American Recovery and Reinvestment Act of 2009
Program Plan for

The United States Geological Survey (USGS)

May 21, 2009

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Part I: Overview: Recovery Act Implementation at the Department of the Interior

Background

The American Recovery and Reinvestment Act of 2009 (the Recovery Act) is an unprecedented investment in our country's future. Funding is to support job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization.

President Obama has set out specific goals in implementing the Recovery Act, including:

- Create or save more than 3.5 million jobs government-wide over the next two years;
- Revive the renewable energy industry and provide the capital over the next three years to eventually double domestic renewable energy capacity;
- As part of the $150 billion investment in new infrastructure, enact the largest increase in funding of our nation's roads, bridges, and mass transit systems since the creation of the national highway system in the 1950's; and
- Require unprecedented levels of transparency, oversight, and accountability.

The Department of the Interior will play an important role in this effort. Investments will focus on job creation, infrastructure needs, and creating lasting value. Priority objectives achieved with Recovery Act funding will:

- Accelerate a move toward a clean energy economy;
- Provide jobs that build employable skills and develop an appreciation for environmental stewardship in young adults; and
- Preserve and restore the nation's iconic and treasured structures, landscapes, and cultural resources.

Project Selection

Criteria

In recognition of the urgency to select and execute projects expeditiously, the Department established unified priorities and formulated guidance to lead the bureaus in the project selection process. The guidance prescribed that the following framework be used to assess a project's suitability for Recovery Act funding:

- **Expediency of implementation**. The first consideration was a practical one – can the project be responsibly executed within the time limitations of the Recovery Act? With a few exceptions, Recovery Act funds are available for obligation through September 30, 2010. Section 1602 of the Act reads "…recipients shall give preference to activities that can be started and completed expeditiously, including a goal of using at least 50 percent of the funds for

activities that can be initiated no later than 120 days after the date of enactment." This criterion was a limiting factor that impacted meritorious projects that were not ready for implementation.

- **Addresses high priority mission needs**. Does the project target the bureau's highest priorities within the categories specified in the legislation? Has the project been evaluated through established procedures to address high priority needs? Are public lands, parks, refuges and resources renewed as a result of the project? With respect to deferred maintenance and line item construction, is the ranking consistent with existing priorities and processes?

- **Job creation potential**. Pursuant to the primary goal of the Recovery Act, what is the potential of the project to quickly create jobs and stimulate local economies?

- **Merit-based.** Was the project selected using merit-based and transparent criteria? Are competitive awards used to the maximum extent possible? Do the criteria incorporate existing prioritization processes?

- **Long-term value**. To what extent does the project create long-term value for the American public through improved energy independence, restoration of treasured landscapes or other lasting benefits?

- **Energy objectives.** For proposed construction or deferred maintenance projects, do they incorporate energy efficient and renewable energy technologies? Do they have a component that will further clean energy and independence goals?

- **Opportunities for youth**. Does the project engage young adults and instill education about our public lands and cultural resources?

- **Future cost avoidance**. Does the project create new operational requirements in future years? Or, conversely, will the project decrease operating costs through energy improvements or disposal of unneeded and costly assets?

Priorities

As part of the Department's standard capital asset planning process, the bureaus develop 5-Year plans identifying deferred maintenance and construction needs. The 5-Year Deferred Maintenance (DM) and Capital Improvement Planning process is the backbone of the Department's Asset Management and Bureau Asset Management Plans which are used to formulate the Department's budget requests. The plans are developed, and updated, on an annual basis at the bureau level using a Department-wide process that ranks both DM and Capital Improvement Projects using uniform criteria. Categories for ranking projects include Critical Health Safety, Critical Resource Protection, Energy, Critical Mission, Code Compliance, and Other Deferred Maintenance.

The categories used in the rating process are weighted so that projects that address critical health and safety needs will receive the highest score. The final score of a project also

takes into account the asset priority for the project. The Department's goal in the 5-year planning process is to focus its limited resources on projects that are both mission critical and in the most need of repair/replacement.

To the extent practicable, Recovery Act projects in deferred maintenance and construction were drawn from the 5-Year lists. Each bureau's detailed Recovery Act plan indicates the extent to which selected projects were derived from existing capital plans and provides the rationale for any exceptions.

There are several reasons why a Recovery Act project might not come from a 5-Year Plan. In many cases, it reflects timing. The Recovery Act requires the obligation of funds by September 20, 2010. Projects involving complicated procurements, significant environmental considerations, or with considerable planning and design components, may not be good Recovery Act investments because of the need to obligate project funds quickly. Additionally, Secretary Salazar has challenged each bureau to select projects that can also be completed within the timeframe of the Recovery Act in order to maximize the beneficial impact to the economy further refining the list of eligible projects.

The scope of the 5-Year plans is also limited. Each 5-Year Plan assumes a five year funding level consistent with prior appropriations. For some bureaus, the Recovery Act funding exceeds the total amounts assumed in the 5-Year Plans. In addition, two years of the available 5-Year Plans will be addressed through the regular FY 2009 and FY 2010 appropriation processes. In cases where the 5-Year Plan has been exhausted, the bureau has selected Recovery Act projects from other existing capital planning lists.

Contingency Projects

As part of the Department's internal process, each bureau has identified a list of eligible projects for Secretarial approval larger than the amount of available Recovery Act funding. Getting advance approval for a larger universe of eligible projects will expedite the deployment of alternate projects should a Recovery Act project experience delays in execution. These projects are referred to as identified contingency and are included in the funding table of each bureau's detailed Recovery Act Plan.

Implementation of Recovery Act

Monitoring and Evaluation

The establishment of meaningful and measurable outcomes is an important component of Interior's Recovery Act reporting. Performance monitoring and oversight efforts are designed to ensure that the Department meets the accountability objectives of the Recovery Act.

These efforts include tracking the progress of key goals. The Department is defining a suite of performance measurements to monitor progress to ensure objectives are met. In addition, the Department's Recovery Act Coordinator is collaborating with senior Departmental officials, the Office of Management and Budget, and the Office of Inspector General to ensure oversight of the program from the first phase of project selection, through implementation and execution. The Coordinator, with the assistance of the Recovery Act Board, will be evaluating processes to ensure that adequate mechanisms are in place and identify and share best practices to promote:

- Maximized use of competitive awards
- Timely award of dollars
- Timely expenditure of dollars
- Timely completion of planned work
- Minimized cost overruns
- Minimized improper payments

Measurement and reporting is a crucial component of Interior's oversight strategy. The information received will serve as an indicator of progress enabling the Department's governance entities to manage risk and ensure successful implementation of the Recovery Act. Department-wide, consistent guidance will guide efforts in this regard, including for example, development of a risk management program.

Accountability and Transparency

The President and Congress have made it clear that the Act must be carried out with unparalleled levels of accountability and transparency. The President's commitment to manage these investments transparently will be met through Agency reporting on performance metrics and the execution of the funds on recovery.gov. Reporting requirements related to major contract actions and financial status, including obligations and outlays, are being instituted. Periodic reviews of implementation progress at both the bureau and Departmental levels will identify the need to realign resources to expedite projects, to modify project plans or to select contingency projects to ensure funds are obligated within the time limitation. The selection of contingency projects will be included as part of regular reporting through recovery.gov.

The Recovery Coordinator will oversee bureau implementation to ensure projects address the Department's high priority goals and objectives, while also working to ensure that department-wide performance objectives, including timeliness and cost and risk management are met throughout the process.

The Office of Inspector General will be working closely with the Department from the start to review and propose effective processes to manage risks, monitor progress and to improve overall performance and accountability.

As part of routine reporting, the Department is also carefully tracking all projects subject to the National Environmental Policy Act (NEPA). During the project selection phase the Department identified which projects had already completed NEPA planning, which

are in progress, and which ones still need to begin the NEPA process. The Department will track the status of all NEPA compliance activities associated with projects or activities and report quarterly to the Council on Environmental Quality.

Administration

The Department's oversight and administration is led by the Secretary with leadership by the Recovery Act Coordinator. He utilizes an Executive Board and Department-wide Task Force to assist. The Executive Board is the entity responsible for ensuring compliance with the Recovery Act execution reporting, and audit requirements. The Board will be convened once project decisions are made and plans are finalized. The Board consists of nine members, and is chaired by the Department's Chief of Staff. The other board members are the Recovery Act Coordinator, Solicitor, Inspector General, and the four programmatic Assistant Secretaries within Interior and the Assistant Secretary for Policy, Management and Budget.

The Recovery Act Task Force ensures consistent implementation of the Recovery Act, promotes collaboration and sharing of skills and best practices among bureaus, develops implementation guidance, oversees the process for completion of Recovery Act plans and project lists, and develops the infrastructure needed for on-going monitoring of progress and performance. It is co-chaired by the Recovery Act Coordinator and the Assistant Secretary for Policy, Management and Budget, and is responsible for implementation of the Recovery Act. The Task Force has representatives from each bureau, as well as all the functional areas across the Department.

There are workgroups reporting to the Task Force that are developing processes and guidance on reporting, performance, communications, project approval, administration, risk management, acquisitions, and youth involvement. As implementation progresses,, workgroups will be disbanded and others may be established.

In addition to these Departmental groups, each bureau has established its own governance structure. Bureau task forces and boards will ensure that programs execute projects effectively and meet the accountability and transparency objectives of the Act. A Recovery Act coordinator has been designated for each bureau.

The bureau task forces have responsibilities from the development of project lists through completion. They develop the project lists, establish the necessary controls, and develop tracking mechanisms to ensure they are managing schedules and performance, and meeting the reporting requirements. The task forces meet regularly to ensure proper oversight. Each bureau has developed a leadership structure to manage the Recovery Act implementation. Responsibility for key components, such as reporting and oversight, has been delegated to the bureaus' senior management officials. The bureaus will also use staff in the field to provide direct oversight and leadership and provide reports to their executive leadership.

