Description of document:	U.S. Geological Survey (USGS) FY2012 Strategic Facilities Master Plan, 2012
Requested date:	04-November-2020
Release date:	01-December-2020
Posted date:	11-January-2021
Source of document:	FOIA Request United States Geological Survey (USGS) P.O. Box 262 State College, PA 16804 Fax: (703) 648-7199 Email: foia@usgs.gov

United States Department of the Interior

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In Reply Refer To:
U.S. Geological Survey
Attention: Mr. Eric J. Darby
12201 Sunrise Valley Drive
Reston, Virginia 20192-0002

December 1, 2020

Transmitted by electronic mail

Re: U.S. Geological Survey (USGS) Freedom of Information Act (FOIA) Tracking # DOI-USGS-2021-000627 – Final Response

This is in response to your FOIA request dated November 4, 2020, assigned control number DOI-USGS-2021-000627. You requested the following information:

> A copy of the (most recent) USGS Strategic FACILITIES Master Plan.

I have enclosed one Portable Document Format file containing the USGS FY2012 Strategic Facilities Master Plan consisting of 361 pages, and which is being released to you in full.

You were classified as an "other-use" requester. Because the cost to process your request is less than $50.00 you are not being charged for the processing of your request. *See 43 C.F.R. 23.7(g)*.

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This completes the processing of your request. If you have any questions about our response, you may contact Mr. Eric J. Darby by electronic mail at foia@usgs.gov.

Sincerely,

ERIC DARBY
Digitally signed by ERIC DARBY
Date: 2020.12.01 08:11:09 -05'00'

Eric J. Darby
U.S. Geological Survey
Government Information Specialist

Enclosure:
USGS Strategic Facilities Master Plan (2012).pdf (361 pages)

U.S. Geological Survey
FY2012 Strategic Facilities Master Plan

June 29, 2012

Table of Contents

Section **Page**

1.0 Executive Summary

The United States Geological Survey (USGS, the Survey) has more than 400 locations across the United States. Its mission is to collect, monitor, analyze, and provide scientific understanding about natural resource conditions, issues, and problems. To support these mission areas, the Survey occupies nearly 1,200 assets, including buildings, land, structures, and vessels.

The Office of Management and Budget (OMB) is working to meet the requirements of real property Executive Orders (EO) by setting goals for each Federal agency. Through these goals, OMB continues to increase its focus on cost cutting strategies for real property. These strategies include efforts to reduce operating costs, deferred maintenance (DM), and the size of agencies' leased portfolios by utilizing consolidation, collocation, and non-traditional work schedules (e.g., teleworking and alternative work schedules).

In fiscal year (FY) 2005, the Survey created a Strategic Facilities Master Plan (SFMP) to address new Federal and Department of the Interior (DOI, the Interior) goals and requirements. In addition, the SFMP was created to improve the management, funding, and performance of its asset portfolio. In FY2012, the Survey developed an updated SFMP to assess the current state of its real property portfolio. This SFMP includes the following sections, described in further detail below:

- Asset Priority Index (API) update
- Benchmarking matrix and performance improvement plan
- Business Case Analyses (BCA)
- Facilities budget and funding assessment
- Implementation strategies
- State of Facilities Report

Asset Priority Index Update

EO 13327, *Federal Real Property Asset Management*, requires agencies to prioritize each asset as it pertains to mission and outcome goals. The Interior released API Guidance on September 21, 2005, providing direction for the API scoring process to encourage Interior-wide consistency of scoring and to meet EO 13327 requirements. The Interior's 2014 Budget Guidance, *Attachment G* issued on October 12, 2011, indicates Bureaus should spend their limited resources on constructed assets that are most important to mission delivery (i.e., assets with high API scores) and that are in the worst condition (i.e., assets with high Facilities Condition Index [FCI] scores).[1] API is an important metric that helps provide a clearer link to mission for existing assets in the portfolio, both owned and leased. API scores are comprised of the following two important components:

[1] FCI is a metric for assessing the relative condition of constructed assets.

