

GAO

Report to the Committee on Oversight
and Government Reform, House of
Representatives

October 2008

FEDERAL REAL PROPERTY

Government's Fiscal Exposure from Repair and Maintenance Backlogs Is Unclear





Highlights of [GAO-09-10](#), a report to the Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

In 2003, GAO designated federal real property as a high-risk area. In 2007, GAO reported that real-property-holding agencies and the administration had made progress toward managing their real property, but underlying problems, such as backlogs in repair and maintenance, still existed and six agencies reported having over \$1 billion in repair and maintenance backlogs. Owning real property creates a fiscal exposure for the government from the expectation that agencies will incur future maintenance and operations costs.

GAO was asked to (1) describe how six agencies estimate their repair and maintenance backlogs, (2) determine how these agencies manage their backlogs and the expected future changes in these backlogs, and (3) identify how backlogs have affected operations at some sites. GAO reviewed agency documents, interviewed officials, and visited two sites at each of the six agencies.

What GAO Recommends

To provide a realistic estimate of the government's fiscal exposure from backlogs, GAO recommends that the Office of Management and Budget (OMB), in consultation with the Federal Accounting Standards Advisory Board, explore the potential for adding a uniform reporting requirement to the Federal Real Property Profile to capture the government's fiscal exposure related to real property repair and maintenance. OMB agreed with GAO's recommendation.

To view the full product, including the scope and methodology, click on [GAO-09-10](#). For more information, contact Mark Goldstein at (202) 512-2834 or goldsteinm@gao.gov.

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What GAO Found

The six agencies that GAO reviewed all periodically assess the condition of their assets to identify needed repairs and maintenance but then use different methods to define and estimate their repair and maintenance backlogs. As a result, the agencies' estimates are not comparable. Three of the six agencies—the Departments of Energy (DOE), the Interior (DOI), and the National Aeronautics and Space Administration (NASA)—defined their backlogs as work that was identified to correct deficiencies. A fourth agency, the Department of Veterans Affairs (VA), also defined its backlog as work identified to correct deficiencies, but VA's backlog included only work on systems, such as mechanical and plumbing systems, found to be in poor or critical condition. The General Services Administration (GSA) and the Department of Defense (DOD) both did not track a backlog. Instead, GSA calculated its reinvestment liability—the cost of repairs and maintenance needed now and in the next 10 years. DOD assigned a quality rating to each facility which was based on the ratio of repair costs to the asset's value. The backlog estimates do not necessarily reflect the costs the agencies expect to incur to repair and maintain assets essential to their missions or to avert risks to their missions. For example, these estimates could understate an agency's backlog because they are based on industry-standard costs, or could overstate an agency's backlog because they include inactive assets that are not essential to the agency's mission or may be demolished.

The six agencies GAO reviewed generally manage their backlogs as part of their overall real property management and expect the size of their future backlogs to increase. Agencies focus on maintaining and repairing real property assets that are critical to their missions and have processes to prioritize maintenance and repair items based on the effects those items may have on their missions, regardless of whether the items are considered part of the backlogs. For example, VA officials told us that their first priority is to perform maintenance and repairs at places that directly affect patient care, such as operating rooms. Agencies are using strategies such as demolishing assets that are no longer needed to reduce their overall backlogs. However, agency officials generally expect their backlogs to increase as the federal portfolio of real property continues to age and construction costs increase.

At the six agencies GAO reviewed, officials have managed their facility repairs and maintenance to minimize the impact of their backlogs on their operations. Officials said that postponing repairs and maintenance generally leads to higher operating and maintenance costs and short-term inconveniences, but they have managed the risks so that the agencies can continue to accomplish their missions. For example, maintenance costs increase when a roof that is due for replacement is repeatedly patched rather than replaced. While several officials said their maintenance staffs have been able to limit the impact of backlogs on operations, they cautioned that there is a real potential for an incident to adversely affect an agency's mission. At one site GAO visited, a multimillion-dollar piece of equipment could have been damaged by a leak from an air conditioning system if it had not been covered with a tarp.

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Abbreviations

API	asset priority index
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
FASAB	Federal Accounting Standards Advisory Board
FIRP	Facilities, Infrastructure, and Recapitalization Program
FRPC	Federal Real Property Council
FRPP	Federal Real Property Profile
GSA	General Services Administration
NASA	National Aeronautics and Space Administration
NNSA	National Nuclear Security Administration
OMB	Office of Management and Budget
PRV	plant replacement value
VA	Department of Veterans Affairs

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United States Government Accountability Office
Washington, DC 20548

October 16, 2008

The Honorable Henry A. Waxman
Chairman
The Honorable Tom Davis
Ranking Member
Committee on Oversight
and Government Reform
House of Representatives

In January 2003, we designated federal real property as a high-risk area, in part due to deteriorating facilities and unreliable real property data.¹ In 2007, we reported that the administration and real-property-holding agencies had made progress toward strategically managing federal real property but that underlying problems, such as backlogs in repair and maintenance, still existed. Federal agencies reported holding real property assets valued at about \$1.5 trillion and spending over \$47 billion in fiscal year 2007 to maintain and operate these assets. Yet, these agencies estimated they would need additional tens of billions of dollars to repair or restore their assets—which include office buildings, military bases, hospitals, national parks, and laboratories—to a fully functional condition.

We have reported that our nation's fiscal policy is on an unsustainable course and that Congress, the President, and the public should have information about any long-term commitments embodied in a current policy decision. While we have also reported that it can be more cost-effective to own real property assets than to lease them,² such ownership represents a long-term commitment for the government in that agencies incur maintenance and operating costs associated with their assets. We use the term “fiscal exposures” to provide a framework for considering the range of responsibilities that may expose the government to future

¹In 1997, we designated the Department of Defense's management of its support infrastructure as a high-risk area because infrastructure costs have affected the Department's ability to devote funds to other more critical programs and needs. High-risk areas are those that either have greater vulnerabilities to waste, fraud, abuse, and mismanagement or major challenges associated with their economy, efficiency, or effectiveness.

²GAO, *Federal Real Property: Strategy Needed to Address Agencies' Long-standing Reliance on Costly Leasing*, GAO-08-197 (Washington, D.C.: Jan. 24, 2008).

spending. We identified real property as an implied fiscal exposure because it creates an implied commitment for the government. The decision to own a building or other real property asset implicitly commits the government to the life-cycle costs associated with its future operation and maintenance.

Concerned about the high cost estimates for repair and maintenance backlogs associated with real property, you asked us to review how agencies develop these estimates and manage their backlogs. Accordingly, this report (1) describes how selected agencies estimate their repair and maintenance backlogs, (2) determines how agencies manage their backlogs and the expected future changes in repair and maintenance backlogs, and (3) identifies how backlogs have affected operations at some sites.