Barriers to Effective Implementation

The volume of funding provided in the Recovery Act and the contracts that will be awarded to execute these resources will challenge Interior's current procurement processing capacity. Interior's FY 2009 appropriation was $11.3 Billion. The Recovery Act supplements this request by $3 billion over two years, an increase of 27% over the enacted amount for FY 2009. Interior has taken a common-sense approach to best utilize existing resources to implement the Recovery Act. However, the investment required to handle the increase in funding will strain Interior's on-board resources. While the Act authorizes the set-aside of monetary resources to alleviate the administrative burden (e.g. hiring additional contracts staff), the real management issue is ensuring that procurement resources, no matter how plentiful, are knowledge and responsible. The Department plans to meet these resource challenges by sharing staff and expertise across bureaus, hiring term and temporary staff, and reemploying knowledgeable annuitants.

In addition to expanding resources to implement the Recovery Act, Interior is also working to streamline business processes to help alleviate resource challenges. The bureaus are encouraged to make use of techniques such as the grouping of like work orders into a single project to reduce acquisition time. Another example that is currently under consideration is the consolidation of procurement functions related to the Recovery Act. This strategy would relieve seasoned acquisition staff of their routine duties to have them focus on Recovery Act procurements. The regular duties would be assumed by alternative DOI acquisition staff. Concentrating Recovery Act procurement expertise would result in processing efficiencies and expedite the use of funds. Considerations such as these illustrate Interior's drive to get the work of the Recovery Act done.

Interior's governance bodies, such as the Recovery Act Task Force and the subsidiary acquisition workgroup, will handle resource issues raised by its members and the bureaus to ensure adequate staffing for the Recovery Act implementation.

Part II: Executive Summary: Recovery Act Implementation at the USGS

Overview

The American Recovery and Reinvestment (ARRA) Act of 2009 (P.L. 111-5) provided appropriations for the U.S. Geological Survey (USGS). The language states:

> *"…for an additional amount for ''Surveys, Investigations, and Research'', $140,000,000, for repair, construction and restoration of facilities; equipment replacement and upgrades including streamgages, and seismic and volcano monitoring systems; national map activities; and other critical deferred maintenance and improvement projects."*

USGS has completed condition assessment at its facilities and developed an inventory of deferred maintenance projects at its owned facilities; abandoned groundwater wells that have not been remediated; streamgages and cableways that have been discontinued and should be removed; overdue upgrades to monitoring capabilities for earthquakes and volcanoes; streamgage modernization and collection of much-needed elevation data, especially in coastal areas.

The Recovery Act provides unprecedented support for priority research and monitoring needs. USGS will meet the 2013 deadline of the requirement to upgrade radio transmission on streamgages to be able to use a new NOAA satellite. Approximately one-fourth of the stations in the Advanced National Seismic System (ANSS) will be upgraded to meet goals set for implementation of ANSS. The National Volcano Early Warning System will begin a robust upgrade to digital systems and implementation of newly developed instruments. Critical elevation data along the United States coasts will be gathered and archived, and data preservation will be advanced by digitizing historic records. USGS will address a large proportion of its inventory of facilities repair in order to provide functional and technical workspace needed to advance its program missions.

The following plan outlines the projects the USGS proposes to implement with the ARRA funding. In addition to addressing key mission needs, these projects will create or retain jobs, engage youth during project implementation, reduce energy consumption in Federal facilities, and utilize renewable energy in comprehensive monitoring systems. Furthermore, ARRA projects that collect or generate new data sets will make this information available through recovery.gov, as well as the Administration's new government-wide data portal, data.gov.

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Funding Categories

USGS plans to use Recovery Act funds to address eight program areas:

1) **Deferred Maintenance-Facilities (DM); (Budget Subactivity: Facilities) +$29.4 million:** USGS will address the highest priority deferred maintenance projects at its owned facilities. These projects will address health and safety issues, functional needs such as improved laboratory space; make facilities more energy efficient, and incorporate sustainable design criteria in project implementation. In the annual budget, $2.0 million is planned for USGS deferred maintenance and capital improvement. One such project at the Conte Anadromous Fish Laboratory in Turners Falls, MA is to replace tent-covered fish tanks and storage with a permanent storage building that will have a solar roof to generate power, significantly reducing annual heating costs. This project will improve USGS' ability to conduct research on Atlantic salmon that spend part of their life in fresh water and the rest of their life in salt water (anadromous fishes). Research is directed at restoring and protecting these fisheries for the ecological and economic benefit of the region.

2) **Construction (C); (Budget Subactivity: Facilities) +$17.8 million:** The USGS Investment Review Board (IRB) has reviewed projects where construction is the preferred alternative to eliminate deferred maintenance and address other health and safety issues. Three construction projects were approved by the IRB as the most cost effective way to address the issues at research centers. They are part of the ARRA project list, including the Patuxent Wildlife Refuge Research Center in Patuxent, MD; the Columbia Environmental Research Center (CERC) in Columbia, MO; and the Upper Midwest Environmental Services Center (UMESC) in LaCrosse, WI. Recovery Act funding will make it possible to begin work on these projects immediately. Work at these centers will improve the ability of scientists to conduct innovative research on contaminants and wildlife, endangered species, wind power and wildlife, adaptive management, wildlife disease and much more. The rehabilitation of these facilities will support jobs for the local community, a key goal of the economic stimulus package, improve functionality, and also reduce long-term operating costs.

3) **Deferred Maintenance – Streamgages, Cableways, and Wells (ER); (Budget Subactivity: Facilities) +$14.6 million:** USGS operates streamgages and wells with state and local funding partners; when partners no longer co-fund the streamgages and wells, sites are usually closed and remediated. Over the past decades, funds were not available to remediate some of these sites or to adequately maintain some currently operated

sites. Discontinued streamgages, cableways, and ground-water wells that have not been remediated potentially pose public health and safety issues until they are remediated. Funding for remediation will be used to remove structures that are no longer in use, which will in turn make these sites safer for public enjoyment and support local economies.

4) **Upgrades to Streamgages (SG); (Budget Subactivity: National Streamflow Information System) +$14.6 million:** The USGS national streamgage network (NSN) (7,500 sites) is dependent on a NOAA-operated satellite, which is scheduled for conversion to new high-data rate radio (HDR) technology in 2013. USGS will use Recovery Act funding to upgrade to HDR technology and upgrade streamgages with new technologies for streamflow measurement. With Recovery Act funding and current appropriation plans, all 7,500 streamgages will be upgraded by 2012. The HDR radios will provide improved data quality to data users through more timely data transmissions (1 transmission every hour instead of 1 transmission every 4 hours.) This is particularly important during periods of flooding when emergency and water managers critically need timely information to warn surrounding communities affected by water surge.

5) **Earthquake Monitoring (SV); (Budget Subactivity: Earthquake Hazards) +$29.4 million:** USGS will use Recovery Act funding to make a substantial impact on the modernization component of the Advanced National Seismic System (ANSS) by doubling the number of ANSS-quality stations and upgrading seismic networks nationwide, to bring the total from approximately 800 to 1600. These improved networks will deliver faster, more reliable and more accurate information – helping to save lives by providing better situational awareness in the wake of the damaging earthquakes that can strike this nation at any time. Earthquakes are one of the most costly natural hazards faced by the Nation, posing a significant threat to 75 million Americans in 39 states. The delivery of earthquake information will be more timely with investments in modern seismic networks and data processing centers.

6) **Volcano Monitoring (SV); (Budget Subactivity: Volcano Hazards) +$15.2 million:** USGS will use Recovery Act funding to modernize equipment in the National Volcano Early Warning System (NVEWS) through modernization of monitoring equipment at all USGS volcano observatories. The U.S. and its territories are one of the most volcanically-active regions in the world, with 169 active volcanoes. As many as 54 of these potentially dangerous volcanoes need improved monitoring. Volcano monitoring can protect lives and avoid significant economic losses. Twenty years ago, a KLM Airlines Boeing 747 filled with passengers flew head-on into a 40,000-ft high cloud of volcanic ash west of Anchorage, Alaska. The encounter shut down all four of the

plane's engines. Fortunately the aircraft was able to restart, averting tragedy, and the loss of the plane valued at more than $80.0 million.

7) **Imagery and Elevation Data for Mapping (NM); (Budget Subactivity: National Geospatial Program) +$14.6 million:** USGS maps are used in myriad ways: hazard response, vegetation change, land cover assessment, coastal erosion change, and determining boundaries. Recovery Act funding will allow USGS to improve mapping data, which will then be made available for multiple uses including flood mapping, emergency operations, and natural resource management. USGS will upgrade existing imagery and elevation map data and collect additional higher resolution elevation and orthoimagery data in critical areas of the United States. Elevation data and orthoimagery are used in applications ranging from flood forecasting and modeling sea-level rise to improving understanding of key natural resource issues. According to the USGS National Map's Tactical Plan, the highest priority areas that need elevation data are over coastal areas of the United States that are most susceptible to storm and hurricane flooding, earthquake damage, and coastal erosion. The USGS will coordinate the collection of elevation and orthoimagery data with other Federal agencies and State governments, leveraging use of Recovery Act funds to obtain data which will be suitable for use by a variety of organizations.

8) **Data Preservation (DP); (Budget Subactivity: Facilities) +$448,000:** Researchers and resource managers across the country utilize bird banding information to track the populations, flight patterns and resting areas of migratory birds. The USGS Bird Banding Laboratory (BBL) located at the Patuxent Wildlife Research Center in Maryland manages all marking and recovery information for migratory birds for the U.S. It also processes banding and recovery data for migratory birds from Canada and Mexico. Since 1908, more than 66 million birds have been banded and 4.1 million have been recovered. Recovery Act funding will make it possible to digitize and make available to the public via the Internet, the historical banding recovery and bird banding records. Bird banding data have a wide variety of uses including applications for disease research. Sampling wild birds for serious disease helps determine the prevalence of the disease in the population and any of these birds with bands can be traced back to when and where the bird was banded. Digitizing these records would allow the BBL to eliminate the need for off-site record storage and the associated storage costs. Recovery Act funding will save resources by allowing more work to be accomplished in a shorter amount of time, and improve access to this information which is widely used by bird management and conservation programs**.**

USGS Funding Table

Surveys, Investigations, and Research	Funding Amount (000's)	# of Projects Per Category	Contingency Projects Funding (000's)[1]	# Contingency Projects[1]
Deferred Maintenance – Facilities (DM)	$29,403	67	$7,392	22
Construction (C)	$17,791	3	0	0
Deferred Maintenance - Streamgages, Cableways, and Wells (ER)	$14,625	183	$8,551	85
Upgrades to Streamgages (SG)	$14,625	52	$3,000	3
Earthquake Monitoring (SV)	$29,445	3	$6,000	1
Volcano Monitoring (SV)	$15,210	6	$3,000	1
Imagery and Elevation maps (NM)	$14,625	2	$3,000	2
Data Preservation (DP)	$488	1	0	1
Administrative Costs[2]	**$3,788**			
TOTAL	**$140,000**	317	$30,943	115

[1/] "Contingency" funding and projects refer to ranked projects meeting the ARRA criteria and ready to be instituted should a project ranked higher experiences delays.