- **Mission Dependency** (80% of API Score) - A measure of how critical a particular asset's function is to the performance of the Bureau's mission
- **Substitutability** (20% of API Score) - A measure of an asset's ability to satisfy the operational requirements with an alternative or how "substitutable" an asset may be

Scoring for the FY2005 process only included owned buildings and a few strategic General Services Administration (GSA) provided assets. The FY2012 scoring process served as an interim process that incorporated Interior's API guidance and previous API scoring methodology. In an effort to score assets efficiently, the Survey developed a two-step approach for the FY 2012 process. The first step of the approach is to score assets using available data around the asset category, main usage type, and available FY2005 API score. The second step of the approach provides the Investment Review Board (IRB) with the opportunity to confirm and adjust necessary API scores. The Survey used modeling for the FY2012 scoring process to score both owned and leased assets in its portfolio. The FY2012 efforts and outcomes helped develop future iterations of the API scoring process.

The Survey proposes a different approach for scoring iterations beyond FY2012. During interviews with the IRB, members identified that an approval process would be beneficial for future scoring as it would help normalize scores, reduce time spent scoring assets, and help enable scoring of the complete real property portfolio.

Given increasing budget constraints and an increasing DM backlog without an increase in DM funding, it is important for the Survey to employ a sustainable, transparent, and repeatable process for prioritizing assets. The following actions will assist the Survey with meeting its requirements for future API scoring:

- **Enhance API scoring process to solidify asset prioritization**
  - Conduct a session with IRB members, and other applicable stakeholders, to help ensure the weights accurately reflect the importance of the criteria
  - Employ a tiered scoring and approval process to help eliminate bias, normalize scores, and reduce the time it takes to score the complete portfolio
  - Validate the API scores and perform an analysis on the asset portfolio to help identify how the API scores are distributed across the Survey
- **Leverage an API scoring tool to facilitate API scoring sessions, document decisions, and provide a source to collect information from stakeholders across the country**
  - Identify and document tool requirements for a sustainable API scoring process
  - Evaluate and assess tools both in the marketplace and internally
  - Identify and establish use of an appropriate tool and identify proper controls over the use of the tool

Benchmarking Matrix and Performance Metric Improvement Plan

EO 13327 also established the GSA Federal Real Property Council (FRPC) to develop guidance for, and to facilitate the success of, each agency's *Asset Management Plan* (AMP), in order to promote efficient and economical use of the Federal government's real property assets. EO 13327 requires Federal agencies to report data on globally owned, leased, and otherwise managed real property assets to the Federal Real Property Profile (FRPP) on an annual basis. FRPP is the compilation of each agency's data. The FRPP data is a mix of general asset information (e.g., the asset type and use) and performance metrics (e.g., mission dependency).

The existence of FRPP performance metrics at the Survey, and across Federal agencies, creates the opportunity for a consistent comparison of the performance of its real property portfolio against itself from year-to-year, as well as against other agencies reporting FRPP data for similar asset types. In response to EO 13327 and the creation of FRPC, the Survey began evaluating its assets through collecting baseline performance metrics. In November 2010, the Survey transitioned to a new real property system, the Financial and Business Management System (FBMS). FBMS decreased the need for data collection, through the automation of rent and operating cost payments processed through FBMS. In FY2012, the Survey benchmarked its FY2011 portfolio, including both FRPP reported and non-FRPP reported assets, against external entities, and prepared a performance metric improvement plan.

After identifying appropriate performance metrics for this exercise, the Survey analyzed its real property data to gain a high level understanding of its portfolio and identify anomalies that suggest a need or opportunity for improvement. The analysis presented areas where the FRPP submission lacked complete or accurate data. The Survey recognized these as opportunities to identify better management strategies for its real property performance data.

