years and do outstanding work. I believe it is absolutely vital that in all of the challenges that we have and all the programs that we have, that we need to rely on the expertise, the sense of pride and professionalism of the employees to help us become more efficient, more effective, and to deliver these programs that are so badly needed in the heartland of America.

Throughout the rest of America, it is story after story of local governments, State governments and businesses furloughing people, cutting benefits, eliminating jobs, laying people off, and people are very, very worried about their future. And we here in the Federal Government have an opportunity, a responsibility to execute our mission as efficiently and effectively as possible, as quickly as possible, and to get the economy going again providing good family-wage jobs throughout all of America.

I am really proud of the great professionals that we have, career people throughout all the agencies of the Department of Commerce, and it is my mission, one of my goals, as you say, to reinvigorate them, to provide them the respect so that they can say with great pride that they are an employee of the Department of Commerce, whether it is Census, whether it is NOAA, whether it is NIST, whether it is EDA, that they can say with pride that they work at the Department of Commerce.

#### CENSUS MANAGEMENT CHALLENGES

With respect to the Census, we have made a lot of changes with respect to management, with respect to oversight functions and programs at the Census, following the debacle over the handheld computers. The handheld computers were to have done two things: to provide automation as they verify addresses—and that is ongoing right now, and they still are using those handheld computers for that particular function, and it appears to be working well.

The other function of the handheld computers was to do the actual knocking on the doors, the enumeration, to get to the folks that did not mail in the census questionnaire after April 1, 2010. Because of problems there, that entire project was canceled, but costing us several millions of dollars of wasted funds.

That to me is completely unacceptable. Throughout all of the contract programs and technology programs that we have in the Department of Commerce, I believe that we should not be paying people unless they have actually performed, and until they have actually performed, they should not get most of their payment. So I believe that we need to completely change our contracting procurement processes, whether it is for satellites or for handheld computers for census or whether it is just mainframe computers and

technology within the Department of Commerce for everyday functions.

We have also followed up on the suggestions and the recommendations of the Government Accountability Office, as well as our Inspector General. There are now monthly status reports that are given to the Secretary's Office, as well as OMB, but within the Census Bureau, they now have weekly reports focusing on high-risk areas with milestones and metrics so that senior management can see what is happening and to respond immediately.

They also have a chief testing officer to oversee the testing efforts of these new programs and activities that have not yet been done before. Especially now that we are going back to paper and pencil, we have a whole bunch of processes that need to be evaluated—

#### ACCOMPLISHING THE CENSUS

Senator MIKULSKI. Mr. Secretary, are you confident that, number one, the census is going to happen? Number two, you have to hire lots of people. This is going to take money. It is going to stretch the FBI. Tell us what is required because this is an appropriations hearing as well. It sounds like you have really been standing sentry over the GAO and other recommendations. What is it going to take to do it? Do you have adequate resources to do this? Do you need resources? What about this in terms of the security clearances needed?

Secretary LOCKE. Well, with respect to the resources, we believe—

Senator MIKULSKI. My time is running out on these questions. So I get 5 minutes to cover the whole Commerce Department.

Secretary LOCKE. I believe that we do have the funds sufficient to conduct the census and we are monitoring it very, very aggressively. We feel that the President's proposal is sufficient.

With respect to the security clearances, what has been happening so far is that the FBI has been able to provide us the FBI fingerprint checks and the criminal background checks in an expeditious manner without interfering with other functions of the FBI.

It is a pilot right now. We will find out what is happening at the end of this current hiring process to make any recommendations with respect to the other million people that we will hire in the spring.

#### FBI BACKGROUND CHECKS

Senator MIKULSKI. This subcommittee also funds the FBI, and we know that our FBI is really tremendously stretched. They are fighting organized crime. They are fighting terrorism. We have now asked them to take on the mortgage fraud area, et cetera. And at the same time, they have got to do all these security clearances.

We are very firm that we must guard vulnerable populations against any potential predators that could be coming into their homes or their communities. So we want the background screening. We want the background checks. How that is defined we want to know about and then also about the resources. So if you are old, if you are a child, et cetera, we need to protect access to vulnerable populations. That is our job.

How many people are you going to hire?

Secretary LOCKE. Over a million people.

Senator MIKULSKI. A million people. That is a lot to put on the FBI, the database, et cetera.

Now, the FBI does not have a great technology record. This whole committee has been through a boondoggle with them to the loss of billions. They are now working with a private sector firm where their own data system and case management is tremendously improved, but they do not have an A-plus record. Okay? So let us not be in la-la land that all this is going to work.

I believe in what President Reagan said, trust but verify. I trust that what the FBI told you is so, but we really want verification.

And then second, if you are going to bring a million people on line and the FBI is not just sitting around waiting for its database to be used, we wonder then, as they come into the system, will this crash the system? What is this going to cost the system, et cetera? So we really need to be up on this now since now taking the census is going to be so much more labor-intensive. The FBI has a spotty record on its own technology functionality.

And number three, you cannot be screening a million people in a short period of time and not have issues. So we would like you to keep us abreast of both cost and operation.

I have used my time. I would like to now turn to Senator Shelby.

#### CENSUS PARTNERSHIPS

Senator SHELBY. Thank you, Madam Chairman.

Mr. Secretary, a lot of us were alarmed when it was discovered that the Census had plans for using ACORN as a partner in the 2010 census. ACORN employees, as you probably know, were found to be fraudulently registering voters for elections. Given ACORN's political history, a lot of us feel that the Census Bureau should not partner with organizations that have shown systemic problems with both accuracy and legitimacy.

It leads me to this. What is the Department of Commerce and the Census Bureau, under your leadership, doing to ensure that groups such as ACORN are adequately investigated prior to their involvement in something as important as the 2010 census? And the next question, is the Census in desperate need of support as to be willing to take anyone and everyone who applies? Could that not be a dangerous path?

Secretary LOCKE. Thank you very much, Senator Shelby.

First of all, the Census will not be hiring anyone from ACORN. We use these so-called partners to get the word out and to spread the word about the need for people to respond and answer the questionnaires.

Senator SHELBY. How will that work? Just reassure me.

Secretary LOCKE. Well, for instance, we have a maximum—I believe \$2,999 that we are willing to spend to help organizations get the word out. We will not make any payments to those partnership organizations. We pay the bills whether it is to pay the rent of a hall for a town meeting or to print, using our materials, materials that they can pass out.

Senator SHELBY. But they will not be taking the census, will they?

Secretary LOCKE. No. We control the hiring. We do not use any Government funds to subcontract with any organization to do any activity—

Senator SHELBY. You are not going to delegate it, in other words.

Secretary LOCKE. We are not delegating anything to ACORN.

Senator SHELBY. To anybody.

Secretary LOCKE. Or anybody.

Senator SHELBY. I like that.

#### NOAA SATELLITES

NOAA satellites. What degree of confidence do you have in the new cost and schedule estimates? And if you are confident, tell us why since every other estimate has turned out to be grossly exaggerated. And what is the level of risk of continuity of weather and our climate data and what contingency plans are being considered? If you do not have this, you can do this for the record.

Secretary LOCKE. I think we will have to give you a more detailed response.

[The information follows:]

#### SATELLITES

For the polar-orbiting satellites, the on-orbit and recently launched satellites are performing well and there is no immediate risk to data continuity for NOAA's weather and climate missions. We are concerned about the fragility of the constellation that begins to occur in 2013. This risk to data continuity occurs in the 2013 timeframe due to the schedule delays that the National Polar-orbiting Operational Environmental Satellite System (NPOESS) is facing.

NOAA is placing highest priority on the acquisition of this system to mitigate this risk. NOAA will use data from NASA's NPOESS Preparatory Project (NPP) sensors to produce data that meet or exceed the data from NOAA-19 (our current operational satellite). We have plans in place to make operational use of the data from the NPP spacecraft by increasing the number of products NOAA had planned to generate from the NPP system as a risk reduction mission.

NOAA has a contingency plan in the event there is a failure of any of its operational systems. This plan depends on using existing NOAA satellite assets, leveraging data from NASA and Department of Defense environmental satellites, and forging partnerships with international space agencies to acquire data needed to support NOAA's operational weather and climate mission. NOAA is also investigating opportunities to fly a mission with the legacy imager Advanced Very High Resolution Radiometer (AVHRR) in the event VIIRS continues to experience developmental challenges

Senator SHELBY. I know you are new there, and I believe from your background, you want to do a good job and you will do a good job. But you are going to have to get your arms around those costs there because ultimately, as Senator Mikulski has pointed out, you come back up here to the committee and we have trouble finding money if the costs keep going up and up in not just your agency, but the FBI, everywhere else because we will be allocated a finite amount of money to deal with this. You know? You spent two terms as Governor, so you can understand what we—

Secretary LOCKE. There are very limited funds, and cost overruns in satellite programs only eat up into the dollars available for other programs.

Senator SHELBY. Great overruns, gross overruns. But you will get back with us on that.

Secretary LOCKE. I will. And let me just say that the GAO has already done a progress report in April 2009 saying that, for in-

stance, the GOES-R program has incorporated a lot of the lessons learned from the NPOESS program. Still a ways to go, but they have revised cost estimates. But the GAO still points out some concerns and has made some recommendations that we intend to follow to try to get a better handle on the satellite acquisition program.

#### DEVELOPMENT OF SUSTAINABLE SEAFOOD

Senator SHELBY. Mr. Secretary, you know very well about our fisheries and seafood, coming from Washington State and serving two terms as Governor there. Safe and sustainable seafood is vital to the U.S. economy, food security, and our livelihood. The development of a sustainable marine aquaculture industry will provide jobs for the commercial fishing industry, severely depressed by competition from imported seafood products.

What research extension and marketing programs will the Department of Commerce provide to foster development in this area?

Secretary LOCKE. Thank you very much.

As our wild fishery stocks decline, it is very important that we are able to complement the wild stocks with aquaculture. NOAA really needs to engage in a program of research and setting up criteria and rules by which safe, environmentally sustainable aquaculture can operate, and right now we do not have any such rules, regulations, or guidelines. And that is something that must be done, given the fact that Americans want safe—

Senator SHELBY. Are you going to provide leadership there? Will you work with us on that?

Secretary LOCKE. Yes. We intend to pursue this and to help develop those guidelines.

#### INTERNATIONAL TRADE

Senator SHELBY. Touching on international trade, Mr. Secretary, our long-term economic growth—and this is an area you have done a lot of work in—and job creation must include, I believe, an exporting component. In recent years, exports have only accounted—listen to this—for 12 percent of our GDP. In fact, we export less than many other of the major G-20 nations.

What can the Department and ITA do to help more United States firms begin exporting, realizing there is a big market in the world, and to further expand our Nation's exporting capabilities? I think that is crucial for the Department of Commerce.

Secretary LOCKE. I think we really need to break down some of the silos that exist between some of the bureaus within the Department of Commerce. Trade, exports is not simply a function of the International Trade Administration, but also should be part of our Economic Development Administration working with companies, employers, large and small, on those opportunities for export and trade.

Senator SHELBY. Good. Thank you. I am through.

Senator MIKULSKI. I hope you feel better.

Senator Pryor, our newest member?

## BUSINESS INCUBATORS

Senator PRYOR. Thank you, Madam Chairman. It is great to be here, and thank you for doing this today. I understand the time sensitivity, so I am going to keep my questions brief and really just focus on two areas.

But first, let me thank you for coming to Arkansas last week. It was great to have you. Madam Chair, I think the first trip he made outside of the District was to Maryland to some of those facilities there, but the first trip out of the D.C. area, he came to Arkansas last week and we really appreciate it. Thank you for being there.

Let me ask, if I may, about a comment you made about—I think you said \$50 million for public-private partnerships and business incubators. I have a bill on science parks or technology parks or business incubators. Tell me how you think—is it \$50 million a year? Is that what it is?

Secretary LOCKE. Yes, it is.

Senator PRYOR. And tell me how you think the Department will use that money and what your criteria will be for that.

Secretary LOCKE. Well, we are going to be developing the criteria, but really it is going to be looking at proposals from local communities where we would partner with those local organizations, economic development organizations, nonprofits, colleges, universities. Obviously, we want to help leverage our funds and be a complement to those local efforts. Obviously, if it is a science park, if people want to create a science park and use that as part of an incubator, that could be a very strong proposal.

So we have no template, no cookie cutter approach, but general policies that we will draft, along with the grants that we now use, for instance, in the Economic Development Administration, competitive grants, but obviously, the more partnership at the local-State level that there are, then the stronger that proposal will be. Obviously, it is incumbent upon—even with regional clusters, that regions and municipalities and parts of the country focus on what their strengths are, what their dreams and aspirations are, and using the Federal dollars to help them achieve that mission.

Senator PRYOR. I am glad you are focused on that. In fact, the building you were in at the University of Arkansas at Little Rock on that campus where you did your town hall meeting actually has a component of it that is a business incubator, and it is exactly what you have talked about. It is a great example of a success story.

## BROADBAND TECHNOLOGY OPPORTUNITY PROGRAM

Let me change gears, if I may, and ask about broadband, the BTOP, the Broadband Technology Opportunities Program. Can you give us a status report on that? Particularly I am wondering if you are working with States to try to find the right way to implement that and what your schedule might be on that.

Secretary LOCKE. We have just closed the public comment period on how governments and the private sector and academia and policy people feel those broadband dollars should be distributed. It is roughly \$4.7 billion out of NTIA, and then there are significant funds through the Department of Agriculture. Both Agriculture,

Commerce, and FCC have been coordinating and trying to develop these policies with all the stakeholder input, over thousands and thousands of comments and ideas on how to distribute these dollars, ranging from direct distribution to the Governors and to the States, to a combination of direct distribution to the States, as well as grant proposals coming into the Federal agencies.

We hope within a few months to announce the final criteria after receiving all of this stakeholder input, digesting all of that, and there will be, I do not believe, one-size-fits-all criteria. The unserved vary from State to State. So we need to figure out a program that has maximum flexibility but, I believe, accomplishes significant national purpose or national goals so that at the end of the day, people will look back and say that with the broadband funds, limited as they are, that we were able to accomplish some very significant milestones or achievements with respect to high-speed Internet service all across America.

Senator PRYOR. Thank you, Madam Chair.

Senator MIKULSKI. But following up on Senator Pryor's question, when do you think you will issue the guidelines to apply for grants?

Secretary LOCKE. We have submitted the spend plans to the Congress. It is our intent to have the guidelines finalized, made public to America sometime in the early summer of—

Senator MIKULSKI. So if you are from Arkansas—like we in Maryland have the Maryland Broadband Cooperative, which is like a little TVA for broadband in our rural communities—when would they be able to apply for grants?

Secretary LOCKE. It is our intent—we are all shooting for early summer 2009, and with the grants actually going out the door beginning in the fall 2009.

Senator MIKULSKI. Okay, thank you.

I am going to ask a few more questions. I just want to apprise my colleagues the Holocaust Memorial starts at 11 o'clock. So we are going to want to move expeditiously.

I would like to thank Senator Pryor for raising EDA and broadband. These were two issues I was going to cover.

#### DIGITAL TO ANALOG CONVERTER BOX COUPON PROGRAM

While Senator Reed is getting himself together from Banking, I want to go to the digital coupon program. We are very concerned about whether this is really going to work. Could you bring us up to date on where you are on the digital coupon? Again, we were short on money. Everybody did this famous countdown so we knew it was changing, but then nobody knew that in addition to a converter box, they needed an antenna and so on.

Are you looking at this program related to the digital coupons not only to help our people be able to afford the conversion, but at the same time, get them what they need to conduct the conversion in a proper way and not just by buying every gizmo that they think is going to help them?

Secretary LOCKE. We have transferred from NTIA within the Department of Commerce some almost \$66 million to the FCC to help us get the word out for a smooth transition, public service an-

nouncements especially in targeted populations and targeted parts of the country.

Senator MIKULSKI. We got the announcements.

Secretary LOCKE. Yes.

Senator MIKULSKI. What we need to know is if the content in the announcements is worth anything, and number two, do you have enough money for really doing the coupons?

Secretary LOCKE. We believe that we do have the funds necessary to get the coupons out. We noticed that not all the coupons that have been distributed have actually been redeemed, but we have ample supply of coupons and funds for coupons that will go out even after the conversion on June 12.

We have already had some test markets and data from all the major media markets shows that around 95 to 97 percent of the households are ready for the conversion.

Now, we can only get the information out to people. I still have some concerns about the quality of the information, whether people truly understand these public service announcements. Some of these are funded by the private sector, but do they really understand what is happening and what they are about to face on June 12? So we are looking at upgrading the quality of the content of the public service announcements and the commercials.

Second of all, the data shows that most of the top 50 media markets around the country—some 95 to 97 percent of the households are equipped for the change.

Senator MIKULSKI. Well, Mr. Secretary, this is terrific because, number one, I am glad you are taking it so seriously and are so hands-on on it.

First, in terms of the quality of the content, people really need know to buy the right technology.

Second, I believe that there is a portion of the population that will not focus until they go to turn on the TV and it does not work. Therefore, I presume that this program will have to exist for another year after the date of conversion when people get their wake-up call, if you will, to that. We want to continue to work with you to make sure it is happening.

I will come back to satellites quickly and another quick one on the census. But let us turn to Senator Reed, a brother coastal Senator. We have been through it with the fisheries, have we not, Senator Reed, and our fishermen and watermen facing disasters and then at times dealing with Commerce was a disaster?

#### ECONOMIC ASSISTANCE TO FISHERIES

Senator REED. Well, Madam Chairman, thank you.

Senator MIKULSKI. It is a little prickly point.

Senator REED. It is. But I want to thank you for your not only interest but your effective support because you ensured there were \$10 million in the last budget for New England ground fisheries, and this is just absolutely critical to my fishing industry. Without your leadership, it would not have happened, and I thank you.

I want to welcome the Secretary. As we said yesterday, Mr. Secretary, I think Dr. Lubchenco, the new NOAA Administrator is doing a very good job in her first few days as the point person for your Department on these issues.

As you know and as Senator Mikulski alluded to, in the Northeast we are transforming the management of the ground fishery to a quota-based catch share system. It is a process that works well elsewhere. But we need to ensure that there is a continued investment in that activity. As I mentioned, Chairman Mikulski was extraordinarily helpful in securing \$10 million for New England's fisheries and Dr. Lubchenco's recent announcement of a \$16 million investment in groundfish was welcome news.

So the question is, can we assume that you will continue this transition by adequately funding it as we go forward and prioritizing this support going forward?

Secretary LOCKE. Senator Reed, we know that for these new fishing regimes to be effective, there has to be economic assistance to those affected in the fishing industry, as well as having the funds to do the research, to set up the data management systems, and to comply with other Federal laws, and not to have the fishermen and the fishing industry pay for some of these costs. So it is our intent to continue to move forward and provide this economic assistance to the fishing industry.

Senator REED. Thank you very much, Mr. Secretary.

Then there is another aspect of this, and that is the cooperative research which goes on between the fishing industry and the National Marine Fisheries Service and NOAA. It helps provide not only support for the fishing industry, but also developing new gear and more accurate stock assessments. I hope that you would also include this cooperative research as a priority in your budget.

Secretary LOCKE. We are assuming that. We know that we need that type of research to be effective.

Senator REED. Well, thank you very much. Thank you, Madam Chairman, and thank you, Mr. Secretary. I look forward to working with you.

Senator MIKULSKI. Mr. Secretary, because of the memorial, we are going to conclude this hearing. I have additional questions about NOAA. I think what you will observe is that we have a great admiration for NOAA, but it needs a lot of reform. We believe that the President has picked the right person in Dr. Lubchenco and look forward to working with her on this.

#### RECRUITING FOR TEMPORARY CENSUS JOBS

One final question on the census. These 1 million people. We are getting a lot of questions from ethnic heritage groups. How and when will people be able to apply for those 1 million jobs?

Secretary LOCKE. We anticipate receiving the applications in the early winter, shortly after 2010, and the hiring and the interviewing process will be probably in March so that they are up and running in April, receiving some training so that they can hit the field. But we know that to have a successful census, we need to have outreach to populations that typically do not trust government or do not speak English very well. So that is going to be the cornerstone of a successful census. Outreach, public service announcements, paid advertisements, and enumerators that go door to door from those hard-to-reach, hard-to-count populations so that those whose doors they knock on feel more comfortable seeing a person of their own ethnicity or background at the door.

Senator MIKULSKI. That is exactly right. We are already getting these requests, as I said. The heritage groups in the Latino community are well known, but I have a substantial Asian community as well. And people are really eager to participate and believe that they have the people to recommend for these jobs who would love to be able to do them. I believe there is a cornucopia of opportunity in our great American mosaic. We have these vibrant heritage organizations that can help us recruit and do outreach with the personnel that are multilingual and would meet the security test.

The other area for us to give consideration is realtors. As you know, so many people in the real estate community are small business people—in many instances, primarily women—women and men who know their communities cold. Well, they have not been as busy as they once were. And the reason I say that is perhaps for Census to also look, during this economic downturn—for those who not only work in the community—but know the community. They know the people. They are familiar with it. They are not running around with a GPS saying “where is Montford Avenue?” and, “am I in Fells Point?” which is in Baltimore, or Horn Port, which is out on the Chesapeake Bay.

So I would also consider that this could be an opportunity for recruitment with people who are versed with talking with people, know the community, are paperwork-oriented, and could get the job done. There might be some who were in that field. But again, I would discuss it with the National Association of Realtors.

Secretary LOCKE. Thank you. We could always use more partners.

Senator MIKULSKI. Senator Murkowski, we were just getting ready to wrap up to go to the Holocaust Memorial.

Senator MURKOWSKI. Madam Chair, if I may just very, very briefly ask a question about fisheries and the Denali Commission.

Senator MIKULSKI. Go ahead.

#### FUNDING FOR THE DENALI COMMISSION

Senator MURKOWSKI. Thank you, Madam Chairman.

Thank you, Mr. Secretary. It is a privilege to have another westerner sitting in this very important seat as Secretary of Commerce and I welcome the opportunity to be working with you in these coming-up years.

Two issues that I want to touch on this morning, and I appreciate the consideration of the chairman in giving me a couple minutes this morning.

The Denali Commission, very, very important to us in the State of Alaska in terms of how we address some of our very critical needs, whether it is water and sewer, whether it is bulk fuel infrastructure projects, education, and certainly when it comes to health care. It has been a critically important partnership between the Federal Government, the State of Alaska and tribal organizations with really the chief goal being to improve the standard of living in rural Alaska through investments in transportation, in infrastructure, rural power systems, alternative energy projects, bulk fuel, health clinics, teacher housing. It really runs the gamut, and I believe it has become a prime example of how Government should operate.

The Commission traditionally has been funded by Congress through the annual appropriations process, but I would like to work with you to see, as we move forward, if we can get that funding for the Commission included in the President's budget. I would just ask for your assistance in working with me on this important initiative.

Secretary LOCKE. I would be delighted to work with you and explore funding issues on that.

Senator MURKOWSKI. Great. I appreciate it. The Commission is set to be reauthorized this year, and I am going to be working with my colleague, Senator Begich, on this. But we will look forward to working directly with you.

#### SUSTAINABLE MANAGEMENT OF FISHERIES

On fisheries, so critically important not only to my State of Alaska, certainly your home State of Washington. But our fisheries are truly the lifeblood of coastal Alaska. Very substantial interest in making sure that we have the best scientific information to continue the management of our fisheries in a sustainable way. And I believe that the Federal funding that we have seen for fisheries science, at least in Alaska, has been inadequate for a number of years.

There has been discussion and you have indicated that funding the full implementation of the Magnuson-Stevens Act and its requirements to end overfishing will be key to you. Well, we do not have any overfished ground stocks in Alaska. We want to keep it that way.

We have got some fundamental stock assessment surveys, such as the Gulf of Alaska pollock survey, that are in danger of not being performed due to lack of funding. If NMFS is unable to do the survey because they do not have adequate funding, the implications on a huge industry can be quite sizable, having a negative effect that are far greater than the cost of any survey there.

I guess my question to you this morning, Mr. Secretary, is whether or not you agree that funding basic fisheries science such as these surveys should be prioritized, and do you intend to increase funding for this type of research within the budget?

Secretary LOCKE. I would have to get back to you with respect to the President's proposal on the funding for that specific scientific activity, but obviously, we cannot be successful in having sustainable harvests, having sustainable fisheries if we do not have the science and the scientific data to drive those policy decisions. So science is the key. It has to be a priority, and without the science, everything else is for naught.

[The information follows:]

#### BASIC FISHERIES SCIENCE

Assessment of fish stocks is a high priority for the administration in order to maintain sustainable fisheries and protect their ecosystem. Implementation of Annual Catch Limits and other provisions of the Magnuson-Stevens Reauthorization Act must be based on the best scientific information available. The Administration recognizes that high quality fish surveys, fishery monitoring, and stock assessments are necessary to attain optimum yield while confidently preventing overfishing.

The Alaska Fisheries Science Center conducts fishery surveys to measure the distribution and abundance of fish and crab stocks in the Aleutian Islands, eastern

Bering Sea and the Gulf of Alaska. The research surveys use a range of sampling techniques, measurement equipment (including acoustic instruments), and fishing gear (trawls and longlines). Survey data derived are analyzed by Center scientists and supplied to fishery management agencies and to the commercial fishing industry.

The Expand Annual Stock Assessment—Improve Data Collection (EASA) and the Survey and Monitoring budget lines fund survey, monitoring, and stock assessment activities. Funded at \$1.7 million in fiscal year 2001, the EASA budget line has grown to provide NMFS with increased funding and capacity to conduct fish surveys, fishery monitoring and stock assessments nationwide. Of the \$40.5 million for EASA in fiscal year 2009, \$2.7 million is used for these activities in Alaska. The Survey and Monitoring budget line for fiscal year 2009 is \$17.0 million, of which \$4.0 is provided to the Center for survey activities in Alaska.

NMFS continues to increase the number of stock assessments needs in Alaska and elsewhere. In fiscal year 2010 we are requesting an additional \$9.9 million in EASA and an additional \$6.3 million for survey and monitoring.

#### OCEAN ACIDIFICATION

Senator MURKOWSKI. Well, I would agree with you. That is another area that we would like to be working together with you to make sure that we have got the resources to advance that science.

On the ocean acidification—

Senator MIKULSKI. Senator, we are really going to have to—

Senator MURKOWSKI. I am going to wrap up right now, Madam Chairman, and I appreciate it. I just wanted to mention we all recognize, as we are talking about climate change, what we are seeing with the ocean acidification as one of the greatest threats to climate change. And we do not have any funding for that. So, again, areas of science and research that I would hope that we could be working on.

Madam Chairman, I have got a couple other questions about Arctic issues and endangered species.

Senator MIKULSKI. Yes. I want to just again pledge our support. It is just this very poignant ceremony and we need to be rather prompt in our—

Senator MURKOWSKI. And I appreciate your additional time. I will submit my additional questions to the Secretary for his comments.

#### ADDITIONAL COMMITTEE QUESTIONS

Senator MIKULSKI. We both have a big investment in NOAA. So we look forward to working with you.

Senator MURKOWSKI. We look forward to working with you.

Senator MIKULSKI. Mr. Secretary, as you can see, there is no end to the topics that we could discuss with you. This is the first of what we would hope would be many conversations, both formal and informal. But the committee extends its hand to you in partnership and ongoing conversation.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

#### QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

##### USPTO

*Question.* Patent and Trademark Office's (PTO) budget authority is based on the amount of fees the agency expects to collect each year. For fiscal year 2009, Congress gave PTO authority to spend \$1.9 billion. Yet, due to the downturn in the

economy, businesses are filing less applications, which means PTO is collecting less fees. As of March 13, PTO collected \$100 million less fees than predicted. Yet, PTO needs \$1.9 billion to operate in order to continue processing applications and to hire additional examiners to reduce backlog. What is the plan to address this short fall in fee collections?

Answer. The budget is built based on the necessary requirements and resources needed to accomplish the goals and objectives detailed in the USPTO strategic plan. Like any business, if projected fee collections are insufficient to fully meet the resource requirements for the year, the agency strives to prioritize critical activities (i.e., patent and trademark examination).

Due to current economic conditions, the agency anticipates end of year fee collections will be approximately equal to actual collections in 2009. In response, USPTO management has made decisions to implement cost-saving measures, which include:

- Fiscal year 2009 Patent Hires Frozen at 600 attrition replacements
- Instituted an exception hiring process to limit hiring to critical vacant positions or areas of need.
- Eliminated Discretionary Awards and essentially stopped Non-Revenue Generating Overtime
- Curtailed Revenue Generating Overtime
- Significantly curtailed Training Expenditures not required to sustain job-critical qualifications or that was already obligated.
- Suspended the Law School Reimbursement Program
- Reduced spending IT System Development/Improvement Efforts
- Reduced spending Patent Workload-based Contracts
- Reduced spending Non-IT Contracts/Services
- Reduced global IP training programs and conferences, and reduced international travel
- Reduced domestic Travel and Supply Purchases

*Question.* What steps will PTO take if fee collections continue to decline?

Answer. Should the economy continue to decline resulting in further reductions to USPTO resources, several options still exist to reduce funding requirements including:

- Suspending all patent examiner recruitment & retention bonuses
- Suspending all production and revenue generating overtime
- Further reducing spending on IT infrastructure strengthening and replacement projects
- Further reducing global IP training programs and conferences, and reducing international mission travel
- Reducing IT and non-IT operational support functions

The USPTO is working with my staff and the Office of Management and Budget to improve the current operating model so that it can responsibly accommodate both positive and negative changes in the economic landscape. We look forward to engaging Congress to develop the optimal model to ensure continued USPTO success.

*Question.* How will this affect the current backlog?

Answer. The USPTO had planned to hire 1,200 patent examiners in fiscal year 2009. In an effort to address the short fall in fee collections, the office now plans to hire only 600 patent examiners. The agency would have expected the additional 600 examiners to process approximately 6,000 applications in fiscal year 2009. However, given the decline in patent application filings, USPTO's current projections of average wait times, which are contained in the 2010 Budget are lower than the same projections made in the 2009 Budget.

*Question.* The Commerce Inspector General concluded PTO is one of the top management challenges facing the Department. The patent backlog continues to grow, and is on track to have a backlog of 800,000 cases this year with the average time to process an application is almost 3 years. In the past, PTO blamed funding shortages for the problem, yet even with increased funding, the problem seems to be getting worse. What steps will the new Secretary take to reduce the backlog?

Answer. For clarification, the USPTO anticipates the backlog at the end of the year will be approximately 740,000. This estimate reflects that the USPTO anticipates a decrease in its backlog by approximately 10,000 cases this year.

Hiring—while not the sole answer to reducing the backlog—remains an important means for examining record numbers of new patent applications. In 2005, when the USPTO set a strategic goal of hiring 1,000 new examiners per year, many in the public said that it couldn't be done. Yet, the USPTO successfully hired and trained these new employees, and then went on to hire and train over 1,200 new patent examiners in fiscal year 2007 and fiscal year 2008. These new patent examiners have helped cut into the patent backlog, by decreasing the rate at which the backlog was increasing.

In addition to hiring, providing patent examiners with training, mentoring, better electronic search and examination tools, and reviewing ways to improve the quality of patent applications are reforms the USPTO is pursuing to help it reduce the backlog. Additionally, the Accelerated Examination option introduced in August 2006, allows any applicant to obtain a patent decision within 12 months. To date, over 3,060 of patent applications have been filed under the Accelerated Examination program.

*Question.* In 2008, GAO report found that PTO hiring efforts were not sufficient to reduce the backlog of patent applications. For every patent examiner PTO hired, the agency lost two patent examiners. Patent examiners leave because cost of living in DC is high, they want more hands on experience, and the private sector offers better opportunities. GAO found bonuses; special pay rate and opportunities to work remotely would greatly increase retention. The GAO in June 2005 recommended 2 steps to improve hiring and retention of examiners, which included improving communications between management, patent examiners and union officials. Fostering greater collaboration will resolve issues underlying the quota system and the need for continuous technical training. What is the current staff retention rate?

*Answer.* To clarify a misstatement in the question, for every two patent examiners hired, the USPTO loses one patent examiner. The USPTO does not lose two examiners for every one hired. The attrition rate is an overall rate based on the entire examiner population.

The current patent examiner overall attrition rate, as of April 2009, is 6.8 percent. This figure translates to a 93.2 percent retention rate.

Since the GAO released a report on USPTO hiring efforts in September 2007, the USPTO has experienced improvement in patent examiner attrition rates. At the time of the GAO report, the overall patent examiner attrition rate was 8.5 percent, and first year attrition rate was 15.6 percent. In the fiscal year 2008, this dropped to 12.9 percent, which represents a 30 percent decline. The average attrition rate for patent examiners with less than 3 years experience was 15.5 percent when the GAO report was released. Currently, the rate has dropped nearly 21 percent to 12.3 percent. Notably, the average attrition rate for patent examiners with greater than 3 years experience is currently 2.2 percent. Overall, the USPTO attrition rate is lower than the average rate for Federal workers (8.5 percent vs. 11.2 percent).

We believe this improvement in attrition is attributable to the economy along with a strong work life quality program and a number of targeted initiatives including:

- Flexible work schedules;
- Expansive teleworking programs;
- Recruitment bonuses;
- Part-time employment;
- Lap top computers available for overtime work away from the office;
- Productivity award programs
- Increased training opportunities tailored to examiners' needs;
- Focused training for new examiners; and
- Movement toward a nationwide workforce.

To date, however, several of these initiatives have been suspended due to reduced fee collections.

- Reimbursement for advanced technical education and law school;
- Annual adjustment to examiner special pay.

*Question.* What steps will you take as the new Secretary to ensure these recommendations are implemented to continue to reduce attrition and retain employees?

*Answer.* Since the June 2005 GAO report, the USPTO has taken steps to strengthen communications between management, patent examiners, and union officials. These steps include instituting weekly work group meetings and larger bi-weekly meetings between managers and employees; establishing a policy that first-line supervisors hold regular meetings; holding regular monthly meetings with union officials and the Patent Office Professional Association; and working to institute a quarterly Joint Labor Management meeting with all unions.

As noted in the response above, the USPTO has also instituted a number of retention initiatives. The USPTO recognizes that a qualified corps of patent examiners is essential to effectively handle its important responsibilities. Attracting and retaining those highly qualified employees through a range and incentives and a positive work environment are absolutely necessary. I intend to review all initiatives currently in place with the emphasis of expanding and improving them.

## ITA US&amp;FCS

*Question.* Created under the Foreign Service Act, the United States & Foreign Commercial Service is the trade promotion arm of the International Trade Administration. They represent U.S. business interests internationally, and small-and-medium-sized businesses rely on this service to promote the export of goods and services from the United States. In recent years, management trends at the Department of Commerce suggest that the number of commercial officers overseas is diminishing, while officers serving in domestic locations in non-commercial roles grow. This trend has the potential to seriously jeopardize the support of expanding U.S. businesses overseas.

How many Foreign Service officers did the Commercial Service have in fiscal year 2004 versus what the Department expects in fiscal year 2010?

*Answer.* In fiscal year 2004, US&FCS had 246 officers. In fiscal year 2010, US&FCS expects to have 237 officers.

*Question.* How many current officers serve in domestic positions?

*Answer.* A total of 49 officers are currently serving in domestic positions.

*Question.* What is the attrition annual rate of Foreign Service officers?

*Answer.* The annual attrition rate for the Foreign Service officers for each of fiscal year 2005, 2006 and 2007 was 7 percent. In fiscal year 2008, it was 5 percent and in fiscal year 2009, it is expected to be 3 percent.

*Question.* How many overseas posts did the Commercial Service have in fiscal year 2004 versus fiscal year 2010?

*Answer.* In 2004, US&FCS had 153 overseas posts in 82 countries. It is expected that US&FCS will have 131 overseas posts in 80 countries in fiscal year 2010.

*Question.* How many of those positions are not currently filled?

*Answer.* We currently have 13 vacant Foreign Service Officer overseas positions in fiscal year 2009.

*Question.* Explain how the fiscal year 2010 budget request adequately supports the mission of the U.S. Commercial Service and that of the Foreign Service Officers.

*Answer.* The fiscal year 2010 budget provides adjustments for inflationary expenses in personnel and US&FCS fixed costs related to the provision of support services to both international and domestic offices and the headquarters. In addition, the request includes \$5.2 million to expand ITA presence in emerging markets in Asia, Africa and Eastern Europe.

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 QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

## NTIA—BTOP/TARGETING RURAL AREAS

*Question.* Secretary Locke, I wanted to ask you about the Department of Commerce's plans to deploy the more than \$4 billion in American Recovery and Reinvestment Act broadband deployment funding Congress and the Administration gave to your agency. I am especially concerned about ensuring that this funding reaches rural America, the Department of Commerce's definitions of underserved and unserved, the Department of Commerce's anticipated timeline for distributing these funds, and the agency's intent to consult with States about pre-existing broadband deployment plans.

The digital divide runs deeply through rural America—and especially through rural Vermont. I firmly believe that places like the Northeast Kingdom of Vermont—the three most Northeastern counties of Vermont, areas in southern Vermont isolated by the Green Mountain National Forest and vast numbers of “digitally disconnected” Vermonters living in between these two areas receive priority when it comes to distributing funding for your Broadband Technology Opportunities Program. This will mean carefully defining unserved and underserved. Preference for funding must be given to Americans with no access to broadband. However, communities where the private sector has “cherry picked” profitable customers and left their rural neighbors offline must be afforded funding opportunities through the ARRA broadband programs.

I commend you, and Secretary Vilsack of the Department of Agriculture, for adopting aggressive timelines to formulate plans for the distribution of these broadband funds. I believe that the NTIA must continue this aggressive posture to deploy these funds in time for the 2009 construction season, a short window in Northern climates like Vermont. A 100 million broadband project in east central Vermont, East Central Vermont Fiber, is shovel ready right now—a victim of the financial collapse. Dozens of wireless projects are on hold, from companies like Great Auk (AWK) Wireless and Cloud Alliance in Vermont, ready for construction if Federal funding can be identified. The Vermont Telecommunications Authority

has \$40 million in State bonding authority waiting for a matching Federal investment. North-Link, a fiber project in northwestern Vermont, is under construction already—but awaiting a final investment to finish construction. These projects can deliver broadband access to Vermonters by the end of the summer—but it will depend on you and your agency pushing to get this money out the door as quickly as possible.

And finally, I want to bring your attention to the work the Vermont Congressional Delegation and Vermont's Economic Stimulus and Recovery Office have undertaken since Congress passed the recovery act. We began aggregating broadband infrastructure grant proposals throughout Vermont in an attempt to offer NTIA and RUS a comprehensive strategy towards building broadband infrastructure to every Vermonter. This effort has brought together private, public and non-profit providers who have shared their proposals and plans with our offices and State officials. As ARRA requires NTIA to consult with States, I hope you and your team will take such comprehensive approaches into consideration when making decisions on broadband funding applications. Should the Department of Commerce decide to provide block grants to States, I also ask that you not base your decisions on population, but instead on a State's true build out needs. For years private telecom providers have chosen to deliver services first to high population areas and second to rural Americans. This strategy has left America's largest digital divide in low population, rural States like Vermont. At a minimum, any block grant should include an all-State-minimum of no less than three-quarters-of-one-percent of all ARRA broadband funds.

Given the rural paradox of telecommunications, where those most isolated and who benefit the most from telecommunications infrastructure are the last to receive such access, does the Department of Commerce plan to specifically target rural and underserved areas such as Vermont through the Broadband Technology Opportunities Program.

*Answer.* The Broadband Technology Opportunities Program (BTOP), as set forth in the American Recovery and Reinvestment Act of 2009 (Recovery Act), has many important goals. One of these is to ensure access to broadband service for consumers living in "unserved" areas of the United States. The Recovery Act also provides funding to improve broadband access in "underserved" areas—whether they are in rural, suburban, or urban settings. Within the Department of Commerce, the National Telecommunications and Information Administration is in the process of defining these and other statutory terms in order to establish funding eligibility criteria. While the final criteria have yet to be established, I am confident that they will ensure that applicants seeking to serve rural and underserved areas of Vermont will be able to compete effectively for BTOP funding.

*Question.* I understand the Department has already suggested a tentative timeline for issuing solicitations for BTOP funding. Does the Department of Commerce plan to stick to that timeline?

*Answer.* NTIA is working as expeditiously as possible to implement the BTOP. On March 12, 2009, NTIA and the Department of Agriculture's Rural Utilities Service (RUS) issued a joint Request for Information (RFI), inviting public comment on implementation of BTOP. NTIA is currently in the process of reviewing the public comments filed in response to the RFI and plans to issue a Notice of Funds Availability (NOFA) this summer to allow eligible entities to apply for BTOP funds. NTIA plans to issue two subsequent NOFAs, inviting additional grant applications, which will be timed to ensure that all grants are made before the statutory deadline of September 30, 2010.

*Question.* Would you consider a more aggressive timeline that might get all of the funding to States this construction season?

*Answer.* The Recovery Act requires that all funds be obligated by September 30, 2010. In order to meet this requirement and to provide all participants a reasonable opportunity to apply, NTIA is considering giving applicants three opportunities, or rounds, to apply for BTOP funds over the life of the Program. The agency's current plan is to publish a NOFA this summer and to hold workshops in a number of locations across the country, soon thereafter, to answer questions about the application process. This process would be repeated in late calendar year 2009 and again in spring 2010, so that prospective applicants who are not ready this summer can prepare to apply for BTOP funds during the second or third rounds. The three rounds would also allow NTIA to make program adjustments based on the experience from the earlier rounds. NTIA believes that having several opportunities for organizations to apply is equitable and effective—especially for smaller organizations that have fewer resources and may need more time to prepare their applications and will help ensure that the funds are used in the most efficient manner possible.

Furthermore, multiple rounds will also help organizations in States like Vermont apply for funds in time for their respective construction seasons.

*Question.* Will States like Vermont, where a coordinated effort is already underway to provide NTIA with a comprehensive and consolidated broadband grant application, be more competitive than States that submit piece-meal applications?

*Answer.* In the Recovery Act, Congress wisely directed that NTIA consult with the States with respect to the best ways to identify areas to which broadband grant funds should be directed and the proper allocation of grant funds. NTIA has already begun meeting with officials from the States and has been actively soliciting input with regard to best practices. I expect different States to adopt different approaches to the BTOP program, but we will not be able to assess the relative merits of any particular approach until all the applications have been filed.

*Question.* Would you support including additional appropriations to the Broadband Technology Opportunities Program into the annual appropriations process?

*Answer.* The Recovery Act provides NTIA with \$4.7 billion for the purposes of increasing broadband deployment and adoption in unserved and underserved areas of the United States, and the statute requires that these funds be obligated by September 2010. Accordingly, NTIA is working to implement the program and to issue grants quickly and efficiently to qualified recipients. I will be working closely with the Assistant Secretary of NTIA, the Office of Management and Budget, and Members of Congress as the program develops in order to assess whether it is fulfilling its objectives within existing appropriations. Decisions about future appropriation requests will be made in the context of program performance and the Administration's budget process.

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#### QUESTIONS SUBMITTED BY SENATOR JACK REED

##### NTIA—COMPETING FOR BTOP FUNDS

*Question.* The Recovery Act provides \$4.7 billion to establish a national broadband service development and expansion program, known as the Broadband Technology Opportunities Program or BTOP. This program will provide competitive grants to improve broadband access in “unserved” and “underserved” areas.

Can you provide any assurance that agency guidance related to “unserved” and “underserved” areas will be defined in a way that ensures that States that do not contain mainly rural areas, like Rhode Island, will be able to effectively compete for this important funding?

*Answer.* Yes. The Broadband Technology Opportunities Program (BTOP), as set forth in the American Recovery and Reinvestment Act of 2009 (Recovery Act), has many important goals. One of these is to ensure access to broadband service for consumers living in “unserved” areas of the United States. The Recovery Act also provides funding to improve broadband access in “underserved” areas—whether they are in rural, suburban, or urban settings. In addition, the Recovery Act contemplates grants being awarded in every State and directs NTIA to provide support for an array of initiatives, including broadband education, awareness, training, access, and equipment for strategic institutions, such as schools, job-creating facilities, libraries, and healthcare providers. In view of these statutory objectives, I am confident that applicants from Rhode Island will be able to compete effectively for BTOP funding.

##### EDA—TRADE ADJUSTMENT ASSISTANCE

*Question.* The American Recovery and Reinvestment Act reauthorized the Trade Adjustment Assistance (TAA) for Firms and tasked the program with covering service industry firms.

Can you provide an update on Economic Development Administration's progress in expanding its cover of serving service firms?

*Answer.* On May 5, 2009, EDA published a proposed rule in the Federal Register that implements the provisions of the reauthorization statute, including inclusion of service sector firms.

On May 18, 2009, EDA sent comprehensive guidance to the Trade Adjustment Assistance Centers addressing the addition of service sector firms. EDA directed the Centers to accept applications from service sector firms immediately.

The guidance package included worksheets and templates that augment the existing application form (ED-840P) to provide the additional information required for service sector firm certification and to comply with the performance data collection requirements of the reauthorization statute.

EDA will conduct teleconference training with Trade Adjustment Assistance Center personnel to update them and provide ongoing support for both the Centers and applicant firms.

EDA will engage the Centers in the development of the revised certification form and other documentation prior to seeking Paperwork Act Reduction approval of any new forms.

*Question.* Do you believe EDA will have sufficient resources to meet its new responsibilities without reducing assistance to manufacturers?

Answer. EDA can meet its new responsibilities while still assisting manufacturers. The Recovery Act authorized EDA to use \$350,000 of its appropriations each fiscal year on full-time administrative positions for the TAA for Firms program. The majority of the EDA FTE administering the TAA for Firms program evaluate and certify firm eligibility. EDA is required to conduct both a programmatic and a legal review of each certification petition. EDA anticipates that service sector firm certifications will be approximately equal to the existing number of manufacturer certifications. As a result, overall certifications are expected to double.

With respect to the eleven Trade Adjustment Assistance Centers, EDA anticipates significant transition issues because the Centers' existing staff is geared almost exclusively to the manufacturing and producing firms that have been the focus of the program for over 25 years.

EDA is exploring policy options that will allow the TAA for Firms program to effectively assist more firms, in both the manufacturing and service sectors, without the need for additional funding or increased overhead.

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#### QUESTIONS SUBMITTED BY SENATOR BEN NELSON

##### NTIA—BTOP/TARGETING RURAL AREAS

*Question.* It is critical that the broadband stimulus funds are spent in a way that targets them where they are needed most. Is it your intent to make unserved areas, those areas where broadband has not previously been deployed, as the number one priority at NTIA?

Answer. The Recovery Act charges the Department of Commerce with the responsibility of addressing the broadband needs of both "unserved" and "underserved" populations, facilitating greater use of broadband services, increasing broadband speeds, and increasing broadband access to community institutions, among other objectives. While I expect NTIA to pursue all of these objectives, I agree with you that the Broadband Technology Opportunities Program provides a unique opportunity to expand broadband access to communities that desperately need it, particularly those areas of the United States that are currently unserved.

*Question.* The Recovery Act does not define the terms "unserved," "underserved," or frankly, even for that matter, "broadband." The House-Senate conferees provided some guidance, but ultimately, the definitions are up to the agencies.

I believe that it is important that we do not establish definitions for broadband that are so high that they would end up actually leaving rural areas behind. If our goal is to build broadband infrastructure, if we set speed thresholds too high, the digital divide between rural and urban areas could be further exacerbated. Demanding the fastest possible speeds—in areas that don't even support basic broadband today—as a condition of awarding a grant seems like a recipe for deterring any investments in these areas, depriving them of jobs in building out broadband and perpetuating the lack of broadband service there.

How do you plan to implement the definition of broadband in a way that will result in deployment of broadband at advanced speeds?

Answer. Among other things, the Recovery Act directs NTIA to provide the greatest broadband speed possible to the greatest population of users. To help implement these requirements, NTIA and the Department of Agriculture's Rural Utilities Service (RUS) published a joint Request for Information (RFI) on March 12, 2009, seeking the public's input on these definitions, as well as a number of other policy and procedural issues. NTIA received over 1,000 comments in response to the RFI by the April 13, 2009 deadline. NTIA is in the process of reviewing the public comments filed in response to the RFI and plans to issue a Notice of Funds Availability (NOFA) this summer to allow eligible entities to apply for BTOP funds and setting forth eligibility criteria. I am confident that these criteria will be consistent with the statutory directive to maximize the number of consumers with access to broadband, while at the same time increasing the speed of broadband service that is available.

## QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

NOAA

## ELECTRONIC LOG BOOKS ON THE GULF SHRIMP FLEET

*Question.* In January 2008, NMFS promulgated regulations implementing the red snapper rebuilding plan requiring the shrimp fleet to reduce fishing effort and by-catch in juvenile red snapper habitat areas by 74 percent. Failure to achieve this target reduction triggers the closure of those areas to the shrimp fleet. This program is the principal means to monitor the level of shrimp fishing effort and by-catch in the red snapper habitat areas as required by these regulations.

What is NMFS doing to assist the shrimp industry with their efforts to install Electronic Logbooks on the Gulf shrimp fleet in order to monitor shrimp fishing effort?

*Answer.* NMFS is funding a contract to support acquisition and installation of Electronic Logbooks on shrimp vessels, and collection and analysis of the data gathered by the devices for use to estimate effort in the shrimp fleet. In fiscal year 2009 NMFS is applying \$200,000 to the contract. NOAA has not requested funds for this in fiscal year 2010.

*Question.* Are the log books effective in assisting NOAA in determining bycatch levels?

*Answer.* Yes, the data obtained from this program assists us in estimating levels of sea turtle and red snapper bycatch mortality in the shrimp trawl fishery, as well as bycatch levels for other species such as blacknose sharks. This program has improved the accuracy of shrimp fishing effort estimates. Since inception, 538 Electronic Log Books (ELBs) have been installed in a representative sample of the Gulf of Mexico shrimp vessels (about one-third of the active fishing fleet covering the entire Gulf of Mexico from south Florida to south Texas) and 470 of these units are still deployed and functioning.

*Question.* If so, why is NOAA not assisting the boat captains with the cost to implement these regulations?

*Answer.* Currently, there are no costs to the boat captains for implementation of the ELB program, other than providing the information through the ELB.

*Question.* Installing electronic logbooks on shrimp boats is the only means available for NMFS to accurately measure shrimp fishing effort and, thus, to prevent the closure of this fishery and the loss of thousands of jobs. If NMFS is going to require that shrimp fishermen reduce their fishing effort by 74 percent in some of their best fishing areas in order to support your red snapper plan, don't you think it makes sense for NOAA to assist in funding the purchase and installation of these electronic logbooks—and fund the collection and analysis of the data?

*Answer.* Currently, there are no costs to the boat captains for implementation of the ELB program, other than providing the information through the ELB. All ELB installation, data collection, and data analysis, are covered by a NMFS funded contract.

*Question.* NOAA has created a funding disparity between the Northeast, Northwest, and the Gulf of Mexico. Despite the fact that some of the largest river systems in the Nation pour into the North Central Gulf of Mexico and the existence of well-respected research facilities along the Gulf Coast, NOAA has consistently focused its resources in other parts of the country. The ecosystems of Mobile River (America's 4th largest river system) and Bay along with Alabama's coastal communities support tourism, commercial and recreational fishing, and important habitats for fish and wildlife. What will you do Mr. Secretary to ensure that the Gulf of Mexico is treated more equitably in the distribution of NOAA research and weather dollars?

*Answer.* The Department agrees that NOAA has an important role to play in supporting the Gulf of Mexico. NOAA continues to work to address the unique and critical needs of all regions of the country, including the significant needs of the Gulf of Mexico region. NOAA is committed to addressing the needs of the Gulf region and continues to implement a number of activities to assist the region. Despite the fiscal constraints of the fiscal year 2010 budget, it includes continued support and increases for NOAA activities in the Gulf of Mexico. Additional details and examples of activities supporting the Gulf are included below.

NOAA Fisheries budget includes \$20.5 million specifically for Gulf of Mexico activities, an increase of \$8.0 million or 64 percent over 2009. This increase includes \$2.5 million to collect and analyze data to improve our understanding of the fishery impacts of hurricanes, our efforts to mitigate those impacts, and our ability to minimize the impacts of future storms. The funding will support time on ships and other platforms for surveys of fish, shrimp, other living marine resources as well as social and economic surveys of the fishing industry and fishing communities. This program

provides the data and core assessments needed to support fisheries management in the hurricane-prone areas. The budget requests an additional \$1.1 million to support economic surveys of commercial fishing fleets and recreational anglers, and development of decision support tools for assessing catch shares, fish stock rebuilding plans, community impact analysis, and other management measures. Additional economic surveys that will be conducted include a series of marine protected area surveys and protected species valuation surveys.

The budget provides additional resources for observer coverage in the Gulf. An increase of \$1.1 million for observer coverage of pelagic longline fishery of Atlantic Bluefin tuna in the Gulf of Mexico will allow NMFS increase the observer coverage required for the Gulf of Mexico pelagic longline fleet and an additional \$0.1 million will augment observer program coverage in the Gulf of Mexico reef fish fishery. This observer program monitors the catch and discard of reef fish species and other finfish and ESA species in the Gulf of Mexico reef fish fishery.

The fiscal year 2010 budget also provided additional resources to support the implementation of Annual Catch Limits. An increase of \$1.4 million will support fishery independent surveys in the Gulf of Mexico to produce the best technical advice to the Fishery Management Councils and support the implementation of Annual Catch Limits. An inshore trawl survey to support the assessment of gag and other snapper-groupers also will be implemented. In addition, an increase of \$0.5 million for the Gulf Regional Council provide it with important resources to set, evaluate, and revise annual catch limits (ACLs) and accountability measures (AMs) to end overfishing on stocks subject to overfishing by 2010 and for all other stocks by 2011 and to develop amendments to their Fishery Management Plans (FMPs) that implement ACLs and AMs. An additional \$0.4 million will support the improvement and enhancement of the independent peer-review process for scientific data required to appropriately set the annual catch limits for managed fisheries in the Gulf of Mexico.

The budget also provides additional resources to gather more accurate data on fisheries landings. It includes an increase of \$0.3 million for commercial fisheries biological sampling and to support more timely reporting of commercial fisheries landings through the development and implementation of electronic reporting technologies. It also includes \$0.6 million to support work by State agencies to provide more complete and timely information on marine recreational fishing participants (anglers and for-hire vessels) for inclusion in the National Saltwater Angler Registry. More complete and up-to-date registries can be used for more efficient and precise telephone surveys of fishing effort in both State and Federal waters.

In addition to NMFS activities, the National Ocean Service (NOS) continues to support activities to address the critical needs of Gulf of Mexico communities and ecosystems, including an increase of \$1 million in fiscal year 2010 for the Gulf of Mexico Alliance. Highlights of NOS activities in the Gulf include:

- Since 2008, NOS has conducted a competitive grant program to address priority activities of the Gulf of Mexico Alliance: create hazard resilient coastal communities; ensure healthy beaches and shellfish beds; support habitat conservation and restoration; increase environmental education; promote ecosystem integration and assessment; and reduce nutrient inputs to coastal ecosystems. The fiscal year 2010 Presidents Request includes \$5 million for this grant program, an increase of \$1 million over fiscal year 2009 appropriation.
- All five Gulf of Mexico States participate in the State-Federal coastal zone management partnership created under the Coastal Zone Management Act of 1972 (CZMA). Gulf States receive annual grants from NOAA ranging from \$1–2 million, matched approximately 1 to 1 by State and local resources. In fiscal year 2008 the five States received a total of \$10.3 million to implement their programs, and the fiscal year 2010 President's Request includes this level of funding for the States as well (estimates pending final appropriations). The Gulf of Mexico State coastal zone management programs focus on a range of issues important to the region: coastal habitat protection, mitigation, and restoration; managing coastal development to protect lives and property and enhance community resiliency; and engaging in outreach and education about the importance of the region's tremendous coastal resources.
- NOS distributes water level information from a network of approximately 70 Federal and partner monitoring stations in the Gulf, including 4 new stations built in 2008 to withstand a Category 4 Hurricane. These hardened stations were designed following the devastating 2005 hurricane season to provide critical oceanographic and meteorological information throughout storm events. The water level information provided by NOS supports marine navigation, storm surge warning systems, coastal restoration activities, and climate monitoring.

NOS continues to support other activities in the region including hydrographic surveys for nautical charts, accurate positioning, oil spill response, tides and currents data for marine transportation and other uses (including 8 Physical Oceanographic Real-Time Systems (PORTS®) in the Gulf of Mexico region by the end of fiscal year 2009), regional coastal ocean observing systems, resource protection through four National Estuarine Research Reserves and one National Marine Sanctuary, coastal and estuarine land conservation, coastal zone management and coastal storms capacity building, status and trends of chemical contamination of U.S. coastal waters, Harmful Algal Bloom Forecasts, and other efforts to support the region.

*Question.* This Administration contends that global warming poses a serious risk to the country's ecosystems. In Mobile Bay, for instance, many contend that global warming and saltwater intrusion will fundamentally alter the ecosystems that many of Alabama's citizens depend on for their livelihoods. What is NOAA doing to research the effects of global warming, specifically in important estuary systems like Mobile Bay?

*Answer.* Estuaries are biologically and ecologically important ecosystems that provide important services to the surrounding communities and ecosystems. Through the National Estuarine Research Reserve System (NERRS), NOAA is working to understand and protect valuable estuarine ecosystems around the country. These sites also serve as important "living laboratories" for research, including studies to improve understanding of how ecosystems respond to climate change. There are four NERR sites in the Gulf of Mexico (including Weeks Bay in Alabama) and a total of 27 sites around the country.

NERRS is a network of protected areas established for long-term research, education and stewardship. This partnership program between NOAA and the coastal States protects more than one million acres of estuarine land and water, which provides essential habitat for wildlife; offers educational opportunities for students, teachers and the public; and serves as living laboratories for scientists.

NOAA is supporting interdisciplinary, multi-year competitive research programs investigating how oceanic and coastal ecosystems respond to climate variability and change. The goal is to provide managers with the scientific knowledge and tools, including ecological models, to prepare for climate change impacts with more certainty in scale, timing and local detail. This research, supported through the National Centers for Coastal Ocean Science (NCCOS), focuses on three issue areas in particular: fisheries, protected resource impacts and sea level rise.

#### LARVAE SAMPLE ANALYSIS

*Question.* Is it true that the National Marine Fisheries Service routinely sends its larvae samples all the way to Poland for analysis? I understand that this is a critical piece of the process for researching ecosystems, the health of fish stocks, and other scientific questions. I also understand that by sending these samples to Poland, we are forcing our research community to wait as much as a year for results and pay enormous amounts of money to a foreign entity.

Shouldn't NOAA be focused on building this capability in this country, putting Americans to work, and improving the ability of our research facilities to do timely work?

*Answer.* The National Marine Fisheries Service (NMFS) and the Morski Instytut Rybacki (Sea Fisheries Institute) of Poland have a 35-year bilateral agreement to conduct joint research on fisheries ecology. This cooperative research effort began in 1974 as a way for Poland to repay its debt to the United States for financial assistance after World War II. In the early years, NMFS plankton specialists trained the Polish marine scientists in the detailed methods of identifying fish larvae from all U.S. waters. Although the war debt was repaid in the mid-1980s, this highly successful scientific collaboration has continued, because it is beneficial to both sides.

The Polish Sorting Center is the most economical, accurate, and timely way to accomplish the detail-oriented work of sorting and identifying the contents of plankton samples. For example, the Alaska Fisheries Science Center spends \$180,000 per year for the sorting and identification of their 2,000 samples by the Polish Sorting Center. To accomplish this same level of effort in-house, the Alaska Fisheries Science Center recently estimated that they would incur personnel costs of approximately \$900,000 annually, as well as additional costs for supplies, equipment, and modifications to their laboratory space. The Polish Sorting Center's turn-around time for NMFS' samples is typically 3–10 months. Their staff has been doing this work for 35 years, and they are experts in the identification of larval fish and zooplankton from at least seven of the Large Marine Ecosystems (LMEs) managed

by NMFS. This depth of experience enables them to maintain high standards of quality control, and to provide consistent data year after year.

At present, three NMFS science centers (Northeast, Alaska, and Southeast) and the Dauphin Island Sea Lab are participants in this agreement. If NMFS were to lose this relationship, we would need an immediate qualified partner to accomplish the ongoing work and avoid a multi-year delay in providing data to our stakeholders. At this time there is only one other sorting center that could process NMFS' samples from multiple LMEs. However, that center is also outside of the United States. The time necessary to establish a sorting and identification center and train staff is approximately 3–5 years. Loss of continuity in standardized identifications, especially for problematic species groups such as tunas, mackerels and snappers, would put data integrity at risk. A disruption of this magnitude would jeopardize NMFS' ability to meet our fishery-management mandates, including the requirement to provide fishery-independent indices from plankton surveys for the federally managed species in the Gulf of Mexico.

*Question.* We have seen an appalling decline in interest among young people in science and research. There are many worthwhile programs around the country that try to get kids interested in science. For instance, the Dauphin Island Sea Lab in Alabama brings school groups from all over the State and Southeast United States to the Lab for educational programs designed to help them better understand and appreciate the world they live in. What can NOAA do to increase young peoples' interest in natural science and help programs like those sponsored by the sea labs?

*Answer.* In the America COMPETES Act of 2007, Congress provided NOAA with a broad mandate to “conduct, develop, support, promote, and coordinate formal and informal educational activities at all levels.” As the lead agency in ocean and atmospheric sciences, NOAA is in a unique position to motivate and connect the younger generation to the world they live in. NOAA has many well-established national and regional programs that provide meaningful educational opportunities to the younger generation. NOAA will continue to support NOAA's education activities to increase students' interest in natural science and provide teachers the tools needed to nurture and encourage that interest through Competitive Education Grants, that allows NOAA to expand our partnerships with capable education institutions such as the Dauphin Island Sea Lab. Below are just a few examples of education programs and activities across NOAA:

*Competitive Education Grants.*—NOAA's Office of Education offers several grant programs that are intended to provide K–12 students with instructional materials and/or experiences within or outside of the classroom that will encourage their interest in science and the application of that knowledge to real-world problems. The Competitive Education Grants program supports regional to national scale projects in both formal and informal education and is intended to reach a wide variety of audiences. These grants support teacher professional development, instructional materials development and publication, citizen science programs, science camps, and exhibits related programs at science centers, aquariums and natural history museums around the Nation. As an example, this program supported the installation of Science on a Sphere (SOS) at the McWane Science Center in Birmingham, AL. Institutions such as the Dauphin Island Sea Lab are eligible for funding support from Competitive Education Grants and B-WET (see below). NOAA is requesting an increase of \$4 million for a total of \$5 million in fiscal year 2010 to expand this program.

*Bay-Watershed Education and Training (BWET) Program.*—The B-WET program supports local and regional projects that offer meaningful watershed educational experiences to K–12 students. The B-WET program currently serves Chesapeake Bay, California, Hawaii, Pacific Northwest, New England and Gulf of Mexico regions.

*NOAA's National Sea Grant Program.*—Sea Grant's innovative and effective marine and aquatic education programs have been a cornerstone of the Agency's education portfolio and have produced a record of successes spanning three decades. An established network of Sea Grant educators, located at universities across the Nation, is committed to NOAA's goal of advancing environmental literacy and educating future environmental professionals and leaders. Sea Grant educators tailor their K–12 marine and aquatic education offerings to meet the needs of their regions, developing relevant science-based educational programs for schools, professional education opportunities for teachers, and workforce training. Last year, Mississippi-Alabama Sea Grant education efforts alone reached more than 11,000 elementary, middle and high school students and nearly 300 educators (attending professional development seminars). Nearly 28,000 attendees participated in programs for children and families in Mississippi and Alabama.

*National Estuarine Research Reserve System.*—The National Estuarine Research Reserve System is a network of protected areas established for long-term research,

education and stewardship. This partnership program between NOAA and the coastal States offers educational opportunities for students, teachers and the public. In Alabama, the Weeks Bay Reserve offers programs that encourage student interest in science and research. For example, The Baldwin County Grasses in Classes Program involves approximately 1,000 new students each school year in habitat restoration. Not only do the students take an active role in growing the plants for restoration, but they work side by side with environmental professionals from U.S. Fish and Wildlife, the Alabama Dept. of Conservation and Natural Resources, and Weeks Bay Reserve to implement the restoration projects. It is the hands-on, “real science” experience part of this program that excites the students. Each school year, over 3,500 K–12 students come to the Reserve for fieldtrips where they participate in a wide variety of grade specific hands-on activities outside.

*NOAA’s Ocean Exploration and Research Program.*—The Ocean Exploration and Research Program (OER) has a formal Exploration Education Alliance Partnership with Dauphin Island Sea Lab, supporting the professional development of Alabama educators of Grades 5–12. This curriculum is designed to bring the science of NOAA’s deep ocean exploration and discovery, including the STEM (science, technology, engineering, and mathematics) disciplines that comprise it, into classrooms throughout the country.

*National Marine Sanctuaries Program.*—The Office of National Marine Sanctuaries (ONMS) works with partner organizations, on location and in classrooms, to increase the interest of students and their teachers in natural science through field studies and hands-on environmental monitoring activities, such as Ocean for Life and LiMPETS, as well as workshops and in-class presentations (Rivers to Reefs, Coral Reef Classroom, Down Under Out Yonder, and MERITO (Multi-cultural Education for Resource Issues Threatening the Ocean)). ONMS also reaches out to classrooms across the United States to engage students through innovative use of the world-wide web (Encyclopedia of the Sanctuaries, ONMS Media Library, social media, ACES: Animals in Curriculum-based Ecosystem Studies and other online curricula) and telepresence (OceansLive!, MONITOR and Thunder Bay National Marine Sanctuaries telepresence centers, and theme missions), bringing the ocean and its sciences into their classroom.

*NOAA’s Teacher at Sea Program.*—The Teacher at Sea Program provides a unique environment for learning and teaching by sending kindergarten through college-level teachers to sea aboard NOAA research and survey ships to work under the tutelage of scientists and crew. The valuable skills and knowledge that teachers acquire are then brought to the classroom. NOAA’s Teacher at Sea Program has supported 52 teachers from the Gulf States and 2 from Alabama. As an example, on June 9, 2009, Alabama middle school teacher, Ruth Meadows, will sail on NOAA Ship HENRY B. BIGELOW for two weeks. Opelika Middle School students will follow her adventure live on the web. Ms. Meadows will write weekly logs, take photos and video, and answer questions while on board the vessel. When she returns, she will create lesson plans about the science and teach her students and others in her local community.

*Educational Partnership Program (EPP).*—The EPP program operates summer science training workshops for K–12 teachers to reach underserved student and teacher populations. Established under the auspices of five Minority Serving Institutions (MSIs), NOAA’s Cooperative Science Centers (CSCs) are located around the country, including the southeastern portion of the United States. These CSCs act as educational change agents in their training and outreach activities for K–12 teachers and students with science content workshops for teachers and weather camps for students. EPP provides financial assistance, through competitive processes, to students and Minority Serving Institutions that support the training of students and research in NOAA mission sciences.

*National Ocean Science Bowl.*—NOAA supports this national program that offers opportunities to encourage and engage students in learning more about science and scientific research. The National Ocean Sciences Bowl (NOSB) is an academic competition for high school students focusing on ocean science, technology and maritime history and policy. The program has 25 regional events around the country including the Hurricane Bowl, which includes schools from panhandle of Florida, Alabama, Mississippi and Louisiana.

*JASON Project.*—The JASON Project is a program that uses technology to engage students in learning about science and technology by connecting them to explorers and explorations of our planet. The JASON Project engages students and their teachers through a variety of media and online experiences. NOAA works closely with the JASON Project to involve NOAA scientists in missions that explore aspects of Earth. JASON offers professional development to teachers who want to integrate this program into their classroom teaching.

*National Science Teachers Association Partnership.*—NOAA has maintained a strong partnership with the National Science Teachers Association (NSTA), the world's largest science education organization. Through that partnership, opportunities are provided for teachers to have face-to-face learning as well as online seminars and resources. NOAA partnered with NSTA at the recent national conference in New Orleans in March 2009, providing science education updates and teaching materials to many teachers from coastal States.

*Other NOAA Education Efforts.*—That NOAA also has several centers around the country that engage with the public, local schools and educational institutions. NOAA's Weather Forecast Office in Huntsville, Alabama developed a series of weather educational presentations using the NASA Digital learning network. The presentations were delivered via teleconferencing to 20 schools across the United States, training around 600 elementary and middle school students and teachers in the NWS Jetstream and Professor Weather curriculum.

NOAA also manages several education websites, widely used by audiences across the country, containing tutorials, lesson plans, interactive activities and games, and a wealth of information about coastal ecology, weather, pollution, hurricanes, sea level, global positioning, tides and currents that teachers can incorporate into their classrooms. The Lesson Plan Library includes over 50 lessons that middle and high school teachers can use to supplement their mathematics and science curricula.

*Question.* In December the NPOESS total life cycle cost estimate increased by \$1 billion to \$13.6 billion. The updated estimate reflected additional costs for the development of the Visible Infrared Imager. What degree of confidence do you have in the new cost and schedule estimates?

*Answer.* The December 2008 life cycle cost estimate of \$13.6 billion reflects an updated Acquisition Program Baseline (APB) signed in 2008. The cost estimate included an update to the operations and support costs of approximately \$1.1 billion that was not part of the 2006 Nunn-McCurdy certification. The estimate also included an increase of approximately \$300 million of additional development costs due to program development challenges with Visible Infrared Imaging Radiometer Suite (VIIRS) and Cross-track Infrared Sensor (CrIS) sensors encountered to that point.

Cost estimation for the NPOESS Program has followed the standard Department of Defense acquisition processes of estimating near the 50 percent confidence level. This means the program has approximately a 50 percent chance of successfully executing within budget. This confidence level has a higher level of risk of future cost growth than is now standard with NOAA programs and it is an issue we are exploring. NOAA policy now requires that budgets reflect estimates with a confidence of 80 percent, which helps to ensure that a program has a high probability of remaining within its budget through the life of the program.

Because of the importance of accurate budget planning, I have directed NOAA to work with the other NPOESS Executive Committee agencies, DOD and NASA, to develop an estimate at the 80 percent confidence level.

*Question.* If you are confident tell us why since every other estimate has turned out to be grossly exaggerated.

*Answer.* We recognize the importance of ensuring cost stability to the NPOESS program and are working with NASA and DOD to produce and evaluate alternative cost estimates. As noted, because of the importance of accurate budget planning, I have directed NOAA to work with the other NPOESS Executive Committee agencies, DOD and NASA, to develop an estimate at the 80 percent confidence level.

*Question.* What is the level of risk to continuity of weather and/or climate data and what contingency plans are being considered?

*Answer.* For the polar-orbiting satellites, the on-orbit and recently launched satellites are performing well and there is no immediate risk to data continuity for NOAA's weather and climate missions. We are concerned about the fragility of the constellation that begins to occur in 2013. This risk to data continuity occurs in the 2013 timeframe due to the schedule delays that the National Polar-orbiting Operational Environmental Satellite System (NPOESS) is facing.

NOAA is placing highest priority on the acquisition of this system to mitigate this risk. NOAA will use data from NASA's NPOESS Preparatory Project (NPP) sensors to produce data that meet or exceed the data from NOAA-19 (our current operational satellite). We have plans in place to make operational use of the data from the NPP spacecraft by increasing the number of products NOAA had planned to generate from the NPP system as a risk reduction mission.

NOAA has a contingency plan in the event there is a failure of any of its operational systems. This plan depends on using existing NOAA satellite assets, leveraging data from NASA and Department of Defense environmental satellites, and forging partnerships with international space agencies to acquire data needed

to support NOAA's operational weather and climate mission. NOAA is also investigating opportunities to fly a mission with the legacy imager Advanced Very High Resolution Radiometer (AVHRR) in the event VIIRS continues to experience developmental challenges.

*Question.* Safe and sustainable seafood is vital to the U.S. economy and food security. The development of a sustainable marine aquaculture industry will provide jobs to a commercial fishing industry severely depressed by competition from imported seafood products. Our Nation should work to reduce seafood imports and ensure the viability of economically and culturally important water dependent communities. Realizing the potential benefits of marine aquaculture will address the environmental, engineering and production needs of the fledgling offshore marine aquaculture sector.

What research, extension, and marketing programs will the Department of Commerce provide to foster development of a sustainable and diverse marine aquaculture industry while also protecting and strengthening independent and family-owned fishing operations?

*Answer. Research.*—The Department of Commerce, through NOAA, has a number of competitive external grants programs available to fund marine aquaculture research, including the National Marine Aquaculture Initiative, the Small Business Innovation Research Program, and the Saltonstall-Kennedy Grant Program. NOAA funds internal marine aquaculture research at NMFS, OAR, and NOS science centers.

NOAA's external and internal research funding supports a wide range of research topics, including: development of environmentally sound aquaculture practices for both finfish and shellfish, development of alternative feeds (e.g., substituting plant-based proteins for fish meal and fish oil), surveys to inform decisions on where to site aquaculture operations, stock enhancement to rebuild overfished and depleted species, and genetics and disease research.

*Extension.*—NOAA's Sea Grant program combines research and outreach/extension efforts for marine aquaculture that have contributed to the creation of several new aquaculture-based industries. These industries include the Gulf of Mexico and South Atlantic soft shell crab industry, the Pacific Northwest oyster and clam industry, the hybrid striped bass industry, and the Mid-Atlantic hard clam industry. In addition, Sea Grant investments have helped to establish new businesses throughout the United States, and have provided improved technologies to these businesses. The combined impact of Sea Grant-developed technology amounts to at least \$100 million annually and supports thousands of jobs in the United States.

*Marketing.*—The National Marine Fisheries Service operates the voluntary Seafood Inspection Program. This program is an outgrowth of the Agricultural Marketing Act of 1946 that provides voluntary inspection and certification program on a fee-for-service basis. This program offers a variety of professional inspection services which assure compliance with all applicable food regulations. In addition, product quality evaluation, grading and certification services on a product lot basis are also provided. Benefits include the ability to apply official marks, such as the U.S. Grade A, Processed Under Federal Inspection (PUFI) and Lot Inspection.

In addition, some funding for marine aquaculture marketing programs has been provided through competitive grants programs.

*Question.* Two Federal agencies have historically played significant roles in aquaculture, USDA and NOAA. What are the Department's plans to increase interagency collaborations among USDA, NOAA, EPA, NSF and others to provide a greater level of support to aquaculture?