[2/] The amount of "Administrative Costs" for DM and C is shown at 3% of the total funding provided for these categories; the amount of "Administrative Costs" for other project categories (ER, SG, SV, SV, NM and DP) is shown at 2.5% of the total funding. There could be administrative costs not to exceed 5% in total.

Process for Allocating Between Categories

USGS received direction in Recovery Act language that identified project categories. Given its strong tradition and practice of science planning and administrative reviews, USGS used existing plans and processes to focus on each category in the legislation and determine how the funds could best be used to respond to the intent of the Act and advance programs and planning efforts already underway or ready to be implemented in USGS. USGS made the funding level determination for each category using a combination of: work that could be implemented within the time frame of the Act; existing national, merit-based priorities; projects which would not generate future year operation and maintenance costs that could not be met with current funding; and projects that would address long-standing needs. Once funding levels were determined by category experts, staff were engaged to examine existing plans and project priorities to recommend individual projects to be funded. From this process emerged a set of projects ranked in priority order and evaluated according to the relevance, expected outcomes and benefits compared to the other projects. USGS has identified a total of $140.0 million in projects to be executed under the authorization of the Recovery Act. Throughout the execution of the program, USGS will monitor schedules and costs for the projects. If it is determined that a project cannot be completed in a timely fashion, USGS will redeploy funds to another project that has undergone the same priority ranking processes. USGS has developed a list of projects totaling $30.0 million for this purpose.

Part III: Deferred Maintenance - Facilities

Program	Funding Amount	# of Projects
Deferred Maintenance – Facilities (DM)	$29,403,000	67

Program Manager

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Objectives

The overall objective for the USGS Facilities program is to provide a safe, reliable, energy-efficient, and right-sized portfolio of infrastructure for employees, visitors, and contractors at USGS facilities. One means of achieving this objective is by completing deferred maintenance projects for mission critical and mission dependent facilities and disposing of assets no longer needed to support the mission. By addressing projects that were planned for future years in the USGS 5-year plan, USGS will protect the health and safety of the public and employees, sustain the assets through their remaining useful life, and ensure compliance with building codes and industry standards.

The USGS Facilities program ensures that assets required to accomplish science mission objectives are maintained. USGS is a leader in understanding complex natural science questions of the day; performing objective, policy-neutral analysis; and providing the scientific products to lead to solutions. For more than a century, natural resource managers, emergency response organizations, land use planners, decision-makers at all levels of government, and citizens in all walks of life have come to depend on the USGS for reliable information to address pressing societal issues such as public safety and health, natural resource management, and environmental protection.

The USGS utilizes its facilities condition assessment program to identify and document deferred maintenance. This program includes annual surveys and a cyclic process for comprehensive on-site condition inspections. These condition assessments are vital to establishing core data on the condition of the USGS constructed assets. This program tracks the facilities condition, as measured by the Facilities Condition Index (FCI). This index is calculated by dividing the deferred maintenance backlog (DM) by the current replacement value (CRV). FCI = DM / CRV.

Completion of the ARRA Deferred Maintenance-Facilities projects will support the advancement of USGS asset management and science programs by reducing deferred maintenance on high priority facilities. Facilities will be decommissioned which will “right-size” the overall portfolio of assets which will be illustrated through improving the bureau’s overall FCI. Additionally, the program will improve the longevity of systems and maximize the efficiencies of the real property assets and equipment used to carry out the science mission. Six projects will include disposal of existing assets. The USGS 5-year plan for 2010-2014

included a total of $17.7 million in deferred maintenance associated with the projects. ARRA funding will complete approximately $16.5 million of this set of priority projects.

For example, the research vessels on the Great Lakes have deferred maintenance issues. Their replacement will address deferred maintenance projects and result in energy efficiency and a safer work environment along with disposal of assets which have far exceeded the end of their life expectancy.

Activities

Examples of ARRA projects:

- Energy efficient roofing project
- Energy Star HVAC system replacement
- Fire alarm and sprinkler system installation
- Paving roadways and sidewalk replacement
- Replacement of water towers and water supply lines

Selection Criteria

Selection Process: Initially, the USGS used existing projects in 5-year plans for deferred maintenance. Deferred maintenance (DM) projects for facilities are ranked using a consistent score that was established by the Department of the Interior (DOI). The projects on the 5-year plan are the highest ranking projects that were slated for 2010 – 2014. Additional projects beyond the current 5-year lists were compiled at the regional level using the same priority-ranking criteria.

Selection Factors: To provide consistency Department-wide and address a consistent set of priorities for DM, all DM projects are ranked using a consistent weighting process: percentage of work that falls in each of nine categories of facilities maintenance and construction needs. These are listed below (weighting factors shown to the right):

Critical Health & Safety Deferred Maintenance (CHSdm)	10
Critical Health & Safety Capital Improvement (CHSci)	9
Critical Resource Protection Deferred Maintenance (CRPdm)	7
Critical Resource Protection Capital Improvement (CRPci)	6
Energy Policy, High Performance, Sustainable Buildings C I (EPHPBSci)	5
Critical Mission Deferred Maintenance (CMdm)	4
Other Deferred Maintenance (Odm)	3
Code Compliance Capital Improvement (CCci)	4
Other capital improvements (Oci)	1

All projects are ranked using the following calculation:
(%CHSdm x 10) + (%CHSci x 9) + (%CRPdm x 7) + (%CRPci x 6)
+(%EPHPBSci x 5) + (%CMdm x 4) + (%Odm x 3) + (%CCci x 4) + (%Oci x 1)
= TOTAL SCORE

This ranking formula was designed to accommodate many project types and sizes. It places the highest priority on facility-related Critical Health and Safety and Critical Resource Protection deferred maintenance needs. Capital improvement projects that also eliminate substantial amounts of deferred maintenance receive higher rank score than projects that do not. A project example is described below along with its total score calculation:

Description: Rehabilitate to correct critical health and safety deficiencies by:

(1) Providing fire alarm system (now lacking) for new HQ office annex,
(2) Providing fire suppression systems for storage rooms in old HQ building,
(3) Installing fume hood,
(4) Installing eye wash station, and
(5) To comply with National Electrical Code, project includes replacing and repairing portions of electrical system in old HQ building.

Percentages of this project applied to weighting categories:

70% CHSdm and 30% CCci

Project's total score would be: (70 x 10) + (30 x 3) = 790.

In preparation of the 5-year plan, Facilities Managers submit scored projects, USGS then uses a DM team that has membership from each Region and Headquarters, to review all project scoring. The Team ensures consistency in USGS scoring and ranking and develops the USGS DM 5-year plan.

Characteristics (Types of Financial Awards to be Used)

Type of Award	# of projects in this category	$ Value of projects	Targeted type of recipients	Award Selection Types
In-House Activity	1	972,000	Acquisitions and Project Managers	Administrative support
Contracts	67	29,403,000	Small Businesses, Large Businesses	Criteria based on statement of work, successful record of past performance and adherence to cost schedule
Grants				NONE CONTEMPLATED
Cooperative Agreements				NONE CONTEMPLATED

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Description of Project Types	# of Projects	$ Value of Projects
Less than or equal to $100k	Deferred Maintenance	25	$1,850,000
Greater than $100k and less than $2M	Deferred Maintenance	38	$15,657,000
Greater than or equal to $2M	Deferred Maintenance	4	$11,896,000

Completion Rate

Quarter	# of Projects Completed (Less than or equal to $100k)	# of Projects Completed (Greater than $100k and less than $2M)	# of Projects Completed (Greater than or equal to $2M)	Total # of Projects Completed per Quarter	Cumulative % of Projects Completed
FY 2009 Q4	1			1	1%
FY 2010 Q1	3	2		5	10%
FY 2010 Q2	3	3		6	18%
FY 2010 Q3	3	2		5	25%
FY 2010 Q4	5	3		8	37%
FY 2011 Q1	3	7		10	52%
FY 2011 Q2	2	7	1	10	67%
FY 2011 Q3	0	4		4	73%
FY 2011 Q4	5	10	3	18	100%

Less than or equal to $100.000 -- Key Milestones

Milestones	Avg. Length of Completion (months)
Planning	1
Award design	1
Design	3
Award Construction	2
Construction	10.5
Closeout	1
Total	*18.5*

Greater than $100,000 but less than $2.0M -- Key Milestones

Milestones	Avg. Length of Completion (months)
Planning	1
Award design	1
Design	2
Award Construction	6
Construction	11.5
Closeout	1
Total	*22.5*

Equal to or greater than $2.0M -- Key Milestones

Milestones	Avg. Length of Completion (months)
Planning	1
Award design	1
Design	4
Award Construction	6
Construction	15.5
Closeout	1
Total	*28.5*

Large Deferred Maintenance Projects (Greater than $800,000)

Project Information		Duration of Activities (in months)					Total Months to Complete
Name of Project	$ Value of Project	Planning	Permitting/ Pre-Contract Award	Design	Construction	Close-Out	
NWHC – Replace Exhaust Fans, Ducting and Filter Housing (TIB Building)	$ > 800,000	1	3	4	19	3	30
UMESC – Replace Existing Water Tower	$ > 800,000	1	2	3	21	3	30
CERC – Renovate Pond Banks, Kettles and Piping	$ > 800,000	1	3	4	19	3	30
NWHC – Replace Exhaust Fans, Ducting and Filter Housing (Main Building)	$ > 800,000	1	3	4	19	3	30
NWHC –Replace building Control System	$ > 800,000	1	3	4	19	3	30
Replace Musky Research Vessel	$ > 800,000	1	3	3	21	2	30
Replace Kaho Research Vessel	$ > 800,000	1	3	3	21	2	30

Mission/Savings/Costs Implications

Keeping employees who work at and the public who visits USGS facilities safe is key to successful conduct of the Bureau's mission. In addition, fixing and maintaining these facilities will save money in the future as well provide jobs now to local contractors. The USGS expects future reductions in annual operations and maintenance costs through the installation of new energy efficient equipment and upgrade of facilities. In 2008, the annual operating cost for owned assets in the Federal Real Property Profile was $14.2M. An estimated reduction of $283,000 each year is expected after completion of the proposed projects. The ARRA funded deferred maintenance projects should reduce both the utility consumption and cost as well as reduce expenditures on unscheduled maintenance.