To accomplish our objectives, we reviewed the six agencies that had each told us in 2007 that they had over \$1 billion in repair and maintenance backlogs associated with their held assets: the Departments of Defense (DOD), Energy (DOE), the Interior (DOI), and Veterans Affairs (VA); the General Services Administration (GSA); and the National Aeronautics and Space Administration (NASA). For each agency, we interviewed officials, reviewed agency documents, and visited two sites at each of these six agencies to determine how the sites estimate and manage their repair and maintenance backlogs as well as the extent to which the sites' operations have been affected by the backlogs. To select each site, we used agency data reported in the governmentwide federal real property profile (FRPP) on the condition of each real property asset identified as a building or structure and agency-provided data on the repair and maintenance backlog for each asset. While the definition of real property includes land, our review focused on buildings and structures and excluded land because backlogs are generally associated with buildings (such as offices and hospitals) or structures (such as airfields or ports). We performed our site visits in two geographic areas of the country—Washington, D.C., and San Francisco, California—because each agency had significant sites in these areas. Within the geographic locations, using FRPP data, we determined the average condition for each agency's assets and then selected sites that (1) were at or near the average condition of the agency's assets, and (2) reported a relatively high repair and maintenance backlog compared to other sites in average or near-average condition. Although our site selection was systematic, the information from our 12 site visits is illustrative and cannot be generalized to sites agencywide.

We conducted this performance audit from September 2007 through October 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We determined the data were sufficiently reliable for the purposes of this report. Appendix I contains a detailed description of our scope and methodology.

Results in Brief

The six agencies that we reviewed all periodically assess the condition of their assets to identify needed repairs and maintenance and schedule the needed work but then use different methods to define and estimate their repair and maintenance backlogs. As a result, the agencies' estimates are not comparable. Three of the six agencies—DOE, DOI, and NASA—define and estimate their backlogs as work that was identified to correct deficiencies. A fourth agency, VA, defines its backlog as work required to correct deficiencies and estimates the cost to address deficiencies associated with sites and systems, such as mechanical and plumbing systems, found to be in poor or critical condition. While GSA and DOD both periodically inspect their facilities to assess their condition, neither agency tracks a backlog. Instead, GSA calculates its reinvestment liability—that is, the cost of repairs and maintenance needed now to bring its assets up to current standards plus the cost of any additional repairs and maintenance that it expects will be needed within the next 10 years. Instead of calculating a backlog, each DOD military service assigns a quality rating to its facilities as an indicator of their condition. DOD quality ratings are based on the ratio of repair costs to an asset's value. These estimates include a variety of items, from current repair and maintenance costs and costs estimated up to 10 years into the future for all assets to only costs associated with correcting deficiencies on building systems in the poorest condition. The backlog estimates do not necessarily reflect the costs the agencies expect to incur to repair and maintain assets essential to their missions or to avert risks to their missions. Instead, agency officials told us that their estimate reflects the magnitude of identified repair needs associated with their assets.

The six agencies we reviewed generally manage their backlogs as part of their overall real property management and most expect the size of their future backlogs to increase. Agencies focus on maintaining and repairing real property assets that are critical to their missions and have processes in place to prioritize maintenance and repair items based on the effects

those items may have on their missions, regardless of whether the items are considered part of the backlogs. For example, officials at a VA Medical Center told us that their first priority is to perform maintenance and repairs at places that directly affect patient care, such as operating rooms. Thus, replacing an aging air conditioning system in a hospital would take priority over replacing the same type of system in an office building. Agencies are using strategies such as disposing assets that they determine are no longer needed to reduce their overall repair and maintenance backlogs. Agency officials generally expect their backlogs to increase as the federal portfolio of real property continues to age and construction costs increase.

At the six agencies we reviewed, officials have managed their facility repairs and maintenance to minimize the impact of their backlogs on their operations. Officials said that postponing repairs and maintenance generally leads to higher operating and maintenance costs and short-term inconveniences, but they have managed the risks so the agencies can continue to accomplish their missions. For example, maintenance costs increase when a roof that is due for replacement is repeatedly patched rather than being replaced. While several officials said their maintenance staff has been able to limit the impact of backlogs on operations at their sites, they cautioned that there is a real potential for an incident to adversely affect an agency's mission. For example, at one site we visited, a multimillion-dollar piece of equipment, which the agency needed to carry out its mission, could have been damaged by a leak from an air conditioning system if the equipment had not been covered with a tarp.

We are recommending that the Deputy Director for Management, Office of Management and Budget (OMB), explore the potential for developing a uniform reporting requirement to the FRPP that would capture the government's fiscal exposure from repair and maintenance backlogs, since this exposure may have a significant effect on future budget resources and our nation's long-term fiscal sustainability. OMB agreed with our recommendation.

Background

In January 2003, we designated federal real property as a high-risk area because of long-standing problems with excess and underutilized property, deteriorating facilities, unreliable real property data, and

overreliance on costly leasing.³ Real property is generally defined as land and anything constructed on, growing on, or attached to land.⁴ In updates to our high-risk report, we acknowledged that the administration and real-property-holding agencies had made progress toward strategically managing federal real property and addressing some long-standing problems. Real-property-holding agencies had, among other things, designated senior real property officers, established asset management plans, standardized real property data reporting, and adopted various performance measures to track progress. The administration also established a Federal Real Property Council (FRPC) that supports reform efforts. FRPC has created the FRPP to be the inventory system for the federal real property portfolio. FRPP, which is overseen by OMB, includes 25 data elements⁵ that agencies are mandated to report annually, including performance measures on asset utilization, condition, mission dependency, and operating cost. Although progress has been made, in 2007, we also reported that the problems that led us to designate real property as a high-risk area still largely persisted, such as repair and maintenance backlogs, and the underlying obstacles remained. We also reported on the condition of facilities at the Smithsonian Institution, where we found that the deterioration of facilities had threatened collections and increased the cost of restoring historic items.⁶ We recommended that the Smithsonian make improvements to its cost estimates for facilities projects.

According to data reported in the 2007 FRPP, the federal government owns about 1,115,000 real property assets worldwide with a replacement cost of over \$1.5 trillion. The six agencies we reviewed reported that they had 568,618 real property assets in the U.S. with a replacement cost of approximately \$1.2 trillion. Five of the six agencies estimated that their assets had approximately \$30.5 billion in repair needs.⁷ DOD did not

³GAO, *High-Risk Series: Federal Real Property*, [GAO-03-122](#) (Washington, D.C.: January 2003).

⁴FRPP categorizes real property into three types: buildings, structures, or land. In this report, when we refer to real property, we are referring to assets identified in FRPP as buildings or structures.

⁵For fiscal year 2007 reporting, FRPP included 24 data elements.

⁶GAO, *Smithsonian Institution: Funding Challenges Affect Facilities' Conditions and Security, Endangering Safety*, [GAO-07-1127](#) (Washington, D.C.: Sept. 28, 2007).