*Answer.* The primary nexus for inter-agency collaboration on marine aquaculture issues is the Joint Subcommittee on Aquaculture (JSA). The JSA was created by the National Aquaculture Act of 1980 and is chaired by the Secretary of Agriculture. The JSA operates under the auspices of the Executive Office of the President, Office of Science and Technology Policy. The JSA serves as the Federal interagency coordinating body to increase the overall effectiveness and productivity of Federal research, technology transfer, and assistance programs in support of a globally competitive, technologically advanced, and environmentally sound aquaculture industry in the United States. The JSA has three active working groups/task forces—the Working Group on Aquaculture Drugs, Vaccines and Pesticides; the National Aquatic Animal Health Plan Task Force; and the National Aquaculture Research and Technology Task Force. NOAA is active on the National Aquaculture Research and Technology Task Force and the National Aquatic Animal Health Plan Task Force, and represents the Department of Commerce on the JSA's Executive Committee.

EPA and the Army Corps of Engineers (COE) both issue permit for marine aquaculture projects. NOAA, through both NMFS and OAR, works with both EPA and COE to provide technical review and advice on a range of marine aquaculture per-

mitting issues. If NOAA is granted authority to issue permits for aquaculture operations in Federal waters (e.g., through national legislation or under existing mandates such as the Magnuson-Stevens Fishery Conservation and Management Act), NOAA will work with EPA and COE to coordinate regulatory roles and permit reviews.

*Question.* According to NOAA data, the Southeast United States has experienced over 50 weather-related disasters over the past 28 years that resulted in losses of \$1 billion or more. That's more than any other region of the country. In Alabama, severe weather has resulted in 148 deaths, 1,723 injuries, and property losses of almost \$5 billion over the past 18 years. Even a small reduction in the impact of severe weather could save many lives and billions of dollars.

Are the current NOAA assets and infrastructure in the Southeast adequate to address the death, injuries and destruction caused by severe weather there?

*Answer.* We agree the Southeast United States experiences a significant number of destructive severe weather events each year: and more than any of the other five NWS regions across the Nation. However, the United States in total experiences more severe weather events than any other country in the world. As such, severe weather is a national and not a regional issue. We believe current NOAA assets and infrastructure across the Southeast are adequate to address the severe weather regime. NOAA's severe weather statistics show NWS forecasts and warnings are meeting or exceeding the national GPRA goals.

Currently, NOAA operates 122 Weather Forecast Offices (WFO) and 13 River Forecast Centers (RFC). The Southeast (Mississippi, Louisiana, Alabama, Florida, Georgia, and South Carolina,) is home to 16 of the 122 WFO's and 3 of the 13 RFC's (West Gulf RFC, Lower Mississippi RFC, and the Southeast RFC). NOAA's National Hurricane Center and its sister research lab (AOML/Hurricane Research Division) are physically located in the Southeast (Miami, Florida).

To improve services for the southeast and elsewhere across the Nation, NOAA has begun the Hurricane Forecast Improvement Project to improve our forecasts of hurricane track, intensity and storm surge. We are also implementing dual polarization of our Doppler radars, which will improve the detection of severe weather and improve our warning accuracy. We are also engaged with the university research community and conduct our own research projects to improve our understanding of severe weather events to improve our warnings.

*Question.* Although the Southeast experiences the worst weather in the Nation, NOAA labs and cooperative research programs are concentrated in other areas of the country. How can NOAA justify this misallocation of resources when it's clear the Southeast is the region most at risk?

*Answer.* While our data shows the most severe storms and hurricanes impact the southeast, the Alaska region might argue they have consistently some of the worst weather in the Nation. NOAA labs are concentrated in areas with similar interests and to leverage expertise in the Federal, academic, and private sectors. The NOAA Severe Storms Research Laboratory and the Storm Prediction Center, with national forecast responsibility for severe storms, are collocated with the Norman Forecast office and the University of Oklahoma to leverage the synergy, capability, research, and knowledge that each component offers. NOAA's National Hurricane Center is located on the campus of the Florida International University and near its sister research lab (AOML/Hurricane Research Division) in Miami, Florida. Here, too, NOAA leverages expertise and synergy to improve understanding of the weather phenomena and improve services. NOAA has a Cooperative Institute for Marine and Atmospheric Studies (CIMAS) in association with the University of Miami and the NOAA facilities in Miami Florida. CIMAS focuses on Marine, ecosystem, and atmospheric research. In 2006, NOAA established the Northern Gulf Institute (NGI) at Stennis Space Center, Mississippi, in partnership with Mississippi State University.

*Question.* Severe weather develops differently in the humid Southeast than in other areas. Would you agree that there is much more that can be done by NOAA in terms of research and planning focused on the unique weather of the Southeast that can help address these issues?

*Answer.* As a science agency striving to constantly improve services, we agree more research can aid our understanding and prediction of severe weather events in the southeast and across the rest of the Nation as well. To help address this, the President's fiscal year 2010 Budget increases funding for research to improve severe weather forecasts, including funding to accelerate improvements in hurricane intensity and track forecasts.

*Question.* Will NOAA support a long-term commitment to improve the infrastructure related to weather, climate and hydrology in the Southeast in order to reduce the number of deaths and injuries and the multi-billion dollar losses in the Southeast due to severe weather?

Answer. NOAA has a long-term commitment to improve the infrastructure related to forecasting weather, climate and hydrology in the Southeast and elsewhere across the Nation to help protect life and property and enhance the economy. It is our mission and we look forward to working with Congress to attain our goals.

*Question.* Can you provide an update on a proposal to NOAA by the University of Alabama in Huntsville to establish a NOAA Cooperative Institute for Remote Sensing on that campus? I know UAH has been working with NOAA for some time now on this proposed institute. This institute would take advantage of the world-class atmospheric research programs at UAH using satellite remote sensing.

Answer. NOAA has been impressed by the University of Alabama in Huntsville (UAH) research programs, particularly its work in the area of air quality and remote sensing. NOAA's Cooperative Institute policy requires that each Cooperative Institute must be competed in a group competition. NOAA will continue to work with UAH as it plans its competition for new Cooperative Institutes.

*Question.* What needs to be accomplished in order to make this institute a reality?

Answer. NOAA has encouraged UAH to submit an application to any of NOAA's calls for Cooperative Institute competitions, either as the primary institute or in partnership with a primary institute. NOAA intends to issue a Federal Register notice in the summer 2009 soliciting proposals for Cooperative Institutes.

*Question.* Can you give me a timeline in which you think this institute could be accomplished?

Answer. Establishment of a Cooperative Institute from the summer 2009 request for proposals could occur as early as July 1, 2010.

#### NIST

*Question.* The Federal Information Security Management Act charges NIST with creating mandatory security standards for all non-classified Federal information systems. Our Nation's cyber infrastructure is facing a growing threat from Russian and Chinese hackers. Recent news accounts have brought up the real possibility of our Nation's power grid being brought down by these hackers. Given the seriousness of this threat, is the annual appropriation of approximately \$25 million provided to NIST enough to address these threats?

Answer. Cybersecurity is a major concern, and NIST plays a vital role in ensuring that our Federal systems are secure. NIST will support the research necessary to enable and to provide the cybersecurity specifications, standards, assurance processes, training and technical expertise needed to secure U.S. Government and critical infrastructure information systems. NIST must continue to work freely and openly with industry and internationally. NIST cybersecurity activities also need to be closely coordinated with national security and both domestic and international private sector cybersecurity programs. As NIST formulates future budgets, it will continue to place a high priority in the area of cybersecurity, consistent with NIST's mission and role.

*Question.* The Administration has recently conducted a "60-Day Review" of all Federal cyber security systems. It was stated that this "review will develop a strategic framework to ensure that U.S. Government cyber security initiatives are appropriately integrated, resourced and coordinated with Congress and the private sector". Because the Department of Commerce is responsible for several key aspects of Federal cyber security, can you share your thoughts on the review?

Answer. The content of the Administration's "60-Day Review" has not yet been released.

*Question.* The Smart Grid integrates digital information technology to transform the Nation's electric system into a dynamic system with improved reliability, security and efficiency. NIST is responsible for developing the standards framework associated with a future smart grid. As part of this effort you recently announced that you would chair a meeting with CEO's to begin the process for reaching agreement on smart grid standards. How else is NIST engaged with the private sector in its efforts to develop this framework?

Answer. In addition to the CEO meeting, attended by 74 CEO's and public sector leaders from around the country, NIST, through its contract with Electric Power Research Institute, has organized a series of public workshops to engage the private sector in developing the framework. Approximately 430 representatives of electric utilities, electric industry manufacturers, IT and telecom providers, industry associations, standards development organizations, and universities participated in the April workshop. Over 680 Smart Grid representatives attended the May 19-20 workshop, and hundreds more are expected at the July 2009 workshop. A web-based collaboration tool is also being used to allow individuals and organizations who cannot attend the workshops to be informed of progress and submit comments.

*Question.* NOAA and NIST play key roles in climate change. Mr. Secretary, there is a lot of talk about the need for a “cap and trade” program to reduce the growth in emission of green house gases. A “cap and trade” system is not the answer, but we do need to develop technologies that allow industries to produce with fewer emissions.

As the Department charged with overseeing American industry, what are your plans for developing and adopting these technologies?

*Answer.* NIST partners with U.S. industry in many ways to support and help it adopt technologies and other processes which lead to reduced energy consumption or the use of alternative energy sources to reduce carbon emissions. As an example, NIST works with manufacturers of continuous emission monitoring equipment to ensure measurement accuracy at the source. Such information enables the user to make more informed decisions about energy consumption, which can lead to reduced energy consumption.

Further, NIST performs critical measurements and standards work in a variety of areas such as:

—*Smart Grid.*—NIST is partnering with industry and other Federal agencies to guide the standards development process which will ensure interoperability of the Smart Grid and associated devices. For example, smart meters, to which NIST measurement science is fundamentally important, can have a positive impact on consumption by informing consumers on the best time to use energy.

—*Green Buildings.*—NIST is working to provide the measurement science that will enable the development, deployment, and use of energy technologies useful to the building sector. For example, the use of solid-state lighting, advanced building materials and smart heating and air conditioning systems will lead to more energy efficient buildings.

—*Alternative Energy.*—NIST is working with industry to provide metrology tools, techniques, and standards to enable the evolution of energy technologies from pilot projects to full commercial applications through the development of technical infrastructure. For example, decreasing the cost of and increasing the efficiency of solar energy will enable the shift toward a larger U.S. share of the solar marketplace.

The Hollings Manufacturing Extension Partnership (MEP) program works directly with small manufacturers to:

—Reduce demand for electricity and fuel, reduce waste and contaminants in the production process, and incorporate green design in manufactured parts;

—Help companies to identify opportunities for reducing the energy footprint at all tiers of the production process;

—Assist manufacturing companies (especially auto suppliers) in market diversification efforts, to transition from supplying declining industries to making components for growing industries such as renewable energy providers and medical devices;

—Collaborate with renewable energy providers to identify new technologies from Federal labs and universities (technology scouting) and new suppliers (supplier scouting) to assist them with increased production demands; and

—Work with the Department of Labor to support the training needs of workers and employers in “green job training” and in support of the emerging energy efficiency sector.

*Question.* Mr. Secretary, this Committee, as well as others, have dedicated billions of dollars over the last several years to improve radio interoperability for first responders. One of my priorities has been to ensure that a process exists that will make sure that these radio systems being purchased will work together, regardless of the manufacturer. I know that NIST has been one of the leaders in putting this program in place. Can you tell the Committee where we stand in the development of this program?

*Answer.* The NIST Office of Law Enforcement Standards (OLES) and DHS’ Office for Interoperability and Compatibility has built a coalition of public safety users and communications equipment manufacturers to create the independent Compliance Assessment Program (CAP), which allows Project 25 (P25) equipment suppliers to formally demonstrate their products’ compliance with a select group of requirements by testing it in recognized labs.

Test laboratories demonstrate their competence through a rigorous and objective assessment process, conducted by NIST/OLES and based on internationally accepted standards. The first batch of laboratory assessments began in December 2008 and continued through April 2009. During the assessment, the NIST/OLES laboratory assessment team examined equipment, facilities, test reports, and the management system; observed demonstrations of testing; reviewed quality and technical records;

and reviewed the credentials of staff to determine their competency in particular areas of expertise.

On May 6, 2009, DHS/OIC recognized eight laboratories to conduct this equipment testing. P25 manufacturers will soon begin to submit their equipment through the testing process, and will release standardized summary test reports from these recognized laboratories, along with declarations of compliance. This documentation will be available on a publicly accessible website to help equipment purchasers make informed decisions. The response community will be able to select from multiple vendors that build innovative products according to the same standards. This documentation will serve to increase the public's confidence in the performance, conformance, and interoperability of P25 equipment.

Additional laboratories may continue to apply to the program and will continue to be assessed, further expanding the pool of laboratories that manufacturers may choose to test their equipment.

*Question.* Also, how is the program being used by the various Federal grant agencies providing funds for interoperable communications equipment?

*Answer.* A 6-month grace period provides equipment manufacturers and laboratories time to perform the necessary interoperability tests on equipment. After 6 months, equipment delivered to grantees receiving funds following SAFECOM grant guidance, which includes numerous Federal grant programs, will be required to have the supporting documentation.

At this time, the following Federal grant programs are leveraging the P25 CAP:

- DHS Interoperability Grants
- NTIA PSIC Grants
- COPS Interoperable Communications Grant Program

In addition, NIST has been informed that all Department of Defense radio procurements will require compliance to the P25 CAP. This program, through grant guidance, provides a means of verifying that Federal grant dollars are being invested in standardized solutions and equipment that promote interoperability for the public safety community.

*Question.* Mr. Secretary, we have been hearing that some first responders, especially firefighters, are having some issues with the new digital radio systems. Apparently, these new digital radios don't work as well as the older systems when there is loud background noise. As I understand it, your people at the Public Safety Communications Research program in Boulder are working on this issue. Can you tell me what you have found to date and what is being done to address the issue?

*Answer.* When a firefighter's life is in danger, the ability to communicate a call for help and to warn others is essential. However, some background noises created by firefighting equipment, such as chainsaws and personal alert safety systems (PASS), can interfere with digital communication. Sometimes this interference is so severe that it can prevent a firefighter and the person talking with them from understanding each other at the most critical moments. To understand how background noise affects voice communications and to determine what technology improvements are needed to overcome any background noise issues, NIST/OLES has worked with practitioners to develop and implement tests that measure how digital radios operate in the presence of loud background noise.

NIST designed and conducted subjective listening experiments that enabled quantification of the performance issues being reported in the field. Disseminating this information will ensure that voice implementations by manufacturers will meet the operational needs of public safety officials. NIST worked directly with fire departments to obtain high-quality recordings of typical firefighting noise and partnered with practitioners from various agencies to conduct numerous tests with three different communications systems in nine different noise environments. NIST has identified immediate behavioral, procedural, and technical steps agencies can take to avoid or minimize emergency response background noise.

A technical report was published in June 2008 describing the testing and results. The report, which is available at [www.its.bldrdoc.gov/pub/ntia-rpt/08-453/](http://www.its.bldrdoc.gov/pub/ntia-rpt/08-453/), notes that in some environments analog radios performed better than digital radios and explains that in some environments no radios performed well. This report is supplemented by a July 2008 report from the International Association of Fire Chiefs, which recommends operational changes for fire agencies using digital radios. The IAFC report is available at [www.iafc.org](http://www.iafc.org).

Since issuing the June 2008 report, NIST/OLES has begun a second round of audio quality testing with practitioners that will continue to inform our understanding of this audio quality problem. Additionally, this second round of testing will identify potential areas that could be improved in order to mitigate the problems being reporting by firefighters.

*Question.* Mr. Secretary, the recent National Academies of Science (NAS) report was a sobering assessment of the state of forensic science in this country. There is no doubt we have to make some serious improvements. Looking at the report, it is obvious that the authors see your Department, especially NIST, as a key element in forging improvements in forensic science in the United States. What steps is the Department of Commerce taking to fulfill the leadership role NIST is being called upon to provide to the government to help improve forensic science in this country?

*Answer.* In anticipation of the publication of the NAS report entitled *Strengthening Forensic Science in the United States—A Path Forward*, NIST undertook plans to engage other Federal agencies with forensic science programs. Also, a NIST scientist was a member of the NAS Committee that worked on this report. The NIST Office of Law Enforcement Standards Forensic Science Program is already working with other forensic science agencies to address the NAS recommendations: to develop standards and validate forensic science protocols; to conduct research and development of improved forensic science technologies; to develop interoperability of automated fingerprint identification systems; and to identify strategies to mitigate contextual bias in impression evidence analysis.

Further, in collaboration with the National Institute of Justice, NIST has begun a working group focused on Human Factors in Latent Print Analysis to study human errors in latent fingerprint testing. NIST has impaneled several dozen experts from Federal, State and local crime laboratories, and statisticians and psychologists from academia, to evaluate and reduce contextual bias in fingerprint analysis. Finally, NIST is working closely with OSTP to address the NAS recommendations at the Federal level, and maintains frequent dialog with State and local crime laboratories, academia and the private sector to implement improvements in forensic science in the United States.

#### CENSUS—CHANGES TO DECENNIAL CENSUS IN FISCAL YEAR 2009

*Question.* Over the past year we have witnessed the decision by the Census to revert to a paper census, rather than continue forward with using handheld computers for non-response follow up. This has raised the total cost of the 2010 Census to \$15 billion. There is still time for further issues to emerge that could drive this cost even higher. This is an effort that gets highlighted to the public once every 10 years, but has been almost a decade in planning with less than spectacular execution of cost saving improvements. Please provide what, if any, significant changes have occurred to plans for the Decennial since the beginning of the fiscal year?

*Answer.* Other than the expansion from the American Recovery and Reinvestment Act (ARRA) for program enhancements to our partnership and outreach/advertising efforts and the Coverage Follow-Up activities (designed to help find and resolve situations where respondents were unsure who to include on their questionnaire), no significant changes to plans have occurred since the beginning of the current fiscal year. As to issues or unexpected events that might yet emerge and have a large cost impact on the census, such as a much lower than anticipated mail response rate, or a major natural disaster, we have included contingency funding in both the fiscal year 2009 amended budget and the fiscal year 2010 President's Budget Request. These contingency funds are part of the estimated lifecycle total of \$14.7 billion.

*Question.* Have the budget and schedule estimates that Census has been using for the 2010 Census been an adequate forecast of the actual costs we now see for the Census?

*Answer.* We have made changes to our budget and schedule estimates over the decade as a result of testing results, program decisions, revised operational plans, and the like. Given that our actual plans for 2010 Census operations must be finalized, and funding requests made, nearly 2 years in advance of operations, it is always difficult to predict how external events and conditions might affect things during implementation. For example, when we prepared our staffing, budget, and schedules for the Address Canvassing operation now underway, we could not have forecast the current economic conditions, or how those conditions might affect such things as our ability to recruit and retain the workforce needed for that operation. We will now examine the results of the Address Canvassing operation to determine whether we might need to make changes to budget and schedule assumptions for future field operations. At this time, we believe we have the funds necessary to conduct the 2010 Census.

*Question.* How have the funds provided in the stimulus been used to mitigate problems that have emerged as we move toward the 2010 Census?

*Answer.* \$250 million of the funding from the ARRA is being used for program enhancements to our partnership and outreach/advertising efforts to minority communities and hard-to-reach populations, and to enhance our Coverage Follow-Up ac-

tivities (designed to help find and resolve situations where respondents were unsure who to include on their questionnaire). The increased funding for partnership and advertising will help us maximize the mail response rate next year, and thereby reduce the need to conduct expensive personal visit follow-up to non-responding households. One of our largest risks for the 2010 Census is a mail response rate lower than our budgeted rate of 64 percent—we estimate that each 1 percentage point change in the mail response rate will require an additional \$80 \$90 million in costs to visit the non-responding addresses, and there also are numerous logistical challenges if we must recruit and train a significantly larger workforce than planned.

*Question.* For the activities related to the 2010 Census, the bureau will hire hundreds of thousands of temporary workers in a short period of time. The Census initially relies on the FBI to screen potential employees and then the Census Bureau conducts further follow up reviews. In the last Census, 930,000 applicants, around 25 percent of the total, were flagged by the FBI. Many of these jobs require going door to door in order to get the information required for the 2010 Census. I am concerned about the safety of the public as they are asked to open their doors by representatives of the government. How can the public be assured of their safety when, according to the 2000 Census data, there is a 1 in 6 chance that the person at the door has a record that has been flagged by the FBI?

*Answer.* The Census Bureau has no data to support the assertion that 1 in 6 enumerators may have a criminal history record. The Census 2000 Census Hiring and Employment Check (CHEC) System data does show that 25 percent of applicants were identified through the FBI's name-based screening process as having a potential criminal record. However, after manual review, 312,544 applicants (approximately 8.6 percent of applicants) were determined to be potential matches to criminal history records that showed significant arrests.

These applicants were not hired. Rather, these applicants were notified by letter and advised that if they wanted to be considered for employment they must either provide fingerprints to allow a fingerprint search of FBI records, or provide court records indicating that the criminal history noted was resolved. Approximately 93 percent of those applicants with potential matches did not respond to this letter and were listed as unavailable for hire.

For Address Canvassing and other 2009 field operations, the Census Bureau is fingerprinting all hires at their first day of training, as an additional security check. Their fingerprints are electronically submitted to the FBI for identification and the results are returned to the Census Bureau electronically. So far, the turnaround time for this process has been approximately 24 hours. The Census Bureau will use this experience to determine whether fingerprinting will be carried out for 2010 field operations.

If there is no match to the submitted identifiers, these employees are cleared for field work. If the submission results in a match, the CHEC Office will flag the case for manual review, and the employee's work will be suspended until a final decision is made. If after review the employee is deemed to be a potential risk, they will be offered the opportunity to provide mitigating information. If after manual review the employee is determined suitable for continued employment, they will be placed back in active status and will be given additional work.

*Question.* What criteria does the Census use to determine if an applicant's past criminal history disqualifies them for employment?

*Answer.* The criteria for the CHEC program are designed to identify those applicants who, based on their criminal history background, present an unacceptable risk to the process of gathering information for the Decennial Census. In the course of making determinations on applicants based upon the criteria established for this purpose, the Census Bureau is mindful of the delicate balance between hiring persons of the highest integrity to represent the government and the need to hire quickly an unusually large workforce for positions to perform limited information gathering duties for periods of 6 weeks or less.

At the same time, the Census Bureau realizes that those who are hired will, even if for a limited period, represent the Census Bureau and the government and, in that capacity, will be invited into private homes and communities for the purpose of collecting information. Thus, we follow the general guidelines below to ensure that each applicant is an acceptable risk to collect census information from residents of a community as a representative of our government.

Most FBI rapsheets do not list the final criminal justice dispositions; therefore, applicants will be asked for official court documentation showing the final outcome of any arrest(s) that contain the following:

- manufacturing/sale of any controlled substance
- breaking & entering

- burglary
- robbery
- embezzlement
- grand theft
- violent crimes against person or property (includes assault, battery, kidnapping, manslaughter, vehicular manslaughter, murder, arson)
- crimes against children
- sexual offense (includes sexual harassment, sexual misconduct, sexual assault, rape, statutory rape)
- weapons charge (includes carrying concealed weapon, possession of illegal weapon, sale of firearms)
- terrorism
- any pattern of arrests (3 or more arrests in the last 15 years)
- any arrest within the last 36 months

A conviction for the above offenses will likely disqualify an applicant for employment. However, this list is not all-inclusive; there may be additional types of offenses for which a conviction depending on the date, severity, and nature of the offense, may render an individual unsuitable for hire.

*Question.* What qualifications do those that screen potential hires have for making evaluations about the safety of the public?

*Answer.* Census Hiring and Employment Check (CHEC) Office senior staff worked on the 2000 Census, and since that time they have been responsible for the suitability reviews of low-risk fulltime FTEs at the Census Bureau's Headquarters and Regional Offices. The USDA Graduate School trains all staff in Office of Personnel Management Suitability Standards.

Temporary staff are comprised of experienced law enforcement professionals, such as retired police officers, and are familiar with suitability evaluations. Additionally, all adjudicators were given extensive in-house system training and completed an FBI training course on criminal history records and adjudication procedures.

*Question.* Address canvassing is one of the most critical operations for the success of the Decennial Census. It is the process by which the Census identifies all of the potential places of residence for sending 2010 Census forms. The canvassing will also include the use of hand-held computers to set GPS markers for each address that will further inform States as they begin the process of redistricting for their representation in the House of Representatives. In light of the management challenges facing the 2010 Census, did AdCan operations begin on schedule?

*Answer.* Yes. Moreover, the field listing for the Address Canvassing operation began in eight offices on March 30, one week ahead of schedule. Some listings were completed prior to March 30 as part of training sessions.

*Question.* What have the early results been with the hand-held units and when will Census complete its quality assessment of Address Canvassing operations?

*Answer.* The handheld computers are generally working well. We have experienced several issues that required immediate resolution. Corrective steps were put in place, and work is continuing on or ahead of schedule.

The Address Canvassing Quality Profile, which reports on results from the Quality Check operation, is scheduled to be completed by the end of November 2010. The Address Canvassing Assessment, which is a broad review on the entire Address Canvassing operation, is scheduled for completion in August of 2010 and an assessment of the Address Canvassing automation is scheduled for February 2011.

*Question.* During these field operations, are census workers collecting significantly more addresses than initially identified by the Geography Division at the start of address canvassing?

*Answer.* Early indications based on preliminary review and processing of the Address Canvassing results have not shown anything significantly beyond our expectations. Until the Address Canvassing operation is complete and all data processed, it will be difficult to assess what the final address count will be.

*Question.* Based on your current collection progress, how accurate and complete will the results of address canvassing be?

*Answer.* We do not have any mechanism to independently measure the accuracy of the address list following address canvassing. However, as part of our overall address list development program (which also includes updates from the U.S. Postal Service and from local, State, and tribal governments), we are confident the Address Canvassing operation is helping us ensure the most complete address file possible for the 2010 Census. For Address Canvassing, we have a quality control (QC) operation in place to check the quality of each lister's work to ensure they are following procedures (and to re-train them, or re-do their work, if necessary). We also conduct a quality check for each assignment area to ensure the overall canvassing results are of acceptable accuracy. It would be prohibitively expensive to conduct a QC

check large enough to ensure 100 percent accuracy for all assignments—the QC operation we have in place is designed to ensure that the average critical error rate does not exceed 8.1 percent.

*Question.* At this time, is address canvassing running on schedule, behind schedule, or ahead of schedule?

Answer. Overall, Address Canvassing work throughout the country continues on or ahead of schedule. As of May 27, 96 percent of Assignment Areas (AAs) have completed all phases of the Address Canvassing operation, including the Quality Check, as compared to the established goal of 65 percent.

*Question.* Are there specific areas that will finish earlier than expected?

Answer. Yes, at this time, it appears that some Local Census Office areas will finish earlier than scheduled.

*Question.* If significant national or local problems are identified as this activity progresses, what are the contingency plans for correcting the problems and has the Census estimated the range of costs for ensuring this activity is properly carried out?

Answer. Given how well the operation has gone to-date, our contingency planning efforts have shifted focus from plans to replace the Address Canvassing operation now underway, to focus on a county-level review of the Address Canvassing results to determine if special efforts are needed in selected areas. Until the completion of Address Canvassing and the county-level review, we won't know if contingency efforts will be necessary, and if so, their scope. However, contingency planning efforts are ongoing. As part of that effort, we are assessing the potential cost impacts but do not have estimates available at this time.

*Question.* As I mentioned in my opening remarks, I am concerned about the potential for politicizing the 2010 Census. Our citizens do not deserve to be short-changed because of manipulation of the results from the Census. Provide a detailed description of what role the White House is playing in the execution of the 2010 Census, including the person at the White House the Census must report to, and that person's role in directing Census activities?

Answer. Secretary Locke has made explicit his commitment to the need for independence of the Census Bureau Director, that the Director will report to him, and that the White House has assured him that they have no interest in politicizing the census.

*Question.* How is the Census ensuring that the integrity of the 2010 Census data is not manipulated for political gain?

Answer. The Census Bureau and its leadership have long recognized, and insisted upon, the need for statistical information of all types to be independent of partisan politics. If the information we produce is in any way considered to be manipulated by such influences, the credibility of the data, and of the Census Bureau, will be lost, and difficult (if not impossible) to restore. A key to ensuring this integrity is, and always has been, the Census Bureau's commitment to openly sharing its plans, methods, findings, and decision criteria with all stakeholders.

*Question.* I was alarmed when I discovered that the Census had plans for using ACORN as a partner in the 2010 Census. ACORN employees have been found to be fraudulently registering voters for elections. Given ACORN's political history, I feel that the Census Bureau should not partner with organizations that have shown systemic problems with both accuracy and legitimacy. What is the Department of Commerce and Census Bureau doing to ensure that groups, such as ACORN, are adequately investigated prior to their involvement in something as important as the 2010 Census?

Answer. The goal of the Census Bureau's partnership program is to combine the strengths of State, local, and tribal governments, community-based organizations, faith-based organizations, schools, media, businesses and others to ensure an accurate 2010 Census. These governmental and private sector businesses and organizations know their local conditions and circumstances better than the Census Bureau and have the connections in the local community to encourage and mobilize participation in the census. Partners are not Census Bureau employees and have no responsibility for counting, collecting, or processing census data.

The selection of 2010 Census partners is extremely important. While not Census Bureau employees, partners are advocates for census cooperation and participation. During partnership training, detailed information is given to partnership specialists about the type of partners the Census Bureau should and should not seek partnership agreements with. Prior to obtaining a formal partnership agreement, partnership specialists also research potential partners and meet with them to learn more about the support and outreach activities the organizations can provide to help ensure an accurate count of their constituents.

Census Bureau staff at the regional and national level use the following guidelines and criteria when identifying potential 2010 Census partners.

Select partner organizations that:

- Promote the goals of the Integrated Communications Campaign to:
  - Increase mail response,
  - Improve accuracy and reduce the differential undercount, and
  - Improve cooperation with enumerators.
- Reach and motivate households and individuals, particularly those who live in hard-to-count areas.
- Have communications vehicles designed to reach their members and/or constituents.
- Agree to take ownership of the outreach process to their members and/or constituents.
- Have influence and respect in their community.
- Are viewed as “trusted voices” by their community.

Do not select partner organizations that:

- Are not trusted or are viewed negatively within the community, such as a company or organization located within an African American community that has a negative reputation for mistreatment of African Americans or other population groups.
- Produce products that may create a negative connotation for the Census Bureau, such as sexually related products.
- Could distract from the Census Bureau’s mission.
- May make people fearful of participating in the census, such as groups that espouse violence or hate-crimes or extreme anti-immigrant views.

Partnership specialists are trained to consult with management if they are in doubt about the choice of an organization or corporation as a 2010 Census partner. When expressing concerns to management about a potential partner, the staff member outlines the concerns that caused them to doubt the validity of a potential partner organization choice. We fully utilize the expertise and experience of regional management staff and Regional Directors during this process, since they know best the organizations that will or will not resonate with the hard-to-count populations in their regions.

#### ITA EXPANDING U.S. EXPORTING

*Question.* Our long-term economic growth and job creation must include an exporting component. In recent years, exports have only accounted for 12 percent of our GDP. In fact, we export less than many of the major G-20 nations. Yet I hear that there are often long wait times for U.S. businesses who have asked the International Trade Administration for help breaking into new markets or for help to get started in exporting. I also understand that the number of people you have in ITA has been declining and it appears as if your budget is relatively flat for export promotion activities. What can the Department and ITA do to help more U.S. firms begin exporting and to further expand our Nation’s exporting capabilities?

*Answer.* ITA plays an important role in creating and sustaining high-paying jobs through export assistance, especially for small and medium-sized businesses, and market access and advocacy support to ensure fair trade. ITA’s efforts are focused on increasing the number of American exporters and on increasing the number of markets to which American firms export. The Commerce Department, as the chair of the interagency Trade Promotion Coordinating Committee (TPCC), also has the lead role in ensuring that all U.S. export promotion programs and resources are deployed in a strategic and effective manner. I will work to ensure that the Department’s export promotion programs, and those of the TPCC member agencies, maximize the competitiveness of U.S. businesses in the global marketplace. In the months ahead, I will be consulting with other TPCC agencies to develop a strong set of national priorities for boosting U.S. exports.

*Question.* Mr. Secretary is there currently a hiring freeze at the Foreign Commercial Service (FCS)?

*Answer.* No, but US&FCS has implemented hiring restrictions to ensure that budgetary resources go where they are most needed.

*Question.* Can you tell us how long this has been in effect and what is the amount of their estimated budget shortfall?

*Answer.* These hiring restrictions have been in effect since October 2008. We anticipate that ITA will be able to manage effectively within its budgetary resources.

*Question.* Mr. Secretary, the responsibility for managing the ever expanding universe of Internet domain names used to be handled by the Department of Commerce, but is now handled by the Internet Corporation for Assigned Names and Numbers (ICANN) under a memorandum of understanding with the Department called the Joint Partnership Agreement, or “JPA.” ICANN has been very open about its desires to terminate the JPA, which would effectively sever its ties to the U.S. Government.

Do you believe ICANN is ready to manage its responsibilities for global Internet protocol address allocation and root zone management for the Domain Name System (DNS) on its own?

*Answer.* The Department of Commerce remains committed to preserving the security and stability of the Internet’s domain name and addressing system (DNS), and any decision with respect to the future of the JPA will be consistent with that goal. NTIA released on April 24 a Notice of Inquiry (NOI) seeking comments on these issues. The public record developed through this process will inform any decision made about the JPA’s future, and the Department looks forward to working with Congress on this important issue.

*Question.* If ICANN is allowed to completely sever its ties to the U.S. government, how will we ensure that the voices of U.S. businesses (and the U.S. government, for that matter) are heeded in ICANN decision making?

*Answer.* It is very important for U.S. business to have a voice in ICANN decision making. Regardless of whether the JPA is terminated, modified, or extended, NTIA will continue to be an active participant in ICANN by representing the United States government in ICANN’s Governmental Advisory Committee (GAC) as well as filing comments, as needed, in ICANN’s various public consultation processes. In addition, the Department’s relationship with ICANN will continue, as ICANN currently performs the Internet Assigned Names Authority (IANA) functions under contract to the Department.

*Question.* Who would ICANN then answer to?

*Answer.* ICANN is a United States not-for-profit organization that coordinates the Internet DNS. As such, it answers to its Board of Directors and the stakeholders that participate in its bottom-up policy making process, including the GAC on which NTIA represents the United States government.

*Question.* What evidence is there that ICANN will take U.S. interests and concerns seriously, since there is some question as to whether they have done this even while operating under the auspices of the JPA?

*Answer.* NTIA recently released a NOI soliciting comment on these issues, specifically on whether there are sufficient safeguards in place to ensure that all stakeholder interests are adequately taken into account in ICANN’s decision-making processes. The Department expects to work with Congress to ensure that these important issues are satisfactorily addressed.

*Question.* Are you aware that ICANN’s budget—which is funded through fees set entirely by ICANN—has grown at an annual compound rate of 34 percent since 1999? (In stark contrast, the budget of the Department of Commerce which grew at about 4 percent annually during that same period).

*Answer.* Under the terms of the JPA, the Department of Commerce reviews ICANN’s performance to ensure completion of the JPA tasks. The Department of Commerce also provides expertise and advice on certain discrete issues (such as processes for making the root server system more robust and secure). The Department does not exercise oversight in the traditional context of regulation and plays no role in the internal governance or day-to-day operations of the organization or its budget.

*Question.* Do you know why ICANN has required such dramatic funding increases year after year?

*Answer.* The continual growth of the domain name market (i.e., increases each year in the number of domain names registered) has resulted in an increase in ICANN’s budget, because a significant portion of the budget is comprised of fees paid by registry operators to ICANN.

*Question.* Are you aware that its Executive Director made close to \$1 million, including benefits, in 2007?

*Answer.* The Department is aware. However, under the terms of the JPA, the Department of Commerce’s role is limited to reviewing ICANN’s performance to ensure completion of the JPA tasks. The Department also provides expertise and advice on certain discrete issues (such as processes for making the root server system more robust and secure). The Department of Commerce does not exercise oversight in the traditional context of regulation and plays no role in the internal governance or day-

to-day operations of the organization, including issues such as executive compensation.

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QUESTIONS SUBMITTED BY SENATOR GEORGE V. VOINOVICH

EDA—PEER REVIEWED EVALUATION PROCESS

*Question.* In 1998, Congress established a peer review, performance evaluation system for the allocation of funds under EDA's University Center Economic Development Program. However, in 2004, EDA imposed a regular competition for resources distributed through the program. The frequent competitions have resulted in unpredictable funding levels, making it difficult for universities to make long-term commitments.

What are your views on the peer-reviewed evaluation process for this program versus a competition?

*Answer.* Section 506 of the Public Works and Economic Development Act requires EDA to evaluate performance: "To determine which university centers are performing well and are worthy of continued grant assistance under this act, and which should not receive continued assistance, so that university centers that have not previously received assistance may receive assistance."

We believe the Congress' insight into the program was visionary and this requirement for competition has made the program a much stronger economic development resource for America's distressed communities. Judging by the robust competition that occurs annually, we believe the section has served its purpose well and helps ensure that additional institutions of higher education do indeed obtain the opportunity to compete (this year's competition is being conducted in the Atlanta and Seattle regional offices). This section already requires EDA to include peer review in its evaluation of the university centers. We think the requirement to include at least one other university center in the evaluation strikes the right balance of ensuring input by a peer into the evaluation, but at the same time ensuring that the final evaluation is conducted by career EDA professionals responsible for oversight of the program.

It is important to note that university centers that wish to undertake larger or longer-term projects may apply and compete for traditional Economic Adjustment Assistance grants.

*Question.* The EDA has a local match requirement of 50 percent for its grants. This requirement helps ensure local commitment to projects, and I certainly support it. However, current regulations allow EDA to reduce the local match in some cases. Given the current economy, would you support giving the Assistant Secretary broad flexibility to reduce matching requirements?

*Answer.* As you have stated, current regulations allow EDA to reduce the local match requirement. Any decision to reduce the matching requirement is based on the relative needs of the area in which the project will be located and is assessed on a case by case basis. This process has been very effective and the current regulations allow the flexibility needed to make these determinations.

*Question.* As part of its fiscal year 2009 appropriations, EDA was directed to increase its efforts to hire staff at both the regional and local levels. Can you please provide details on the agency's staff levels in its six regional offices, including field-based economic development representatives?

*Answer.* EDA's regions have 3 vacancies out of their 122 permanent positions. One of these vacancies is due to a recent retirement in the Philadelphia Regional Office, and the position is in the process of being advertised. For the remaining two vacancies in the Seattle Regional Office, offers have been made to candidates. All 19 field-based economic development representative positions have been filled.

USPTO—STOP! INITIATIVE

*Question.* I have long been a champion of strong intellectual property rights enforcement and outreach. President Bush established the Strategy Targeting Organized Piracy (STOP!) initiative, a good deal of which was coordinated with and operated out of the Department of Commerce. I worked with my colleagues to give this initiative a permanent structure as part of the PRO-IP Act (Public Law 110-403). More recently, I joined Senators Leahy, Bayh, and Specter in a letter to President Obama urging him to appoint the Intellectual Property Enforcement Coordinator (IP Coordinator).

Can you describe what steps the Department of Commerce is taking to transition the institutional knowledge related to the STOP! initiative to the office of the IP Coordinator?

Answer. The USPTO, through its Office of Intellectual Property Policy and Enforcement (OIPPE), worked very closely with Mr. Chris Israel, the former U.S. Coordinator for International Intellectual Property Enforcement. As an important part of the interagency team charged with implementing STOP, the USPTO was instrumental in spearheading three separate programs that fall under the general STOP initiative: (1) establishing the STOP toll free hotline; (2) posting IP experts in U.S. embassies in countries/regions where intellectual property protection and enforcement remain a challenge; (3) IP public awareness and outreach programs targeting small and medium sized companies (for full description of these initiatives, see response to question no. 71). All of these initiatives are fully established and have become important components of the STOP initiative. The USPTO is drafting briefing materials providing background on the development, maintenance and continuation of these programs, which will be provided to the new IP Coordinator, at his/her request. In addition, the USPTO is considering new ways to gauge and improve the effectiveness of these programs, and looks forward to sharing these thoughts with the IP Coordinator. The USPTO looks forward to being an integral part of the IP Coordinator's efforts, and to closely working with the IP Coordinator to fulfill his/her duties.

*Question.* What specific efforts does the Commerce Department intend to undertake related to IP enforcement, and educating American companies about the need to protect intellectual property when conducting business abroad?

Answer. The Department of Commerce is taking a wide variety of actions related to IP enforcement and educating American companies about the crucial importance of protecting their intellectual property rights when conducting business abroad.

To avoid an overly voluminous response here, the following is merely a listing by category of the types of IP enforcement efforts and educational outreach efforts that the Department is already undertaking:

*Capacity Building/Technical Assistance*

Year-round IP enforcement training programs—for foreign and domestic judges, prosecutors, police, IP-Office officials and others—at the USPTO's Global Intellectual Property Academy (GIPA), located in Alexandria, Virginia. In 2008 alone, GIPA provided training to more than 4,100 officials from 127 countries on a variety of topics, including IP protection and enforcement, and technology transfer.

—Programs customized to the needs of a particular country.

—Regional programs, such as hosting an APEC/ASEAN enforcement conference in June in Malaysia, and is co-sponsoring a companion APEC/ASEAN enforcement conference in July, in Hawaii.

*IPR Attaches*

A key IP enforcement effort over the past several years has been the placement of IPR Attaches in key regions around the world. The USPTO, FCS, and State have worked cooperatively to post six attorney-advisor intellectual property experts in: Bangkok, Thailand; New Delhi, India; Beijing and Guangzhou, China; Moscow, Russia; and, Sao Paulo, Brazil.

These IP attachés provide expertise to U.S. embassies and consulates on IPR issues, advocate U.S. intellectual property policies, coordinate training on IPR matters, and assist U.S. businesses that rely on IPR protection abroad

*Promoting Strong IPR Enforcement In and Through International Agreements*

The Department, through the USPTO, ITA and other bureaus, provides support to the State Department and USTR, assisting in rafting, negotiating and implementing the intellectual property provisions of free trade and other international agreements. These provisions generally require U.S. trading partners to provide stronger, more effective protection for intellectual property than is required under the World Trade Organization's Trade Related Aspects of Intellectual Property Rights ("TRIPs") Agreement.

In 2008, the Department participated in post Free Trade Agreement (FTA) implementation discussions and/or follow-up talks with several countries, including Peru and Costa Rica.

The Department also supports USTR efforts for Trade and Investment Framework Agreements (TIFA) negotiations in various countries such as Nigeria and Indonesia, as well as in negotiating the Anti-Counterfeiting Trade Agreement (ACTA), where the objective is to negotiate a new, state-of-the art agreement to combat counterfeiting and piracy.

*Public Awareness Efforts**STOP*

Through the USPTO, the Department manages a hotline (1-866-999-HALT) that helps small-and medium-sized businesses (SMEs) leverage U.S. government resources to protect their intellectual property rights in the United States and abroad. In fiscal year 2008, the Hotline received 1,289 calls, including calls regarding counterfeiting and piracy concerns with respect to China and other countries.

The Department also maintains the [www.stopfakes.gov](http://www.stopfakes.gov) website, which provides in-depth information about the STOP initiative. A key feature of the website is the country-specific “toolkits” that have been created by our overseas embassies to assist SMEs to understand the business environment and how to protect and enforce their rights in a particular country. There are now 16 toolkits, including toolkits for the BRIC countries.

The USPTO also established the [www.stopfakes.com/smallbusiness](http://www.stopfakes.com/smallbusiness) after a study revealed that only 15 percent of 1,000 small businesses that do business overseas are aware that a U.S. patent or trademark provides protection only in the United States.

*Public Outreach*

The Inventor’s Assistance Program, run by the USPTO, reaches out to inventors and entrepreneurs to educate the public about the importance of intellectual property by hosting educational conferences, creating and posting computer based training modules, and posting pod casts on I-tunes. In addition the Office conducts live on-line chats, has established a mailbox for inventor questions, and has an 800 number to answer questions. There is also an Inventors Resource page within the USPTO web site that has “plain language” content for the public.

The Department, through the USPTO, offers “IP Basics” conferences throughout the U.S., targeting SMEs where participants learn what intellectual property rights are, why they are important, and how to identify, protect and enforce these rights.

Separately, the Department, through the USPTO also offers China intellectual property-focused programs in various cities throughout the United States. These programs are directed to SMEs that either are in China or are thinking about going to China or, for that matter, any SME—because many are not aware of the threat of IP theft from other countries and how surreptitiously it can occur.

In 2009, the USPTO is expanding its China-related event to include intellectual property issues in India.

The U.S. Export Assistance Center (USEAC) programs, run by the Department’s U.S. & Foreign and Commercial Service (US&FCS), provide personalized assistance to small and medium-sized businesses in various cities throughout the United States.

In fiscal year 2008, the USPTO entered into a Memorandum of Understanding (MOU) with the U.S. Minority Business Development Agency to provide education to the minority businesses as well as the directors for the MBDA offices and business centers. The USPTO also works closely with the U.S. Department of Interior, specifically, the Indian Arts and Crafts Board (IACB) and the Bureau of Indian Affairs (BIA), to help educate Native American artists and craftspeople on intellectual property issues as well as intellectual property theft from other countries. Starting in fiscal year 2007, the USPTO began to operate its USPTO STOP Booth, an information booth, at the International Music Products Association (NAMM) bi-annual trade shows to wide acclaim by both the NAMM Board and music product manufacturers.

## ITA—PROMOTING U.S. EXPORTS

*Question.* Exports are an important part of Ohio’s manufacturing economy. As governor of Ohio, I led nine Ohio trade missions abroad, which were designed to open markets for Ohio products. I know that the U.S. Commercial Service serves as a resource to many small and medium-sized companies that want to export.

Can you describe the Department’s strategic plan on how the Commercial Service resources will be used to promote U.S. exports given the constraints on existing personnel?

*Answer.* The U.S. & Foreign Commercial Service (US&FCS) is a critical part of the International Trade Administration. US&FCS will continue to ensure that U.S. companies, particularly small and medium-sized businesses, benefit from global trade. Through US&FCS’s current global network of trade professionals in 109 U.S. locations and in 127 offices located in 77 countries, US&FCS staff will continue to work with U.S. companies, providing counseling and advocacy, market research, trade events, and identification of potential international buyers or partners.

US&FCS will maintain its program focus on three priorities: increasing the number of U.S. companies that export; helping smaller companies expand to new export markets; and helping exporters overcome hurdles in foreign markets.

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QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

NOAA

*Question.* Secretary Locke, the President's budget request eliminates the Pacific Coastal Salmon Recovery Fund, and proposes a new nationwide competitive grants program to recover all endangered and threatened marine species. But as you know from your time as Governor of the State of Washington, salmon recovery is a complex issue.

Can you tell me about NOAA's plans moving forward to ensure adequate funding for recovery of Pacific Coast salmon?

*Answer.* On May 21st, the Administration sent a budget amendment to the hill that contains language that allocates \$50 million to the Pacific Coastal Salmon Recovery Fund. In fiscal year 2010, program increases are provided to implement the Pacific Salmon Treaty (+\$16.5 million) and develop advanced tools for managing salmon (+\$7 million), amounting to a total of \$159 million in NOAA to support Pacific salmon. Also, nearly \$170 million was provided in the Recovery Act to restore coastal habitat, particularly in locations where there are listed species. Areas with Pacific salmon are competing for those grants.

*Question.* Mr. Secretary, the Mitchell Act hatchery program was created in 1938 and funds hatchery activities in the Lower Columbia River. As you may be aware, the Hatchery Scientific Review Group recently released a report calling for hatchery reform efforts in the Columbia Basin. A key part of these reforms would be centered around Mitchell Act hatcheries, which have been flat funded for several years.

What plans do you have to move forward on the much-needed modernization and reform of Mitchell Act hatcheries?

*Answer.* I am familiar with the important contribution made by the Mitchell Act to recreational, commercial, and tribal fisheries in the Northwest, as well as to fulfilling expectations under our Pacific Salmon Treaty with Canada. It is critical that the hatchery facilities supported by the Mitchell Act sustain fisheries in a manner that is consistent with the Endangered Species Act (ESA). The Hatchery Scientific Review Group recently called for measures that would accomplish our joint goals of maintaining fisheries while meeting ESA objectives.

NOAA Fisheries is working with the Washington Department of Fish and Wildlife, the Oregon Department of Fish and Wildlife, the Yakama Indian Nation and the Fish and Wildlife Service (the operators of the facilities) to manage funding opportunities in order to implement many of these recommendations. More implementation measures are planned for the future. The fiscal year 2010 funding request for Mitchell Act hatcheries is \$ 16.5 million, within which further hatchery reform measures will be implemented.

SUBCOMMITTEE RECESS

Senator MIKULSKI. This subcommittee stands in recess, subject to the call of the Chair.

[Whereupon, at 11:08 a.m., Thursday, April 23, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

**COMMERCE, JUSTICE, SCIENCE, AND RE-  
LATED AGENCIES APPROPRIATIONS FOR  
FISCAL YEAR 2010**

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**THURSDAY, MAY 7, 2009**

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 10:08 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Leahy, Lautenberg, Pryor, Shelby, and Alexander.

DEPARTMENT OF JUSTICE

ATTORNEY GENERAL

**STATEMENT OF HON. ERIC H. HOLDER, JR., ATTORNEY GENERAL**

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Good morning. The Subcommittee on Commerce, Justice, Science of the Senate Appropriations Committee will come to order.

The subcommittee this morning wants to give a very warm and cordial welcome to our Attorney General, Eric Holder. This is his first appearance before the Senate Appropriations Committee, and we welcome him. We want to hear the President's priorities, his agenda for essentially rebuilding and recapitalizing the Department of Justice.

The American people rely on the Department of Justice, and we are passionate about restoring it to what its original mission is. We know that you bring a great deal of experience as a career prosecutor, as a judge, and as someone who has been dedicated to protecting the American people from all kinds of crime.

As the Chair of the Commerce, Justice, Science Subcommittee, I want to look to you to be able to carry out the mandate. First of all, restoring the honor and integrity of the Justice Department. There are so many people who work at the Justice Department every day. Not only our gifted and talented legal teams, but all those who support them and then those who work in the field of Federal law enforcement, as well as those who administer those grant programs designed to deal with prevention and intervention.

They need to know that the Department of Justice is free from politics and ideology. And whether it has been what has happened

at the U.S. Attorneys Office, whether it has been the politics involved in giving out the juvenile justice grants, and, of course, the issues related to torture, we are going to hear from you how you want to restore that trust. And then what are the resources you need to be able to begin enforcing those laws that need to be enforced, as well as those that might have been overlooked as we fought other wars, particularly in the area of civil rights?

We are also concerned that in addition to fighting the global war against terrorism, we need to continue to protect our neighborhoods. We will be reviewing the budget for cops on the beat; the Byrne grants to make sure that they have resources that they need to fight local crime, and also, again, those very important grant programs that make such a difference in the lives of people in the local police departments. As you know, people interact with Justice at many different levels.

There are also new threats, particularly in the area of mortgage fraud, predatory lending, identity theft, cyber crime—all kinds of new, emerging things that were not pressing when you worked in Government more than a decade ago. The Internet seemed nothing more than an expensive toy for a few, and now it is an essential tool for law enforcement. But we now find the criminals are as good at using the Net as we are, and we don't want them to escape the net of justice.

There is also the issue of terrorism. During the last decade, with America under attack and our desire to protect the homeland, our law enforcement agencies have had to assume a new role, particularly the FBI. We will want to hear about that. And we will also want to hear about the President's plan for the closing of Guantanamo Bay.

I support the President's agenda for closing Guantanamo Bay, and at the same time, as a United States Senator, I want to make sure that we protect our neighborhoods and communities as we look at what is the honorable and right way to deal with the prisoners that are there.

We need to enforce the law. We need to respect international law. But we have to make sure that streets and neighborhoods are not going to be the repository of Guantanamo prisoners. So we are going to be asking questions about the President's policies.

We would like to hear from you today, as you present your budget. We know that the President has given us kind of the top line on the appropriations. We don't have the kinds of details we normally would have for this hearing, but we are pleased at the direction that he is going in.

We are also particularly pleased that he understands the role of our Federal law enforcement, not only our FBI, but also the Marshals Service, DEA, and ATF. We note the President has increased funding in those—the Marshals Service by an increase of \$198 million, DEA by close to \$100 million, et cetera.

For the cops on the beat, which goes to neighborhood initiatives, we know that the President has increased this by \$300 million. But we are deeply troubled that the Office of Justice Programs has been reduced by \$594 million just at the time when local communities are facing great stress, particularly those marvelous prevention programs. So we will go into this in more detail.

But I will save more focused comments for my questions. I would like to turn now to Senator Shelby for any comments that he might have.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you, Madam Chairwoman.

Attorney General Holder, welcome to the committee, and thank you for joining us to discuss the Department of Justice and its 2010 budget request.

First, I want to recognize and extend my appreciation and support to the men and women of the Department of Justice who protect the country from crime and terrorism. We owe them all a debt of gratitude.

The fiscal year 2010 budget request for the Department of Justice is \$24 billion. This is a \$950 million, or 4 percent increase over the 2009 request.

In keeping pace with the last administration, the Department continues to be, some people think, satisfied playing second fiddle to the Department of Homeland Security—I hope that is not true—whether it is drugs, gun tracing, explosive, jurisdiction, or the border war. During the last administration, the Department of Homeland Security's request grew 7 to 10 percent each year, while the Justice Department request decreased or remained flat until this year.

While the overall numbers for the Department appear to have improved, there is a disturbing theme throughout the request that advocates hugs for criminals, some people think, instead of catching and punishing them. I am specifically, Mr. Attorney General, referring to the Second Chance Act.

The DOJ 2010 budget press release sent out by your office highlights the Second Chance Act. Now that is not a bad thing, but there is no mention of Adam Walsh funding, for example. The welfare of terrorists, pedophiles, and career criminals is prioritized, some people believe, at the expense of child safety, crime victims, and law enforcement. I hope this is not the case.

Once again, this administration, like the previous one, has requested such an inadequate level of funding for the Adam Walsh enforcement that it essentially ensures the act's failure, which is disturbing. In a perfect world flush with resources, I would be supportive of funding the Second Chance Act, period. But the very idea of taking money from victims and law enforcement officers to educate and comfort terrorists, pedophiles, and career criminals I think is an abomination.

Let me say this again. The Department of Justice is requesting funds to educate and to mentor terrorists, pedophiles, and career criminals while requesting no funds for tracking the kinds of people that abducted and sexually assaulted Adam Walsh, Elizabeth Smart, Drew Sjodin, Polly Klaas, and Jessica Lunsford and others like them.

How can we look into the eyes of the parents of these children and tell them the Department of Justice and the administration are prioritizing criminals while being overfunding of the Adam Walsh Act?

Mr. Attorney General, the administration recently announced its intention to close the military detention facility at Guantanamo Bay, where 241 detainees are still being held. This will be a difficult and expensive undertaking for the Department.

The Los Angeles Times recently reported that the administration plans to possibly release the detainees into the United States. The Director of National Intelligence, Dennis Blair, went so far as to suggest that the administration is even considering providing these terrorists with taxpayer-funded subsidies to establish and supplement their new life in America. Gosh, I hope they don't come to my community.

I look forward to hearing whether this administration really intends to release these terrorist-trained detainees into our communities and give them public assistance and under what circumstances.

Last, Mr. Attorney General, I would like an explanation of the cost and burdens the department will have to undertake to begin the closure process. We want to work with you to ensure that the personnel under your direction involved in this process have the resources necessary to complete their mission safely.

And I do thank you again for appearing before the committee.

Senator MIKULSKI. Mr. Attorney General

STATEMENT OF ERIC H. HOLDER, JR.

Attorney General HOLDER. Good morning, Chairwoman Mikulski, Ranking Member Shelby, Senator Alexander. It is good to see you.

And I guess happy birthday, Senator Shelby. I understand you had a birthday yesterday?

Senator SHELBY. Thank you. I did, and I hope I have many more. Thank you.

Attorney General HOLDER. I am sure you will.

Senator MIKULSKI. I didn't know that. You really are a good detective.

Attorney General HOLDER. The FBI works for me. Due to the Presidential transition, the fiscal year 2010 budget request is being released in two parts. In February, the administration announced the top-line request for each agency, including the Department of Justice. Today, the President will transmit the fiscal year 2010 budget, which includes \$26.7 billion for the Department of Justice.

I appreciate the opportunity to appear before you today to highlight certain aspects of the budget and further discuss key priorities for the Department of Justice.

The President promised that from the day that he took office; America will have a Justice Department that is truly dedicated to exactly that: justice. As I mentioned, the fiscal year 2010 budget that will be transmitted today supports this vital task by investing a total of \$26.7 billion in our critical law enforcement mission, including protecting America from terrorism, fighting financial and mortgage fraud, getting more cops on the beat, reinvigorating civil rights enforcement, and providing essential resources for our prisons.

As I testified during my confirmation hearing earlier this year, I will also pursue a very specific set of priorities. First, I will work to strengthen the activities of the Federal Government to protect

the American people from terrorism. I will use every available tactic to defeat our adversaries, and I will do so within the letter and the spirit of our Constitution.

Adherence to the rule of law strengthens security by depriving terrorist organizations of their prime recruiting tools. America must be a beacon to the world. We will lead by strength. We will lead by wisdom, and we will lead by example.

Second, I will ensure that law enforcement decisions and personnel actions in the Justice Department are untainted by partisanship.

Third, I will revive the traditional missions of the Department. Without ever relaxing our guard against the fight against global terrorism, the Department must also embrace its historic mission in fighting crime, protecting civil rights, protecting the environment, and ensuring fairness in the marketplace.

#### PRESIDENT OBAMA'S EXECUTIVE ORDERS

The Department's work does not end with those priorities. On January 22, President Obama issued three Executive orders and a Presidential memorandum that gave significant responsibility to the Department. These orders require immediate interagency action regarding Guantanamo Bay detainees, specifically to: review the appropriate disposition of individuals who are currently detained there; to develop policies for handling individuals captured or apprehended in connection with armed conflicts and terrorist activities; and evaluate current interrogation practices and make recommendations as is necessary.

Now while implementing these orders, the Department will take necessary precautions to ensure decisions regarding Guantanamo Bay detainees account for safety concerns for all Americans. Executing these orders will have a significant workload and cost impact on the Department, and this budget reflects that need.

Last month, I, along with other U.S. Government officials, attended the Mexico-United States arms trafficking conference in Mexico. This was my first foreign trip as Attorney General. My attendance at this conference reflects my commitment to continuing the fight against the drug cartels. The United States shares the responsibility to find solutions to this problem, and we will join our Mexican counterparts in every step of the fight.

Now, \$26.7 billion is a significant amount of money that comes with a commensurate amount of responsibility. We will use these funds wisely and with transparency. Our internal efforts, which range from implementing the Department's new Unified Financial Management System to establishing internal controls to ensure that proper expenditure of Recovery Act funds, will demonstrate our commitment to accountability at the highest level.

#### PREPARED STATEMENT

Chairwoman Mikulski, Senator Shelby, and members of the subcommittee, I want to thank you for this opportunity to discuss the Department's priorities and for your support of our programs. I appreciate your recognition of the Department's mission and the important work that we do.

I look forward to working in partnership with this subcommittee and with Congress as a whole. I will be pleased to answer any questions that you might have.

[The statement follows:]

PREPARED STATEMENT OF ERIC H. HOLDER, JR.

Good morning Chairwoman Mikulski, Ranking Member Shelby, and Members of the Subcommittee. Thank you for the opportunity to appear before you today to highlight areas of the President's fiscal year 2010 Budget for the U.S. Department of Justice and further discuss key priorities for the Department. I would also like to thank you for your support of the American Recovery and Reinvestment Act and the fiscal year 2009 Omnibus Appropriations Act. I look forward to your continued support and appreciate your recognition of the Department's mission and the important work that we do.

The Department is responsible for defending the interests of the United States according to the law; ensuring public safety against threats both foreign and domestic; seeking just punishment for individuals who break the law; assisting our State and local partners; and ensuring fair and impartial administration of justice for all Americans. The Department's ability to meet its mission is dependent on funding that supports our operations and allows us to enhance our efforts in identified areas of need.

Today the President released the fiscal year 2010 Budget which includes \$26.7 billion for the Department of Justice. This is a 3.8 percent increase over the fiscal year 2009 appropriation. The Department's budget includes enhanced funding for: strengthening national security and intelligence programs; combating financial fraud; hiring additional police officers; enforcing civil rights; securing our Nation's borders; and expanding Federal detention and incarceration programs. More specifically, the President's fiscal year 2010 Budget request:

- Counters the Threat of Terrorism and Strengthens National Security.*—The request provides \$7.9 billion for the Federal Bureau of Investigation (FBI), including \$480 million in enhancements and \$101 million for continued support of overseas contingency operations and \$88 million for the National Security Division (NSD), to address the President's highest priority: protecting the American people from terrorist acts. Funding supports the detection and disruption of terrorists, counterintelligence, cyber security, and other threats against our National Security.
- Provides Funding to Begin to put 50,000 More Cops on the Street.*—The request expands the COPS Hiring Grants, and includes funding to begin hiring 50,000 additional police officers. Supporting the hiring of police officers nationwide will help States and communities prevent the growth of crime during the economic downturn.
- Combats Financial Fraud.*—The request includes resources for additional FBI agents to investigate mortgage fraud and white collar crime and for additional Federal prosecutors, civil litigators and bankruptcy attorneys to protect investors, the market, the Federal Government's investment of resources in the financial crisis, and the American public.
- Reinvigorates Federal Civil Rights Enforcement.*—The request provides a total of \$145 million for the Civil Rights Division to strengthen civil rights enforcement against racial, ethnic, sexual preference, religious, gender, and other forms of discrimination.
- Strengthens Immigration Enforcement and Border Security.*—The request supports resources for a comprehensive approach to enforcement along our borders that combines law enforcement and prosecutorial efforts to investigate, arrest, detain, and prosecute illegal immigrants and other criminals. This initiative also enhances the Department's ability to track fugitives from justice, combat gunrunners and shut down illegal drug traffickers.
- Supports Federal Detention and Incarceration Programs.*—The request provides \$6.1 billion for the Bureau of Prisons and \$1.4 billion for the Office of the Detention Trustee to ensure that sentenced criminals and detainees are housed in facilities that are safe, humane, cost-efficient, and appropriately secure.
- Expands Prisoner Reentry Programs.*—The request includes \$114 million for prisoner reentry programs, including an additional \$75 million for the Office of Justice Programs to expand grant programs authorized by the Second Chance Act that provide counseling, job training, drug treatment, and other transitional assistance to former prisoners.

As I testified during my confirmation hearing earlier this year, I will pursue a very specific set of goals:

First, I will work to strengthen the activities of the Federal Government that protect the American people from terrorism. I will use every available tactic to defeat our adversaries, and I will do so within the letter and spirit of the Constitution. Adherence to the rule of law strengthens security by depriving terrorist organizations of their prime recruiting tools. America must be a beacon to the world. We will lead by strength, we will lead by wisdom, and we will lead by example.

Second, I will work to restore the credibility of a Department badly shaken by allegations of improper political interference. Law enforcement decisions and personnel actions must be untainted by partisanship. Under my stewardship, the Department of Justice will serve justice, not the fleeting interests of any political party.

Third, I will reinvigorate the traditional missions of the Department. Without ever relaxing our guard in the fight against global terrorism, the Department must also embrace its historic role in fighting crime, protecting civil rights, preserving the environment, and ensuring fairness in the market place.

In addressing these priorities over the next several years, I look to the continued support of this subcommittee and Congress, as a whole, to ensure a systematic approach is implemented to target each one of the priorities outlined.

#### NATIONAL SECURITY: COUNTER-TERRORISM EFFORTS SINCE 9/11

Since the attacks of September 11, 2001, the highest priority of the Department has been to protect America against acts of terrorism. Despite repeated and sustained efforts by terrorists, there has not been another attack on American soil. The Department has improved significantly its ability to identify, penetrate, and dismantle terrorist plots as a result of a series of structural reforms, the development of new intelligence and law enforcement tools, and a new mindset that values information sharing, communication and prevention. Working with its Federal, State, and local partners, as well as international counterparts, the Department has tirelessly worked to safeguard America.

The FBI has transformed its operations to better detect and dismantle terrorist enterprises—part of the FBI's larger emphasis on threat-driven intelligence. As part of this strategic shift, the FBI has overhauled its counterterrorism operations, expanded intelligence capabilities, modernized business practices and technology, and improved coordination with its partners.

All of the Department's law enforcement components, especially those involved in national security efforts need reliable wireless communication capabilities. The ability of law enforcement to adequately communicate is vital in emergency situations and for day-to-day operations. Inadequate radio systems put our agents' lives, as well as those of the public, at risk. On average, the current Department radio systems are between 15 and 20 years old. The Integrated Wireless Network (IWN) Program is an interagency effort to provide secure, interoperable wireless communications that support the missions of the Federal agencies involved in this initiative. IWN will provide a range of secure and reliable wireless communications services, including voice, data and multimedia, to support Federal law enforcement, homeland security, and first responder operations. IWN will implement solutions to provide Federal agency interoperability with appropriate links to State, local and tribal public safety and homeland security entities. IWN will be deployed incrementally across the country by 2014.

#### SOUTHWEST BORDER VIOLENCE

Several weeks ago, this subcommittee held hearings with Special Agents in Charge of the Drug Enforcement Administration (DEA) and the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF); and then with Acting DEA Administrator Michele Leonhart. These hearings provided you critical information on the Department's efforts to address this issue. I will not attempt to summarize what took place during the previous hearings regarding this matter, but I will highlight some of the work the Department has engaged in recently to address southwest border violence.

Illegal immigration and border security continue to be paramount concerns for the United States and the Department. The Southwest Border in particular is a vulnerable area for illegal immigration, drug trafficking, and the smuggling of illegal firearms. Implementing a comprehensive strategy involves collaboration and coordination at various levels of the government. Late last month, the Department announced increased efforts to be used in the fight against Mexican Drug Cartels. The Department, along with the Department of Homeland Security (DHS) and the Department of State, will invest \$700 million this year to enhance Mexican law en-

forcement and judicial capacity and work closely to coordinate efforts against the cartels through the Merida Initiative. The Department's coordination will include the FBI, DEA, ATF, U.S. Marshals Service (USMS) and the Criminal Division, who will work to investigate and prosecute cartel members for their illegal activities in the United States and with law enforcement colleagues to disrupt the illegal flow of weapons and bulk cash to Mexico.

The Mexican Cartel Strategy will allow the Department to commit 100 ATF personnel to the Southwest Border to supplement our ongoing Project Gunrunner, DEA will add 16 new positions on the border, as well as newly reconstituted Mobile Enforcement Teams, and the FBI is creating a new intelligence group that will focus on kidnapping and extortion. DHS is making similar commitments regarding southwest border resources. In addition, I have met with Secretary Napolitano to discuss increased coordination on various matters between the Department of Justice and DHS.

The Mexican Cartel Strategy is being led by Deputy Attorney General David Ogden. This strategy uses Federal prosecutor-led task forces that bring together Federal, State and local law enforcement agencies to identify, disrupt and dismantle the Mexican drug cartels through investigation, prosecution, and extradition of their key leaders and facilitators, and seizure and forfeiture of their assets. The Department is increasing its focus on investigations and prosecutions of the southbound smuggling of guns and cash that fuel the violence and corruption and attacking the cartels in Mexico itself, in partnership with the Mexican Attorney General's Office and the Secretariat of Public Security.

Earlier this month I, along with other U.S. government officials, attended the Mexico/United States Arms Trafficking Conference in Cuernavaca, Mexico. This was my first foreign trip as Attorney General. My attendance at this conference reflects my commitment to continuing this fight against the drug cartels. The United States shares the responsibility to find solutions to this problem and we will join our Mexican counterparts in every step of this fight.

#### IMPLEMENTING THE PRESIDENT'S EXECUTIVE ORDERS TO CLOSE GUANTANAMO

On January 22, President Obama issued three Executive Orders and a Presidential Memorandum that gave significant responsibility to the Department. These Orders, which are clearly important Presidential initiatives, require immediate interagency action to:

- review and effect the appropriate disposition of individuals currently detained by the Department of Defense at the Guantanamo Bay Naval Base;
- develop policies for the detention, trial transfer, release, or other disposition of individuals captured or apprehended in connection with armed conflicts and counterterrorism operations;
- study and evaluate current interrogation practices and techniques and, if warranted, recommend additional or different guidance;
- and review the detention of Ali Saleh Kahlah al-Marri.

The Department has begun implementing these Orders and the Memorandum. I have appointed an Executive Director to lead the Task Force on Review of Guantanamo Bay Detainees. I have also named two officials to lead the Task Force Reviews on Interrogation and Detention Policy.

The Guantanamo Detainee Review Task Force is responsible for assembling and examining relevant information and making recommendations regarding the proper disposition of each individual currently detained at Guantanamo Bay. The Task Force will consider whether it is possible to transfer or release detained individuals consistent with the national security and foreign policy interests of the United States; evaluate whether the government should seek to prosecute detained individuals for crimes they may have committed; and, if none of those options are possible, the Task Force will recommend other lawful means for disposition of the detained individuals.

The Special Task Force on Interrogation and Transfer Policies is charged with conducting a review to determine whether the Army Field Manual interrogation guidelines, when employed by departments or agencies outside the military, provide an appropriate means of acquiring the intelligence to protect the Nation, and whether different or additional interrogation guidance is necessary. This task force is also responsible for examining the transfer of individuals to other nations to ensure that such practices comply with all domestic and international legal obligations and are sufficient to ensure that such individuals do not face torture or inhumane treatment.

The Special Task Force on Detention Policy is charged with conducting a review of the lawful options available to the Federal Government for the apprehension, de-

tention, trial, transfer, release or other disposition of individuals captured or apprehended in connection with armed conflicts and counterterrorism operations.

The Presidential Orders and the Memorandum require me to coordinate or co-chair each of these interagency activities. These task forces also involve other Departments and agencies, including the Secretaries of Defense, State, Homeland Security, the Director of National Intelligence, the Director of the Central Intelligence Agency, the Chairman of the Joint Chiefs of Staff and other officials.

While implementing these Orders the Department will take necessary precautions to ensure decisions regarding Guantanamo detainees account for safety concerns of all Americans. Executing these orders will have a significant workload and cost impact on the Department and this budget reflects that need.

#### FEDERAL AND STATE PARTNERSHIPS TARGETING FORECLOSURE SCAMS AND LOAN MODIFICATION FRAUD

As many Americans face the adverse affects of a devastating economy and an unstable housing market, the administration announced a new coordinated effort across Federal and State government and the private sector to target mortgage loan modification fraud and foreclosure rescue scams. These fraudulent activities threaten to hurt American homeowners and prevent them from getting the help they need during these challenging times. The new effort aligns responses from Federal law enforcement agencies, State investigators and prosecutors, civil enforcement authorities, and the private sector to protect homeowners seeking assistance under the administration's Making Home Affordable Program from criminals looking to perpetrate predatory schemes.

The Department, in partnership with the U.S. Department of Treasury, the Department of Housing and Urban Development (HUD), the Federal Trade Commission (FTC) and the Attorney General of Illinois, will coordinate information and resources across agencies to maximize targeting and efficiency in fraud investigations, alert financial institutions to emerging schemes and step up enforcement actions. As part of this multi-agency effort, the Department has outlined ways to crack down on mortgage fraud schemes. The FBI is investigating more than 2,100 mortgage fraud cases. This number is up almost 400 percent from 5 years ago. The Bureau has more than doubled the number of agents investigating mortgage scams, created a National Mortgage Fraud Team at Headquarters, and is working hand-in-hand with other partnering agencies.

In addition to focusing on fraudulent scams, I am committed to ensuring that homeowners who may be having difficulty making their mortgage payments do not experience discrimination and can benefit in equal measure from legitimate loan modification programs and other Federal programs to provide mortgage assistance and stabilize home prices. Lending discrimination prevents those who are discriminated against from enjoying the benefits of access to credit, including reasonable mortgage payments, so they can stay in their homes and provide much needed stability for their neighborhoods.

Discrimination in lending on the basis of race, national origin, or other prohibited factors is destructive, morally repugnant, and against the law. We will use the full range of our enforcement authority to investigate and prosecute this type of unacceptable lending discrimination.

#### UNIFIED FINANCIAL MANAGEMENT SYSTEM

Lastly, the Department continues to address ways to improve work efficiency and productivity. One important and complex effort in the Department's management arena is the implementation of the Unified Financial Management System (UFMS). Once fully implemented, UFMS will result in more accurate, timely and useful financial information that can better support management decisions and actions. UFMS will also enhance the Department's accountability, accuracy, and transparency as it relates to financial performance, internal controls, and standard business practices. Significant achievements and progress have been made on UFMS, and details of our future plans are provided in our Congressional request.

UFMS is a critical element in the long-term health of the Department's financial operations and we look forward to working with the subcommittee as we move forward with UFMS implementation.

#### CONCLUSION

Chairwoman Mikulski, Senator Shelby, and Members of the Subcommittee, I want to thank you for this opportunity to discuss my priorities for the Department.

Today I have highlighted critical areas that require attention and resources so that the Department can fulfill its mission to enforce the Nation's laws and help

protect national security. I hope you will support me in these worthy investments. As always, we are aware that there are tough decisions and challenges ahead and I look forward to working with you as we move forward.

Once again, thank you for inviting me here today. I am pleased to answer any questions you might have.

Senator MIKULSKI. Well, first, Mr. Attorney General, we want to salute you on these priorities and believe that in your official statement, too, where you say you want to counter the threat of terrorism and strengthen national security; make sure we are providing cops on the beat, 50,000 of them; strengthen the Southwest border initiatives, both dealing with the Mexican cartels as well as others; and combating financial fraud—we believe these are very important priorities.

Let me get, though, right to what is a headline topic, which is the Guantanamo Bay closing. We on the committee attended this time last week a hearing on the supplemental, and we heard the outstanding testimony of Secretaries Gates and Clinton, where we listened to the Departments of Defense and State. But a significant part of what needs to happen will be at Justice. So we are going to ask a little bit about the supplemental as well as this, what is in the fiscal year 2010 budget request.

As we understand for Guantanamo, the Justice Department is asking for \$30 million to begin the closing of Guantanamo Bay and then has a placeholder for fiscal 2010 for additional funds related to the closing of Guantanamo Bay. Could you tell me—I mean, you have got \$30 million here, and what it says is you have got three task forces. That just strikes the committee as an awful lot of money to pay for bureaucracy, three task forces.

We do not minimize the role of these task forces, which are detention review, interrogation policy, et cetera. But what would this \$30 million do, and is this laying the groundwork for the dumping of terrorists into State and Federal prisons?

#### REVIEW OF DETAINEE CASES

Attorney General HOLDER. Well, Madam Chairwoman, these are, as you indicated, not ordinary task forces. We were asked to set them up with short deadlines. There are, obviously, as you indicated, extraordinary consequences to the work that these task forces will do for our country and for the world, for that matter.