Part IV: Construction

Program	Funding Amount	# of Projects
Construction	$17,791,000	3

Program Manager

Paul Gargano; AGargano@usgs.gov; (703) 648-7505

Objectives

Construction funding for USGS facilities provides for the construction, rehabilitation and replacement of assets required to accomplish mission objectives. USGS is a leader in understanding complex natural science questions of the day; performing objective, policy-neutral analysis; and providing the scientific products to lead to solutions. For more than a century, natural resource managers, emergency response organizations, land use planners, decision-makers at all levels of government, and citizens in all walks of life have come to depend on the USGS for reliable information to address pressing societal issues such as public safety and health, natural resource management, and environmental protection.

It is USGS policy to manage its real property and other constructed assets in an economic and effective manner and to exercise responsible stewardship of these assets in compliance with Departmental guidance on capital improvements. To adequately meet science mission needs, USGS uses construction funding for the repair, modernization and construction of buildings and other facilities that are in a state of disrepair, beyond their useful lives, or otherwise no longer cost-effective to operate. All construction projects are reviewed and selected by the USGS Investment Review Board.

Completion of the ARRA construction projects will modernize assets and infrastructure, eliminate overcrowding and dispose of assets that are no longer cost effective to operate and maintain. This will improve the overall USGS asset management program in the areas of operating costs, utilization, facilities condition index, and the disposition of assets. All of these are key elements of an asset management program as identified by the Federal Real Property Council.

Activities

Examples of ARRA projects:

- Demolition of existing administration and research buildings
- Demolition of existing water and sewer piping systems
- Design sustainable building and scope of work for construction
- Modernization of water and sewer piping systems

Selection Criteria

Construction projects were identified for inclusion in the Recovery Act using the USGS Investment Review Board process. This process consists of field managers reporting conditions of facilities and whether they are adequate to meet the needs of the required functions of the field unit. Local managers submit their proposals to the Regional Directors, who in turn review them and rank them in a priority order respective to their Region and submit decisions to Headquarters. In Headquarters, facilities staff rank all of the projects according to accepted procedure and prepare them for Board consideration. Managers/Regions make presentations to the Board on the projects selected for funding and action. The USGS IRB then discusses all projects in an Executive Session and recommends a ranked list to the Director for decision. Projects are then included in the Bureau budget request to the Department, concomitant to funding targets. This process was modeled on the DOI IRB model. The USGS follows the procedures in the Department's Capital Planning and Investment Control Guide to review, select and manage the business cases (OMB Exhibit 300) for construction projects greater than $2 million.

Characteristics (Types of Financial Awards)

Type of Award	# of projects	$ value of projects	Type of recipient	Award Selection Criteria (high-level bullets)
Contracts	3	$17,791,000	**small and large business**	Vendors will be selected based on meeting statement of work requirements; performance record; evaluation of competitive costs and performance record.
Grants				NONE CONTEMPLATED
Cooperative Agreements				NONE CONTEMPLATED

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Description	# of Projects	$ Value of Projects
Greater than $2M	Construction Projects	3	$17,791,000

Greater than $2.0M

Construction Project List

Project Name	Description
Patuxent Wildlife Refuge Center (MD) Phase 3	Phase 3 of Construction of New Facility and Disposal of Assets would provide for design and engineering of new buildings; archaeological, historical, and cultural assessment and mitigation; and animal research facility upgrades; work will include disposal of up to 10 assets
Upper Midwest Environmental Sciences Center (WI) Building Addition Segment "D"	Building Addition Segment "D" will be a wing on the main office/laboratory building and will alleviate severely overcrowded conditions resulting from vacating 25,000 square feet of leased space in nearby Onalaska to consolidate science operations
Columbia Environmental Research Center (MO) Office/Laboratory Consolidation New Building Construction	Office/Laboratory Consolidation, Demolition and New Building Construction includes constructing an office/laboratory building which would replace nine agricultural and modular structures that have exceeded their useful life cycles, have safety and structural deficiencies, and no longer meet accessibility and electrical code standards

Timeline

Project Information		Duration of Activities (in months)					Months to Complete
Name of Project	$ Value	Planning	Permitting/ Pre-Contract Award	Design	Construction	Close-Out	
Patuxent	$ > 2M	1	2	12	12	3	30
UMESC	$ > 2M	1	2	3	21	3	30
CERC	$ > 2M	1	2	3	21	3	30

*Administrative cost for construction projects is $534K

Mission/Savings/Costs Implications

Expected cost implications are described for each of USGS' three ARRA projects:

Patuxent Wildlife Refuge Center, MD (home to approximately 140 Federal employees): The Patuxent Wildlife Refuge Research Center is a national treasure: America's first wildlife experiment station and research refuge unit in the system, it was the research home to Rachel Carson who paved the way for the important ecological studies continuing there today. The ARRA funds will allow for the immediate implementation of the architecture and engineering-designed plans that have been under development to rehabilitate this historical facility for over a decade. USGS plans a new facility that is expected to have a minimal annual operational cost differential.

Upper Midwest Environmental Sciences Center (UMESC), WI, Segment D (home to approximately 180 Federal employees): UMESC was established in 1959, in La Crosse, WI in an old fish hatchery. It was designed to investigate and develop chemical agents for controlling undesirable freshwater fish, in efforts to assist the Great Lakes fishing industry with the best known methods at the time. Its mission expanded tens years later to include research into control of sea lamprey in the Great Lakes and develop chemicals for public use in aquaculture. Most on-site current structures date to late 1960's; they are in need of repair. Specifically, new labs are required for research to support the $7.5 billion fishing

industry in the Great Lakes. This building expansion project is estimated to increase square foot occupancy by 21,500 for the 180 staff housed there. Increases in operational costs of approximately $291,486 for this expansion will be covered through combined funding from an allocation from the Rent and Operations and Maintenance appropriation, facilities costs in reimbursable agreements, and program funding.

Columbia Environmental Research Center (CERC), MO (home to approximately 100 Federal employees): CERC was also established in 1959 at the US Fish and Wildlife Service's Denver Wildlife Research Center as its Fish Pesticide Research Lab (FPRL). In 1966, the University of Missouri demonstrated its dependence on the work of the facility in both educational and adaptive application and deeded 33 acres to move the lab to its present location. The partnership initiated between the University and (the now) UMESC remains strong through cooperative research. This project would include demolition of nine buildings to be replaced by one. The new office/laboratory consolidation building construction project at CERC is estimated to reduce annual operations and maintenance costs by $33,066. A decrease in utility costs and unscheduled maintenance is expected with this Leadership in Energy and Environmental Design (LEED) certified building that will replace nine assets.

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Part V: Deferred Maintenance – Streamgages, Cableways, and Wells

Program	Funding Amount	# of Projects
Remediation of discontinued streamgages, cableways, and ground-water wells	$14,625,000	183*

Each project in the project list may include multiple sites for each project type, priority, and State. There are **a total of 1289 individual sites included in the projects on the project list.*

Program Manager

Steve Blanchard; sfblanch@usgs.gov; 703-648-5629

Objectives

The USGS installs and manages ground-water wells, streamgages, and cableways to measure the water quality and quantity of the Nation's rivers and aquifers. The USGS' intent is to operate these monitoring stations indefinitely; however, the USGS has to discontinue use of a monitoring station if funding to operate the site is no longer available from a cooperating organization such as Federal, State, local, and Tribal governments. When funding from a cooperating organization is no longer provided, the monitoring station is discontinued. When discontinued, the station immediately presents a facilities management issue with potential health and safety concerns.

Discontinued cableways are large structures that seem to draw people to climb on them and present a fall hazard; discontinued streamgages often have shafts within them that present a fall hazard; and ground-water wells can potentially serve as conduits for contamination of aquifers. These discontinued monitoring sites are entered into the deferred maintenance-capital improvements (DM) database.

A priority objective of the ARRA DM funding is to remediate all the discontinued sites as previously identified by the USGS Water Science Centers (WSCs) as priority 1 or 2 in the DM database as of the end of fiscal year 2008 (145 of the 183 projects are priority 1 or 2). After priority 1 and 2 sites are addressed, remaining sites will be remediated in priority order and if additional funding is available, all sites needing remediation will be completed along with repairs and stabilization to existing streamgages and cableways.

National Environmental Policy Act (NEPA) and USGS Environmental Liability

In accordance with NEPA and the legal environmental requirements, each site in the DM must be verified as being in compliance with NEPA and not an environmental liability to the USGS before and after the rehabilitation of the project. This process has been simplified into a field form that will be filled out by an appropriate USGS field person to ensure the bureau's potential safety and environmental liabilities have been met in the mitigation of the project.

Activities

USGS will remediate 1,289 discontinued streamgages, cableways, and ground-water wells contained within the USGS DM database. This activity will be done principally through contracts. WSCs will inspect each site before and after the mitigation.