⁷According to FRPP, "repair needs" is the amount necessary to restore an asset to its originally intended and designed capacity.

estimate repair needs for its FRPP reporting. FRPP does not require agencies to report their repair and maintenance backlogs, but requires agencies to determine a condition index for each asset by computing a formula that compares the asset's repair needs with its plant replacement value (PRV). Specifically a condition index equals $(1 - \text{repair needs} / \text{PRV}) * 100$. Based on this formula, a condition index is reported as a whole number from 1 to 100, with 100 representing the best possible condition for an asset. FRPP guidance defines repair needs as "the amount necessary to ensure that a constructed asset is restored to a condition substantially equivalent to the originally intended and designed capacity, efficiency, or capability."

Real-property-holding agencies are generally responsible for the cost of maintaining and repairing their assets. We have reported that owning an asset creates an implicit fiscal exposure for the government.⁸ This fiscal exposure is created because there is an expectation that the government will incur costs associated with maintaining and operating the assets it owns. As the National Research Council has observed, federal assets must be well maintained to operate adequately and cost effectively; protect their functionality and quality; and provide a safe, healthy, productive environment for the American public, elected officials, federal employees, and foreign visitors who use them every day. Facilities and the systems within the facilities such as electrical, heating, and air conditioning systems and roofs generally have a finite, expected useful life, over which time they should be maintained and after which time they can be reasonably expected to need replacement. The useful lives of facilities can be extended through adequate and timely repairs and maintenance. Conversely, delaying or deferring repairs and maintenance can, in the short term, diminish the quality of building services, and in the long term, shorten building lives and reduce asset values. Deferring needed maintenance indefinitely may ultimately result in significantly higher costs.

⁸GAO, *Fiscal Exposures: Improving the Budgetary Focus on Long-Term Costs and Uncertainties*. [GAO-03-213](#) (Washington, D.C.: Jan. 24, 2003).

Agencies Estimate Their Backlogs through Condition Assessments, Though Estimates Are Not Comparable

At the six agencies we reviewed, we found processes in place for the agencies to periodically assess the condition of their assets—processes that the agencies also generally used to identify repair and maintenance backlogs for their assets. However, the agencies differed in how they conducted these condition assessments and how they define and estimate their repair and maintenance backlogs. Thus, the information is not comparable across agencies and cannot be used to understand the government’s potential fiscal exposure associated with its real property repair and maintenance needs.

Agencies Have Processes to Determine the Condition of Their Assets and Estimate Their Backlogs

Each agency we reviewed conducted facility condition assessments either itself or through a contractor to identify repair and maintenance deficiencies associated with their assets. The intent of conducting a facility condition assessment is to obtain an overall understanding of the condition and repair and maintenance needs of an asset. Condition assessments can range from staff walking through a facility and visually inspecting its condition and identifying repair and maintenance issues to a more comprehensive assessment in which the individual building systems, such as the plumbing, heating, and electrical systems, are assessed by a professional and deficiencies are identified. Condition assessments may also identify projects for future years, such as a roof replacement expected within the next couple of years. As shown in table 1, each of the six agencies we reviewed periodically conducted condition assessments. How agencies define and estimate their repair needs or backlogs varies. This variation is not unexpected because, according to OMB officials, FRPP was purposefully vague in defining repair needs so agencies could use their existing data collection and reporting processes. In addition, there is no governmentwide definition or reporting requirement for repair and maintenance backlogs.⁹

⁹The terms “repair and maintenance backlog” and “deferred maintenance” are sometimes used interchangeably. Deferred maintenance is defined governmentwide for reporting in agencies’ financial statements, and as discussed later in this report, some agencies report the same estimates for backlogs and deferred maintenance while others report different estimates.

Table 1: Selected Agencies' Processes for Conducting Condition Assessments and Estimating Repair Needs to Calculate FRPP Condition Index for Fiscal Year 2007 (Backlogs)

Dollars in billions

Agency	Assets assessed	Frequency of assessments	What is included in the estimate of repair needs (backlog)	Identified repair needs
DOE	All assets	At least every 5 years	Work not done in time frame identified	\$3.3
NASA	All assets	Annually	Work required to bring the asset up to current standards	2.3
DOI	Assets valued at \$5,000 or more	Every 5 years	Work not done in time frame identified	12.0 ^a
VA	All assets	At least every 3 years	Work required to correct identified deficiencies in systems determined to be in poor or critical condition	5.9
GSA	All assets	Every 2 years	Work identified to be done now or within the next 10 years	7.0
DOD	All assets	Varies by military service	No backlog estimated	^b

Source: GAO analysis.

^aAccording to DOI officials, DOI recognizes that due to the scope, nature and variety of DOI assets, exact estimates of backlogs are very difficult to determine. As a result, DOI prefers to think of its estimate as a range.

^bDOD did not compute a dollar amount for repair needs in 2007.

DOE requires its sites to perform condition assessments on all real property assets at least once during any 5-year period (some assets, such as nuclear facilities, are assessed more frequently). The results of the assessments are reported to a DOE-wide database. While individual DOE sites have some flexibility in which assessment surveys they use, inspection methods must be in accordance within general DOE guidelines. For example, one DOE laboratory developed its own assessment tool in the early 1990s and uses in-house inspectors to perform the assessments, while other sites use contractors to conduct their assessments. For all the assessments, each identified deficiency is assigned an optimum year for correction through maintenance. If a maintenance activity is not performed within the optimum period, it is considered deferred maintenance and part of DOE's backlog.¹⁰ The condition assessments also include cost estimates, developed using nationally-recognized databases of repair costs, for correcting the deficiencies.

¹⁰DOE defines optimal period as that time in the life cycle of an asset when maintenance actions should be accomplished to preserve and maximize the useful life of the asset. Facility managers have some flexibility to revise the optimum period.

NASA has used a contractor since 2002 to conduct annual deferred maintenance assessments of all its facilities and their component systems. NASA contractors visually assess nine different systems within each facility (such as the roof and the electrical system), and rate each facility using an overall condition index with a scale from 0 to 5. Based on that rating, the contractor uses an industry cost database and other information to estimate the costs of correcting the identified deficiencies. According to NASA officials, using a contractor and a standard estimating methodology to assess all its facilities provides consistent information across sites.

DOI has comprehensively assessed the condition of what it calls its standard assets such as roads, bridges, trails, water structures, and buildings but has not yet conducted contractor-performed comprehensive assessments of the condition of heritage assets such as monuments, fortifications, and archeological sites. In May 2008, DOI issued guidance on how to estimate the condition of and maintenance costs associated with its heritage assets. For assessed assets with a value over \$5,000, DOI conducts annual inspections to determine the condition of an asset and to determine the nature of needed repairs. DOI conducts condition assessments of assets with a value over \$50,000 at least every 5 years to identify and estimate the cost of correcting repair and maintenance deficiencies. Either contractors or internal bureau staff perform the assessments and industry-standard cost-estimating databases are used, if available, to estimate the costs to correct identified deficiencies. If maintenance is needed, work is scheduled; if the work is not completed on time, it becomes part of DOI's backlog.