We had to take extraordinary measures to stand up these full-fledged classified task forces to put in place these classified legal review structures utilizing dozens of attorneys and subject matter experts from around the country. Now, to be more specific, we stood up a temporary classified organization at the top secret SCI level.

There are tens of thousands of pages of classified documents that have to be reviewed, thousands more that have to be translated. There are now over 80 attorneys, including several dozen who are detailed to Washington from our field offices, who are involved in this effort. We have paralegals with classified clearances that are needed and are involved in the effort.

We have travel and lodging for those staff that is included in this money. And we are also having to backfill the positions in the field

so that our traditional law enforcement work doesn't suffer as a result of the work the task forces have to do.

Now all of this work has to be done in a secure, classified environment, using secure networks and classified capable computers, scanning devices, phones, and copiers. And as you know from your Intelligence Committee work, this is material and equipment that is very expensive. We also have secure electronic document handling capabilities that we need. We have to outfit these task forces with, in essence, the secure equipment that is required for the work that they are doing.

We have also entered into an automated litigation support arrangement to support the massive document review effort that the task forces will have to do.

Senator MIKULSKI. Mr. Attorney General, what you are saying is that though it sounds like 241 prisoners, which is not a large number—I mean, in Maryland I have got 600 prisoners awaiting Federal trial. But the highly sensitive nature of who these prisoners are requires that everything occur in highly classified situations because of the nature of the information involved. Is that correct?

Attorney General HOLDER. Yes. That is correct.

Senator MIKULSKI. So it is just not an inventory about a person and what did he do and how bad he is and what we should do. So the cost and expense, particularly with them being off the coast of Cuba and our coast, require a great deal of expenditure just to maintain the security and the classification of this and that we do it in an appropriate way. Is that correct?

Attorney General HOLDER. That is correct.

Senator MIKULSKI. Now when will these task forces be done?

Attorney General HOLDER. The task force that is making the individualized determinations on the detainees is supposed to be done by January of next year. The other two task forces are supposed to be finished by July of this year.

Senator MIKULSKI. When would you anticipate that this be done and that prisoners would begin to leave Guantanamo to places yet to be determined?

Attorney General HOLDER. I am not sure. We are still in the process of making those individualized determinations, and we haven't come to a conclusion yet as to when we will be in a position to actually ask specific countries if they would take specific detainees. We are doing this on a rolling basis, and we have not gotten to that point yet.

I would expect in the next few months, though, that we would probably start that process.

Senator MIKULSKI. But Mr. Attorney General, are you saying that there is no immediate or imminent release of prisoners who would be placed on the shores of the United States of America?

Attorney General HOLDER. No. As I said, we are still in the process of making individualized determinations as to where these people should go. And paramount in our concern is the safety of the American people. We are not going to put at risk the safety of the people of this country in any determination we make with regard to the disposition of any of these individuals.

Senator MIKULSKI. Well, I am glad to hear that safety of our people is the number one concern. Could you tell us what would be the

general policy and consultation that you would have? Because I think the fear that many have, whether they are Governors or those of us who are elected national officials, is that we don't wake up one day and we hear that there are 100 people coming, and they are just going to be—I don't mean dropped off. We would be very concerned about not proper consultation. Do you anticipate them going to Federal facilities? What is your process?

We understand that the President and you can't go to another country and say, "Please, take some of these prisoners," unless we, ourselves, also evaluate our responsibility. But what would be your timetable? What is your role and the President's in consultation so that we are aware of this? These are not just any old prisoners.

#### DISPOSITION OF DETAINEES

Attorney General HOLDER. Yes. With regard to the disposition of all of these detainees, we will be consulting. And that is, in fact, what I was in Europe doing last week, talking to our allies about the possibility of making transfers to some of those countries. We are talking to our allies in the Middle East as well for the disposition of possible transfer.

Senator MIKULSKI. But who are you going to talk to in the United States?

Attorney General HOLDER. Well, if the decision is made to have people come to the United States. And I say "if." That determination has not been made yet. We would obviously be consulting with State and local officials, and Federal officials to do that in the way that we would want and make sure, as you say, that surprises did not occur.

But I really want to emphasize that determinations have not been made yet with regard to any individuals about where any specific people are going.

Senator MIKULSKI. Well, let me tell you what I worry about. First of all, of course, the safety of our communities. One of the things that happened to me during the Bush administration was when I woke up to a headline coming from the Department of Justice and the Bureau of Prisons that they were going to put a prison, a 1,700-person detention facility, in Maryland. And they chose two African-American communities as their site, and nobody had talked to me. No one had talked to Governor Ehrlich, a Republican Governor.

And all of a sudden, we were facing this, and it was going to hold everything from Federal prisoners awaiting trial to potentially holding terrorists. I launched like Sally Ride going into orbit about this, as did also Governor Ehrlich.

It is not that we don't understand Federal responsibility, but wow. And also, it was going to be a privately operated prison by a Mississippi company. So we can't have that.

Can I have your assurances that nothing would be done in States and local communities without consultation with us and also consultation with Governors?

Attorney General HOLDER. Well, Madam Chairwoman, I give you that promise with regard to all that the Justice Department and all of the components that we have will do. We want to have a good relationship with this committee, and with other Members of Con-

gress. We want to work in partnership, and I truly mean that—in partnership—so that we establish priorities to carry out the work that we think is important, but also what Members of Congress, and this committee think is important. We are looking to work together to solve the common problems that we all face.

Senator MIKULSKI. Well, thank you.

I know we are going to have a lot to talk about, but I thank you for your candor. What you are saying is that right now you are doing an inventory of who is there at Guantanamo Bay and what is the right way to dispose of them, as well as also doing a real evaluation about what are the best interrogation policies that get the best information under the rule of law. Is that correct?

Attorney General HOLDER. That is correct.

Senator MIKULSKI. Senator Shelby.

Senator SHELBY. Thank you, Madam Chairman.

Attorney General Holder, about more than a month ago, my colleague from Alabama, Senator Sessions, who is now the ranking or top Republican on the Judiciary Committee that you will deal with a lot, he wrote you a letter dated April 2 regarding, among other things, the legal authority of the United States of America through the Justice Department, asking whether the Federal Government has the current legal authority to admit any prisoner held at the military detention facility in Guantanamo Bay who participated in terrorist-related activities into the United States. He sent a follow-up letter on May 4 to you.

My question to you, in view of the statutes, as you are very familiar with, and the Court of Appeals for the District of Columbia decision, does the U.S. Government have the authority to admit these terrorists into the United States if you move them from Guantanamo Bay into some of our communities? And if you think they do, could you provide for the committee a written response as to the authority of that?

First, do you think you have the authority to do that?

Attorney General HOLDER. Well, I think—

Senator SHELBY. To bring terrorists into the communities?

#### DETERMINATIONS TO TRANSFER DETAINEES

Attorney General HOLDER. Well, as I indicated in my opening statement, the purpose of this review is to make individualized determinations as to what should happen to the detainees, and the paramount consideration that we will have is the safety of the American people. Transfer or release of these detainees will only happen in those instances where we are convinced that that can be done in a way that the communities that receive them—overseas, with our allies—will not have any impact on the safety of the place that is receiving them.

Senator SHELBY. Excuse me a minute. Excuse me.

Are you saying that, one, you believe you have the legal authority to bring terrorists into this country and disperse them around the country in the communities? Do you believe you have that?

Attorney General HOLDER. The underlying premise I don't agree with. We don't have any plans to release terrorists.

Senator SHELBY. No, I asked if you have the authority first. Do you have the authority under the law to do this? To bring terrorists into this country and bring them into the community?

Attorney General HOLDER. And what I am saying is that with regard to those who you would describe as terrorists, we would not bring them into this country and release them. Anybody who we consider to be a terrorist, as I think you are using the word.

Senator SHELBY. A terrorist or a former terrorist or whatever, or terrorist trained, all of that.

Attorney General HOLDER. And again, as I said, with regard to the release decisions that we will make, we will look at these cases on an individualized basis and make determinations as to where they can appropriately be placed.

Senator SHELBY. Isn't that a dicey thing to do? Do you know of any community in the United States of America that would welcome terrorists, former terrorists, would-be terrorists, people trained as terrorists that have been incarcerated at Guantanamo Bay?

Attorney General HOLDER. Well, again, it will not be the intention of this task force review, the intention of this administration or this Attorney General to place anybody in any part of this world who is a risk to the community, to the country that is receiving these individuals.

You have to understand that we are going to be making decisions with regard to these people. Some are going to be released. Some are going to be tried. Some will be detained on a fairly extended basis. And so, those who will be released are those who we think can be released and be released on a safe basis.

Senator SHELBY. Of course, as the Attorney General, you are familiar with a number of terrorists that have been released to their various countries and have wound up as leaders in terrorist activities, killing our soldiers, our allies, and everything else. You are aware of what the track record is there, where people have been released, and most of them have come back as some of the top terrorists of the world?

Attorney General HOLDER. I am not sure if I would say "most." I know that with regard to the Saudi program, for instance, that re-education program that they have used, about 10 percent of those apparently have returned to the battlefield, a not insignificant number. But we will do all that we can in those release determinations that we make to ensure that those people who we think will pose a danger if released, in fact, do not get released.

Senator SHELBY. Could you say here today that the top priority of your office as the Attorney General of the United States would be to protect the American people from terrorist activity at any cost?

Attorney General HOLDER. I spend every waking moment of my life now thinking about how I can ensure the safety of the American people. The responsibilities of this job are enormous, and they have become more enormous since September 11.

In talking to my predecessors, Attorneys General Ashcroft, Gonzalez, and Mukasey, I understand in a way that I did not before I had this job the heavy responsibility that being Attorney General now is.

Senator SHELBY. If I could shift a little bit to the explosives trafficking in Mexico that you alluded to earlier? In April, the Associated Press reported that Mexico has seized more than 2,702 grenades since the start of the new president's term in December 2006. There has been a lot of focusing from your office, too, on the trafficking of firearms to Mexico and tracing the origins of firearms recovered at crime scenes.

But we have heard little in regard to the serious threat from explosives trafficking. Does the Department of Justice have adequate resources in Mexico in identifying these recovered explosives, one? Does the Department of Justice have adequate resources at the U.S. Bomb Data Center to trace the enormous increase in grenades recovered in Mexico and analyze the data from these traces?

And what efforts, Mr. Attorney General, has the Department of Justice taken to provide explosive training to Mexican military and law enforcement authorities? And I guess, last, how can we help you in this regard in the funding of these activities that I think are very important?

#### ARMS TRAFFICKING ACROSS THE SOUTHWEST BORDER

Attorney General HOLDER. We think we have been helpful to our Mexican counterparts by moving resources to the Southwest border—ATF agents, DEA agents, FBI agents—as well as increasing our presence within Mexico to deal with the arms trafficking that is going on there and also with the issue that you raised regarding explosive devices that are found there.

We have in our budget additional resource requests in that regard. I think the facility that is located in Alabama can be a critical part in helping our Mexican counterparts in focusing there. More generally, the facility will be critical in the work that the Justice Department should have the responsibility for dealing with explosives and the crime that can be committed using explosive devices.

Senator SHELBY. I agree.

Attorney General HOLDER. That is a very, very important—

Senator SHELBY. I am glad to hear that because there is a tug-of-war for appropriations going on up here, wittingly or unwittingly, between the Department of Homeland Security and the Justice Department. But I believe that a lot of this responsibility lies with the Justice Department.

Thank you, Madam Chair.

Senator MIKULSKI. Thank you.

Senator Lautenberg, ordinarily we would be alternating party. But I am taking people in their order of arrival. I am going to turn to Senator Alexander now.

Senator Alexander? And then we will come right over to you, Senator Lautenberg.

Senator ALEXANDER. Thank you, Madam Chairman.

Thank you, Senator Lautenberg. I appreciate that.

Mr. Attorney General, welcome. Thank you for being here.

Attorney General HOLDER. Good morning.

Senator ALEXANDER. And thank you for your service.

I have a few questions about the interrogation of enemy combatants. I thought President Obama's first instinct was a good one

when he said that we should look forward. But apparently, not everyone agrees with that. I notice a Member of the House of Representatives yesterday said that she wanted a full top-to-bottom criminal investigation.

So these are my questions. Number one, what directions or guidance have you received from the President or his representatives or anyone at the White House concerning an investigation of the interrogation of enemy combatants?

#### INVESTIGATION OF INTERROGATIONS

Attorney General HOLDER. Well, as we have indicated, for those people who were involved in the interrogation and who relied upon, in good faith, and adhered to the memoranda created by the Justice Department's Office of Legal Counsel, it is our intention not to prosecute and not to investigate those people.

I have also indicated that we will follow the law and the facts and let that take us wherever it may. I think a good prosecutor can only say that. But so I think those are the general ways in which we view this issue.

Senator ALEXANDER. Thank you, Mr. Attorney General.

Well, my second question would be should you follow these facts and continue in an investigation, if you are investigating lawyers at the Department of Justice who wrote legal opinions authorizing certain interrogations, wouldn't it also be appropriate to investigate the CIA employees or contractors or other people from intelligence agencies who asked or created the interrogation techniques or officials in the Bush administration who approved them?

Or what about Members of Congress who were informed of them or knew about them or approved them or encouraged them? Wouldn't they also be appropriate parts of such an investigation?

#### OFFICE OF PROFESSIONAL RESPONSIBILITY INQUIRY

Attorney General HOLDER. Well, there is, as has been publicly reported, an OPR inquiry into the work of the attorneys who prepared those OLC memoranda. I have not reviewed it. It is not in final form yet. I have not reviewed that report.

I will look at that report and make a determination as to what I want to do with the recommendations. It deals, I suspect, not only with the attorneys, but the people that they interacted with. So I think we will gain some insights by reviewing that report.

Our desire is not to do anything that would be perceived as political, as partisan. We do want to look forward to the extent that we can do that. But as I said, my responsibility as Attorney General is to enforce the laws of this Nation. And to the extent that we see violations of those laws, we will take the appropriate action.

Senator ALEXANDER. So you would follow, the investigation could follow to the people who asked for the—I mean, if you are going to investigate the lawyers whose opinion was asked about whether this is legal or not, I would assume you could also go to the people who created the techniques, the officials who approved them, and the Members of Congress who knew about them and may have encouraged them?

Attorney General HOLDER. Hypothetically, that might be true. I don't know. What I want to do is look at, in a very concrete way,

what that OPR report says and get a better sense from that report what it says about the interaction of those lawyers with people in the administration and see from there whether a further action is warranted.

Senator ALEXANDER. My last question is once we begin this process, the question is where is the line drawn? According to former intelligence officials, renditions—and by “renditions,” we mean moving captured people from our country to another country where they might be interrogated or even worse—those renditions were used by the Clinton administration, beginning in the mid 1990s to investigate and disrupt Al-Qaeda.

That is the testimony before Congress from Michael Scheuer. He said it began in late summer of 1995. “I authored it. I ran it. I managed it against Al-Qaeda leaders.”

The Washington Post says that the former Director of the Central Intelligence Agency George Tenet said there were about 70 renditions carried out before September 11, 2001, most of them during the Clinton years.

Mr. Attorney General, you were the Deputy Attorney General from 1997 to 2001. Did you know about these renditions? Did you or anyone else at the Department of Justice approve them? What precautions were taken to ensure these renditions or any interrogations of such detainees on, by, or behalf of the United States Government complied with the law?

#### TREATMENT OF TERRORISM SUSPECTS

Attorney General HOLDER. I think the concern that we have with renditions is renditions to countries that would not treat suspects in a way that is consistent with the treaties that we have signed. If there is a rendition taking a person to a place where the possibility is that person might be tortured, that is the kind of rendition I think that is inappropriate.

Now, from my memory of my time in the Clinton administration, I don’t believe that we had renditions where people were taken to places where we had any reasonable belief that they were going to be tortured. And that would be the concern that I would have.

I wouldn’t want to restrict the ability of our Government to use all the techniques that we can to keep the American people safe. But in using those tools, we have to do so in a way that is consistent with our treaty obligations and our values as a Nation.

Senator ALEXANDER. But I think you can see the line of my inquiry, which is that if we are going to ask lawyers who were asked to give legal opinions, we are going to investigate them. Jeopardize their career, second-guess them, and look back. Then where does that stop?

I mean, do we not also have to look at the people who asked for those techniques, at people who approved those techniques, at Members of Congress who knew about and encouraged the techniques perhaps? Or in your case, in the Clinton administration, we don’t know what the interrogations were then. Perhaps you do. And the question would be whether you approved them?

I prefer President Obama’s approach. I think it is time to look forward, and I hope he sticks to that point of view.

Thank you, Madam Chair.

## PROSECUTOR DISCRETION

Attorney General HOLDER. Well, I will note that the OPR inquiry was begun in the prior administration and also will note that I am a prosecutor. I have been a career prosecutor and, I hope, a good one.

And a good prosecutor uses the discretion that he or she has in an appropriate way and has the ability to know how far an inquiry needs to go to satisfy the obligations that prosecutor has without needlessly dragging into an investigation at great expense, both personal and professional, people who should not be there.

And that would be the kind of judgment that I hope I would bring to making the determinations that you expressed concern about.

Senator ALEXANDER. Thank you, Madam Chairman.

Thank you, Mr. Attorney General.

Senator MIKULSKI. Senator Lautenberg.

Senator LAUTENBERG. Thank you, Madam Chairman.

And welcome, Mr. Attorney General. We have had the opportunity to work together in the past.

As a matter of fact, nearly 10 years ago, the aftermath of the slaughter at Columbine—13 young people killed, 26 wounded. We worked to close the gun show loophole. It passed the Senate 51–50. Vice President Gore breaking the tie. And at the time, you urged the House to follow the Senate’s lead to close this loophole.

It is 10 years later. The loophole still exists. Do you think it is time for Congress to try again to get this sensible legislation in place?

## GUN VIOLENCE

Attorney General HOLDER. Well, I think we have got to use our creativity. We have got to use the tools that we already have. We have to use the budget that we have proposed to come up with ways in which we arm our State and local partners with the tools that are necessary to combat the gun violence that I think still plagues our country.

There are a variety of things that I think that we can do, and we want to work with this committee and other Members of Congress, listen to our State and local partners and try to determine what is it that we can do to help them with regard to reducing the gun violence that they still confront.

So I think, as I said, there are a variety of things that we can do, and we will look at all of those possibilities and then, I think, make determinations on the basis of the interaction we have with our partners, the interaction that we will have in the executive branch, the consultations we will have with Members of Congress to decide exactly which tools are going to be the ones that will be the most effective.

Senator LAUTENBERG. Yes, but doesn’t it offend the sensibilities to know that guns can be bought at gun shows where your name isn’t asked, no Social Security number is asked, no picture is taken, no reason for the gun purchase. Is it sporting? Is it hunting? None of that.

And here, like again the Columbine massacre, a young woman bought these guns without question, gave them to the two fellows who killed all their friends. Doesn't it strike you as kind of an anomaly in our pursuit of law and justice, protecting our citizens, that this is kind of a foolish way to turn our back on these things? Which is what happens, Mr. Holder.

I was traveling out West in a State where gun ownership is a matter of pride to lots of people. But the place was jammed, and there were unlicensed gun dealers selling weapons without asking questions.

When I asked the question about sensibilities, I don't know whether that ever gets us to the end of line, but it sure sticks out like a flaw in our system as far as I am concerned. And I hope that you will be able to pursue this aggressively.

The Recovery Act provides \$10 million for the administration's Southwest border initiative, focused on reducing gun trade that fuels so much of the violence in Mexico. Can we be assured that the DOJ's efforts to stop the flow of guns to Mexico will not interfere with resources that are designed to stop domestic gun trafficking within our country?

Attorney General HOLDER. That is actually a very legitimate concern, Senator. We are going to help our Mexican counterparts with the issues, the problems that they confront. We have drugs flowing from Mexico into this country, a lot of guns flowing from this country into Mexico.

And the resources that we are moving to the Southwest border, we are doing on a temporary basis to try to help our Mexican counterparts with regard to their efforts and being mindful of the fact that as we move those resources to the Southwest border, that we are not doing anything that would weaken our efforts in other parts of the country.

So we are trying to do it in a way that is sensitive to the needs of the places in which these agents and other personnel come from so that we can be helpful to our Mexican counterparts without weakening the efforts that we are making there.

But I also think there is a collateral impact in helping our Mexican counterparts. To the extent that we stop the flow of arms into Mexico, we will necessarily confront, I suspect, people who are also illegally trafficking in guns in this country. And so, I think there is a collateral impact, a positive impact in helping our Mexican counterparts.

But I think you are right to raise that concern, and I think it is one that we are being sensitive to.

Senator LAUTENBERG. You and I had the opportunity to work together some years ago on the issue of racial profiling. It was unfortunately highlighted in our State of New Jersey, but across the country, we saw incidents of that nature. Now new leadership—how is DOJ addressing this continuing problem?

#### RACIAL PROFILING

Attorney General HOLDER. Well, that is an issue that we focused on in the Clinton administration. It is something that will be a priority for this administration as well.

Profiling is simply not good law enforcement. If you devote the limited resources that we have in law enforcement on the basis of profiling, on the basis of nontraditional techniques—we have a good basis for predicates—you will focus on somebody, and the person who, in fact, you ought to be concerned about slips right on by.

So I think we have learned a lot from the efforts that we did in the 1990s working with you and with others, and our hope would be to replicate those efforts. That is still something that is a priority for us. It has a negative impact also on the communities in which that is practiced and tends to breed disrespect for law enforcement and for the criminal justice system. And we have to avoid that.

Senator LAUTENBERG. Thanks. The anomaly in New Jersey that took place was when our attorney general-to-be was stopped at a roadside rest place and questioned and so forth, and his—the only thing they could accuse him of was “driving while black.” And that is what caused that stop.

The last question, Mr. Holder, in the last administration, the COPS program was nearly decimated with serious cuts in funding. The Recovery Act contains \$1 billion for the COPS program, which I think is a great start.

How do we make up for the deficit that occurred in having people trained and available as a result of the neglect of this program?

#### COPS PROGRAM

Attorney General HOLDER. I think the billion dollars that the Recovery Act provides will give us a leg up on the efforts that we have to use to reinvigorate the COPS program. We have about \$300 million in the budget for next year, and I think we have to keep that effort up.

Our aim is to put 50,000 new police officers on the street. I think that what we have done in this first year is significant, but we must continue those efforts on a year-by-year basis. I think we have to see a lot of what we are doing this year as really downpayments on efforts to revitalize programs that I think we should focus on and revitalize efforts that perhaps have been neglected in the recent past.

Senator LAUTENBERG. And I close, Madam Chairman, with congratulations to the Attorney General for filling the positions that he has with highly capable people and for the zeal and the vigor with which you are pursuing your responsibility. And we thank you for that.

Attorney General HOLDER. I look forward to working with a young man from New Jersey, who I think is going to be a great U.S. attorney.

Senator MIKULSKI. Mr. Attorney General, Senator Shelby and I have another round.

I would like to pick up on the Southwest border initiative and ask you some questions in that area. Much has been in the news about swine flu, H1N1. Reaction to that virus was at times a near panic, as we were concerned of a pandemic in the United States. But I believe there is another “pandemic” in the United States, and that is the insatiable demand for drugs.

And as long as we have an insatiable demand for drugs, we are going to be funding the Taliban in Afghanistan and we are going to be emboldening and empowering the Mexican cartels. There is a great deal in your appropriations request about increased agents and the technology they need.

First of all, let us deal with that. In other words, it sounds almost like a Petraeus strategy meets Mexico and our border, which is more troops, more gear, more technology. I don't dispute that. Obviously, it had an impact. But also we need to look at the other side of that, which is the insatiable demand.

Let us talk about the actual violence and what is going on. This committee, meaning the Appropriations Committee, has already funded staff. We have provided five additional helicopters. We have been providing money, resources, and manpower.

Could you tell us what exactly you intend to do with the Southwest border initiative? How many agents, how many attorneys are needed? What do you see, and what do you estimate the cost for that to be? Because we want to do that. Then I will come to the demand side.

#### SOUTHWEST BORDER INITIATIVE

Attorney General HOLDER. Yes, in 2010, our request is for \$231 million for the Southwest border. That is for about 1,200 new positions—632 agents, about 110 attorneys. This would include 34 ATF agents, about 70 DEA agents.

I think there is clearly a need for a balanced strategy, and we will talk about the other part of that in your next question, for us to have a strong enforcement presence to deal with the problem of the drugs flowing into our country. But I think there also has to be an effort to deal with the demand side as well. So with regard to the enforcement side, that is what we are requesting in the 2010 budget.

Senator MIKULSKI. So, as I understand, essentially for enough manpower, you hope to deploy 632 agents and over 100 attorneys. As well as 528 agents for the Marshals Service. Are those new agents, or are those agents that you are going to redeploy from other areas?

Attorney General HOLDER. I believe these are all new positions. The 1,200 or so, the 1,187 are all new positions with regard to agents and attorneys.

Senator MIKULSKI. You know, we are placing an awful lot of stress on the Marshals Service, and I just want to bring this to your attention in a spirit of cordiality. We have asked them to take on the Adam Walsh Act in addition to the protection of the judges, the transportation of prisoners, who are increasingly violent, and the pursuit of the fugitive warrants. And now they are going to be intensively involved in the Southwest border initiative.

And I would hope, as we go through this process, in addition to looking at the FBI, DEA and ATF, that we also look at what we are asking the marshals to do for this initiative, which is much needed, in addition to what else have we have asked them to do regarding the Adam Walsh Act, which the ranking member has addressed. We want to support you in that.

But let us go to the first line of defense, which is local law enforcement in the border communities, and then also the whole issue of the demand side. We see that the President has asked for more cops on the beat. But when we look at our stressed border communities, do you see additional funds and resources going into those local law enforcement agencies? Because crime and violence will flow back and forth across the borders. How do we look at how we are partners with our border law enforcement?

#### ASSISTANCE TO STATE AND LOCAL PARTNERS

Attorney General HOLDER. Well, we have in our budget request a total of \$2.6 billion for State and local funding, and that is in addition to money that is included in the Recovery Act of about \$4 billion. And I think that is a recognition of the fact on the part of this administration that for us to be really effective in our law enforcement effort, we have to have good State and local partners, and to the extent that we can, we need to meet the needs that they have. We have to assist them to the extent that we can.

The Southwest border is a place of particular attention for us, and we will be helping our State and local partners there, drawing from the pools that I have talked about. But also the significant amounts of money that we have asked for is a recognition of the fact that the attention that we devote to the Southwest border has to be replicated in other parts of the country as well.

We need our State and local partners to have the technology and the resources that they need. And we have, as I said, come up with pretty substantial amounts of money both in terms of State and local funding, plus the COPS program to help our State and local partners.

Senator MIKULSKI. Well, let me ask you this, conceptually. We want to support our border partners, our border communities. But what I don't want is for it to be at the expense of other States. So while I want to protect the Southwest border initiative, I also want to protect southwest Baltimore.

I believe Southwest border violence is a very significant threat and if we don't intervene aggressively now, it will have horrific consequences to our security. But at the same time, we don't want them competing with Alabama, Utah, Arkansas, et cetera, for available resources.

Is that the way you see it for your cops and your interventions and interdictions and preventions?

Attorney General HOLDER. Yes, and that is why I think our requests are as large as they are. So that we will have the ability to do all of the things that you just talked about, which is to give attention to the Southwest border, but also not lose focus on the very important priorities that we have in other parts of the country.

Senator MIKULSKI. Yes, but are they going to be sequestered, or if there is going to be funding for cops on the beat, will there be a focus on the Southwest border communities in addition to other funds for other State and local jurisdictions to compete? Or is it all one big pot?

Attorney General HOLDER. Well, we have money that is set aside for the Southwest border, but we also have substantial amounts of

money that go for other State and local efforts that we are making. So there is not necessarily that competition.

I would also say that when we look at the Southwest border, we have to understand that the efforts that we make there will have residual positive impacts in other parts of the country. When we announced the takedown of Project Xcellerator 6 or 7 weeks or so ago, we indicated that some of the people who were arrested in connection with the Mexican cartels, and we think Southwest border, were involved were from Maryland. And we had arrests in Maryland in connection with that and in a variety of other States.

So that—

Senator MIKULSKI. But people in Maryland, Alabama, and so on are using drugs. I don't want to get into semantics about what is sequestered. I think we have got a good picture and really want to support the policy. But I want to go to the demand side, and I really salute Secretary Clinton, when she went to Mexico, and took ownership for our insatiable demand for drugs.

And I just want to speak about my own beloved Baltimore. We were on our way. We had a great renaissance momentum, and then, bang, in came cocaine. And we have never recovered from it. Cocaine really took generation after generation of young people in the Baltimore community, across all ethnic and class lines. It brought in so much money that it enabled crooks to arm themselves at times where they had more and better arms than our cops on the beat, et cetera.

Each administration has been rather tepid, timid and uneven in dealing with demand. We have tried "just say no." Just say no a little bit more. Let us do a little bit more here or there.

With the Obama administration and your leadership—and I am looking to Secretaries Sebelius and Arne Duncan, just across the board, is the administration developing a comprehensive strategy to really work at the local level? Because it has got to be fought at the local level to deal with this demand side.

Attorney General HOLDER. Well, I would totally agree—

Senator MIKULSKI. And I am not talking about hugs for crooks. I am talking about the kind of juvenile justice prevention programs, et cetera, where we do this early intervention.

#### JUVENILE JUSTICE PROGRAMS

Attorney General HOLDER. No, I totally agree with you. If you look at the request we have made on the juvenile justice side, we have a request for \$317 million. The Drug, Mental Health, and Problem-Solving Courts Program, we have \$59 million.

And there is a recognition of the fact that we have to do something on the demand side. As a local judge here in Washington, DC, I witnessed that.

Senator MIKULSKI. You saw it.

Attorney General HOLDER. I saw that. I sent, unfortunately, too many young men and women to jail because of drug problems that they had and the crimes that they committed as a result.

Senator MIKULSKI. But let me ask a question, are you developing a comprehensive approach with other Cabinet members? Is that underway?

Attorney General HOLDER. Yes, we are.

Senator MIKULSKI. Good. Well, we will come back. I know Senator Shelby has to ask questions, and I know your time is very limited.

Let me just conclude by saying some things are really working well. And one of the things that I know you witnessed as a lawyer, a resident, a judge in this town, is the way we all worked so well on the sniper case. And it is these local task forces that I am going to emphasize.

Do you remember when Washington was gripped by the fear of the sniper? All games were canceled for children. We were afraid to get out of our car and walk into a Burger King. A beloved FBI employee was shot coming home from Home Depot.

And the fact that with our local law enforcement around the Beltway working with the Federal officials, we were able to catch that sniper. That kind of cooperation continues to exist and what we need to build on.

I am very proud of the kind of task forces that are being used in Maryland right now, and I hope that we could have the emphasis on task forces. One just broke up a cell phone ring in Maryland State prisons, where guys were sitting there ordering lobster, shrimp, and ordering contract killing. But thanks to the task force approach, we were able to intervene and stop them.

And while we are doing fighting against violent, repugnant people, we also have now a task force against mortgage fraud, where another type of predator is stalking our communities, particularly our low-income residents. So we have got a lot to build on, and if we can work together, I think we can make a difference and also make that change that President Obama wants.

So I want you to know I think all of us feel that in many ways at the local level it is working if we can keep that momentum going through these task forces.

Senator Shelby.

Senator SHELBY. Thank you, Madam Chairman.

Mr. Attorney General, I want to go back into the area that Senator Alexander was questioning you earlier on. I believe you went to the Department of Justice as the Deputy Attorney General in 1997. Is that correct?

Attorney General HOLDER. That is correct.

Senator SHELBY. I remember. During that time—and you were there from 1997 until the Bush administration went into office, 2001. During that time, I happen to have been the chairman of the Intelligence Committee from 1997 to the summer of 2001, after you had left. And of course, we interacted with the Justice Department.

As the Deputy Attorney General, you were involved. You were a very active deputy, as I recall, and the Intelligence Committee dealt with, of course, the CIA and everything that goes on.

Senator Alexander went through some chronological events coming from Director Tenet and others as to what happened as far as rendition and interrogation of would-be terrorists and terrorists during the period before—during the Clinton years when you were active there.

I wasn't clear as to the answer a few minutes ago. So I am going to ask this question again. During your tenure as the Deputy Attorney General of the United States, 1997 to 2001, did you know

about these renditions? And if you didn't know, why didn't you know because people in Justice knew?

INTERROGATION TECHNIQUES

Attorney General HOLDER. Now I would have to look back. I don't know the exact numbers that Senator Alexander—

Senator SHELBY. No, did you know about them? I didn't say how many. That was Tenet's testimony, I believe, that has been in the record and in the papers that there were 70 or more. But did you know about them generally, and did you know about interrogation techniques at that time?

Attorney General HOLDER. Well, I certainly knew generally that there were renditions that were occurring. I can't honestly say that I knew about specific interrogation techniques that were being used at that time.

Senator SHELBY. Would you check the record and furnish this to the committee? We think this is an important question because a lot of this just didn't start during the Bush administration is what I am saying. This interrogation, rendition of terrorists had been going on before the Bush administration.

Attorney General HOLDER. I think, as a distinction, and that is the focus of the concern that we have with regard to Guantanamo and the things that preceded it is that we had American agents, representatives of our Government perhaps, involved in the use of techniques that we didn't think were appropriate.

Now I will certainly look at the records—

Senator SHELBY. Will you do that, just for the record? And did you or the Attorney General that you were working with, day in, day out, or anyone else under your jurisdiction at the Department of Justice then approve these renditions and interrogations? You had to. But I will wait for your record to show.

Attorney General HOLDER. We will review those records, and I will provide you with a response.

Senator SHELBY. And Mr. Attorney General, if so, what precautions were taken to ensure that the renditions and any interrogations that were going on in the intelligence communities regarding such detainees, what precautions were made? In other words, what steps did you go through to see that they complied with the law at that time? Can you furnish that for the record?

Attorney General HOLDER. Sure. I will go through that—

Senator SHELBY. You might have to go back because I know it was a while back. But you were in a very important job, as I remember interacting with you.

Attorney General HOLDER. We will look at those records and see what are the numbers, to the extent that I can provide those.

Senator SHELBY. Absolutely.

Attorney General HOLDER. And the protections that we used. It may be that I have to do this in a classified way, but we will provide you with those.

Senator SHELBY. That is okay. We can do that.

Attorney General HOLDER. That is fine.

Senator SHELBY. Okay. I would like to get into some other things now.

The GAO study. In April 2009, Mr. Attorney General, a GAO study concluded that ICE is not participating or contributing to several important intelligence and coordination centers. As a result of this lack of cooperation, according to the Government Accountability Office, our Government's war on drugs is not as productive as it should be.

The GAO recommended that the Secretary of DHS direct ICE to contribute all of its relevant drug-related information to the DEA Special Operations Division and ensure that if ICE fully participates in both SOD and in the OCD fusion center.

My question to you, is ICE contributing all of its relevant drug-related information to the DEA's Special Operations Division? And if not, why not? And if you don't know that, if you could furnish that for the record?

#### DRUG INTELLIGENCE INFORMATION

Attorney General HOLDER. I share the concern that you have expressed, and I have raised that with Secretary Napolitano, who I have worked with as a U.S. Attorney in the Clinton administration. And we are, together, trying to address that issue and trying to make sure that both of our agencies are contributing all of the intelligence information that we have. And given the resources, given the agencies that we have stood up, I think we will make progress in that regard.

Senator SHELBY. Are there other agencies that have not participated or refused to participate? It looks to me like you have got to coordinate this, and the Department of Justice should be right at the top of it.

Attorney General HOLDER. Well, I would like to think that we have a special expertise in the Justice Department in that regard.

Senator SHELBY. Absolutely.

Attorney General HOLDER. And we will work with our partners at DHS to ensure that ICE becomes fully involved in that effort.

Senator SHELBY. Ballistics, very important, I think. General, Secretary—I want to call him “Secretary.” Attorney General Holder, while the President recently endorsed the use of ballistics imaging as part of the effort to end gun violence along the Southwest border, the committee has been informed that DHS, Department of Homeland Security, is not coordinating their gun investigations through the ATF, which is—

Are there any official memorandums of understanding or policies in place that you know about requiring the use of NIBIN by DHS law enforcement? And if you want to do this for the record, that is okay. And could you provide a copy to the committee, the chairman, and others, if you could?

And what is the extent of DHS, Department of Homeland Security's coordination with the ATF's project Gunrunner, if you know? And if you don't know offhand, I know I am asking you a lot of questions.

Attorney General HOLDER. Sure.

Senator SHELBY. But we would like to know for the record because we fund all these things.

## COORDINATION BETWEEN DOJ AND DHS

Attorney General HOLDER. Right. We will provide for the record answers to the specific questions that you have asked. But I will say that, generally, I think Secretary Napolitano and I both agree that coordination between DHS and the Justice Department has not necessarily been as good as it needs to be. That is an issue.

[The information follows:]

## NIBIN, PROJECT GUNRUNNER, AND BALLISTICS IMAGING

The Department does not have an MOU in place with DHS that requires their use of NIBIN. The Department is working towards increased communications with DHS but is not aware if DHS has a policy that requires their use of NIBIN. Within the Department of Justice, ATF is preparing an internal directive that outlines a process for entering information into NIBIN. Once the directive is issued, the Department will furnish a copy to DHS to provide guidance so that they can participate in Project Gunrunner.

Attorney General HOLDER. And let us be very frank about that, that we have not worked together in a way that is efficient and effective.

Senator SHELBY. But the Justice Department has got a lot of expertise in this area, hasn't it?

Attorney General HOLDER. Oh, absolutely. And DHS brings things to the table as well. We need to come up with ways in which we coordinate our efforts so that we can be most effective. But the concerns that you raise are very legitimate ones, and we are trying to address them.

Senator SHELBY. Are you going to be assertive in this area to make sure that the expertise of Justice is shared and used in this area?

Attorney General HOLDER. I wouldn't have taken this job unless I was here to advance the interests of an institution in which I grew up and which I love. I have great faith in the men and women who work in this department. I think we are experts in a whole bunch of areas and—

Senator SHELBY. But some of us on the Appropriations Committee, both Democrats and Republicans, we see at times parallel initiatives that we don't need, and it is very costly, in other words, to reinvent the wheel. And you have got the big wheel in Justice, and we want to make sure that you are well funded and keep it.

Attorney General HOLDER. We want to be well funded. I will be assertive. But we also want to work with members of this committee to identify those areas where you think that there is duplication of effort so that we minimize that and that we work efficiently together. As I said, we want to be working in partnership with you all as well.

Senator SHELBY. Absolutely.

Madam Chairman, if you would let me, one last thing? I mentioned in my opening statement that there are a number of Adam Walsh provisions that will soon expire. Does the Department have a legislative plan regarding these expiring provisions of the Adam Walsh Act, which I think and others thought was a good piece of legislation? And does the Department support reauthorization of these provisions designed to protect children from pedophiles and sexual predators?

Attorney General HOLDER. Yes. We support the Walsh Act. We have asked for \$381 million, which is a 5 percent increase over fiscal year 2009, and that would support 50 new Marshals Service deputies and a \$16 million increase there as well. The Walsh Act we think is important, and it is something that we support.

Senator SHELBY. Thank you.

Thank you for your indulgence, Madam Chairman.

Senator MIKULSKI. Excellent questions, Senator Shelby.

In the order of arrival, I am going to turn to Senator Pryor, one of our newest members and then, of course, have as our wrap-up hitter, the chairman of the Judiciary Committee. We are so fortunate to be able to have him as both the premier authorizer also to bring that wisdom and skill and experience to appropriations.

Senator Pryor.

Senator PRYOR. I agree. Thank you, Madam Chair.

Senator MIKULSKI. Go ahead.

Senator PRYOR. Thank you very much.

General Holder, let me start with something that the last administration attempted to do, and that is they tried to—in their fiscal year 2009 budget, they tried to consolidate the 38 Federal law enforcement assistance programs like COPS, et cetera, into three competitive grant programs. They also, in our view, were going to try to under fund those.

But do you have any plans to do any consolidation along those same lines?

#### GRANTMAKING TO STATE AND LOCAL GOVERNMENTS

Attorney General HOLDER. I am not sure I am totally familiar with what the prior administration did. Our hope is to have sufficient amounts of money in the programs that we think are important, COPS being among them. Certainly Byrne and JAG grants.

We want to have flexibility so that we can be responsive to the needs of our State and local partners and be most effective in using the resources that we have.

Senator PRYOR. I would encourage you, if you are thinking about any changes, to certainly reach out to State and local people because they really rely on those grants, and that is, in a lot of ways—in a lot of places and a lot of ways, that is really critical funding on a local level.

Let me ask about—there was a story this morning in the Washington Post about the—it wasn't totally about the SCAAP program, the State Criminal Alien Assistance Program. As I understand it, are you going to try to eliminate that program?

I know there has been some problems. Some of the States and local law enforcement have not been real pleased with some of the administration of it. But I think that many of them have said that the program is very popular, et cetera.

Do you know the status of that and what the plan is for that, and why?

Attorney General HOLDER. We are not asking for additional monies for SCAAP in the budget for next year. But one of our priorities is making sure that our Nation's borders are protected. And although we seek to eliminate funding for SCAAP, we have, we think, other monies in the budget. There is \$3.4 billion in DOJ re-

sources to help curtail illegal immigration and combat the violence associated with border gangs.

We think that the SCAAP program, although it has had a value, we think we can give greater value by dealing with the problem in an enforcement way as opposed to using the limited resources that we have to help on the detention side.

I will say, however, that this is obviously a budget proposal that we have, and to the extent that you have strong feelings about the SCAAP program, I would be more than glad to interact with you, talk to you about that, and see if there are ways in which we can meet your concern.

Senator PRYOR. Yes, I would like to talk about that. I just want to make sure that we are not dropping something that we really need. If you think that you have really got it covered in other ways, other areas, I certainly would like to hear more about that.

The last question I really had was about this issue where the—I think Congress Daily actually had a little story on it today about the dispute between the Department of Justice and the Inspector General's Office regarding the FBI's terrorist watch list. The IG has been critical of the FBI to the extent that the FBI apparently quickly adds and quickly removes people from the list.

I would like to ask you about that criticism, if we can call it that, from the IG and how you respond to that and if there is any changes that need to be made?

#### IG REPORT ON THE TERRORIST WATCH LIST

Attorney General HOLDER. Yes, we have a great IG, Glenn Fine, I have worked with and known him for a long time.

I have not actually seen the report, but it is my understanding that the concerns that were raised in the report are serious ones. But that with regard to the issues that were raised by the inspector general, they have actually been met. Those concerns have been met by the FBI. Changes have been made in response to the issues that were raised by the inspector general.

But I will be reviewing the report, and I will be talking to the director of the FBI just to make sure that that, in fact, is the case. But that is my understanding.

Senator PRYOR. Great. Yes, if you could—if that is not correct or if you check back on that and you have a concern there, I wish you would check back with us on that.

Attorney General HOLDER. I will do that.

Senator PRYOR. Thank you very much.

Thank you.

Senator MIKULSKI. Thank you, Senator Pryor.

I just want to comment. On June 4, we are going to hold our hearing on the FBI budget request, and the committee will do something different this year. We will hold a public hearing on the public programs of the FBI. But as you know, after the terrible attack on 9/11, we gave the FBI the responsibility of being an agency within an agency, with a significant national security responsibility.

The committee has observed over the years that there are certain questions we can't ask in a public setting. One of which would be the greater detail of what the gentleman just raised that we need

to pursue. So we will have a public hearing with the FBI and followed by a classified one on how the FBI is waging the global war against terrorism, and we look forward to your active participation.

Now, we turn to the number one on Judiciary and number one advocate of all that is good about the Justice Department.

Senator LEAHY. I figure being number one at the Judiciary is a punishment for past sins, and you and I, Madam Chair, remember the good nuns explaining how that works.

Senator MIKULSKI. Do you want me to sit here and remember past sins?

Senator LEAHY. No, no, no. I remember the good nuns telling us about how it catches up with us.

Mr. Attorney General, it is good to see you. And I know you will also be before the Judiciary Committee, but I wanted to ask you about the Justice for All Act. In 2004, we passed that, a number of us—Republicans and Democrats together. It is a crucial bipartisan law, trying to improve the quality of justice for all Americans using DNA evidence, so forth. We negotiated carefully, worked it.

Unfortunately, the past administration failed to fund some of the key programs created by this important law. And it was a consistent struggle. We had the law. We didn't have the funding of programs, including the Kirk Bloodsworth Post Conviction DNA Testing Grant Program, capital representation, capital prosecution improvement grants, Debbie Smith DNA Backlog Grant Program, and other activities.

Will you work with me and with the committee to fully fund these vital programs and also to reauthorize the Justice for All Act?

Attorney General HOLDER. Yes, Senator. I am looking around here, trying to find my—I have got a great answer to that question. I just can't put my hands on it. But, yes, we will work with you to ensure that that act is funded in an appropriate way.

The concerns that are addressed by the act are concerns that this administration shares. And so, we look forward to working with you in that regard.

Senator LEAHY. And I would note that we had people across the political spectrum who came together and worked on that. Many of the Senators in both parties were, like yourself, former prosecutors. I guess you are now the prosecutor for the country, but you understand what I am saying.

And I think, as every prosecutor knows, two things you don't want to happen. One, you don't want a guilty person to go free, but you also want to make sure when you are prosecuting somebody that you have got the right person. Because if you don't, aside from the miscarriage of justice, the person who committed the crime is still out free, and we are not as safe as we think we are.

Now last week, the 9th Circuit Court of Appeals reversed the decision to dismiss the case *Mohamed v. Jeppesen* on State secrets grounds. You know that one. The plaintiffs are suing a flight company for allegedly helping the CIA transport them overseas, where they were tortured.

The case had been dismissed at the pleading stage. The Government used State secrets, and so the trial court just cut it off at that point. And the appeals court said that you dismiss the case at the

pleading stage, it would effectively cordon off all secret Government actions from judicial scrutiny, immunizing the CIA and its partners from the demands and limits of the law.

I agree with the court. I have introduced the State Secrets Act, along with others. We have been asking for weeks for the Justice Department's position with respect to this bill. We haven't gotten an answer. So I will ask you. Do you support the State Secrets Protection Act?

#### STATE SECRETS DOCTRINE

Attorney General HOLDER. Well, I think our administration shares your concern about the use of that doctrine. In fact, I have asked that a review be conducted of all the cases in which the State secrets doctrine has been invoked. We have about 20 cases or so where it has been used. The report is just about complete. It is my hope to share that report, make it publicly available.

What I have asked the people in the Justice Department to do is look at all of these cases and see if we appropriately are using the State secrets doctrine in each of those cases. Is there a way in which we can use it in those cases where we think it is appropriate in a more surgical way so that we don't have to perhaps dismiss the whole case? And so, that review is just about done, and I would be prepared to share that information.

With regard to the piece of legislation that you have indicated, I want to look at that in light of the report that I get from the task force that we created and see if there are ways in which we can work together to deal with the issue that we do share that concern that you have.

Senator LEAHY. Attorney General, we have, you and I have talked a lot about the Department of Justice, and I don't begin to understand all of the issues that come on your desk. But this is an important one, and I would like, as soon as the review is done, as soon as it can be shared, I would appreciate not only that, but then a position of the department on the piece of legislation.

Brought up today in committee, we put it over. I did that knowing I was going to be talking to you today and knowing that your review is underway, and it may take a while.

We are not having a markup next Thursday, as we normally do. I will be in Vermont, where I will watch my closest friend get an honorary degree from my alma mater. We will celebrate our 47th wedding anniversary this year, and if I want to make sure we celebrate, I will be there at the graduation.

My last question, if I might, Madam Chair? In light of what I consider shocking opinions by Jay Bybee and Steven Bradbury and others nominated by President Bush to run the Office of Legal Counsel, these opinions secretly authorized interrogation techniques. I am looking down the list here that included shackling naked people to the ceiling to keep them awake, sleep deprivation of up to 11 days at a time, forcing them into a small box for up to 18 hours at a time, waterboarding, and so on.

I know you are looking at OLC. And for those who may be watching and don't understand, OLC opinions become basically de facto rules of law within the administration. Right now, you don't have

a head of OLC. How critical is it for the Senate to confirm Dawn Johnsen as the Assistant Attorney General in charge of OLC?

CONFIRMATION OF DAWN JOHNSEN

Attorney General HOLDER. That is probably my top priority now, Senator. OLC is, as you said, an integral part of our effort to protect the American people. There is a lot of national security work that OLC does. OLC handles a lot of other matters for the department.

They are among the best and brightest in the Justice Department. And although we have very capable people who are there and a very capable acting person who is leading OLC, there is a certain solidity and continuity that you don't have unless you have a permanent person there.

And so, I would hope that we could have Dawn Johnsen, who is an extremely qualified lawyer, who will be a great head of OLC, confirmed as soon as possible.

Senator LEAHY. Thank you very much.

I hope so, too. We passed her out of committee. She is on the floor. I saw that the senior-most Republican in the Senate, Senator Lugar, said he will vote for her, and I just wish we would go forward because the OLC is so extremely important. It is like the Department of Justice's court, and I would like that to go forward.

So, Madam Chair, thank you. I will submit my other questions for the record.

Senator MIKULSKI. Thank you very much, Senator Leahy. And I note when you talked about your best friend getting an honorary degree, I gather it is your beloved wife, Marcelle? Is that correct?

Senator LEAHY. It is. It is, indeed. And so, I will take off.

Senator MIKULSKI. Well, Senator, with all due respect, she shouldn't only get an honorary degree, but if we were talking about saints and sinners before, you know what category she is in.

Senator LEAHY. It will be her, not me.

Senator MIKULSKI. Well, congratulations to her.

Senator LEAHY. Thank you. And I will tell Marcelle you said that.

Senator MIKULSKI. Mr. Attorney General, that concludes our questions. If there are no further questions this morning, Senators may submit additional questions for the subcommittee's official record. We are going to request the Department of Justice response within 30 days.

I would also like to add thank you for your testimony today, and I would also like to add we are lucky to have you.

Attorney General HOLDER. Thank you.

ADDITIONAL COMMITTEE QUESTIONS

Senator MIKULSKI. I think President Obama has made an excellent choice in selecting you. You come with such an incredible breadth of experience from working at the NAACP through prosecutor days, judges, Justice Department.

But you are also at the point in this career you could be in private practice, in control of your own time. You have three wonderful children and a wife who is a physician and quite distinguished in her own right. The fact that you are willing to take on a very

onerous responsibility of international as well as domestic responsibilities is heartening.

I am already hearing about all these wonderful young people who want to come to work at Justice Department, and they don't call it the Justice Department. They say "at Justice." They want to "work at justice," and they want to work at the Department of Justice to achieve it. And I think your own reputation is also already attracting people who want to come, whether they are the lawyers or the backup people or those that are going to run the prevention and intervention programs.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

VIOLENT CRIME/SUPPORT OF LOCAL LAW ENFORCEMENT

*Question.* A major focus of both the Judiciary Committee and the Appropriations Committee so far this year has been ensuring that the Federal Government provides the assistance to State and local law enforcement that is so important to restoring our economy and keeping our communities safe.

With the massive economic crisis facing us, we see conditions of unemployment and hopelessness which can lead to increases in crime. States, cities, and towns face budget shortfalls and decreases in tax revenues and were at risk having to abandon innovative crime prevention strategies and to drastically reduce police forces.

We have taken major steps toward returning to this successful approach. We included nearly \$4 billion for State and local law enforcement in the economic recovery and investment package enacted earlier this year. That package included funding of vital programs like Byrne grants, rural drug enforcement assistance, and the Community Oriented Policing (COPS) program, as well as funding for critical crime victims programs. The Judiciary Committee will be holding a hearing next week to look at how this funding has been used to support local law enforcement efforts in communities across the country.

*Answer.* The administration is committed to fully funding the COPS program as an effective tool to combat crime and help address police brutality and accountability issues in local communities. The research available regarding COPS funding clearly validates the program as a crime fighting strategy. In its final report on the effectiveness of COPS Office grants, the Government Accountability Office (GAO) found that COPS funding resulted in significant increases in the number of sworn officers and produced significant declines in the rates of total index crimes, violent crimes and property crimes. Specifically, the declines in crimes attributable to COPS expenditures accounted for 10 percent of the total drop in crime from 1993 to 1998 and approximately 5 percent from 1993 to 2000. Further, for every dollar in COPS hiring grant expenditures per capita there was a reduction of almost 30 index crimes per 100,000 persons.

In a 2007 policy brief from the Brookings Institution, Yale University economist John Donohue and Georgetown University economist Jens Ludwig state that the COPS program contributed to the drop in crime during the 1990s and is one of the most cost-effective options for fighting crime. They estimate that each \$1.4 billion invested in the COPS program is likely to generate a benefit to society from \$6 billion to \$12 billion.

Equally important is the demand we saw for this year's COPS Hiring Recovery Program (CHRP). During the application period, COPS fielded more than 17,000 calls from agencies detailing failing local economies and rising crime rates. For the \$1 billion in funding provided by ARRA to help create or save approximately 5,500 law enforcement positions throughout the country, the COPS Office received requests from more than 7,200 State, local and tribal law enforcement agencies asking for more than \$8.3 billion for nearly 40,000 officers.

The administration and the Department of Justice strongly support providing resources for crime prevention. The Department's Office of Justice Programs (OJP) plays a leading role in exploring new crime prevention strategies, evaluating their effectiveness, developing best practices for crime prevention, and helping State, local, and tribal governments implement innovative, effective crime prevention initiatives. Many of OJP's largest and best-known programs, such as the Edward

Byrne Memorial Justice Assistance Grants, Byrne Competitive Grants, Juvenile Accountability Block Grants, Juvenile Justice Part B Formula Grants, Missing and Exploited Children's program and Title V Community Prevention Grants programs, support prevention programs. In fact, OJP's fiscal year 2010 President's Budget request includes approximately \$1 billion to support crime prevention programs. This includes substantial increases for the Residential Substance Abuse Treatment and Second Chance Act/Prisoner Reentry programs as well as two new prevention-oriented programs, the Problem-Solving Courts and Community-Based Violence Prevention Initiatives. Community-Based Violence Prevention Initiatives, adapted from the best violence reduction research in the public health field over the last several decades, collaborates with community-based organizations and focuses on street-level outreach, conflict mediation, and changing community norms to reduce violence, particularly shootings. The Problem-Solving Courts Initiative builds on the success of OJP's existing Drug Courts and Mentally Ill Offender Act/Mental Health Courts initiative by provide grants, training, and technical assistance to help State, local, and tribal grantees develop and implement problem-solving court strategies.

*Question.* At a Judiciary Committee hearing in January, police chiefs and policy experts testified that an infusion of Federal money for State and local law enforcement would quickly create jobs, bring money into the economy, and make neighborhoods safe for the businesses and homeowners essential to local economies. Do you agree that Federal support for State and local law enforcement is integral to our economic recovery?

*Answer.* When President Obama signed the American Recovery and Reinvestment Act (ARRA), I stated that this funding is vital to keeping our communities strong and that as local law enforcement professionals struggle with the current economic crisis, we can't afford to decrease our commitment to fighting crime and keeping our communities safe. The local law enforcement grants awarded under ARRA will help ensure States and localities can make the concerted efforts necessary to protect our most vulnerable communities and populations.

When the administration began discussions about how best to revive the lagging economy, creating jobs was the number one priority and the COPS program, according to former Associate Attorney General John Schmidt who testified at that January hearing, "has obvious value in terms of economic stimulus." The funding awarded under COPS will go directly to State, local and tribal law enforcement and will both stimulate our economy by creating jobs and keeping our citizens safe.

The American Recovery and Reinvestment Act of 2009 provides more than \$4 billion in assistance for State and local law enforcement in addition to the \$2.9 billion in funding provided for State and local law enforcement in the Appropriations Act of 2009. The fiscal year 2010 President's budget proposal, if enacted as submitted, would provide an additional \$2.6 billion for State and local law enforcement assistance. As part of the fiscal year 2010 budget, the administration is proposing a substantial increase for the Second Chance Act program, which will combat criminal recidivism among offenders released from the Nation's prisons and jails.

#### INTELLECTUAL PROPERTY ENFORCEMENT

*Question.* Last Congress, I introduced the Enforcement of Intellectual Property Rights Act, which became law in October. The law authorized more resources for the Computer Crime and Intellectual Property Section and for State and local law enforcement grants. Intellectual property rights promote innovation and creativity, long recognized as major drivers of the United States economy. Protecting intellectual property, in my view, is therefore both a law enforcement objective and an important component of our economy recovery efforts. How would the Department use the resources authorized by Congress last year to improve its effort in combating criminal intellectual property theft?

*Answer.* The Department is committed to fulfilling the goals of the Prioritizing Resources and Organization for Intellectual Property ("PRO IP") Act of 2008 to strengthen Federal intellectual property enforcement efforts and improve coordination among Federal agencies in meeting our intellectual property protection challenges. The PRO IP Act contains a number of important tools to strengthen the ability of the Federal Government, State and local law enforcement, and intellectual property owners to protect intellectual property. The Department appreciates Congress' decision thus far to fund Section 402(a) of the PRO IP Act authorizing additional FBI Special Agents dedicated to investigating intellectual property offenses. As appropriated, the FBI will be able to deploy 31 such Special Agents around the country. Specifically, the FBI has allocated 26 agents to support many of the Computer Hacking and Intellectual Property Units nationwide as well as assign 3 agents and two supervisors, who will be housed at the IPR Coordination Center, to support

the Computer Crime and Intellectual Property Section (CCIPS) in order to administer a nationwide IP program.

The PRO IP Act, Section 403, also authorizes, but Congress has not yet appropriated, \$10 million for the FBI and \$10 million to the Department for the Criminal Division, respectively, to hire and train law enforcement officers to investigate and assist in the prosecution of IP crime and to procure forensic resources. If the Department received this funding, it would increase the number of Criminal Division attorneys dedicated to IP prosecutions. Specifically, in order to meet the increased demands posed by the PRO IP Act, the Department would increase the number of CCIPS attorneys who are devoted solely to intellectual property enforcement.

#### FUNDING FOR CLOSURE OF GUANTANAMO BAY

*Question.* President Obama ordered the closure of the detention facility at Guantanamo Bay and created task forces to determine how best to do so and to move forward with effective national security policies. In order to put this shameful chapter behind us and do the hard work of reinstating our legal process, it will take resources. My understanding is that part of the money requested will go toward the task forces which are responsible for coming up with these solutions. Recognizing that you do not yet have all the final answers on how to solve the difficult problem you were left with by the last administration, can you tell us why you believe that \$30 million sum is necessary?

*Answer.* On January 22, President Obama issued three executive orders and a presidential memorandum that gave significant responsibility to the department. These orders require immediate interagency action on several fronts: a comprehensive review and determination of the appropriate disposition with regard to each detainee currently held at Guantanamo Bay; the development of policies regarding the detention of individuals apprehended in connection with armed conflicts and terrorist activities; and, an evaluation of interrogation and transfer practices.

With regard to the Guantanamo Review Task Force, that Task Force is making individualized determinations on the detainees in order to facilitate the closure of Guantanamo per the President's Executive Order by January of 2010. The other two task forces are required to produce reports containing their recommendations in July 2009. There are now more than 80 attorneys, including several dozen detailed to Washington from our field offices, who are involved in this effort. We have also detailed paralegals with classified clearances that are involved in the effort.

The Department requested \$30 million in the 2009 war supplemental for the task forces. These task forces are tasked with work that has extraordinary consequences for the country, and we took significant steps to stand up structures utilizing dozens of attorneys and subject matter experts from around the country in order to facilitate their work. Much of this work cannot be done in an ordinary work environment. To give you a sense of the effort involved, we have:

- Established the Task Force reviewing and making disposition determinations regarding the detainees at Guantanamo at an offsite facility that enables the task force members to work at the Top Secret/SCI level; they are reviewing tens of thousands of pages of classified documents. Our costs for this effort cover the agents, analysts and attorneys to perform those legal reviews.
- This work must be done in a classified, secure environment, using secure networks, classified-capable computers, scanning devices, phones, and copiers. We had to ensure we had secure electronic document handling capabilities. We are carrying the costs for this secure office space, for the Top Secret/SCI clearances required for our detailees, and for outfitting these Task Forces with the secure equipment required for their work.
- Finally, we have entered into Automated Litigation Support arrangements to facilitate the massive document review effort, and also to ensure that the records of this effort are maintained properly and securely.

The costs for classified reviews of this magnitude are tangible. We greatly appreciate the support the Committee can give the Department in this extraordinary effort.

#### NEW FOIA GUIDELINES AND RESOURCES

*Question.* During my 30-plus years in the Senate, I have always believed that the Freedom of Information Act (FOIA) is a critical mechanism to ensure that our tradition of open government is preserved for future generations. I was pleased that, as one of his first official acts, President Obama issued a directive to strengthen FOIA and that you recently issued new FOIA guidelines that restore the presumption of openness for government information. I commend these important steps to restore confidence in our government and I believe that they will help reverse the troubling

trend of excessive government secrecy that we witnessed during the last administration. Does the Department have sufficient resources, staffing and funding to fully implement your new FOIA guidelines?

Answer. Yes, we believe that the Department has sufficient resources to fully implement my new FOIA guidelines. The Office of Information Policy operates on a fully reimbursable basis to promote effective FOIA operations across the Executive Branch. We will of course monitor this situation and work with the Congress if we conclude that existing resources are insufficient.

*Question.* If not, what can Congress do to help ensure that the laudable goals of the President's FOIA directive and your new FOIA guidelines become a reality?

Answer. As stated in the previous response, we believe the Department has sufficient resources to implement our new FOIA Guidelines at the present time.

#### PATRIOT ACT REAUTHORIZATION UNANSWERED LETTER ASKING FOR PROPOSALS

*Question.* Key parts of the Patriot Act allowing the government to undertake certain intelligence gathering and surveillance activities are set to "sunset" this year. The Judiciary Committee is currently reviewing whether and how to extend these authorities so that we can ensure that the intelligence community has the tools it need to keep the Nation safe without unduly infringing on the personal freedoms of Americans. I wrote to you 2 months ago asking you to provide the Department's legislative proposals for extending or modifying these Patriot Act authorities by March 31. I still await an answer to that letter. As you know, legislation on these matters requires careful attention and sufficient time for consideration without the undue pressure provided by pending deadlines. When can we expect the Department's proposals for reauthorization of the Patriot Act?

Answer. We have received your letter and are working with the administration with the administration to get our views transmitted as quickly as possible.

#### OFFICE OF LEGAL COUNSEL—OPR REPORT AND JOHNSEN NOMINATION

*Question.* There has been a lot of speculation and even reporting about the long awaited Office of Professional Responsibility (OPR) report on the legal advice provided by Office of Legal Counsel attorneys who drafted the controversial memos giving legal cover for the brutal treatment of detainees. I fear there is significant misunderstanding of the jurisdiction of OPR and the scope of that report. Can you clarify what issue the OPR report is considering and whether it had access to on the record interviews with former Vice President Cheney and his staff and others in the White House or whether OPR's reach was limited in any way from a complete and comprehensive investigation?

Answer. OPR is conducting an investigation into whether legal advice in several Office of Legal Counsel (OLC) memoranda regarding enhanced interrogation techniques was consistent with the standards of professional conduct that apply to Department of Justice attorneys. We cannot comment further on this pending investigation.

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#### QUESTION SUBMITTED BY SENATOR FRANK R. LAUTENBERG

##### COPS FUNDING

*Question.* Due to actions of past administrations, the New Jersey cities of Camden and Newark have been banned from receiving Federal funds for the COPS program to hire additional police officers from the Economic Recovery Act. Will you commit to working with me, New Jersey's State Attorney General and the City of Newark to develop a plan to address the concerns of the Department of Justice, while allowing the cities of Camden and Newark to access COPS funding to hire additional police officers under the Economic Recovery Act?

Answer. The Department of Justice is committed to helping local law enforcement during these difficult economic times; however, we must also remain committed to ensuring that taxpayer dollars are spent wisely and that all instances of waste, fraud or abuse are dealt with appropriately. The Department of Justice Office of Inspector General (OIG) found that Camden and Newark violated the grant terms and conditions associated with their COPS grants. Both cities chose not to repay the amount of the violations, but rather opted to accept the 3-year bar from receiving COPS funds.

The American Recovery and Reinvestment Act (ARRA) of 2009 appropriated \$1 billion for the COPS Hiring Recovery Program (CHRP) to create or save law enforcement positions across the country. The COPS Office received over 7,200 applications from law enforcement agencies across the country under CHRP, with requests total-

ing more than \$8.3 billion. COPS grants are carefully monitored and there are serious consequences from misuse. This is particularly important regarding ARRA funds.

To remedy violations with past grants, both the City of Camden and the City of Newark have been barred from receiving COPS funding until 2010. Both agencies have been in frequent contact with the COPS Office to discuss the options available, including repayment of funds with a combined total of over \$1.2 million, but both declined to choose repayment as a remedy and opted instead for a 3-year bar.

Camden will complete its 3-year bar period on May 30, 2010, and Newark will complete its 3-year bar period on December 6, 2010. The Department looks forward to working with both cities at that time to identify funding opportunities that will be available in the COPS Office future year budgets.

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QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

EXPLOSIVES TRAFFICKING IN MEXICO

*Question.* The Associated Press reported in April that Mexico has seized more than 2,702 grenades since the start of President Felipe Calderon's term in December 2006, compared to 59 during the first 2 years of the previous administration. There has been much focus of your Department on the trafficking of firearms to Mexico and tracing the origins of firearms recovered at crime scenes, but we have heard little in regard to the serious threat from explosives trafficking. It is only a matter of time before these cartels use these devices on our side of the border. Does DOJ have adequate resources in Mexico to assist the military and law enforcement in identifying recovered explosives?

*Answer.* The United States Bomb Data Center (USBDC) currently fulfills explosive trace requests in the United States. The USBDC does not currently trace all explosives recovered or seized in Mexico. However, Mexican officials have recognized the value in tracing recovered explosives and have expressed interest in establishing formal protocols for tracing all explosives recovered or seized in Mexico.

The USBDC currently has two employees that focus on explosives traces. The USBDC conducts about 140 traces a year, each of which takes about 3 weeks to complete, due to the extensive research required. An increase in trace demand from Mexico would likely slow down the trace processing timeline. Additionally, there is currently only one ATF special agent with advanced explosives training located in Mexico. At some point, additional resources in Mexico may be required.

*Question.* Does DOJ have adequate resources at the U.S. Bomb Data Center to trace the enormous increase in grenades recovered in Mexico and analyze the data from these traces?

*Answer.* Coordination Group for the Control and Arms, Ammunition and Explosives traffic for Mexico's law enforcement intelligence community, (CENAPI GC-Armas), recently reported that Mexico has recovered or seized 3,161 hand grenades since President Calderon took office in December 2006. The 940 grenades have also been turned in, over the same period through the Mexican military's "Change of Arms" program. The program is similar to gun buy-back programs in the United States.

Currently, there are 16 FTEs assigned to the U.S. Bomb Data Center (USBDC), and 2 FTEs are assigned to perform the explosives traces. The Department anticipates that our law enforcement partners in Mexico will continue to recover grenades at the same rate as they have experienced in the last 2 years. Accordingly, the USBDC would need to accommodate an increase of approximately 1,600 grenade traces each year. Even if Mexico submitted requests to trace 10 percent of the aforementioned recoveries/seizures, the workload would more than double at the USBDC, significantly affecting the turnaround time for all traces—domestic and foreign.

*Question.* Can you provide this committee with statistics on the recovery of grenades in the United States for the same time period for comparison purposes?

*Answer.* According to the information reported to the U.S. Bomb Data Center (USBDC) by Federal, State and local agencies contributing to the Bomb Arson Tracking System (BATS), there have been 148 hand grenades seized or recovered in the United States since December 1, 2006. Although the Department encourages the reporting of all explosives incidents to the USBDC by Federal, State and local law enforcement agencies, there is no mandate that requires such reporting. Consequently, the Department can not verify that all incidents are reported.

*Question.* Does DOJ have adequate resources for the investigation of the explosives related incidents involving these criminal organizations along the Southwest Border?

Answer. ATF currently has a limited number of certified explosives specialists (CESs) assigned to Southwest Border States. Although ATF does solely support Southwest Border explosives investigations, the CESs in this region are their field divisions' primary resources for all explosives investigations. From the regulatory aspect, ATF's Industry Operations Investigators (IOIs) are required to perform explosives applications inspections and to inspect every explosives licensee/permittee at least once every 3 years in order to comply with the Safe Explosives Act. ATF currently has approximately 632 IOIs in the field, and their workload includes the performance of application and/or compliance inspections for approximately 107,000 Federal firearms licensees and 13,000 Federal explosives licensees.

*Question.* Does DOJ have adequate resources for the follow-up investigation of explosives traces conducted by the Bomb Data Center?

Answer. The President's budget request for fiscal year 2010 includes 35 additional ATF agents, stationed along the Southwest Border. These agents will be able to assist in follow-up investigations of explosives traces conducted by the Bomb Data Center. It is possible that additional investigative resources may be required to follow up on explosives traces.

#### EXPLOSIVES/GRENADE TRACING RESOURCES IN MEXICO

*Question.* On October 11, 2008, the United States Consulate in Monterrey, Nuevo Leon, Mexico was attacked with assailants using small arms fire and a fragmentation grenade. On January 6, 2009, a television station located in the same Mexican city was attacked by individuals who fired shots at the building and threw a hand grenade over the perimeter wall. In light of these attacks and the increase in grenade recoveries, I would presume the Mexican government is requesting U.S. assistance in explosives related training. What efforts have you taken to provide explosives training to Mexican military and law enforcement authorities?

Answer. Following grenade attacks in Mexico, Mexico's intelligence agency, the Center for Research and National Security (CISEN), was tasked by President Calderon to develop a cadre of agents that are familiar with explosives and explosives investigations. In November 2008 the Department provided explosives identification training in Tucson, Arizona to 15 CISEN agents.

CISEN and other Mexican law-enforcement and security agencies have asked for additional training, particularly in the area of post-blast investigation. While the Department has not provided additional training since November 2008, it is ready to continue working with the Department of State to identify training opportunities for Mexican law enforcement personnel.

*Question.* Can you provide this committee with planned training activities for next fiscal year and where these activities will take place?

Answer. The majority of explosives related training is provided to Federal, State, and local agencies. The Department plans to deliver a wide variety of explosives training courses in fiscal year 2010. No specific programs for Mexico have been planned yet, but the Department will work with the Department of State to identify any opportunities for such programs. Should such programs be initiated, training could be provided at either the National Center for Explosives Training and Research at Huntsville, Alabama, or elsewhere in the United States or Mexico.

*Question.* Is this training sufficient to meet the demand from the Mexican government?

Answer. The Department of Justice is working with the State Department to identify training opportunities and programs for Mexican law enforcement.

#### ATF CANINE TRAINING

*Question.* How many DOJ certified explosives detection canines are there currently in Mexico? Has the Mexican government requested additional explosives detection canines from DOJ?

Answer. There are currently 9 DOJ certified explosives detection canines in Mexico. The Mexican government, through the office of the ATF Assistant Country Attaché, has requested that a total of 80 explosives detection canines be trained and in place by fiscal year 2013.

*Question.* What is the current capacity at the DOJ canine training facility to train United States and foreign explosives detection canines?

Answer. The capacity at the ATF National Canine Training and Operations Center (NCTOC) allows for the training of approximately 48 new explosives detection canines each year.

*Question.* Is this capacity adequate to meet the demand for canines? If not, can you provide the committee with the amount of resources and space needed to address any backlog of canine training?

Answer. The demand for DOJ-certified canines is extensive and as a result, DOJ is experiencing backlogs at the ATF National Canine Training and Operations Center. The current backlog for explosives detection canines is 1–2 years and the wait for accelerant detection canines exceeds 2 years. In addition to training new canines, ATF also provides recertification and advanced training in support of approximately 3,000 explosives and accelerant detection canine teams currently in service with law enforcement agencies in the United States.

SUPPLEMENTAL FUNDING—GUANTANAMO BAY

*Question.* The 2009 supplemental funding request includes \$30 million for the Justice Department to review the status detainees still held at Guantanamo to determine if they need to be tried or released. How will the Department spend this \$30 million?

Answer. On January 22, President Obama issued three executive orders and a presidential memorandum that gave significant responsibility to the department. These orders require immediate interagency action on several fronts: a comprehensive review and determination of the appropriate disposition with regard to each detainee currently held at Guantanamo Bay; the development of policies regarding the detention of individuals apprehended in connection with armed conflicts and terrorist activities; and, an evaluation of interrogation and transfer practices.

With regard to the Guantanamo Review Task Force, that Task Force is making individualized determinations on the detainees in order to facilitate the closure of Guantanamo per the President's Executive Order by January of 2010. The other two task forces are required to produce reports containing their recommendations in July 2009. There are now more than 80 attorneys, including several dozen detailed to Washington from our field offices, who are involved in this effort. We have also detailed paralegals with classified clearances that are involved in the effort.

The Department requested \$30 million in the 2009 war supplemental for the task forces. These task forces are tasked with work that has extraordinary consequences for the country, and we took significant steps to stand up structures utilizing dozens of attorneys and subject matter experts from around the country in order to facilitate their work. Much of this work cannot be done in an ordinary work environment. To give you a sense of the effort involved, we have:

- Established the Task Force reviewing and making disposition determinations regarding the detainees at Guantanamo at an offsite facility that enables the task force members to work at the Top Secret/SCI level; they are reviewing tens of thousands of pages of classified documents. Our costs for this effort cover the agents, analysts and attorneys to perform those legal reviews.
- This work must be done in a classified, secure environment, using secure networks, classified-capable computers, scanning devices, phones, and copiers. We had to ensure we had secure electronic document handling capabilities. We are carrying the costs for this secure office space, for the Top Secret/SCI clearances required for our detailees, and for outfitting these Task Forces with the secure equipment required for their work.
- Finally, we have entered into Automated Litigation Support arrangements to facilitate the massive document review effort, and also to ensure that the records of this effort are maintained properly and securely.

The costs for classified reviews of this magnitude are tangible. We greatly appreciate the support the Committee can give the Department in this extraordinary effort.

*Question.* Could this be just the beginning of what some estimate to be a \$1 billion cost to the Department?

Answer. Beyond the fiscal year 2009 supplemental request, the Department has included \$60 million in the 2010 budget for matters relating to Guantanamo detainees, including:

- Secure detention housing, including hardening facilities during trial (USMS and BOP costs) and U.S. Marshals Service security command posts;
- Secure air transport, specialized local transportation provided by USMS, armored vehicles with secure communications equipment, hardened cell blocks and sally ports, and overall hardening of our courthouses;
- Communication costs;
- Linguists to communicate/facilitate instructions during trial;
- Electronic surveillance equipment (USMS protective intelligence installs counter-surveillance devices to protect the Federal judiciary);
- Litigation costs (U.S. Attorneys, NSD, and CRM); and
- Other costs such as specialized training and fees and expenses of witnesses who testify.