Selection Criteria

The plan for allocating the ARRA DM funding is to retire all the discontinued sites as previously identified by the WSCs as priority 1 through 4 and many of the priority 5 projects in the DM database as of the end of Fiscal Year 2008. The sites are ranked from 1 to 5 with 1 highest priority for remediation and 5 representing the lowest priority for remediation. Remediating these sites accounts for about $12 million of the $15 million of expected ARRA funds. All the project costs in the DM database are estimates, so after much of the work for priority 1 and 2 projects has been contracted and firmer costs have been established, work will begin on priority 3 and higher projects contained in the DM database. The database has documentation about the locations of all the sites, the infrastructure needing removal, and the history of the stations (Figure. 1).

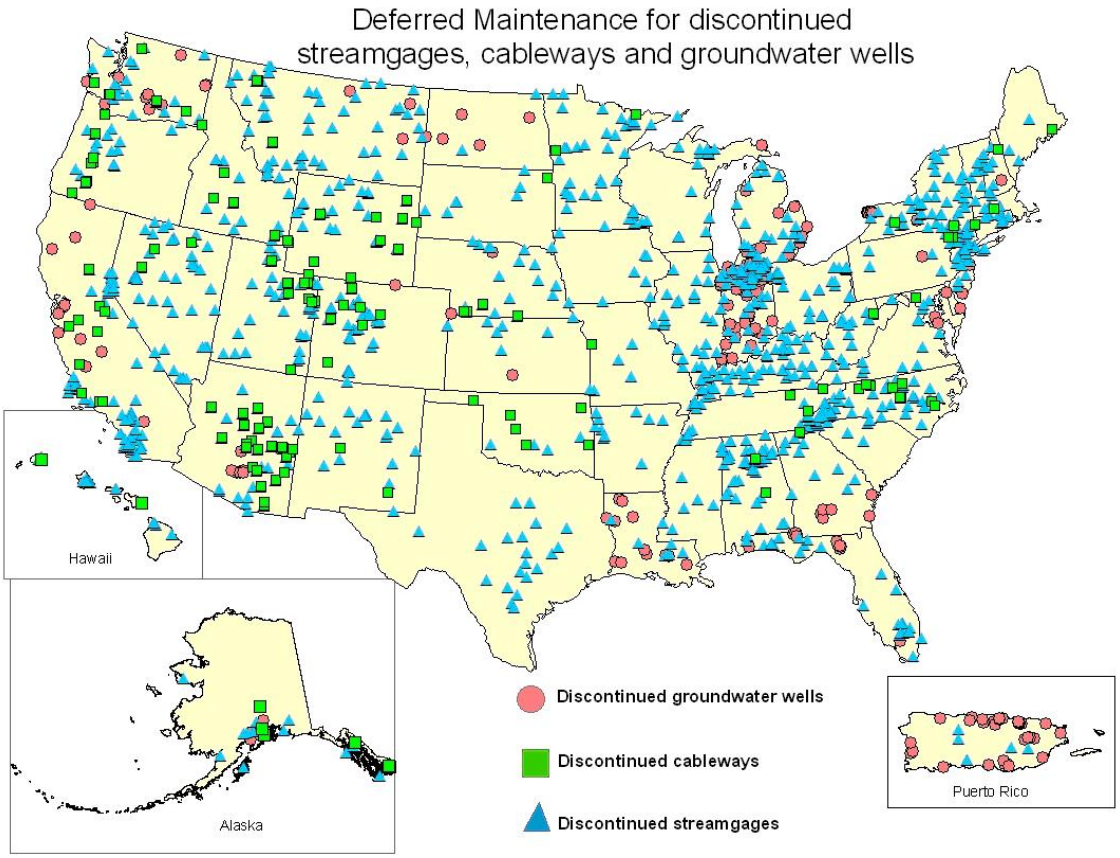

Figure 1.—Map of discontinued streamgages, cableways, and streamgages in the USGS.

Characteristics (Types of Financial Awards to be Used)

Type of Award	# of projects	$ Value	Type of recipient	Award Selection Criteria
Temporary Term Appointments	183	1,000,000	USGS Hydrographers	Quality assurance visits to discontinued sites to ensure remediation is completed properly and to complete NEPA documentation.
Contracts	183	$13,625,000	Private Contractors	Methods available: open market competition; orders using Indefinite Delivery/Indefinite Quantity (ID/IQ); GSA schedule orders; and open market non-competitive for small transactions (less than $3,000).

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Description of Project Type	# of Projects	$ Value of Projects
Wells	Remediation of discontinued ground-water wells according to State regulations	42 (222 sites)	$6,893,000
Cableways	Removing cableway structures at discontinued cableway sites	50 (145 sites)	$1,285,000
Streamgages	Removal of streamgage structures at discontinued streamgage sites	91 (922 sites)	$6,447,000

Completion Rate

Quarter	# of Sites Completed (Category X-wells)	# of Sites Completed (Category Y – cableways)	# of Sites Completed (Category Z - streamgages)	Total # Completed per Quarter	Cumulative % Completed
FY 2009 Q4	30	17	100	147	11 %
FY 2010 Q1	30	20	115	165	24 %
FY 2010 Q2	30	25	135	190	39 %
FY 2010 Q3	30	25	150	205	55 %
FY 2010 Q4	31	20	135	186	69 %
FY 2011 Q1	23	13	100	136	80%
FY 2011 Q2	16	13	85	114	89 %
FY 2011 Q3	16	7	57	80	95 %
FY 2011 Q4	16	5	45	66	100%

Mission/Savings/Costs Implications

The $14.6 million in ARRA funding is expected to remediate approximately 1,289 discontinued monitoring sites nationwide that currently present ongoing challenges to management including public safety and health problems. Once this work is completed, there will be no future operating costs associated with these sites. This work will reduce the USGS liability for discontinued monitoring sites by millions of dollars.

Part VI: Upgrades to Streamgages

Program	Funding Amount	# of Projects
Upgrades to Streamgages	$14,625,000	52*

**Each project shown in the project list includes two components (radios and streamflow technology) for each State, Puerto Rico, and headquarters.*

Program Manager

Steve Blanchard; sfblanch@usgs.gov; 703-648-5629

Objectives

The USGS national streamgage network (7,500 sites) is dependent on the NOAA-operated Geostationary Operational Environmental Satellites (GOES) for transmission of real-time streamflow data. In order for the USGS to make streamflow information available and continue to use the NOAA satellite, it is necessary for USGS to convert their streamgages to the new high-data rate radio (HDR) technology by the end of 2013.

Each USGS WSC will acquire equipment to upgrade to HDR technology. In addition to HDR upgrades, WSCs will use funds to upgrade streamgages with new streamflow measuring technologies including (hydroacoustic flow measuring devices, side looking hydroacoustic sensors and non-contact radar units). The new technology stream measurement equipment will allow the USGS to more efficiently monitor streamflow and provide higher quality data. Solar powered technologies will be utilized to the greatest extent possible.

USGS will purchase approximately 2,000 of the needed 3,000 HDR for total of 6,500 of 7,500 or 87% of the national network sites (approximately 4,500 streamgages already have HDR technology). The remaining 1,000 streamgages to be upgraded would be completed through the current plan of upgrading 400 streamgages per year with annual appropriations. With ARRA funding combined with annual funding, the conversion would be completed well before 2013.

It is anticipated that private vendors and manufacturers of equipment would need to increase production to meet demand. Streamgage equipment would be installed during regular periodic servicing visits by USGS hydrologic technicians. It is expected that equipment installation generally will be accomplished in less than one hour at each site.

Activities

Examples of ARRA projects:

- Purchase High Data Rate (HDR) satellite telemetry radios and install them on approximately 2,000 USGS streamgages nationwide. The new HDR

radios will allow for hourly transmission of streamflow data instead of transmissions once every 4 hours.

- Purchase new technology streamflow measuring equipment, such as hydroacoustic flow measuring devices, side looking hydroacoustic sensors, non-contact radar units, etc. to improve the efficiency and safety of streamflow monitoring by the USGS and to provide higher quality data to the public.

Selection Criteria

To meet the HDR upgrade requirement and improve USGS streamgage technology, USGS will allocate funding for streamgage upgrades to each USGS Water Science Center (WSC) based on the size of their streamgage network in relation to size of national network. If the California Water Science Center streamgage network is 4% of the national network, they will receive 4% of the funding for the equipment upgrades. USGS would spend approximately $10 million on HDR and $5 million on other equipment and technologies to modernize the streamgage network.

Characteristics (Types of Financial Awards)

Type of Award	# of projects	$ Value of projects	Type of recipients	Award Selection Criteria
Contracts	52	$14.625M	Private Instrument Vendors	Criteria based on statement of work, successful record of past performance and adherence to cost schedule

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects*

Type	Description of Project Types	# of Projects	$ Value of Projects
Radios	Purchase and installation of high data rate satellite telemetry radios	52	$9,750,000
Streamflow equipment	Purchase new technology streamflow measuring equipment	52	$4,875,000

*Each of the 52 projects has two components—radios and streamflow equipment.

Completion Rate

Quarter	# of Projects Completed (Radios)	# of Projects Completed (Streamflow Equipment)	Total # of Projects Completed per Quarter	Cumulative % of Projects Completed
FY 2009 Q4	0	5	5	5%
FY 2010 Q1	5	5	10	14%
FY 2010 Q2	5	7	12	26%
FY 2010 Q3	7	10	17	42%
FY 2010 Q4	10	10	20	62%
FY 2011 Q1	10	9	19	80%
FY 2011 Q2	7	6	13	92%
FY 2011 Q3	5	0	5	97%

Purchase of HDRs – Key Milestones

Milestones	Avg. Completion
Equipment funding assignments for Water Science Centers determined	1 week
HIF HDR ordering web page developed and operation	2 weeks
Water Science Centers place orders	3 weeks
HIF places orders with Vendors for HDRs	3 weeks
Vendors fabricate and deliver HDRs	2 years
HDRs are installed at streamgages	30 weeks

Purchase new steamflow measuring equipment -- Key Milestones

Milestones	Average Length of Completion
Equipment funding assignments for Water Science Centers determined	1 week
HIF HDR ordering web page developed and operation	2 weeks
Water Science Centers place orders	3 weeks
HIF places orders with Vendors for HDRs	3 weeks
Vendors fabricate and deliver HDRs	2 years
Streamflow measuring equipment is put into operation	24 weeks

Mission/Savings/Costs Implications

Streamflow data is critical to the health, safety and welfare of the United States, providing key information on the quality and quantity of the Nation's water supply. Streamflow measuring equipment will allow for more measurements to be made for the same operational costs and provide a safer and more efficient means to measure streamflow.