After evaluating the FY2011 data, the Survey compared its current and prior year data to other agencies in a benchmarking exercise. The benchmarking exercise provided information on where the Survey's assets were performing better or worse than the asset data of other Benchmark Candidates. The analysis allowed for the development of a performance metric improvement plan, focusing on non-FRPP metrics which can help the Survey improve its real property portfolio management. The performance metric benchmarking and analysis exercise yielded the following suggested actions:

- **Conduct data improvement assessment for GSA FRPP metrics**
  - Monitor the performance of inactive and excess assets
  - Improve upon the collection of complete and accurate data in advance of FRPP submission timeline
  - Use new API scores to re-evaluate mission dependency scores
- **Utilize non-FRPP portfolio-wide metrics**
  - Lease cost per square foot (SF)
  - Utilization rate
  - Operating efficiency

  - Cost of repair needs per SF
- **Automate data collection**

Business Case Analyses

A BCA is quantitative cost and benefits analysis that incorporates criteria linked to the Survey's mission goals and strategies as it relates to real property decision-making. The IRB is tasked by the *Interior's Capital Planning and Investment Control Guide* with reviewing, selecting, and managing business cases for GSA occupancy agreements (OAs) and commercial leases with a cost of $1 million or more per year, or $5 million lifecycle. With increasing lease costs, and scrutiny on building utilization, the Survey is continuously looking for opportunities to consolidate space to meet Interior requirements, as well as saving facilities funding to help offset the shortfall of approximately $15 million in FY2012. In its Cost Savings and Innovation Plan (CSIP), USGS identified its three major centers (Reston, VA; Denver, CO; Menlo Park, CA) as key locations to focus consolidation efforts.

Reflecting the sentiment of the CSIP, the Survey's Achieving Cost Efficiencies for Science (ACES) Team identified the following three business case opportunities to assess:

1. Solid State Physics Laboratory, Reston, VA - Evaluate alternatives for the Solid State Physics Building to include demolition, renovation, or construction of another facility.
2. Denver Federal Center (DFC), CO - Evaluate the feasibility of consolidating USGS employees, laboratories (labs), and storage in Buildings 25, 95, and 810. This would mean vacating the older buildings - Buildings 20, 21, 21A, and 53.
3. Menlo Park, CA - Assess the feasibility of consolidating employees and functions into the highest quality facilities on Menlo Park campus that would lead to vacating an entire building (e.g., Building 2 or 3).

The focus on consolidating space is important, especially at the three largest centers at the Survey as the cost savings could be material. When assessing the BCAs, the Survey first took into account meeting science mission needs, as well as Interior's utilization requirements and ways to offset the budget shortfall. After assessing the three business cases, the Survey noted the following considerations for future consolidation efforts:

- Reduce library collections and space
- Identify need for overall authority to make facility-related project approvals
- Assess laboratory utilization to identify shared-space opportunities
- Decrease warehouse and storage items and space
- Collaborate with GSA to release space

In addition, the Survey should emphasize the importance of including funding strategies with BCAs. In many cases, the IRB reviews and approves BCAs; however, the requesting parties frequently do not include a funding strategy. This could result in the delay or pause on the project's implementation.

Facilities Budget and Funding Assessment

The Survey funds its facilities needs through operations and maintenance (O&M) and rent appropriations, as well as deferred maintenance and capital improvement (DMCI) funding. In addition, the Survey created a Budget Initiatives process in FY2007 as a means for requesting "over target" funding from Congress. Currently, the Survey has a shortfall due to its O&M and rent needs being greater than its available funds. The Survey's DM backlog also continues to grow while funding for it remains the same.