*Question.* Can you give us some indication about the amount of taxpayer funds estimated to be needed to transport, imprison and prosecute these detainees over the next 5 years?

*Answer.* Currently our planning estimates of costs do not extend beyond the first year. The \$60 million first-year estimate we have developed assumes that some trial or pre-trial preparations and custody will be in process. The estimate includes: secure detention housing, secure detainee transportation, court security, communication costs, litigation costs, and other expenses.

*Question.* Will you reimburse the State and local governments for their increased law enforcement costs related to the movement, incarceration and prosecution of these terrorists?

*Answer.* Currently our planning estimates of costs do not assume reimbursements for State and local governments.

*Question.* Will the administration send up another supplemental in the near future to cover these costs to the Department?

*Answer.* As stated previously, our current cost estimates of \$30 million for fiscal year 2009 and \$60 million for fiscal year 2010 represent our best estimate at this time of the total costs for these task forces. We do not plan to seek additional supplemental funds for these reviews.

#### DOJ LEGAL AUTHORITY

*Question.* General Holder, my colleague from Alabama, Senator Sessions, wrote to you over a month ago asking whether the Federal Government has the current legal authority to admit into the United States any prisoner held at the military detention facility at Guantanamo Bay who participated in terrorist related activities or training. Does the Government have the authority to admit these terrorists into the United States? When can we expect a written answer to my colleague's letter?

*Answer.* On June 16, 2009 we responded to the letters from Senator Sessions. However, as I testified before the subcommittee with regard to the release decisions we will make, we will look at these cases on an individualized basis and make determinations as to where they can appropriately be placed within the spirit and letter of the law.

#### INFLUENZA

*Question.* Currently the Department has thousands of agents working in Mexico and along the southern border. Given the recent widespread outbreak of H1N1 influenza can you tell us specifically what the Department has done to ensure the safety and health of its agents?

*Answer.* The health and safety of the Department's employees is of utmost importance to me. DOJ has been monitoring the spread of H1N1 since the start of the outbreak and has undertaken outreach to ensure that employees are aware of symptoms of H1N1, preventative measures to guard against infection, and HR flexibilities, such as teleworking and alternative work schedules. Following are some of the actions taken by DOJ law enforcement entities to ensure the safety of their employees.

- The FBI purchased protective equipment, including surgical masks, hand sanitizer solutions, and workspace disinfectant for wide availability, including for those employees on the southern border, and obtained N95 respirators for select employees whose duties are most likely to bring them into close contact with members of the public suffering from upper respiratory infections.
- The USMS Prisoner Operations Division issued guidance to advise personnel to be vigilant in detecting symptoms in prisoners in USMS custody.
- ATF issued a broadcast to employees that provided a link to Pandemic Flu Awareness training.
- In conjunction with DHS, the Department issued a "dual seal" document that provides instruction to law enforcement and security personnel on how to prepare for and handle those they encounter who exhibit H1N1 flu symptoms.

#### EXPIRING PROVISIONS OF THE ADAM WALSH ACT

*Question.* There are a number of Adam Walsh provisions expiring in fiscal year 2009. Has the Department contemplated a legislative plan regarding the expiring provisions of the Adam Walsh Act?

*Answer.* The Adam Walsh Act is a significant and landmark piece of legislation. We believe any expiring provisions which serve to protect the public welfare and the safety of children should be extended. The Department is currently reviewing the provisions of the Adam Walsh Child Protection and Safety Act (the Adam Walsh

Act) that are set to expire in fiscal year 2009, and looks forward to working with Congress to discuss these expiring provisions.

There are two “Authorization of Appropriations” provisions of the Sex Offender Registration and Notification Act (SORNA) (Title I of the Adam Walsh Act) with terms from 2007 to 2009. Section 126(d) of SORNA (42 U.S.C. §16926(d)) authorizes “such sums as may be necessary” to the Sex Offender Management Assistance program authorized by section 126(a) of SORNA (42 U.S.C. §16926(a)). Section 142(b) of SORNA provides for “such sums as may be necessary” to utilize Federal law enforcement resources to assist local jurisdictions in locating and apprehending sex offenders who violate their registration requirements. No other portion of SORNA is “expiring” in fiscal year 2009.

On May 26, 2009, pursuant to his statutory authority under 42 U.S.C. 16924(b) to grant “two one-year extensions of the deadline,” the Attorney General extended the deadline for these expiring provisions to July 27, 2010. States now have until that date to come into compliance with the requirements of SORNA.

*Question.* Does the Department support reauthorization of these provisions designed to protect children from pedophiles and sexual predators?

Answer. The Department is committed to protecting the Nation’s children from pedophiles and sexual predators, and fully supports the programs outlined in the Adam Walsh Child Protection and Safety Act. We look forward to working with Congress to discuss reauthorization of expiring provisions in the Act.

*Question.* What changes if any will DOJ propose?

Answer. The Department of Justice is reviewing the Adam Walsh Act and looks forward to working with Congress to determine any changes that need to be made.

*Question.* Does the Department support the requirement that sexual predators must register with local authorities?

Answer. The Department of Justice believes that requiring registration with local authorities will aid law enforcement in ensuring compliance with both State and Federal laws. Since the launch of the Dru National Sex Offender Public Website in 2005, millions of parents, employers, and other concerned residents have utilized the Website as a safety resource, identifying location information on sex offenders residing, working, and going to school not only in their own neighborhoods but in other nearby States and communities as well.

#### NIBIN—BALLISTICS

*Question.* Are there any official MOU’s or policies in place requiring the use of NIBIN by DHS law enforcement? If not, why not? If so, please provide a copy for the record.

Answer. An MOU does not currently exist between the Department of Justice and Homeland Security requiring the use of NIBIN by DHS law enforcement. We are looking at how to best facilitate DHS’ use of NIBIN, including outlining a process for entering information into NIBIN.

*Question.* What is the extent of DHS’s coordination with ATF’s Project Gunrunner?

Answer. Project Gunrunner is an anti-firearms trafficking operation to stem the flow of illegal firearms purchased in the United States into Mexico. As Project Gunrunner is focused on the border, ATF coordinates extensively with DHS’s Custom and Border Protection and Immigration and Customs Enforcement.

*Question.* What specific initiatives does DOJ have in place to ensure that all firearms seized by Customs and Border Protection and Immigration and Customs Enforcement are being processed thru the ATF’s NIBIN and the ballistics databases?

Answer. The Department is looking at how best to facilitate DHS’s use of NIBIN, including outlining a process for entering information into NIBIN.

*Question.* How are the data from etrace and NIBIN being integrated and mapped along with other relevant crime data from the border?

Answer. The El Paso Intelligence Center (EPIC), which is an intelligence sharing organization focusing on the Southwest Border, houses employees from 22 Federal, State, and local agencies, including ATF. By participating in EPIC, ATF is able to integrate the data available from NIBIN with other crime data from the border. In addition, ATF’s Violent Crime and Analysis Branch analyzes data derived from traces to develop a comprehensive enforcement strategy by mapping the trace data to specific geographic areas. This information is used to form an integrated intelligence-driven policing strategy.

*Question.* Are all guns seized by the Mexican authorities being processed by the ATF?

Answer. The Department is only aware of the weapons that the Mexican authorities have submitted to ATF for tracing and processing. The Department has no way

to ascertain whether the weapons sent to ATF encompass the entire universe of weapons seized by Mexican authorities. Mexican authorities possess the Integrated Ballistic Imaging System (IBIS) technology allowing them to process firearms in their possession. ATF recently received \$3.2 million to update its IBIS equipment to allow ATF's technology to interact with Mexico's ballistics equipment.

BORDER CZAR

*Question.* The administration recently announced the creation of a Border Czar. What is the Border Czar role and what actual assets will they control?

*Answer.* I believe that the new "border czar," Alan Bersin, will help bring a more comprehensive view of border security to the government. Alan brings years of vital experience working with local, State and international partners to help meet the challenges we face at our borders. As a former U.S. Attorney, Alan knows the Department of Justice and the entire justice system. I understand that his responsibilities at the Department of Homeland Security (DHS) will include improving relationships with the DHS's partners in the international community, as well as those at the State and local level including elected officials, law enforcement, community organizations and religious leaders. The DHS will determine the specifics of this position, including the actual assets (if any) that the Border Czar will control.

*Question.* Can they direct any DOJ resources?

*Answer.* Secretary Napolitano and I are both personally committed to a strong partnership between the Departments of Justice and Homeland Security. We understand that need for close collaboration and seamless cooperation between our Departments. While our specific strategic and operational protocols with the Border Czar have not been finalized, we don't expect new Border Czar to direct the allocation of DOJ resources.

*Question.* Do you have to coordinate with the Czar on investigations or allocating DOJ resources on or near the border?

*Answer.* As discussed above, Secretary Napolitano and I are both personally committed to a strong partnership between the Departments of Justice and Homeland Security. We understand that need for close collaboration and seamless cooperation between our Departments. Our respective departments routinely work together effectively in areas of joint concern, but given the importance of cooperation and coordination between our departments, there is always room for improvement. To that end, one of my first actions after becoming Attorney General was to meet with Secretary Napolitano and discuss how we might improve cooperation and coordination between our departments, and together we have established a high-level working group of agency senior staff to address these issues. Moreover, we continue to meet regularly to confer on operational and budget issues, as does our senior staff. We are confident that we can work together to further improve coordination between our departments.

In point of fact, DOJ and DHS law enforcement agencies have worked successfully together for decades on investigations and prosecutions involving drug trafficking, money laundering, firearms trafficking, and border violence issues. ICE's predecessor U.S. Customs (formerly in the Treasury Department) and the U.S. Coast Guard (formerly in the Department of Transportation) have both been members of the Organized Crime Drug Enforcement Task Forces (OCDETF) since OCDETF's inception in 1982, along with the Treasury Department's IRS-Criminal Investigations Division, and DOJ's DEA, FBI, ATF, USMS, and prosecutors in the 94 U.S. Attorney's Offices and Criminal Division.

Every day agents in these OCDETF task forces across the country and along the Southwest Border continue to work together to disrupt and dismantle the most significant drug trafficking and money laundering cartels that operate along the Southwest Border and elsewhere. In fact, ICE participates in approximately 44 percent of all currently active OCDETF cases. CE and USCG are particularly valuable members of OCDETF Co-located Strike Forces, including the Panama Express Strike Force, which have so far interdicted more than 850 tons of cocaine in the maritime transit zones between the sources in Colombia, the transporters in Mexico, and the end users in the United States. DOJ will continue to emphasize planning, coordination, and this type of multi-agency approach to ensure the most effective working relationships that will minimize jurisdictional conflicts.

*Question.* Does the Border Czar have any operational control of any law enforcement function?

*Answer.* The Deputy Attorney General directs the overall Departmental strategy against the Mexican cartels. In addition, the Assistant Attorney General for the Criminal Division will be coordinating extensively with Alan Bersin in his role as

DHS Assistant Secretary for International Affairs and Special Representative for Border Affairs.

GAO STUDY

*Question.* Why is ICE not participating nor contributing to these multi-agency efforts?

Answer. DOJ and DHS law enforcement agencies have worked successfully together for decades on investigations and prosecutions involving drug trafficking, money laundering, firearms trafficking, and border violence issues. ICE's predecessor U.S. Customs (formerly in the Treasury Department) and the U.S. Coast Guard (formerly in the Department of Transportation) have both been members of the Organized Crime Drug Enforcement Task Forces (OCDETF) since OCDETF's inception in 1982, along with the Treasury Department's IRS-Criminal Investigations Division, and DOJ's DEA, FBI, ATF, USMS, and prosecutors in the 94 U.S. Attorney's Offices and Criminal Division.

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*Question.* Are there any other agencies that refuse to participate?

Answer. The Department is not aware of other agencies refusing to participate.

*Question.* What is the impact on drug investigations as a result of ICE refusing to participate with the rest of the interagency community?

Answer. Secretary Napolitano and I are both personally committed to a strong partnership between the Departments of Justice and Homeland Security. We understand that need for close collaboration and seamless cooperation between our Departments. Our respective departments routinely work together effectively in areas of joint concern, but given the importance of cooperation and coordination between our departments, there is always room for improvement. To that end, one of my first actions after becoming Attorney General was to meet with Secretary Napolitano and discuss how we might improve cooperation and coordination between our departments, and together we have established a high-level working group of agency senior staff to address these issues. On June 18, 2009, DEA and ICE signed a new Memorandum of Understanding (MOU) that updates the previous MOU from 1994. As part of the recently signed agreement, ICE agrees to fully participate at OFC and SOD, both in terms of staffing and information sharing, and to provide seizure data to EPIC, which will greatly enhance the sharing of intelligence with the rest of interagency community.

SECOND CHANCE ACT

*Question.* General Holder the Second Chance Act provides job training for convicted felons. Can you tell us how much is in your request for assisting felons rehabilitating them and assisting them in finding employment?

Answer. For fiscal year 2010, the administration is requesting \$13.8 million for the Bureau of Prisons (BOP) to implement a comprehensive reentry strategy called the Inmate Skills Development (ISD) initiative that has been developed on a competency-based model that measures success by skill acquisition. The process includes an assessment of an inmate's strengths and skill deficits upon admission, the development of an individualized plan to address skill deficits, and the monitoring of skill enhancements throughout incarceration. This framework is predicated on beginning the preparation of an inmate's release to the community when he or she first comes into the BOP and on a consistent basis throughout their incarceration, as well as developing partnerships and resources to assist in a successful transition to the community.

Of the \$100 million requested for the Office of Justice Programs (OJP), much of the funding will go directly to grant funds for States, localities and tribes, and each of these entities will submit applications for funding that will address a variety of reentry related initiatives. These initiatives may focus on substance abuse treatment, mental health treatment, cognitive skill development and motivational inter-

viewing, as well as housing or employment. There are many components of successful and evidenced based reentry efforts, and thus we assume the majority of applicants will put forth applications that comprise one or more components to improve an offender's life, one that leads to positive behavior and contributions to the community in which the offender resides. We also plan to use a portion of the funds for research to improve the knowledge base of effective reentry strategies.

*Question.* Given that the Department is working to ensure that this program is a success how many of the felons who in the process of being rehabilitated will be working at the Department?

*Answer.* Funding and implementation of offender reentry programs that reduce recidivism and enhance public safety is an important priority for the Department of Justice. The Office of Justice Programs plans to coordinate extensively with the Department of Labor's Employment and Training Administration and other agencies in administering the programs authorized by the Second Chance Act including developing a program that will allow for the hiring of offenders who are involved in rehabilitative efforts in some of our community based programs.

*Question.* If the Department has no initiative could you report back to the committee in 30 days on a suggested pilot program we could set up at DOJ headquarters?

*Answer.* Certainly, the Department can follow-up with the Committee regarding the development of such a program.

#### INTELLECTUAL PROPERTY

*Question.* Provide an update on the execution of this funding and outline what efforts the Department intends to take in the future to ensure that intellectual property crimes are vigorously investigated and prosecuted?

*Answer.* The Department takes intellectual property crimes very seriously and I am grateful for the resources provided in the fiscal year 2009 Appropriation for 46 positions (31 Special Agents and 15 Professional Staff) to support the FBI's investigations of Intellectual Property crimes. Of these positions, five Special Agents will be assigned to the Intellectual Property Rights Unit, within the Cyber Criminal Section at the FBI Headquarters. The remaining 26 Special Agents will work in coordination with the Department of Justice Computer Hacking and Intellectual Property Units in the following FBI Field Offices: Los Angeles, San Francisco, San Diego, Washington, DC, Seattle, San Antonio, Pittsburgh, Philadelphia, New York, Newark, Miami, Memphis, Kansas City, Detroit, Denver, Dallas, Chicago, Boston, Baltimore, and Atlanta. I will continue to work with the administration and Congress on resource requirements to address this issue.

#### SECOND CHANCE DUPLICATION

*Question.* The Office of Justice Programs (OJP) currently administers more than 82 grant programs. The sponsors of the Second Chance act did a poor job of examining the existing programs at OJP, and opted for more bureaucracy and a press release. Instead of utilizing existing Byrne Grants, R-SAT, re-entry and other programs at OJP, a new battery of programs was created. It seems as though a new grant program is created every day. What is the Department doing to examine the duplication of existing programs?

*Answer.* The Department is aware that some programs can be duplicative of past or existing reentry initiatives; however, the Department, through the Office of Justice Programs (OJP), makes every effort to avoid duplicative efforts by developing solicitations and other funding opportunities, where permissible within the legislation, that stress creation and implementation of new, innovative, and evidenced based initiatives that have not been initiated through previous funding opportunities.

*Question.* What is the Department doing to find out what does and doesn't work?

*Answer.* It is critical that the Department support new and innovative approaches to addressing crime that are supported by evidence-based practices. At OJP we are following through on this commitment by working to re-establish the connection between research and practice, and giving the field the latest information about what works in the field of criminal and juvenile justice. This effort is one of our top priorities, and is helping to restore the integrity of science at the Department of Justice.

We also believe research should be integrated into, not separate from, our programmatic activities. OJP has started a series of internal working groups to figure out how we can share information with the field about evidence-based approaches to fighting crime. In many cases, the knowledge is already out there in the field and it is our job to facilitate the horizontal transfer of that information and advance programs and practices that are supported by evidence of effectiveness. Through these

working groups, we are coming up with a strategy for strengthening the evidence-based nature of our programs and working to build a more solid research foundation for the work that we do.

In addition, meetings and monitoring visits are held with the grantees to ensure that they are providing effective and efficient programs through the various funding opportunities. OJP has emphasized that the Bureau of Justice Assistance and the National Institute of Justice (NIJ) collaborate on the evaluation of new programs and initiatives. There is also an emphasis on creating meaningful and productive performance measures for recipients of funding.

#### DEA TITLE 21 AUTHORITY

*Question.* What is your position on ICE receiving independent Title 21 authority to investigate drug crimes, as opposed to the current practice of ICE relying on cross-designation by DEA?

*Answer.* On June 18, 2009, DEA and ICE signed a new Memorandum of Understanding (MOU) that updates the previous MOU from 1994. The new MOU continues the use of cross-designation of ICE agents, but removes any cap imposed upon the number of ICE agents that can receive cross-designation. Both Secretary Napolitano and I agree that this MOU is the most efficient and effective means to coordinate and deconflict drug enforcement investigations.

*Question.* Would independent Title 21 authority for ICE cause any problems?

*Answer.* Under the newly signed MOU, ICE will not require independent authority to conduct Title 21 drug investigations because ICE agents will be cross-designated with Title 21 authority, with no limitation on the number of ICE agents that may be cross-designated.

*Question.* General Holder, will the new leadership for both ICE and DEA be able to resolve this or will it require a legislative fix?

*Answer.* The recently signed MOU is the most efficient and effective way to address cross-designation concerns and to promote additional coordination. Because the issues between DEA and ICE have been resolved with this MOU, no legislative fix is required.

*Question.* If the administration's new leadership can fix this what is your plan?

*Answer.* I believe that with the signing of the MOU between ICE and DEA that any such issues related to cross-designation and coordination are resolved.

*Question.* If ICE wants Title 21 to work narcotic cases why has ICE refused to participate at the OCDETF Fusion Center and EPIC? Why don't they play a larger role at SOD?

*Answer.* Under the recently signed MOU between DEA and ICE, ICE commits to full participation, information sharing, and staffing at the OCDETF Fusion Center and SOD, and will provide seizure data to EPIC.

*Question.* What intelligence do the two agencies share and how?

*Answer.* DEA participates in a number of task forces and special initiatives with DHS agencies, including ICE, such as OCDETF, HIDTA, the CBP/DEA Ports Project, Border Enforcement Security Task Forces, and the Tunnel Task Force. These initiatives increase the flow of information between participating agencies regarding violent criminal organizations and gangs operating on both sides of the border.

The information sharing and de-confliction processes and protocols established in the El Paso Intelligence Center (EPIC), the OCDETF Fusion Center (OFC), and the Special Operations Division (SOD) have proven to be effective systems for multi-agency law enforcement intelligence sharing. With the recently signed MOU between DEA and ICE, ICE agrees to fully participate at OFC and SOD, both in terms of staffing and information sharing, and to provide seizure data to EPIC, which will greatly enhance the sharing of intelligence between DEA and ICE.

*Question.* What is DEA's plan to resolve the issue?

*Answer.* ICE commits to full participation, information sharing, and staffing at OFC and SOD and to provide seizure data to EPIC in the recently signed MOU.

#### LAW ENFORCEMENT WIRELESS COMMUNICATIONS

*Question.* President Obama recently announced his administration's comprehensive response to increased violence against Mexico fight against the drug cartels. How effective are the tactical radio communications between DOJ agents and other Federal agents such as Customs and Border Patrol along the Southwest border and do you need assistance from this subcommittee to fund tactical communications?

*Answer.* The Department appreciates the support the Congress has shown the program in fiscal year 2009, and is pleased to share our plans for replacing and modernizing our aging radio systems, correcting security deficiencies, and address-

ing mandated technical standards that directly support agents along the border. DOJ's tactical radio systems should be updated where appropriate with systems which are more modern, more reliable and more secure. DOJ is working with other Federal law enforcement components to increase the effectiveness of tactical communications.

Due to budgetary constraints, the typical "technical refresh" investments necessary to maintain the reliable and secure operations of our radio systems have been postponed and/or delayed for 10–12 years. We have reached a point where certain aspects of our wireless systems are no longer supported by the original equipment vendors. Our largest user—the Drug Enforcement Administration—must often go to extraordinary lengths (Internet/eBay, cannibalization of older units, unreliable third party suppliers, etc.) to source replacement parts.

*Question.* If this is a priority for DOJ why was LEWC not included in a 2009 supplement?

*Answer.* We are working with the administration to develop funding strategies for the IWN program. The President's 2010 budget request would increase project funding to \$205 million. These funding levels drastically increase our ability to invest in new wireless technology, reducing the costs for maintaining our legacy systems.

*Question.* Follow up: The President's supplemental does not contain any funding for tactical communications for Federal law enforcement agents being deployed to the Southwest Border. If we are able to add funds to ensure that DOJ agents have secure digital communications along the SWB how quickly can DOJ respond to provide enhanced operational ability and security?

*Answer.* The Department is prepared to immediately invest any additional funding to upgrade/modernize our radio systems serving the Southwest border. Such investments would have an immediate and significant impact in addressing the operational failures and security problems we currently face in the Southwest. Upgrade investments would be made in three major areas requiring attention:

- Acquire and distribute new, modern radios (i.e., radio "handsets" used by individuals and mobile radio systems typically installed in vehicles) for our law enforcement personnel along the Southwest border. This investment would immediately address many of the reliability and security problems our users currently encounter and we would expect to realize operational benefits within approximately 90 days of investment.
- Begin to upgrade the system infrastructure that supports our tactical radios. This infrastructure includes telecommunications components, computers and servers, antenna towers, and related hardware. It will take approximately 9 months to acquire, install, test, and transition the major components of this investment. Improvements in overall system performance and coverage would be realized immediately upon infrastructure upgrade.
- Begin to develop and implement interoperability capabilities with other Federal radio systems, including CBP. Such investments would allow our users to more easily communicate with other Federal law enforcement personnel. We believe that interoperable capabilities can be significantly improved within approximately 9 months of investment.

*Question.* Will the \$350,000,000 provided to DOD for counternarcotics activities be available for DOJ to use to help upgrade its law enforcement wireless communications infrastructure along the Southwest border?

*Answer.* The Law Enforcement Wireless Communications (LEWC) Program has no insight to the \$350 million being provided to DOD for counternarcotics activities, so we are not familiar with how that money will be used. We assume this money will be obligated in a manner consistent with the scope and mission originally used by DOD to justify the funding—and to our knowledge DOJ's IWN radio system was not included in that justification. No discussions have been held by the LEWC program and DOD regarding the use of this funding.

*Question.* With regard to your fiscal year 2010 request, it is my understanding that DOJ requested 300 million for LEWC in 2010 and it has been recommended that they receive 205 million.

*Answer.* With the Committee's support of the IWN program in fiscal year 2009, the Department received a total of \$185 million, which is \$110 million above the fiscal year 2008 enacted level. The fiscal year 2010 request is \$205 million, a \$20 million increase above fiscal year 2009 that, if enacted, will allow for further IWN deployment.

*Question.* What is the plan, the schedule for completing this project?

*Answer.* Our current implementation schedule is to design and develop the IWN system over a 6 year period utilizing a series of overlapping implementation phases. The planned 6-year upgrade and replacement of legacy communications systems will include regional design and deployment of modernized tactical communications sys-

tems and services focusing on urban centers. The timeframe for completion is dependent on the availability of funding.

*Question.* Are their plans for a 2010 supplement request to help accelerate this program?

*Answer.* At this time there are no plans to request supplemental funds for this program in fiscal year 2010.

#### FBI—CRIMINAL INVESTIGATIVE ABILITIES

*Question.* Are you concerned over the apparent deterioration of the FBI's criminal investigative capabilities?

*Answer.* The FBI has allocated its resources to ensure priorities are addressed in all its programs, including the criminal programs. We have established policies regarding resource allocation, we monitor resource use within each program to ensure that the most serious crime problems are addressed, and we ensure valid reasons exist for the diversion of resources from lower priority programs to higher priorities.

Since the FBI reprioritized its mission following the terrorist attacks of 2001, some of the FBI's criminal program resources were redirected to combat the terrorism-related threats endangering our Nation. To alleviate any corresponding strain on other law enforcement agencies, the FBI has strengthened its focus and commitment to task force operations, which act as force multipliers. For example, the FBI operated approximately 50 Safe Streets Gang Task Forces before 9/11/01 and is currently directing approximately 150 gang task forces across the country, consisting of approximately 650 FBI Special Agents and over 1,000 task force officers from other agencies. The FBI pays the overtime, vehicle, travel, and equipment related expenses for the assigned State and local agents. These task force operations maximize efficiency by promoting intimate collaboration and detailed information sharing between agencies.

*Question.* Is this an area where we need to invest more agents and analysts?

*Answer.* The fiscal year 2010 Departmental budget request to Congress includes a \$62.6 million increase and a total of 379 positions (including 54 agents and 165 attorneys) to aggressively pursue mortgage fraud, corporate fraud, and other economic crimes. Included in this total are 143 positions (50 Agents) and \$25.5 million for the FBI to combat the dramatic increase in mortgage fraud. These resources would enhance the FBI's field investigative capability, provide Forensic Accountants to aid in increasingly complex financial investigations and preparation of evidence for prosecution, and increase the number of Mortgage Fraud Task Forces.

#### FBI FORENSICS

*Question.* Mr. Attorney General, the National Academy of Science recently issued a draft report of its findings concerning forensic science—a report prepared at the request of Congress. Does the Department agree with the findings and recommendations of the report?

*Answer.* The Department agrees with many of the recommendations of the National Academy of Science and fully supports initiatives to maximize: the quality and rigor of forensic analyses; the education and training of forensic practitioners; rigorous quality assurance programs to ensure the results and interpretations of forensic analyses, and the conclusions drawn from them, are accurate and within acceptable scientific boundaries; and the proper interpretation and use of forensic analysis results in criminal proceedings.

The Department also agrees that additional research is needed to enhance the existing body of knowledge in the forensic sciences and to improve efficiency and effectiveness in forensic science laboratories through the development of new technologies and tools. For example, we agree that more research is needed in the areas of human observer bias and other sources of human error to minimize the possibility that these errors will affect forensic analysis, the interpretation of forensic results, and the accuracy and quality of courtroom testimony. Specifically, the Department supports: standardizing terminology across the forensic science community (Recommendation 2); more research on the accuracy, reliability, and validity of the forensic sciences (Recommendation 3); more research on human observer bias and sources of human error in the forensic sciences (Recommendation 5); the development of standards, practices, and protocols for use in forensic sciences (Recommendation 6); lab accreditation and practitioner certification (Recommendation 7); stronger quality assurance and control procedures (Recommendation 8); the establishment of a code of conduct, including ethical principles (Recommendation 9); higher education in the forensic sciences (Recommendation 10); the improvement of the medico legal death investigation system (Recommendation 11); Automated Fin-

gerprint Identification System interoperability (Recommendation 12); and the use of forensic science to aid homeland security (Recommendation 13).

The Department believes two of the recommendations need further study: the creation of a National Institute of Forensic Science to oversee the nation's entire forensic science community and the removal of all forensic science labs from the administrative control of law enforcement agencies or prosecutors' offices.

*Question.* Based on the report, are there areas where you could suggest that the Committee could start to invest funding to address some of the problems identified?

*Answer.* The Department believes in efforts to further forensic science research and validation efforts and to foster optimal quality assurance practices in all forensic science agencies. Thus, future investments in NAS recommendations 1 through 13 would be a step in the right direction to address some of the issues identified in the study.

*Question.* Do you agree with the recommendation that forensic laboratories should be independent of police or law enforcement agencies?

*Answer.* Although the Department supports the location of forensic science practitioners in laboratory settings managed and overseen by scientific personnel, we do not support the removal of public laboratories from the administrative control of law enforcement agencies.

#### PEER TO PEER CHILD PORNOGRAPHY GROUPS

*Question.* Attorney General Holder: The internet and innovations in digital technology have in many ways made life easier and made the world a smaller place. Much like any legitimate tool or technology, the criminal element always finds a way to exploit these innovations with their own criminal needs.

Currently on the internet music, books, thoughts and ideas are shared through "peer to peer" networks. These networks allow a computer user to connect with thousands or hundreds of thousands of other computers around the world and share the contents of their collections which are maintained on their own computer hard drives. Like a person in Virginia could share his thoughts or ideas on a particular subject freely with a person in New Mexico. These networks are open and for anyone to participate.

The vile and disgusting culture involved in the production and distribution of child pornography also take advantage of this technology. In these "peer to peer" groups Child pornographers are free to post, share and download horrible images of child rape and exploitation. These "peer to peer" networks are relatively easy to infiltrate by law enforcement and standard Investigative procedures allow for the subpoenaing and identification of the origin and person(s) involved in distributing the child pornography.

The internet crimes against children, ICAC, task forces along with other State and local law enforcement agencies are charged with investigating these offenses. However, because often the person sharing the despicable child pornography is located outside the state of the original investigation great cost, time and effort are needed to have an Investigator travel to a foreign jurisdiction to provide evidence and testimony to obtain a conviction.

These "peer to peer" groups are relatively easy to investigate and these cases are ripe for picking.

*Answer.* The Department of Justice is deeply committed to the fight against child exploitation, including the production and trade of child pornography. Today's technology knows no borders, so it is the rule, rather than the exception, for an investigation to uncover targets in numerous States and countries. In response to this reality, as part of Project Safe Childhood, the Department's Child Exploitation and Obscenity Section (CEOS) works with law enforcement partners, including the Federal Bureau of Investigation (FBI), Immigration and Customs Enforcement (ICE), and the Postal Inspection Service, to develop national and international operations which generate hundreds or even thousands of leads which are then disseminated to law enforcement agencies and United States Attorney's Offices in the appropriate geographic areas. CEOS also assists in the prosecution of offenders identified through these operations. These large-scale national and transnational operations leverage limited enforcement resources to identify high-value targets and large numbers of offenders.

While peer-to-peer technology certainly can be used for nefarious purposes, it is only one of several methods of trading child pornography on a mass scale over the Internet. Our experience shows that these opportunistic offenders do not limit themselves to any particular technology, so our law enforcement response must be equally broad. For example, a Philadelphia man who had two prior convictions for molesting children was recently convicted in the Eastern District of Pennsylvania of adver-

tising child pornography through an online bulletin board that he created and administered. As another example, fourteen individual defendants were recently convicted in the Northern District of Florida, seven through plea agreements and seven at trial, of engaging in a child exploitation enterprise. The members of the international illegal organization used Internet newsgroups to traffic in illegal images and videos depicting prepubescent children, including toddlers, engaged in various sexual and sadistic acts. The group, which included convicted sex offenders, traded over 400,000 images of children being sexually abused. While we are constantly trying to adapt to technological changes as they come—and they come quickly—we also note that these offenders often use traditional methods of trading these illegal images, such as the mail. For example, an Arizona man who had been identified through an undercover operation recently pled guilty to receiving child pornography he had ordered through the mail.

To be sure, peer-to-peer networks offer a fertile environment for law enforcement action—and the Department for years has successfully targeted offenders using that technological platform. For its part, the FBI developed its first peer-to-peer operation in 2003, and later developed the eP2P tool in response to the use of these networks by child exploiters. FBI and ICE both continue to run operations to dismantle peer-to-peer networks, along with the work done by the Internet Crimes Against Children taskforces (ICACs), which have become very proficient in investigating these types of cases. Federal investigators and State and Local law enforcement agencies who participate on ICAC Task Forces use tools such as eP2P and Operation Fairplay to address peer-to-peer file sharing. In 2008, ICACs investigated almost 13,000 child pornography distribution cases and almost 10,000 child pornography possession complaints. Many of these cases stemmed from peer to peer investigations or from Cyber tips reported to the National Center for Missing and Exploited Children. Federal prosecutions of all child pornography offenders has increased in each of the last 10 years, including over 2,200 indictments filed in fiscal year 2008.

Rather than emphasizing the investigation of one technology over another, the Department of Justice instead employs a comprehensive approach that includes an effort to identify peer-to-peer users, but it is not focused exclusively on it. In responding to the scourge of child exploitation, our goal through the enforcement of Federal laws is not to replicate the efforts of our State and local partners, but to complement it. This involves the identification of new technologies used by offenders, finding solutions to technical hurdles, and otherwise ensuring that we are pursuing the high-value targets wherever they are operating. On the last point, this often means targeting organized international and national networks of offenders.

Operation Joint Hammer, announced by the Department in December of 2008, is one such example. In that case, European law enforcement notified the United States of commercial website run by an Italian that was selling subscriptions to its members that allowed them to access “fresh” images of child pornography. The U.S. received hundreds of leads of persons in the United States who had paid subscriptions to that site. The many leads were divided among the FBI, Postal Inspection Service and ICE, and all three Federal agencies worked in close association with the Department’s Child Exploitation and Obscenity Section to investigate the leads and prosecute the offenders. By the end of 2008, the Operation had resulted in over 60 arrests in the United States. The investigation continues.

#### COMPUTER DIGITAL FORENSICS

*Question.* Not since the advent of finger print evidence and later DNA evidence has a field of forensic sciences been so impactful in the area of criminal investigation as that of computer digital forensics.

Every criminal case potentially has digital evidence within it. Drug deals are set up via text messaging. Murder conspirators communicate by way of email messages. Cell phone tracking assists in the location of missing or abducted persons. Massive white collar fraud cases are cracked due to in house email between defendants.

State and local law enforcement around this country are not financially equipped nor trained effectively to investigate and prosecute these cases.

Federal law enforcement agencies.

The United States is in desperate need of training the many areas of cybercrime for State and local law enforcement agents, prosecutors and trial judges who handle over 90 percent of these cases.

Attorney General Holder, in Alabama we have taken a major step forward in this area.

*Answer.* More and more crimes today involve the use of digital devices, including terrorism, murder, child exploitation, identity theft, and fraud. State and local law

enforcement agencies and courts find themselves challenged to deal with the resulting volume of digital evidence.

The Department's Office of Justice Programs (OJP) is aggressively responding to this challenge, both with regard to providing training and resources and in the development of new and improved digital investigative and forensic tools. OJP's response is being undertaken in partnership with State and local practitioners.

The Bureau of Justice Assistance's (BJA's) Electronic and Cyber Crime Training and Technical Assistance Program is designed to improve the capacity of local criminal justice systems and provide national support for training and technical assistance projects that strategically address electronic and cyber crime needs.

The National Institute of Justice's (NIJ's) Electronic Crime Program is designed to improve the capability of State and local criminal justice agencies to acquire and process digital evidence effectively and efficiently. NIJ's investments in the area of Electronic Crime are advised by a State and local practitioner-based Technology Working Group to ensure it addresses the most pressing needs of the community. Activities sponsored under this program include:

- Development of improved means to conduct digital forensic examinations of mobile devices such as cell phones as well as other digital devices
- Provision of resources to speed the process and efficiency of digital forensic examinations such as National Software Reference Library (NSRL) and the Computer Tool Forensic Testing Program (CFTT)
- Publication of guides such as: "Digital Evidence in the Courtroom: A guide for Law Enforcement and Prosecutors" and "Forensic Examination of Digital Evidence: A guide for Law Enforcement"

OJP remains committed to this effort. In fact, since 2006, BJA and NIJ have provided over \$2 million in grant funding to support the Alabama District Attorney's Association's (ADAA's) efforts to meet the challenge of dealing with digital forensic evidence including the Alabama Computer Forensic Program, which, in partnership with the Department of Homeland Security, United States Secret Service, created NCFI. The support the ADAA provides Alabama criminal justice agencies in this regard goes well beyond training, to include investigative support, prosecutorial support, and computer forensic analysis support. Although their efforts are focused on the needs of the State of Alabama, their model could well inform similar efforts by other States, or compacts among States.

#### METHAMPHETAMINE

*Question.* In recent years many States enacted legislation that curtailed the access to ephedrine which is a key or vital component in the manufacture of crystal methamphetamine. This legislation caused a marked decrease in the number of meth lab seizures around the country. An unintended consequence of this legislation led to an increase in the amount of crystal methamphetamine being manufactured and imported from Mexico. These super labs and drug cartels have been responsible for much of the gang and drug violence perpetrated on our border and around our country. However, due to recent changes in the manufacturing process of meth, the amount of domestic laboratory discoveries is sky rocketing. This new method of cooking methamphetamine is commonly referred to as a "one pot" cook or a "shake and bake" cook. Early manufacturing methods required several stages in the manufacturing process. These stages might involve ingredients such as ephedrine, anhydrous ammonia, lithium from lithium batteries, camp fuel, ether, salts, drain cleaner, and other dangerous ingredients or processes. With this new method of a "one pot" cook there are no separate stages in the cooking process. All of the dangerous, volatile ingredients are combined into one container. These containers are like sticks of dynamite, and, once the cook has been completed, the containers are discarded as trash. Recently in my State of Alabama a young child unsuspectingly picked up a soft drink bottle and attempted to consume what she thought was a soft drink. It was in fact ether, acid and the remnants of a "one pot" meth cook. She received life threatening injuries due to this encounter.

State and local law enforcement around the country are seeing greater levels of meth lab seizures than they were prior to the ephedrine legislation that sought to reduce the number of meth labs. In one jurisdiction within my State of Alabama, a local drug unit seized nearly 50 "one pot" meth labs in a single residence. Attorney General Holder, my question to you is: What are you and the Department of Justice doing to assist and train State and local law enforcement and prosecutors to deal with not only the influx of imported meth and its associated violence, but also the dramatic increase in the amount of local methamphetamine manufacturing, distribution and meth lab seizures?

Answer. Drug and lab seizure data has historically suggested that roughly 80 percent of the methamphetamine used in the United States comes from larger labs operated by Mexican organizations that are on both sides of the border, with the remaining 20 percent coming from domestically operated Small Toxic Labs. The Department is working with other Federal, State, and local law enforcement counterparts to address both sources. More specific examples of the work undertaken by DEA and COPS in this area are highlighted below.

- DEA's Mobile Enforcement Teams (METs) prioritize deployments focusing on methamphetamine trafficking, which is often conducted by violent Mexican cartels and gangs. In fiscal year 2009, DEA has 14 METs.
- DEA continues to collaborate with its Mexican counterparts as well as Customs and Border Protection. Projects such as the Long Beach Ports Project, which target suspicious containerized cargo, Operation All Inclusive, and Operation Ice Block, are all designed to stem the flow of precursor chemicals from reaching clandestine methamphetamine laboratories.
- DEA assists State and local law enforcement by providing hazardous waste contractor cleanup services and other assistance funded by the Community Oriented Policing Services (COPS) program. In fiscal year 2008, DEA administered 3,750 State and local clandestine laboratory cleanups. Based on current data, DEA expects to administer 5,600 State and local clandestine laboratory cleanups in fiscal year 2009, a 49 percent increase from the previous fiscal year.
- DEA is working to expand the Hazardous Waste Container Program, which reduces overall cleanup costs. The Container Program allows law enforcement officers to transport properly packaged hazardous waste from clandestine laboratory sites to secure containers until a DEA contractor picks it up within seven days. At the end of fiscal year 2008, Kentucky, Alabama, Indiana, Illinois, Nebraska, and Oklahoma were participating in the program. DEA Clan Lab Coordinators are also working with Mississippi, Tennessee, Ohio, and Michigan on the feasibility of these States joining the program. During fiscal year 2008, the container programs have resulted in cost savings of approximately \$4 million.
- DEA trains Federal, State, local and tribal law enforcement professionals on clandestine lab enforcement operations, including basic certification, officer safety and tactical training. Between fiscal year 2001 and fiscal year 2008, DEA provided clandestine lab training to nearly 9,000 State and local law enforcement officers and plans to train 950 each year in fiscal year 2009 and fiscal year 2010. Funding for these activities is provided by COPS.
- In addition to its support for DEA activities, COPS funding also supports enforcement, training, and prevention nationwide, concentrating in areas having the greatest need for assistance in combating methamphetamine production, distribution, and use. COPS encourages agencies to focus on community policing approaches to methamphetamine reduction, and also works directly with State, local and tribal law enforcement agencies to craft innovative strategies, track and evaluate their implementation, and disseminate results to other jurisdictions confronting similar challenges.

#### AGENT CERTIFICATIONS

*Question.* Because of Federal EPA regulations a meth lab cannot be legally seized or disposed of unless the law enforcement agent conducting the seizure has DEA Federal certifications. The waiting list to obtain these certifications and the costs associated are an impediment to many local law enforcement agencies being able to effectively investigate, seize and prosecute these cases. How will you and the Department of Justice see that the training and certification of these State and local law enforcement officers is expedited and made cost effective?

Answer. DEA trains Federal, State, local, and tribal law enforcement professionals on clandestine lab enforcement operations, including basic certification, officer safety, and tactical training. Between fiscal year 2001 and fiscal year 2008, DEA provided clandestine lab training to nearly 9,000 State and local law enforcement officers and plans to train 950 each year in fiscal year 2009 and fiscal year 2010. In December 2008, DEA opened a new clandestine lab training facility at the DEA Academy in Quantico, VA. DEA will use this state-of-the-art facility to train Federal, State, local, and foreign law enforcement officers in meth lab techniques and how to safely enter and dismantle them. DEA's State and local clandestine lab training programs are currently funded with COPS funding provided to DEA for assistance to State and local law enforcement.

## TRAINING OF PROSECUTORS

*Question.* Mr. Attorney General, 95 percent of all criminal cases and 98 percent of all violent crime are prosecuted by our Nation's State and local prosecutors. However, when funding is set aside by the department to train prosecutors, State and local prosecutors often get the short end of the stick. Currently, The Hollings National Advocacy Center in Columbia, South Carolina is a prime example of the disparity between Federal and State and local prosecutors. The Federal training at the NAC has been well funded since its inception, however, the State and local program, conducted in partnership with the National District Attorneys Association, has struggled to provide its much needed programs to the Nation's 39,000 State and local prosecutors due to lack of funding. If we are asking State and local prosecutors to carry the vast majority of the burden of criminal prosecutions, what will the Justice Department do to ensure the guilty are brought to justice and the innocent protected by well-trained prosecutors?

*Answer.* We value the National District Attorneys Association (NDAA) as a strong partner and have collaborated with NDAA on a number of issues including violent crime, crimes against children, capital litigation improvement, and motor vehicle theft. Beginning in fiscal year 2010, the National District Attorneys Association may apply, and compete, for discretionary grant funding to fund expansion of the current curriculum at the National Advocacy Center to provide more training for State and local prosecutors.

## STUDENT LOAN REPAYMENT PROGRAM

*Question.* State and local prosecutors and public defenders offices struggle with budgets as much, if not more as any governmental agency, these tight budgets make it difficult to compete against private law firms when recruiting and attempting to retain attorneys. Today, over 80 percent of law school graduates enter the workforce with student loans that on average exceed \$50,000. While many young people would truly like to serve their community, the sheer economics of a tremendous level of debt often eliminates that as an option. The Nation has an obligation to ensure the criminal justice system operates at the highest level possible. This is increasingly difficult with understaffed and overworked prosecutors and public defenders offices, which are constantly losing staff to the private sector. In part to address the wage disparity between the public and private sector, Congress passed and the President signed the John R. Justice Prosecutors and Defenders Incentive Act of 2008 in August. The Act authorizes the Justice Department to develop a student loan repayment program that mirrors a program already in place at the department for U.S. Attorney's Offices. What progress has the Department made in putting this program in place?

*Answer.* The Department understands and appreciates the essential work performed by State and local prosecutors and public defenders in handling the large volume of cases in State court systems in this country. In recognition of that, through the Office of Justice Programs, the Department administers a number of targeted efforts to support the work of these attorneys in areas ranging from gun crime to drug cases, child abuse and neglect, and DNA evidence. In light of many competing priorities, however, the Department did not seek appropriations for student loan repayment under the John R. Justice Prosecutors and Defenders Incentive Act in the fiscal year 2010 budget. Department of Justice leadership met recently, however, with the Executive Director and the President of the National District Attorneys Association and discussed the Act and the needs that led to its passage. With recognition of the important work of State and local prosecutors and public defenders, the Department will continue to consider this matter.

## NAS STUDY

*Question.* The recent NAS study on Forensic Sciences raises a number of concerns for this subcommittee. Probably most importantly is that the NAS failed to follow the legislative language requesting the study. That being said the study is not without value and there are some recommendations in the study that are worth consideration and have the broad support of stakeholders. However, there are two proposals I find particularly troubling: the establishment of an independent forensics agency and the removal of all forensics labs from within law enforcement agencies. These proposals, to me, seem extremely expensive, ill advised, and frankly unworkable. Have you or your staff considered the implications of this recommendation and which agency in your department would be cut to cover the costs?

*Answer.* The Department welcomes the report of the National Research Council entitled, Strengthening Forensic Science in the United States: A Path Forward. The

report is a helpful addition to the public discourse on the state of the forensic science community, and it recommends many useful steps to strengthen the community and enable it to continue to contribute to an effective criminal justice system. In fact, many of these steps are familiar to those in the forensic science community, including DOJ, and have been discussed among practitioners for some time. In large part, it builds on previous reviews conducted under DOJ's auspices in 1999 and 2004 that similarly identified numerous areas for improvement.

DOJ supports most of the recommendations. Many of them are directed toward state and local forensic entities, which is to be expected as around 98 percent of forensic science is performed outside the Federal Government. However, the Federal Government has a crucial leadership role to play in support of our criminal justice stakeholders and constituents. The Federal Government is already engaged in activities along the lines of many of the recommendations, but the Department recognizes that a significant new effort is required to appropriately address the issues raised by the community and in the report.

There are two recommendations that need further study: the creation of a National Institute of Forensic Sciences (NIFS) "support and oversee the forensic science disciplines" nationwide and the removal of all forensic science labs from administrative control of law enforcement agencies or prosecutors' offices. The report is correct in observing that, currently, the Nation's forensic science community is somewhat fragmented given the sheer number of independent law enforcement agencies, prosecutorial units, and crime laboratories. However, there is important work in progress to unify the community from within, as national organizations such as the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) and the Scientific Working Groups (SWGs) are working to standardize quality control and implement uniform standards. It is not clear that a new organization is necessary to achieve implementation of most of the report's recommendations. In fact, it could detract from this effort by refocusing energies and resources toward bureaucracy-building rather than substantive improvement in the field. A decision to establish a NIFS must be made carefully, and only after a thorough assessment of the strengths and weaknesses of both the concept and its proposed implementation.

Along those lines, DOJ also questions whether full independence of laboratories from law enforcement is advisable or feasible. The report cites an inherent potential for conflict of interest in the operational function of the majority of forensic service providers as they currently exist. The concept of "independence" that the report raises is not new to the law enforcement or forensic science community. In fact, States such as Arizona and Virginia have moved in this direction. However, it should not be surmised that this model can or should be adopted Nation-wide because there is inherent value to a collaborative process among forensic practitioners and law enforcement in determining the best course of action as it relates to the analysis of forensic evidence. To be separated completely from interaction with investigative partners might well cause missteps in decision-making that could result in either loss and/or destruction of evidence, or important analyses left undone. Instead, we agree with language in the report stating that autonomy within law enforcement entities should be the goal. In fact, accredited laboratories have management requirements to ensure independence of their scientific work.

The publication of *Strengthening Forensic Science in the United States: A Path Forward* provides a renewed opportunity for the forensic science community, the Executive Branch, Congress, and the public to focus on ways to improve the use of forensic science. While we have no plans to eliminate any DOJ agency as a result of the recommendations made in the NAS report, we look forward to working with Congress to develop and refine a comprehensive approach to address the serious issues raised by the report.

#### SUBCOMMITTEE RECESS

Senator MIKULSKI. So we have got a lot to do together, and we want to work with you to recapitalize and rebuild the Department of Justice so we can render justice in our country and have our national honor restored abroad. So we are looking forward to working with you and your very able staff.

This subcommittee stands in recess until Thursday, May 21 at 10 a.m., when we will take testimony from the Acting Administrator from NASA.

The subcommittee is in recess.

[Whereupon, at 11:38 a.m., Thursday, May 7, the subcommittee was recessed, to reconvene at 10 a.m. Thursday, May 21.]

**COMMERCE, JUSTICE, SCIENCE, AND RE-  
LATED AGENCIES APPROPRIATIONS FOR  
FISCAL YEAR 2010**

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**THURSDAY, MAY 21, 2009**

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 11:05 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Nelson, Shelby, and Voinovich.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
**STATEMENT OF CHRISTOPHER J. SCOLESE, ACTING ADMINISTRATOR**

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Good morning, and welcome to the Subcommittee on Commerce, Justice, and Science. I'd like to welcome Mr. Scolese from the NASA Goddard Space Flight Center in my State.

We have heard testimony from several Presidents' administrations, we've had Nobel Prize winners, and now we're actually going to have astronauts in space. As I understand it, it is the very first time that we will receive testimony from space.

One could make jokes about it, and maybe we've heard it before when it's been coming from outer space, but today it will be the real deal.

As we prepare for that, know that I've also asked one of our colleagues who is an astronaut Senator Bill Nelson, to join us for that part of the hearing. The Senate is a wonderful institution, we've actually had three astronaut Senators—John Glenn, Jake Garn, and Bill Nelson.

And one today which, really, with the Hubble, Senator Shelby and I have been together on the Hubble for 19 years, as was Senator Kit Bond.

I really want to pay tribute to both Senator Glenn—when I took over this subcommittee so many years ago he was a learned counselor and adviser to help me really understand the breadth and depth of the American Space Program.

I also want to pay tribute to Senator Jake Garn, who was my ranking member in those days and on a bipartisan basis we worked together to do many sound things to achieve a balanced space program. And Senator Garn brought a measure of great civility and

an enormous knowledge, and I feel that I was able to launch my career in trying to help the American Space Program because of the excellent guidance and tutelage, those two space astronaut Senators gave me.

So, with that, I also, want to welcome Chris Scolese to the hearing. He's no stranger to us, he's served as NASA's Chief Engineer since 2007, and was the Deputy Director of the Goddard Space Flight Center.

I want to thank Administrator Scolese for steering the NASA ship during this time of transition. It has indeed been in competent hands, and I want to thank you for your fidelity, for your competence, and for your stewardship. It exactly shows why we need a civil service, and why we need a NASA civil service. You truly have been part of that senior executive corps, providing hands-on leadership, as well as motivation of his staff, as we go through very difficult times.

So, I really want to thank you, and I think, you know, I want to just give you a little round of applause. I'm sorry more colleagues are not here, they'll be here for the more glitzy part of it, but we think you're glitzy, too.

Later on in the hearing, as I said, we're going to talk to 7 of our very daring and courageous astronauts from Space Shuttle Atlantis.

But let us get right to the heart of why we're here, which is the NASA 2010 budget request. It's for \$18.7 billion—\$1 billion above the omnibus level—and also, NASA has received \$1 billion in the American recovery stimulus package. So, between the 2010 budget request, the Recovery Act, NASA will receive \$2 billion more than they have in the past. This is a real victory.

Unfortunately, these gains don't continue into the future, and this is where we're deeply troubled. We're concerned that NASA is flat-lined after 2010.

But there's promising news within the 2010 budget, as well. We're heartened that science is funded at \$4.5 billion, with greater investments in Earth science as we study our own planet, and look to distant stars.

We also note that in other areas of science, the budget totals of \$4.5 billion, and NASA is being guided by the decadal reports prepared by the National Academy of Science. These are roadmaps for us, and we believe science at NASA saves lives, saves the planet, and creates jobs for the future. We're very heartened that we will continue to look at green science as we look at Planet Earth, but at the same time, to do other forms of science, related to planetary science, as well as solar science. And we're going to continue our mission development in telescopes, like the James Webb telescope.

In aeronautics research, the budget request is for \$507 million, roughly the equivalent of the 2009 omnibus level. This is disappointing. The aeronautics budget in 1998 was \$1.5 billion, 10 years ago, aeronautics was one of the keystones of the NASA budget. We've got to get back to this, because we believe that in order to maintain U.S. leadership in aeronautics, we need to make those public investments in development of technologies that increase our competitive edge in aircraft and airspace for safer, better, faster transportation.

The budget also reflects money for the Space Shuttle, and the space station, \$3.2 billion for the Space Shuttle, \$2.3 billion for the space station.

The budget calls for eight more flights to the space station, and we'll be discussing this in a very active way with the acting administrator. Eight more flights before the end of the fiscal year 2010.

We know the administration is committed to these remaining flights, and we know that delays that can occur in the Shuttle schedule, and we're concerned that there's no funding in the budget to keep a transition going.

As we retire the Shuttle, and we must do it with honor, we also have to acknowledge the wonderful workforce that has kept the Shuttle flying all of these years. And that this transitioning of the workforce is a major challenge for NASA, for the administration, and quite frankly for the Congress to work on a bipartisan basis with us.

The United States can't afford to lose this talent. Our talent in science and engineering continues to be needed, so we need to really take a fresh, creative way of looking at this workforce.

As our courageous astronauts perform amazing feats, we also need to know that with that Space Shuttle, safety has to be our number one concern, our number one priority that is absolutely needs to ensure. We need to ensure their safety, no matter what.

Now, this budget is a down payment on a balanced space program. Some years ago, a man by the name of Norm Augustine chaired a White House Commission for the President—a Republican President, I might add—and we've followed that for years, that we would have a commitment to human space exploration, a reliable and safe space transportation system and that we would do science, and we would do aeronautics.

Well, here we are again, where we're asking Norm Augustine to chair a Commission in terms of human flight. We look forward to the way that the Augustine review will take place, and hopefully it will help us, guide us on this.

Let me conclude, though, by saying we're deeply troubled by the cost overruns at NASA. Since 2006, 10 of the 12 NASA projects in development have exceeded baseline cost in schedules. This has cost credibility with NASA and the Congress. So, whenever they want to do something new that's dazzling, that's important to either our economics or to science, or to exploration, we wonder what we're getting into. And what we think we're getting into either doubles or triples or so on. And there is a growing concern among our colleagues that because of flawed estimates that there is a reluctance to begin what we need to do.

I believe we need to tackle this, and we're going to look for your ideas on how to do that.

But I want to conclude by saying this is a very special year in NASA's space history. It's the 50th anniversary of when NASA was created. It's the 40th anniversary, this July—July 20—of when we landed on the Moon. It's the 25th anniversary of when Dr. Sally Ride was the first woman to go into space, and of course, the beloved, and cherished Hubble Telescope, the people's telescope, is celebrating its 19th year in space, and like a lot of us, it's had ups and downs and needed a lot of help.

So, we look forward to hearing from you, we think the President has done a good job in making recommendations in this budget, but we think there's more work to be done.

Now I'd like to turn to my ranking member, Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you, Madam Chairwoman.

Mr. Scolese, thank you for joining us today, and thank you for the work that you've done over the years at NASA.

This is a sizable sum with our budget, considering the funding constraints that the Federal Government faces. This is a \$903 million, or 5.1 percent increase over the 2009 funding level.

This would provide—but it doesn't begin to provide enough for NASA to do all of the critical missions it has been asked to do.

The proposed budget has welcome increases in the areas of science and exploration, and maintains aeronautics funding at an acceptable level. However, more than 21 percent of NASA's budget, nearly \$4 billion, is being set aside as a placeholder, while NASA turns its manned space program over to, what will hopefully be an independent, and unconstrained blue-ribbon panel.

While there are a few developments at NASA to be excited about, there are even more that are troubling.

For starters, we are just now receiving a budget proposal from the administration that claimed it was able to hit the ground running, and was ready to lead.

With the nominee for the Administrator's post that was barely announced less than a week ago, the administration, I believe, has chosen to let their budget proposal be the face of NASA until a successful nominee is confirmed, in order to shepherd this Nation's space priorities through Congress.

In the case of the future for human space flight in some lunar science missions, the administration has made Norm Augustine that Chairwoman Mikulski referenced, the de facto interim Administrator, further delaying any plan for over \$4 billion of NASA's budget until weeks before the start of the fiscal year.

Such timing will not allow for NASA to potentially re-plan a major component of their budget, or for Congress to review the inclusion of this funding in fiscal year 2010.

Rather than rush such a monumental decision, any suggested changes should inform the development of the 2011 budget, once the ramifications of the recommendations can be fully vetted and authorized by Congress.

The proposed budget—while addressing issues of climate change, unmanned exploration and aeronautics research—shortchanges, I believe, our most viable and visible and inspiring manned space flight program. Instead of providing Constellation with funds to move forward, it is delaying the current mission, while seeking to have a do-over on plans that have been authorized by both a Republican and Democratic Congress.

I believe it should be remembered that, while the Hubble Telescope has brought us amazing images, and deepened our understanding of the universe, this marvelous instrument would still be on the ground, without our manned space program.

It is our distinct pleasure today to be able to talk to the crew—as Chairwoman Mikulski said—of the Atlantis, as they return to Earth from a successful mission. They will be the last, I believe, of Americans to travel farther away from the Earth than the Space Station for years to come.

I believe that manned space flight is something that is still in the realm of Government, because despite their best efforts, some truly private enterprises have not been able to deliver on plans of launching vehicles.

SpaceX claimed that they would be launched by 2004, and had a grandiose vision of manned flights launching by early this year. Unfortunately, the reality is that out of four attempts, they've only delivered a single dummy payload to space, have never delivered any payload to the Space Station, much less a human.

However grandiose the claims of proponents for commercial orbital transportation services, part D, they cannot substitute for the painful truth of failed performance, at present. For all of the hype, and the hundreds of millions in taxpayer dollars invested in cargo-only delivery, we still await the first successful completion of a single mission that delivers a real payload, not a simulated dummy.

I ask—is this the hope we will hitch our dreams of the future of manned space flight to? Will unproven cargo capabilities close the manned space flight gap faster than the work NASA has done on Ares and Orion? Are we to entertain the idea of placing people on a rocket that has yet to deliver a single real payload of any kind into space? I would have trouble, Madam Chairwoman, supporting a budget that is poised to eliminate a real manned space program, and instead maintains the fantasy of one.

This course, I believe, will only extend the time we will have to rely on the Russians to get our astronauts to a space station for which we have invested billions of dollars.

Without truly supporting and building upon the human and heavy-lift launch capabilities that are already under development, our astronauts will have no choice but to wave at the Russians, perhaps the Chinese, and possibly astronauts from India and other countries, as they pass by the Space Station on their way to exploring space.

As our astronauts endlessly circle the Earth in the future, astronauts from other nations, perhaps, will be exploring well beyond the edges of Earth's atmosphere and will become the inspiration of America's children. Is that what we want? I hope not.

We may be the leader in manned space flight today, but the eventual ramifications of this budget, as I understand it, has the potential to ensure that this lead will end, perhaps forever.

#### PREPARED STATEMENT

I look forward to hearing from you today, but the reality is that rocket science is tough, it is not a cheap venture, and it is not without risk. As a former NASA Administrator recently said, and I'll quote, "A fictional space program will always be faster, better, and cheaper than a real space program, but it won't be one."

Thank you.

[The statement follows:]

## PREPARED STATEMENT OF SENATOR RICHARD C. SHELBY

Thank you, Madam Chairwoman. Mr. Scolese, thank you for joining us today to discuss the fiscal year 2010 budget proposal for the National Aeronautics and Space Administration (NASA). NASA's proposed budget is \$18.7 billion. This is a \$903 million, or 5.1 percent, increase over the fiscal year 2009 funding level.

This is a sizeable sum considering the funding constraints that the Federal Government faces, yet it still does not begin to provide enough for NASA to do all of the critical missions it has been asked to do. The proposed budget has welcomed increases in the areas of science and exploration, and maintains aeronautics funding at an acceptable level. However, more than 21 percent of NASA's budget, nearly \$4 billion, is being set aside as a placeholder while NASA turns its manned space program over to what will hopefully be an independent and un-constrained blue ribbon panel.

While there are a few developments at NASA to be excited about, there are even more that are troubling. For starters, we are just now receiving a budget proposal from an administration that claimed it was able to hit the ground running and was ready to lead. Without even a nominee for Administrator, this administration has chosen to let their budget proposal be the face of NASA until a successful nominee is confirmed in order to shepherd the Nation's space priorities through Congress.

In the case of the future for human space flight and some lunar science missions, the Administration has made Norm Augustine the de facto interim administrator, further delaying any plan for over \$4 billion of NASA's budget until weeks before the start of the fiscal year. Such timing will not allow for NASA to potentially re-plan a major component of their budget, or for Congress to review for inclusion this funding in fiscal year 2010. Rather than rush such a monumental decision, any suggested changes should inform the development of the 2011 budget once the ramifications of the recommendations can be fully vetted and authorized by Congress.

The proposed budget, while addressing issues of climate change, un-manned exploration, and aeronautics research, shortchanges our most visible and inspiring space program, manned space flight. Instead of providing Constellation with funds to move forward, it is delaying the current mission while seeking to have a do-over on plans that have been authorized by both a Republican and Democratic Congress.

It should be remembered that while the Hubble telescope has brought us amazing images and deepened our understanding of the universe, this marvelous instrument would still be on the ground without our manned space program. It is our distinct pleasure today to be able to talk with the crew of Atlantis as they return to Earth from a successful mission. They will be the last Americans to travel farther away from Earth than the space station for years to come.

I believe that manned space flight is something that is still in the realm of government because, despite their best efforts, some truly private enterprises have not been able to deliver on plans of launching vehicles. Space-X claimed that they would be launching by 2004 and had grandiose visions of manned flights launching by early this year. Unfortunately the reality is that out of four attempts, they have only delivered a single dummy payload to space, have never delivered any payload to the space station, much less a human. However grandiose the claims of proponents for Commercial Orbital Transportation Services part D (COTS-D) are, they cannot substitute for the painful truth of failed performance at present.

For all the hype and the hundreds of millions in taxpayer dollars invested in cargo only delivery, we still await the first successful completion of a single mission that delivers a real payload, not a simulated dummy.

I ask, is this the hope we will hitch our dreams of the future of manned space flight? Will these unproven cargo capabilities close the manned spaceflight gap faster than the work NASA has done on Ares and Orion? Are we to entertain the idea of placing people on a rocket that has yet to deliver a single, real, payload of any kind to space?

I would have trouble supporting a budget that is poised to eliminate a real manned space program and instead maintains the fantasy of one. This course will only extend the time we will have to rely on the Russians to get our astronauts to a space station for which we have invested billions.

Without truly supporting, and building upon the human and heavy lift launch capabilities that are already under development, our astronauts will have no choice but to wave at the Russians, the Chinese, and possibly astronauts from India, as they pass by the space station on their way to exploring space. As our astronauts endlessly circle the Earth, the astronauts of other nations will explore well beyond the edges of Earth's atmosphere and will become the inspiration of America's children. We may be the leader in manned space flight today, but the eventual ramifications of this budget has the potential to ensure that this lead will end forever.

The reality is that rocket science is hard. It is not a cheap venture, and it is not without risk. As the former NASA Administrator recently said, "a fictional space program will always be faster, better, and cheaper than a real space program."

I look forward to working with NASA and the Administrator, once one is nominated and confirmed, to move the real space program at NASA and its exploration goals forward in the next fiscal year.

Thank you.

Senator MIKULSKI. Senator Voinovich, are you prepared to stay for the hearing, so we could go to Scolese?

Senator VOINOVICH. I am, but I have a short statement.

Senator MIKULSKI. Would you like to make it?

Senator VOINOVICH. Yes, I would.

Senator MIKULSKI. Sure.

#### STATEMENT OF SENATOR GEORGE V. VOINOVICH

Senator VOINOVICH. Thank you very much for having this hearing, and it's my first opportunity to be on this subcommittee, and Mr. Scolese, thank you for your participation here.

I want you to know that NASA is very close to me, I'm wearing this watch that was given to me by the crew of the STS-70, the all-Ohio crew that happens to have the OSU Buckeye sign on it.

We're all aware of what NASA's done, and their engineering and scientific accomplishments. Given the complexity and uniqueness and variety of the missions that are managed under the NASA umbrella, it's of utmost importance that the Agency have adequate human capital framework to ensure their success, and I just want you to know how pleased I am with the fact that NASA has used the additional flexibilities that we gave them in 2004 so that you could go out and recruit the best and brightest people to work for NASA.

In addition to that, I'd like to thank you and former Administrator Griffin for the fact that you came up with a program at a very difficult time to maintain the 10 centers that we had throughout the United States. And I want to applaud you that you took back in work that was going out to other contractors to try and maintain the in-house capability of NASA.

I am also please, Madam Chairwoman, that when there was a concern about whether or not you were going to continue your commitment to aeronautics, and I agree with you, Madam Chairwoman, that that budget for aeronautics ought to be reviewed.

But I'm also grateful that you identified our, as Glenn, for the CEV and for the launch vehicle, that we now have a new mission.

I think the real challenge now is to make sure that we allocate these resources in the places that it makes the most difference. And I think that Senator Shelby makes a very good point about dealing with some of the real-world things, and I think the American public is going to demand that, and I'm certainly hoping that Mr. Augustine takes that into consideration when he comes back to make his recommendations to NASA.

I have to say that I was concerned about what the administration would do about the NASA budget. There was many of us that felt that because of other priorities, that the NASA budget would be shortchanged. That hasn't been the case—as Senator Shelby says, there's been an increase of 5.1 percent. So, somebody did a

pretty good job with OMB, convincing them that this program was worthwhile.

PREPARED STATEMENT

And I keep emphasizing—as I had when I was mayor, and Governor of Ohio—that too often NASA does not do a good enough job in letting the folks of this country know how the work that they're doing has so many other things that make a difference in people's lives. In other words, not just up in space, but all of these things that you're doing, do impact—remarkably—the quality of life of people here in this country.

And we've seen this at Cleveland Clinic. They've taken a lot of stuff that you guys have developed, and put it to work to save people's lives.

So, I'm anxious to hear your testimony today.  
[The statement follows:]

PREPARED STATEMENT OF SENATOR GEORGE V. VOINOVICH

Good Morning, Thank you Chairwoman Mikulski and Ranking Member Shelby for convening today's hearing. Thank you Mr. Scolese for participating. I am looking forward to hearing more about the administration's fiscal year 2010 budget request and what NASA has in store for the future.

NASA's engineering and scientific accomplishments have long been a symbol of America's innovation and technological excellence.

Given the complexity, uniqueness, and variety of missions that are managed under the NASA umbrella, it is of utmost importance that the agency have an adequate human capital framework to ensure mission success. That is why I have utilized my role on the Homeland Security and Government Affairs Subcommittee on Oversight of Government Management, the Federal Workforce and the District of Columbia to work with NASA to improve its workforce development.

I am proud that the agency has made substantial and commendable strides in its human capital management since 2004, when my legislation, the NASA Flexibility Act, was signed into law. NASA has certainly done a much better job in recruiting, developing, and retaining the staff it needs to execute the agency's missions.

As a former mayor of Cleveland and governor of Ohio, I have been concerned for many years about NASA Glenn's struggle to obtain an identifiable mission. When I spoke with several of NASA Glenn's administrators a few years ago, we were all worried about restoring NASA's aeronautics funding and setting NASA Glenn on a clear mission forward.

In 2005, when Mike Griffin became NASA's administrator, I met with him to discuss the future of NASA Glenn, and he assured me he was not only focused on keeping NASA centers around the country functioning, but also that he was committed to finding a new mission for Glenn. I was pleased with Griffin's leadership. He did a great job managing and maintaining the ten NASA research centers at a time when the agency was going through a difficult transition.

I am so glad he was able to work with Lockheed Martin to see NASA Glenn secure an identifiable mission that included testing and certification of the Crew Exploration Vehicle (CEV) as well as overseeing the development of several Crew Launch Vehicle (CLV) upper stage systems.

But the staffs at NASA Glenn and at the Plum Brook facility are eager to do more.

Glenn is renowned for its blend of aeronautics and space flight experience. Together, NASA Glenn Research Center and the Air Force Research Lab at Wright-Patterson Air Force Base have helped shape Ohio as a global leader in aerospace design and production.

I am generally pleased with where NASA has been headed, but concerned that with the impending retirement of the Space Shuttle, and its replacement by the next generation of human space flight systems that shifting priorities within NASA could lead to the transfer of NASA Glenn Research Center's mission responsibilities to other NASA centers.

It is my hope that the vitality of Glenn be maintained, and that the Obama Administration and its future nominee for NASA administrator would continue its commitment to the "10 Healthy Center Concept."

Mr. Scolese, thank you again for joining us, I am eager to hear your thoughts on the future NASA.

Senator MIKULSKI. Mr. Scolese, please proceed.

STATEMENT OF CHRISTOPHER J. SCOLESE

Mr. SCOLESE. Thank you, Chairwoman Mikulski, Ranking Member Shelby, and members of the subcommittee. Thank you for inviting me here today to discuss the President's fiscal year 2010 budget request of \$18.686 billion for NASA.

The President's request is \$903.6 million above the fiscal year 2009 omnibus appropriation.

First, let me note that NASA's fiscal year 2009 budget is \$18.8 billion, or about \$1.2 billion above the fiscal year 2009 request. This reflects an increase of \$168 million in the regular appropriations, and about \$1 billion in the Recovery Act.

NASA is appreciative of the support of this committee, and the Congress, for the full funding of the fiscal year 2009 request, and the additional Recovery Act funds, which will enable NASA to meet critical priorities.

The President's fiscal year 2010 request includes \$4.5 billion for science. In Earth Science, NASA is continuing to work aggressively to implement the recommendations of the decadal survey. The first two decadal missions—SMAP and ICESat-II, continue formulation. The next two DESDynI and CLARREO—will be accelerated and NASA will issue its first Venture-class announcement of opportunity this year.

Over the next year, we plan to launch the Glory and Aquarius missions, the GOES-O mission for NOAA, and complete the development of the NPOESS Preparatory Project.

We will continue development of the foundational missions, including the global precipitation mission, the landsat data continuity mission, and initiate work on a thermal infrared sensor.

NASA is currently assessing options to recover from the disappointing loss of the Orbiting Carbon Observatory, and we will keep you informed of our findings and plans.

In planetary science, we are continuing the exploration of the solar system with the Juno mission to Jupiter, the Mars Science Laboratory, and the MAVEN Scout mission to Mars.

In astrophysics, I'm pleased to report that the final Hubble servicing mission EVA was completed on Monday, and earlier this week, the Space Shuttle successfully released a revitalized Hubble Space Telescope. We look forward to many more years of discoveries from Hubble. Development continues on the James Webb Space Telescope, which passed its confirmation review last year, and has an Agency commitment to launch in 2014.

NASA's fleet of heliophysics missions located throughout the solar system is providing researchers the first ever comprehensive view of solar influences on the Earth and other planets.

The fiscal year 2010 budget request of \$507 million renews NASA's commitment to a strong program in aeronautics, that will continue to contribute to the economic well-being and quality of life of Americans through its partnerships with industry, academia, and other government agencies.

Our Airspace Systems Program continues to collaborate with the Joint Planning Development Office to enhance the capacity, efficiency, and flexibility of the National Airspace System.

In exploration, the President's fiscal year 2010 budget request of \$3.963 billion is an increase of \$457 million above the fiscal year 2009 omnibus appropriations level, and \$225.4 million above last year's plan. This increased budget will support continued progress to advance the development of the next-generation human spaceflight system to carry American crews and supplies to space and return Americans to the Moon. Specifically, the Lunar Reconnaissance Orbiter and the Lunar Crater Observation Sensing Satellite spacecraft are ready for launch next month. Later this year, two major test flights will be conducted: the Ares 1-X developmental test flight from KSC, and the Orion Pad Abort I test at the White Sands Missile Range.

At the request of the Director of the Office of Science and Technology Policy, NASA is initiating an independent review of U.S. human space flight plans, conducted by a panel of outside experts, chaired by Norm Augustine. The review will examine ongoing and planned NASA human spaceflight development activities and potential alternatives, and present options for advancing a safe, innovative, sustainable, and affordable human spaceflight program in the years following Shuttle retirement. It will also evaluate options for extending ISS operations beyond 2016. The panel will present its results by August 2009. During the review, the NASA workforce will continue to work on all current exploration projects, including the Ares I and Orion.

The President's fiscal year 2010 budget request includes \$6.176 billion for Space Operations, which funds the safe flight of the Space Shuttle to complete the eight remaining scheduled flights to the ISS and then retire the Shuttle. We believe these flights can be accomplished by the end of 2010. This month, the ISS will host its first six-person crew, and next month, the STS-127 mission will deliver the third and final component of the Japanese Kibo laboratory, setting the stage for full research utilization of the ISS.

Last December, NASA awarded two commercial resupply services contracts to develop vehicles needed to deliver supplies and experiments to the ISS. The benefits from NASA's human spaceflights programs are ultimately demonstrated in the inspiration of the next generation of Americans, which was reflected recently in the delighted faces of students who participated in the uplink phone call between President Obama and the combined Shuttle and Station crews last month.

Finally, the fiscal year 2010 request supports NASA's Education Program, to continue developing a future aerospace, technical, and scientific workforce, improving the technological competitiveness of our Nation's universities, and attracting and retaining students in science, technology, engineering, and mathematics disciplines.

#### PREPARED STATEMENT

This request also funds the NASA cross-agency support programs, which provide critical mission support activities, necessary to assure the efficient and effective operation and administration of the Agency and its Centers.

Madam Chair, thank you again for your support, and that of this committee, I would be pleased to respond to any questions you may have.