The HDR radios will not decrease operational costs but will provide improved data quality to data users through more timely data transmissions (1 transmission every hour instead of 1 transmission every 4 hours.) This is particularly important during periods of flooding when emergency and water managers critically need timely information.

Hydroacoustic equipment and other new technologies will provide a safer and more resilient way to measure streamflow during major flooding events. This could save millions in annual equipment replacement costs.

Part VII: Earthquake Monitoring

Program	Funding Amount	# of Projects
Earthquake Monitoring Network Upgrades	$29,445,000	3

Program Manager

David Applegate, Ph.D;applegate@usgs.gov; 703-648-6714

Objectives

Earthquakes are one of the most costly natural hazards faced by the Nation, posing a significant threat to 75 million Americans in 39 states. The timely delivery of earthquake information requires modern seismic networks and data processing centers – critical infrastructure that provides the situational awareness required for effective emergency response, saving lives and reducing economic losses. Funding in the stimulus proposal will further improve timely delivery of earthquake information.

In areas of the U.S. at risk for destructive earthquakes, some of the current monitoring system is 40-year-old technology; even previously-upgraded systems now have outdated technology. Stimulus funding would replace old instruments with state-of-the-art, robust systems across the highest earthquake hazard areas in California, the Pacific Northwest, Alaska, the Intermountain West, and the Central and Eastern U.S. The modernization of our earthquake networks will deliver more reliable, robust information, helping to save lives in the wake of natural disasters that can strike the Nation at any time. The planned upgrades will also allow for "earthquake early warning" – a technology in operation in Japan, Taiwan and Mexico that uses sensor detections at the earthquake epicenter to broadcast warnings to nearby areas about-to-be-shaken.

The proposed investments in earthquake monitoring meet the stated Recovery Act criteria for spending that will flow directly into the Nation's economy. These investments will provide jobs for U.S. equipment manufacturers; geophysical contractors to do installations, and the colleges and universities that run regional earthquake networks and partner with USGS. Because the investments will modernize aging equipment at existing stations, they do not represent out-year commitments and the new equipment should lower future maintenance costs. Solar powered technologies will be utilized to the greatest extent possible.

Activities

Examples of areas that ARRA funds will address:

- Replacement of existing urban strong motion instrumentation (modernization as part of the development of the Advanced National Seismic System, ANSS)

- Replacement/upgrade of existing seismograph stations & processing centers (modernization as part of the development of the Advanced National Seismic System and the Global Seismographic Network (GSN))
- Replacement/upgrade/reconfiguration of Existing Deformation Monitoring Equipment (integration as part of the development of the Advanced National Seismic System)

When supplemented with base program funds over 3 years, ARRA funds will double the number of ANSS stations, completing the initial stations called for in the ANSS plan, and will allow the completion of planned "next-generation" system upgrades to the USGS-operated portion of the GSN.

Selection Criteria

Priorities were set through the long-standing and multi-year planning process for the Advanced National Seismic System (ANSS) and Global Seismographic Network (GSN). Priorities address upgrading equipment in areas most vulnerable to seismic activity and subsequent potential natural disasters related to it. Committees comprising USGS and partner scientists identified priority needs, which are included in the Department's and USGS planning processes for major IT capital investments. Priorities also reflect guidance from the following external (FACA) advisory committees: ANSS National Steering Committee, GSN Standing Committee, and the congressionally-established Scientific Earthquake Studies Advisory Committee. These documents are available at. http://earthquake.usgs.gov/research/monitoring/anss/.

Characteristics (Types of Financial Awards to be Used)

Type of Award	# of projects	$ Value of projects	Type of recipient	Award Selection Criteria
Contracts**	3	$19,450	equipment manufacturers and software developers	Criteria based on statement of work, successful record of past performance and adherence to cost schedule

**Each project will utilize a combination of contracts and cooperative agreements in completing the work.

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Project Type	# Projects	Value Projects
Seismic	Upgrades to seismic stations	1	$6,825,000
Center	Upgrades to processing centers & communications	1	$16,478,000
Deformation	Upgrades to deformation monitoring systems & communications	1	$6,142,000

Completion Rate

Quarter	% of Project Completed* (Seismic)	% of Project Completed (Center)	% of Project Completed (Deformation)	% of Projects Completed per Quarter	Cumulative % of Projects Completed
FY 2009 Q2					
FY 2009 Q3	33%	75%	20%	42%	42%
FY 2009 Q4	33%	0%	20%	17%	59%
FY 2010 Q1	0%	0%	20%	7%	66%
FY 2010 Q2	0%	0%	20%	7%	73%
FY 2010 Q3	0%	0%	0%	0%	73%
FY 2010 Q4	17%	25%	20%	21%	94%
FY 2011 Q1	0%	0%	0%	0%	94%
FY 2011 Q2	17%	0%	0%	6%	100%
FY 2011 Q3	Equipment purchases complete				
FY 2011 Q4					

*Percent of projects completed was used since each project type has only one project.

Upgrades to seismic stations -- Key Milestones

Milestones	Target Time to Completion
Equipment orders placed (1st set)	1 month
Temporary hires, students in place (USGS)	3 months
Installation contracts/coops funded	5 months
Equipment delivery	6 months
Installations completed - USGS	18 months
Installations completed - University	22 months

Upgrades to processing centers and communications -- Key Milestones

Milestones	Target Time to Completion
Equipment orders placed	1 month
Development and installations contracts funded	2 months
New contracts funded (e.g., communications upgrades)	3 months
Upgrades completed	18 months

Upgrades to deformation monitoring systems

Key Milestones

Milestones	Target Time to Completion
Project plan completed	1 month
RFP for site restoration	4 months
New coop. agreement(s) for demonstration projects	7 months
Equipment purchases – USGS	10 months
Upgrades completed	18 months

Savings/Costs Implications

There will be no net change to operational costs as a result of these projects. Operational costs are expected to decrease on the modernized stations where older technology will be replaced with cost efficient and solar powered equipment. Some operational costs may increase with additional equipment required to upgrade the data centers and improve communications. These changes are expected to offset each other and result in no net change to the operational costs.

Part VIII: Volcano Monitoring

Program	Funding Amount	# of Projects
Volcano Hazards Program Research And Monitoring	$15,210,000	6

Program Manager

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Objectives

The U.S. and its territories contain 169 potentially active volcanoes. Hazards from volcanic eruptions and resultant ash and lahars are dangerous to human health and welfare and to the Nation's economy. They are mitigated by a system of five volcano observatories maintained by the USGS and its partners. Deployment of networks of geophysical instruments on high threat volcanoes, together with regular satellite surveillance, permits unrest, which is a prelude to eruption, to be detected early enough for communities, business, and emergency response agencies to take protective measures. Coupled studies of eruption history and community vulnerabilities permit wise monitoring investment priorities to be established and likely eruption scenarios predicted. The result is that losses to life and property are minimized.

While all these volcanic systems are monitored, there is a serious need to bring the equipment and systems up to state-of-the-art standards outlined by the National Volcano Early Warning System (NVEWS) report framework. This is the planned use of Recovery Act funds. In particular, antiquated analog seismic systems need to be upgraded to digital systems, and newly developed instruments, such as continuously recording Global Positioning Systems (GPS) and gas sensors need to be added to monitoring stations. Networks of seismic instruments deployed on volcanoes are the first line of the defense in "hearing" magma (molten rock) moving, and GPS – by measuring swelling of the volcano – can tell how much magma is moving and how close it is to the surface. Improvements need to be made to the telemetry systems that bring this data from highly remote mountain locations to the observatories for analysis. Other new tools need to be brought to bear on the volcano hazards problem. Airborne Light Detection and Ranging (LiDAR), essentially precision mapping by laser from an airplane, can reveal new information about volcanic structures and provide a baseline against which to measure the results of volcanic eruptions. Geologic investigations of recent eruptions, new computational fluid dynamic models for mudflows, and new Geographic Information System (GIS) approaches to assembling data make possible much better assessment of the hazards posed by eruption and so inform preventative measures. Computer upgrades are needed to fully benefit from the increasing amount of satellite data that can detect heat, gas, and ash coming from volcanoes. All of these upgrades will enhance public safety by providing volcano monitoring data that is both timely and accurate. These improvements will also

support a wide array of jobs in the private sector as well as with academic and state partners.

Activities

Examples of areas that ARRA funds will address:

- Installation of geophysical and telemetry equipment at remote sites in Alaska (AK), the Cascade Range (WA, OR, CA), Yellowstone National Park (WY, ID, MT), Long Valley Caldera (Mammoth Lakes, CA), Island of Hawaii (HI), and Commonwealth of the Northern Mariana Islands (CNMI)
- Aviation services at above locations
- LiDAR surveys (airborne precision laser mapping)
- Geologic mapping
- GIS-based hazard assessments
- Data network design
- Software development for data visualization, analysis, and archiving
- Geophysical data analysis
- Supply of geophysical and geochemical sensors and other electronic devices

Selection Criteria

Establishing priorities for which geographic areas needed to be addressed were based on needs identified to enable the implementation of the National Volcano Early Warning System (NVEWS). NVEWS focuses on areas deemed to be at risk for high-activity volcanoes and was endorsed by AAAS in a 2007 program review. Priorities areas for NVEWS are enhancing Alaska volcano monitoring; modernizing volcano monitoring in Hawaii, improving the telemetry backbone in the Cascades to close a monitoring gap, and replacing analog monitoring with digital monitoring and continuous GPS sensors.

Selected projects were vetted to and approved by the Volcano Hazards Program Council and were determined to be projects which would support NVEWS. Information on NVEWS can be found at http://pubs.usgs.gov/fs/2006/3142/2006-3142.pdf and http://pubs.usgs.gov/of/2005/1164/.