VA uses contractors to conduct facility condition assessments to evaluate the condition of its assets at least once every 3 years.¹¹ The contractor inspects all major systems in each building (e.g., structural, mechanical, plumbing, and others) and gives each a grade of A (for a system in like-new condition) through F (for a system in critical condition that requires immediate attention). As part of this assessment, the contractor uses an industry cost database to estimate the correction costs for each system graded D or F—in poor or critical condition. VA's reported backlog is the sum of all identified correction costs. In addition, if repair and

¹¹The assessment process described here refers mainly to VA's Veterans Health Administration, which holds the majority of VA's real property assets. Other VA administrations have recently adopted similar assessment processes.

maintenance is not completed, VA escalates the correction cost each year for inflation.

GSA assesses all of its assets and estimates all repair and maintenance needs that may need to be done in the next 10 years. GSA conducts inspections known as physical condition surveys every 2 years on each asset. From these, GSA develops what it refers to as its reinvestment liability, which includes cost estimates for repair and maintenance items that GSA has determined need to be done now and expects will need to be done within the next 10 years. To conduct physical condition surveys, GSA staff walk throughout each facility answering a list of 37 standard questions about the asset and identifying the time frame within which the identified needs should be corrected, ranging from immediately to 6 to 10 years from now. GSA staff also develop cost estimates to repair each identified need. According to agency officials, the use of a standard survey allows some comparison between assets.

DOD reported a condition index to FRPP based on what it calls a quality rating (Q-rating), ranging from Q1 (best condition) to Q4 (poorest condition). As shown in table 2, three of the four services determined the Q-rating by comparing an asset's estimated repair and maintenance costs to the asset's value. The fourth service assigned Q-ratings by considering the adequacy and age of the asset. DOD reported one of four condition indexes for its assets to FRPP based on the Q-rating of the asset. Thus, DOD did not provide an estimate of its repair and maintenance backlog.¹² In determining Q-ratings for their assets, officials from the Army, Navy, and Marines told us that they used the results of facility assessments. According to these officials, these assessments were conducted either annually (by the Army), in 2005 (by the Navy) or at various times (by the Marines). According to Air Force officials, the Air Force totaled the cost of all maintenance projects for each asset but did not inspect the assets to determine if the assets had other repair and maintenance needs. For its fiscal year 2008 reporting, DOD plans to report the condition index for its

¹²According to DOD officials, DOD has focused on the cost of sustaining its facilities, rather than its backlog. DOD has developed a model to determine the cost of sustaining its facilities in good working order, and is developing a model to determine the cost of recapitalizing its facilities, which includes restoring and modernizing DOD facilities. DOD has set a goal for services to fund restoration and capital annually so that DOD can replace a facility every 67 years. See GAO, *Defense Infrastructure: Continued Management Attention Is Needed to Support Installation Facilities and Operations*, [GAO-08-502](#) (Washington, D.C.: April 2008), for further discussion of DOD's models.

assets as a percentage value consistent with FRPP rather than using the Q1-Q4 rating scheme.

Table 2: DOD Services' Definitions of Quality Ratings and Corresponding Condition Indexes Reported to FRPP

Quality rating	Definition used by Army, Navy, and Air Force	Definition used by Marines	Condition index assigned by DOD
Q1	Cost of repairs was 10 percent or less of the asset's value	Adequate asset less than 25 years old	95
Q2	Cost of repairs was 11 to 20 percent of an asset's value	Adequate asset more than 25 years old	85
Q3	Cost of repairs was 21 to 40 percent of an asset's value	Substandard asset	70
Q4	Cost of repairs was more than 40 percent of an asset's value	Inadequate asset	30

Source: GAO analysis of DOD information.

Backlog and Deferred Maintenance Estimates Are Not Comparable Across Agencies and Do Not Capture the Government's Fiscal Exposure

Because agencies define their backlogs differently, estimates cannot be compared across agencies or totaled to obtain a governmentwide estimate. For example, as discussed above, DOE, NASA, and DOI include the costs of all backlog work identified on their assessed assets while VA includes the cost of work on asset systems in the poorest condition and GSA includes costs for work it has identified to be done up to 10 years in the future. Additionally, because these estimates are not comparable, the condition indexes reported in FRPP cannot be compared across agencies to understand the relative condition or management of agencies' assets. Thus, condition indexes should not be used to inform or prioritize funding decisions between agencies. While not comparable between agencies, backlog information collected in a consistent manner over several years can be useful within individual agencies for tracking trends. NASA officials noted, as of October 2008, they have 5 years of data from their annual assessment reports, which they are using to examine trends.¹³ The data show that NASA's backlogs have been increasing recently, but the rate at which it has increased dropped between fiscal years 2007 and 2008. The consistency of reporting established by FRPC should allow for trend analysis for individual agencies starting with the 2008 data. While intra-agency trends could provide useful information for policymakers, it is not

¹³NASA officials said that adjustments were made to the process in the first couple of years; therefore, they do not use this data in their trend analyses.

possible to compare backlog data between agencies since agencies develop their estimates differently.

While there is no governmentwide reporting of repair and maintenance backlogs, agencies have been required to report deferred maintenance as part of their annual financial statements since 1996, and governmentwide totals for deferred maintenance have then appeared annually in the Financial Report of the U.S. Government. Since 1999, agencies have reported deferred maintenance as required supplemental information, which is not audited. For the six agencies we reviewed, we found differences in the basis of their deferred maintenance reported in their financial statements similar to the differences we found in their reporting of repair and maintenance backlogs. Statement of Federal Financial Accounting Standards No. 6, as amended, defines deferred maintenance as “maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period.” The definition excludes any activities that would expand or upgrade an asset from its originally intended use (such as capital improvements) and any maintenance on an asset that is in acceptable condition.¹⁴ Federal Accounting Standards Advisory Board (FASAB) standards allow each agency’s management to both define “acceptable condition” and determine if its assets are in acceptable condition. FASAB staff told us that agencies use different methods to estimate their deferred maintenance and the standards for reporting are designed to accommodate these different methods. FASAB is currently considering a project to review requirements for reporting deferred maintenance as well as asset impairment.

¹⁴Federal Accounting Standards Advisory Board Standard Number 6, as amended, Accounting for Property, Plant, and Equipment, June 1996, GPO #041-001-00462-9.

Table 3: Deferred Maintenance Reported by Selected Agencies, Fiscal Year 2007

Dollars in billions	
Agency	2007 deferred maintenance
DOE	\$3.4 ^a
NASA	2.3
DOI	11.3-19.8
VA	3.7
GSA	0
DOD	72.0

Source: Agency financial reports.