[The statement follows:]

PREPARED STATEMENT OF CHRISTOPHER J. SCOLESE

Chairwoman Mikulski and members of the subcommittee, thank you for the opportunity to appear today to discuss the President's fiscal year 2010 budget request for NASA. The President's fiscal year 2010 budget request for NASA is \$18.686 billion. The fiscal year 2010 request represents an increase of \$903.6 million above the amount provided for NASA in the fiscal year 2009 Omnibus Appropriations Act (Public Law 110-8). The fiscal year 2010 budget does a number of things: it supports the administration's commitment to deploy a global climate change research and monitoring system; it funds a strong program of space exploration involving humans and robots with the goal of returning Americans to the moon and exploring other destinations; and it supports the safe flight of the Space Shuttle to complete assembly of the International Space Station by the Space Shuttle's planned retirement.

*Highlights of the Fiscal Year 2010 Budget Overview*

With the fiscal year 2010 budget request, NASA advances global climate change research and monitoring. The NASA investment in Earth science research satellites, airborne sensors, computer models and analysis has revolutionized scientific knowledge and predictions of climate change and its effects. Using the National Research Council's recommended priorities for space-based Earth science research as its guide, NASA will develop new space-based research sensors in support of the administration's goal to deploy a global climate research and monitoring system. NASA will work to deploy these new sensors expeditiously while coordinating with other Federal agencies to ensure continuity of measurements that have long-term research and applications benefits.

The fiscal year 2010 NASA request funds a robust program of space exploration involving humans and robots. NASA's astronauts and robotic spacecraft have been exploring our solar system and the universe for more than 50 years. The Agency will create a new chapter of this legacy as it works to return Americans to the Moon by 2020. NASA also will send a broad suite of robotic missions to destinations throughout the solar system and develop a bold new set of astronomical observatories to probe the mysteries of the universe, increasing investment in research, data analysis, and technology development in support of these goals.

With the fiscal year 2010 request, NASA will complete the International Space Station (ISS) and advance the development of new space transportation systems and the unique scientific research that can be conducted onboard the ISS. The fiscal year 2010 budget request funds for the safe flight of the Space Shuttle to complete the ISS, incorporates an additional flight to deliver the Alpha Magnetic Spectrometer (AMS) to the ISS, and then retires the Shuttle. NASA is committed to completing these nine remaining scheduled Shuttle flights, including the current mission underway to service the Hubble Space Telescope, which we believe can be accomplished by the end of 2010. Funds freed from the Shuttle's retirement will enable the Agency to support development of systems to deliver people and cargo to the ISS and the Moon and explore other destinations. As part of this effort, NASA will stimulate private-sector development and demonstration of vehicles that may support the Agency's human crew and cargo requirements for ISS. In addition, the Agency will continue to utilize the ISS, the permanently crewed facility orbiting Earth that enables the Agency to develop, test, and validate critical space exploration technologies and processes, and to conduct microgravity research. NASA also will continue to coordinate with international partners to make this platform available for other government entities, commercial industry, and academic institutions to conduct research.

At the request of the Director of the Office of Science and Technology Policy, NASA is initiating an independent review of planned U.S. human space flight activities, with the goal of ensuring that the Nation is on a vigorous and sustainable path to achieving its boldest aspirations in space. This review will be conducted by a blue-ribbon panel of outside experts chaired by Norman R. Augustine. The panel will present its results in time to support an administration decision on the way forward by August 2009. This Review of U.S. Human Space Flight Plans will examine ongoing and planned NASA human space flight development activities, as well as potential alternatives, and present options for advancing a safe, innovative, afford-

able, and sustainable human space flight program in the years following completion of the current Space Shuttle manifest and retirement. The independent review panel will seek input from Congress, the White House, the public, industry, and international partners. In addition, the review will examine the appropriate amount of R&D and complementary robotic activities needed to make human space flight activities most productive and affordable over the long term, as well as appropriate opportunities for international collaboration. It will also evaluate what capabilities would be enabled by each of the potential architectures considered. And it will evaluate options for extending International Space Station operations beyond 2016. We will keep the Congress informed, as appropriate, with the progress of the review.

It is important to note that the President has submitted a fiscal year 2010 budget request for NASA Exploration Systems of \$3.963 billion, an increase of \$457.6 million above the fiscal year 2009 Omnibus Appropriations level. During the review, the NASA workforce will continue to focus on the safe flight and operation of the Space Shuttle and ISS, and continue to work on all current exploration projects, including Ares I, Orion, and Commercial Crew and Cargo efforts.

The President's fiscal year 2010 budget request includes \$507 million for Aeronautics Research, renewing NASA's commitment to cutting-edge, fundamental research in traditional and emerging disciplines to help transform the Nation's air transportation system and to support future aircraft. NASA research will increase airspace capacity and mobility, enhance aviation safety, and improve aircraft performance while reducing noise, emissions, and fuel consumption. The Integrated Systems Research Program, a new program beginning in fiscal year 2010, will conduct research at an integrated system-level on promising concepts and technologies and explore, assess, and demonstrate the benefits in a relevant environment.

Finally, consistent with administration priorities, NASA is developing plans to stimulate innovation and increase investments in technologies for the future while ensuring that nearer-term Agency commitments are met.

#### *NASA Initial Fiscal Year 2009 Operating Plan and Recovery Act Funding*

Before I highlight key accomplishments and plans for activities across the Agency, I would like to summarize NASA's initial fiscal year 2009 Operating Plan, including Recovery Act funding, as recently submitted to the subcommittee. The initial fiscal year 2009 Operating Plan is \$18,784.4 million, or \$1,170.2 million above the President's fiscal year 2009 request, which reflects an increase of \$168.2 million in the regular appropriation and \$1,002.0 million in the Recovery Act. NASA is appreciative of the action by the Committees on Appropriations and Congress in providing regular appropriations for the Agency with full funding for Science, Aeronautics, Exploration, Space Shuttle, ISS, and Education. This total fiscal year 2009 appropriations level, with minor adjustments within the total, will enable NASA to meet critical priorities, in accordance with the direction from the Congress and the President. NASA also appreciates the efforts by the subcommittees to include funding for NASA in the Recovery Act. This funding will help NASA achieve programmatic goals in Science, Exploration and Aeronautics, and repair damage done to the NASA Johnson Space Center during Hurricane Ike, and support national recovery goals.

NASA has allocated the \$1,002.0 million in Recovery Act funds as follows:

- Science, \$400.0 Million
  - Earth Science, \$325.0 Million
  - Astrophysics, \$75.0 Million
- Aeronautics, \$150.0 Million
- Exploration, \$400.0 Million
  - Constellation Systems, \$250.0 Million
  - Commercial Crew & Cargo, \$150.0 Million
- Cross Agency Support, \$50.0 Million
- Inspector General, \$2.0 Million

I would be happy to address the objectives to which NASA is applying the Recovery Act funds in detail.

#### *Science*

NASA's Science Mission Directorate continues to expand humanity's understanding of our Earth, our Sun, the solar system and the universe with 57 science missions in operation and 31 more in development. The Science budget funds these missions as well as the research of over 3,000 scientists and their students across the Nation. The President's fiscal year 2010 request for NASA includes \$4,477.2 million for Science.

The Science budget request includes \$1,405.0 million for Earth Science in fiscal year 2010, and steadily increases Earth science funding in the outyears. NASA's 15

Earth Science missions in operation provide a large share of the global observations used for climate change research in the United States and elsewhere. This year, NASA's Earth Science satellites enabled research to understand how changes both in the tropics and in Arctic sea ice are changing ocean biology globally. NASA also recently conducted the first Ice Bridge aircraft campaign to demonstrate a new airborne laser capability to bridge the gap in time between ICESats 1 and 2. In fiscal year 2010, NASA plans to launch the Glory mission to map atmospheric aerosols and continue the long record of solar influences on climate, and the Aquarius mission to provide the first global measurements of sea surface salinity. NASA will complete development of the NPOESS Preparatory Project and continue development of the Global Precipitation Mission and the Landsat Data Continuity Mission (LDCM). The request fully funds development of a Thermal Infra-red Sensor (TIRS) at a total cost of approximately \$150–175 million. A decision whether to fly TIRS on LDCM or another spacecraft will be made this summer; meanwhile, funding for TIRS is carried within the LDCM budget. The launch vehicle failure of the Orbiting Carbon Observatory (OCO) was a significant loss to the climate science communities, and NASA is assessing options to recover from that loss; we will inform the Congress of the results of these studies when they become available. NASA is continuing to work aggressively to implement the recommendations of the National Research Council Decadal Survey for Earth Science. The first two Decadal Survey missions, SMAP and ICESat-II, will continue formulation in fiscal year 2010, and the next two, DESDynI and CLARREO, will be accelerated and transition to formulation. NASA also expects to issue its first Venture-class Announcement of Opportunity later this year, implementing another important decadal survey recommendation.

The fiscal year 2010 Science budget request includes \$1,346.2 million for Planetary Science. NASA's Planetary Science missions continue to return images and data from the far reaches of the Solar System. This year, the Mars Phoenix Lander completed its mission, conducting the first chemical test providing evidence of water ice on another planet. MESSENGER returned stunning imagery of portions of the planet Mercury never before seen. The Cassini spacecraft continues to provide unparalleled science of the Saturnian system; the spacecraft flew within 25km of Enceladus viewing the ejecting plumes and surface, and data from 19 fly-bys of Titan enabled creation of a radar map showing 3-D topography revealing 1,200-meter (4,000-foot) mountain tops, polar lakes, vast dunes, and thick flows from possible ice volcanoes. Development is continuing on the Juno mission to Jupiter for launch in 2011. NASA and ESA jointly announced they will work together on a Europa Jupiter System mission as the next outer planets flagship mission. The rovers Spirit and Opportunity continue to study the Martian surface and have exceeded their 5-year of successful operations. NASA is continuing development of the Mars Science Laboratory (MSL) for launch in 2011 and selected MAVEN, a Mars aeronomy mission, as the next Mars Scout mission for launch in 2013. NASA has integrated its lunar science research program with the Lunar Precursor Robotic Program into a single Lunar Quest Program under the Science Mission Directorate, which includes the LADEE mission, the U.S. nodes of the ILN, and a new virtual university research collaboration called the NASA Lunar Science Institute. The Moon Mineralogy Mapper (M3) was launched aboard Chandrayaan-1 and has begun making scientific observations of the Moon's composition. Development is continuing on the GRAIL mission to map the Moon's gravity field for launch in 2011. NASA has issued an Announcements of Opportunity for the next New Frontiers mission, and will do so for the next Discovery mission later this year.

The fiscal year 2010 Science budget request includes \$1,120.9 million for Astrophysics. 2009 is the International Year of Astronomy, and NASA's Astrophysics program will deploy exciting new capabilities for studying the cosmic frontier. The Kepler mission, launched in March, is NASA's first mission dedicated to the search for Earth-like planets in our galaxy. ESA will launch the Herschel and Planck missions in April, carrying several NASA instruments, to study the far-infrared sky and the cosmic microwave background. The final Hubble Space Telescope servicing mission aboard STS-125, currently in progress, is upgrading the observatory to its peak scientific performance. Late this calendar year, NASA plans to launch the Wide-field Infrared Survey Explorer (WISE) as part of its highly successful Explorer Program, following on the recent successes of the Fermi Gamma-ray Space Telescope (launched as GLAST in July 2008), which has provided the best-ever view of the gamma-ray sky revealing energetic sources in our solar system, our galaxy, and galaxies billions of light-years away. Development is continuing on the James Webb Space Telescope, which passed its Confirmation Review in 2008 and has an Agency commitment to launch in 2014. Development continues on the NuSTAR mission to study black holes for launch in 2011, along with a Soft X-ray Spectrometer to fly

on Japan's Astro-H mission in 2013. Development continues on the airborne Stratospheric Observatory for Infrared Astronomy or SOFIA, which will conduct open door flight tests in 2009 and early science flights in 2010, with planned full operational capability in 2014. Conceptual design is continuing for ambitious future mission concepts to investigate the origins of planets, stars, and galaxies; to search for Earth-like planets around nearby stars; and to examine the nature of dark energy, dark matter, gravity waves, and black holes. These and other mission concepts are currently under consideration by the NRC's decadal survey for Astrophysics, or Astro 2010, which will be completed during 2010, and will provide recommendations to NASA on the science community's highest priority science questions and strategic missions for the next decade.

The fiscal year 2010 Science budget request includes \$605.0 million for Heliophysics. The fleet of NASA Heliophysics missions strategically placed throughout the solar system is providing researchers the first ever solar system-wide view of solar influences on the Earth and other planets, and the dynamic structures of space itself. This virtual "Great Observatory" is in place and functioning for the next solar magnetic activity cycle, and has already detected the first signs of a new solar maximum anticipated for 2011–2012. Late this year or early next, the launch of Solar Dynamics Observatory will add to this fleet the capability to observe the solar atmosphere to a depth one-third of the Sun's radius to study the flow of plasmas that generate magnetic fields and the sudden changes that produce coronal mass ejections that we experience as space weather. Also this year, NASA plans to select two Small Explorer (SMEX) missions in response to an Announcement of Opportunity issued in 2008, which could be either Heliophysics or Astrophysics missions depending on the proposals selected. Development of the Radiation Belt Storm Probes mission to study the interactions of space weather events with Earth's magnetic field is continuing for launch in 2012. The Magnetosphere Multi-Scale mission to observe the processes of magnetic reconnection, energetic particle acceleration, and turbulence in Earth's magnetosphere will undergo a Confirmation Review this year for a planned launch in 2014. Finally, NASA is continuing early formulation work on the Solar Probe-Plus mission that will travel into, and sample, the near-Sun environment to probe the origins of the solar wind.

#### *Aeronautics Research*

NASA's fiscal year 2010 budget provides \$507 million for Aeronautics Research. Over the past year, the Aeronautics Research Mission Directorate has continued to pursue long-term, innovative, and cutting-edge research that develops revolutionary tools, concepts, and technologies to enable a safer, more flexible, environmentally friendly, and more efficient national air transportation system. NASA Aeronautics Research also plays a vital role in supporting NASA's space exploration activities.

A primary goal across Aeronautics Research programs is to establish strong partnerships with industry, academia, and other government agencies in order to enable significant advancement in our Nation's aeronautical expertise. NASA has put many mechanisms in place to engage academia and industry, including industry working groups and technical interchange meetings at the program and project level, Space Act Agreements (SAAs) for cooperative partnerships, and the NASA Research Announcement (NRA) process that provides for full and open competition for the best and most promising research ideas. To date, 68 SAAs have been established with industry partners across all programs and 375 NRAs have been awarded to academia, industry and non-profit organizations. NASA Aeronautics has continued to collaborate with the Joint Planning Development Office (JPDO), Federal Aviation Administration (FAA), U.S. Air Force, Army, and other government organizations.

New for fiscal year 2010, \$62.4 million has been provided for the Integrated Systems Research Program (ISRP) to conduct research at an integrated system-level on promising concepts and technologies and explore, assess, or demonstrate the benefits in a relevant environment. The research in this program will be coordinated with on-going, long-term, foundational research within the three other research programs, and will be closely coordinated with other Federal Government agency efforts. The project within ISRP will be the Environmentally Responsible Aviation (ERA) Project, a "green aircraft initiative," that will explore and assess new vehicle concepts and enabling technologies through system-level experimentation to simultaneously reduce fuel burn, noise, and emissions. The ERA project will transfer knowledge outward to the aeronautics community so that aircraft and propulsion system manufacturers can confidently transition these technologies into new products, as well as transfer knowledge inward to the Fundamental Aeronautics Program when the need for further development at a foundational level is identified.

NASA's Airspace Systems Program (ASP) has partnered with the JPDO to help develop concepts, capabilities and technologies that will lead to significant enhance-

ments in the capacity, efficiency and flexibility of the National Airspace System. For fiscal year 2010, ASP has been reorganized from the NextGen Airspace and NextGen Airportal projects into the NextGen Concepts and Technology Development project and the NextGen Systems Analysis, Integration and Evaluation project. The distinctions between airport operations, terminal-area operations and en-route operations were sometimes confusing, leading to time expended determining the line of demarcation between the responsibilities of the two projects. A more significant distinction is the development of air traffic management concepts and the technologies that enable air traffic management improvements and the evaluation of these concepts and technologies at a system level. The previously planned work on airspace concepts, technologies and systems will continue. This new project structure is better aligned to the nature of the work being performed. A notable accomplishment for ASP is the successful completion, by NASA researchers in collaboration with academia and the FAA, of a series of human-in-the-loop experiments that explored advanced concepts and technology for separation assurance, which ensures that aircraft maintain a safe distance from other aircraft, terrain, obstacles, and certain airspace not designated for routine air travel. The technology being developed by NASA and its partners is critical to relieving air-traffic controller workload, a primary constraint on airspace capacity that is expected to increase in coming years. In the future, this Program will continue to develop new technologies to solve important problems such as surface traffic planning and control, and initial algorithms for airport arrival and departure balancing as well as developing traffic flow management concepts for increased efficiencies at the regional and national levels for different planning intervals.

NASA's Fundamental Aeronautics Program (FAP) conducts research in all aeronautics disciplines that enable the design of vehicles that fly through any atmosphere at any speed. For fiscal year 2010, all ARMD research into planetary entry, descent and landing (EDL) has been consolidated into the Hypersonics project in FAP. EDL is an integral part of many space missions and is not easily divided into distinct hypersonic and supersonic phases. This change will provide more focus to technical developments and will also yield technical management efficiencies. The FAP program has supported the testing of various new concepts that will help enable much improved capabilities for future vehicles. For example, wind-tunnel testing was conducted for several promising powered lift concepts. Powered lift concepts increase lifting force on an aircraft at slow speeds (e.g., at take-off and landing) without increasing drag under cruise conditions. Successful use of the concepts will enable short take-off and landings on runways less than 3,000 feet, which will increase next-generation air transportation system capacity through the use of shorter fields and improved low-speed maneuverability in airport terminal areas. Testing was also completed for a Smart Material Actuated Rotor Technology (SMART) helicopter rotor, which offers the potential for significant noise and vibration reduction in rotorcraft. Future work includes technologies and advanced tools to evaluate the trades between noise, emissions, and performance of future aircraft entering service in the 2012–2015 timeframe. Additionally, with the transfer of technologies to be matured to system-level within ISRP, the Subsonic Fixed Wing (SFW) project is streamlining its research content. This is enabling new efficiencies across the foundational disciplines remaining in the project. The integrated system-level research in this program will be coordinated with on-going, long-term, foundational research within the three other research programs, and will focus specifically on maturing and integrating technologies in major vehicle systems and subsystems for accelerated transition to practical application.

NASA's Aviation Safety Program (AvSP) continues to develop tools and technologies to improve on today's incredibly safe air transportation system, while ensuring that future technologies can be safely incorporated to the system. Examples of advances that support this development include NASA's ongoing and new research into aircraft icing. For example, with current knowledge we cannot extrapolate how ice forms on a straight wing such as found on a turbo-prop to how it will form on a swept wing, or a radically new aircraft configuration. The Aviation Safety Program is tackling this with a combination of computational models and experiments in NASA's Icing Research Tunnel. We are establishing that, in high and cold flight conditions, ice can form deeper in jet engines than previously understood. NASA is working collaboratively with the FAA, industry and international partners, such as the National Research Council of Canada, to conduct tunnel tests of the underlying physics, to fly our instrumented S-3 Viking into such engine icing conditions, and design upgrades to our Propulsion System Lab in which jet engines may be tested in detail. Additional future work in Aviation Safety includes addressing gaps in validation and verification of critical flight software, developing new data-analysis capabilities to mine aviation operational data for safety issues, examining

the safety of new vehicle systems and structures, and tackling the biggest human factors issues in the NextGen flightdeck.

NASA's Aeronautics Test Program (ATP) is focused on ensuring a healthy suite of facilities and platforms to meet the Nation's testing needs including the development of new test instrumentation and test technologies. As part of its continuous efforts to improve facility operational efficiencies, ATP initiated the National Force Measurement Technology Capability, to address the severe erosion of NASA's capability to utilize strain gage balances in wind tunnel testing. The National Partnership for Aeronautics Testing, a strategic partnership between NASA and the Department of Defense (DOD), recently commissioned a study of government-owned, mid-to-large supersonic facilities necessary to fulfill future air vehicle test requirements. The Program will continue to develop a long-term strategic approach that aligns the NASA and DOD facilities to meet future requirements with the right mix of facilities and appropriate investments in facility capabilities.

#### *Exploration Systems*

Human space flight is important to America's political, economic, technological and scientific leadership. In the span of a few short years, NASA has already taken long strides in the formulation of strategies and programs to develop a robust program of space exploration. These critical steps will allow our Nation to build the next-generation space flight vehicles that will carry humans and deliver cargo to the ISS and the Moon, and on to other destinations in our solar system. The President's fiscal year 2010 budget request for Exploration Systems is \$3,963.1 million, an increase of \$457.6 million above the fiscal year 2009 appropriation and \$225.4 million above the planned fiscal year 2010 level in last year's request. Based on the Recovery Act funds and the President's increased budget request for fiscal year 2010, the Exploration Systems budget plan includes about \$630 million more in fiscal year 2009 and fiscal year 2010 than the previous plan. At this critical juncture, full funding at the President's requested level is essential for expediting development of new U.S. human space flight systems to support the International Space Station and explore the Moon and other destinations beyond low Earth orbit.

The Constellation Program will apply additional Recovery Act funds to critical activities related to the successful completion of the Orion, Ares I and Ground Operations projects. The Commercial Crew and Cargo Program plans to use Recovery Act funds to stimulate efforts within the private sector in order to develop and demonstrate technologies that enable commercial human space flight capabilities—efforts that are intended to foster entrepreneurial activity leading to job growth in engineering, analysis, design, and research, and to economic growth as capabilities for new markets are created.

Following the Review of U.S. Human Space Flight activities, the administration will provide an updated request for Exploration activities, as necessary. In the meantime, NASA is proceeding as planned with current Exploration activities, including Ares I, Orion, Commercial Crew and Cargo efforts, and lunar systems.

During the past year, NASA Exploration Systems continued to make significant progress in developing the next-generation U.S. human space flight vehicles and their associated ground and mission support systems. In the next several weeks, the first lunar robotic mission, the Lunar Reconnaissance Orbiter and the Lunar Crater Observation Sensing Satellite spacecraft, will be launched from the Cape Canaveral Air Force Station aboard an Atlas V, which will help NASA scout for potential lunar landing and outpost sites. Later this year, two major test flights for the Constellation Program will be conducted: Ares I-X is the first developmental test flight to support the design of the Ares I Crew Launch Vehicle; and the Pad Abort 1 (PA-1) is the first test of the Launch Abort System to be used on the Orion Crew Exploration Vehicle. NASA will continue to work with other nations and the commercial sector to coordinate planning, leverage investment, and identify opportunities for specific collaboration on Exploration activities.

The Constellation Program continues to complete the formulation phase of its projects—in particular Ares I, Orion, and major ground facilities. Major development work is underway, contracts are in place; and we have a dedicated group of civil servants and contractors who are all working hard to accomplish the Constellation Program's objectives. So far, NASA engineers have conducted about 6,500 hours of wind tunnel testing on subscale models of the Ares I to simulate how the current vehicle design performs in flight. These wind tunnel tests, as well as the Ares I-X test flight, will lay the groundwork for maturing the Ares I final design prior to its Critical Design Review (CDR). When launched later this year from NASA's Kennedy Space Center in Florida, the Ares I-X will climb about 25 miles in a 2-minute powered test of the First Stage performance and the First Stage separation and parachute recovery system. Work on the Orion Project also continues to advance.

Recently, NASA conducted testing of the water recovery process for the Orion capsule, and NASA also selected the material for Orion's heat shield. Later this year, Orion's PA-1 test will take place at White Sands Missile Range, New Mexico. PA-1 will demonstrate the Launch Abort System's ability to pull crew to safety should there be an emergency while the Orion and Ares I stack is still on the launch pad.

In September 2008, Ares I completed a key milestone with its Preliminary Design Review (PDR). PDR is the final step of the initial design process, and thereby a crucial milestone during which the overall project verifies that the preliminary design can meet all requirements within acceptable risk limits and within cost and schedule constraints, and identifies technical and management challenges and addresses approaches for eliminating or mitigating them. This fall, the Orion is expected to have progressed to the point of completing PDR, and obtaining Agency approval to proceed to Critical Design Review (CDR). Current plans call for Ares I to progress to the point of obtaining Agency approval by early 2010 to proceed to CDR.

As part of the Commercial Crew and Cargo Program and its associated Commercial Orbital Transportation Services (COTS) cargo projects, NASA is completing its promised \$500 million investment to the two funded COTS partners, Space Exploration Technologies Corporation (SpaceX) of El Segundo, California, and Orbital Sciences Corporation (Orbital) of Dulles, Virginia. Recently, SpaceX successfully operated the full complement of the first stage engines of the Falcon 9, the SpaceX launch vehicle. Orbital continues to progress in achieving engineering milestones, and completed its PDR earlier this month. In addition, NASA has two non-funded COTS partners.

The transition of NASA facilities, infrastructure, property, and personnel from the Space Shuttle Program to the Constellation Program continues to be a major activity. This joint effort between the Space Operations and Exploration Systems Mission Directorates includes the utilization and disposition of resources, including real and personal property; personnel; and processes in order to leverage existing Shuttle and Space Station assets for NASA's future Exploration activities.

NASA's Advanced Capabilities programs include the Human Research Program (HRP) and the Exploration Technology Development Program (ETDP). These programs continue to reduce risks for human explorers of the Moon and beyond by conducting research and developing new technologies to aid future explorers. HRP focuses on the highest risks to crew health and performance during exploration missions while also developing and validating a suite of human health countermeasures to facilitate long-duration space travel. For example, NASA is conducting research to better understand the effect of space radiation on humans and to develop effective mitigation strategies. This year, HRP delivered a space radiation risk assessment tool, provided cockpit display design requirements for the Orion spacecraft, and provided design requirements for the new Constellation Space Suit System. HRP is also conducting research onboard the ISS with regard to: the cardiac structure and function of astronauts; radiation shielding technologies; and, the effect that certain pharmaceuticals may have on the prevention of bone loss during long-duration missions. ETDP will conduct a range of activities, including testing cryogenic hydrogen and methane propulsion systems for future missions; developing a small pressurized rover for transporting astronauts on the lunar surface; and demonstrating the capability to produce oxygen from lunar soil. ETDP also is conducting experiments on the Space Station to investigate the behavior of fluids and combustion in microgravity, and operating instruments to monitor atmospheric contaminants on the Space Station.

#### *Space Operations*

The fiscal year 2010 budget request includes \$6,175.6 million for Space Operations.

It is an exciting time for NASA's Space Shuttle Program. At this moment, the astronauts of Shuttle Atlantis are in orbit on STS-125, the final mission to service the Hubble Space Telescope. We anticipate that the work they are doing, which includes upgrading the Hubble's instruments, should extend the observatory's operational life several years. The President's fiscal year 2010 budget funds the safe flight of the Space Shuttle to conduct its remaining missions, including the AMS flight and completing assembly of the ISS. NASA is committed to completing the eight remaining scheduled Shuttle flights, which we believe can be accomplished by the end of 2010. These Shuttle flights will leave the ISS in a configuration to support a broad portfolio of research and to receive and be maintained by commercial cargo services. The fiscal year 2010 budget request includes \$3,157.1 million for the Space Shuttle Program.

NASA and its Russian, European, Canadian, and Japanese International Space Station partners are working together to realize one of the most inspiring dreams

of the last 50 years: the establishment of a station in Earth orbit for the conduct of various types of research. We are now approaching two significant milestones. In May, the ISS will host its first six-person crew. The recent delivery of the Station's final set of solar arrays and other equipment by the crew of STS-119 represents the final step toward this goal. In June, the STS-127 mission will deliver the third and final component of the Japanese Kibo laboratory—the Kibo Exposed Facility. The addition of the Exposed facility enables the Kibo laboratory, with the European Columbus module and the U.S. Destiny module, to complete the three major international science labs on ISS, setting the stage for utilization of ISS as a highly capable microgravity research facility. The President's fiscal year 2010 budget request includes \$2,267.0 million for the ISS.

The ISS will represent both an unparalleled international cooperative effort and a U.S. National Laboratory in orbit. Scientists will be able to conduct biomedical and engineering research from a unique vantage point. Some of the work will increase our knowledge of the effects of long-duration human space flight, which is critical for the design and operation of future human space vehicles, including those being developed under the Constellation Program to return U.S. astronauts to the Moon and explore other destinations. Other research will not be focused on space exploration at all, but may have significant applications right here on Earth. Medical research, for example, may be applicable to the development of vaccines; NASA's research into salmonella aboard the Space Shuttle and ISS has already increased our knowledge in this area. In the key areas of energy and the environment, the ISS serves as a daily demonstration of "green" technologies and environmental management techniques. The ISS receives 120kW of power from its solar arrays to operate the Station and run experiments. The ISS environmental system is designed to minimize the amount of mass that has to be launched from Earth to support the Station, so recycling is a must. STS-119 supplied ISS with a replacement Distillation Assembly for Station's water recycling system, which is key for supporting a full six-person crew for extended periods of time. Given the central role science and technology play in our society, it is important that the United States maintain a leadership role in these fields. The availability of a research laboratory in the microgravity environment of space will support this aim.

Another benefit from Space Shuttle missions and ISS research is reflected in the programs' ability to inspire the next generation of Americans. This was reflected recently in the delighted faces of students who participated in the uplinked phone call between President Obama and the crews of the ISS and STS-119 on March 24. The ISS will support the President's goal of making math and science education a national priority by demonstrating what can be accomplished through science and engineering, and by inspiring both teachers and students.

NASA is relying on U.S. industry to develop vehicles to deliver supplies and experiments to the ISS. In December 2008, the Agency awarded two Commercial Resupply Services (CRS) contracts for the provision of this critical capability. Cargo resupply is important for the continued viability of ISS. In addition, the vendors involved will gain valuable experience in the development and operation of vehicles that can (1) fly to the ISS orbit; (2) operate in close proximity to the ISS and other docked vehicles; (3) dock to ISS; and, (4) remain docked for extended periods of time.

The fiscal year 2010 budget request includes \$751.5 million for Space and Flight Support, which supports Space Communications and Navigation, Launch Services, Rocket Propulsion Testing, Crew Health and Safety, and the new Human Space Flight Operations programs.

#### *Education*

The fiscal year 2010 budget request for Education totals \$126.1 million and furthers NASA's commitment to Science, Technology, Engineering, and Mathematics (STEM) education. NASA will continue its successes in developing a future aerospace workforce, improving the technological competitiveness of our Nation's universities, attracting and retaining students in STEM disciplines, and engaging the public in NASA's missions. NASA will accomplish these goals by offering competitive research grants to universities, providing targeted educational support to Minority Serving Institutions, and strengthening curricula at 2-year community colleges. NASA's plans to streamline and centralize internship and fellowship application processes will realize cost savings and facilitate student access to information while attracting a wider, more diverse participant base. The Agency is also seeking new opportunities for student involvement in current space and aeronautics research missions and flight projects, including those using high altitude balloons, sounding rocket payloads, airborne sensors, and space satellites. NASA will further these efforts through a new project, Innovation in STEM Education, which will allow the Agency to investigate and offer opportunities for student and faculty to participate

in NASA-related research. In coming months, the Agency will complete award announcements for competitive grant programs in K–12, global climate change, and informal education, and revise and issue new solicitations using fiscal year 2009 funds.

NASA will further pursue a goal to attract and retain students in STEM disciplines in the upcoming fiscal year. Last year, the Interdisciplinary National Science Program Incorporating Research & Education (INSPIRE) program engaged over 200 high schools in STEM areas, and NASA Explorer Schools conducted instructional and enrichment activities that reached over 105,000 students. The March 2009 STS–119 mission also provided a unique educational opportunity as two Mission Specialists who are science teachers, Joe Acaba and Richard Arnold, were part of the crew. NASA Education continues to provide internships, fellowships, and research opportunities to help students and educators gain hands-on experiences in a range of STEM-related areas. These opportunities provide students with the motivation, inspiration, and experience needed to serve the Nation’s current and future workforce needs. In fiscal year 2008, the Agency provided more than 3,000 summer internships, reached 5,331 students through significant research experience or grants, and provided 139 grants to underrepresented and underserved institutions.

NASA will also engage elementary and secondary school and informal education audiences by using Earth and deep space observations, the flight experience of Educator Astronaut Dorothy Metcalf-Lindenburger aboard STS–131, as well as future missions to the Moon and other destinations. New technologies such as social networks, Internet collaborations, a new virtual magnet school, and remote control of science instruments will expand and enhance these efforts. In fiscal year 2010, NASA also plans to provide an online professional development system for students training to become educators, in-service teachers, and informal educators. Additionally, NASA will promote continuous public awareness of its mission and improvement to STEM literacy by partnering with informal education providers, which allows Agency partners to share the excitement of NASA missions with their visitors in meaningful ways.

#### *Cross-Agency Support*

NASA Cross-Agency Support provides critical mission support activities that are necessary to ensure the efficient and effective operation and administration of the Agency, but cannot be directly aligned to a specific program or project requirement. These important functions align and sustain institutional and program capabilities to support NASA missions by leveraging resources to meet mission needs, establishing Agency-wide capabilities, and providing institutional checks and balances. Cross-Agency Support includes Center Management and Operations, Institutional Investments, and Agency Management and Operations. The fiscal year 2010 budget request includes \$3,400.6 million for Cross Agency Support.

Center Management and Operations funds the critical ongoing management, operations, and maintenance of nine NASA Centers and major component facilities. NASA Centers continue to provide high-quality support and the technical talent for the execution of programs and projects. The fiscal year 2010 budget request includes \$2.084 million for Center Management and Operations.

Institutional Investments funds design and execution of non-programmatic revitalization construction of facilities projects, demolition projects for closed facilities, and environmental compliance and restoration activities. The Construction of Facilities Program makes capital repairs and improvements to NASA’s critical infrastructure to improve safety and security and improve NASA’s operating efficiency by reducing utility usage. NASA continues to right size the infrastructure by demolishing facilities that are no longer needed. Emphasis has been placed on energy and water conservation. Currently, NASA has five buildings that are certified under the Leadership in Energy and Environmental Design (LEED) criteria, three additional buildings that are built and awaiting certification as LEED Silver facilities, and 13 buildings in various stages of design and construction as High Performance Buildings and are expected to be LEED-certified when completed. The fiscal year 2010 budget request includes \$355.4 million for Institutional Investments.

NASA’s fiscal year 2010 request includes \$961.2 million for Agency Management and Operations, which funds the critical management and oversight of Agency missions, programs and functions, and performance of NASA-wide activities, including five programs: Agency Management, Safety and Mission Success, Agency Information Technology Services, Innovative Partnerships Program, and Strategic Capabilities Assets Program.

—The fiscal year 2010 budget request provides \$412.7 million for Agency Management, which supports executive-based, Agency-level functional and administrative management requirements. Agency Management provides for the oper-

ational costs of Headquarters as an installation; institutional and management requirements for multiple Agency functions; assessment and evaluation of NASA program and mission performance; strategic planning; and independent technical assessments of Agency programs.

- The fiscal year 2010 budget request provides \$183.9 million for Safety and Mission Success activities required to continue strengthening the workforce, training, and strengthening the fundamental and robust cross-checks applied on the execution of NASA's mission, and to improve the likelihood for safety and mission success for NASA's programs, projects, and operations. The engineering, safety and mission assurance, health and medical independent oversight, and technical authority components are essential to NASA's success and were established or modified in direct response to many of the key Challenger and Columbia accident board recommendations for reducing the likelihood for future accidents. Included under Safety and Mission Success is the Software Independent Verification and Validation program.
- The fiscal year 2010 budget request for Agency Information Technology Services is \$150.4 million, which encompasses cross-cutting services and initiatives in IT management, applications, and infrastructure necessary to enable the NASA Mission and improve security, integration and efficiency of Agency operations. NASA plans significant emphasis on continued implementation of five major Agency-wide procurements to achieve the following: (1) consolidation of IT networks leading to improved network management, (2) consolidation of desktop/laptop computer services and mobile devices to improve end-user services, (3) data center consolidation to provide more cost-effective services, (4) Agency public web site management to improve access to NASA data and information by the public, and (5) Agency business systems development and maintenance to provide more efficient and effective business systems. NASA will also continue to improve security incident detection, response, and management through the Security Operations Center.
- The request for the Innovative Partnerships Program (IPP) is \$184.8 million. IPP works with all four Mission Directorates to provide innovations meeting NASA's technology needs, and transfers NASA technology for broad Spinoff applications that improve quality of life and contribute to economic growth. Included in the IPP portfolio are: NASA's SBIR/STTR Programs seeking out innovative high-technology small businesses; a new Innovative Technology Project seeking high-impact revolutionary research and technology projects; a Seed Fund to address technology needs through cost-shared, joint-development partnerships; use of commercial flight services by the FAST program to demonstrate new technologies; Innovation Ambassadors to exchange ideas; and the Centennial Challenges prize program for the citizen inventor. IPP seeks partnerships through offices at all 10 NASA Centers.
- Finally, NASA is requesting \$29.4 million in fiscal year 2010 for the Strategic Capabilities Assets Program (SCAP). This program funds the costs required to sustain key Agency test capabilities and assets, such as an array of flight simulators, thermal vacuum chambers, and arc jets, to ensure mission success. SCAP ensures that assets and capabilities deemed vital to NASA's current and future success are sustained in order to serve Agency and national needs. All assets and capabilities identified for sustainment either have validated mission requirements or have been identified as potentially required for future missions.

### *Conclusion*

The President's fiscal year 2010 budget request for NASA supports the administration's commitment to deploy a global climate change research and monitoring system, funds a robust program of space exploration involving humans and robots with a goal to return Americans to the Moon by 2020 and explore other destinations, and funds the safe flight of the Shuttle to complete assembly of the ISS through its retirement, planned for the end of 2010. The fiscal year 2010 budget request funds continued use of the ISS to enable the Agency to develop, test, and validate critical exploration technologies and processes and, in coordination with our international partners, to make the ISS available support other government entities, commercial industry and academic institutions to conduct unique research in the microgravity environment of space. It will also stimulate private sector development and demonstration of vehicles that may support NASA's cargo and crew requirements. And it renews NASA's commitment to aeronautics research to address fundamental aeronautics, aviation safety, air traffic management, and mitigating the impact of aviation on the environment. NASA's diverse portfolio of science, technology, engineering and mathematics (STEM) educational activities is also aligned with the administration's goal of improving American innovation and global competitiveness.

NASA looks forward to working with the subcommittee on implementation of the detailed fiscal year 2010 budget request.

Madam Chair, thank you for your support and that of this subcommittee. I would be pleased to respond to any questions you or the other members of the subcommittee may have.

#### HUMAN SPACEFLIGHT

Senator MIKULSKI. Thank you, Mr. Scolese. My areas of questioning will be in three categories, which of course, the Spaceflight and the reliability of our space transportation system for the remaining eight missions, space—the scientific endeavors that are supported in the President's budget which is really a robust commitment to science; and also, the acquisition issues.

Let me go to the Spaceflight issue. The administration is committed to flying the Space Shuttle 8 more times to finish the Space Station. The budget assumes that this can be done by 2010. The Shuttle program is a \$3 billion a year program, so here is my question. One, can you envision a scenario where you would keep flying the Shuttle past 2010, and second, if you have to, if you can't complete the 8 missions, where will the money come from if the Shuttle flights have to be extended?

Mr. SCOLESE. Yes, as I mentioned earlier—

Senator MIKULSKI. In other words, do you have an ending date where you blow a whistle and the racks come down, and it's goodbye to the Shuttle?

Mr. SCOLESE. No, we don't have an ending date. We are committed to flying the manifest, which is the remaining eight flights, we look at that regularly, almost weekly, to look at what our logistics chain is, and what's available and what the current situation is.

As of today, we believe that we can complete those missions by the end of September 2010. Clearly, if we run into any serious difficulties, that we have to slip, and we would have to go beyond the September date.

We don't foresee those at this stage of the game. We have margin in the date to September 2010. However, if we did have to slip, if it was a significant slip, months or more, we will have to find additional resources to cover that slip. And we would either have to come in and ask for an increase in the budget if we knew early enough about it, or we would have to go off and take resources from other parts of NASA.

Senator MIKULSKI. But the administration is counting on these 8 flights to be done by 2010.

Mr. SCOLESE. Yes.

Senator MIKULSKI. And there is no contingency plan beyond that, except, "If we get to it, we'll deal with it?"

Mr. SCOLESE. Well, as I was saying, based on what we see we believe—that we can make that date. We have not working towards a date, I need to be careful about that—but our planning indicates that 2010 is a very achievable date.

#### SOYUZ

Senator MIKULSKI. Right, well let me move ahead, then.

Let's go to the Soyuz, which is our only way that, if our astronauts get into difficulty, we can return them safely.

There's been much in the press about the Soyuz, number one, its ongoing reliability, and also what they're charging us to do—to be this standby vehicle, which we're absolutely dependent upon. Could you tell us, number one, what is in the budget to—how many—what are we, essentially, what is our—what is it that we're requesting of the Russians, how many Soyuz flight guarantees and, is the money in the budget to do that, and do you believe that those—that money is reasonable, or does it require some diplomatic negotiation?

Mr. SCOLESE. Well, today we believe the money is reasonable. As you pointed out, we've been relying on the Soyuz for crew rescue since the initiation of the Space Station. So, it's always been a part of the program for that aspect of it. And, of course, following the *Columbia* tragedy, we were relying on the Soyuz to take our crew up to the Station and back.

In the time between Shuttle retirement and the availability of Orion to take crew up and back, we will be relying on the Soyuz. We do not buy Soyuz, so to speak, we buy seats. We buy the training, the flight up, the flight back, and all of the logistics associated with a long-duration mission, and that's how we negotiate with the Russians. We're in the process of negotiating with them for the duration of that gap. And, to date, as we're saying, we're still negotiating, it's about \$47 million a seat, today. And the press has reported, but we're still negotiating, about \$51 million for the future.

Senator MIKULSKI. Well, my time has expired, I think that it goes through those. I do have workforce questions, and then science and acquisition, but let me turn to my colleagues and we'll come back for another round.

#### NASA'S SPEND PLAN

Senator SHELBY. Thank you, Madam Chair.

The Congress explicitly provided \$400 million to the exploration program in 2009 economic stimulus bill to close the gap between the Shuttle and constellation programs, as I understand it.

It's my understanding that NASA's spend plan included the redirection of \$150 million for new initiatives related to commercial, crew, and cargo. Based on what little detail we've learned from NASA, it appears these funds are for entirely new activities that have not even been formally presented or reviewed by the Congress. What's going on, here? What other options were examined for Ares and Orion with the \$150 million, prior to it being proposed for commercial studies, as I understand it. Tell us what's going on, here?

Mr. SCOLESE. Certainly. Of the \$400 million that was appropriated, \$250 million is being used to accelerate and improve the situation for Ares and Orion, by procuring long-lead materials that we needed—

Senator SHELBY. Why do you need to use it all?

Mr. SCOLESE. Well, I'll get to that. And certainly more would allow us to do more. We did look at the overall system when we came up with the plan, and we invested \$150 million in commercial crew.

It's broken into two fundamental categories—\$70 million is something that will broadly support not only commercial activities, but all activities associated with the Space Station.

One example of those is the human rating requirements. Human rating—we do these missions so infrequently that we need to go off and catalogue those so that anybody that wants to come to the Space Station will clearly understand what it is that we need to do. Anybody that wants to fly a NASA astronaut will understand how we want to fly.

And then \$80 million is available through competition, but first, we're going to go off and issue a broad area announcement to see if there is interest in providing commercial crew capabilities, and then we will—and only then—will we obligate those funds.

#### SECTION 505 OF THE OMNIBUS

Senator SHELBY. It's my understanding that section 505 of the omnibus clearly prohibits funding for new activities. Did Congress approve what you're doing, here, for the redirection of the funds?

Mr. SCOLESE. Well, we submit it as part of our operating plan, so—

Senator SHELBY. But you hadn't had an approval of it, had you? By the Congress.

Mr. SCOLESE. Not at this time.

Senator SHELBY. Don't you think you need—if section 505 of the omnibus prohibits funding for new activities, did you consider that?

Mr. SCOLESE. Well, I think we had authority to go off and work commercial activities, and that's what we're trying to do here, and we submitted it as part of the operating plan. I'd have to go back and look at the details—

Senator SHELBY. Will you check that for the record?

Mr. SCOLESE. I will check that for the record, sir. Yes, sir.

[The information follows:]

#### FISCAL YEAR 2009 RECOVERY ACT SPEND PLAN

Section 505, Title V, Division B of the fiscal year 2009 Omnibus Appropriations Act (Public Law 111-8), states that "None of the funds provided under this Act, or provided under previous appropriations Acts . . . shall be available for obligation or expenditure through the reprogramming of funds that creates or initiates a new program, project or activity."

Since NASA's initial Operating Plan defined the activities that would be undertaken by the Agency in response to the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), the Operating Plan does not represent a re-programming from a previous baseline. The Recovery Act funds did not identify specific activities, so the initial Operating Plan represents the proposed baseline for these funds. While some of the specific activities may be new or identified uniquely for the first time, they are all supporting NASA's existing authorized and appropriated programs and projects.

#### ARES-V

Senator SHELBY. Because some of the people on our staff are concerned about this.

Ares-V delay—NASA has repeatedly stated that the constellation programs will continue as usual while the human space flight review is underway. While this may be true for Ares I and Orion, other facets of constellation—it's my understanding they're being held back. The heavy-lift vehicle, Ares-V, has been specifically de-

layed, pending an altered request due to the human spaceflight study, it's my understanding.

If constellation is moving forward, then why is Ares-V, the heavy-lift rocket, that is essential to landing a man on the Moon, being delayed? This is unusual business. What's going on, here?

Mr. SCOLESE. Well, you're absolutely right—Ares-V is absolutely critical if we're going to get humans back to the Moon, and outside of low Earth orbit, plus for other activities. We are not stopping work on Ares-V. There is continued work—

Senator SHELBY. You're still committed to Ares-V, aren't you?

Mr. SCOLESE. I'm sorry.

Senator SHELBY. NASA's committed to Ares-V.

Mr. SCOLESE. Oh, absolutely. We have to have that type of a vehicle, Ares-V, in order to get out of low-Earth orbit. And, in fact, work being done on Ares I is directly applicable to Ares-V, the solid rocket motor, the J2X engine in the upper stage, plus we have, you know, individuals at our space flight centers, also continuing to work on Ares-V.

Clearly there could be implications as a result of the review that's going on this summer, but as the President's budget said, they want to return humans to the Moon, and there's only one way to do that, with the heavy-lift launch vehicle, and Ares-V is the one that's on the books today.

Senator SHELBY. How much of the \$30 million for Ares-V in the 2009 bill will you spend? Will you spend that this year?

Mr. SCOLESE. I expect that we will, but I'd like to get back to you for the record.

[The information follows:]

#### ARES-V

The fiscal year 2009 Operating Plan contains \$30 million for the Ares-V. That money is expected to be fully expended in 2010.

Senator SHELBY. You going to get back in the next 10 days or so?

Mr. SCOLESE. Yes, sir.

Senator SHELBY. Does the action by NASA at that point, dealing with Ares-V delay indicate there's already a pre-determined outcome, as it relates to Ares-V?

Mr. SCOLESE. No. I mean, as I said earlier, the only way we're going to get out of low-Earth orbit is with a vehicle, and a substantial vehicle, and Ares-V is the one that—

Senator SHELBY. You've got to have it, hadn't you?

Mr. SCOLESE. You have to have that type of a vehicle, yes sir.

Senator SHELBY. Okay.

Thank you, Madam Chair.

Senator MIKULSKI. Senator Voinovich.

#### COST OVERRUNS

Senator VOINOVICH. Thank you, Madam Chair.

I'd like to first commend the Agency for a decision that they made a couple of years ago, and that was in regard to the Plumbrook facility. I was quite impressed with the fact that when I talked with Mr. Griffin about that facility, he was not knowledgeable about its potential or its condition, and the Agency had—along

with Lockheed Martin—decided they were going to do something else in terms of testing the CEV.

And I was impressed with the fact that he came out, and they looked at it, and NASA is investing, I think, some \$54 million into that, which will do the testing for a lot of the things that NASA's doing, and also put it in the position where they can take in some commercial work. I think that kind of work on your part is very important.

I'm also concerned about the fact that Senator Shelby said, some of these overruns. And what does NASA do about these? What's does NASA do about these in terms of contractors, do you hit them over the head, trying to get them to perform? Is there any provision that says that if they have these overruns and don't make good on what they say they're going to do that they won't get further business from NASA?

Mr. SCOLESE. Overruns—we work those very carefully, and yes, there are penalties for overruns, but we also have to understand what the reasons for them are. Sometimes it's due to underestimates in the beginning that we, indeed, plan for. And sometimes it's due to the fact that we change requirements. As you know, NASA is a research and development agency, we do things, typically, for the first time. And that requires learning as we're going along, so if we adjust the requirements it is not an overrun by the contractor, it is us adjusting the requirements, and adjusting the contract.

Senator VOINOVICH. How often is that the case?

Mr. SCOLESE. A fair amount. It happens relatively frequently. In fact, we tend to be the mission integrator, so, that will happen.

But, the budget that you want to look at is the NASA budget—how much do we say, it's going to cost to do a particular mission. And then we work with our contractors, when a contractor does not perform there are penalties. There are severe penalties, including terminating the activity. We clearly report on contractor performance, so that future work is judged by past performance.

But, we have to look first to see if we're changing requirements or if they're not performing.

Senator VOINOVICH. You're confident that you're doing what anyone else would do in terms of these contractors?

Mr. SCOLESE. Yes, I am.

#### U.S.-RUSSIA PARTNERSHIP

Senator VOINOVICH. Okay.

Recently I was in Brussels and heard Sergiev Levrov, the Russian Foreign Minister give a speech, and I was quite concerned about the tone of this speech. And I just wonder, in your negotiations with the Russians, in terms of the use of the Soyuz, have you seen any difference in attitude on their part, in terms of them being above-board, objective negotiators, or has this—I don't know—paranoia set in with their scientific agencies that you're working with?

Mr. SCOLESE. No, we haven't seen it. Russia has been a very good partner with us on the Space Station, and in our space activities, and they continue to be a very reliable partner. So, we have not seen that.

Senator VOINOVICH. In other words, you're dealing on a professional basis, with scientists, and the foreign policy thing hasn't entered into those negotiations? You feel that they're being fair and above-board?

Mr. SCOLESE. Yes, I mean, we're linked very tightly on this Space Station. They can't survive without us, and we can't survive without them. And we work very closely together, and it's been a good and productive relationship over the last several years.

#### TEN HEALTHY CENTER CONCEPT

Senator VOINOVICH. This undertaking of looking at the future of NASA, I think it would be very important for you to share with the folks that are doing this that, many of us are very happy with the 10 healthy center concept. And you know darn well there are people out there that are holding their breath, and hyperventilating, what are they going to get and what are they going to do? And I think the sooner that that's made clear to everyone, just what the deal is going to be, I think all of us will be feeling a whole lot better about things.

So, if you could share that with—if you have any input from your organization, that was a—something that we really, all of us supported, you did a good job of assigning missions to the various agencies, and we'd like to know that that's still part of the program.

Mr. SCOLESE. I certainly will. As you know, it's the people that make this all work, and we have some of the best people in the world, if not the best people in the world, in developing our spaceflight systems—human robotic and aeronautics. And we have some great capabilities in all of our centers, and we should utilize those to the fullest, and I'll make that known.

Senator VOINOVICH. Thank you.

#### SHUTTLE WORKFORCE TRANSITION PLAN

Senator MIKULSKI. Senator Voinovich raised some really important issues around workforce assurance, and also the acquisition and cost overrun issue.

Let me come back to the workforce issues—one, with the retirement of the Shuttle. As you know, it is a source of great concern in the communities, particularly in Florida and in Texas. We're talking about thousands of people who've really served the Nation with fidelity and reliability, I mean, they really kept the Shuttle going. And the Shuttle's had challenges, including the return to flight after the *Challenger*.

Could you tell us where NASA is in the workforce planning for this transition, and number two, is NASA, or the administration also in consultation with our colleagues and also the Governors of those respective States—it's a big deal.

Mr. SCOLESE. Yes, and you're absolutely right—the people that have built and maintained this Shuttle have done an incredible job and are truly dedicated. We see it every day. We see it with the flight that's going on today. We're going to rely on them until the last Shuttle returns to Earth.

Senator MIKULSKI. And they have to stay?

Mr. SCOLESE. And they have to stay.

Senator MIKULSKI. You know, so we're going to go ahead. I mean, I'm going to the edge of my chair, I'm going to sound like Bill Nelson, launching.

Mr. SCOLESE. I think we probably very much agree on this. They are doing an incredible job, and we are doing a number of things to retain and retrain—where that's needed—the workforce. We need them, as I said, to continue to fly the Shuttle safely, and we're relying on that.

So, in some cases we're doing retention bonuses, we're encouraging people to stay on that may want to retire or leave for other reasons.

Also, we are looking at people engaged in work on Orion and Ares or other elements of Constellation, so they can look, today, and know they're working on the Shuttle, and know that they're already working on the next-generation system, so that they know they will have a job when they are done.

For those people that may not be, available or may not be able to continue with the program, we're looking at other activities, other avenues for them, it may be at other centers, it may be retraining. That's what we can do within NASA.

Outside of NASA, we're working with our contractors. We don't have as much insight into that, but they're trying to do the same thing there, as well, we're working with them to provide retention bonuses, to encourage them to offer people opportunities to work, not only on the Shuttle, but on the next-generation system, that they may be operating, whether it's Orion, or Ares, or a component of that.

So, we're working, across the board to retain the workforce and retrain the workforce and allow for a smooth transition for those that may have to leave the Shuttle program at the end.

#### RETENTION

Senator MIKULSKI. I feel very strongly about this, and again, knowing first of all, the fact is that we need them now. And we need them to stay. And if I were in the room with Peter Orzag, working on this, and the President's science advisor, looking at the future of NASA, I'd say, "You know, everybody dumped buckets of money into the banks because they said we need their talent," well, they had no place to go. But here, we have these wonderful people who have a job that they're doing, and a job that we need them to do.

So we're going to ask for quarterly reports from NASA on how this transition is going on. And I gather—because it will be a phase-down, but also for the retention now. And do you think that there are sufficient resources in your appropriations request to retain the workforce that we have during these last flights, taking us into the end of the fiscal year 2011, and to really properly retain them as we also are looking at those who wish to retire, and those who wish to be retrained, and those who wish to be redeployed within NASA.

So, those are your, kind of, three tools, isn't it? Retirement, retraining, and redeployment?

Mr. SCOLESE. Yes. And we do believe we have the resources, as I mentioned, retention bonuses and other activities to do that, but

we're working specifically to make sure that we have people that can cover any issue that may come up with the Shuttle and its associated systems. So we are taking a very active look at making sure that we retain those—that dedicated workforce.

#### SCIENCE

Senator MIKULSKI. Right. And, as you know, now with 19 years, the Hubble servicing is coming to an end, and we have 300 people who have really served the Nation well in Hubble, and we also want that same attention to detail with retention, and also looking at what are the other projects at Goddard.

So, we would like to be in touch with the NASA Administrator on these issues.

Let me go to science. And let's go to the President's desire, we believe, to have a green science initiative, I believe, is the way of talking about it.

We are so proud, here, in this subcommittee, that we fund 80 percent of all climate change science. We are the green committee. Senator Boxer and I have had talks about this. NASA's portion is \$1.2 billion, including science that comes from Earth-observing spacecraft, and then there is NOAA that also does very important work on climate research—\$325 million.

So, \$2 billion is spent by the Government on climate change science, but \$1.5 billion comes from this subcommittee.

Let me go to what NASA's job is, and I would like, if you could, outline an inventory of the NASA projects in the budget request that will contribute to climate change science?

Mr. COLESE. Certainly. As you know, we have a number of on-orbit satellites that are, today, contributing to our understanding of climate change, they're supporting not just NASA researchers, but researchers throughout the world.

They're also supporting the operational agencies, as you mentioned, NOAA, USGS, other Department of the Interior organizations—Forestry, Agriculture. In addition, we have several missions in development, I could list some of them—the global precipitation mission is one, the Landsat data continuity mission is another. We have the decadal missions that are coming up, and we're very aggressively working to meet those.

In addition, we have relationship with NOAA that is very productive, where we've been producing the polar orbiting environmental satellites. We launched the last one, NOAA and Prime in January, and it's working well on orbit, it's been turned over to NOAA. We have a GOES-O launch scheduled for later in June, that is coming up. We have the NPOESS preparatory project, which is we are working in collaboration with, not only NOAA, but also the Department of Defense, on the next-generation weather satellites.

And while the Department of Defense is developing the Prime satellite, we were developing the preparatory project, which was intended to test out the capabilities, but now has become critical to the operational weather and climate communities, and we hope to launch that in the next year or so.

## PRACTICAL APPLICATIONS

Senator MIKULSKI. Well, first of all, that's impressive. That is really impressive. I think what the committee would appreciate, and also the Congress would appreciate, as it looks at climate change legislation, for us to have an inventory of these very important climate projects. We're also going to ask for the same inventory from NOAA.

But what we want is not only a list of the projects, Mr. Scolese, but what is the information that we're going to get that will be useful to policymakers to really come up with really sound legislation to deal with the global climate crisis.

As you know, there's been incredible debate over the last couple of years about science, junk science, and everybody's got their arguments about the climate change situation. We believe science should speak for itself, and that the facts of science should speak for itself.

But, what the American people will want to know is, say, okay, we're going to spend \$1.5 billion on science, and we've been spending it over time, and it's been enormously impressive. We would not know today about the global climate crisis if it were not for NASA. And then the very important work of NOAA, and our National Science Foundation.

As we've met with environmental ministers from around the world, the size and scope of the NASA endeavor has enabled them to also do their science. What would be useful to us in the debate is to know what we can continue to contribute for our colleagues, so that decisions, recommendations, policy initiatives and policy flashing lights would come from our science. So, could we have that from you? Because the people really need to have that in plain English.

We can hear GOES, NPOESS, they all have those names, et cetera, and I think it's often not seen. But we're ready to do legislation on the global climate crisis.

Which then takes me to something else. After—presuming we do have legislation—do you see that it is our science that will also be able to provide ongoing monitoring to see whether we truly are making a difference? Will there need to be new things, or will what we're doing now be able to carry us, say, for the next 5 or 7 years?

Mr. SCOLESE. Well, I think what we're doing now will probably carry us for the next 5 to 7 years, the answer to your question is will we be able to do monitoring? Absolutely. We're doing that today in various areas. For instance, in ozone monitoring, we use satellites to measure the ozone, and have seen, you know, an improvement in the reconstitution of the ozone layer.

So, yes, our satellites can go off and provide a lot of that information, and will continue to do so. And I expect, as the decadal survey missions indicated, that we will need some new capabilities, as we gain new understanding and want to look at different effects, be they, solar effects or Earth effects, or, other climatological effects that we need to deal with.

So, yes, our satellites can, and will, continue to do that, and as you know, our data systems are out there providing that data to researchers, as I said, around the world. So, as I said, we're getting

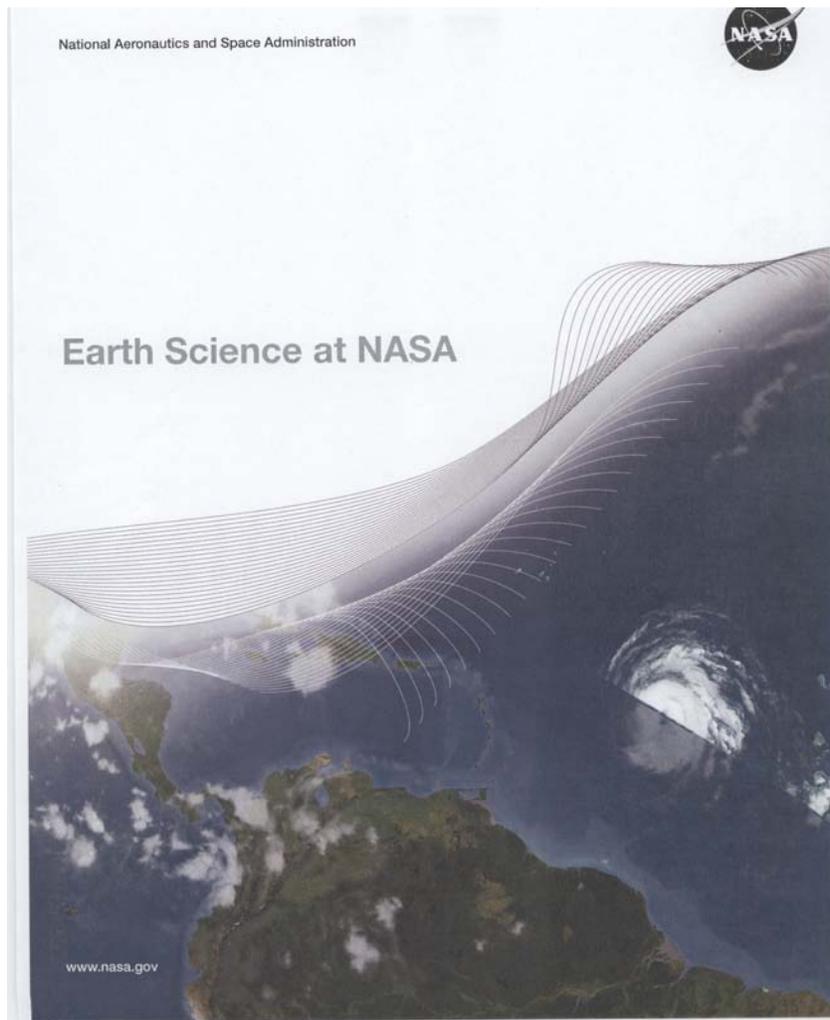
an objective look at the data, as well, to inform the decisions of the policymakers.

[The information follows:]

#### GLOBAL CLIMATE CHANGE

Provide an inventory of climate projects. Identify the types of information from them that would be useful to policy makers, with any “flashing lights” that would come from science results. Assess the sufficiency of monitoring activities over the next 5–7 years.

See Attached.



## Introduction

The National Aeronautics and Space Administration (NASA) conducts a program of breakthrough research to advance fundamental knowledge on the most important scientific questions about the global integrated Earth system. NASA continues to lead the international scientific community to advance global integrated Earth system science using space-based observations. The research encompasses the global atmosphere; the global oceans including sea ice; land surfaces including snow and ice; ecosystems; and interactions among the atmosphere, oceans, land and ecosystems, including humans. NASA's goal is to understand the changing climate, its interaction with life, and how human activities affect the environment. Through partnerships with national and international agencies, NASA enables the application of this understanding for the well-being of society. This document provides a descriptive inventory of NASA's research and observing activities in Earth system science, including climate science.

Much of the science community's present state of knowledge about global change—including many of the measurements and a significant fraction of the analyses which serve as the foundation for the assessment reports of the Intergovernmental Panel on Climate Change (IPCC) and the quadrennial ozone assessment by the World Meteorological Organization—are derived from NASA's Earth Science program. For example, using data from Earth observing satellites NASA-supported researchers are: discovering the abrupt rapidity of sea ice depletion in the Arctic cover and ice sheet motions in the Arctic and Antarctic; quantifying short-term and long-term changes to the Earth's protective shield of stratospheric ozone, including the positive impacts of the Montreal Protocol; developing robust relationships between increasing upper ocean temperature and decreasing primary production from the phytoplankton that form the base of the oceans' food chain; using a fleet of satellites flying in formation (the "A-Train") to study the effects of aerosols in the atmosphere on cloud formation and cloud cover; and using rainfall, vegetation, and other data to help predict food shortage conditions in developing countries. By flying satellites in formation through the A-Train, NASA is capable of making unique, global, near-simultaneous measurements of aerosols, clouds, temperature and relative humidity profiles, and radiative fluxes. Similarly, the use of satellites, aircraft, and ground-based monitoring stations provides NASA effectively calibration of new measuring capabilities and provides unprecedented views into numerous phenomenon, such as the origin of storms.

Our improved understanding of Earth System processes leads to improvements in sophisticated weather and climate models, which, in turn,—when initialized using the satellite data—can be used to predict natural and human-caused changes in the Earth's environment over time scales of hours to years.

NASA also makes strong investments in the development of new technologies that enable a range of scientific measurements, including those specified in the NRC's Decadal Survey, as well as make that data accessible for applications that benefit society. Technology funding now only supports the development of new sensors and instruments, but also advanced communications systems and computer modeling capabilities.

There is thus a strong synergy between our Nation's research satellites and our operational spaceborne systems. Near-real-time measurements from NASA research missions, such as the Tropical Rainfall Measuring Mission (TRMM), the Quick Scatterometer (QuikSCAT), and the Atmospheric Infrared Sounder instrument on the Aqua mission are used routinely by the National Oceanic and Atmospheric Administration (NOAA) and other U.S. and international agencies to improve weather forecasting. NASA works closely with NOAA and the other Federal agencies to transition satellite research measurement capabilities to long-term operations, as appropriate.

## Inventory of Observing Capabilities

NASA presently has 15 satellite missions in orbit, as shown in Figure 1, each observing one or more aspects of Earth's climate system. Brief descriptions of NASA's current missions are provided in Table 1 and more detailed descriptions are provided in Appendix A.

On February 24, 2009, NASA's Orbiting Carbon Observatory (OCO) did not reach orbit altitude due to a launch vehicle failure.



**FIGURE 1**  
Currently operating NASA Earth Science missions that respond to the U.S. Global

NASA has five foundational missions in development for launch in 2010–2014, as shown in Figure 2. These missions were all planned prior to the 2007 NRC Earth Science Decadal Survey. Brief descriptions of these missions are provided in Table 2 and more detailed descriptions are provided in Appendix B.

The National Research Council's (NRC) Decadal Survey report "Earth Science and Applications from Space: National Imperatives for the Next Decade and Beyond" (NRC, 2007) is the principal determinant of the priorities of NASA's Earth Science satellite missions beyond those

**Table 1** Brief descriptions of NASA's Earth Science missions currently in operation

Satellite	Launch Dates	Principal Measurement
ACRIMSAT	December 1999	Total solar irradiance
Aqua	May 2002	Atmospheric temperature & humidity
Aura	July 2004	Atmospheric composition
CALIPSO	April 2006	Clouds and aerosol properties
Cloudsat	April 2006	Cloud vertical structures
EO-1	November 2000	Land cover
GRACE	March 2002	Earth's gravity field
ICESat	January 2003	Ice sheet topography
Jason	December 2001	Ocean surface height
Landsat-7	April 1999	Land cover/land use change
OSTM/Jason-2	June 2008	Ocean surface height (successor for Jason)
QuikSCAT	June 1999	Ocean surface vector winds
SORCE	January 2003	Total solar irradiance (successor for ACRIMSAT)
Terra	December 1999	Multi-purpose land, ocean, atmosphere
TRMM	November 1997	Rainfall over the global tropics



**FIGURE 2**  
NASA Earth Science foundational missions under development.

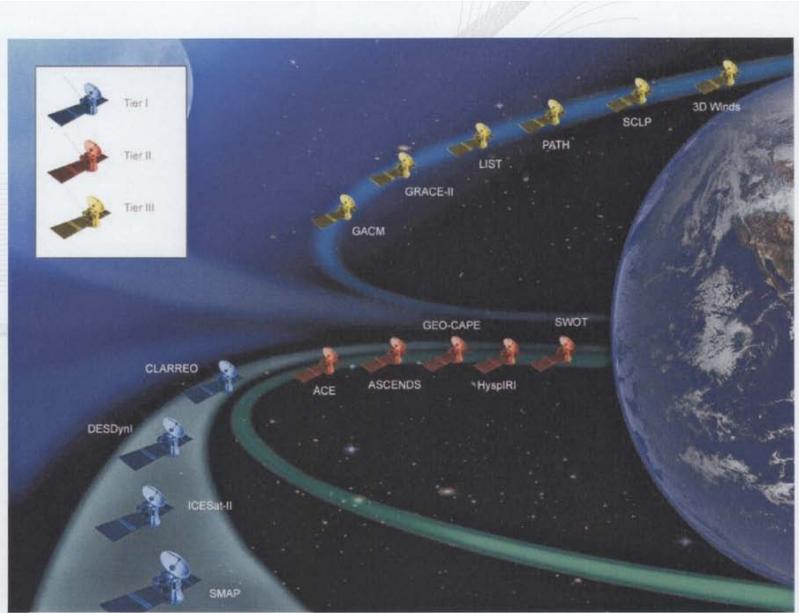
currently in development. The NRC Decadal Survey recommended an integrated slate of missions in three sets (or Tiers, as NASA has come to call them), as shown in Figure 3.

Of the four Tier 1 missions, the Soil Moisture Active-Passive (SMAP) is in Phase A formulation and concept development study and the Ice, Cloud, and land Elevation Satellite (ICESat II) mission is expected to begin Phase A in FY 2010. The other two Tier 1 missions, Climate Absolute Radiance and Refractivity Observatory (CLARREO) and Deformation, Ecosystem Structure and Dynamics of Ice (DESDynI), are currently the subject of engineering studies to prepare them to enter the formal mission formulation process. Detailed descriptions of these missions are provided in Appendix C.

In addition, the NRC Decadal Survey recommend NASA implement a new Venture class line of small, innovative research and applications missions. This class can be implemented as sub-orbital missions (e.g. on Unmanned Aerial Vehicles), instruments on other platforms, or dedicated small satellite missions. The first solicitation for Venture class missions was issued in July 2009.

**Table 2** Brief descriptions of NASA Earth Science foundational missions currently in development

Satellite	Launch Dates	Principial Measurement
Aquarius	May 2010	Sea surface salinity
Glory	Late 2010	Aerosol properties & total solar irradianc
NPP	NET Jan 2011	Continue key measurements from Terra & Aqua
LDCM	Dec 2012	Land cover / land use change
GPM	2013	Global precipitation



**FIGURE 3**  
NRC Decadal Survey Missions, arranged by Tiers.

NASA aircraft- and surface-based instruments are used to calibrate and enhance interpretation of high-accuracy, climate-quality, stable satellite measurements. NASA, in recording approximately 4 terabytes of data every day, maintains the world's largest scientific data and information system for collecting, processing, archiving, and distributing Earth system data to worldwide users. NASA supports state-of-the-art computing capability and capacity for extensive global integrated Earth system modeling using satellite observations.

One recent example of NASA's use of airborne assets to measure climate is the Arctic Research of the Composition of the Troposphere from Aircraft and Satellites (ARCTAS) field campaign carried out in the spring and summer of 2008. In the ARCTAS campaign, data from three NASA aircraft based in Canada and Alaska, making flights as far away as Greenland, studied the gas phase and particulate composition of the troposphere, emphasizing their distribution in the atmosphere over North America and the Arctic. In particular, in the summer campaign, numerous observations of air affected by forest fires were made. By combining data from aircraft and satellites, scientists are now better able to understand the regional scale impacts of fires and long-range pollutant transport on air quality and the implications for climate.

Ground networks help provide global, in situ measurements of important climate parameters through partnerships between NASA and other institutions around the world. For example, as the Aerosol RObotic NETwork (AERONET) program provides globally distributed observations of aerosols in order to measure how much sunlight reaches the ground.

Through NASA's twelve Distributed Active Archive Centers (DAAC's), Earth Science data from these different sources are processed, archived, documented, and distributed to researchers and the general public. Each DAAC specializes in specific science disciplines in order to better support that community. Complete information on the DAAC's is available at: <http://nasadaacs.eos.nasa.gov/index.html>.

## Inventory of Research Programs

Consistent with the goals of the U.S. Global Change Research Program, NASA pursues climate research activities focused on key areas of interaction in the climate system, specifically Atmospheric Composition, Climate Variability and Change, Water and Energy Cycles, Carbon Cycle and Ecosystems, Weather, Earth Surface and Interior, Modeling Strategy, Decision Support Resources Development, Observing and Monitoring the Climate System, and Data Management and Information.

### Research Area: Atmospheric Composition

Atmospheric Composition studies changes in the Earth's atmospheric chemistry and composition, which determine air quality and affects weather, climate, and critical constituents such as ozone and carbon dioxide. Research in this area is geared toward creating a better understanding of changes in atmospheric composition and the time scales over which they occur, the forcings (man-made and natural) that drive the changes, the reaction of trace components in the atmosphere to global environment change and the resulting effects on the climate, the effects of global atmospheric chemical and climate changes, and air quality. NASA's research for furthering our understanding of atmospheric composition will provide an improved prognostic capability for issues such as the recovery of stratospheric ozone and its impacts of surface ultraviolet radiation, the evolution of greenhouse gases and their impacts on climate, and the evolution of tropospheric ozone and aerosols and their impacts on climate and air quality.

Figure 4 Research Highlight: Predicting Ozone Loss in the Arctic in development

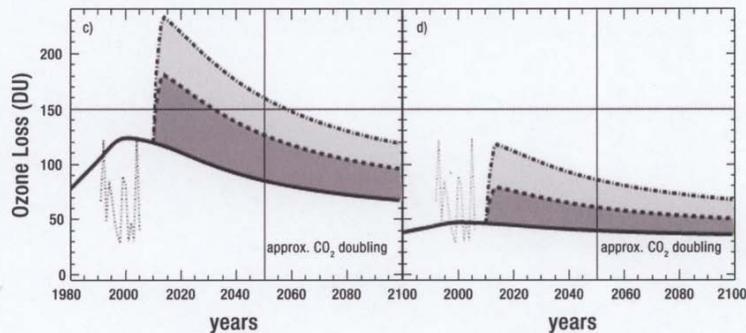


Figure 4. Researchers have projected the chemical loss over time of column ozone in the Arctic, for a base case (solid line) and two scenarios of climate geoengineering by the injection of stratospheric sulfate aerosols (dashed and dash-dot lines), for very cold (left) and moderately cold (right) conditions in the Arctic stratosphere during winter. The very cold conditions are similar to lower stratospheric temperatures during the Arctic winter of 2005, while the moderately cold conditions approximate lower stratospheric temperatures during the Arctic winter of 2003. These results demonstrate that severe loss of ozone could result from geoengineering of climate by the injection of sulfate aerosols into the stratosphere. The geoengineering scenarios represent different but plausible estimates of the amount and size of sulfate aerosols necessary to counter the surface warming that is likely to result from a doubling of atmospheric carbon dioxide. The projections are based on empirical relationships between ozone loss and stratospheric sulfate aerosol levels derived from measurements. The dotted lines in the left and right panels show the ozone loss estimated from the empirical relationship and observed sulfate loading and chlorine levels. These empirical relationships were derived almost entirely from data acquired by NASA satellites and aircraft, without which the projections would not have been possible. Data from the Halogen Occultation (HALOE) instrument, which flew on board the NASA Upper Atmosphere Research Satellite (1991–2004), was used to define the amount of chemical ozone loss that occurred during each Arctic and Antarctic winter. Concurrent data from the NASA Stratospheric Aerosol and Gas Experiment II (SAGE II) on board the Earth Radiation Budget Satellite (1984–2005) were used to develop the relationship between chemical ozone loss and the potential for chlorine activation, which is very sensitive to the amount of sulfate aerosol loading of the stratosphere. Measurements from the NASA Airborne Arctic Stratospheric Expedition II (October, 1991–March, 1992) campaign were also used to corroborate the satellite measurement-based relationships used in the study. (Tilmes, S., R. Muller, and R. Salawitch, The sensitivity of polar ozone depletion to proposed geoengineering schemes, *Science*, 320, 1201, 2008.)