Characteristics (Types of Financial Awards to be Used)

Type of award	# of projects	$ value	Types of recipient	Award Selection Criteria (high-level bullets)
Contracts	40-60	$8,460	Equipment manufacturers, aviation services, software developers, state agencies	Criteria based on statement of work, successful record of past performance and adherence to cost schedule
Cooperative Agreements	7	$6,750	Universities, state or territory agencies	Consistent with the ARRA requirements.

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Project Type	# Projects	$ Value Projects
Observatory	Improvements to observatory systems	6	$15,210,000

Project List

Project Name	Description
Alaska	Alaska Volcano Observatory and NVEWS upgrades
Hawaii	Hawaii Volcano Observatory and NVEWS upgrades
Cascades	Cascades Volcano Observatory and NVEWS upgrades
Yellowstone	Yellowstone Volcano Observatory and NVEWS upgrades
Marianna Islands	Mariana Islands Volcano monitoring and NVEWS upgrades
Long Valley CA	Long Valley Volcano Observatory and NVEWS upgrades

Completion Rate

Quarter	% of Project Completed* (Observatories)	% of Projects Completed per quarter	Cumulative % of Projects Completed
FY 2010 Q2	1	17%	17%
FY 2010 Q3	2	33%	50%
FY 2010 Q4	3	50%	100%

Improvements to observatory systems -- Key Milestones

Milestones	Average Length of Completion
Cooperative agreements completed	3 months
Contracts for equipment and services placed	6 months
Observatory data facility upgrades completed	12 months
Observatory monitoring site upgrades completed; contract design and assessment projects completed	18 months

Savings/Costs Implications

With improved instrumentation, USGS will be able to monitor volcanic activity of the highest-risk volcanoes in the United States. This monitoring will allow for advanced warning of potential eruptions, thereby avoiding loss of human life and economic resources. There will be no net change in operational costs as a result of these upgrades to the volcano observatory systems. However, the rate at which data are available and the accuracy and frequency of measurements will improve considerably, strengthening program effectiveness.

Part IX: Imagery and Elevation Maps

Program	Funding Amount	# of Projects
National Map	$14,625,000*	2

Program Manager

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Objectives

The National Map's activities supported by the American Recovery and Reinvestment Act of 2009 (ARRA) will expand employment and business opportunities within a key sector of the geospatial industry with the acquisition of data to be used for myriad mapping applications including flood mapping, elevation, land cover and other topographical issues that are important to the safety and commerce of the American public. The acquisition of Light Detection and Ranging (LiDAR) data will substantially improve the resolution of the National Elevation Dataset (NED) over coastal areas of the U.S. most likely to be susceptible to storm and hurricane flooding, earthquake damage, and coastal erosion due to storms and sea level rise. The full LiDAR data set will be collected and made available for use in other national applications (data layers) such as infrastructure development, resource assessment and scientific studies. Funds will also be available for the acquisition of high resolution orthoimagery.

In concert with Federal and State programs and other partners, ARRA funding will complete LiDAR elevation and high resolution orthoimagery acquisitions in selected areas. The strategy would be to use the funding to leverage other Federal and State funding through the USGS Geospatial Liaison Network Partnership and existing Federal affiliations and State programs to: 1) augment the coastline elevation and near-shore bathymetric data currently being collected by Federal and State agencies, and 2) augment existing and new partnerships for leaf-off, high-resolution orthoimagery. These data help local land managers in the decisions they make to protect the environment and the American people.

Activities

Examples of ARRA projects:

- Elevation data collection from high resolution source (LiDAR)
- High resolution, leaf-off orthoimagery collection

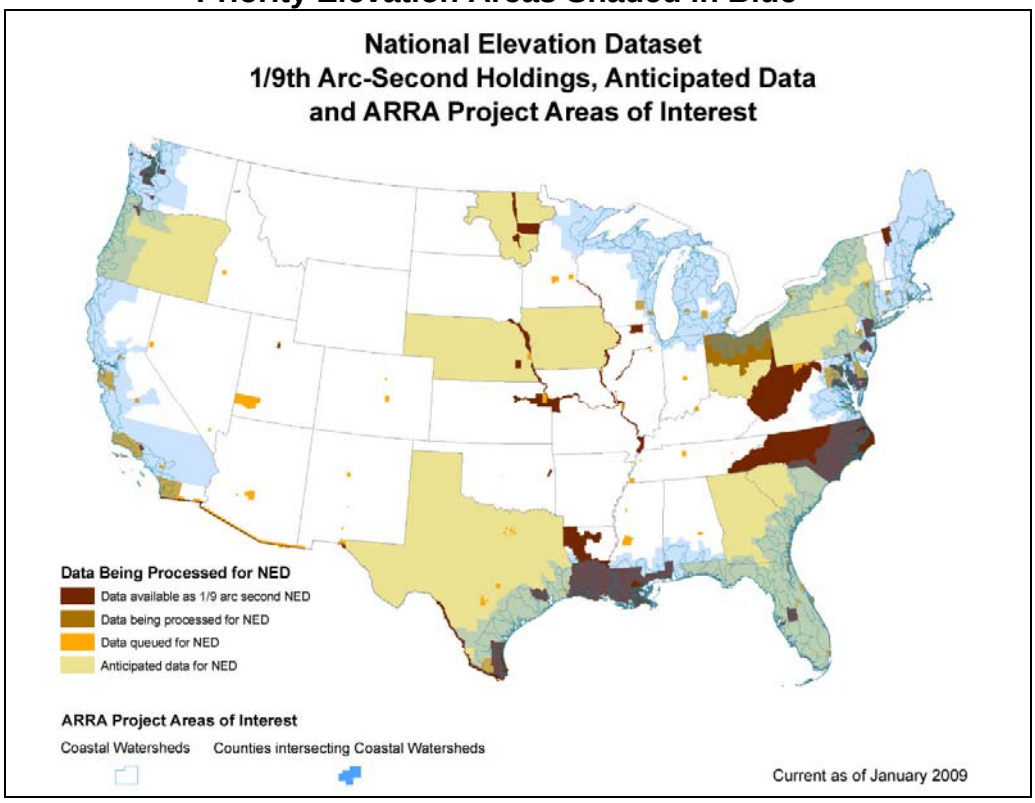
Selection Criteria

Specific sites to be targeted for data acquisition have yet to be selected. However, projects will be selected based on the following criteria:

- Technical soundness/completeness of proposal

- Geographic Area Priority: coastal and flood areas
- Large Geographic Area of Coverage (areal extent)
- Improvement of Data Currentness
- Improvement of Data Accuracy
- Partner/USGS Funding Ratio
- Number of partners/collaborators
- Relevance to with USGS missions and needs including science
- Factors related to economic situation of partners, such as impact to local economy, jobs retained or created

Priority Elevation Areas Shaded in Blue



Characteristics (Types of Financial Awards to be Used)

Type of Award	# of projects**	$ value	Types of recipient	Award Selection Criteria
Contracts	2		Private Firms	Criteria based on statement of work, successful record of past performance and adherence to cost schedule
Cooperative Agreements*	2		Federal State, & Local Government	Methodology of peer-reviewed competitive with selection criteria: technical excellence, project effectiveness, leveraging existing cooperator capability

***** Includes Interagency Agreements with other Federal agencies. Any funds, outgoing or incoming, will meet ARRA reporting requirements as identified by OMB.
**To complete each project, a combination of contracts and cooperative agreements may be used.

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Description	# of Projects	$ Value of Projects
Elevation	Collection of elevation data	1	$
Orthoimagery	Collection of orthoimagery data	1	$

Completion Rate

Quarter	% Completed (Elevation)	# Completed (Orthoimagery)	% Completed per Quarter	Cumulative % Completed
FY 2009 Q4	25%*	0	13%	13%
FY 2010 Q1	25%	0	13%	13%
FY 2010 Q2	35%	10%	25%	25%
FY 2010 Q3	35%	10%	25%	25%
FY 2010 Q4	60%	40%	50%	50%
FY 2011 Q1	80%	60%	70%	70%
FY 2011 Q2	100%	100%	100%	100%

*Percent of the project completed was used since each category has one project. The number of individual tasks in each project has not been determined.

Elevation -- Key Milestones

Milestones	Average Length of Completion
Contract/Agreement Award	6 months
Planning/Collection of elevation data	3 months
Processing of elevation data	6 months
Quality Assurance	1 month
Archive/Dissemination of elevation data	2 months

Orthoimagery -- Key Milestones

Milestones	Average Length of Completion
Contract/Agreement Award	6 months
Planning/Collection of orthoimagery data	3 months
Processing of orthoimagery data	6 months
Quality Assurance	1 month
Archive/Dissemination of orthoimagery data	2 months

Savings/Costs Implications

There will be no operational costs changes in the completion of these projects, which will provide the Nation an enhanced set of important digital data for use in local and National decision making.

Part X: Data Preservation

Program	Funding Amount	# of Projects
USGS Patuxent Wildlife Research Center Bird Banding Laboratory	$488,000	1

Program Manager

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Objectives

The USGS Bird Banding Laboratory (BBL) at Patuxent Wildlife Research Center manages all marking and recovery information for migratory birds for the United States, Canada and Mexico. Since 1908, more than 66 million birds have been banded and 4.1 million have been recovered. Recovery Act funding will make it possible to digitize and make available to the public via the Internet, the historical banding recovery and bird banding records. Bird banding data have a wide variety of uses including applications for disease research. Sampling wild birds for serious disease helps determine the prevalence of the disease in the population and any of these birds with bands can be traced back to when and where the bird was banded.

The BBL has approximately 533,000 recovery records on paper dating from 1985 to present and 1,221 microfilm reels with recovery data from 1908-1984. These records serve as the original recovery data for banded birds and include information that is not currently part of the electronic database. The BBL has all banding records from 1960 stored in a relational database, but the paper schedules remain and serve as the original data source to address problems identified in these data. Digitizing these records would allow the BBL to eliminate the need for off-site record storage and the associated storage costs. Recovery Act funding will save resources by allowing more work to be accomplished in a shorter amount of time, and improve access to this information which is widely used by bird management and conservation programs.