^aNumbers in FRPP and financial statements vary due to timing.

We found that the six agencies' deferred maintenance estimates reported in their financial statements, like their backlog estimates, were not comparable. Specifically, DOE, NASA, and DOI equate deferred maintenance with their backlogs. For these agencies, the estimated repair and maintenance costs identified through their condition assessments for all assets are reported in the agencies' deferred maintenance estimate.¹⁵ However, officials from all three agencies said that they do not consider their assets be in unacceptable condition just because they have some identified deferred maintenance associated with them. DOD reported about \$72 billion in deferred maintenance for 2007.¹⁶ This figure represents the cost to repair and modernize each facility so that it is in acceptable operating condition, which is defined differently within each of DOD's services. According to DOD's 2007 Financial Report, this estimate includes costs that are not precisely equivalent to deferred maintenance, but the costs were reported because they are considered "generally representative" of the magnitude of the agency's deferred maintenance requirements. GSA officials said that GSA has no reportable deferred maintenance because it has determined that, at the overall portfolio level, their building inventory is in acceptable condition. However, GSA noted in

¹⁵Numbers in FRPP and financial statements may differ, however, due to timing. Numbers are a snapshot at one point in time.

¹⁶In April 2008, we reported that DOD had approximately \$58 billion in restoration and modernization needs (see [GAO-08-502](#)). However, that estimate only included needs that were not funded in fiscal years 2005-2007. In contrast, DOD's deferred maintenance estimate is based on the cumulative deferred amount of all restoration and modernization requirements, including restoration and modernization needs identified prior to fiscal year 2005.

its 2007 financial statements that it has approximately \$6.3 billion in capital improvements that are not normal repair and maintenance costs. Since capital improvements are not classified as deferred maintenance under the accounting standard, these costs are not considered deferred maintenance. Similarly, VA's reported deferred maintenance does not include capital projects or assets with less than \$100,000 in estimated repairs. VA officials told us that VA's deferred maintenance estimate is used only to comply with FASAB's requirement and does not represent the cost to repair and maintain VA's facilities.

The estimates for both backlogs and deferred maintenance cannot be used to provide a governmentwide perspective on the cost of repair and maintenance needs. While officials at the six agencies we reviewed use these estimates internally to help inform their real property decisionmaking, the estimates are based on industry-standard cost factors and are not detailed estimates of project costs. According to officials at each agency, these estimates should not be viewed as accurate cost estimates for repair and maintenance, but are valid as an indicator of the magnitude of work that an asset needs. In addition, these estimates occur at a single point in time. The actual repair and maintenance project for an asset may occur well after the deferred maintenance or repair needs are estimated, and construction costs can rise significantly after the estimates are made but before the project is undertaken. Also, some officials told us that while these estimates address the cost to correct identified deficiencies, as projects are bundled together and a work plan is determined, additional work may need to be done to complete the project. For example, additional work such as removing and replacing ceilings to access pipes or reconfiguring a space to accommodate new systems equipment may need to be done although it was not in the estimate to correct the identified deficiency.

In addition, FRPP requires agencies to report data on every asset. As a result, agencies reported backlog estimates associated with assets that are inactive, that are not critical to their missions, or that have been identified for demolition in the next few years. In addition, for those agencies that equate deferred maintenance with backlogs, their deferred maintenance estimate also included the costs associated with these assets. Agencies may not have any intention of repairing some assets and would not seek funding for the identified repair and maintenance deficiencies. Thus, for some agencies, simply totaling the estimated repair and maintenance cost for each asset may overstate the costs.

Agencies Manage Their Backlogs as Part of Their Overall Mission-Driven Real Property Management Programs

Each agency that we reviewed manages its backlog as part of its overall real property management. Agencies focus on maintaining and repairing assets that are critical to safety and accomplishing their missions, and each agency has processes in place to prioritize repair and maintenance work based on the potential impact of not doing the work on the agency's mission. In addition to performing the identified repair and maintenance work, agencies use other techniques, such as asset disposal and replacement, to reduce their overall repair and maintenance backlogs. In spite of these efforts, agency officials generally expect their backlog estimates to increase as the federal portfolio of real property continues to age and the cost of making repairs increases.

Agencies Manage Repair and Maintenance Work Based on Safety and Potential Impact on Mission

Real property managers at the six agencies told us that it is more important to prioritize repair and maintenance work on the basis of safety and the potential impact of not doing the work on the agencies' missions rather than on when the work was identified to be done. DOE is the only agency we reviewed with a specific program to reduce its repair and maintenance backlog. DOE's National Nuclear Security Administration (NNSA) has the Facilities, Infrastructure and Recapitalization Program (FIRP), which was established in 2000 to reduce NNSA's repair and maintenance backlog from the 1990s. The current goal for the program is to eliminate \$900 million of this 1990s-era backlog by 2013. The program does not address new growth in the backlog. So far, the program has eliminated about \$500 million of this backlog. For example, one DOE laboratory recently used FIRP funds to build four new office buildings because staff were moved into the new buildings from older buildings that had a backlog from the 1990s.

Agency officials—both at headquarters and at the sites we visited—told us that they prioritize repair and maintenance for assets that they consider to be important to their mission when deciding which projects to fund. Many of the sites we visited used a risk assessment process to prioritize their projects for funding. This process considers the probability of a failure, such as an electrical outage or a roof leak, and the probable impact of such a failure on the agency's mission. The higher the probability of failure and the higher the probable impact of such a failure on the agency's mission, the higher the priority the project would receive for funding. Projects related to safety also received high priority for funding.

The following are illustrative of comments we heard from agency officials on our site visits:

-
- At VA's Palo Alto Medical Center, mission is the main factor that determines project priorities, and the focus is on patient care buildings. Administrative buildings are always a lower priority. If a building does not house any patients or research, then it may not be as thoroughly studied for seismic issues and is a lower priority for funding.
 - At NASA's Ames Research Center, officials told us that they prioritize repair and maintenance projects based on how the project will affect the center's mission, safety, or compliance with new regulatory requirements. As a result, employees at Ames are able to accomplish the center's mission. According to NASA officials, this prioritization is typical for all NASA Centers.
 - At DOD's Travis Air Force Base, maintenance officials told us that they focus their repair and maintenance funds on those buildings that directly affect the mission of the base, such as airplane hangars and runways. As a result, those facilities are in good condition.
 - At DOI's Patuxent Wildlife Refuge, priority is given to health and safety concerns and those assets that are concerned with wildlife. According to Patuxent officials, caring for wildlife is the core mission of the refuge and therefore repair and maintenance items for facilities that affect wildlife receive higher priority than items that affect other buildings, such as offices.
 - At GSA's federal office building in New Carrollton, Maryland, officials told us that they prioritize repair and maintenance work based on how the repair need affects the customer and the extent of any safety concerns.
 - At DOE's Lawrence Livermore National Laboratory, a facilities governance board develops a prioritized list of repair and maintenance projects by considering the effect on the laboratory's mission and the probability of failure. The laboratory's program staff determine the potential effect on mission and provide input into the prioritization of projects.