### Research Area: Climate Variability and Change

A unique NASA contribution to climate science is the frequent near-global coverage of observations from space of many properties of the integrated Earth system, including ice sheets, sea ice, sea level, clouds, snow cover, solar radiation, and humidity. NASA's role in characterizing, understanding and predicting climate variability and change is centered around providing the global scale observational data sets on the higher-inertia components of the climate system (oceans and ice), their forcings, and the interactions with the entire Earth system. Understanding these interactions goes beyond observations, to include the development and maintenance of modeling capabilities that allows for the effective use, interpretation, and application of the data. The ultimate objective is to enable predictions of change in climate on time scales ranging from seasonal to multi-decadal. As NASA pioneers new satellite measurements to enable this capability, we work with our agency partners to transition our demonstrated observational capabilities to operational capabilities run by other agencies.

#### Climate Change and Variability Research Highlight: ICESat Tracks Changes in Ice Cover and Ice Type in the Arctic

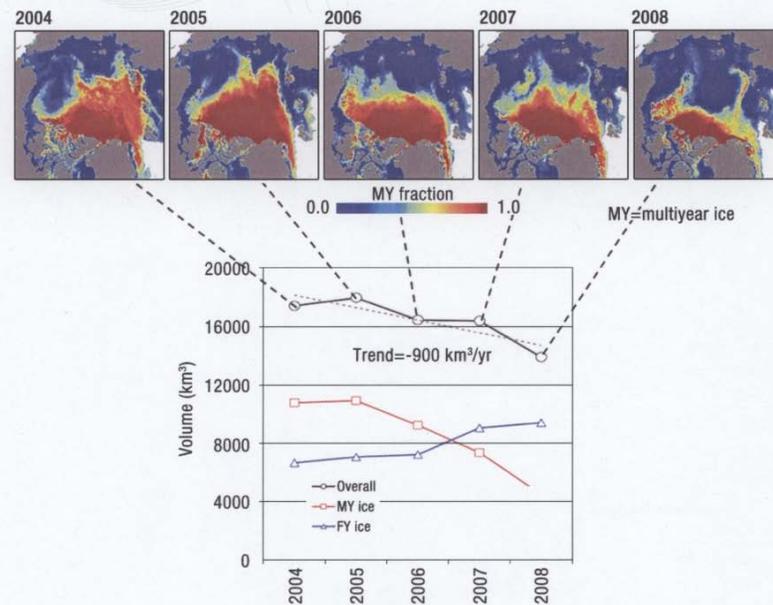


Figure 5. Using NASA's Ice, Cloud and land Elevation Satellite, known as ICESat, scientists have made the first basin-wide estimate of the thickness and volume of the Arctic Ocean's ice cover. The new results provide further evidence for the rapid, ongoing transformation of the Arctic's ice cover as Arctic sea ice thinned dramatically between the winters of 2004 and 2008, with thin seasonal ice replacing thick older ice as the dominant type for the first time on record. During the study period, the relative contributions of the two ice types to the total volume of the Arctic's ice cover were reversed. In 2003, 62 percent of the Arctic's total ice volume was stored in multi-year ice, with 38 percent stored in first-year seasonal ice. By 2008, 68 percent of the total ice volume was first-year ice, with 32 percent multi-year. The research team attributes the changes in the overall thickness and volume of Arctic Ocean sea ice to the recent warming and anomalies in patterns of sea ice circulation. (Kwok, R., and G. F. Cunningham (2008), ICESat over Arctic sea ice: Estimation of snow depth and ice thickness, *J. Geophys. Res.*, 113, C08010, doi:10.1029/2008JC004753.)

### Research Area: Water and Energy Cycles

The Water and Energy Cycle Focus Area studies the distribution, transport and transformation of water and energy within the Earth System. The water cycle involves water in all three of its phases, including clouds and precipitation; ocean-atmosphere, cryosphere-atmosphere, and land-atmosphere interactions; mountain snow; and groundwater. Since solar energy drives the water cycle and energy exchanges are modulated by the interaction of water with radiation, the energy cycle and the water cycle are intimately entwined. The long-term goal of this focus area is to enable improved predictions of the global water and energy cycles. This key goal requires not only documenting and predicting means and trends in the rate of the Earth's water and energy cycling as well as predicting changes in the frequency and intensity of related meteorological and hydrologic events such as floods and droughts.

### Water and Energy Cycles Research Highlight: GRACE Calculates Groundwater Depletion Rates in India

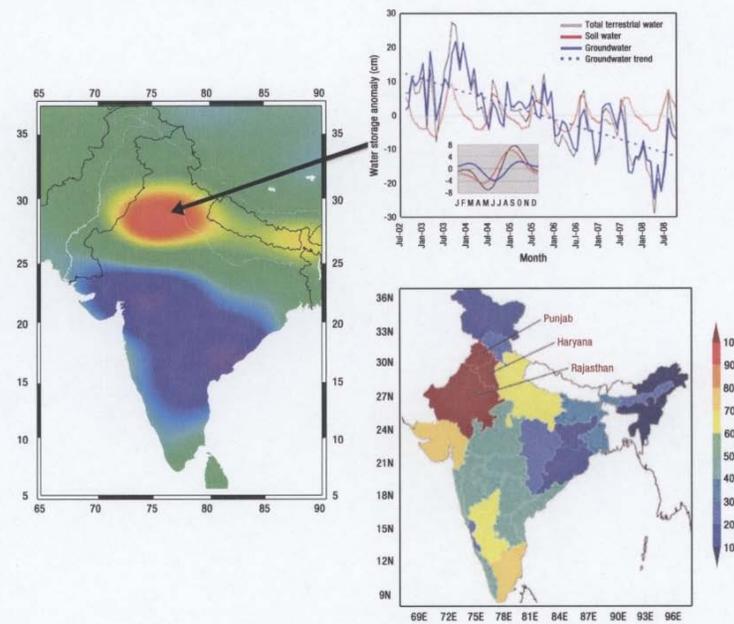
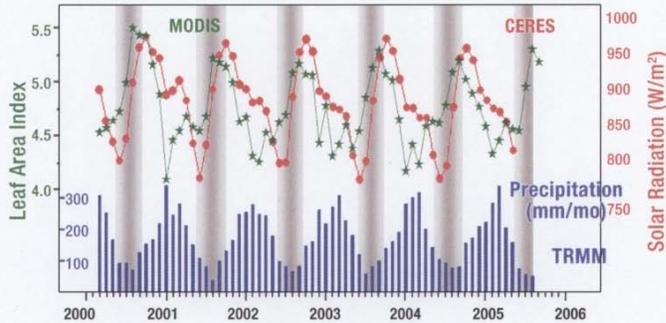


Figure 6. Gravity Recovery and Climate Experiment (GRACE) data can be used to track groundwater depletion rates over regional scales. The map shows the rate of change of groundwater storage in India during 2002–08, with losses shown in deepening shades of red and gains in blue. The estimated rate of depletion of groundwater in northwestern India (averaged over the states of Rajasthan, Punjab, and Haryana, which includes the national capital of New Delhi) is 4.0 centimeters of water per year, equivalent to a water table decline of about 33 centimeters per year. Increases in groundwater in southern India are due to greater than normal rainfall in the past few years, whereas northwestern India received close to normal rainfall throughout the study period. (M. Rodell et al. Nature doi:10.1038/nature08238; 2009)

**Research Area: Carbon Cycle and Ecosystems**

The Carbon Cycle and Ecosystems Focus Area addresses the distribution and cycling of carbon among the land, ocean, and atmospheric reservoirs and ecosystems as they are affected by humans, as they change due to their own biogeochemistry, and as they interact with climate variations. Through a series of direct measurements and models, NASA helps to characterize and quantify greenhouse gases and related controlling processes in the terrestrial, near-surface aquatic, and atmospheric environments. Given the importance of understanding how carbon cycles through the environment, NASA maintains a vigorous research program to study the distribution and the forces determining the atmospheric concentrations of carbon dioxide and other key carbon-containing atmospheric gases (especially methane), as well as carbon-containing aerosols. NASA improves understanding of the structure and function of global marine and terrestrial ecosystems, their interactions with the atmosphere and hydrosphere, and their role in cycling biogeochemical elements.

**Carbon and Ecosystems Research Highlight: NASA Satellites Show Unexpected Seasonal Growing**



**Basin-wide greening in dry season**  
October EVI (dry season) minus June EVI (wet season)

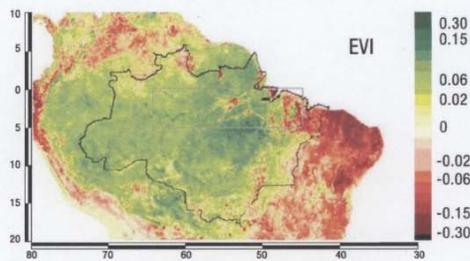


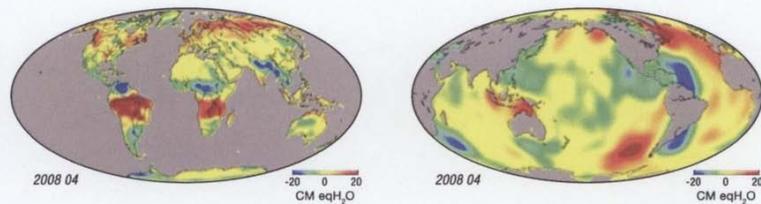
Figure 7. Two research teams studying the Amazon Rain Forest from space have demonstrated fundamentally new understanding of the seasonality of rain forest ecosystems. In one study (above), measurements of leaf area index from MODIS on Terra, precipitation from TRMM, and solar radiation from CERES (also on Terra), show that leaf area is high when solar radiation is high and low when rainfall (and cloudiness) is high. This shows that the productivity of these tropical forests is light limited, not water limited. (Myneni, et al. Large seasonal swings in leaf area of Amazon rainforests. PNAS 2007 104:4820-4823; doi:10.1073/pnas.06113381042007.) In the second study (left), MODIS was used to show that seasonal patterns of forest productivity in the Amazon are opposite to what had been previously understood; the forests are more productive in the dry season when more light is available. They concluded that the forest trees are able to tap deep soil water and avoid the water limitations that pastures in the region experience during the short dry season. (Huele, et al. (2006). Amazon rainforests green-up with sunlight in dry season, Geophys. Res. Lett., 33, L06405, doi:10.1029/2005GL025583.)

**Research Focus Area: Earth Surface and Interior**

The goal of the Earth Surface and Interior focus areas is to assess, mitigate, and forecast the natural hazards through a better understanding of the transport of mass and energy within the Earth System. The Earth's surface and its interior are fundamental components of the Earth system that both influence and react to the dynamics of our oceans and atmosphere. Therefore, an understanding the dynamics of the solid Earth is essential to developing an interconnected view of Earth science and its applications that ranges from natural hazards and climate change to fundamental physics. Space geodetic science and its associated geodetic ground networks and satellite missions such as GRACE, LAGEOS, and soon DESDynI provide the measurements to monitor crustal deformation, sea level change, water storage, ice dynamics and ablation and numerous other influences from the transport of mass and energy through the Earth System. Though these topics are very interdisciplinary in nature, the Earth Surface and Interior Focus Area provides the primary support for the development of Space Geodetic science and associated missions and infrastructure.

**Earth Surface and Interior Research Highlight: Monthly Assessments of Earth's Gravity Field**

Figure 8. NASA's Gravity Recovery and Climate Experiment (GRACE) provides monthly to semi-monthly estimates of variations in the Earth's gravity field with unprecedented accuracy and precision. This figure shows the Earth's gravity field in April 2008 for land variations (left) and ocean variations (right). Land gravity field variations are stronger than those for the ocean. Such monitoring capabilities are essential for understanding seasonal anomalies and other variations in the Earth's gravity field. GRACE itself depends upon NASA's space geodetic networks for its precise positioning requirements.



**Research Focus Area: Weather**

Our weather system includes the dynamics of the atmosphere and its interactions with the oceans and land. The Weather focus area is important to the NASA Earth Science for two reasons. First, the improvement of our understanding of weather processes and phenomena is crucial in gaining an understanding of the Earth system. It is directly related to the Climate and Water/Energy Cycle focus areas. In both cases, the dynamics are to a large degree controlled by "weather processes." Second, there is an infrastructure in the U.S. for operational meteorology at NOAA, the FAA, the DoD, and others that requires the introduction of new technologies and knowledge that only NASA can develop.

**Weather Research Highlight: AIRS Data Improves Hurricane Forecasting for Cyclone Nargis**

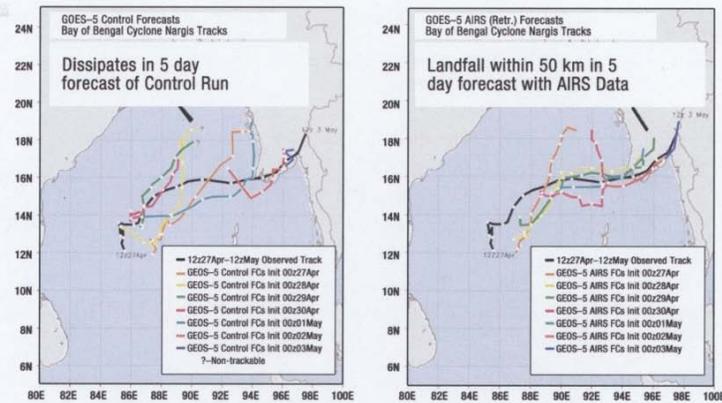


Figure 9. Recent studies using NASA's Atmospheric Infrared Sounder (AIRS) on the Aqua spacecraft have demonstrated the tremendous value of hyperspectral infrared observations to improve weather forecast. In a study performed by scientists at NASA's Goddard Space Flight Center (GSFC), AIRS temperature profiles were assimilated into the GEOS-5 forecasting system to evaluate the forecast improvement of tropical cyclone Nargis that caused the worst natural disaster in the history of Burma. The 5 day forecast control run without AIRS data (left) showed the cyclone dissipating prior to landfall in a position 200 km north of the actual track. After assimilation of AIRS cloud-cleared temperature profiles the cyclone produced an accurate track in 5 of the 7 runs during the forecast period (right). In fact, in the 108 hour forecast, the displacement error at landfall time is less than 50 km with the coordinates of the storm at that time 16.44°N, 94.7°E in the AIRS run, against the observed of 16.00°N, 94.7°E in the actual position recorded. (Reale, D., W. K. Lau, J. Susskind, E. Brin, E. Liu, L. P. Riishojgaard, M. Fuentes, and R. Rosenberg (2009), AIRS impact on the analysis and forecast track of tropical cyclone Nargis in a global data assimilation and forecasting system, *Geophys. Res. Lett.*, 36, L06812, doi:10.1029/2008GL037122.)

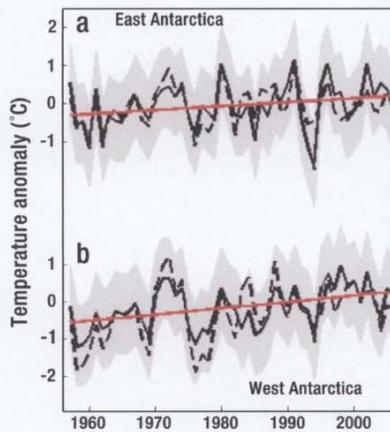
### Disciplinary and Interdisciplinary Research Programs

Underlying the Science Focus Areas that explore key climate and Earth system interactions are a core set of foundational Earth science disciplinary and interdisciplinary research programs. These are primarily comprised of competitively-selected research grants issued in response to NASA Research Announcements, particularly the annual omnibus Research Opportunities in Space and Earth Sciences (ROSES). These programs include:

- Cryospheric science
- Land use/land cover change
- Ocean biology and biogeochemistry
- Terrestrial ecology
- Physical oceanography
- Terrestrial hydrology
- Precipitation science
- Atmospheric modeling and analysis
- Interdisciplinary research in Earth science

On average, NASA sponsors 1100 research grants and thousands of researchers in universities and industrial and government labs around the nation conducting Earth Science research.

Quantitative understanding of Earth system processes and feedbacks is codified in climate models. The Earth System Modeling Framework—which was initiated in 2002 by NASA and now is an interagency activity—enables shared infrastructure and interoperability of model components and interface.

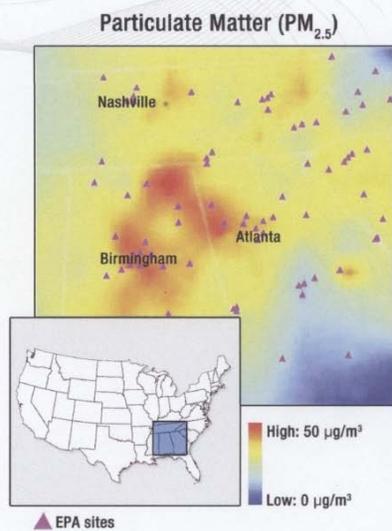


### Interdisciplinary Research Highlight: Unexpected Warming in Antarctica

Fundamental work shows that East Antarctica—long thought to be cooling—is warming. Reconstructed temperatures using Advanced Very High Resolution Radiometer (AVHRR) and station data shows a warming trend of 0.10°C per decade overall in Antarctica but with a stronger warming trend of 0.20°C per decade in West Antarctica. (Steig, E.J., D.P. Schneider, S.D. Rutherford, M.E. Mann, J.C. Comiso and D. T. Shindell (2009) Warming of the Antarctic ice sheet surface since the 1957 International Geophysical Year, *Nature*, 457, 459-463.)

### Applied Sciences

NASA develops and demonstrates practicable applications of its research satellite observations and model results for use by decision makers. NASA works directly with decision makers throughout the development of applications. Examples include improved public health tracking systems for deadly diseases with the Center for Disease Control; advances in prediction of weather conditions for airplane pilots through the National Weather Service and the Federal Aviation Administration; improved tracking of air pollutants with the Environmental Protection Agency for decision-making on biomass burning and industrial practices; improving the Department of Agriculture's Global Economic Forecasting; and providing tools for better disaster management by state and local first responders.

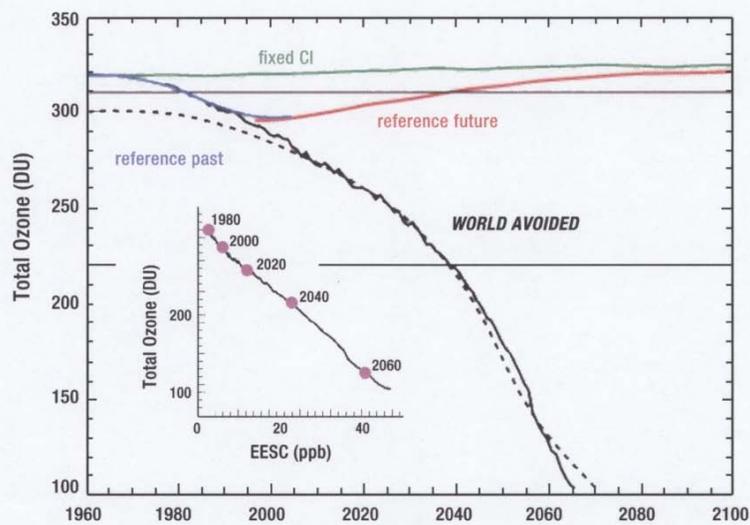


#### Applied Sciences Research Highlight: NASA and CDC Partner to Provide Improved Public Health Tracking

Accurately monitoring concentrations of 2.5 micron particulate matter (PM<sub>2.5</sub>) are difficult using ground observations alone. Similarly, 10 micron PM (from naturally occurring dust) are associated with asthma and other respiratory distress in the desert Southwest. NASA and the CDC have been partners in linking PM<sub>2.5</sub> and PM10 and health observations to enhance public health surveillance through the CDC Environmental Public Health Tracking Network (EPHTN). The EPHTN, a surveillance tool that scientists, health professionals, and—for the first time—members of the public can use to track environmental exposures and chronic health conditions, went operational in July 2009. NASA was an integral partner in enhancing the capabilities of this system as it was developed, using surfacing algorithms, modeling capabilities, and observations FROM A VARIETY OF NASA EARTH SCIENCE SATELLITES AND SENSORS INCLUDING MODIS, ABOARD THE NASA TERRA AND AQUA SATELLITES. (The Application of Satellite Derived Environmental Data to Improve Environmental Public Health Surveillance Systems. NASA Tech. Report, 2006; Al-Hamdan, et al.; and Niskar, A. 2009. "Methods for Characterizing Fine Particulate Matter Using Ground Observations and Remotely Sensed Data: Potential Use for Environmental Public Health Surveillance. *Journal of the Air & Waste Management Association*". 59:865–881.)

## Information Useful to Policy Makers

The climate science data and results produced by NASA's Earth Science program have broad applicability beyond research, including the provision of a scientific basis for policy concern and policy choices. NASA observations are the principal source of global observations for the U.S. Global Change Research Program, and NASA observations and research provided a substantial portion of the input to the scientific assessments of the Intergovernmental Panel on Climate Change (IPCC), which are created for policy purposes. In addition, NASA partners with the World Meteorological Organization to produce a triennial assessment of the health of the Earth's stratospheric ozone layer, which shields the surface from harmful ultraviolet radiation.



### Policy Highlight: NASA Researchers Evaluate Impacts of the Montreal Protocol

Figure 12. A team of NASA scientists have simulated "what might have been" if chlorofluorocarbons (CFCs) and similar chemicals were not banned through the Montreal Protocol. CFCs are known to deplete ozone in the atmosphere, which results in an increase in ultraviolet radiation reaching the surface of the Earth. The simulation used a comprehensive model that included atmospheric chemical effects, wind changes, and radiation changes. Annual average concentrations of global ozone are shown for the "World Avoided" (solid black), a modeled future with ozone regulation (red), atmospheric chlorine at a fixed amount (green), and a simulation of past observations (blue). The inset shows how ozone concentrations decrease as the amount of chlorine in the atmosphere—effective equivalent stratospheric chlorine (EESC)—grows over time. The simulation has shown that, without regulation, by 2065, 67% of the overhead ozone would be destroyed in comparison to 1980. Large ozone depletions in the polar region would become year-round rather than just seasonal, as is currently observed in the Antarctic ozone hole. Ozone levels in the tropical lower stratosphere remain constant until about 2053 and then collapse to near zero by 2058 as a result of "polar ozone hole" chemical processes developing in the tropics. In response to ozone changes, ultraviolet (UV) radiation increases, tripling the "sun-burning" radiation in the northern summer mid-latitudes by 2065. (Newman et al. What would have happened to the ozone layer if chlorofluorocarbons (CFCs) had not been regulated?, *Atmospheric Chemistry and Physics*, 9, 2113-2128, 2009)

Policy makers, of course, ultimately determine what is of most use to them. But recent experience points to the following as examples of observing data and research results capturing policy makers' attention:

- Global average temperature records and regional variations
- Weather forecasting, including tracking extreme weather events
- Relative strengths of climate "forcings" (especially the ability to distinguish natural from anthropogenic causes of climate change, e.g., by measuring solar irradiance)
- Sea-level rising faster than expected
- Sea-ice extent (especially rapid decline in Arctic summer sea ice extent in recent years)
- Greenland and Antarctica ice mass, especially ice shelf collapse in the Antarctic peninsula
- Inter-regional and intercontinental transport of air pollution
- Precipitation and drought patterns
- Rates of deforestation/reforestation and urbanization
- Stratospheric ozone recovery, and the impact of climate change on rate of recovery
- Carbon sources and sinks.

### Sufficiency of Observing Activities Over the Next 5–7 Years

NASA's Earth Science program conducts observation and research programs to answer climate and Earth system science questions formulated through engagement with the science community. Observing activities are planned to optimize progress on these questions within the available resources. The Nation has other Earth observation needs in areas such as weather forecasting and natural hazard management, to which NASA observing missions and research can contribute, along with those of other agencies. This results in collaborative programs such as the Landsat series and NPOESS. Thus, while NASA can address sufficiency from the standpoint of its research goals, other agencies are better positioned to address sufficiency of observing activities for their needs.

Some science questions require research satellite measurements longer than the normal operating period of a satellite mission. The NASA strategy for long-term data acquisition has two facets. On some occasions, NASA will re-fly a proven satellite instrument measurement capability. An example in the attachment is the Clouds and the Earth's Radiant Energy System (CERES) instrument for measurement of total solar irradiance at the top of the atmosphere. On other occasions, NASA works with operational agencies like NOAA to continue a satellite measurement capability that NASA developed and tested. The tables in Appendix D show the measurements obtained through currently operational missions and display NASA's current research missions (Table 3) and identify what planned foundational missions (Table 4) and future Decadal Survey missions (Table 5) would continue those measurements.

As shown in the table below, NASA transferred to NOAA the operational control of health and safety of the Ocean Surface Topography Mission (OSTM) satellite, which was launched by NASA. The OSTM nadir sea surface topography measurement capability is sustaining the high accuracy global sea level data produced by NASA's TOPEX/Poseidon (August 1992–October 2005) and Jason (December 2001–present) missions. NOAA has become the U.S. lead for the OSTM follow-on mission called Jason-3.

## Appendix A—NASA Earth Science Missions Currently In Operation

### Active Cavity Radiometer Irradiance Monitor (ACRIMSAT)

Launch Date: December 20, 1999

Web Site: <http://acrim.jpl.nasa.gov>



ACRIMSAT, with its ACRIM III instrument, studies total solar irradiance from the Sun. It is theorized that as much as 25 percent of the Earth's total global warming may be solar in origin due to small increases in the Sun's total energy output since the last century. By measuring incoming solar radiation and adding measurements of ocean and atmosphere currents and temperatures, as well as surface temperatures, climatologists will be able to improve their predictions of climate and global warming over the next century. NASA has been measuring total solar irradiance via the ACRIM instrument since the launch of ACRIM I on the Solar Maximum Mission in 1980. The Upper Atmospheric Research Satellite (UARS), launched in 1991, flew ACRIM II.

### Aqua

Launch Date: May 04, 2002

Home Page: <http://aqua.nasa.gov>



Aqua was launched with six state-of-the-art instruments to observe the Earth's oceans, atmosphere, land, ice and snow covers, and vegetation, providing high measurement accuracy, spatial detail, and temporal frequency. In particular, the Aqua data includes information on water vapor and clouds in the atmosphere, precipitation from the atmosphere, soil wetness on the land, glacial ice on the land, sea ice in the oceans, snow cover on both land and sea ice, and surface waters throughout the world's oceans, bays, and lakes. Such information helps scientists improve the quantification of the global water cycle and examine such issues as whether or not the cycling of water might be accelerating.

### Aura

Launch Date: July 15, 2004

Web Site: <http://aura.gsfc.nasa.gov>



NASA's Aura mission seeks to understand and protect the air we breathe by making truly comprehensive measurements of the Earth's atmosphere. Aura's four instruments enable daily global observations of Earth's atmospheric ozone layer, air quality, and key climate parameters. Aura is able to monitor five of the six Environmental Protection Agency principle pollutants to be monitored: carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, and particulates (aerosols). Aura provides data of suitable accuracy to improve industrial emission inventories, and also to help distinguish between industrial and natural sources. Together, Aura's instruments provide global monitoring of air pollution on a daily basis.

**Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO)**

Launch Date: April 28, 2006

Home Page: <http://www-calipso.larc.nasa.gov>

The CALIPSO satellite helps scientists answer significant questions and provide new information about the effects of clouds and aerosols (airborne particles) on changes in the Earth's climate. Understanding the behavior of these components is essential for a better understanding of the Earth's climatic processes and improving the accuracy of climate model predictions used to make informed policy decisions about global climate change. CALIPSO measurements taken in conjunction with the Aqua satellite enable new observationally based assessments of the radiative effects of aerosol and clouds that will greatly improve our ability to predict future climate change. CALIPSO measurements taken in conjunction with CloudSat provide a thorough characterization of the structure and composition of clouds and their effects on climate under all weather conditions.

**CloudSat**

Launch Date: April 28, 2006

Web Site: <http://cloudsat.atmos.colostate.edu>

Unlike ground-based weather radars that use centimeter wavelengths to detect raindrop-sized particles, CloudSat's radar allows us to detect the much smaller particles of liquid water and ice that constitute the large cloud masses that make our weather. CloudSat's advanced radar "slices" through clouds to see their vertical structure, providing a completely new observational capability from space. Because clouds have such a large impact on Earth's radiation budget, even small changes in cloud abundance or distribution could alter the climate more than the anticipated changes in greenhouse gases, anthropogenic aerosols, or other factors associated with global change. Changes in climate that are caused by clouds may in turn give rise to changes in clouds due to climate: a cloud-climate feedback. These feedbacks may be positive (reinforcing the changes) or negative (tending to reduce the net change), depending on the processes involved. These considerations lead scientists to believe that the main uncertainties in climate model simulations are due to the difficulties in adequately representing clouds and their radiative properties.

**New Millennium Program Earth Observing-1 (EO-1)**

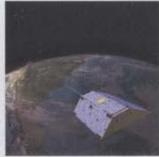
Launch Date: November 21, 2000

Web Site: <http://eo1.gsfc.nasa.gov>

EO-1 is an advanced land-imaging mission that demonstrates new instruments and spacecraft systems, which contribute to a significant reduction in cost of follow-on Landsat missions and other satellites. The EO-1 mission includes three advanced land imaging instruments and five revolutionary cross-cutting spacecraft technologies. EO-1 had a 1-year primary mission but was so successful that it continues to operate as a testbed for automated sensor web applications, and to collect unique hyperspectral data (more than 220 spectral colors) of the land surface, useful both for algorithm development and disaster response.

**Gravity Recovery and Climate Experiment (GRACE)**

Launch Date: March 17, 2002

Web Site: <http://www.csr.utexas.edu/grace>

The primary goal of the GRACE mission is to accurately map variations in the Earth's gravity field over its planned 5-year lifetime. The gravity variations that GRACE studies include: changes due to surface and deep currents in the ocean; runoff and ground water storage on land masses; exchanges between ice sheets or glaciers and the oceans; and variations of mass within the Earth. Another goal of the mission is to create a better profile of the Earth's atmosphere. The results from this mission yield crucial information about the distribution and flow of mass within the Earth and its surroundings.

**Ice, Clouds, and Land Elevation Satellite (ICESat)**

Launch Date: January 12, 2003

Web Site: <http://icesat.gsfc.nasa.gov>

The primary goal of ICESat is to quantify ice sheet mass balance and understand how changes in the Earth's atmosphere and climate affect polar ice masses and global sea level. ICESat also measures the distribution of clouds and aerosols, as well as surveys land topography, sea ice, and global ice mapping. The ICESat mission provides multi-year elevation data needed to determine ice sheet mass balance as well as cloud property information, especially for stratospheric clouds common over polar areas. It also provides topography and vegetation data around the globe, in addition to the polar-specific coverage over the Greenland and Antarctic ice sheets. Future missions will extend and improve assessments from ICESat, as well as monitor ongoing changes.

**Jason-1**

Launch Date: December 07, 2001

Web Site: <http://sealevel.jpl.nasa.gov/mission/jason-1.html>

Jason is an oceanography mission to monitor global ocean circulation, improve global climate predictions, and monitor events such as El Niño conditions and ocean eddies. Earth's oceans are the greatest influence on global climate, yet only from space can we observe our vast oceans on a global scale and monitor critical changes in ocean currents and heat storage. Accurate observations of sea-surface height and ocean winds provide scientists with information about the speed and direction of ocean currents and about the heat stored in the ocean that, in turn, reveals global climate variations. Continuous altimetry data from satellites like Jason-1 help us understand and foresee the effects of the changing oceans on our climate and on climate events such as El Niño and La Niña. Jason-1 is a follow-on mission to the highly successful TOPEX/Poseidon mission (decommissioned in 2005) and precursor to OSTM/Jason 2 (launched in 2008).

**Landsat 7**

Launch Date: April 15, 1999

Web Site: <http://landsat.gsfc.nasa.gov>

The Landsat 7 Project is a joint initiative of the U.S. Geological Survey (USGS) and the NASA to gather Earth resource data, and is the most recent in a long series of Landsat satellites going back 30 years to 1974. Landsat 7 systematically provides well-calibrated, multispectral, moderate resolution, substantially cloud-free, Sun-lit digital images of the Earth's continental and coastal areas with global coverage on a seasonal basis. Landsat's Global Survey Mission is to establish and execute a data acquisition strategy that ensures repetitive acquisition of observations over the Earth's land mass, coastal boundaries, and coral reefs; and to ensure the data acquired are of maximum utility in supporting the scientific objectives of monitoring changes in the Earth's land surface and associated environment.

**Ocean Surface Topography Mission (OSTM, Jason-2)**

Launch Date: June 20, 2008

Web Site: <http://sealevel.jpl.nasa.gov/mission/ostm.html>

OSTM is an international effort to measure sea surface height by using a radar altimeter mounted on a low-Earth orbiting satellite called Jason-2 and is a follow-on to the Jason-1 and TOPEX/Poseidon missions. This satellite altimetry mission provides sea surface heights for determining ocean circulation, climate change and sea-level rise. The research satellites, TOPEX/Poseidon and Jason-1, have been instrumental in meeting NOAA's operational need for sea surface height measurements necessary for ocean modeling, forecasting El Niño/La Niña events, and hurricane intensity prediction. OSTM takes oceanographic studies of sea surface height into an operational mode for continued climate forecasting research and science and industrial applications.

**Quick Scatterometer (QuikSCAT)**

Launch Date: June 19, 1999

Web Site: <http://winds.jpl.nasa.gov/missions/quikscat>

QuikSCAT is the primary source of global ocean surface wind vectors and wind stress for science applications such as ocean and climate model forcing, air-sea interaction studies, and hurricane studies. QuikSCAT data are routinely assimilated in operational numerical weather prediction models at meteorological agencies worldwide, and have revolutionized the analysis and short-term forecasting of winds over the oceans. SeaWinds, the main instrument on QuikSCAT, measures near-surface wind speed and direction under all weather and cloud conditions over Earth's oceans. The instrument collects data over ocean, land, and ice in a continuous, 1,800-kilometer-wide band, making approximately 400,000 measurements and covering 90% of Earth's surface in one day. QuikSCAT can acquire hundreds of times more observations of surface wind velocity each day than can ships and buoys, and can provide continuous, accurate and high-resolution measurements of both wind speeds and direction regardless of weather conditions.

**SeaWiFS**

Launch Date: August 01, 1997

Web Site: <http://oceancolor.gsfc.nasa.gov/SeaWiFS/SEASTAR/SPACECRAFT.html>

The commercial SeaStar satellite carries the SeaWiFS instrument, which is designed to monitor the color of the world's oceans, and is a follow-on to the Coastal Zone Color Scanner (CZCS). Various ocean colors indicate the presence of different types and quantities of marine phytoplankton, which play a role in the exchange of critical elements and gases between the atmosphere and oceans. The satellite monitors subtle changes in the ocean's color to assess changes in marine phytoplankton levels, and provides data to better understand how these changes affect the global environmental and the oceans' role in the global carbon cycle and other biogeochemical cycles. Complete coverage of the Earth's oceans occurs every two days.

**Solar Radiation and Climate Experiment (SORCE)**

Launch Date: January 25, 2003

Web Site: <http://lasp.colorado.edu/sorce>

Solar radiation is the dominant, direct energy input into the terrestrial ecosystem, and it affects all physical, chemical, and biological processes. SORCE provides state-of-the-art measurements of incoming x-ray, ultraviolet, visible, near-infrared, and total solar radiation. The measurements provided by SORCE specifically address long-term climate change, natural variability and enhanced climate prediction, and atmospheric ozone and UV-B radiation. These measurements are critical to studies of the Sun, its effect on our Earth system, and its influence on humankind. Data obtained by the SORCE experiment is used to model the Sun's output and to explain and predict the effect of the Sun's radiation on the Earth's atmosphere and climate.

**Terra**

Launch Date: December 18, 1999

Web Site: <http://terra.nasa.gov>

Terra provides global data on the state of the atmosphere, land, and oceans, as well as their interactions with solar radiation and with one another. Terra's five instruments simultaneously study clouds, water vapor, aerosol particles, trace gases, terrestrial and oceanic surface properties, biological productivity of the land and oceans, the interaction among them and their effects on atmospheric radiation and climate. Comprehending these interactive processes is essential to understanding global climate change.

**Tropical Rainfall Measuring Mission (TRMM)**

Launch Date: November 27, 1997

Web Site: <http://trmm.gsfc.nasa.gov>

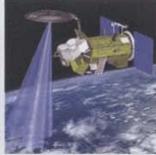
TRMM is the world's foremost satellite for the study of precipitation and associated storms and climate processes in the tropics and subtropics, contributing to a better understanding of where and how much the winds blow, where the clouds form and rain occurs, where floods and droughts. The tropical regions make up about two thirds of the total rainfall on Earth and are responsible for driving our weather and climate system. TRMM has evolved from an experimental mission focusing on tropical rainfall climatology into primary satellite in a system of research and operational satellites used for analyzing precipitation characteristics on time scales from 3-hr to inter-annually and beyond.

## Appendix B—NASA Earth Science Foundational Missions Currently In Development

### Aquarius

Launch Date: May 2010

Web Site: <http://aquarius.gsfc.nasa.gov>



Aquarius is a mission to measure changes in global sea surface salinity equivalent to about a "pinch" (i.e., 1/6 of a teaspoon) of salt in 1 gallon of water. By measuring sea surface salinity over the globe with such unprecedented precision, Aquarius will answer long-standing questions about how our oceans respond to climate change and the water cycle. Monthly sea surface salinity maps will give clues about changes in freshwater input and output to the ocean associated with precipitation, evaporation, ice melting, and river runoff. Aquarius data will also be used to track the formation and movement of huge water masses that regulate ocean circulation and Earth's climate. Within two months of starting observations, Aquarius will collect as many sea surface salinity measurements as the entire 125-year historical record from ships and buoys, and provide measurements over the 25 percent of the ocean where no previous observations have been made.

### Glory

Launch Date: Late 2010

Web Site: <http://glory.gsfc.nasa.gov>



Glory is designed to help understand the Earth's energy balance and the effect on climate requires measuring black carbon soot and other aerosols, and the total solar irradiance. These measurements continue and improve upon NASA's research of the forcings influencing climate change in the atmosphere. Measurements produced by this mission and the scientific knowledge such observations will provide are essential to predicting future climate change, and to making sound, scientifically based economic and policy decisions related to environmental change.

### Global Precipitation Measurement (GPM)

Launch Date: June 2013

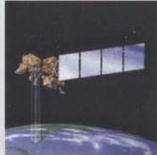
Web Site: <http://gpm.gsfc.nasa.gov>



Building upon the success of the Tropical Rainfall Measuring Mission (TRMM), GPM will initiate further measurement of global precipitation, a key climate factor. GPM Constellation consists of a core spacecraft to measure precipitation structure and to provide a calibration standard for the constellation spacecraft, an international constellation of NASA and contributed spacecraft to provide frequent precipitation measurements on a global basis, calibration/validation sites distributed globally with a broad array of precipitation-measuring instrumentation, and a global precipitation data system to produce and distribute global rain maps and climate research products. These measurements will help improve the accuracy of weather and precipitation forecasts through more accurate measurement of rain rates and latent heating.

**Landsat Data Continuity Mission (LDCM)**

Launch Date: December 2012

Web Site: <http://ldcm.nasa.gov>

LDCM is a joint initiative of the U.S. Geological Survey (USGS) and the NASA to gather Earth resource data, and is a follow-on to Landsat 7, the most recent in a long series of Landsat satellites going back 30 years to 1974. One of the key objectives of LDCM is to make all Landsat-type data available at affordable cost. This will enable the many different sectors of the population—farmers, business leaders, scientists, educators, state and federal governments and many others to continue to utilize this data for high quality research and applications.

**NPOESS Preparatory Project (NPP)**

Launch Date: January 2011

Web Site: <http://jointmission.gsfc.nasa.gov>

The five sensors on NPP will collect data on atmospheric and sea surface temperatures, humidity, biological productivity, cloud and aerosol properties, the Earth's energy bud-get, and atmospheric ozone. These data will be used for long-term climate and global change studies and serve as a continuation of measurements from NASA's Terra and Aqua satellites. In addition, NPP provides the agencies developing NPOESS with early access to the next generation of operational sensors, thereby greatly reducing the risks incurred during the transition. This will permit testing of the advanced ground operations facilities and validation of sensors and algorithms while the current operational and scientific systems are still in place. This new system will provide nearly an order of magnitude more data than the current operational system and will move a subset of critical climate quality Earth system data records into operational production.

## Appendix C—NRC Decadal Survey Tier 1 Missions

### Climate Absolute Radiance and Refractivity Observatory (CLARREO)

Launch Date: TBD

Web Site: <http://clarreo.larc.nasa.gov>

CLARREO is a joint NASA-NOAA mission recommended in the Decadal Study report of the National Research Council (NRC), "Earth Science and Applications from Space: National Imperatives for the Next Decade and Beyond", to measure solar irradiance. The NOAA component involves the continuity of measurements of incident solar irradiance and Earth energy budget by flying two sensors that were removed from NPOESS. The NASA portion involves the measurement of thermal infrared and reflected solar radiation at high absolute accuracy. These measurements will provide a long-term benchmarking data record for the detection, projection, and attribution of changes in the climate system. In addition, these measurements will provide a source of absolute calibration for a wide range of visible and infrared Earth observing sensors, greatly increasing their value for climate monitoring.

### Deformation, Ecosystem Structure and Dynamics of Ice (DESDynI)

Launch Date: TBD

Home Page: <http://desdyni.jpl.nasa.gov>

DESDynI was recommended in the Decadal Study report of the National Research Council (NRC), "Earth Science and Applications from Space: National Imperatives for the Next Decade and Beyond", for measuring surface deformation, which is linked directly to earthquakes, volcanic eruptions, and landslides. Observations of surface deformation are used to forecast the likelihood of earthquakes occurring as a function of location, as well as predicting both the place and time when volcanic eruptions and landslides are likely. Advances in earthquake science leading to improved time-dependent probabilities would be significantly facilitated by global observations of surface deformation, and could result in significant increases in the health and safety of the public due to decreased exposure to tectonic hazards. Monitoring surface deformation is also important for improving the safety and efficiency of extraction of hydrocarbons, for managing our ground water resources, and, in the future, providing information for managing CO<sub>2</sub> sequestration.

### Ice, Cloud, and land Elevation Satellite II (ICESat-II)

Launch Date: Late 2014/early 2015

Web Site: <http://icesat.gsfc.nasa.gov/index.php>

As envisioned by the Decadal Study, the ICESat-II mission will deploy an ICESat follow-on satellite to continue the assessment of polar ice changes by providing multi-year elevation data needed to determine ice sheet mass balance as well as cloud property information, especially for stratospheric clouds which are common over polar areas. ICESat-II is also expected to measure vegetation canopy heights, allowing estimates of biomass and carbon in above ground vegetation in conjunction with related missions, and allow measurements of solid earth properties.

### Soil Moisture Active-Passive (SMAP)

Launch Date: Late 2013/early 2014

Web Site: <http://smap.jpl.nasa.gov>

The SMAP mission was recommended by the NRC Earth Science Decadal Survey Panel to provide direct measurement of surface soil moisture and freeze-thaw state. Direct measurements of these properties are necessary to improve our understanding of regional water cycles, ecosystem productivity, and processes that link the water, energy, and carbon cycles. Soil moisture information at high resolution enables improvements in weather forecasts, flood and drought forecasts, and predictions of agricultural productivity and climate change.

## Appendix D—Current Measurements and Planned Replacements for Data Continuity

Table 3. NASA Earth Science Missions Currently in Operation

Mission/ Launch Year	Instruments	Measurements	Potential Replacements
TRMM–1997		Global distribution of tropical rainfall*	GPM (2013, 2015)
	Precipitation Radar	Rain rate, rain drop size	PR: on GPM (2013)
	VIRS	Cloud coverage, height, and temperature	
	TMI	Microwave brightness temperatures	GMI: on GPM (2013, 2015)
	LIS	Lightning incidence	
	CERES (inoperative)	Earth radiation budget	CERES: on NPP (2011), NPOESS (2013)
Landsat 7–1999	NOTE: Operated by U.S. Geological Survey		
	ETM+	Land cover	LDCM (2012)
QuikSCAT–1999	SeaWinds	Ocean surface wind speed and direction	NOAA's XQVWM (TBD); possibly on JAXA GCOM-W2
Terra–1999	MODIS	Multiple (vegetation, clouds, ocean color, etc.)	VIIRS: on NPP (2011), NPOESS C1 (2013)
	MISR	Aerosol distributions	APS: on Glory (2010); ACE (Tier 2 mission in Decadal Survey)
	MOPITT (Canada)	Carbon monoxide and methane	
	ASTER (Japan)	Land surface imaging	OLI & TIRS: on LDCM (2012)
	CERES	Earth radiation budget	CERES: on NPP (2011), NPOESS C1 (2013)
ACRIMSAT–1999	ACRIM III	Total solar irradiance	SORCE since 2003; TIM: on Glory (2010); TSIS: on NPOESS C1 (2013)
EO-1–2000	ALI	Land cover	
	Hyperion	Hyperspectral land imaging	HyspIRI (Tier 2 mission in Decadal Survey)
	LAC	Atmospheric correction	
Jason–2001		Ocean surface topography*	OSTM since 2008; NOAA's Jason-3 (TBD); NASA's SWOT (Tier 2 mission in Decadal Survey)
	Poseidon-2 Altimeter (France)		
	Jason Microwave Radiometer		
	DORIS (France)		
	TurboRogue Space Receiver (a GPS)		
	Laser retroreflector		

Mission/ Launch Year	Instruments	Measurements	Potential Replacements
GRACE-2002		Earth's gravity field*	GRACE II (Tier 3 mission in Decadal Survey)
	High Accuracy Intersatellite Ranging System		
	ONERA SuperStar accelerometer		
	BlackJack GPS Receiver		
	Star Camera Assembly		
	Ultra Stable Oscillator		
Aqua-2002	MODIS	Multiple (vegetation, clouds, ocean color, etc.)	VIIRS: on NPP (2011), NPOESS C1 (2013)
	AIRS		
	AMSU-A	Upper atmosphere temperature profiles	ATMS, CrIS: on NPP (2011), NPOESS C1 (2013)
	HSB (Brazil) (inoperative)	Humidity profiles thru the atmosphere	ATMS, CrIS: on NPP (2011), NPOESS C1 (2013)
	AMSR-E (Japan)	Microwave brightness temperatures (winds, SST, ice, etc.)	JAXA's AMSR: on GCOM-W1 (2012); MIS: on NPOESS C2 (2016)
	CERES	Earth radiation budget	CERES: on NPP (2011), NPOESS (2013)
ICESat-2003	GLAS	Ice sheet topography	ICESat II (2014/2015)
SORCE-2003	TIM	Total solar irradiance	TIM: on Glory (2010); TSIS: on NPOESS C1 (2013)
	SOLSTICE, SIM, XPS	Solar spectral irradiance*	
Aura-2004	MLS	Upper atmosphere chemistry	GACM (Tier 3 mission in Decadal Survey)
	TES	Lower atmosphere chemistry	GEO-CAPE, GACM (Tier 2 & 3 missions in Decadal Survey)
	HIRDLS (UK) (not collecting data)	Upper atmosphere chemistry	
	OMI (Netherlands)	Total ozone and aerosols	Total ozone OMPS: on NPP (2011), NPOESS (2013)
CloudSat-2006			
	Cloud Profiling Radar	Cloud structure & radiative properties*	ACE (Tier 2 mission in Decadal Survey)
CALIPSO-2006		Vertical structure & properties of clouds & aerosols*	APS: on Glory (2010)
	Cloud-Aerosol Lidar		
	Wide Field Camera		
	Imaging Infrared Radiometer		

Mission/ Launch Year	Instruments	Measurements	Potential Replacements
OSTM-2008	NOTE: Operated by	Ocean surface topography*	NOAA's Jason-3 (TBD); NASA's SWOT
	Poseidon-3 Altimeter (France)		
	Advanced Microwave Radiometer		
	DORIS (France)		
	GPS		
	Laser Retroreflector		

\* All the instruments in this suite are used to produce the key measurement.

Table 4. NASA Earth Science Foundational Missions

Mission/ Launch Year	Instruments	Measurements	Precursor Missions
Aquarius-2010	Note: Joint NASA-Space Agency of Argentina (CONAE) mission	Sea surface salinity	
	Aquarius on SAC-D spacecraft		
Glory-2010		Aerosols; solar irradiance	
	Aerosol Polarimetry Sensor		Terra (MISR), CALIPSO
	Total Irradiance Monitor		ACRIMSAT, SORCE (TIM)
LDCM-2012	Note: Joint NASA-USGS mission	Multi-spectral land data	
NPP-2011	VIIRS	Multi-spectral imager/radiometer	Terra (MODIS), Aqua (MODIS)
	CIris	Atmospheric profiler	Aqua (AIRS, AMSU-A, HSB)
	ATMS	Atmospheric profiler	Aqua (AIRS, AMSU-A, HSB)
	OMPS	Ozone monitoring	Aqua (OMI)
GPM-2014		Precipitation	
	GPM Microwave Imager		TRMM (TMI)
	Dual-frequency Precipitation Radar		TRMM (Precipitation Radar)

Table 5. NASA Earth Science Decadal Survey Missions

Mission/Launch Year	Measurements	Precursor Missions
SMAP - Late 2013/Early 2014	Soil moisture and freeze/thaw	
ICESat-II – Late 2014/Early 2015	Ice sheet height	ICESat
DESDynI (Tier 1 mission)	Surface and sea ice deformation; vegetation structures	
CLARREO (Tier 1 mission)	Solar radiation	
HypIRI (Tier 2 mission)	Land surface composition	EO-1 (Hyperion)
ASCENDS (Tier 2 mission)	CO <sub>2</sub>	
SWOT (Tier 2 mission)	Ocean, lake, and river water levels	OSTM
GEO-CAPE (Tier 2 mission)	Atmospheric gas; ocean color	Aura (TES)
ACE (Tier 2 mission)	Aerosol and cloud profiles; ocean color	Terra (MISR), CloudSat, CALIPSO (Cloud-Aerosol Lidar)
LIST (Tier 3 mission)	Land surface topography	
PATH (Tier 3 mission)	Temperature and humidity	
GRACE-II (Tier 3 mission)	Gravity fields	GRACE
SCLP (Tier 3 mission)	Snow accumulation	
GACM (Tier 3 mission)	Ozone and related gases	Aura (MLS, TES)
3D-Winds (Tier 3 mission)	Tropospheric winds	

Senator MIKULSKI. Well, I think it's impressive. I'm really proud of NASA and what they've done in this. And they have been truly a tremendous voice to—not only scientists—but for those who have stewardships about their individual nations' futures. And NASA is really loved and appreciated because of what it does do, along with NOAA and the National Science Foundation.

This, though, takes me then to other science, which is in addition to our Earth science, planetary science, astrophysics and heliophysics. Is there concern at NASA that, with our emphasis on green science, and also on dealing with the global climate crisis, that other scientific projects will be crowded out?

You know, to keep the shuttle going, there was a lot of rearrangement of the money, and science suffered over the years. The President has made a significant investment in this year's budget, and we really appreciate this, because it's then not left up to the Congress to restore science, which it has been in the last decade.

Mr. SCOLESE. We believe we have a balanced program and, of course, as you know probably better than most, there's always many more missions that people want to do, many more investigations.

Senator MIKULSKI. Every science wants their own rocket ship.

Mr. SCOLESE. But we believe we have a balanced program, and we'll be looking at that, and have it informed by the decadal surveys that are coming up, to establish those priorities and determine what we can do. I think you'll see heliophysics is going up, astrophysics is staying about the same, and planetary is about the same. So Earth science and heliophysics have a little bit better, and the others are kind of balancing out to historical percentages.

#### NASA EDUCATIONAL EFFORTS

Senator MIKULSKI. Which then takes me to education. What is in the President's request for the NASA educational efforts?

Mr. SCOLESE. I was going to say \$125 million and David tells me it's \$126 million. So, we have \$126 million in that budget. It covers everything from, support for formal education, K-12, universities, grants for graduate students and undergraduates, as well as informal education, in terms of, support to museums and other activities along those lines. And we can get you the specifics.

Senator MIKULSKI. Well, I understand that it is \$126 million, that there's been a reduction of \$43 million. Do you know why, and what will go by the wayside with that \$43 million cut, or would you like to go back and talk to your team?

Mr. SCOLESE. I think I need to go back and talk to my team about that.

[The information follows:]

#### NASA EDUCATION PROGRAM

The fiscal year 2010 budget request for NASA's Education Program is \$126.1 million, up from \$116.0 million in the fiscal year 2009 request. As part of NASA's fiscal year 2010 budget request, the Agency preserved high-priority investments in Higher Education STEM (science, technology, engineering, mathematics) Education, K-12 STEM Education, and Informal STEM Education.

Higher Education STEM Education includes STEM Opportunities, Minority University Research and Education Program (MUREP), Space Grant, and Experimental Program to Stimulate Competitive Research (EPSCoR). These projects will build, sustain, and provide a skilled, knowledgeable, diverse, and high performing workforce to meet the current and emerging needs of NASA and the Nation.

K-12 STEM Education includes three main areas. STEM Student Opportunities engage and help retain students in STEM disciplines through flight opportunities, hands on research and engineering experiences, and increased knowledge of NASA science and technology content. STEM Teacher Development uses NASA's content and resources to provide pre-service and classroom teachers with learning experiences to build STEM skills and better motivate students to pursue STEM careers.

Informal STEM Education supports NASA Center efforts involving scouting groups, community based organizations, and other informal education providers who use NASA content to engage their audiences in STEM experiences. NASA also supports the Nation’s museums, science centers and planetariums in developing innovative educational experiences that help the American public understand NASA’s exploration mission.

A summary of NASA’s fiscal year 2010 request for the Education Program follows:

FISCAL 2010 BUDGET REQUEST

[Dollars in Millions]

	Fiscal year 2008 actual	Fiscal year 2009 enacted	Fiscal year 2010	Fiscal year 2011	Fiscal year 2012	Fiscal year 2013	Fiscal year 2014
Fiscal Year 2010 President’s Request .....	146.8	169.2	126.1	123.8	123.8	123.8	125.5
Higher Ed. STEM Education .....	92.0	107.7	80.6	80.6	80.6	80.7	80.7
K–12 STEM Education .....	41.3	47.5	43.3	41.0	41.0	41.0	42.7
Informal STEM Education .....	13.5	14.0	2.1	2.1	2.1	2.1	.....
Fiscal Year 2009 President’s Budget Request .....	146.8	115.6	126.1	123.8	123.8	123.8	.....
Education .....	146.8	115.8	126.1	123.8	123.8	123.8	.....
Total Change From Fiscal Year 2009 Request .....	.....	53.6	.....	.....	.....	.....	.....

Compared with NASA’s fiscal year 2009 budget request, the fiscal year 2010 budget request includes increases for:

- Higher Ed. STEM Education (+ \$14.202 million)
- K–12 STEM Education (+ \$4.365 million)
- Informal STEM Education (+ \$0.113 million)

NASA’s fiscal year 2010 budget request does not include continuation of fiscal year 2009 Congressional augmentations for:

- Global Climate Change Education (fiscal year 2009 + \$10 million)
- K–12 Competitive Educational Grant Program (fiscal year 2009 + \$16 million)
- Science Museums and Planetarium Grants (fiscal year 2009 + \$7 million)
- NASA Visitors Centers (fiscal year 2009 + \$7 million)
- Space Grant (fiscal year 2009 + \$12.268 million)
- EPSCoR (fiscal year 2009 + \$11.72 million)

NASA will be able to address the intended outcomes of these initiatives, as well as NASA’s stated education goals, through programs for which the Agency is requesting fiscal year 2010 funding.

Senator MIKULSKI. Let me say why I’m raising this. I’m a big supporter, as you know, of the National Academy of Sciences, and this is why we so like the decadal studies, that we’re guided by—in our endeavors and what we should be exploring and doing through the National Academy of Sciences, then it’s not out of politics or State interest and so on, that we’re really working for the Nation.

And, in the “Rising Above the Gathering Storm”, another Augustine-led effort was, we talked about how could America maintain its competitive edge, how could we continue innovation? And they talked about a triad of increased money for research, really a focus on education, K–12, to make sure—even earlier—that our young people focused on so-called STEM disciplines, science, technology, engineering, and mathematics, and that we have an innovation-friendly government, patent reform, tax policy.

Education, here we’re doing all this fantastic research, we have a President that’s making major investments in education, and through his own charisma, and that of the First Family, are creating, I think, a renewed interest in education. Their own girls, the

way they feel about the rest of America. How can we use now, the power of NASA, while we're doing the research part, and our job of being innovative—finally, to be part of education?

I feel that education at NASA has not been as sharply focused, and perhaps not as wise in its use of dollars, when we've got not only a great story to tell about education, but a great way to motivate our young people to be interested in that. I want to hear from the astronauts because of their courage, the spectacular thing they've done, but I want people to think, "Wow, there's a telescope, that I use the pictures in my classroom, and there's an astronaut that maybe I'm going to be, or maybe I'm going to work at Houston and work that's going to happen on the space station, to find a cure for breast cancer," which is challenging one of our most beloved colleagues here.

So, you see where I am? I'm into motivation, I'm into inspiration, using this story. So, where—what do you see about this?

Mr. SCOLESE. Well, I agree, clearly, the program, as I mentioned it, it tries to encompass all those things in various forms, with our teacher training programs that we do. We try and bring teachers down to launches, so that they can see what's actually going on, along with going out and providing forums where teachers can come in for the summers, for instance, and participate at NASA Centers, to learn about what we do and how we do it. That's sort of on the formal training program of the teachers.

We have the grants students in minority universities, as well as in other universities, to encourage undergraduate and graduate work. As you mentioned about, the informal education, you know, encouraging museums in getting NASA content and activities out, so that the broader public can see them.

And of course, directly, as our people go out there and talk to students, astronauts, scientists, engineers are out there talking at schools as well, and we encourage that as part of what we do as an agency, because we do realize the strong motivation that people see when they get to meet somebody that flew in space or somebody that works at NASA and does some interesting stuff.

I, myself, even had an opportunity to talk to a bunch of seventh grade students just a little bit ago—

Senator MIKULSKI. Harder than testifying before Congress?

Mr. SCOLESE. Yeah, they ask some interesting questions. But the good thing, and this is going to be kind of funny, is that the NASA portion of it, which I did, was rated against everybody else, and we beat out the mortician and the fireman. So, we ended up doing pretty good in the view.

But, actually is something that when people can get out there and see the looks on the students when they see what we can do, is really great.

So, I think we're doing all of those things, and we'll get you a better detailed list.

[The information follows:]

#### NASA EDUCATION PROGRAM

The President's fiscal year 2010 budget request for NASA's Education Program is \$126.1 million, up from \$116 million in the fiscal year 2009 request. The Office of Education administers national education efforts that draw on content from

across the Agency. It also disseminates education content and activities developed by the Mission Directorates, Centers and education partners.

The NASA Education Program addresses three outcomes:

- to strengthen NASA’s and the Nation’s workforce;
- to attract and retain students in STEM disciplines; and
- to engage Americans in NASA’s mission.

As part of the fiscal year 2010 budget request—Education projects have been reorganized into three programs to better meet the needs of targeted audiences:

- Higher Education STEM Education;
- K–12 STEM Education; and,
- Informal STEM Education.

NASA’s Higher Education STEM Education budget supports the targeted development of individuals who are prepared for employment in disciplines needed to achieve NASA’s mission and strategic goals. Graduates of these projects have had in-depth and hands-on experience with research and engineering that support NASA’s scientific and exploration missions. Experiences include NASA/industry internships, scholarships, competitions, and engineering design work. These students, drawn from national audiences, are interested in, prepared for, and able to contribute immediately to the NASA/aerospace workforce.

The Office of Education budget builds academic infrastructures and supports NASA-grounded research that builds the scientific and engineering competitiveness of the Nation. These investments also build the future STEM workforce by providing future workers the opportunity to contribute to research of interest to NASA. Target audiences in research capability-building include community colleges and Minority Serving Institutions (MSI’s). This type of efforts is funded through both the HE and the MUREP budgets.

K–12 STEM Education activities are based on NASA missions and stimulate excitement in students. Educator training and professional development programs improve teacher proficiency and confidence in teaching NASA and STEM content. Education technologies that foster educator training and student engagement opportunities are developed through the K12eED Program, but the tools and infrastructures serve all NASA Education programs.

NASA Informal STEM Education programs build STEM-interest in the general public by providing NASA exhibits, workshops, and special activities at museums, science centers, planetariums, and the activities of community organizations and clubs.

Senator MIKULSKI. Well, I think that’s very interesting. What I would like to ask, is that you make available, the Dr. Joyce Winterton, Assistant Administrator for Education, to meet with our staff so that we really have an idea of the comprehensive scope that you are doing, and how we can be supportive of that in, again, looking at the National Academy, “Rising Above” the Gathering Storm. And when they looked at the education of students, they looked at exactly what you said, teacher training, and how we can help with that. And then, hands-on kinds of things for young people to be able to either see or witness, and so on the inspiration part of NASA.

And number three, what is it about the development of curriculum and so on that you can help? One of the things that really so touched me about what NASA did—and I’ll just tell this little story.

Dr. Weiler, as you know, Mr. Space, science, and Goddard, et cetera, used part of his education budget to work with the National Federation of the Blind in Baltimore. And working with the National Federation of the Blind in Baltimore and the National Air and Space Museum—the space part of the Smithsonian—they developed a textbook for blind children on astronomy. And it’s called “Touch the Invisible Sky.”

Now I have seen the textbook, and the Federation is headquartered in Baltimore, and what that has meant to boys and girls, and what it’s meant to parents, where their children can

learn science, and actually touch the Hubble, and also think about careers in science, where particularly those things in the digital world that they could participate. This is—this is stunning, and it will—it impacts thousands of lives. So, we appreciate that.

Mr. SCOLESE. Thank you.

#### ACQUISITION PROCESS

Senator MIKULSKI. I'm going to have one other set of questions related to acquisition, and then—what time—what time do we link up with *Atlantis*? Twelve twenty-nine? I'm afraid to let everybody go, it's my Catholic school education, that if you go, you won't come back.

And, here's Bill Nelson, Bill we've got a few minutes, here. We're actually not going to be early, but we're just asking questions about cost difference.

Do you want to explain to Senator Nelson where we are while I finish?

Senator Voinovich raised the question about the acquisition process. Do you think we need a Commission on this? Do you think with acquisition cost overruns and schedule upages, we need a national Commission, where an effort like the Pentagon has just completed with their acquisition?

Mr. SCOLESE. I'm not sure we need a national Commission on it. I can tell you what we are doing. The Government Accountability Office, of course, has been reviewing NASA, and we recognized the issues that are associated with acquisition and acquisition reform. One of our biggest is the early cost estimates for our missions. There tends to be a lot of exuberance and enthusiasm for the missions, and as a result, we tend to say we can do more for less than we can really do it.

So, we're working very hard to fix that very early portion of it. And that's a combination of working with our colleagues in the external community, in the science community, as well as working internally to develop better cost estimates, and we're doing that. With the National Academy, we're sitting down so that they can develop better cost estimates, we can work with them so that we can develop them. We can develop cost estimates that can be compared against each other, as opposed to having one estimator do it one way, one group do it another way, we can get them all on common footings, so that we can look at them in terms of a common base, to understand which is really more expensive or more risky than the other.

In addition, we've revised our acquisition strategy. We now have essentially three meetings that we do before we go off with a procurement. One to look at what it is that we really want to accomplish and do we have the resources to accomplish it, both within NASA and in the industry as a whole. Is it available to us? Because often times we find out that we start something before we have the people or the resources available to support it. And then we develop the best way to go off and procure that, whether it be a fixed-price activity, and in-house activity, where it's built within NASA, or whether we go out of house to contractors.

In addition, we're looking at how we monitor our performance, so that we can catch problems early, rather than finding them out

late in the game when they're very expensive. So we're having monthly reporting, so that we can go off and look at all of those activities. And of course, we're working with industry and academia to go off and address those from their perspective as well.

So, that's what NASA is doing, and we're working with our colleagues in other agencies, most closely with NOAA, of course, because we buy some of their satellites.

#### HUBBLE SPACE TELESCOPE

Senator MIKULSKI. Well, thank you, again. I want to just thank you again for your service. I'm not going to recess the committee. What I'm going to do is ask you some questions about the Hubble.

Mr. SCOLESE. Okay.

Senator MIKULSKI. Then I'm going to, essentially, as we get ready to link up with *Atlantis*, talk about the biographies of the astronauts, and I'm going to ask our colleague—we're happy to be joined by our colleague, Senator-astronaut Bill Nelson, to, perhaps while we're waiting to hook up, you might talk about what it feels like to be an astronaut. Everybody sees it, they see it weightless, et cetera, but you've actually known, in our conversations, it can be pretty dangerous. And so, by that time, we'll be ready to hook up with them, and we would also invite you to engage in the conversation with them.

So, we're getting ready now and lining up to connect to our astronauts, on the *Atlantis* mission.

You've watched Hubble, and I am so proud of Hubble. You know, it's gone where no telescope has gone before. It's taken us to pictures of galaxies, and the great information of the Hubble has gone out to people in school—the scientists and school children around the world, whether it was in south Baltimore or South Africa. And, what I would like, if you could share with us, from the science viewpoint, what you think have been the major accomplishments of the Hubble mission?

Mr. SCOLESE. Probably the most significant accomplishment, as I look around, is the inspiration it's given to people to go off and pursue science, engineering, math, technology careers. You look at every textbook and you see a Hubble image, whether it's, of some planetary nebula or some nebula someplace, or just the Hubble Space Telescope with an astronaut floating next to it. It just has an incredible encouragement to people, to go off and do those things, because it does represent an icon.

When Hubble was first launched, you remember, more than anybody else, the difficulties that we had when it was first launched, and the perseverance—

Senator MIKULSKI. You mean when it went up and it wouldn't work?

Mr. SCOLESE. When it went up and it wouldn't work. I didn't want to say it quite that way. It was the techno-turkey of the time, yet it was resurrected.

Senator MIKULSKI. That was my phrase.

Mr. SCOLESE. Yes. It's been resurrected and I think people have seen that and recognized that with hard work and perseverance, you can overcome almost anything. And watching our crews, just this week and in previous weeks, we tend to get most of our atten-

tion with Hubble missions, because they are so dynamic, they are so interesting.

We can practice and practice and practice, yet at some point in a mission, you always know that something's going to come up that wasn't quite the way you practiced it. And I'm sure Mike Massimino how he had to use some elbow grease to remove a hand-rail.

So, I think that's probably our biggest contribution, because I see it when I talk to children and I see it when I talk to people who are now graduates from college, that, you know, looking at the Hubble. In my generation it was going to the moon. I think in this generation it's been, you know, what the Hubble Space Telescope can do.

And then, of course, I can't do the justice that an Ed Weiler could do to how it's revolutionized our understanding of the universe. But it clearly has done that. It's rewritten every textbook that's been out there in astronomy and cosmology, and to some extent, in physics as well.

Senator MIKULSKI. Well, I understand that the Hubble has led to 7,000 scientific papers, and that the information on Hubble, even that which continues to be analyzed, could fill two Libraries of Congress, and has taken us to the discovery of new galaxies, and also the whole issues of black holes and dark energy, things that will help us understand the universe, and in understanding the universe, understand physics, quantum physics, tremendous scientific expansion—

Mr. SCOLESE. All those.

Senator MIKULSKI [continuing]. That then enable us, also, to go to far more practical implications. Isn't that correct?

Mr. SCOLESE. Absolutely. I'm surprised it's only 7,000, considering all the things that it's done.

Senator MIKULSKI. The other thing that was required, in addition to the astronauts, was these tools. When one goes into space to do this work, because what the Hubble did on this mission, was five space walks, and that's what we're going to talk with them about, five space walks that took hours. It's just not like suiting up and walking out and—did you do space walk or did you stay inside?

I think I'd stay inside, too. Could you imagine trying to find a little space suit in, you know, in 14 petite? Well, they did it for Sally and some of the others.

But anyway, could you tell us about the technology that was developed to be able to refurbish the Hubble?

Mr. SCOLESE. Just an incredible number of tools. For every mission, one has to think about, taking a screwdriver with a ski glove on, and a pressure suit, where you're in a balloon trying to move in order to do this work. So, it's not at all like putting a suit on or just having a glove on, it's pressurized, and you're fighting that each and every time you move. And the astronauts can describe it a heck of a lot better than I can describe it. But that's the limitation that one has to work with.

And then think about the fact that you can't see everything. You've got this hood over your head. So, you have to develop tools that will allow the crews to be able to work with those limitations,

limitations in viewing, limitations in their ability to grasp things. So every mission, you have to come up with a new set of tools, a new set of guides to allow them to see where they want to go. And this mission was no different, to go off and do that.

Then you have to remember you have to take the power with you. It doesn't come along, you can't plug it into the wall like our Black and Decker, these are largely battery-operated. So while they're floating around in space, they have to have these tools. When they remove a screw, they have to capture it, otherwise it's going to go floating around in space. Because on this mission, and on other missions, we repaired things that weren't designed to be repaired in space. If you design it to be repaired in space, you'll have big fasteners that you can grasp with a gloved hand and everything will stay in place.

We were removing hundreds, 150, 160-some screws, little screws, that if they got into the wrong place—

Senator MIKULSKI. Talk about having a screw loose.

Mr. SCOLESE [continuing]. Yes—they could damage the telescope or damage the orbiter or damage the suit that the astronauts were in.

So, in addition to being able to remove the screw, we had to make sure that that screw didn't float away and go someplace we didn't want it to go. So, we had components that allowed us to capture those screws.

And then, as we mentioned, think about pulling a circuit card out of your computer, if you've ever had to go off and do that, put in a board for graphics if you wanted to do gaming or something along those lines. And think of how small that is. We had the astronauts retrieve that.

Needless to say, they couldn't use their gloved hand, so we had to develop a tool that would allow them to go in there, grasp it, pull it out, and then put a new box in.

So, there's an incredible amount of effort with the engineers on the ground developing these tools and understanding what's going on, working with the astronauts to refine those tools so that they can use them effectively. And then, while the mission is going on, adjusting when things change.

#### SPACE SHUTTLE CREW INTRODUCTION

Senator MIKULSKI. And it's the big deal.

What I'd like to do now is—first of all, that was an excellent description—I'd like to talk about these astronauts and who they are, as we get ready to connect to them, a few words about, really, what they did, just as you've described it. And while we're waiting, in the 4 minutes for the hookup, as you said, this is not a Swiss watch factory, to connect to them.

Well, first of all, there were seven astronauts, and of the seven, three had been on previous Hubble experiences. One is Scott Altman, he's the commander of the mission. He flew the Shuttle during its capture and release of Hubble. He was also the commander of the last Hubble servicing mission, in March 2002, when we installed that Hubble advanced camera that made the mission worthwhile.

The other is John Grunsfeld, who's considered like one of the fathers or godfathers or grandfathers of the Hubble. He led the space walking team, and he's conducted three space walks, in addition to the five others he did on previous serving missions. He's done two previous Hubble missions, in December 1999 and March 2002, which was so important, again, to reboot, reinvigorate Hubble.

And then there's Mike Massimino, who will be leading the conversation today. Now he's conducted two space walks, and guess what? He's the first astronaut to Twitter from space. Oh boy, engaging thousands of people and he also was the one who persevered during Sunday's nail-biting, hold your breath, oh my gosh, Sunday space walk. And I've never been so glad ever to hear someone say, "Disposable bag, please," which said that he had accomplished it. He had to deal with a stuck bolt, a tool battery that died, but he kept on going. Mike flew on the last Hubble servicing mission in March 2002, again, when we did that advanced camera.

Now, we've had three other Hubble astronauts on their first shuttle mission. Megan McArthur, one of the women on the trip, operated the shuttle's robotic arm during the capture and release of the rejuvenated Hubble. She became an astronaut in 2000. She has an unusual background. Dr. McArthur has a Ph.D. in oceanography and worked at the Script's Oceanographic Institute, so, from inner space to outer space.

We have Drew Feustel, who conducted three space walks, and on the third space walk—that was Saturday—he and Grunsfeld installed that new spectrograph that looks deeply into the early universe how profound. He became an astronaut in 2000, he began his education at a community college, he worked as an auto mechanic, and now he's a mechanic in space. He then went on to an undergraduate degree and a masters in Earth science and geophysics from Purdue, and a Ph.D., specializing in seismology, from Queens University in Canada. These are incredible backgrounds.

Then there's Greg Johnson, the pilot of the mission. He orchestrated the photographic and video documentation of the mission. He became an astronaut in 1998. He's a Navy captain, he landed on 500 carriers, and we're going to count on him to land safely and smartly tomorrow, at around 10 o'clock eastern standard time.

And last, but not at all least, Michael Good, who conducted two space walks, including Sunday's, which lasted more than 8 hours. It is the sixth longest NASA space walk in history. He comes as Air Force colonel and a test pilot.

We're about 2 minutes away, and as you can see, this is really an incredible amount of talent, and also, talent and dedication and courage and diligence. So, that's who we'll be talking to in space, the very first hearing from space. And as we get ready for our uplink, I'd like to turn to our astronaut-Senator, Bill Nelson.

And Senator, if you could share, maybe, your thoughts on this occasion, of the rejuvenation of Hubble, and your own experiences in space?

Senator NELSON. Madam Chairwoman, this is—

Senator MIKULSKI. And this is the way we ought to be at the table, I might add, authorizers and appropriators, not only celebrating, but really working together for the good of the country.

## THE ASTRONAUT EXPERIENCE

Senator NELSON. And thank you for this opportunity, Madam Chairwoman. This is an incredible example of the interlinking of humans and machines, to accomplish great things. As you were reading the biographies of these astronauts, they are exceptionally qualified people, they are, all of them, overachievers, and yet, they are just the visible example of a space team that is, every one of them, overachievers.

A lot of that team is in your State, at the Goddard Space Flight Center, and this particular mission is symbolic of the expertise at Goddard, that putting together all of those with the team that gets them up there, that creates the vehicle to get them there, and then to do the work once in orbit.