PWRC is incurring costs for the off-site storage of these data; converting records would eliminate the storage need. The records have scientific usefulness beyond the record management benefit to the BBL for investigations of topics such as bird phenology and changes to the status and distribution of birds in response to global climate change.

Banding records from 1955-1959 are available in a summarized format although individual banding records are not digitized. Banding data collected before 1955 are available only on paper schedules. After the conversion of the paper records, any funds remaining would be used to computerize the pre-1960 banding records. The benefits of this project would be the same as for the conversion of the paper and microfilm records recovery records.

Activities

Examples of ARRA projects:

- Preparation for scanning and conversion to electronic files of paper recovery files, paper banding schedules, and microfilm data reels.
- Quality control of electronic files of recovery records and banding schedules to ensure legibility.
- Computerization of pre-1960 bird banding data from paper schedules.
- Conduct edit checks of computerized records of pre-1960 banding data and correction of data entry errors.

Selection Criteria

USGS has a program underway to convert paper records to electronic files and this project was determined to be the highest priority for ARRA funding, given the risk of loss due to potential damage and limited access by others. This project is a high priority because of the importance of access to the information by the USGS, States, Universities, and others. The initial phase will be the conversion of the paper and microfilm recovery records to electronic files. These records represent the complete set of available information for all reports of banded birds recovered in the wild, representing a unique data set of significant importance for the management of game bird populations and defining the movement of migratory birds.

The second phase is the conversion of post-1960 paper banding schedules to electronic files. These schedules are the original record for the computerized banding data. Availability in electronic format will facilitate the correction of errors in the existing dataset and provide a more accurate dataset for use by scientists and managers.

The third phase is the entry of the pre-1960 banding data from the paper schedules. The data from 1955-1959 are available in a summarized format but the individual banding records have not been entered. Entry of the 1955-1959 data would occur first to complete the banding dataset through 1955.

If funds are available, data will be entered back in time from 1954. This process would work towards completing the computerization of all banding records from the U.S. and Canada, a dataset of considerable value for bird conservation and management.

Characteristics (Types of Financial Awards)

Type of Award	# of projects	$ value	Types of recipient	Award Selection Criteria
Contracts	1	$488,000	Small businesses Large businesses	Criteria based on statement of work, successful record of past performance and adherence to cost schedule

Performance Measures

USGS has developed performance measures to monitor the impact of its Recovery Act investments on mission and programmatic goals and objectives. These performance measures can be found on Recovery.Gov.

Project Milestones and Completion

Types of Projects

Type	Description	# of Projects	$ Value
Records	Computerization of historic bird banding records	1	$500,000

Completion Rate

Quarter	Total # of Projects Completed	Cumulative % of Projects Completed
FY 2009 Q3		5
FY 2009 Q4		15
FY 2010 Q1		35
FY 2010 Q2		60
FY 2010 Q3		85
FY 2010 Q4	1	100

Records -- Key Milestones

Milestones	Average Length of Completion
Document preparation for scanning	4 months
Records scanned and electronic files prepared	1 year
Quality control for electronic files	2 months

Mission/Savings/Costs Implications

Digitization of data and making it available to the public via the Internet has a wide variety of uses including applications for disease research. Sampling wild birds for serious disease helps determine the prevalence of disease in the population and the birds with bands can be traced back to when and where the bird was banded. This project will provide considerable savings with respect to the efficiency of operations at the BBL. On average, locating individual recovery or banding data records takes 10-15 minutes per record, so that only 4-6 records per hour can be located when necessary. This process will reduce that time to seconds per record. The net result will be a noticeable increase in the efficiency of the BBL operations when dealing with questions that require personnel to access these records, and a noticeable improvement to the quality of data in the BBL database because of the improved access to this information.

Part XI: Recovery Act Funds' Impact on Existing USGS Programs

Construction

USGS Portion of ARRA Construction Projects Selected from Current Program

Recovery Act Projects Construction			
# of Recovery Act Projects Not on 5-Year Plan	$ Value of Projects Not on 5-Year Plan	# of Recovery Act Projects that meets criteria for inclusion on 5-Year Plan	$ Value of Projects
3	$18,325	3	$18,325

Construction projects were identified for inclusion in the Recovery Act using the existing USGS Investment Review Board process. The USGS follows the procedures in the Department's Capital Planning and Investment Control Guide to review, select and manage the business cases for construction projects greater than $2.0 million. Seven projects on the 5-year plan are being addressed by ARRA construction projects.

Deferred Maintenance

USGS Portion of ARRA Deferred Maintenance Projects Selected from 5-Year Priority Lists*

Current 5-Year Plan		5-Year Plan Projects funded by Recovery Act Funds		Recovery Act Projects Not on 5-Year Plan			
# of projects on 5-Year Plan	$ value of projects on 5-Year Plan	# of ARRA projects selected from 5-year plan	$ Value of ARRA projects selected from 5-year plan	# of ARRA projects not on 5-Year Plan	$ Value of projects not on 5-Year Plan	# of ARRA projects meeting criteria for inclusion on 5-Yr Plan	$ Value of Projects
86	$31,044,000	63	$22,351,000	4	$7,052,000	4	$7,052,000

*This information is based on the 5 Year DM Plan (2010-2014).

USGS' Recovery Program funds 73% of the projects on the 5-year plan, or 72% of the dollar value. The projects funded by the Recovery Act that are not on the 2010 -2014 5-year DM Plan include the replacement of two research vessels on the Great Lakes which will remove several DM projects associated with these facilities. Two projects (Priority 15 and 17) were on past 5-year plans and were not funded in the 2010-2014 5-year plan because additional requirements for these two projects were identified and the total was in excess of available funding in the year planned. All USGS DM projects are ranked using the DOI scoring and weighting process as outlined earlier in this document.

Cross-Cutting Initiatives

Use of Renewable and Efficient Energy Technologies

USGS recently implemented the USGS Sustainable Buildings Implementation Plan (SBIP). The SBIP will be followed for all ARRA projects. The SBIP incorporates the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings. The Guiding Principles employ integrated design principles, optimize energy performance and renewable energy, protect and conserve water, enhance indoor air quality, and reduce environmental impact of materials. Regardless of size, all construction and building renovation projects shall be as sustainable and energy efficient as possible. As outlined in Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, USGS will implement renewable energy generation technology when life cycle costs determine that it is cost effective.

In addition to renewable and energy efficient technology for facilities, streamgages and seismic monitoring equipment for earthquakes and volcanoes will utilize solar energy technology and the newer technologies in the sensors will also provide more efficient and timely transfer rates and better accuracy in measurements.

Types of USGS Renewable and Efficient Energy Technology Projects	# of Projects	*% of Projects**
Projects with Renewable technology	68	*21%*
Energy Efficiency Projects	131	*41%*
Total	199	

* Deferred Maintenance of streamgages, cableways, and wells total 183 projects. Without including these projects, the percent of renewable technology is 51% (68/134) and the percent of energy efficient projects is 98% (131/134).

Engage America's Youth

Youth will be involved in implementing many of the USGS projects executed with ARRA funding. Specific projects where youth will be directly involved will be the data preservation to digitize bird banding data at Patuxent Wildlife Research Center and the implementation of upgrading seismic monitoring.

Types of USGS Youth Outreach Projects	# of Projects	% of Projects
Data preservation and Seismic Monitoring	10	3%
TOTAL	10	3%

Governance in USGS at the Bureau Level

USGS has established a bureau Recovery Act Oversight Board (RAOB). The RAOB will ensure that the bureau's project plans are executed in accordance with the Act's specific requirements. Projects will come from those previously reviewed and approved by the bureau's Investment Review Board. The RAOB

will monitor projects against schedule and cost**.** Associate Directors, in consultation with Regional Directors, will continue to exercise direct oversight and leadership in their respective areas of responsibility and will provide to the RAOB reports as defined for purposes of RAOB oversight roles and responsibilities. Instructional memoranda are being written to provide guidance on recording and tracking obligations, expenditures and performance in accordance with OMB and Departmental guidance.

RAOB members are the Bureau's Executive, senior and program leadership. The Director of the Office of Budget and Performance and the Associate Director for Administrative Policy and Services/Chief Financial Officer serve as co-chairs.

Contracting Methodology:
Contracting will be used to acquire the goods and services required to implement the projects proposed. Current contracting methodologies will be used. Open competition using firm, fixed price contracts will be used to the maximum extent possible. Selection criteria include technical excellence, project effectiveness, support for cross-cutting initiatives, and lowest price. The USGS will adhere to the following contracting methodologies:

- open market competitive solicitations;
- task orders awarded using fair opportunity (i.e. multiple award) under Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts awarded using competitive procedures;
- task orders awarded to an established source (i.e. single award) under ID/IQ contracts awarded using competitive procedures;
- GSA schedule orders using fair opportunity; and
- Availability of product or service applies to open market non-competitive transactions less than $3,000.

USGS implemented an environmental purchasing policy by considering the environmental consequences of procurement choices. Areas considered are

- relative energy consumption of competing alternatives;
- avoiding hazardous materials when there is a safer alternative;
- avoiding ozone-depleting substances;
- selecting items with recycled content or bio-based product alternatives; and
- eventual disposal costs of alternative products.

Facility deferred maintenance and construction will follow guidelines set forth in the USGS Sustainable Buildings Implementation Plan.

Administrative Costs

The report covering the Recovery Act legislation allows the Department to retain up to 5% of each appropriated account to cover administrative costs. A total of $3.8 million will be retained to cover bureau and Department level administration costs associated with implementing ARRA projects. Examples of administrative costs will be used include: the hiring term appointment contracting officers and

project managers. USGS proposes to retain 3% of the total amount available for deferred maintenance – facilities and construction projects and 2.5% of the total amount available for other project categories. In addition, the programs will have up to another 2% for deferred maintenance – facilities and construction and 2.5% for other project categories within their program areas for administrative costs to implement work specific to a project. The Bureau funding will be monitored and tracked separately. Project level administrative costs will be included in the overall project cost. Bureau funding will be used to obtain additional resources in the form of Contracting Officers and Contracting Officer Representatives. As a cost control measure, the RAOB has the responsibility to approve and monitor all ARRA related staffing plans and associated administrative cost expenditures.