Some agencies have developed other tools, processes, and performance measures to help manage their real property portfolios and prioritize repair and maintenance projects. For example, DOI established an agencywide process for prioritizing assets based on its mission. Specifically, DOI uses an asset priority index (API) in combination with information on an asset's condition to establish a clearer link between individual assets and mission, and to assist managers in deciding where to focus their resources. API scores range from 0 to 100 and are based on two components—mission dependency (80 percent) and asset substitutability

(20 percent). Mission dependency criteria are determined at the bureau level and reflect each bureau's unique mission. For example, the National Park Service ranks its assets as having high, medium, low, or no importance in three areas: resource protection, visitor services, and park operations. Assets are scored on substitutability depending on whether there is a substitute asset that can perform comparable functions and serve a comparable purpose. The Washington Monument, for example, is unique and would receive the highest score in this category. On the other hand, if there are two similar warehouses close to each other, they would score much lower. After considering health and safety priorities, API scores are compared with the condition of each asset and those with high API scores and low condition ratings are generally given priority for repair and maintenance projects while those with low API scores and low condition ratings are considered for disposal.

NASA requires their Centers to conduct their own detailed condition assessments at least every 5 years. These assessments, which are separate from the annual deferred maintenance assessments, are used by the Centers to identify and prioritize repair and maintenance projects. According to officials at the Ames Research Center, their assessment focuses more on active, mission-critical assets and repairs and maintenance that they will try to get funded within the next 5 years. Information provided by NASA's centers identified a backlog of about \$1 billion, far lower than the \$2.3 billion in deferred repair and maintenance needs NASA report for fiscal year 2007. According to NASA officials, the backlog reported by these individual NASA centers is lower than the deferred repair and maintenance needs NASA reported because the centers include only the most important projects that they believe should receive funding, instead of all projects to address their backlog as estimated in NASA's annual deferred maintenance assessment report.

Within each agency that we reviewed, repair and maintenance projects can be prioritized at different levels. For example, while DOI has an agencywide policy about how each bureau should prioritize repair and maintenance projects, DOD generally provides the base commander (or equivalent official responsible for a military base) with substantial discretion in deciding how to prioritize repair and maintenance projects. GSA officials told us that their prioritization process is a collaborative effort between property managers, asset managers, and other regional staff, and headquarters staff. At NASA, the centers assign priorities, with headquarters involved in the funding decisions for more expensive projects. At VA, projects are prioritized first at the local level, then at the regional and national levels. While projects are prioritized at different

levels within an agency, each project competes against other potential projects within that agency but does not compete with projects at other agencies.

Agencies Have a Few Strategies to Reduce Maintenance Backlogs but Expect Backlogs to Increase

Agency officials told us that they have a few strategies to address their repair and maintenance backlogs aside from correcting the identified deficiencies. Specifically, officials at DOD, DOE, DOI, GSA, and NASA told us that disposing of buildings and structures that no longer serve their missions, including through demolition, is an effective way to reduce their repair and maintenance backlogs. As these buildings are disposed, the repair and maintenance backlogs at the buildings are eliminated. However, agency officials told us that it can be expensive to demolish a building and they cannot always demolish as many as they would like. Officials at DOI's Patuxent Wildlife Refuge told us that they would like to demolish 20 to 25 buildings, but they have not received the funds to do so. NASA has a program to demolish buildings that has been funded at \$10 million annually, but officials said that this is just "a drop in the bucket" when compared to the buildings it would like to demolish. According to DOE officials, it has eliminated 15 million square feet of space since fiscal year 2002. Officials at multiple agencies also told us that, when they determine it is appropriate to dispose of a building, their primary motivation is not always to reduce their backlog, but this can be an added benefit.

Agencies can also reduce their backlogs through "replacement by construction." Using this strategy, an agency can decide that while it still needs the space it is more cost-effective to dispose of a building and build a new one than to repair the existing building. For example, NASA plans to demolish seven older buildings and replace them with a new multi-use office building at one of its Centers. When this work is done, the repair and maintenance backlogs at the seven buildings will be eliminated. GSA officials also said that they are using this tool at ports of entry to replace border stations. These officials noted that GSA and other agencies are often limited in their ability to use this tool because of its impact on the federal budget, since federal budget scorekeeping rules require the full cost of construction to be recorded up-front in the budget.

Despite these strategies, agency officials told us that they generally expect their repair and maintenance backlogs to increase. Specifically, officials at five of the six agencies we reviewed told us that needs increase as buildings age and a good portion of their current portfolio is more than 30 years old. As a result, these assets will require more money for operations and maintenance and building systems are reaching the point where they

are expected to be replaced. For example, officials at one site told us that given current conditions, they estimate that their backlog may grow from \$75 million in fiscal year 2008 to \$107 million in fiscal year 2012, mainly because a large number of assets are nearing the end of their useful lives and will need replacing over the next 5 years. Agency officials also told us that, as facility inspections and real property information continue to improve, agencies could discover greater repair and maintenance needs. For example, while park staff have conducted annual condition assessments of the Golden Gate National Park's fortifications and other unique assets, they expect the backlog associated with the assets to increase significantly once a contractor performs a comprehensive condition assessment. Finally, as construction costs increase, as they have done over the last several years, the cost of repair and maintenance work may increase contributing to a rise in agencies' backlogs.

Officials at the six agencies we reviewed told us that there is a relationship between the level of repair and maintenance funding and agencies backlogs. DOD officials told us that they have invested in restoring, modernizing, and replacing some assets and they expect their backlog associated with these assets to decrease in the next 4 years. As mentioned earlier in this report, DOD has developed a model to determine the cost of sustaining its facilities.¹⁷ In theory, if repair and maintenance work is funded to sustain facilities, backlogs will not occur. According to a DOE official, DOE is committed to funding maintenance at industry standard levels. The Department's maintenance expenditure grew by about 64 percent from fiscal year 2003 through fiscal year 2007 and reported backlog decreased by 3 percent. In contrast, the maintenance budget at one NASA Center went down by about 40 percent from fiscal year 2005 (when the maintenance budget was \$14.5 million) to fiscal year 2006 (when the maintenance budget was \$10.4 million). The maintenance budget has since remained fairly constant through fiscal year 2008. According to officials at this Center, this funding history has directly contributed to the growth of the center's repair and maintenance backlog, and they expect their backlog will continue to increase.

¹⁷[GAO-08-502](#).