Now, in this case, these astronauts have not had a minute to spare, every minute is scheduled. As a matter of fact, usually it's very typical of crews that they have to fight for time to get to the window to gaze back at this incredible creation that we call our home, the planet. In our particular case, I had to cheat on my sleep to find time, just to go and float in front of the window, and see our home.

One of the greatest examples of this teamwork, came out of tragedy, Madam Chairwoman, and that was Apollo 13.

Senator MIKULSKI. Right.

Senator NELSON. We thought that that was going to be three dead men on the way when that explosion occurred on the way to the moon, and yet that incredible team, on the ground, working with the astronauts in real-time, who's lives were on the line, we brought them back and brought them back safely.

And so, what these new lens, these new computers, these new instruments on Hubble are going to do for us, is help us gaze out even further, to sample cosmic rays and understand in greater detail, what is this infinite place called the universe, and how do we relate to it. And that's why I'm so excited for the success of this mission.

Thank you, Madam Chairwoman.

## SPACE SHUTTLE ATLANTIS TESTIMONY

Senator MIKULSKI. Well, that was really eloquent, and it shows how—to be an astronaut, you have to be daring, you have to be courageous, you have to be agile.

So, anyway, that was a great job, and now we'll just wait to hear from Houston, a familiar sound to you.

Now remember, we're going to be able to see the astronauts, but they can't see us. This is going to be for them, an audio link.

Mr. VENTRY. Atlantis, this is Houston, are you ready for the event?

ASTRONAUT. We are now ready for the event. Voice check.

Mr. VENTRY. Atlantis, this is Don Ventry at the U.S. Senate, how do you hear me?

ASTRONAUT. Space Shuttle *Atlantis* has you loud and clear, sir.

Mr. VENTRY. *Atlantis*, please stand by for Senator Barbara Mikulski.

Senator MIKULSKI. Hello to all of our astronauts on Space Shuttle *Atlantis*. You are taking part in something quite historical, not only have you given the Hubble a new life, but you're going to give the Senate a new lease on life. You are the very first astronauts to testify from space, at an official hearing.

I'm joined by my colleague, Senator Bill Nelson, a brother astronaut to you. I'm going to lead off the conversation by first of all, thank you for this stunning and successful mission. As you closed the hatch on the Hubble, you have now opened a new door to a new era of scientific discovery.

Hubble is the people's telescope, and it wanted to have another chance to be able to educate a new generation of scientists and school children. What you've done to refocus and recharge the Hubble Space Telescope is appreciated. We appreciate the daring and the difficult and the dangerous things that you've done to install the cameras, the computers, the batteries, and the gyroscopes.

Hubble is the greatest scientific instrument since Galileo's telescope, but you are some of the greatest astronauts that we could get hooked up with.

We want to hear from you about what those experiences are like, but before I do, Bill, Senator Nelson, did you want to say something to your brother astronauts in space?

Senator NELSON. Hey guys, I wish I were up there with you.

Senator MIKULSKI. So, Mike Massimino, are you the one that's going to lead it off?

So, okay, well that works, we see you very clearly. I feel like—if only the Hubble is going to work as good as this link.

So tell us, what was it like to be up there? What was the greatest nail-biting thing that you had? What were those space walks like? What's it been like up there?

Mr. MASSIMINO. Well, Senator, I'd just say, first of all, we're very honored to be able to appear before the committee today. It's an honor for us, it's also an honor to be part of this mission. Many people worked very hard on it, including all the folks at Goddard, and of course, your efforts, Senator, keeping Hubble alive, are much appreciated. We're a beneficiary of that vision that you share with all. Hubble is a part of the spirit of exploration that I think is an American dream we all share. So, thank you so much.

#### HUBBLE REPAIR MISSION

Senator MIKULSKI. Well, tell us, what was the most—for all of you to jump in—what were some of the most thrilling moments of the mission, what were some of the most nail-biting? We sure liked that disposable bag comment, because we knew you had been able to fix that whole computer situation. Mike?

From what I see, we're getting a lot of enthusiasm.

Mr. MASSIMINO [continuing]. Ground trying to help us. When I wasn't able to get the bolt to turn for the handle, to take the handle off, to continue with the repair of the instrument, the space telescope imaging spectrograph, and we had practiced this so many times as a crew, to do this repair, and never expected—we try to think of every problem we could come up with, and we were prepared, I thought, for everything, but we never expected that particular bolt to give us trouble. And when it did, and when we start-

ed getting the suggestions from the ground, I really thought that we were in trouble. I couldn't see how we were going to be able to continue the repair at that point.

But, the folks at the Goddard Space Flight Center did a great job, along with the folks at the Johnson Space Center, and people from around the country, I'm sure, were all involved, trying to figure out how we could do this. And we didn't have much time because we were running late into this space walk, but they figured out a way for us to fix it, we got the tools we needed, and we were able to get access to the board by breaking off the handle in a way that we would never have imagined to do it. When we launched, we never thought we'd have to do that, but we did it.

And for me, that was a feat, that we could continue—

Senator MIKULSKI. Well, listen, Space Shuttle *Atlantis*, we're having a hard time hearing you.

Mr. MASSIMINO [continuing]. Nail-biters out there, to be sure.

Mr. JOHNSON. Senator Mikulski, this is Greg Johnson, the pilot. It, too, is an honor to testify before your subcommittee. I can tell you, from the flight deck, Scooter and I and Megan were watching, and every single EVA, to me, was a nail-biter. I was trying to photo document them, some of it with IMAX, and the two points that really come to mind are Bueno closing the door when the arm started to slip, as he pushed as hard as he could.

And then Mike Massimino going to get contingency tools, in areas that he hadn't really gone to before, and then breaking that bolt. You should have seen the action out the back window, it was—I'm sure it was better up close, but from the pilot's perspective, I was on the edge of my seat the—all five EVAs, actually.

Senator MIKULSKI. Dr. McArthur, did you want to say anything?

Mr. JOHNSON. And I guess I'll let Megan comment, and then if you have any more questions for—

Dr. MCARTHUR. Yes, ma'am.

Hello, Senator Mikulski, and Senator Nelson, and all of the Senators on the committee. It's great to be chatting with you today about our experiences. I think you've heard a lot about how the EVAs were pretty much all nail-biters, and that's certainly true. Those guys did great work out there though, and we're real proud of them.

Operating the arm, that was my primary task during the flight, and it actually went very nominally, very much as expected and as we had trained, it's pretty incredible to me to be thinking about this amazing stuff that we're doing, moving this giant telescope around in space with a robotic arm, and have it be nominal. So, I just take away that sense of wonder at doing the incredible and having it be nominal, that's sort of the big impression that it has made on me.

#### HUBBLE'S CONTRIBUTIONS

Senator MIKULSKI. Well, guys—first of all, thank you. It's really exciting to hear you. And we really, again, want to salute your daring and your bravery and your courage.

And this takes me to a question about all of your work, personally. You know, you've been training for this now for several years. You've had the support of devoted families and we've had delayed

takeoffs, setbacks, challenges in space. My question to you is, when you've literally put your lives on the line for this scientific endeavor. Could you tell me why you wanted to service the Hubble, and why, knowing at times, the uncertainty of the risk involved here, that you were willing to risk your lives to fix an aging telescope who seemed like its best days were behind it?

ASTRONAUT. Senator, it's really wonderful to appear before your committee and all the Senators there today. I really appreciate you taking the time to hear us.

You know, Hubble really has struck a fundamental chord in the human hearts around the world. It would be hard to find a K-12 school room anywhere in the United States of America that doesn't have a Hubble picture up on the wall.

From a science perspective, as you opened the hearing, it's probably the most significant scientific instrument of all time, in terms of its productivity. And astronomers try and answer, using Hubble, fundamental questions that we've had, since the beginning of human history. Where do we come from? Where are we going, what's the history of the universe, what is the stuff that we're made of, how was it made, what's the universe made of? All these very, deep philosophical questions that everybody has a curiosity about.

That's what Hubble and the other science, basic science that we do in this great country is all about. And Hubble is at the pointy end of that. And so, from a perspective of risk, we all take risks every day, driving up 295 to Baltimore, there's a certain risk there every morning in the commute. And we don't think about those risks, we think about the risks when, the stakes are a little bit higher, as they are for our space program. But when you look at the importance of what we do, things like Hubble, the International Space Station, our exploration program, our climate observing, observing the Earth, the dynamic Earth, all of these things are so very important to our country and to the world, that the risks are definitely worth it.

ASTRONAUT. And I would just add, quickly, that we're not leaving an aging telescope, we're leaving a newly refurbished telescope, with new instruments, instruments that have been repaired, a telescope that is now at the apex of its capabilities, and will be for a long time to come.

Senator MIKULSKI. Bill, did you have a question?

Senator NELSON. Hey guys, I just want you to know that you have made the spring in the step of every American a little bit bouncier by what you all have accomplished. And, what you said about us understanding this universe that we are a part of, and where did we come from, is now going to be better understood by the success of your mission. So, congratulations to all of the team.

Senator MIKULSKI. I, too, want to conclude this conversation, by again thanking you for your dedication, your sense of duty, and you really—when we talk about the Hubble and giving it, essentially, a new life and a new way of going and seeing the universe, you've touched our hearts, and you've also made history.

We want to wish you a very safe landing, and we look forward, Senator Nelson and I, to welcoming you at the Capitol, where we can give you a great big Hubble hug, and welcome you back home.

This concludes our part of the conversation.

Mr. MASSIMINO. Thank you very much, we've enjoyed it.

Mr. VENTRY. Atlantis, this is Houston ACR. That concludes the event, thanks.

Mr. MASSIMINO. Thank you, Senator Mikulski.

Senator MIKULSKI. Wow, wasn't that a hearing?

And, Senator Nelson, we were glad you were here.

Senators may submit additional questions for this subcommittee. We're going to request NASA's responses within 30 days.

SUBCOMMITTEE RECESS

This subcommittee will now stand in recess until Thursday, June 4, at 9:30 a.m., when we'll take testimony from the Director of the FBI.

Before I put down the gavel, wasn't that just wonderful? I mean, don't you all feel that that was pretty exciting?

So, thank you, again, Administrator Scolese, and thank you for your job, thank you for your service, and let's go where no Senate's gone before, and get this job done.

[Whereupon, at 12:50 p.m., Thursday, May 21, the subcommittee was recessed, to reconvene at 9:30 a.m., Thursday, June 4.]

**COMMERCE, JUSTICE, SCIENCE, AND RE-  
LATED AGENCIES APPROPRIATIONS FOR  
FISCAL YEAR 2010**

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**THURSDAY, JUNE 4, 2009**

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 9:31 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Lautenberg, and Shelby.

DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

**STATEMENT OF HON. ROBERT S. MUELLER III, DIRECTOR**

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Good morning, everybody. Today the Commerce, Justice, and Science Subcommittee will hear from FBI Director Mueller on the FBI's budget priorities for fiscal year 2010. We welcome the Director of the FBI, who is no stranger to this subcommittee, having now been the Director for 8 years.

This hearing will not only ascertain the appropriations needs of the FBI, but I also thought it would be a good time to take stock of where we are, not to in any way step on the toes of the Intel or Judiciary Committee. But the FBI is a wonderful and unique agency. It has iconic status in the minds of the American people. The American people count on the FBI to protect them from those people that have predatory intent against them, whether it's in streets and neighborhoods, whether it's when they go to get a mortgage, whether their children are on the Internet, or whether their a terrorist who would like to take down the United States of America.

We're going to do something unique today. We're going to have a public hearing on the appropriations and then we will also have a classified hearing. For those not familiar with what the Congress did after 9/11, when we had to see how we would deal with the threat of terrorism, the question was would we create a new agency, kind of an MI-5, or would we do an agency within an agency?

We created within the FBI a very robust effort on fighting terrorism. Many of the things to be discussed regarding what tools the FBI needs to meet that national mandate must occur in a classified

setting. So for the first time CJS will hold a classified hearing, and we will look forward to hearing what the FBI does.

I have been concerned for some time. Because that work is unseen, as it must, and so it's not often understood by policymakers and those who formulate the budget. So today we will be in an appropriate classified, secure forum where we can get to know more rigorously what the FBI's doing and then what we need to do. As part of the national mandate we gave to them, what is the national mandate we need to give to ourselves to make sure the FBI has any and all appropriate resources?

We're pleased that the President today is abroad making as many friends as we can, but we also know that there are many people who, as I said, have this predatory intent.

Today and at this particular part of the hearing, we want the FBI to know how proud we are in how they fight to protect Americans. They dismantle organized crimes and drug cartels. They combat drug violence. They solve kidnapping and extortion cases. They rescue the vulnerable from illicit traffickers. They protect children against pornography on the Internet and they investigate and prosecute corrupt public officials. We want to make sure the American people fully appreciate them and we want to make sure that they're fully appropriated.

As I said, the FBI was given a new mission after 9/11. There are essentially what we call four decision units—a wonderful way of talking about it when we talk about the FBI. I'm just going to review them briefly, go over the President's budget, and then want to turn to Senator Shelby, who I know has also a defense hearing.

There are four decision units, meaning how the FBI is organized for budgetary purposes. There is the intelligence unit, which is requesting \$1.64 billion. This is \$150 million over the President's fiscal 2009 request. This Intelligence Directorate includes field agents, virtual translation center, language analysis, and foreign terrorist tracking service.

We also have a counterterrorism and counterintelligence unit. That is a \$3.4 billion request, 9 percent over fiscal 2009. Counterterrorism means detecting and defeating terrorist operations before they occur—it's a pretty big job, and that's what we'll talk about—making sure that weapons of mass destruction are not built or detonated or imported to the United States. They're dealing now with the new threat of cyber computer intrusion, which goes to the President's cyber security initiative, and the foreign counterintelligence program and the critical response.

That which the American people are most familiar with is the criminal enterprise and Federal crime decision unit. This is a \$2.8 billion request, \$130 million above the fiscal 2009 appropriated level. The criminal enterprise deals with cyber crime, organized crime, trafficking, children's pornography, and of course the public corruption cases.

Then there is the criminal justice services unit, which is \$427 million, \$8 million over last year's \$418 million. The criminal justice services unit includes crime information on stolen property, the national computerized fingerprint check system, which local governments rely on so much, the FBI forensic laboratory, and many others.

We know that the FBI has new initiatives on the home front that we have asked them to take up. Senator Shelby has been a real leader on this in the Banking Committee. Senator, I'd like to commend you for that, on mortgage fraud. This subcommittee was one of the first to blow the whistle, if you will, to our colleagues or, shall we say, sound the horn on alert, that there was fraud as part of this economic meltdown, as thousands and thousands of Americans lost their homes. It was one thing to lose your home because you had lost your job; it was another thing to lose your home because of fraud.

So the FBI is asking for 50 new agents and 61 new forensic accountants, for a total of 225 agents, 42 fiscal analysts, and 61 forensic accountants to investigate complex financial investigations. We look forward to seeing if that is adequate enough.

We also know that we continue our very strong efforts in the area of child pornography and how that then ties in with the other aspect in our bill, with the missing persons unit.

The FBI also has responsibility for investigating Federal civil rights law, which means hate crimes, human trafficking, and access to Federal clinics. We have agents working on this and we need to continue work on it. I was appalled when Dr. Tiller was assassinated in a church on Sunday. I believe it is a hate crime. I'm glad that the person who assassinated him has been arrested. I look forward to a speedy trial and I look forward to those who use violent words to promote violent actions taking responsibility for it. But we're glad that the FBI is on the job for investigating hate crimes.

There are many other issues that we want to go over, but we want to hear more from Director Mueller than from ourselves. I'd like to turn to Senator Shelby for his statement. Senator, I would like to also yield to you for a first round of questions because we've got defense today. Well, we've got two defense hearings, one in the defense and then another kind of defense. So why don't I turn it over to you, and use such time as you want and ask any questions you want.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you. Thank you, Madam Chairman. I will put—with your permission, I'll put my questions in the record if I could.

But, Mr. Director, thank you again for appearing before the committee, but also thank you for the job you're doing as the leader of the Federal Bureau of Investigation.

I want to begin by also thanking the men and women of the FBI who worked to protect this Nation. We're indebted to them for the sacrifices they make to protect our country.

The FBI's role has changed dramatically, Mr. Director, as you know because you've been in the leadership there since 9/11. The mission now includes fighting terrorism, foreign intelligence operations, cyber crime, public corruption, white collar crime, and violent crime. Since 9/11 the FBI has shifted approximately 2,000 agents from the Criminal Division to address the expanding counterterrorism role for a good reason.

The FBI's request for fiscal 2010 is \$7.9 billion and, while this is a \$560 million increase over the 2009 funding level, many vital areas within the FBI remain underfunded, Mr. Director, as you know and we've discussed. With the shift of thousands of agents from the FBI's criminal mission to counterterrorism, a significant burden has been placed on our State and our local law enforcement agencies.

Mr. Director, while I'm grateful for the Bureau's efforts on thwarting terrorism—we all are—a 2 percent increase to the Criminal Division's budget is hardly a significant improvement in the investigative assets that you can provide as the head of the FBI to assist State and local partners to fight crime in our communities. We know that's a challenge on money and otherwise.

Because the Federal investigative assets are spread so thin, the concerns raised in the May 2007 inspector general report entitled "Coordination of Investigations by the Department of Justice Violent Crime Task Forces" are troubling. The report states that some DOJ components have nationwide policies that require coordination of task force operations. The ATF, the DEA, and the Marshall Service entered into memorandums of understanding that require their task forces to coordinate their operations. Yet the FBI to date to my knowledge has no policy of coordination.

To quote an FBI task force manager in the report, "The FBI only participates in joint investigations as the overall head agency and, because the FBI is the lead agency, the FBI special agents share information in accordance with FBI policy." I understand that, too, to a point.

Although this report was released in May 2007, 2 years ago, the situation does not appear to some participants to have improved. I continue to receive numerous complaints from various law enforcement agencies about the FBI's unwillingness to share information or encourage their State and local partners not to share with other Federal partners. I think this needs to be addressed and I think this is something you could do.

A lack of cooperation and refusal to share information helped lead to the worst terror attack in U.S. history. As the leader of the top law enforcement agency in the world, I hope you will take the initiative and at least address this problem the best you can.

Finally, the Terrorist Explosives Device Analytical Center, TEDAC, at Quantico, which we've talked about yesterday in my office, provides forensic analysis to the IEDs recovered in Iraq and Afghanistan. The need to exploit these devices, as you're well aware of, in a timely fashion for the military is critical to the safety of our soldiers, and it could be critical to our own citizens. This past Tuesday I met with Lieutenant General Metz, the Director of the Joint Improvised Explosives Device Defeat Organization. He showed me a picture of an FBI warehouse filled with boxes of evidence, stacked to the ceiling waiting to be processed. You can see it here.

It is clear that the current TEDAC at Quantico—and you've acknowledged this—is undersized, overwhelmed, and lagging. According to the Department of Defense, approximately 80 percent of the material submitted to TEDAC remains unprocessed and sits in warehouses. Most of the material sent in 2008 and 2009 has not

even received basic inprocessing and photography. At the FBI's rate of processing evidence, the Department of Defense indicates that it will take 20 years or more to clear the backlog. 20 years, that's too much, as you and I both discussed.

I believe that it's conceivable that somewhere within the warehouse of evidence, in one of those boxes, there might be a trace element of a fingerprint that could identify a terrorist bomb maker. By identifying that terrorist, he could be put out of commission and the lives of our warfighters and perhaps our citizens could be saved.

In the past 4 years the committee has provided, as we talked yesterday, the FBI with approximately \$86 million toward construction of a larger and more state of the art TEDAC. I hope that we can keep addressing this and build that facility, and I know you've indicated support for it.

Madam Chairman, I have a number of questions I'd like to submit for the record. I don't want to eat the time up. I do have a defense meeting I have to go to on Appropriations. But I will like to join you and the Director and others at your closed hearing later.

Senator MIKULSKI. Thank you very much, Senator Shelby.

Director Mueller, the floor is yours.

#### STATEMENT OF ROBERT S. MUELLER

Mr. MUELLER. Allow me to start by saying good morning, Madam Chairwoman, Ranking Member Shelby. It's an honor again to be here with you.

As you know, the FBI has undergone and, as you indicated, both Senators, we've undergone unprecedented transformation in recent years, combining better intelligence capabilities with a long-standing commitment to protect the American people from criminal threats. In so doing, we remain mindful that our mission is not just to safeguard American lives, but also to safeguard American liberties.

I want to thank the chairwoman and ranking member and other members of the committee for continuing support over the years, ensuring that the FBI has the adequate tools and resources to meet these threats from global to regional to local, or be those threats from a criminal, a terrorist, or a spy.

I would also like to thank members of your staff—Gabrielle Batkin, Erin Corcoran, Eric Chapman, Art Cameron, Goodloe Sutton—for their efforts in this regard and working with us on these budgets over the years.

The FBI's fiscal year 2010 budget request represents an outline of the resources needed for the FBI to succeed in its mission to keep America safe, while recognizing our responsibility to be good stewards of public funds. While my written statement and our budget request goes into greater detail, I do want to highlight a few specific areas, including cyber, economic crime, surveillance, and the FBI's infrastructure.

Certainly the threats currently present in the national security arena continue to be a grave concern. Terrorism remains our top priority and we cannot become complacent. We must continue to guard our country's most sensitive secrets from hostile intelligence

services. In addition to other measures, our budget request includes essential surveillance resources to combat these threats.

Our Nation's cyber infrastructure is also vulnerable to compromise or disruption, be it from a terrorist, a spy, or an international criminal enterprise. We must continue working to stay ahead of those using new and innovative methods to attack our networks, and our request does include resources to that end.

As each of you pointed out, these are by no means our only priorities. Economic crime, especially mortgage fraud and corporate fraud, presents a serious threat to our Nation. We are currently investigating more than 2,400 mortgage fraud matters, more than double the number from 2 years ago. We are investigating more than 580 corporate fraud cases and more than 1,300 securities fraud cases. We must continue our efforts in this area as it grows in magnitude and in scope.

Historically, the Bureau handled emerging criminal threats by transferring personnel within its Criminal Branch to meet the new threat. In response to the September 11 attacks, the FBI permanently moved approximately 2,000 of our criminal agents to our National Security Branch, as has been pointed out. This transfer has substantially improved our counterterrorism and intelligence programs and we have no intention of retreating from preventing another terrorist attack on American soil.

But, it has also reduced our ability to surge resources within our Criminal Branch to meet existing and emerging threats. I do wish to work with you to restore that balance to the extent possible, and in doing so the Bureau must still maintain its commitment to other key areas.

Public corruption continues to be our top criminal priority. The FBI has 2,500 pending public corruption investigations. In the last 2 years alone, we have convicted nearly 1,700 Federal, State, and local officials, and we must continue to hold accountable those who abuse the public trust.

Violent crime is also a substantial, serious concern. The citizens of many communities continue to be plagued by gang violence and gun crime. Since 2001, our gang cases have doubled and the spread of international gangs has increased. The FBI continues to combat this threat through more than 200 safe streets, gang, violent crime, and major theft task forces across the country. I must say as an aside to the comments made by Senator Shelby, I do believe that these task forces have a reputation of cooperating fully with our Federal and our State and local partners. Particularly since September 11, 2001, our relationships with Federal, State, and local partners have improved substantially around the country, although of course there will always be anecdotal evidence from this individual or that individual that it is not all it should be.

So too must we continue to work with our State and local counterparts to combat crimes against children, the most vulnerable members of our communities.

Finally, I want to update you on key changes we have made within the FBI's infrastructure to more effectively meet today's challenges. We know that the FBI's best and strongest asset is our people. So we have paid attention to recruiting, training, and maintaining a work force with skills necessary to meet the challenges

of today's mission. Our hiring goals include special agents, intelligence analysts, IT specialists, linguists, professional staff. This year we have received more than 450,000 applications and have already extended over 5,500 job offers.

We are also focusing on other portions of our infrastructure from information technology to training. SENTINEL, our new case management tool, is being developed and deployed on time and within budget. The FBI Academy at Quantico continues to train not only new special agents and intelligence analysts, but also hundreds of State, local, and international law enforcement partners each year, forging essential and lasting partnerships in a world where crime and national security threats are increasingly global.

In closing, I would again like to thank the committee for your support to the men and women of the FBI and I look forward to working with the committee on these and other challenges facing our country.

#### PREPARED STATEMENT

Madam Chairwoman, other members of the committee, I appreciate the opportunity to be here today and look forward to answering your questions. Thank you, Madam Chairwoman.

[The statement follows:]

#### PREPARED STATEMENT OF ROBERT S. MUELLER, III

Good morning, Madam Chairwoman Mikulski, Ranking Member Shelby, and Members of the Subcommittee. I appreciate the opportunity to appear before you today to discuss the President's fiscal year 2010 budget for the Federal Bureau of Investigation (FBI). I would also like to thank you for your continued oversight of the Bureau and for your efforts to ensure our success as we pursue the shared goal of making America safer.

As you are aware, the FBI celebrated its 100th Anniversary this past July. When the FBI was created in 1908, we had 34 investigators and a budget of about \$6 million. Now, the budget request before you today includes over 30,000 employees and over \$7 billion. Among the factors in this increased budget is the substantial growth in the FBI's mission over the past 100 years. We have gone from investigating gangsters and spies to terrorists and cyber intrusions. After the attacks of September 11, 2001, the FBI's priorities shifted dramatically as we charted a new course, with national security at the forefront of our mission. The intervening 8 years have seen significant changes at the FBI, and we have made remarkable progress. Today, the FBI is a stronger organization, combining greater capabilities with a longstanding commitment to the security of the United States, while at the same time upholding the Constitution and the rule of law and protecting civil liberties.

#### 2010 BUDGET REQUEST

The fiscal year 2010 budget for the FBI totals 32,883 positions and \$7.9 billion, including program increases of 1,389 new positions (407 Special Agents, 321 Intelligence Analysts, and 661 Professional Staff) and \$581.1 million. These resources are critical for the FBI to perform its national security, criminal law enforcement, and criminal justice services missions. Most importantly, the additional funding requested will continue to build upon our on-going efforts to integrate and fortify our intelligence and law enforcement activities.

Last year, at the urging of Congress and other oversight entities, the FBI altered its budget strategy to identify key end-state capabilities based on current and anticipated future national security and criminal investigative threats. This capabilities-based approach to planning ensures that the FBI possesses the capabilities and capacities necessary to address these threats. The FBI's 2010 budget strategy builds upon both current knowledge of threats and crime problems and a forward look to how terrorists, foreign agents and spies, and criminal adversaries are likely to adapt tactics and operations in a constantly evolving and changing world. This forward look helps inform and determine the critical operational and organizational capabili-

ties the FBI must acquire to remain vital and effective in meeting future threats and crime problems.

The FBI is continuing to refine the definition of end-state capabilities, including appropriate “metrics,” as requested by the Appropriations Committees.

The FBI continues to align its budget with the Strategy Management System (SMS) to ensure new resources are tied to our strategic vision and goals. Through the SMS, the FBI has struck an appropriate balance between its national security and criminal missions, and between short-term tactical efforts and longer-term strategic initiatives. The 2010 budget builds upon the initiatives delineated in last year’s budget and will focus on five critical topics.

I will highlight some key FBI topics below.

#### INTELLIGENCE

Over the past few years, the FBI has taken several steps to transform its intelligence program. Most recently, the FBI has been working to examine how we could accelerate this transformation and identify areas where we should focus our efforts. We established a Strategic Execution Team (SET), comprised of both headquarters and field personnel, to help us assess our intelligence program, evaluate best practices, decide what works and what doesn’t work, and then standardize operations across the Bureau.

With the guidance of the SET, we restructured our Field Intelligence Groups (FIGs), so they can better coordinate with each other, with street agents, and with analysts and agents at FBI headquarters. Drawing from the best practices that were identified, we have developed a single model under which all FIGs will function to increase collaboration between intelligence and operations, and to provide accountability for intelligence gathering, analysis, use, and production. The model can be adjusted to the size and complexity of small, medium, and large field offices.

This consistent process better allows us to share intelligence with our partners in more than 18,000 law enforcement agencies around the country. We also collaborate closely with our international counterparts. And as the world continues to shrink and threats continue to migrate across borders, it is more important than ever for the FBI to be able to develop and disseminate information that will assist our partners.

We have already implemented these recommendations in 24 of our field offices, and anticipate full rollout to the remaining field offices by December.

I cannot emphasize enough that targeted intelligence-gathering takes time, and requires patience, precision, and dedication. It also requires a unity of effort both here at home and with our partners overseas. Intelligence enables us to see the unseen and to discover new threats on the horizon. Yet even the best intelligence will not provide complete certainty, given the nature and number of threats we face.

The fiscal year 2010 budget includes 480 positions (41 Special Agents, 279 Intelligence Analysts, and 160 Professional Staff) and \$70.0 million to bolster the FBI’s intelligence program. These resources will, over time, enable the field offices and headquarters to better leverage investigative and analytic capabilities to develop and maintain a common understanding of the threat issues they currently face. Moreover, these requested resources will allow us to better identify emerging threats, assess those threats, and act against them.

#### CYBER

Protecting the United States against cyber-based attacks and high-technology crimes is one of the FBI’s highest priorities. In 2002, we created the Cyber Division to handle all cybersecurity crimes. Today, our highly trained cyber agents and analysts investigate computer fraud, child exploitation, theft of intellectual property, and worldwide computer intrusions.

The threat of cyber-related foreign intelligence operations to the United States is rapidly expanding. The number of actors with the ability to utilize computers for illegal, harmful, and possibly devastating purposes continues to rise. Cyber intrusions presenting a national security threat have compromised computers on U.S. Government, private sector, and allied networks. The FBI is in a unique position to counter cyber threats as the only agency with the statutory authority, expertise, and ability to combine counterterrorism, counterintelligence, and criminal resources to neutralize, mitigate, disrupt, and investigate illegal computer-supported operations domestically. The FBI’s intelligence and law enforcement role supports response to cyber events at U.S. government agencies, U.S. military installations, and the private sector. Because of this, the FBI has partnered with other Intelligence Community and Law Enforcement partners with complementary missions to establish the National Cyber Investigative Joint Task Force (NCIJTF). The task force is

a collaborative environment and was designed to identify, mitigate, disrupt, and investigate cyber threats. Within the operation of the NCIJTF, the FBI serves in a leadership, management, and operational role. In this capacity, the FBI is not the sole owner of operational activities, allowing operations to be conducted under the leadership of other member agency's authorities. The FBI's fiscal year 2010 budget includes 260 positions (107 Special Agents, 42 Intelligence Analysts, and 111 Professional Staff) and \$61.2 million to ensure the FBI has the technological infrastructure to conduct investigations and to turn seized network information into actionable intelligence products that can be used across the Intelligence Community to allow the government to move from a reactive to a proactive cyber attack response.

#### CRIMINAL

As you know, the current financial crisis has taken its toll on the U.S. financial markets and the American Public. A portion of this crisis is due to fraud and faulty accounting practices. The FBI has led and taken part in these types of investigations before. If you will recall, the FBI investigated the Savings and Loan (S&L) Crisis of the 1980s, which crippled our economy, and also led the Enron investigation. Many of the lessons learned and best practices from our work during the past decade will clearly help us navigate the expansive crime problem currently taxing law enforcement and regulatory authorities.

The FBI currently has approximately 250 Agents addressing the crisis that could result in over \$1 trillion in losses, including losses due to fraud and other criminal activities. Last year alone, financial institutions wrote off over \$500 billion due to losses associated with the sub-prime mortgage industry. With the passage of recent legislation that includes billions of dollars

being infused into the U.S. economy, including the Housing and Economic Recovery Act (HERA), the Emergency Economic Stabilization Act of 2008, the Troubled Asset Relief Program (TARP), and other asset relief programs, we anticipate an increase in fraud. In addition to the agents that are currently on board, the FBI's 2010 budget includes 143 new positions (50 Special Agents and 93 Professional Staff) and \$25.5 million to assist the FBI in combating mortgage and corporate fraud.

We also face significant challenges with regard to violent gangs, a nationwide plague that is no longer relegated to our largest cities. Since 2001, our violent gang caseload has more than doubled, and in fiscal year 2008 alone increased by 273 percent. These cases resulted in over 7,792 arrests, 2,839 convictions, 716 disruptions of violent gang activity, and 59 dismantlements of neighborhood gangs in fiscal year 2008.

As discussed in the 2009 National Gang Threat Assessment, produced by our National Gang Intelligence Center and the National Drug Intelligence Center, gangs are increasingly migrating from urban to suburban and rural areas and are responsible for a growing percentage of crime and violence in many communities. In addition, much of the gang-related criminal activity involves drug trafficking. We routinely work with our State and local partners to combat this pervasive threat, including over 140 Safe Streets Violent Gang Task Forces across the country dedicated to identifying, prioritizing, and targeting violent gangs. Task forces are extremely important in making the best use of available resources, and are used as a force multiplier to increase productivity and avoid duplication.

#### TECHNOLOGY

Although the FBI's information technology systems have presented some of our greatest challenges, they have also resulted in some of our most significant improvements in the past 8 years. The FBI has made substantial progress in upgrading its information technology capabilities to help us confront current threats and mission needs. Technology is the cornerstone to fulfilling the FBI mission as well as creating efficiencies for both FBI personnel and our Intelligence and Law Enforcement Community partners. Leveraging technology will allow the FBI to provide forensic, analytical, and operational technology capabilities to FBI investigators and analysts, law enforcement officers, and the Intelligence Community. Without enhanced resources to invest in applied research, development, knowledge building, testing, and evaluation, the FBI will not be able to take advantage of emerging technologies or adapt to a constantly changing and evolving threat and operational environment.

Although I have hired a new Chief Information Officer, Chad Fulgham, our priorities have not wavered. As you are aware, the FBI has dedicated significant effort towards SENTINEL, a case management system that will revolutionize the way the FBI does business. SENTINEL will be a fully automated, web-based case management system designed to support both our law enforcement and intelligence mission.

The system, when completed, will help the FBI manage information beyond the case focus of existing systems, and will provide enhanced information sharing, search, and analysis capabilities. SENTINEL will also facilitate information sharing with members of the law enforcement and intelligence communities. Phase I of SENTINEL was deployed Bureau-wide in June 2007. Phase II is being developed in increments, with the first segment to be delivered this April and continuing throughout the summer. The remaining phases will deliver additional capability through the end of development, in summer 2010.

The FBI is one of the few agencies that operate on three enclaves—unclassified, Secret, and Top Secret. We are continuing to deploy UNet, our unclassified Internet-connected system, to field offices nationwide. When complete, we anticipate approximately 39,000 UNet workstations will have been deployed to all FBI locations. We are also continuing the rollout of Blackberries to all agents, analysts and other critical professional support employees. This has provided these individuals with the ability to conduct their daily operational duties in the field without being chained to a desk. Their blackberry provides them with access to critical Sensitive but Unclassified applications they would normally access at their desks, such as email, Internet, the National Crime Information Center (NCIC), the Department of Motor Vehicles, etc. We are also continuing the technical refreshment of our Secret workstations, where most FBI employees conduct their day-to-day business. In addition, we continue to deploy SCION, our Top Secret network, to headquarters and field offices around the country. Strengthening these information technology programs allow us to communicate with our law enforcement and intelligence community partners in real-time.

We are also in the midst of developing the Next Generation Identification (NGI) system. NGI will expand the FBI's Integrated Automated Fingerprint Identification System beyond fingerprints to advanced biometrics. It will also produce faster returns of information, enabling law enforcement and counterterrorism officials to make tactical decisions in the field. Criminals ranging from identity thieves to document forgers to terrorists are taking advantage of modern technology to shield their identities and activities. This trend will only accelerate. Our new system will improve fingerprint identification capabilities, and as it becomes cost-effective, additional biometric data from criminals and terrorists. It will give us—and all our law enforcement and intelligence partners—faster capabilities that are more accurate and complete.

We are also building a Biometrics Technology Center, a joint facility with the Department of Defense's (DOD) Biometrics Fusion Center, which will serve as the center for biometric research and development. This facility will advance centralized biometric storage, analysis, and sharing with State and local law enforcement, DOD, and others. The FBI is currently working with the DOD in theater in Iraq and Afghanistan to collect and search biometrics information. This effort has shown the critical role emerging biometric technology has played in the war on terror. Information collected in Iraq and Afghanistan is transmitted via mobile biometric devices to global databases at the FBI Criminal Justice Information Services Division main facility, which houses the largest centralized collection of biometric information in the world. This biometric information is searched and matching results are relayed to units back in the field to assist in their operations and investigations. The fiscal year 2010 budget includes \$97.6 million in our construction account to move the construction phase of this project forward.

The FBI must also keep pace with evolving technology. Currently, all wireless carriers in the United States are upgrading their networks to third Generation wireless technology. This upgrade will radically transform voice, internet, email, short message service, multimedia services and any future services from circuit-switched data to packet transferred data. The FBI, along with the rest of the Intelligence Community, has created a Joint Wireless Implementation

Plan, which will allow us to provide the field with advanced tools and technologies as well as provide adequate training on the use of duly authorized wireless intercept and tracking tools. The fiscal year 2010 budget includes \$20.5 million to assist us in keeping abreast of this cutting edge technology and the ability to counter the technology posed by our adversaries.

#### INFRASTRUCTURE

Critical to the success of the FBI's mission are safe and appropriate work environments. Since September 11, the FBI's workforce has grown substantially. While the FBI has made considerable effort to hire quality personnel, provide the necessary training, and properly equip these new personnel, much of the FBI's infrastructure has not kept pace. For example, the FBI continues to work to provide secure work

environments for handling classified information and computers and other technology. In particular, there are two construction projects that are critical to the FBI's mission which are included in the fiscal year 2010 request.

The FBI Academy, in Quantico, VA was built in 1972, and has not undergone major renovation or upgrade since, aside from the addition of a dorm in 1988. The Academy is home to new Agents for the first 21 weeks of their FBI career; is the setting for new Intelligence Analyst training; houses the National Academy, which is a professional course for United States and international law enforcement officers to raise law enforcement standards, knowledge and cooperation worldwide; is the venue for the FBI's Leadership Development Institute, which provides leadership development education to FBI employees; and is the locale for various other FBI training opportunities. The Academy is continuously operating at maximum capacity, which leaves little opportunity for both scheduled and unscheduled renovation—a necessity due to the age of the Academy. The fiscal year 2010 budget includes \$10 million for an Architectural and Engineering (A&E) study, which will help us determine the full scope of renovations/construction necessary.

In addition, we are in dire need of a Central Records Complex (CRC), which will consolidate and digitize FBI records now dispersed among 265 FBI locations worldwide. The CRC will enable us to efficiently locate and access all of our records quickly, thus allowing us to more effectively process name checks, as well as provide critical case and administrative data that can be used for intelligence and investigative purposes. The fiscal year 2010 budget includes \$9 million to prepare these records to be universally-searchable, accessible, and useful intelligence and investigative tools prior to relocation to the CRC.

#### CONCLUSION

Chairwoman Mikulski, I would like to conclude by thanking you and this Committee for your service and your support. Many of the accomplishments we have realized during the past 8 years are in part due to your efforts and support through annual and supplemental appropriations. Unlike the FBI of 1908, today's FBI is much more than a law enforcement organization. The American public expects us to be a national security organization, driven by intelligence and dedicated to protecting our country from all threats to our freedom. For 100 years, the men and women of the FBI have dedicated themselves to safeguarding justice, to upholding the rule of law, and to defending freedom. As we look back on the past 100 years, we renew our pledge to serve our country and to protect our fellow citizens with fidelity, bravery, and integrity for the next 100 years, and beyond.

From addressing the growing financial crisis to mitigating cyber attacks and, most importantly, to protecting the American people from terrorist attack, you and the Committee have supported our efforts. On behalf of the men and women of the FBI, I look forward to working with you in the years to come as we continue to develop the capabilities we need to defeat the threats of the future.

Senator MIKULSKI. Mr. Director, we also want to note that Senator Lautenberg, one of our real active members, has joined us. Senator, I'm going to ask questions for a few minutes and then turn it over for comments and your questions as well.

Senator LAUTENBERG. Thank you very much, Madam Chairman. It's been a privilege to work with you as chairman over lots of years. Senator Mikulski is someone who knows how to hit the ball, hit it far and deep. We always—

Senator MIKULSKI. Better than the Orioles.

Senator LAUTENBERG. We always like being with her at committee hearings and other places.

Mr. Mueller—

Senator MIKULSKI. Senator, I haven't asked my questions, so I'm going to lead off with my questions.

Senator LAUTENBERG. Okay. I'm sorry, I misunderstood.

Senator MIKULSKI. I was just welcoming you. Let me get right to my questions and then we can get to other members as they come. First, I'm going to ask a question that is mundane and yet significant. This goes to another job we have in this CJS Subcommittee, which is making sure that the census is done on time.

The census needs to be done on time and it's had significant technological failure and will need to be more manpower intensive.

Is the FBI ready? With all of the security clearances or background checks that it's working on, will the FBI have sufficient ability to process the significant thousands of numbers of people that we have to hire to take the census? Remember, we're going to have people in every community saying: I'm from the government; I'd like to ask you some questions. Which means they'll be exposed to vulnerable populations, and we need to make sure they have had rigorous background checks.

Also, have you worked with the Census Bureau to make sure we'll be able to work at the State and local level to make sure that there will not be people imitating the census people? I think that's actually also a question for Secretary Locke.

You know, I worry about the FBI in so many ways, about having the resources. But really, with the new administration, you're working doubletime on doing background checks. While we're going to talk about mortgage fraud and fighting terrorists and stopping trafficking of human beings, we've got the FBI doing all these background checks.

So let me start with the census and ask, will you be able to meet the needs, because it will require a surge capacity?

Mr. MUELLER. Let me start, Madam Chairwoman, if I may, by saying that in the budget we've requested resources for agents and others to enhance our capability to do background checks generally, because it comes out of our other programs, and at a time like this, with a new administration, we take a great deal of resources and put them on the background checks. So our budget request for 2010 does include resources there.

Turning to the census, we began working with the Census Bureau—

Senator MIKULSKI. You say that in order to vet the administration's new people you do have the resources to do the background checks?

Mr. MUELLER. We do it now, but we take it—again, we prioritize, but I think you will find that the administration is quite satisfied with the pace of our background checks on the nominees that they've proposed. But it does take resources from other—

Senator MIKULSKI. But it's a strain on the FBI to do this?

Mr. MUELLER. It is a strain on particular offices. That is why we have specifically asked for additional resources down the road in 2010 to address the background checks. The current nominees, we have effectively, efficiently, and in a timely manner provided the backgrounds necessary to move forward and place persons in positions in this administration.

Let me move if I could to the issue of the census. In response to your letter of April 30, we have a response here today, we provided a copy to your staff, that addresses those questions in more detail. In brief, I can tell you that since 2007 we have been working with the Census Bureau on this particular issue. We anticipate that there will be something like 4.5 million names that we will have to run through records checks, and we are working with the Census Bureau in a number of ways to assure that this could be done efficiently.

First, we have established communications lines with the Census Bureau so that we can talk and exchange information quickly. We have had some difficulties with the quality of the fingerprint submissions to date and we are working with the Census Bureau to make certain that we improve and increase the fingerprint submissions. We are increasing our capabilities at IAFIS, our fingerprint facility out in West Virginia, and we are also anticipating peak processing periods where we will have to put on additional persons to respond to requests that will come in in some volume at particular points in time in the growth of the work force for the taking of the census.

So with that in place, I think we, with the Census Bureau are satisfying the need to make certain that we are responsive to their needs.

The other issue that you raise and have raised before, and that is individuals masquerading as census takers. We intend to be alert to that, to work with our field offices to very swiftly respond to any indications of that type of fraud, and move quickly to investigate, turn it over to the prosecutors, so that those individuals who would undertake that activity would be prosecuted.

Senator MIKULSKI. Well, I think that's fantastic. I don't want to dwell on this, but I want the record to show, number one, the Census Bureau will hire 1.5 million workers. This is while we're also screening for Cabinet-level positions and other security clearances. So we're asking the FBI to do a lot. I know this is not the kind of question that, oh, everybody comes and wants to be on CNN, but it's really significant. And the FBI only has so many people.

So we thank you for your response to this. We're going to take your letter that is a formal answer to the question and with unanimous consent include it in the record. As we move on, I believe you and Secretary Locke really are ready to do this. So thank you.

[The information follows:]

U.S. DEPARTMENT OF JUSTICE,  
Washington, DC, June 3, 2009.

Hon. BARBARA A. MIKULSKI,  
*Chairwoman, Subcommittee on Commerce, Justice, Science and Related Agencies,  
U.S. Senate, Washington, DC.*

DEAR MADAM CHAIRWOMAN: I am writing in response to your letter dated April 30 concerning the FBI's ability to conduct fingerprint searches and name-based background checks on temporary employees to be hired in support of the 2010 Census. You requested specific information regarding steps the FBI is taking to guarantee that the 2010 Census will not be delayed due to these necessary background checks; how the increase in workload will affect the FBI's background check system and the associated human resources; and if there will be any additional costs incurred in order to conduct these checks in a timely manner.

The U.S. Census Bureau currently estimates that 4.6 million names will be forwarded to the FBI for background checks and 1.4 million fingerprint cards will be electronically submitted to search against the FBI's Integrated Automated Fingerprint Identification System (IAFIS). Recognizing the significant challenge of this undertaking, the FBI's Criminal Justice Information Services (CJIS) Division and the U.S. Census Bureau have been working together since 2007 to ensure that the background check process does not adversely affect the conduct of the 2010 Census.

These preparations include the following:

—*Submission of Names and Fingerprints by the U.S. Census Bureau.*—An efficient and effective process for the submission of names and fingerprints by the U.S. Census Bureau is essential. The CJIS Division recently enhanced its telecommunications infrastructure that connects to the U.S. Census Bureau in Bowie, Maryland, in order to support the volume of information expected to be submitted. A second telecommunications line will be temporarily installed in

Bowie as a backup to ensure there is no interruption in service. In addition, the CJIS Division recently traveled to the U.S. Census Bureau's National Processing Center in Jeffersonville, Indiana, to observe the fingerprint scanning process, participate in mock training sessions for employees involved in the background check process, and provide feedback regarding those activities.

—*Improving the Quality of U.S. Census Bureau Fingerprint Submissions.*—The CJIS Division is working closely with the U.S. Census Bureau to improve the quality of its fingerprint submissions. Historically, rejection rates for all fingerprint submissions have been relatively low, with the fiscal year 2008 rate less than 5 percent. To date, submission rejection rates for the 2010 Census average over 40 percent, with peaks above 60 percent. Substandard submissions create a number of problems, including the need to resubmit the fingerprint information, utilization of an inordinate amount of system and human resources to resolve borderline submissions, and an increase in the potential for missed identifications of applicants who should be disqualified. In the past, there have also been instances where high rejection rates of U.S. Census Bureau search requests have resulted in degradation in the required 2-hour response time for criminal justice submissions.

During the on-site visit to the U.S. Census Bureau's National Processing Center, CJIS Division representatives suggested that the U.S. Census Bureau activate the image quality functions on all scanners to reduce the frequency of inferior quality images being submitted to the IAFIS. This built-in functionality alerts U.S. Census Bureau personnel of potential fingerprint sequence errors and insufficient image quality, thus providing the opportunity for corrective action prior to electronically transmitting images to the IAFIS. Such a change in procedure would preserve U.S. Census Bureau and CJIS Division personnel resources, as well as allow the U.S. Census Bureau to avoid additional user fees from the resubmission of fingerprint images.

—*Upgrading Components of the IAFIS.*—The CJIS Division is currently upgrading many components of the IAFIS. These upgrades, while primarily directed at the future growth of fingerprint submissions and expansion to include other biometric-related submissions, will also benefit the 2010 Census. These benefits will include larger storage capacity and a faster, more reliable network for all CJIS systems.

The increased workload from the 2010 Census will, for the most part, not adversely affect the FBI's regular background check system. The name-based background checks and fingerprint checks submitted in support of the 2010 Census can be accommodated by the current IAFIS in all but the peak processing period.

—*Peak Processing Periods.*—As previously noted, the U.S. Census Bureau projects that nearly 4.6 million name-based search requests will be forwarded to the FBI. Subsequent to the name-based checks, 1.4 million fingerprint cards will be electronically submitted for a search against the IAFIS database. Although fingerprint submissions will occur from December 2008 through 2011, there will be an extremely elevated submission rate during April 28–30, 2010. During this 3-day time period, the U.S. Census Bureau expects to submit approximately 485,000 fingerprint background checks to the CJIS Division. This is in addition to the FBI's current daily average fingerprint workload of 175,000 submissions. The U.S. Census Bureau workload estimate does not reflect the projected 30 percent rejection rate due to fingerprint submissions of insufficient quality. If the suggestions for improvement in fingerprint quality discussed above are not successful, the U.S. Census Bureau submission numbers could grow to over 600,000 for this 3-day period.

—*Mitigating Actions Planned.*—The FBI will take several steps to ensure timely processing of the U.S. Census Bureau submissions during the peak period without adversely affecting submissions from other agencies. The CJIS Division plans to temporarily redirect staff during the peak processing period and will provide overtime compensation and other incentives, as necessary, to ensure the availability of adequate staff. In addition, the CJIS Division has coordinated with other agencies to adjust the processing of their submissions to accommodate the anticipated fingerprint submissions from the U.S. Census Bureau. Specifically, CJIS plans to queue nonurgent transactions from other agencies during April 28–May 2, 2010. All users of IAFIS have been notified, through the CJIS Advisory Policy Board and the Compact Council, that during April 28–May 2, 2010, various types of noncriminal justice transactions will be held in queue for processing until May 3, 2010. In addition, processing for some criminal transactions considered to be nonurgent in nature will be limited during

this time period. There will be no degradation in service to the criminal justice community as a result of these actions.

In response to your inquiry regarding additional costs to the FBI to support the 2010 Census, the CJIS Division is currently upgrading many components of the IAFIS. These upgrades will provide larger storage capacity and a faster, more reliable network. The CJIS Division estimates the costs of these upgrades to be approximately \$70 million and, while primarily directed at the future growth of fingerprint submissions and expansion to include other biometric-related submissions, these upgrades will also benefit the 2010 Census. This cost will be offset by approximately \$34 million in fees to be paid by the U.S. Census Bureau, for a net cost to the FBI of approximately \$36 million.

The FBI appreciates your interest regarding the potential risks posed as temporary U.S. Census Bureau employees visit the homes of the general public and will take all steps necessary to support the processing of background checks for the 2010 Census. To this end, it is crucial that the U.S. Census Bureau commits to capturing fingerprints of sufficient quality to assist the FBI in identifying perpetrators of criminal acts and terrorist-related crimes.

I hope this information will be of assistance to you.

Sincerely Yours,

ROBERT S. MUELLER, III,  
*Director.*

Senator MIKULSKI. This then takes me to the issue of sufficient agents. In your testimony you said that after 9/11, 2,000 of your criminal agents were moved to the National Security Branch, and they did a spectacular job. However, "It reduced our ability," you say, "to surge resources within our Criminal Branch and meet existing and emerging threats." What we want to do is begin to help the FBI balance the multiple demands on it. We want you to be vigorous and stand sentry over these international predatory and even domestic threats. But we really want the FBI to continue to be the FBI that we know and love and count on, which is domestically.

In the President's budget you're given more resources. You have 450,000 applicants, that's a pretty amazing number. Do you have enough money to hire enough agents to do what you need, not only in the National Security Branch, but again to in some ways recapitalize our criminal enterprise area of the FBI?

Mr. MUELLER. We always have to prioritize. We did before September 11, depending on the surge of crime in the country before September 11. Our budgets in the last couple of years and this one seek additional resources, agents, principally in the cyber arena, as well as in mortgage fraud. We have received additional agents in those areas in years past. We could always use more agents. We have probably more than 530, I think, agents working mortgage fraud, corporate fraud, securities fraud at this juncture. Back in the savings and loan crisis, again in the early 1990s, we had almost 1,000.

Now, we have become, I believe, more effective in addressing white collar criminal cases by understanding that we need to move quickly and to bring them to fruition more quickly than we have in the past, and using computers and databases and intelligence capabilities to focus on and prioritize those cases. But nonetheless, we could always use more resources there.

Again, one thing that should not be lost, though, is that it's not just agents; it's the infrastructure for the agents.

Senator MIKULSKI. Right.

Mr. MUELLER. We can—I will say, over a period of time Congress has allocated to us agents, but what you need with those agents

is the supporting infrastructure, the intelligence analysts, the professional staff, the training. So it's not just a focus on agents itself, but on the support that the agents need. In our budget request, we have focused on expanding the academy. We have funds in here for security training and career paths. We have funds in here for intelligence, and it's not just intelligence for the national security mission, but also for the criminal mission.

So it's not just the agents we need, but it's also the infrastructure to support the additional agents on the criminal side.

Senator MIKULSKI. Well, thank you. I'm going to follow up on a second round, but I'd like to turn to Senator Lautenberg.

Senator LAUTENBERG. Thank you, Madam Chairman. The comments I made earlier I assume stand in the record, about the guidance and the leadership of the chairman.

Mr. Mueller, we have great respect for you. You have treated the position, that it gains I think more honor for a very distinguished group of people who we count on so dearly.

With 9/11, we learned that we have to be on guard constantly and, I might say, deeply with threats that come to our country. I was just in Turkey and the prime minister there decreed that one of the organizations that we have on the terrorist list, one of the countries, that he sees no problems with it. I found it really disturbing because when you look at the forces that we put together to fight against terrorism, it numbers in the hundreds of thousands of people. I think the chairman made reference to that.

So I thank you and the people who serve with you for your diligence and hard work and commitment to duty.

I want to commend the FBI for the recent sting operation that resulted in the arrests of four men plotting to bomb synagogues in New York City. As you're aware, Federal law actually allows individuals on the terror watch list to purchase a gun or even explosives, unless they have some other disqualifying factor such as being a felon. In response to a letter that I sent you in 2005, the Department of Justice recommended giving the attorney General the power to deny guns and explosives to terror suspects. Yet we still have the condition that existed then.

Isn't it time to close the terror gap in our laws?

Mr. MUELLER. Denying a weapon to somebody who's not convicted of an offense or subject to a psychiatric disability and the like is an issue that has been debated over the years. I would have to defer to the Department of Justice in terms of the current position on to what extent the identification of an individual as being associated or affiliated in some way with terrorism should bar that individual from obtaining a weapon.

We are notified when there appears to be a purchase by somebody who is affiliated with a terrorist group. But that is different than barring that individual from the outset from purchasing a weapon. But again, I have to defer to the Department of Justice in terms of the policy position that it is going to take on that issue.

Senator LAUTENBERG. You know, I've been a long-time supporter of closing the gun show loophole, which permits unlicensed dealers to operate without any responsibilities about the person they are considering selling a gun to. They don't have to ask a question about name, no identifying, address, any background. We came aw-

fully close some years ago in closing that loophole. Every time we see a situation develop where someone gets a gun, often illegally, and goes ahead and kills somebody because they're angry or otherwise—and lots of times these things are purchased, as was in Columbine, by someone underage and without any qualifications.

How do you feel about the gun show loophole?

Mr. MUELLER. Again, I'm going to defer to the Department of Justice. It's a policy issue that is made generally by the administration and by the Department of Justice.

Senator LAUTENBERG. Let me ask you then, do you think that we would be safer if there was regulatory jurisdiction on unlicensed dealers?

Mr. MUELLER. I believe there are arguments on both sides of that. From the parochial law enforcement perspective, fewer guns is better, from the perspective of law enforcement. On the other hand, this is a country which has so many guns at this point. You can't compare it to a European country that has had centuries—not centuries, because you haven't had guns hundreds of years, but certainly decades of stringent gun enforcement.

So you can argue both sides of that, and again I defer it to the Department of Justice.

Senator LAUTENBERG. I don't want you to do that. I don't want you to argue both sides. You're a man of honesty and good judgment. So we'll pass it.

Madam Chairman, may I have just a few minutes more, please?

Senator MIKULSKI. Go right ahead.

Senator LAUTENBERG. Thank you.

The FBI, as you know, identified the stretch between Port Newark and Liberty International as the most dangerous 2 miles in America. That was for a terrorist attack. An attack on this 2-mile area could cause untold suffering, death, injury, but crippling also the economy by disrupting major portions of the country's rail lines, oil infrastructure. We'd shut down the air traffic system, communications, all of these things.

Now, how will the FBI use these resources? I for one think that there's no question but that we have to respond to your request for a budget that gives you more—a better facility and more people. How will the FBI use the resources in that request to protect, further protect this 2 miles?

Mr. MUELLER. The resources we're requesting, whether it be a WMD response or cyber security, we have requests in for enhanced surveillance and we've got requests in for enhancing as I may have mentioned, our intelligence program, and national security investigations across the country.

But the understanding of the vulnerabilities of that 2-mile stretch has been longstanding. Not only us; by DHS too. There are a number of pieces that have been put in place already to protect it, amongst them the Joint Terrorism Task Force in Newark, which works closely not only with State and local counterparts in Newark and northern New Jersey and New Jersey as a whole, but also with New York.

On that Joint Terrorism Task Force are airport liaison agents that operate Newark International Airport. We have maritime liaison agents that are looking at the maritime vulnerabilities. We

have an area maritime security committee for the Port of New York and New Jersey that is a separate entity addressed specifically to those issues. We also have coordination with the rails, the railroad companies, and on the national railroad system.

Senator LAUTENBERG. Not meaning to interrupt, but what will—will the additional funds being requested help us be more effective in our terrorist act prevention role?

Mr. MUELLER. It will, in two specific ways. One, in terms of additional resources, special agents, professional staff and others, to conduct investigations or follow leads when we get counterterrorism leads; the other area, providing additional resources to build up our intelligence capability with special agents, with intelligence analysts, and with professional staff, that will increase our ability to gather insight into potential threats, including potential threats to this strip in northern New Jersey.

Senator LAUTENBERG. The gun show loophole, as I described, allows just about anybody to walk in and buy a gun, including an assault weapon. Yet criminal background checks can be completed in a matter of minutes. Shouldn't we require criminal background checks for all gun purchases at all gun shows?

Mr. MUELLER. Again, I think I incorporate my answer before. You can argue both ways, but this is an issue that is a policy issue that's left really to the Department of Justice. Whatever policy arguments are made by the Department of Justice I will be supportive of.

Senator LAUTENBERG. Mr. Mueller, you're too good for passing that ball. I don't want to put you in a spot here, but your opinions—and I don't know how guarded you have to be when throwing out an opinion.

Mr. MUELLER. I can tell you, as I said before, from the perspective of law enforcement, fewer guns and the ability to track guns enhances our capabilities.

Senator LAUTENBERG. Madam Chairman, you know very well that I wrote the law to prohibit spousal abusers from getting Federal gun permits. When I fought the legislation through, it was 1996 and they said: Ah, you don't need it, and so forth. And I did it in a way that it had to come up for a vote. Reluctantly on the part of many here, the bill was passed into law.

We have since 1986, since I wrote that law, we've had over 150,000 household bullies denied gun permits, and having to fight the fight with that was a terrible—

Senator MIKULSKI. How many?

Senator LAUTENBERG. 150,000. 150,000 of these household bullies have been denied gun permits.

Senator MIKULSKI. First of all, that's a great term, "household bully." But 150,000 people probably meant you either saved a spouse, a child, or a law enforcement officer coming to their rescue.

Senator LAUTENBERG. That's the case, and the first conviction came from a fellow who was a U.S. attorney in Denver, Colorado, whom I knew, and he called me up. He was so cheerful. He said: Frank, I've got great news; we just convicted one of these guys, a spousal abuser, and he got a 3½ year term for having acquired a gun, and had been only with a misdemeanor conviction only. Felons can't get them.

Anyway—and I'll close, Madam Chairman. The FBI's Newark Division covers all New Jersey counties except for three that are covered by Philadelphia. The split hinders, I am told, New Jersey's ability to have a unified strategy for combating crime, including gangs and gun violence, is at odds with the U.S. attorney's office and the ATF, both of which cover the whole State.

Would you commit to working with our office and the New Jersey Attorney General's Office to take a look at this issue and see if we can improve the operation by having it more carefully managed by the New Jersey headquarters?

Mr. MUELLER. I understand there have been ongoing discussions with Ann Milgram, who's a very good State's attorney, on that particular issue, as well as the issues relating to the Philadelphia area. It's Camden we're talking about, and Philadelphia. I believe we're working through those issues. They are complicated in some sense because, what I have come to find, that criminals don't really care about the borders. Criminals in Camden and Philadelphia don't really care that Camden may be in New Jersey and Philadelphia is in Pennsylvania. Gangs can operate very swiftly across borders. You see it here in this area with the District of Columbia and Maryland or the District of Columbia and Virginia, and they don't care about these borders.

For us to be effective, one of the things we can bring to law enforcement is the oversight of bringing the intelligence together from two separate entities, two States, in an area where criminals don't care about the different States. In order to be effective in reducing and investigating and locking up gang members, for instance, you need that overview.

That's one of the issues that we're discussing with the Attorney General of New Jersey and we do want to work through it and come up with a resolution, because I do understand from her perspective the desire to take care of her State and the responsibility she has working with the New Jersey State Police and the like. So there are some conflicting issues there that we're working through.

Senator LAUTENBERG. Thank you, Madam Chairman.

Senator MIKULSKI. Thank you.

If you intend to leave and join us for the classified hearing, we're going to be finished with this part in about 15 minutes and we'll resume. We're going to move up the classified hearing. So we'll move that up to quarter of 11 o'clock, and that way the Director will be able to expedite our conversation and also leave you to be on your way to fight crime and predators and for truth, justice, and the American way.

But in the meantime, a couple of more questions. I really value your comments in which you said that, yes, we need more special agents, but we need more intelligence analysts, more professional staff, and we need the resources to properly train them. I'd like to talk about training and technology and the situation at Quantico, which is kind of like the Naval Academy at Annapolis or West Point. You are the FBI Academy.

Let's go to technology. Really the major tool of the trade today to do so much about what you're asked to do is new uses of technology. We had a rough time with SENTINEL, where we had to start all over again. Could you brief the committee, number one,

on the fact that you've hired a new CIO, and also where we are on SENTINEL? As you know, we did have to start again, at considerable cost to the budget. So are we on time, on line, and ready to do the job?

Mr. MUELLER. Yes, ma'am. The failure was on what was called the Virtual Case File system early in this decade, where it had been put together early on without understanding our needs and ultimately did not satisfy our needs and at bottom would not work. The SENTINEL project that's been ongoing for 2, 2½ years now is on target to finish in I think 2010 and is within budget.

There have been adjustments that have been made along the way because we've done it in phases, the understanding being that I wanted to make absolutely certain that the first phase worked and that we laid the groundwork for the second phase and then the third and the fourth phase. We're finishing up the second phase now and, as I say, we've done I believe a good job of developing this, shifting internally to the program to take advantage of lessons that we've learned from phase one so that we can make improvements in phases two, three, and four.

I will tell you that our work with the contractor, Lockheed Martin, has worked well. I meet with the CEO of Lockheed Martin every 6 months to make certain that both of us know that it's on track and that any issues or glitches will be addressed by both of us. It has been a very worthwhile relationship.

So I am comfortable and confident that we are on the right track.

Senator MIKULSKI. When will SENTINEL be done? I mean, when will you have completed it?

Mr. MUELLER. I believe the last date is—it's the summer of 2010. I will tell you, just so that you know, we are going through right now one of the more challenging phases, and that is, without getting into the specifics, but moving databases, making certain that the security is adequate and the like. So our expectation is that it will be done by summer of next year, 2010. But we are going through some of the toughest periods.

Senator MIKULSKI. Well, as you say in your written testimony that you submitted: "The FBI is one of the few agencies that operates in three enclaves in terms of the net: unclassified, Secret, and Top Secret." Which also means the case management files have to operate at those three enclave levels. Am I correct in that?

Mr. MUELLER. You're correct. Right now SENTINEL will go generally at the second level, which is the Secret level. We're putting in place plans to expand it to the other levels.

Senator MIKULSKI. Now I want to go to the next one, which I found really surprising here. It said you are now going on something called the UNet, which is your unclassified Internet connect system, and you're now giving every agent a BlackBerry. Is that correct? I thought—

Mr. MUELLER. I think we have something like—

Senator MIKULSKI. Do you mean every agent doesn't have what everybody else has?

Mr. MUELLER. No, everybody—all persons, whether it be agents or analysts, who profitably can use the BlackBerry in the course of their work have a BlackBerry. I think it's over 20,000 at this juncture BlackBerries throughout the Bureau. And we have addi-

tional capabilities that we're including, in other words access to CGIS databases that will make the BlackBerry not only indispensable as it is to communications, whether it be email and otherwise, but also to data that the agent can use in the course of their day to day activities.

Senator MIKULSKI. It says things like the National Crime Info Center, DMVAs around the country—

Mr. MUELLER. Yes.

Senator MIKULSKI. Things that when they're in the process of doing it they need to be able to access unclassified databases, would help them do their job, etcetera. Is that correct?

Mr. MUELLER. That is correct. One needs to keep in mind, however, security.

Senator MIKULSKI. Yes.

Mr. MUELLER. When we're developing these new communication tools, everybody wants, including myself—and I tend to be impatient—the new communications tools. But we have to do it understanding that we need to put into place the requisite security to assure that if a particular BlackBerry becomes infected with malware or otherwise it does not give persons access to the system as a whole. Consequently, as we have built these various systems we have given the appropriate attention, I believe, to the appropriate security to assure that they are safe from intrusions.

Senator MIKULSKI. Well, that's excellent. But I want to go through the lessons learned from the debacle that took us to SENTINEL. I believe there are a lot of lessons that you've just even articulated, Mr. Director. But you're about to embark upon several new initiatives. You're developing the Next Generation Identification System that will expand the FBI's Integrated Automated Fingerprint ID System. You're building a new Biometrics Tech Center. Biometrics is supposed to be one of the latest and greatest in terms of identifying people.

Also, the private sector is developing new wireless technology, in which you need to be able to help us to deal with cyber intrusions, cyber attacks, et cetera.

So here is my question. Not only are you in the human development, but you're in the technology development. Human development is the special agents, the intelligence analysts, the professional staff. But this tech development we've got to get right the first time and do it—because we only can do this once now. We're really running severe deficits. We cannot ever go back if we screw up.

What steps are being taken—and we don't have to detail it in each area; maybe you want to submit a more formal statement—so that we do not end up in other techno boondoggles, quite frankly? It's a blunt term. I don't mean it to be a stinging term, but we've got to protect the American people by making sure the FBI has the right tools, and that's technology. That's as important to you now as carrying a gun; am I correct?

Mr. MUELLER. Yes.

Senator MIKULSKI. You can always get a new gun, but you can't go back and redo technology.

Mr. MUELLER. Yes. Well, the Virtual Case File, let me just start there, with trilogy. It was part of a trilogy system to upgrade our

capabilities. The other prongs of that or the other legs of that stool work exceptionally well and we have had a history, although occasionally overlooked, of developing databases and having them work effectively and efficiently. Fingerprints is one of them. DNA is another one.

Over the years the FBI has been on the cutting edge of developing technology for use in law enforcement, and I believe we continue to do so, and that history will be extended with the new Biometric Technology Center, with the upgrading of our fingerprint capabilities. My full expectation is that they will be as successful as they have been in the past.

The SENTINEL and several other packages that we have developed to handle our sources, to handle our intelligence requirements, are coming on line this year and the next and I believe will be not only successful, but will be models for others.

That's internally. If you look externally at our expertise, our ability to investigate cyber intrusions and the like, I believe we are ahead of just about every other agency in the world in terms of our capabilities, our experience, our expertise, and having the tools to utilize those skills to identify—well, investigate, identify, and then attribute cyber attacks. So whether it be internally to our information technology or externally to address some of the technology developments, I believe we are on course to be successful.

Senator MIKULSKI. Well, thank you. The actual policy and people issues we're going to talk about in the next classified hearing, because I think they're quite sensitive.

First of all, we want to work with you on that because it is a major public investment to accomplish a pretty significant public good.

I also want to note the issue that is part of the training for our FBI personnel. We want to support the effort to modernize Quantico. I'd like the record to show, as is in the statement of the FBI Director, that the Quantico, Virginia, the famous FBI Academy, was built in 1972. It has not undergone any renovations since we added a new dorm in 1988. So this is the FBI, the Federal Bureau of Investigation. We haven't done anything substantial in 37 years in terms of the physical facilities—the last thing we did was 20 years ago and it was a dorm that was wired for the pre-.com world.

We can't bring talented, smart people that you're recruiting with all kinds of backgrounds and bring them into a dated facility. I want you to know, Mr. Director, as well as the people who serve at the FBI and those who are coming to the FBI, that we're on your side on this one.

We understand in the budget request you ask for \$10 million to take a look at what is needed, so that we can upgrade the facilities with not only buildings with bricks and mortar, but modems and clicks, so that we can really do the kind of training necessary, because, as you said, it's one thing to bring in the people, but we've got to get them ready for the job, which means new threats, new challenges. But we need new facilities to do it.

So I'm going to pledge to you right now. We will support you in your people. We're going to support you in your technology, and

we're going to support you in making sure that we truly have a 21st century FBI Academy.

So there are other things I'm going to talk about. We're going to take a temporary recess. I also am going to reiterate what Senator Shelby said about the joint task forces at the State and local level. Those in Maryland are operating superbly. I'd like to compliment the Baltimore Field Office on this. I'd like to compliment the U.S. attorney, Rob Rosenstein, who has also coordinated some of this in our work with the District U.S. attorney. But my local law enforcement, from the police commissioners to the sheriffs and so on, just think these task forces are an amazing tool to get value and leverage the law enforcement effort. As you said, particularly in the capital region, whether it's Montgomery County or Prince George's County or going over to Northern Virginia, it's some pretty rough stuff going on. There seems to be like a brotherhood of the Beltway, if you will, that comes out of these joint task forces. We just want to reiterate, we want to support that effort while we're working on these other issues.

Before I recess us to take us to the classified hearing, is there anything you would like to add? Is there anything you didn't have a chance to say? Some questions or answers you've thought of that you'd like to share?

Mr. MUELLER. No. One thing I believe I'd like to respond briefly to, what Senator Shelby said about TEDAC. TEDAC is an important facility for IEDs. As he points out, we have had to prioritize and we are looking forward to further discussions in terms of funding to expand our capabilities in that regard. So we appreciate the input and the support.

Senator MIKULSKI. Thank you very much, and the record will so show that.

#### ADDITIONAL COMMITTEE QUESTIONS

Now, if there are no further questions this morning, Senators may submit additional questions for the subcommittee's official record. We request the FBI's response within 30 days.

Mr. MUELLER. Thank you. Thank you, Madam Chairwoman.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

#### QUESTIONS SUBMITTED BY SENATOR MARK PRYOR

*Question.* Can you talk about the specific activities you plan to carry out with the additional funding? Will you increase FBI field office involvement in these sorts of investigations? Hire additional agents and accountants?

*Answer.* The \$25.5 million in requested funding for mortgage fraud would enable the FBI to increase its available field investigative assets by 50 Special Agents and 61 Forensic Accountants. These additional resources would increase the FBI's ability to address mortgage fraud and sub-prime related corporate fraud through increased investigations and higher quality evidence production. This funding would provide the FBI with the resources necessary to expand its document management systems, allowing the FBI to expedite document analysis and add more robust analysis capabilities. Given the central role of document analysis in white collar crime investigations, the FBI anticipates that these enhancements would contribute significantly to the FBI's efforts to address mortgage fraud and sub-prime related corporate fraud. Finally, this funding would allow the FBI to address the non-personnel aspects of our current task forces and working groups, and to add new ones as appropriate. Given the advantages of the close working relationships the FBI has estab-

lished with State, local, and other Federal law enforcement and regulatory partners, the FBI considers these task forces and working groups to be significant, and highly cost effective, force multipliers.

*Question.* How does your budget increase coordination between the FBI and other agencies involved in the southwest border initiatives?

*Answer.* The FBI coordinates with other agencies involved in Southwest Border initiatives in numerous ways to ensure that efforts are synergistic, leading to better results than any one agency could achieve alone. For example, all FBI field offices, including those responsible for the States along the Southwest Border, include squads specifically responsible for criminal enterprise, violent crime, and public corruption investigations. These squads work closely with their counterparts in the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Drug Enforcement Administration (DEA), U.S. Immigration and Customs Enforcement (ICE), and other relevant agencies to coordinate the many activities in which they have complementary roles. In addition, several task forces and working groups focus on particular aspects of the problems arising along our Southwest Border. These groups include the following:

- El Paso Intelligence Center (EPIC).*—EPIC, which is led by the DEA and includes the participation of numerous Federal, State, and local agencies including the FBI, ATF, and ICE, was initiated to collect and disseminate information concerning drug, alien, and weapon smuggling. The FBI relies on the capabilities afforded by EPIC's multi-agency environment, coordinating its drug investigations closely with EPIC to ensure de-confliction and the efficient use of Organized Crime Drug Enforcement Task Force (OCDETF) resources.
- OCDETF.*—OCDETF serves an important coordinating role in this region. In addition to the activities discussed above, an OCDETF Strike Force comprised of twelve FBI agents, nine DEA agents, two ICE agents, and one Texas Ranger was created in El Paso, Texas, and works closely with DEA's Resident Office in Cd. Juarez, Mexico, to gather intelligence and, when possible, assist in operations. Among other things, this Strike Force's investigations target Mexican Consolidated Priority Organizational Targets (CPOTs), who are responsible for a large amount of violence around the border. Another OCDETF Strike Force, operating in the FBI's San Diego Division since January 2007, has also targeted Mexican CPOTs, identifying a number of Arellano-Felix Mexican Drug Trafficking Organization (MDTO) kidnapping/homicide cells working within southern California. The San Diego Strike Force works closely with that Division's Violent Crime/Major Offender Squad to relay intelligence gleaned during drug enterprise investigations that involve violent crime issues. This Strike Force also regularly reports on corruption within the Mexican government.
- High Intensity Drug Trafficking Area (HIDTA) Program.*—The FBI's El Paso Office participates in the regional HIDTA program, in which executive managers of numerous Federal, State, and local law enforcement agencies participate in monthly meetings to discuss the border violence and to look for trends and possible crossover into the United States.
- Southwest Intelligence Group (SWIG).*—The SWIG serves as the central repository and distribution point for FBI intelligence on both criminal and national security issues for this region. The SWIG is currently moving from FBI Headquarters (FBIHQ) to EPIC, where it will be co-located with ATF, DEA, and ICE personnel.
- Resolution Six, Mexico (R-6).*—The purpose of R-6 is to enhance the inter-agency coordination of drug and gang investigations conducted in Mexico, with R-6 personnel working in coordination with the Mexican military and law enforcement authorities to gather intelligence in pursuit of the MDTOs and individuals responsible for lawlessness along the Southwest Border. R-6 priorities include confidential human source development, supporting domestic cases appropriate for U.S. prosecution, cultivating liaison contacts within Mexico, and supporting bilateral criminal enterprise initiatives. The R-6 program is supervised by personnel located in numerous critical cities, including Mexico City, Cd. Juarez, Tijuana, Hermosillo, and Guadalajara.
- Some R-6 personnel are co-located with the DEA to facilitate the coordination of drug investigations and participation in the R-6/DEA Electronic Intelligence Collection Initiative. The goal of this initiative is to identify and collect intelligence on drug cartel structures in order to disrupt and dismantle these criminal enterprises. This initiative will be worked with Mexico's Secretaria de Seguridad Publica (SSP); once reliable and significant intelligence is obtained, the SSP will present the findings to Mexican federal prosecutors and initiate formal investigations.

—R-6 personnel also coordinate intelligence sharing and operations with ATF and United States Marshals Service (USMS) personnel stationed in Mexico in support of domestic FBI drug and organized crime investigations. R-6 and the USMS are initiating a Mexican Fugitive Intelligence Vetted Unit to locate fugitives that are members of, or protected by, drug cartels. The Mexican Intelligence Service will attempt to locate the fugitives using cellular tracking and other technologies and, once a fugitive is located, Mexican-vetted units will execute operations to apprehend the fugitive.

—*Violent Gang Safe Streets Task Forces (VGSSTFs)*.—A number of FBI VGSSTFs are working closely with Federal, State, and local law enforcement agencies to address violent street and prison gangs operating along the Southwest Border. Over the past several years, gangs such as the Mexican Mafia, the Almighty Latin Kings, and the Hermanos de Pistoleritos Latinos have been linked to the smuggling and distribution of drugs for MDTOs. With their alliances to MDTOs, these gangs have committed murders and other violence in an effort to control territory along the Southwest Border.

—*Border Corruption Task Forces*.—The FBI participates in six border corruption task forces along the Southwest Border. Among these is the National Border Corruption Task Force, which is a partnership between the FBI and U.S. Customs and Border Protection-Internal Affairs (CBP-IA) to be based at FBIHQ. The FBI and CBP-IA intend to coordinate their investigative efforts and resources and to conduct joint corruption training for field agents and managers.

*Question.* I think coordination of efforts not only at the Federal level but also between Federal agencies and State and local agencies is critically important in combating drug and gang violence. What funding and resources are directly invested in the FBI's 56 field offices? How closely do these field offices work with and share information with State and local law enforcement officers?

*Answer.* The FBI maintains drug, gang, and violent crime squads along the Southwest Border that work closely with State and local police agencies, as well as with the ATF, DEA, and ICE. For example, in calendar year 2008, the FBI's offices in San Diego, Albuquerque, Phoenix, El Paso, Houston, Dallas, Los Angeles, and San Antonio participated in investigations of approximately 400 OCDETF and Criminal Enterprise cases with a nexus to Mexican drug trafficking and approximately 300 OCDETF and Criminal Enterprise cases with a nexus to violent gangs. These investigations resulted in approximately 2,621 arrests, 1,036 indictments, and 620 convictions in fiscal year 2008.

The FBI currently funds and manages approximately 150 VGSSTFs to address violent street and prison gangs operating along the border, with funding comprised primarily of asset forfeiture funds and OCDETF funds, along with some direct FBI funding. The VGSSTFs are staffed by over 650 FBI agents and over 1,000 task force officers, which include both State and local police officers.

*Question.* What metrics are you using to ensure that funding spent on counter-drug and counter-gang activities successful?

*Answer.* The FBI measures the success of its counter-drug and counter-gang activities by tracking the statistics representing the following activities, all of which are tracked by FBI division, region, and nationally.

- Pending criminal enterprise and drug-related money laundering cases.
- Drug trafficking operations, violent street gangs, outlaw motorcycle gangs, and prison gangs disrupted or dismantled as a result of the FBI's investigative efforts.
- Seizures of illicit drugs and illicit drug funds.
- Arrests, indictments, convictions, and sentences.
- Asset forfeitures.

As described in the fiscal year 2010 Congressional Justification, during fiscal year 2010, the FBI anticipates disrupting 30 drug-trafficking organizations with links to Consolidated Priority Organization Targets (CPOT) and dismantling 15 drug trafficking organizations with links to CPOTs. In addition, the FBI anticipates dismantling 99 gangs and other criminal enterprises.

*Question.* Are there any specific initiatives focused on the issue of U.S. gang members participating in illicit activities coordinated by Mexican drug cartels?

*Answer.* Yes. The SWIG has dedicated 11 Intelligence Analysts to conduct strategic analysis of the Southwest Border. Among other missions, these analysts are reviewing the connections between the Mexican drug cartels and their use of United States gang members for narcotics distribution and enforcement within the United States. In addition, there are 24 VGSSTFs in the eight FBI Divisions on the Southwest Border (Albuquerque, Dallas, El Paso, Houston, Los Angeles, Phoenix, San Antonio, and San Diego). These task forces target the "worst of the worst," regardless

of their status atrans-national, national, regional or local/neighborhood-based gangs.

*Question.* Does this proposed budget have all the resources you need to carry out your cyber security duties?

Answer. The FBI will continue to work with the Congress, the Office of Management and Budget, and others in the Department of Justice to identify the funding needed to address the administration's priorities.

*Question.* What measurable goals do you plan to achieve with the funding provided under this budget?

Answer. The funds referenced in the question relate to the Comprehensive National Cybersecurity Initiative (CNCI), supporting the investigative, intelligence, and technological requirements to combat cyber attacks. These resources will increase the FBI's ability to respond to counterterrorism, counterintelligence, and criminal computer intrusions, with particular emphasis on intrusions with a counterintelligence nexus. These resources will ensure that the FBI has the technological infrastructure to conduct these investigations and to turn seized network information into actionable intelligence products that can be used across the United States Intelligence Community to allow the government to move from a reactive to a proactive posture with respect to cyber attacks.

The cyber threat to the United States and its allies is increasingly sophisticated, effective, dangerous, and broad in scope. Cyber-based attacks and intrusions directed at networks and networked systems continue to increase, resulting in substantial economic losses. The United States has suffered substantial loss of critical intelligence as a result of cyber exploitation, much of which may be by State sponsors. This is demonstrated concretely by foreign intrusions spanning U.S. government, academia, military, industrial, financial, and other domains, causing incalculable damage. Information related to U.S. government sensitive research, including military contractor research, has been compromised. Simply put, the Internet has provided foreign intelligence services with routine and immediate access inside otherwise well-guarded facilities and the ability to quickly exfiltrate massive quantities of data that otherwise (if in paper format) would require a well-coordinated fleet of tractor trailers and tankers to remove from our country.

To meet the demands posed by cyber threats, the FBI must develop significant new assets and capabilities and transition its efforts from reactive investigations to the proactive mitigation of threats before they cause harm. To accomplish these objectives, the FBI must expand in the following areas: investigatory capabilities, cyber intelligence collection, science and technology tools to enhance investigatory and intelligence collection capabilities, and FBI information technology information assurance. In order for the FBI to expand its investigatory and intelligence gathering capabilities, the FBI's ability to intercept data, develop technical tools, and conduct data analysis of networks and seized hardware must expand as well.

The National Cyber Investigative Joint Task Force (NCIJTF), which serves as a multi-agency national focal point for coordinating, integrating, and sharing pertinent information related to cyber threat investigations, forecasts a 50 percent increase in the number of cyber-related electronic surveillance operations, a 30 percent increase in cyber-related undercover operations, and a 10 percent increase in the number of confidential human source operations, all of which will increase the burden on existing resources.

*Question.* How does the Cyber Program coordinate and work with other cyber security initiatives such as the National Cyber Investigative Joint Task Force in which the FBI participates?

Answer. The NCIJTF is an alliance of peers that includes representation from across the U.S. Government intelligence and law enforcement communities. The NCIJTF's member agencies have complementary missions to protect national cyber interests, operating through the NCIJTF in a collaborative environment that assists, but does not direct, the operational and investigative activities of participating agencies. The FBI participates in the NCIJTF, which seeks, through the joint investigative and operational efforts of its members, to proactively develop predictive intelligence and mitigate the cyber threat through the active use of that intelligence. As the NCIJTF's executive agent, the FBI has aligned critical investigative efforts to avoid and prevent duplications of effort, redundant legal process, and operational confusion. The FBI has also placed experienced personnel in liaison positions working on the cyber security initiatives sponsored by other agencies to facilitate the growth and efficacy of the NCIJTF. For example, the FBI's Cyber Division has assigned an experienced Senior Executive Service official as a detailee to the National Counterintelligence Executive, supporting the development of the National Cyber Counterintelligence Plan called for under the CNCI.

## QUESTION SUBMITTED BY SENATOR SAM BROWNBACK

*Question.* I understand the demand on FBI aviation has increased substantially in recent years. I also understand the FBI may be forced to rely on older or sub-standard equipment to fulfill these missions and meet the increased demand for surveillance capabilities. Can you describe the demands being made of FBI aviation, especially for aerial surveillance missions? Do you have enough aircraft to meet the increased demands?

*Answer.* The FBI's aviation program provides safe and effective support for all facets of FBI investigative activities and law enforcement operations. Aircraft surveillance has become an indispensable intelligence collection and investigative technique, and serves as a force multiplier to the ground surveillance teams. Aircraft surveillance allows ground personnel to remain further away from the surveillance target, ensuring greater personnel safety and reducing or eliminating the risk of compromise.

On average, the FBI fulfills between 10,000 and 15,000 requests for surveillance each year. However, lower priority aviation surveillance requests go unaddressed because of the lack of aircraft, excessive aircraft down-time due to required maintenance or mechanical problems, lack of crew, or weather challenges. The growth in the number of surveillance requests for Foreign Intelligence Surveillance Act (FISA), Physical Surveillance (FISUR), and other national security priorities has not only increased the number of requests that cannot be filled, but has also reduced the availability of hours for criminal matters. Prior to September 11, 2001, criminal matters accounted for approximately 79 percent of total aviation surveillance hours; criminal matters now account for only 30 percent of the total aviation hours flown.

In 2005, the aviation program consisted of 104 surveillance aircraft regularly conducting surveillance missions—90 single engine and 14 twin/multi-engine aircraft. An audit of these aircraft found that the average age for both single and twin/multi-engine aircraft exceeded 25 years. Frequent inspections, overhauls, and parts replacement dramatically increase the maintenance costs and down-time of older aircraft. Eventually, it is more expensive to maintain the aircraft than to purchase a new one, particularly if it is necessary to update an old airframe with the avionics required to communicate with FAA towers, other aircraft, and ground surveillance teams. The FBI has been able to replace 23 of the single engine aircraft (with an additional 47 on order). The new aircraft are equipped with technology that allows the FBI to conduct surveillance at night, which is when most targets operate, as well as during reduced visibility conditions.

In contrast, the FBI has been forced to remove without replacement seven multi-engine aircraft from its inventory because of maintenance costs and overall age. The last two remaining "King Air" aircraft in inventory are multi-engine planes that are capable of imaging and identifying a moving target from above 10,000 feet, which is imperative for reducing the risk of exposure, and can fly for over five consecutive hours. Unfortunately, the FBI will have to remove these two airframes from operation beginning September 30, 2009 because of their age.

## CONCLUSION OF HEARINGS

Senator MIKULSKI. The subcommittee will temporarily recess and reconvene in the Capitol Visitor Center Room 217 to take classified testimony from the FBI Director. We are going to reconvene at 10:50 a.m., and we'll see you there.

The subcommittee stands in recess.

[Whereupon, at 10:30 a.m., Thursday, June 4, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]



# COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2010

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

## NONDEPARTMENTAL WITNESSES

[The following testimonies were received by the Subcommittee on Commerce, Justice, Science, and Related Agencies for inclusion in the record. The submitted materials relate to the fiscal year 2010 budget request for programs within the subcommittee's jurisdiction.]

### PREPARED STATEMENT OF THE AMERICAN MUSEUM OF NATURAL HISTORY

#### *Overview*

Recognizing its potential to support NASA in its goals to pioneer the future in space exploration, scientific discovery, and aeronautics research; to develop a balanced overall program of science, exploration, and aeronautics; and to establish new and innovative programs to enhance understanding of our Earth, other planets, asteroids, and comets in our solar system, as well as the search for life around other stars, the American Museum of Natural History (AMNH) seeks \$3.5 million to contribute its unique science, education, and technological capacity to helping the Agency to meet these goals.

#### *About the American Museum of Natural History*

The American Museum of Natural History (AMNH) is one of the Nation's pre-eminent institutions for scientific research and public education. Since its founding in 1869, the Museum has pursued its joint mission of science and public education. It is renowned for its exhibitions and collections of more than 32 million natural specimens and cultural artifacts. With some 4 million annual on-site visitors—approximately half of them children—it is one of the largest and most diverse museums in the country. Museum scientists conduct groundbreaking research in fields ranging from all branches of zoology, comparative genomics, and informatics to Earth science, biodiversity conservation, and astrophysics. Their work forms the basis for all the Museum's activities that seek to explain complex issues and help people to understand the events and processes that created and continue to shape the Earth, life and civilization on this planet, and the universe beyond.

#### *Common Goals and Accomplishments of AMNH and NASA*

For many years, NASA and AMNH have shared a joint commitment to cutting-edge research and the integration of that research into unique educational tools and resources. Over the years, the Museum has successfully pursued a number of competitive opportunities, has cultivated rich relationships with NASA divisions such as the Science Mission Directorate's Heliophysics division and the Informal Education program, and has worked with the Agency to develop innovative technologies and resources that reach audiences of millions in New York, across the country, and around the world.

The Museum's educational mission is fueled by and reflects cutting-edge science, including the work of our scientists in collaboration with NASA centers and researchers.

In keeping with that mission, the Museum has built a set of singular national resources that bring cutting-edge science and integrated NASA content to total audiences of more than 16 million in New York City, across the country, and around the world. One such resource, Science Bulletins—immersive multimedia science encounters, presenting science news and discoveries in various, flexible formats—is already on view in 41 locations across the country (including eight NASA visitor centers), with more being added. In the New York area alone, the Museum reaches nearly four million annual visitors, including more than 450,000 children in school groups and more than 6,000 teachers, with millions visiting online.

In fiscal year 2010, AMNH seeks to build on these successes by scaling up to reach even larger audiences with a program to communicate current science content—about NASA science and missions in particular—to diverse national audiences. The program encompasses:

*Presenting Current Science in Public Spaces: Science Bulletins*

Science Bulletins (SB) is a nationally distributed, multimedia science exhibition program targeted to informal learning settings. It presents cutting-edge research and discoveries in visually compelling feature documentaries and updates in flexible, large-screen, high-definition video and interactive kiosk versions, as well as in a free online version adapted for classroom use. We propose the following activities:

—*Scaling Up Science Bulletins Dissemination.*—In addition to AMNH, Science Bulletins is currently on view at 41 subscribing venues across the country (including eight NASA visitor centers), with annual audiences of more than 13 million. AMNH will continue its aggressive dissemination efforts to expand to additional sites and increase market penetration.

—*R&D and Program Delivery.*—AMNH will develop new visualization methods to advance the communication of current science, and will utilize them in developing and distributing the Science Bulletins program. We will: release approximately 26 bi-weekly updates, create six new feature documentaries, and increase website visits in the Bulletins focused on the earth, space, and biosphere. Science Bulletins DVDs will also be distributed in New York City schools.

—*Science Bulletins on the Web.*—AMNH will continue to promote the Science Bulletins website as a rich resource for formal education and educators, providing materials online to facilitate classroom use.

*Visualizing and Disseminating Current Science Data*

Visualization of real, large scale datasets into digital planetarium shows marks one of the Museum's signature achievements in the new era of digital dome technologies. AMNH proposes to draw on its unique expertise and capacity in visualizing astrophysics data from NASA and other sources to create a new digital space show that will engage children, families, and general audiences worldwide.

The Museum has very successfully leveraged past NASA investments with funds from other government and private sources, and will support the present project with funds from nonFederal as well as Federal sources. The Museum looks forward to continuing to contribute its unique resources and capacity to helping the Agency meet its goals.

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PREPARED STATEMENT OF THE AMERICAN MUSEUM OF NATURAL HISTORY

*Overview*

Recognizing its potential to support NOAA in its goals to understand and predict changes in the Earth's environment; to conserve and manage coastal and marine resources; and to protect, restore, and manage the use of coastal and ocean resources to meet our Nation's economic, social, and environmental needs, the American Museum of Natural History (AMNH) seeks \$2 million to advance a partnership with the agency to promote the environmental education, outreach, and research so pivotal to the health of our Nation and our planet.

*Common Goals of NOAA and AMNH*

The National Oceanic and Atmospheric Administration (NOAA) is committed to understanding and predicting changes in the Earth's environment and to conserving and managing coastal and marine resources to meet the Nation's needs. NOAA's Education Plan outlines a broad vision for reaching various audiences to build awareness and knowledge of issues related to the world's atmosphere, climate, oceans, and coastal ecosystems. Addressing the needs of teachers, students, and policy makers as well as the general public, the agency's goals include enhancing environmental literacy and knowledge, application of NOAA science, and development of a capable and diverse workforce for environmental science.

The AMNH, one of the Nation's preeminent research and education institutions, shares NOAA's commitment to these environmental goals and to the scientific research and public education that support them. Since its founding in 1869, the American Museum has pursued its mission of scientific investigation and public education. Its renowned exhibitions and collections serve as a field guide to the entire planet and present a panorama of the world's cultures. Museum collections of some 32 million specimens and cultural artifacts provide an irreplaceable record of life. More than 200 Museum scientists conduct groundbreaking research in fields as diverse as systematic and conservation biology, astrophysics, and Earth and biodiversity sciences. The work of scientific staff fuels exhibitions and educational programming that reach annually an on-site audience of nearly four million visitors—nearly half of them children.

The Museum's Center for Biodiversity and Conservation, founded in 1993, is dedicated to enhancing the use of scientific data to mitigate threats to global biodiversity, and to integrating this information into the conservation process and disseminating it widely. It conducts conservation-related field projects around the world, trains scientists, organizes scientific symposia, presents public programs, and produces publications geared toward scientists, policy makers, and the lay public.

The goal of all Museum resources and programming is to communicate to a broad public of varying ages and backgrounds about basic scientific concepts, scientific research, and new discoveries. The Museum's exhibition halls and the collections that give them life are perhaps the most visible way the Museum fulfills this educational mission. The Museum's renovated Hall of Ocean Life, for example, is a major focal point for public education on marine science issues. Drawing on the Museum's world-renowned expertise in Ichthyology as well as other areas of Vertebrate as well as Invertebrate Zoology, the Hall is pivotal in educating visitors about the oceans' key role in sustaining life on our planet. This Hall, together with the Halls of Biodiversity, Planet Earth, and the Universe, provide visitors with a seamless educational journey from the universe's beginnings to the formation and processes of Earth to the extraordinary diversity of life on our planet.

#### *Environmental Literacy Initiative*

In fiscal year 2004, as a result of Congressional leadership, the Museum entered into a partnership with NOAA that launched a multi-year marine science and education initiative. Support for this initiative, which encompassed a broad range of education and research activities closely aligned with NOAA goals and purposes, was continued in fiscal year 2005, recommended in the fiscal year 2007 Senate report, continued in fiscal year 2009, and further leveraged by Museum scientists who successfully secured competitive NOAA education and research funding.

Building upon this strong foundation, and in concert with the strategic priorities of NOAA and the Museum, we seek \$2.5 million in fiscal year 2010 to join with NOAA in education, outreach, and research activities that promote environmental literacy and knowledge. With the requested funds, the Museum will develop and deliver education programs and resources that leverage its environmental research programs and extend its recent major exhibitions on water and climate change. These activities will include presenting current marine- and climate-related issues and news in the Museum's nationally distributed Science Bulletins program; developing advanced visualization tools and techniques for presenting environmental data to the public in varied formats; developing on-site and online professional development offerings, exchanges, and resources for teachers, children, families, and students; presenting programs for the general public; and carrying out research that advances conservation of marine ecosystems systems.

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#### PREPARED STATEMENT OF THE AMERICAN PHYSIOLOGICAL SOCIETY

The American Physiological Society (APS) thanks the subcommittee for its sustained commitment to the National Science Foundation (NSF). Scientific research is critical to the future of our Nation because of the important role it plays in technological innovation and economic development. Congress recognized the potential of the NSF through passage of the America COMPETES Act of 2007, which authorized a doubling of the agency's budget over several years. However, the NSF budget failed to grow at the authorized levels and has fallen behind by more than \$1 billion in fiscal year 2009. We are grateful that Congress remedied this in the American Recovery and Reinvestment Act of 2009 (ARRA), which will provide the NSF with an additional \$3 billion over the next 2 years. This additional funding will allow the NSF to significantly expand its efforts to fund cutting edge research and support the scientific enterprise. Investment in research at the NSF will not only create jobs

and drive economic growth, but will allow us to better understand the diversity of life on earth, and how the changing environment affects all living things. The APS recommends that Congress fully fund the fiscal year 2010 NSF budget request of \$7 billion. This funding combined with the additional funds provided under the ARRA will enable NSF to continue to expand our Nation's research capacity and achieve the goals envisioned in the America COMPETES Act.

The APS is a professional society dedicated to fostering research and education as well as the dissemination of scientific knowledge concerning how the organs and systems of the body work. The Society was founded in 1887 and now has nearly 10,000 members who do research and teach at public and private research institutions across the country, including colleges, universities, medical and veterinary schools. Many of our members conduct physiology research that is supported by funds allocated through the NSF, and in this testimony, the APS offers its recommendations for the fiscal year 2010 budget.

The basic science initiatives funded by the NSF are driven by the most fundamental principles of scientific inquiry. The NSF provides support for approximately 20 percent of federally funded basic science and is the major source of support for non-medical biology research, including integrative, comparative, and evolutionary biology, as well as interdisciplinary biological research. It has been shown time and again that the knowledge gained through basic biological research is the foundation for more applied studies that lead to improvements in the lives of humans, animals and ecosystems.

The majority of the funding NSF provides is awarded through competitive, merit-based peer review, which ensures that the best possible projects are supported. NSF has an excellent record of accomplishment in terms of funding research endeavors that have produced results with far-reaching potential. Listed below are just a few of NSF's most recent advances in biological research.<sup>1</sup>

- Researchers using a genetically engineered strain of lab mice were able to show that mutations in a single genetic pathway underlie a number of common birth defects that affect heart, brain and jaw development.
- A multi-disciplinary team of investigators using imaging techniques to visualize how food moves through the human digestive track is learning how the gut is able to efficiently move food through the intestines in a way that maximizes nutrient absorption.
- Obesity researchers using powerful DNA sequencing technologies have found that bacterial populations present in the human gut are different in lean and obese twin pairs.
- Researchers studying Hantavirus, the virus that caused an outbreak of severe respiratory disease in the Southwestern United States in 1993, found that older, larger mice are primarily responsible for spreading the disease in the deer mouse population. Understanding how the virus is spread in carrier species is crucial to controlling the future spread of the disease to humans.

In addition to funding innovative research in labs around the country, the NSF also fosters the next generation of scientists through education programs. The APS is proud to have partnered with NSF in this program to provide training opportunities and career development activities to enhance the participation of underrepresented minorities in science. The APS was recognized for these efforts in 2003 with a Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM), funding for which was provided by NSF and was reinvested in our education programs. We believe that NSF is uniquely suited to administer science education programs of the highest quality, and we recommend that Congress continue to provide federal funds for science education through the NSF.

The America COMPETES Act and the ARRA demonstrate the strong support of Congress for the NSF because of its highly-regarded research and education programs. The APS thanks Congress for these votes of confidence in the NSF and joins both the Federation of American Societies for Experimental Biology and the Coalition for National Science Funding to recommend that the agency be funded at the Administration's requested level of \$7 billion in fiscal year 2010.

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PREPARED STATEMENT OF THE AMERICAN SOCIETY OF AGRONOMY, CROP SCIENCE  
SOCIETY OF AMERICA, SOIL SCIENCE SOCIETY OF AMERICA

Dear Chairwoman Mikulski, Ranking Member Shelby and Members of the Subcommittee: The American Society of Agronomy, Crop Science Society of America, Soil Science Society of America (ASA-CSSA-SSSA) are pleased to submit the fol-

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<sup>1</sup> Research examples from <http://www.nsf.gov>, accessed March 18, 2009.

lowing funding recommendations for fiscal year 2010. ASA–CSSA–SSSA thank Congress for the significant funding (\$3 billion) for NSF in Public Law 111–5, the American Recovery and Reinvestment Act of 2009. ASA–CSSA–SSSA understand the challenges the Senate Commerce, Justice, Science, and Related Agencies Appropriations Subcommittee faces with the tight science budget for fiscal year 2010. We also recognize that the Commerce, Justice, and Science Appropriations bill has many valuable and necessary components, and we applaud the efforts of the subcommittee to fund critical research through the National Science Foundation (NSF). ASA–CSSA–SSSA recommend the Subcommittee increase fiscal year 2010 funding for NSF by 7.85 percent (\$509,496,400) over fiscal year 2009 enacted, bringing total funding to \$7.015 billion, the budget allocated to NSF in the President’s fiscal year 2010 Budget Request. This strong level of funding will enable NSF to continue to fund worthy projects that promote transformational and multidisciplinary research, provide needed scientific infrastructure, and contribute to preparing a globally engaged science, technology, engineering, and mathematics workforce.

With more than 25,000 members and practicing professionals, ASA–CSSA–SSSA are the largest life science professional societies in the United States dedicated to the agronomic, crop and soil sciences. ASA–CSSA–SSSA play a major role in promoting progress in these sciences through the publication of quality journals and books, convening meetings and workshops, developing educational, training, and public information programs, providing scientific advice to inform public policy, and promoting ethical conduct among practitioners of agronomy and crop and soil sciences.

#### *Biological Sciences Directorate*

##### *Molecular and Cellular Biosciences (MCB)*

The Molecular and Cellular Biosciences division of NSF Biology directorate provides funding for critical research that contributes to the fundamental understanding of life processes at the molecular, subcellular, and cellular levels. Programs such as the Microbial Observatories and Microbial Interactions and Processes program increase the understanding of microbial distribution in a variety of ecosystems—the first step in evaluating microbial impact on ecosystem function. Furthermore, while we agree that considerable advances investigating interactions between microbial communities and plants have been made, critical gaps do remain requiring additional study to understand the complex, dynamic relationships existing between plant and microbial communities.

##### *Biological Infrastructure (DBI)*

The emergence of a bioeconomy requires greater reliance on plants and crops, further expanding their use into the energy sector. To meet the increased demands and develop more robust crops, additional fundamental understanding regarding the basic biology of these crops is needed. The Plant Genome Research Program (PGRP) accomplishes these objectives by supporting key NSF projects. The Developing Country Collaborations in Plant Genome Research program links U.S. researchers with partners from developing countries to solve problems of mutual interest in agriculture and energy and the environment. Additionally, in collaboration with the U.S. Department of Energy and the U.S. Department of Agriculture, the Plant Genome Research Program has financed the Maize Genome Sequencing Project—a sequencing project for one of the most important crops grown globally. Finally, the International Rice Genome Sequencing Project published in 2005 the finished DNA blueprint for rice, a crop fundamental to populations worldwide. To continue the discovery of new innovative ways to enhance crop production for a growing population, sustained funding is needed for similar projects.

#### *Geological Sciences Directorate*

##### *Atmospheric Sciences (ATM)*

Changes in terrestrial systems will have great impact on biogeochemical cycling rates. The Atmospheric Sciences division funds critical programs, such as Atmospheric Chemistry, that increase understanding of biogeochemical cycles. Soils and plants make up one of the largest sinks and sources for several environmentally important elements.

##### *Earth Sciences (EAR)*

The Earth Sciences division supports research emphasizing improved understanding of the structure, composition, and evolution of the Earth, the life it supports, and the processes that govern the formation behavior of the Earth’s materials. EAR supports theoretical research, including the biological and geosciences, the hydrologic sciences, and the study of natural hazards. An important program funded

within this division is the Critical Zone Observatories which focuses on watershed scale studies that advance understanding of the integration and coupling of Earth surface processes as mediated by the presence and flux of fresh water.

*Engineering Directorate*

*Chemical, Bioengineering, Environmental and Transport Systems (CBET)*

The Environmental Engineering and Sustainability program and its Energy for Sustainability sub-program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable. Most world energy needs are currently met through the combustion of fossil fuels. With projected increases in global energy needs, more sustainable methods for energy production will need to be developed, and production of greenhouse gases will need to be reduced.

*Directorate for Education and Human Resources*

*Division of Graduate Education*

ASA-CSSA-SSSA are dedicated to the enhancement of education, and concerned about recent declines in enrollment for many sciences. To remain competitive, scientific fields need to find new, innovative ways to reach students. The programs offered in the Education and Human Resource Directorate accomplish this goal. The Graduate Teaching Fellows in K-12 Education program offers graduate students interested in teaching an opportunity to get into the classroom and teach utilizing new innovative methods. Graduate students are the next crop of scientists. Therefore opportunities for study must be increased with the ever-increasing demands of science. Global problems rely on scientific discovery for their amelioration; it is critical that the United States continue to be a leader in graduate education. ASA-CSSA-SSSA recommend strong support for the Integrative Graduate Education and Research Traineeships (IGERT) program. Because education is the key for our future competitiveness, it is essential that sustainable, long-term support for these and other educational programs be made.

*Division of Undergraduate Education*

Advanced Technological Education (ATE) program focuses on the education of technicians for the high-technology fields that drive our nation's economy. We support continued, strong funding for this program. The program involves partnerships between academic institutions and employers to promote improvement in the education of science and engineering technicians at the undergraduate and secondary school levels.

*NSF-Wide Programs*

*Dynamics of Water Processes in the Environment*

One of our greatest environmental challenges is to ensure an adequate supply and quality of water for human use while maintaining the integrity of natural ecosystems. The economic vitality of the Nation relies on fresh water for agriculture, energy, manufacturing, and other industries. Understanding water dynamics is essential to understanding climate and environmental change. At multiple scales of time and space, water connects physical, geochemical, biological, and ecological processes. Water also links and integrates natural systems with human social systems. ASA-CSSA-SSSA support the multi-disciplinary, multi-scale research program, Dynamics of Water Processes in the Environment.

*Climate Change Science Program*

The Climate Change Science Program, initiated in 2002, provides the Nation and the world with the science-based knowledge to predict change, manage risk, and take advantage of opportunities resulting from climate change and climate variability. Biological systems are critical to mitigating the impacts and effects of climate change. Additional research is needed to examine potential crop systems, plant traits, wetland properties, and other ecosystem adaptations to help manage climate change. The basic sciences of agro-ecosystems, plant improvement, soils, and riparian and wetland ecology need support as well.

As you lead the Congress in deliberation on funding levels for the National Science Foundation, please consider American Society of Agronomy, Crop Science Society of America, Soil Science Society of America as supportive resources. We hope you will call on our membership and scientific expertise whenever the need arises.

Thank you for your thoughtful consideration of our requests. For additional information or to learn more about the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America (ASA-CSSA-SSSA), please visit [www.agronomy.org](http://www.agronomy.org), [www.crops.org](http://www.crops.org) or [www.soils.org](http://www.soils.org) or contact ASA-CSSA-

SSSA Director of Science Policy Karl Glasener (kglasener@agronomy.org, kglasener@croplife.org, or kglasener@soils.org).

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PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR MICROBIOLOGY

The American Society for Microbiology (ASM) is pleased to submit the following testimony on the fiscal year 2010 appropriation for the National Science Foundation (NSF). The ASM is the largest single life science organization in the world with more than 43,000 members. The ASM mission is to enhance the science of microbiology, to gain a better understanding of life processes, and to promote the application of this knowledge for improved health and environmental well-being.

The ASM strongly supports the administration's stated fiscal year 2010 budget proposal for NSF of \$7 billion, an 8 percent increase over the fiscal year 2009 appropriation.

The administration's proposed NSF budget is a critical step toward maintaining the nation's global leadership in science and technology. Investments in high quality research revitalize economic growth, and strong funding for NSF directly boosts innovative basic research across the United States. Many priority areas specifically identified in the America COMPETES Act of 2007 intersect the broad mission of NSF to maintain the vitality of the U.S. academic science and engineering enterprise to include enabling university-industry partnerships, encouraging interdisciplinary research, and improving funding rates for new investigators to strengthen the nation's workforce in science and engineering. More than 80 percent of NSF's annual budget is awarded to academic researchers, and as a result supports approximately 20 percent of all federally funded basic research conducted at U.S. colleges and universities.

We commend Congress for the substantial and much needed NSF funding included in the American Recovery and Reinvestment Act of 2009 and the Omnibus Appropriations Act of 2009. The need remains, however, for a steady and reliable increase of fiscal year appropriations to offset the detrimental cuts and loss to inflation in past NSF budgets. Sustained NSF funding yields considerable impact on our national research endeavor. Each year, NSF supports research by nearly 200,000 individuals across all fields of science and engineering, at over 1,900 institutions in all 50 States. NSF currently receives about 45,500 requests annually for its competitive, peer-reviewed grants, selecting roughly 11,500 to receive funding for new multi-year projects. It also expends over \$400 million each year in professional and service contracts, further infusing resources into America's private science and technology sectors.

The NSF promotes innovation across many disciplines, generating 21st century technological advances to preserve human health and our environment. NSF funding keeps the Nation at the leading edge of discovery and ensures a skilled technical workforce in the future. The NSF's wide-ranging funding portfolio is the foundation for much of the nation's enviable success in the biological and physical sciences.

*Support for the Directorate for Biological Sciences*

The ASM is concerned with past low funding levels for NSF's Directorate for Biological Sciences (BIO.) Although ASM does not have details of the administration's budget request for NSF, we recommend an fiscal year 2010 funding level of at least \$675 million for the BIO directorate, a 10 percent increase over the fiscal year 2008 level. In fiscal year 2008, the overall funding rate for BIO grants was only 16 percent, which failed to capture the many meritorious research opportunities that NSF could have funded with a larger budget. Funding rates for BIO research grants have been consistently lower than those for NSF as a whole, and the gap between BIO and agency-wide funding rates has grown in recent years.

The NSF provides about two-thirds of Federal support for U.S. academic basic research in non-medical biological sciences, a major source of funding for research, infrastructure, and education in these crucial disciplines. Research supported by the NSF through BIO programs is critical for understanding issues of national importance, such as sustaining the environment, improving agriculture, or maintaining public health and well being. NSF funding is particularly important to understand how living organisms, from microbes to humans, function and interact with non-living systems. It is also important because the physical, mathematical, engineering, and computational sciences increasingly use living systems to raise questions and find solutions in their respective fields.

Life sciences are in transition. Traditional disciplines are giving rise to multi-disciplinary and interdisciplinary programs, creating new research areas that then become new disciplines in their own right. Science is constantly changing and NSF

is adept at responding to this constant transformation, supporting work at the intersection between the life and physical sciences. In February, 2009 the NSF directorates for biological sciences and geosciences announced a new NSF funding emphasis on interdisciplinary research that bridges both areas, to meet the challenges of the earth's changing physical and chemical environments. BIO supports other scientific disciplines through its own funding priorities and through collaborative programs, such as those in environmental genomics, biogeochemistry, and biochemical engineering. BIO also advances Federal interagency priorities, such as research on climate change, and NSF-wide programs, such as Dynamics of Water Processes in the Environment, which studies freshwater systems to provide solid scientific bases for decision-making about water resources.

Growth in BIO appropriations is essential for progress in the life sciences and other allied disciplines, and to sustain the ongoing innovation flowing from NSF-supported projects across the United States. Last year, academic researchers at the University of Minnesota showed that bacteria (*Geobactersulfurreducens*) can be harnessed to form batteries and biosensors; previous and ongoing studies have shown that these and other bacteria that produce electrical currents can be used to create microbial fuel cells that that wastewater organic compounds while producing useful electricity. Other researchers are leveraging the fact that each ecosystem contains a particular suite of microbes, inventorying the microbial DNA profiles unique to each type of ecosystem with the ultimate goal of using microbes as early warning systems of a variety of ecological threats.

It is imperative that NSF has sufficient resources to increase competitive awards and research grants that ensure scientists and engineers remain involved and generate basic research discoveries. The ASM strongly supports increasing BIO funding made available to the thousands of post doctorates, senior researchers, graduate students and teachers who contribute immeasurably to our collective scientific knowledge through BIO programs. Growth in the BIO budget should be commensurate with growth in the total NSF budget. ASM, therefore, recommends an increase in the BIO budget consistent with that of overall NSF increases for Research and Related Activities in fiscal year 2010.

#### *Support for the National Ecological Observatory Network (NEON)*

The ASM strongly supports the continued BIO-funded effort to expand the National Ecological Observatory Network (NEON), and the integration of microbial biology into the NEON framework. Such integration promises a new and much needed level of understanding of the intricate interactions between microbes, ecosystems and climate change. The network utilizes state-of-the-art communications between instrumentation sites located across the continent, to collect data on ecological systems. It creates a unique virtual laboratory to study and predict the cause-and-effects between environmental change and biological processes. Although ecological forecasting is critically important in our changing world, the ASM urges Congress to ensure that funding for BIO is expanded sufficiently to support core programs and NEON-related initiatives.

#### *Support for Geosciences, Engineering, Mathematical and Physical Sciences*

The ASM supports increased fiscal year 2010 funding for research activities at the Geosciences Directorate (GEO), the Engineering Directorate (ENG), and the Mathematical and Physical Sciences Directorate (MPS).

Within the Geosciences Directorate, the Division of Earth Sciences (EAR) supports research that examines the relationship between living systems and the earth's changing physical environment. The Geobiology and Low-Temperature Geochemistry Program provide an example of the mutually beneficial relationship between biological sciences and geosciences. Among other areas, this program studies interactions between microbes and economically important resources, and interactions among microbes, minerals and groundwater. The program also facilitates cross-disciplinary efforts to harness new bioanalytical tools like those used in molecular biology. Another EAR-funded effort, the Continental Dynamics Program, supports work like the recent discovery of microbial contaminants in a 35-million-year-old crater crumbling beneath Chesapeake Bay, a potential threat to regional water supplies. The ASM supports \$178 million in funding for Earth Sciences, 14 percent above the fiscal year 2008 level, with an emphasis toward increased support for the biological geosciences and ocean sciences funding.

Of particular interest to ASM, research funded by the Engineering Directorate's Chemical, Bioengineering, Environmental and Transport Systems Division (CBET) regularly uses microbial systems to examine problems involved in the processing and manufacture of economically important products, as well as the efficient utilization of chemical resources and renewable bioresources, and the development of

novel ways to produce drinking water and wastewater effluents to reduce public exposure to pathogens. Much of this work depends on bioinformatics originating from genomic and proteomic studies. Bioengineering is another cross-cutting research area of impressive scope, evidenced by recent development of nanoscopic plastic spheres, a type of artificial cell, designed to stimulate human immune cells to kill cancer cells. Not only does CBET-funded research contribute significantly to our knowledge base, it also helps develop the workforce for major U.S. industries like petroleum, pharmaceuticals, microelectronics, and medical devices. The ASM supports funding the CBET at \$173 million, the proposed fiscal year 2009 level. Priority applications for the life sciences within CBET include programs with great potential to enhance human health: tissue engineering, biophotonics, nano-biosystems, and biotechnology, which could lead to improved biosensors, biomaterials, and controlled drug release.

Researchers funded by the Mathematical and Physical Sciences Directorate frequently collaborate with other scientific disciplines; this cooperation is important for continued progress in physics fields, such as studies at molecular and cellular levels. The NSF contributes 67 percent of Federal support for academic basic research in the mathematical sciences and 42 percent in the physical sciences. MPS supports interdisciplinary research that greatly benefits both the physical sciences and the life sciences, by creating state-of-the-art tools and techniques that assist in advancing biological research and other disciplines. For example, MPS is a partner in the NSF-wide initiative, Dynamics of Water Processes in the Environment. The scope of MPS activity is enormous, from computational tools for cyberscience to understanding how microscopic processes transform the living world.

#### *Workforce Development and Training*

Support for science and engineering education is an essential part of NSF's mission. NSF-funded research is thoroughly integrated with formalized education strategies embedded into each NSF program, designed to ensure there will always be a skilled workforce to support future scientific, engineering and technological fields, as well as a robust community of educators to train and inspire coming generations. NSF is the second largest Federal supporter of academic research, and Congressional appropriations directly strengthen education in science, technology, engineering, and mathematics. Disappointing funding trends in the sciences can be seen clearly in U.S. academic institutions. As alternate career paths, non reliant on government funding, are seen as more desirable, the number of U.S. students pursuing careers in the sciences has declined. Foreign student enrollment however has increased and the fear is as these students leave the United States their departure will create a brain and talent drain, significantly reducing the Nation's ability to compete on a global scale. It is critical that Congress understand the need to invest adequately for students to recognize that science and engineering represent worthwhile career paths.

#### *Conclusion*

Since 1950, it has been the NSF's primary responsibility to energize the nation's academic science and engineering enterprise. In meeting this mission, NSF has been a powerful motive force in U.S. innovation, facilitating research at the frontiers of scientific exploration. Consistent and reliable funding support for the NSF is necessary to maintain and improve U.S. scientific and economic competitiveness on a global scale. Funding essential programs as outlined above will remain an urgent priority in the coming years, and establishing a base level of \$7 billion for fiscal year 2010 will begin to recoup serious losses from past budget cuts. Increasing appropriations for the NSF should ensure that all areas of science are at least adequately funded and that basic science research is encouraged and supported. The ASM appreciates the opportunity to provide written testimony and would be pleased to assist the subcommittee as it considers the fiscal year 2010 appropriation for the National Science Foundation.

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PREPARED STATEMENT OF THE GEOLOGICAL SOCIETY OF AMERICA

#### *Summary*

The Geological Society of America urges Congress to appropriate at least \$7.0 billion for the National Science Foundation (NSF) in fiscal year 2010, an increase of approximately \$500 million or 8 percent compared to the enacted level in the Omnibus Appropriations Act for Fiscal Year 2009. This funding level would uphold the President's fiscal year 2010 budget request of \$7.0 billion for the National Science

Foundation. However, it is below the authorized funding level of \$8.1 billion under the America COMPETES Act (Public Law 110–69).

The Geological Society of America supports strong and growing investments in earth science research at the National Science Foundation and other Federal agencies. Substantial increases in Federal funding for earth science research are needed to ensure the health, vitality, and security of society and for stewardship of Earth. These investments in earth science research are necessary to address such issues as energy resources, water resources, climate change, and natural hazards. Earth science research forms the basis for training and educating the next generation of earth science professionals.

The Geological Society of America, founded in 1888, is a scientific society with over 22,000 members from academia, government, and industry in all 50 States and more than 90 countries. Through its meetings, publications, and programs, GSA enhances the professional growth of its members and promotes the geosciences in the service of humankind. GSA encourages cooperative research among earth, life, planetary, and social scientists, fosters public dialogue on geoscience issues, and supports all levels of earth science education.

#### *Rationale*

Science and technology are engines of economic prosperity, environmental quality, and national security. Federal investment in research pays substantial dividends. According to a recent report by the National Academies, “. . . the economic value of investing in science and technology has been thoroughly investigated. Published estimates of return on investment (ROI) for publicly funded R&D range from 20 to 67 percent ” (Rising Above the Gathering Storm, 2007).

The earth sciences are critical components of the overall science and technology enterprise. Substantial increases in Federal funding for earth science research are needed to ensure the health, vitality, and security of society and for Earth stewardship. Earth science research provides knowledge and data essential for developing policies, legislation, and regulations regarding land, mineral, and water resources at all levels of government. Growing investments in earth science research are required to stimulate innovations that fuel the economy, provide security, and enhance the quality of life.

#### *Broader Impacts of Earth Science Research and Education*

It is critically important to significantly increase NSF’s investments in earth science research and education to meet challenges posed by human interactions with Earth’s natural system in order to help sustain these natural systems and the economy. Additional NSF investments in earth science research are necessary to address such issues as natural hazards, energy, water resources, and climate change.

- Natural hazards, such as earthquakes, tsunamis, volcanic eruptions, floods, droughts, and hurricanes, remain a major cause of fatalities and economic losses worldwide. An improved scientific understanding of geologic hazards will reduce future losses through better forecasts of their occurrence and magnitude.
- Energy and mineral resources are critical to the functioning of society and to national security and have positive impacts on local, national, and international economies and quality of life. These resources are often costly and difficult to find, and new generations of geoscientists need the tools and expertise to discover them. In addition, management of their extraction, use, and residue disposal requires a scientific approach that will maximize the derived benefits and minimize the negative effects. Improved scientific understanding of these resources will allow for their better management and utilization while at the same time considering economic and environmental issues. This is particularly significant because shifting resource demands often reframe our knowledge as new research . . . enabling technologies become available.
- The availability and quality of surface water and groundwater are vital to the well being of both society and ecosystems. Greater scientific understanding of these critical resources—and communication of new insights by geoscientists in formats useful to decision makers—is necessary to ensure adequate and safe water resources for the future.
- Forecasting the outcomes of human interactions with Earth’s natural systems, including climate change, is limited by an incomplete understanding of geologic and environmental processes. Improved understanding of these processes in Earth’s history can increase confidence in the ability to predict future States and enhance the prospects for mitigating or reversing adverse impacts to the planet and its inhabitants.
- Research in earth science is also fundamental to training and educating the next generation of earth science professionals.

Increased NSF investments in earth science education at all levels are needed because knowledge of the earth sciences is essential to science literacy and to meeting the environmental and resource challenges of the twenty-first century.

Earth science research and education should be a component of broader initiatives to increase overall public investments in science and technology. For example, earth science research should be included in a recommendation by the National Academies to “increase the Federal investment in long-term basic research by 10 percent each year over the next 7 years . . .” (Rising Above the Gathering Storm, 2007). Likewise, implementation of the America COMPETES Act, which authorizes a doubling of the budgets of key science agencies in 7 years, should encompass earth science research and education.

#### *Extraordinary Scientific Opportunities in the Earth Sciences*

Extraordinary scientific opportunities in the solid earth sciences have been summarized by the National Academies and other organizations, including the following reports:

- Basic Research Opportunities in the Earth Sciences (National Research Council, 2001)
- The Geological Record of Biosphere Dynamics (National Research Council, 2005)
- Hydrology of a Dynamic Earth (Consortium of Universities for the Advancement of Hydrologic Science, 2007)
- Future Research Directions in Paleontology (Paleontological Society and Society for Vertebrate Paleontology, 2007)
- Seismological Grand Challenges in Understanding Earth’s Dynamic Systems (Incorporated Research Institutions for Seismology, 2009)

While the NSF’s Earth Sciences Division regularly receives a large number of exciting research proposals that are highly rated for both their scientific merit and their broader impacts, only a small percentage of these have been funded in recent years due to budget constraints. Modest additional investments in this research can have significant positive impacts. For example, Interferometric Synthetic Aperture Radar (InSAR) studies may improve our ability to forecast earthquakes and volcanic eruptions. Underinvestment in the earth sciences may result in lost opportunities and lost lives.

EarthScope is producing transformative science while being developed on time and on budget. The transition of EarthScope expenses from NSF’s Major Research Equipment and Facilities Construction (MREFC) account to the Research and Related Activities (R&RA) account is occurring at a time when the NSF budget has been nearly stagnant in real dollars. When the project was being developed, it was widely expected that the NSF budget would experience robust growth as indicated by the NSF Authorization Act of 2002, the American Competitiveness Initiative, and the America COMPETES Act.

As a result of budgetary developments beyond its control, members of the earth science community are concerned that new expenses for EarthScope operations and maintenance may have significant negative impacts on other time-sensitive opportunities in the earth sciences. The success rate for new proposals in the Earth Sciences Division is already too low and new expenses for EarthScope operations and maintenance expenses may drive the success rate even lower.

#### *Conclusion*

President Obama has not submitted a detailed fiscal year 2010 budget request for the National Science Foundation and therefore we are unable to comment on the specifics of his budget proposal at this time. The fiscal year 2010 budget request comes at a critical juncture in the history of the National Science Foundation. The America COMPETES Act set the stage to double the NSF budget in 7 years. Despite overwhelming bipartisan support for the America COMPETES Act, funding for NSF fell short of the doubling path in the regular appropriations cycles for fiscal years 2007, 2008, and 2009. NSF received \$3 billion in economic stimulus funds under the American Recovery and Reinvestment Act. This one-time injection of funding is very helpful, but NSF needs sustained annual funding increases in order to achieve the objectives of the legislation.

The Geological Society of America is grateful to the Senate Appropriations Subcommittee on Commerce, Science, Justice, and Related Activities for its past leadership in increasing the budget for the National Science Foundation and other science agencies. We are also grateful to the subcommittee for its leadership in providing \$3.0 billion in stimulus funds for NSF under the American Recovery and Reinvestment Act of 2009. Thank you for your thoughtful consideration of our request. For additional information or to learn more about the Geological Society of America,

please visit [www.geosociety.org](http://www.geosociety.org) or contact Dr. Craig Schiffries at [cschiffries@geosociety.org](mailto:cschiffries@geosociety.org).

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PREPARED STATEMENT OF THE FEDERATION OF AMERICAN SOCIETIES FOR  
EXPERIMENTAL BIOLOGY

On behalf of the Federation of American Societies for Experimental Biology (FASEB), I respectfully request an fiscal year 2010 appropriation for the National Science Foundation (NSF) of \$7 billion. As you know, NSF is the only Federal research agency dedicated to supporting all of fundamental science and engineering, and is the principal source of Federal research support in fields such as mathematics, computer science and social science.

As a Federation of 22 professional scientific societies, FASEB represents over 90,000 life scientists, making us the largest coalition of biomedical research associations in the nation. FASEB's mission is to advance health and welfare by promoting progress and education in biological and biomedical sciences, including the research funded by NSF, through service to its member societies and collaborative advocacy. FASEB enhances the ability of biomedical and life scientists to improve—through their research—the health, well-being and productivity of all people.

*Improving Quality of Life and Fueling the Economy*

“America’s sustained economic prosperity is based on technological innovation made possible, in large part, by fundamental science and engineering research. Innovation and technology are the engines of the American economy, and advances in science and engineering provide the fuel.”—Arden Bement, Jr., Director, National Science Foundation<sup>1</sup>

With less than 5 percent of the Federal research and development budget, NSF funds 22 percent of all federally sponsored basic research at academic institutions. It is the principal source of Federal research support in many fields and provides necessary funding for unique, large-scale research facilities.<sup>2</sup> NSF also plays a significant role in advancing medical research: forty-one Nobel Prizes have been awarded to NSF-funded scientists for contributions in physiology or medicine, including the groundbreaking work that led to the development of magnetic resonance imaging (MRI).<sup>3</sup> NSF’s mission is not limited to advancing scientific research: the agency is also committed to achieving excellence in science, technology, engineering, and math education at all levels. NSF supports a wide variety of initiatives aimed at preparing science teachers, developing innovative curricula, and engaging students in the process of scientific discovery.

*Advancing Discovery in Science and Engineering*

Each year, NSF funding results in grants to more than 200,000 scientists, teachers, and student researchers for cutting-edge projects at thousands of institutions across the country. Following are just a few highlights of the innovative research and education projects supported by NSF.

—*Advancing Organ Transplant Technology.*—Researchers discovered that certain frogs produce an “anti-freeze” that prevents their cells from being damaged by the chemical changes that occur when they are frozen. As a result, these frogs can survive for months in freezing weather even though their major organs have come almost to a halt. Research in this area may lead to technologies that enable human organs to be preserved longer, resulting in improved transplantation success rates.

—*Biologically Inspired Nanocapsules.*—Basic research on the origin, structure, and function of naturally occurring nanocapsules is providing scientists with the information necessary to engineer these molecules for medically-relevant tasks. These tiny capsules may be used to deliver drugs directly to cancer cells, correct genetic mutations, or extract toxins from cells.

—*Engineering Safer Metals.*—Materials scientists and engineers have invented a super-strong and light weight metal foam that significantly reduces the force of collisions by absorbing much of the energy of the impact. At a fraction of the

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<sup>1</sup>Testimony of Dr. Arden L. Bement, Jr., Director, National Science Foundation Before the Senate Commerce, Science, and Transportation Subcommittee on Technology, Innovation, and Competitiveness. March 29, 2006. [http://commerce.senate.gov/pdf/bement\\_032906.pdf](http://commerce.senate.gov/pdf/bement_032906.pdf). Accessed on November 26, 2008.

<sup>2</sup>National Science Foundation. <http://www.nsf.gov/about/>. Accessed November 26, 2008.

<sup>3</sup>National Science Foundation (2007). Nobel Prizes—The NSF Connection. [http://www.nsf.gov/news/special\\_reports/nobelprizes/med.jsp](http://www.nsf.gov/news/special_reports/nobelprizes/med.jsp). Accessed November 26, 2008.

weight of bulk steel, this foam has an array of life-saving safety applications in the automobile, aerospace, and health care industries.

—*Nurturing the Next Generation of Scientists*—One of many NSF programs to prepare future scientists, the Integrated Graduate Education Research and Training (IGERT) program supports 125 doctoral degree programs that foster collaborative and interdisciplinary training in emerging scientific domains. IGERT trainees have produced important scientific and technological breakthroughs, including a handheld imaging device that can detect breast tumors and “bio-transformable” materials that can be implanted into the body to deliver drugs or open blood vessels.

#### *Investing in the Future*

“Keeping our competitive edge in the world economy requires policies that lay the ground work for continued leadership in innovation, exploration, and ingenuity”—Domestic Policy Council. American Competitiveness Initiative: Leading the World in Innovation, 2006

Since its creation in 1950, NSF support for research projects across the country has fueled innovation, energized the economy, and improved the quality of life for all Americans. NSF’s strategic plan for the future<sup>4</sup> will ensure that, even as the global science and engineering landscape changes, the United States remains at the forefront of the enterprise. In the years ahead, funding for NSF will allow the agency to enhance support for the instrumentation, facilities, and equipment that scientists need to advance discovery, promote transformational, interdisciplinary research projects, and foster innovative approaches to science education and training at all levels.

We are very grateful for the robust investments in NSF provided by the Omnibus Appropriations Act of 2009 and the American Recovery and Reinvestment Act (ARRA). We are also grateful for the commitment to NSF funding established by the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Science, and Education (COMPETES) act.<sup>5</sup> It is important that in fiscal year 2010 and future years, those investments are sustained and that commitment realized by steady and reliable growth for the NSF. For this reason, FASEB supports an fiscal year 2010 appropriation for the National Science Foundation (NSF) of \$7 billion.

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#### PREPARED STATEMENT OF THE INSTITUTE OF MAKERS OF EXPLOSIVES

Dear Madam Chairman: On behalf of the Institute of Makers of Explosives (IME), I am submitting a statement for inclusion in the subcommittee’s hearing record regarding the proposed fiscal year 2010 budget for the Bureau of Alcohol, Tobacco, Firearms & Explosives (ATF) Arson and Explosives (A&E) program.

#### *Interest of the IME*

The IME is the safety and security association of the commercial explosives industry. The production, distribution, storage and use of explosives are highly regulated. ATF is one of the agencies that play a primary role in assuring that explosives are identified, tracked, and stored only by authorized persons. The ability to manufacture, distribute and use these products safely and securely is critical to this industry. While we do not have access to the Administration’s fiscal year 2010 budget request for ATF, we have the following comments about its impact on the commercial explosives industry.

#### *Addressing Statutory Mandates*

The commerce of explosives is one of the Nation’s most heavily regulated activities. As noted above, ATF plays a key role in this regulatory scheme through its implementation of Federal Explosives Law (FEL). The FEL requires ATF to “protect interstate and foreign commerce,”<sup>1</sup> which commerce is the business of the commercial explosives industry. This mission seems to be tabled in the agency’s quest to be a lead terrorist/criminal agency. While ATF claims to work with industry members to make regulation less burdensome, the needs of the legitimate explosives industry are secondary to the agency’s criminal enforcement interests. By statute, ATF is supposed to “take into consideration . . . the standards of safety and secu-

<sup>4</sup> National Science Foundation (2006). Investing in America’s Future: Fiscal Year 2006–2011. [http://www.nsf.gov/pubs/2006/nsf0648/NSF\\_06\\_48.pdf](http://www.nsf.gov/pubs/2006/nsf0648/NSF_06_48.pdf). Accessed October 31, 2007.

<sup>5</sup>H.R. 2272. America Creating Opportunities to Meaningfully Promote Excellence in Technology, Science, and Education (COMPETES). August 2007.

<sup>1</sup>Public Law 91–452, Sec. 1101.

rity recognized in the explosives industry” when issuing rules and requirements.<sup>2</sup> But, our recommendations are often overlooked, and attendant safety and security benefits are unrealized. With this perspective, we offer the following comments on ATF’s budget and program performance.

#### *Adequacy of Budget Resources*

We understand the need of the Obama administration to review and modify as appropriate budget requests prepared by the last administration. This delay in the release of the bureau’s budget justification hampers our ability to file detailed comments on the adequacy of the budget request for ATF’s arson and explosives program. With one notable exception, the fiscal year 2009 appropriation for the A&E account appears to be that only necessary to sustain current services. We question whether a current services budget is sufficient for level of engagement and oversight expected of the bureau, not only of the private sector, but as has been documented in oversight hearings, the bureau’s outreach to public sector explosives users.

The one notable exception is the fiscal year 2009 set-aside of \$200,000 for the bureau to begin addressing its pending regulatory backlog. This backlog remains a source of concern to the regulated community. We are grateful to Congress for your oversight of this issue and for taking steps to address the problem.

#### *Industry Standards*

We take seriously the statutory obligation that ATF take into account industry’s standards of safety when issuing rules and requirements. We have endeavored to fulfill this obligation through the development of industry best practices for safety and security, participation in relevant standard-setting organizations, and forums for training. We have offered ATF recommendations that we believe will enhance safety and security through participation in the rulemaking process, in the Bureau’s research efforts, and in other standard setting activities. Our interface with ATF in these settings prompts the following comments.

—*Rulemakings.*—ATF currently has five open rulemakings of interest and concern to the explosives industry, one less than the same number of outstanding dockets reported in our comments last year. We are disappointed to report that the reduction in the number of rulemakings is not due to the bureau finalizing a rule. Rather, the reduction is due to the fact that the bureau withdrew a rulemaking.<sup>3</sup> This particular rulemaking was the result of a petition filed by industry. The intent of the rulemaking was to update and harmonize existing rules. Of the remaining rulemaking dockets, the oldest was proposed in 2001. Several are a result of the enactment of the 2002 Safe Explosives Act (SEA). Two of these rulemakings were issued as “interim final rules,” which allows rules to be enforced without public input as to the effect of the rule on the regulated community. Subsequently, IME raised a number interpretative questions and concerns about these rules which are critical to the continued commerce of commercial explosives. Yet once again, ATF has delayed the projected date for finalizing these IFRs until April 2009 and August 2009 respectively, and has delayed the projected dates for finalizing every other open rulemaking of significance to IME except one. The one, dealing with the delivery of explosives by common or contract carriers, is projected to be finalized this month.<sup>4</sup>

As noted above, Congress has directed the ATF to address these long-standing rulemaking concerns. In the absence of rulemaking that is capable of keeping up with new developments and practices, industry must rely on interpretive guidance and variances from rules to conduct business. While we appreciate that bureau’s accommodations, these stop-gap measures do not afford the protections that rulemaking would provide the regulated community, nor allow the oversight necessary to ensure that all parties are being held to the same standard of compliance. These regulatory tasks may be at odds with ATF’s vision as a law enforcement agency, but they are critical to the lawful conduct of the commercial enterprises the bureau controls.

—*Data.*—ATF is continuing efforts to enhance data capabilities. These efforts should be supported. We are only disappointed in one aspect. We rely on ATF’s data collection and analysis capabilities. IME needs data about incidents and theft and losses to perfect our safety and security recommendations and practices. The latest full-year information we have about explosive incidents is from

<sup>2</sup> 18 U.S.C. 842(j).

<sup>3</sup> RIN 1140-AA01, withdrawn May 7, 2008. The withdrawal was not announced at the time in the Federal Register. Rather, industry was informed of the bureau’s action over 6 months later when its regulatory agenda was published in the Federal Register on November 24, 2008.

<sup>4</sup> RIN 1140-AA20.

2006. Last November, we initiated a specific information request for any record ATF may have about thefts of explosives in transportation last November after seeing data from the bureau alleging two incidents and failing to verify these incidents from any other source. We are still waiting for this information. We urge the Subcommittee to ensure that ATF has the resources to gather and release this information in a timelier manner.

—*IMESA FR.*—IME prides itself in being the safety and security advocates for the commercial explosives industry. The technical expertise of our members is a resource we gladly share with government agencies. In this regard, IME has spent years developing and validating a credible alternative to strict interpretation of quantity-distance tables used to determine safe setback distances from explosives in collaboration the Department of Defense Explosives Safety Board and Canadian and U.S. regulatory agencies, including ATF. The result is a windows-based computer model for assessing the risk from a variety of commercial explosives activities called IMESA FR.<sup>5</sup> Not only can IMESA FR determine the amount of risk presented, but it can also determine what factors drive the overall risk and what actions would lower risk, if necessary. The probability of events for the activities were based on the last 20 years experience in the United States and Canada and can be adjusted to account for different explosive sensitivities, additional security threats, and other factors that increase or decrease the base value. Following this effort, we expected that ATF would be willing to recognize this powerful assessment tool as an alternative for the regulated community to meet quantity-distance limitations, which limitations are themselves standards developed by the IME. However, this has not been the case. ATF has not taken full advantage of opportunities to partner with IME and accept this or any other risk-based approach to explosives safety. ATF’s reluctance to recognize risk-based modeling is contrary to the norm practiced by all other Federal agencies with regulatory responsibilities over the explosives industry. We believe that the consistency of risk analysis offered by IMESA FR is preferable to the subjective approach ATF may use to address setback issues now.

*Performance Measure Improvements*

For a number of years, IME has expressed concern about the lack of appropriate performance measures for the commercial explosives industry. Currently, ATF has eight performance indicators that apply to its arson and explosives program, and of those, three apply to the commercial explosives industry.<sup>6</sup> Two are statutory requirements to investigate explosives thefts and to inspect explosives licensees and permittees. The most beneficial indicator, at this time, is that reporting on the resolution of unsafe explosives conditions discovered by inspections. However, the regulated community has asked for other indicators such as the percent of explosives applications acted on within 90 days; the number of background checks that ATF has performed, within what average timeframe, and of those, how many individuals failed to receive clearance, and of those, how many appealed the Bureau’s findings; the number of rulemakings outstanding and their priority; and turnover rates among agents and inspectors. Yet, ATF has not adopted any of these measures. Absent information of this type, it is unclear how Congress can effectively oversee ATF’s handling of its responsibilities toward the regulated community or determine the adequacy of its budget request.

We are also concerned at the drop in the performance of the A&E program as measured by the Program Assessment Rating Tool (PART).<sup>7</sup> During assessment year 2004, the A&E program was rated “moderately effective.” By 2008, the rating of the A&E program had fallen to “adequate.” The program’s scores fell in all categories:

[In percent]

Section	Score—2004	Score—2008
Program purpose & Design .....	100	80
Strategic Planning .....	88	75
Program Management .....	100	43

<sup>5</sup> IMESA FR was built on the DDESB’s software model, SAFER. The DDESB currently uses SAFER and table-of-distance methods to approve or disapprove Department of Defense explosives activities.

<sup>6</sup> ATF Strategic Plan—Fiscal Years 2004–2009.

<sup>7</sup> <http://www.whitehouse.gov/omb/expectmore/detail/10002202.2008.html>. PART was developed to assess and improve program performance so that the Federal Government.

[In percent]

Section	Score—2004	Score—2008
Program Results/Accountability .....	67	40

To improve the performance of the program, ATF has stated that it would conduct independent program evaluations to determine whether the program is effective and achieving results. We would welcome an independent audit of the program, and believe that the timing for such an audit is ripe given the new administration's pledge of transparency and accountability.

#### *Leadership*

The resolution of these issues may have to wait the appointment of a new director. The ATF has been without a director since August 2006. We hope that an appointment will soon be announced. The bureau has been too long without permanent leadership.

#### *Conclusion*

The manufacture and distribution of explosives is accomplished with a remarkable degree of safety and security. We recognize the important role played by ATF in helping our industry achieve and maintain safe and secure workplaces. Industry and the public trust that ATF has the resources to fulfill its regulatory responsibilities. It is up to Congress and, in particular, this Subcommittee to ensure that ATF has the resources it needs. We strongly recommend full funding for ATF's explosives program.

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#### PREPARED STATEMENT OF THE TRUST FOR PUBLIC LAND

Chairwoman Mikulski and Ranking Member Shelby, thank you for the opportunity to submit testimony in support of funding for the Coastal and Estuarine Land Protection Program (CELCP) administered by the National Oceanic and Atmospheric Administration (NOAA). My statement today urges you to provide funding through the CELCP program to the coastal and lake States and the territories at the level of \$60 million in fiscal year 2010. This funding is necessary to protect the ecologic, recreation, historic and aesthetic values and the economic vitality of our coastal communities.

The Trust for Public Land (TPL) is a national nonprofit land conservation organization that conserves land for people to enjoy as parks, community gardens, natural and scenic areas, historic sites, working landscapes, and other public assets. Since 1972, TPL has worked with willing landowners, community groups, and national, State, and local agencies to complete more than 4,000 land conservation projects that protect more than 2.5 million acres in 47 States and the territories. TPL has partnered with NOAA, private landowners, and State and local governments on over 50 CELCP-funded coastal land protection projects. Since 1988, TPL also has helped States and communities craft and pass over 463 ballot measures, generating almost \$31 billion in new conservation-related funding. These conservation measures provide an important source of State and local matching funding for CELCP and other federal land protection programs.

TPL and other non-governmental partners invest our energies, funding, and staff in the places where the threats to open spaces are most urgent. Not surprisingly, many of those public-private conservation partnerships have focused on our Nation's dwindling coastal open spaces. Even with the considerable focus on our most critical coastal ecosystems and shorelines, we continue to fall farther and farther behind in our efforts to help State and local government partners protect the coastal open spaces. In recent years, we have witnessed an unprecedented pace of resource-damaging development along our coastlines. The need for prompt conservation action in these sensitive and challenged areas is only increasing. The recent economic downturn may well provide a window of opportunity when public conservation agencies and partners can better compete and stretch limited acquisition dollars further, making this a wise time for strategic federal investment in coastal conservation.

Coastal protection provides many public benefits including buffering from storms and floods, filtering pollution and maintaining water quality, providing waterfront and coastal access for public recreation, supporting fish and shellfish populations important to commercial and recreational fisheries, preserving coastal habitats for nesting and foraging birds, and securing habitat for native wildlife including threatened and endangered species. The CELCP program is the only Federal program dedicated exclusively to helping coastal communities protect their natural and rec-

reational heritage. CELCP is essential federal funding, that allows State and local governments, and their private conservation partners, to respond effectively to coastal conservation needs. The recent NOAA eligibility requirement that each coastal State develop a Coastal and Estuarine Land Conservation Plan helps ensure that both federal and non-federal dollars are being smartly targeted and wisely spent.

The spiraling development pressures upon our Nation's coastal zone are obvious and well documented. Since 1970, coastal areas have experienced steady increases in population. According to NOAA, coastal counties constitute only 17 percent of the Nation's land areas, but account for 53 percent of its populations—a population density five times greater than non-coastal counties. According to the U.S. Commission on Ocean Policy, “more than \$1 trillion, or one-tenth of the Nation's annual gross domestic product, is generated within the relatively narrow strip of land immediately adjacent to the coast that we call the nearshore zone. When the economies throughout coastal watershed counties are considered, the contribution swells to over \$45 trillion, fully half of the Nation's gross domestic product, accounting for some 60 million jobs.” The health of our coasts is inextricably linked with the economic health of the Nation.

In 2002, Congress stepped in to respond to that need and enhance the Federal role within the Federal-State coastal conservation partnership by creating the Coastal and Estuarine Land Conservation Program (CELCP) to protect “those coastal and estuarine areas with significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by conversion from their natural or recreational States to other uses.” Authorized at \$60 million annually, funding for the program grew from an initial \$15 provided in fiscal year 2002, to a high of \$50 million in 2004, before declining each subsequent year to a low of \$8 million in fiscal year 2008. Despite its uneven funding history, the CELCP program has built an impressive track record. To date, the over \$200 million provided by Congress for the CELCP program has funded over 150 conservation projects in 26 of the Nation's coastal States and territories helping to protect approximately 35,000 acres. This Federal funding has been leveraged by at least an equal amount of State, local and private matching investments, demonstrating the broad support for the program, the importance of coastal protection, and the critical role of Federal funding to accelerate coastal protection. Inclusion of the Coastal and Estuarine Land Protection Act in the recently passed H.R. 146, the Omnibus Public Lands Management Act of 2009, formally codifies CELCP and recognizes the program's achievement and significance.

In 2007, by directive from this subcommittee, NOAA instituted a competitive grants selection process for the CELCP program. The CELCP team at NOAA has done an impressive job of managing this transition and creating a thorough competitive grants process. In the last 3 years, NOAA, in partnership with the States, has identified over \$230 million of vetted and ranked projects. While we support the competitive nature of the program, full funding at \$60 million annually is needed to meet the demand of increasingly high-quality projects being developed by States with other partners and submitted to NOAA. We were pleased to see the program funding increased to \$15 million in fiscal year 2009, reversing a 5-year funding decline. However, this will only fund the first eight or so of the 43 competitively ranked projects in fiscal year 2009, meeting a fraction of the total project need of \$63 million.

The CELCP program is the only Federal program dedicated exclusively to helping coastal communities protect their natural and recreational heritage. CELCP provides essential Federal funding that allows State and local governments, and their private conservation partners, to respond effectively to coastal conservation needs. Perhaps the best way to underscore the critical value of this program to the American people is to provide some examples of the projects seeking funding in fiscal year 2010:

*Lapakahi Marine Life Conservation District (MLCD), Hawaii County, Hawaii*

CELCP funding will protect the last privately held property fronting the Lapakahi MLCD on the North Kohala coast of the big island of Hawaii. This 17.05-acre tract includes 200 feet of shoreline and will connect a total of 1.75 miles of publicly held coastline and protect habitat for the threatened green sea turtle and the endangered Hawaiian monk seal. The requested \$1.25 million from the Hawaii Legacy Land Conservation Fund Program will match CELCP funding in the amount of \$1.25 million.

*Magnolia Hill Conservation Project, Massachusetts*

The City of Gloucester, The Trust for Public Land, The Trustees of Reservations, and Essex County Greenbelt Association are working to protect the 109-acre Magnolia Hill property in the coastal area of Essex County, MA. This upland habitat overlooking Gloucester Harbor represents an intact Oak-Hemlock-White Pine forest and wooded swamp supporting the State-listed Blue spotted Salamander and State-endangered Sweetbay Magnolia. The property drains into a 12-acre tidal coastal salt pond, Clark Pond, and connects 1,270 acres of contiguous protected coastal zone habitat. \$3 million in CELCP funding will be matched by an equal amount of State, local and private funds.

*Harsens Island Conservation Area, Lake St. Clair, Michigan*

The 547-acre Harsens Island Conservation Area lies at the heart of the St. Clair flats—the largest freshwater delta in the world. Located on both the Atlantic and Mississippi flyways, migratory waterfowl use of these coastal waters and wetlands has historically reached three million annually. Protection will enhance public access for recreation, eliminate the threat of development, and protect sensitive coastal habitat. \$7 million in Michigan Natural Resources Trust Fund dollars will match a \$3 million CELCP grant.

*Houghton Falls Nature Preserve, Lake Superior, Bayview Township, Wisconsin*

Seventy-seven acres on the Bayfield Peninsula with 2,230 feet of Lake Superior shoreline will be protected as a Bayfield town park. This rare boreal forest habitat contains numerous species of concern including the Gray Wolf, Northern Flying Squirrel, Woodland Jumping Mouse, and Water Shrew. The property is an important stopover for Neotropical migratory birds, and a fish nursery for Lake superior whitefish and other species. A \$1.423 million CELCP grant will be equally matched with funding from the Wisconsin Knowles-Nelson Stewardship Fund.

*Kiket Island Addition to Deception Pass State Park, Phase II, Skagit County, WA*

A \$3 million CELCP grant will purchase the final 40 acres of the Kiket Island project in northern Puget Sound to protect a total of 96 acres of high quality coastal habitat and over two miles of shoreline threatened. Kiket Island is an intact, intertidal zone with all eight species of Puget Sound anadromous fish, including the endangered Chinook salmon and bull trout. The forested portion of Kiket Island provides excellent habitat for bird, including owls, and other native wildlife. A \$3 million CELCP grant will be matched with \$3.431 million from Washington State Parks.

*Ayers Creek-Holly Grove Swamp, Worcester County, Maryland*

To be protected are 431 acres along Ayers Creek within the waters of Newport Bay and the larger Maryland Coastal Bays area. The property, including one-half mile of tidally influenced shoreline, will be added to the State's Ilia Fehrer Nature Reserve. The forested wetlands are important habitat for eleven State and/or federally listed species. \$1 million from Maryland Program Open Space and \$250,000 from Worcester County Program Open Space Funds will match \$1.25 million in CELCP funding.

*Keewaydin Island, Rookery Bay National Estuarine Research Reserve, Florida*

TPL is working in partnership with the State of Florida to protect five crucial acres of beach front within and adjoining the Rookery Bay National Estuarine Research Reserve (RBNERR). The RBNERR protects the largest and most pristine subtropical mangrove estuary in the world, with over 150 species of wading, nesting and migratory birds, and numerous threatened and endangered species including the Atlantic loggerhead sea turtle, gopher tortoise, least tern, piping plover, and West Indian manatee. \$1.5 million from the Florida Forever Program will match a \$1.5 million CELCP grant.

*San Miguel Natural Reserve III, Puerto Rico*

Fiscal year 2010 CELCP funding will complete the final phase of this 601-acre coastal land protection effort at the San Miguel Natural Reserve on the northern coast of Puerto Rico. One of the last ecologically functional wetlands together with an undeveloped coastal shoreline, this area is home to forty-two critical species, including nesting grounds for the federally listed Leatherback sea turtle. A \$3 million CELCP grant, matched by a land value donation from the landowner, will protect the final 179 acres.

These several examples are just a small representation of the breadth and depth of CELCP program needs for the coming year across our Nation's coastal geographies and communities. In closing, The Trust for Public Land urges you to provide

full funding of the CELCP program at the authorized level of \$60 million in fiscal year 2010 for this critically important program. This level of Federal commitment is necessary to meet the demonstrated program need and to position NOAA to be fully responsive to the many State and local governments and private partners working together to protect our coastal heritage. Thank you.



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