Impact of Backlogs Has Been Limited at Sites We Visited

At the six agencies we reviewed, officials have managed their facility repairs and maintenance to minimize the impact of their backlogs on the agencies. Officials said that their repair and maintenance backlogs have generally not affected the ability of their agencies to accomplish their missions, but the backlogs have led to higher operating and maintenance costs and short-term inconveniences. Also, some officials cautioned that their backlogs create a real potential for an unanticipated incident to occur that could adversely affect an agency's mission.

At some sites, agency officials told us that a key responsibility of the maintenance staff is to keep the facilities up and running, and they praised their staff for creating work-arounds that allow agency staff, despite problems, to continue to work to accomplish the agency's mission. At some of the sites we visited, the costs included in the backlog estimate were to replace basic systems—such as electrical, heating, and air-conditioning systems and roofs—that have exceeded their expected useful lives. The staff said that they spend a lot of time, effort, and money to patch these systems and keep them going, which allows the agency to continue to operate but it is not efficient. In addition, the failure of one of these systems at a critical location could adversely affect an agency's mission.

At the sites we visited, we did not identify or hear of any instances in which an agency's mission had been significantly hampered as a result of a repair and maintenance backlog. Most of the examples cited affected operations and maintenance costs and staff's quality of life or raised concerns about the potential for a failure that would adversely affect/hinder an agency's mission. Agency officials at some of the sites told us that the effect of their repair and maintenance backlog is difficult to see, because the maintenance staff have prioritized projects that directly affect the mission and have done an excellent job of keeping the facility operating while facing increased repair needs. For example, officials at one site told us that repair and maintenance are often deferred on facilities that do not directly affect the site's mission. As shown in figure 1, a maintenance shed has been allowed to deteriorate and now has rotting wood and missing shingles on the roof. According to officials, the shed has not been repaired because funding has been spent on more mission-critical facilities.

Figure 1: Dilapidated Maintenance Shed



Source: GAO.

Repair and maintenance backlogs can lead to higher costs because affected assets are generally not operating as efficiently as possible. At some sites, officials showed us building systems that are 30 or more years old that they are trying to keep operational. Newer systems, such as heating and air-conditioning systems, could operate more efficiently, provide more reliable service to the tenants, and reduce operating costs. In addition, overall maintenance costs increase when a roof that is due for replacement is repeatedly patched rather than replaced. At one site we visited, leaking steam pipes are creating a hazard as hot steam is released. The leaks are also increasing operating costs for energy, water, and maintenance chemicals because additional cold water must be heated to make new steam and must also be chemically treated. Officials said that repairing the steam distribution system is not critical to the site's mission and the leaking steam pipes mostly just increase operating costs. A project to repair the steam system has been proposed for about 10 years and would cost about \$7 million.

Figure 2: Steam Escaping from Pipes



Source: GAO.

We found that maintenance staff sometimes devise creative solutions, such as the system that the maintenance staff at one site we visited set up to funnel water from a roof leak into a water bottle that then directs the water to a drain. This solution stopped the water from further damaging the building and leaking into areas occupied by staff while deferring the cost of correcting the problem.

Figure 3: Roof Leak Drainage System



Source: GAO.

We saw one building that had been flooded, from which some offices had to be evacuated due to the water and subsequent mold growth. Maintenance staff at one site we visited had to move staff from a building where the floor was beginning to rot into another building with little available space, which they described as “squeezing in” the staff.

Repair and maintenance backlogs can interrupt agencies’ work. Officials at one site told us that the age of the fire alarm systems contributed to an increase in false fire alarms. The fire alarm systems are old and beyond their useful life expectancy and part of the agency’s identified backlog. In addition, some alarms were triggered when air conditioning systems were restarted causing changes in air pressure and velocity and dust blown into the air stream. During each alarm, staff had to stop working and leave the building. As a result, the site lost labor time and concerns arose about staff becoming complacent and not taking the fire alarms seriously. Replacement of the fire alarm system in each building on the site is underway. The fire alarm system replacement is scheduled to be completed in all buildings in 2011.

We heard from several officials that while they prioritize their work based on the expected impact an incident might have on the agency's mission, they cannot necessarily predict when or where an incident might occur. At one agency, officials told us that it is standard operating procedure to cover sensitive equipment during off hours to protect it from dust, debris, moisture, humidity, and unexpected incidents. Covering equipment is one way to mitigate the risk of damage to equipment from repair and maintenance backlogs. At one site we visited, officials said that a cooling coil from an old heating, ventilation, and air-conditioning system that is part of their backlog leaked water into a clean room that contained multimillion dollar equipment. Fortunately, the equipment was covered with a tarp and the leak was down the perimeter wall, not on the equipment. However, had the equipment gotten wet, it could have been severely damaged and directly affected the agency's ability to carry out its mission.

Conclusions

Many believe that the overall condition of the federal government's real property assets continues to deteriorate, and it is difficult to predict when or where an incident might occur that would severely impact an agency's mission. However, governmentwide information on the estimated costs to repair and maintain agencies' real property assets that are important to their missions is not currently available. The tens of billions of dollars that agencies have reported to us in backlogs or in their financial statements as deferred maintenance associated with their real property does not capture the federal government's true fiscal exposure. The flexibility that agencies were given to facilitate their reporting of repair costs in FRPP and deferred maintenance in their financial statements has resulted in estimates that include different items. Trying to use current estimates to understand the government's fiscal exposure related to real properties backlogs in some cases would understate and in other cases overstate the exposure. For example, agencies may understate the government's exposure if they have estimated only the cost of correcting assets in the poorest condition or if they have incomplete information about the condition of their assets. Conversely, they may overstate the government's exposure if they include costs associated with repair and maintenance projects they do not plan to do or include the costs of those projects that would not impact the agency's mission even if completed.

In addition, the requirement to report on all assets has resulted in agencies reporting estimated repair and maintenance costs associated with projects they do not plan to undertake because, for example, they intend to demolish the asset or expect there to always be projects with a higher

priority. With information that reflects the government's fiscal exposure from repairing and maintaining its real property that is important to its mission, decisionmakers are better positioned to address future costs.

Recommendation for Executive Action

To provide a realistic estimate of the government's fiscal exposure resulting from repair and maintenance backlogs and minimize the potential for duplicative reporting requirements, we recommend that the Deputy Director for Management, Office of Management and Budget, in conjunction with FRPC and in consultation with FASAB, explore the potential for developing a uniform reporting requirement in the FRPP that would capture the government's fiscal exposure related to real property repair and maintenance. Such a reporting requirement should include a standardized definition of repair and maintenance costs related to all assets that agencies determine to be important to their mission and therefore capture the government's fiscal exposure related to its real property assets.

Agency Comments and Our Evaluation

We provided a draft of this report to OMB, DOD, DOE, DOI, GSA, NASA, and VA for review and comment. OMB generally concurred with the report and agreed with our recommendation. OMB's letter is contained in appendix II. DOD, DOE, DOI, GSA, NASA, and VA provided technical clarifications, which we incorporated where appropriate.

In addition to its technical comments, DOD also raised some concerns about our recommendation to OMB. DOD was concerned that we recommended OMB develop a new uniform federal reporting requirement, based in part on an inaccurate and misleading characterization of DOD's condition rating process. We recommend that OMB, in conjunction with FRPC and in consultation with FASAB, explore the potential for developing a uniform reporting requirement in the FRPP that would capture the government's fiscal exposure related to real property repair and maintenance. Our recommendation is based on the lack of governmentwide information specifically related to the costs to repair and maintain those real property assets that are important to the agencies missions. We believe it is important for OMB to explore the potential of capturing such information to quantify the government's fiscal exposure in this area. Through the incorporation of DOD's technical comments, we have clarified our discussion of DOD's condition rating process and DOD informed us that we have accurately described its process. DOD's letter is contained in appendix III.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to the Director and Deputy Director of OMB, the Secretaries of Defense, Energy, the Interior, and Veterans Affairs, and the Administrators of GSA and NASA. Additional copies will be sent to interested congressional committees. We also will make copies available to others upon request, and the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you have any questions about this report, please contact me at (202) 512-2834 or at goldsteinm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.



Mark L. Goldstein
Director, Physical Infrastructure Issues

Appendix I: Scope and Methodology

Our objectives were to (1) describe how agencies estimate their repair and maintenance backlogs, (2) determine how agencies manage their backlogs and the expected future changes in maintenance and repair backlogs, and (3) identify how backlogs have affected some facilities. To accomplish our objectives, we reviewed the six agencies that each told us in 2007 that they had over \$1 billion in repair and maintenance backlogs associated with their held assets: the Departments of Defense, Energy, the Interior, and Veterans Affairs, the General Services Administration, and the National Aeronautics and Space Administration. For each agency, we interviewed headquarters officials, reviewed agency documents, obtained data on repair and maintenance backlogs for the agency's held assets, and visited two agency sites to determine how the sites estimate and manage their backlogs as well as the extent to which the sites' missions have been affected by their backlog. In selecting sites to visit, working with our Applied Research and Methods team, we reviewed agency inventory and performance measurement data from the Federal Real Property Profile (FRPP), including information on the condition of each real property asset, issued by the Federal Real Property Council as well as data on deferred maintenance and repair needs from the agencies. We performed our site visits in two geographic areas of the country—the Washington, D.C./Virginia/Maryland area and the San Francisco Bay area in California—because each agency had significant sites in these areas. Within the geographic locations, using FRPP data, we determined the average condition for each agency's assets and then selected sites that (1) were at or near the average condition of the agency's assets, and (2) reported a high repair and maintenance backlog compared to other sites in average or near-average condition. Our criteria for selecting each agency included asset types and uses—focusing on core assets, geographic location, quantitative indicators (such as asset value, condition index, and amounts of backlog), and the mission dependency ranking for assets. The information from our site visits is illustrative and cannot be generalized to sites agencywide.

We also interviewed officials from the Office of Management and Budget (OMB) because it oversees the implementation of Executive Order 13327, which addresses federal real property management. We reviewed guidance documents related to this order and obtained relevant agency data from OMB implementing the order. Additionally, we interviewed officials from the Federal Accounting Standards Advisory Board (FASAB) to obtain information on FASAB's accounting standards for required governmentwide reporting of deferred maintenance by agencies in their annual financial statements. We reviewed these FASAB standards, examined agencies' current reporting of their deferred maintenance to

meet the standards, and consulted with our Financial Management and Assurance team about the standards. We also reviewed relevant GAO reports—especially those related to our designation, in 2003, of federal real property as a high-risk area because of long-standing problems—problems that included alarming backlogs of repair and maintenance in federal facilities. While the definition of real property includes land, our review focused on buildings and structures and excluded land because backlogs are generally associated with buildings (such as offices and hospitals) or structures (such as airfields or ports).

We conducted this performance audit from September 2007 through October 2008 in accordance with generally accepted audit standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We determined the data were sufficiently reliable for the purposes of this report.

Appendix II: Comments from the Office of Management and Budget



OFFICE OF FEDERAL
FINANCIAL MANAGEMENT

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

SEP 26 2008

Mr. Mark L. Goldstein
Director, Physical Infrastructure Issues
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Goldstein:

Thank you for the opportunity to comment on the Government Accountability Office's (GAO's) draft report entitled "Federal Real Property: Government's Fiscal Exposure from Repair and Maintenance Backlogs is Unclear" GAO-09-010. The Office of Management and Budget (OMB) agrees with your recommendation to explore the potential for adding a uniform reporting requirement to the Federal Real Property Profile (FRPP) that would capture government's fiscal exposure related to real property repair and maintenance. We further agree that a standard measure for repair and maintenance costs will help drive better asset management decisions at both the agency and government-wide level.

In evaluating this (or any) change to the FRPP, we examine the costs of such a change against the expected value. Further, we must evaluate the extent to which changes to the FRPP have the potential to degrade the usefulness of the existing data. These issues will need to be carefully considered. As your report recommends, we will coordinate our efforts with the Federal Accounting Standards Advisory Board (FASAB) as well as the Inventory Committee of the Federal Real Property Council (FRPC).

Again, we want to thank GAO for the opportunity to comment on this draft report. We look forward to our continuing work in the area of improving Federal Real Property Asset Management.

Sincerely,

Danny Werfel
Deputy Controller

Appendix III: Comments from the Department of Defense



ACQUISITION
TECHNOLOGY
AND LOGISTICS

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

OCT 8 2008

Mr. Mark L. Goldstein
Director, Physical Infrastructure Issues
U.S. Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. Goldstein:

This is the Department of Defense (DoD) response to the GAO draft report, GAO-09-010, "FEDERAL REAL PROPERTY: Government's Fiscal Exposure From Repair and Maintenance Backlogs Is Unclear," dated September 5, 2008 (GAO Code 544143).

The Department does not concur with the recommendation to OMB to develop a new uniform Federal reporting requirement for real property repair and maintenance. It appears this recommendation is based, at least in part, upon an inaccurate and misleading characterization of the Department's condition rating process and terminology. This faulty assessment overstates differences between the Department and the other surveyed Federal agencies and would institute processes already in place through the Federal-wide implementation of a facilities condition index. The enclosed technical annex provides additional explanation and clarification.

Thank you for the opportunity to comment on this report.

Sincerely,

A handwritten signature in cursive script that reads "Wayne Army".

Wayne Army
Deputy Under Secretary of Defense
(Installations and Environment)

Enclosure:
As stated



Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Mark Goldstein (202) 512-2834 or goldsteinm@gao.gov

Staff Acknowledgments

In addition to the contact person named above, Nancy Boardman, Maria Edelstein, Elizabeth Eisenstadt, Carol Henn, Yumiko Jolly, and John W. Shumann also made key contributions to this report.

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