In FY2012, the Survey assessed its current facilities budget and allocation processes and their impact. As part of the assessment, the Survey identified gaps within its processes and areas for improvement. The Survey also assessed missing funding requirements needed to fully fund the needs of its facilities. The facilities budget and funding assessment yielded the following suggested actions:

- **O&M and Rent Considerations**
  - Establish FRPP data governance process
    - FRPP data is used as a modifier to the Survey's O&M cost models
  - Reassess FRPP metrics used in O&M cost models annually
  - Incorporate cost model requirements into O&M calendar in the Facility Maintenance and Management System (FMMS)
  - Perform budget to actual analysis
  - Increase training for O&M and rent budget and allocation processes
  - Further examine incentivizing shortfall or holdback
  - Provide metrics to executive leadership for their review
  - Require contingency planning for shortfall
  - Establish process to evaluate the renewal of OAs
  - Pursue alternative financing
- **DMCI Considerations**
  - Create standard queries as a process step for an internal control
  - Establish periodic DMCI budget allocation training
  - Create a DMCI project descriptions and scoring ranges guide
  - Rotate members of the DMCI Scoring Team
  - Take a holistic approach to funding projects at a facility
  - Contract with other agencies to perform condition assessments
- **Budget Initiative Considerations**
  - Require an approved BCA prior to submitting a Budget Initiative
  - Assess Budget Initiatives more thoroughly at the lower levels of the organization
  - Update the Budget Initiatives template

- **Additional Funding Considerations**
  - Investigate component renewal
  - Work with science programs to evaluate the impact of facilities on science mission
  - Evaluate the efficient use of laboratory space

Implementation Strategies

The SFMP is an important part of the Survey's facility operations, including supporting the mission, identifying opportunities, and preparing for the future. **Figure 1.1** provides a holistic framework linking the activities outlined in the SFMP and other documents (e.g., CSIP) to how the Survey supports the overall mission.

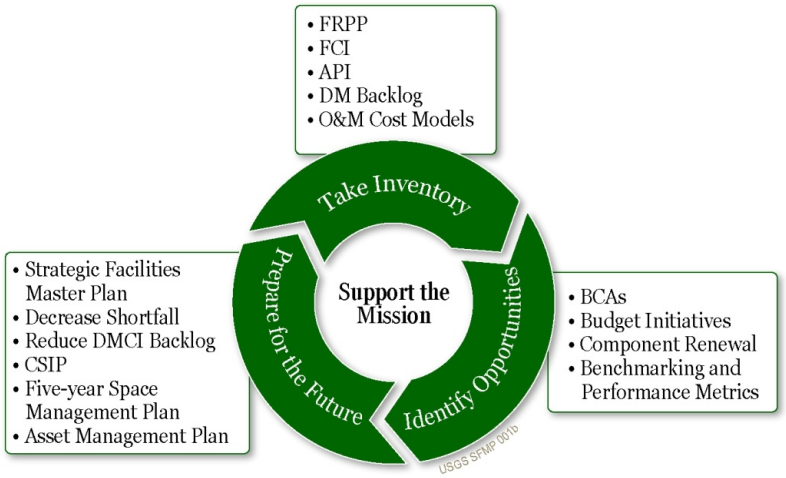

Figure 1.1. SFMP Framework

The Survey's implementation strategies are comprised of considerations, or opportunities, presented throughout the SFMP and CSIP. To effectively identify which opportunities to pursue first, the Survey incorporated a prioritization framework to assess the relative priority of each opportunity. The prioritization framework accounts for the different levels of USGS stakeholder interest, the potential cost savings or avoidances, the implementation timeline, impact to the mission, ability to meet compliance requirements, and the estimated cost associated with implementing each opportunity.

State of Facilities Report

The State of Facilities Report (Report) provides a high-level overview of the performance of the Survey's assets by Regional Executive (REx), national responsibility, and mission area (collectively, “areas”). The quarterly Report is intended to provide areas with point-in-time results (i.e., State of Facilities Report) which may be used to help improve data quality and the overall management of the assets. To assist the areas in preparing these point-in-time results, the Survey developed a Microsoft Excel® tool to analyze FBMS, Lotus Notes Address book (Name and Address Book, NAB), and Facilities Management Branch (FMB) data.

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2.0 Background

2.1. U.S. Geological Survey Background Information

The United States Geological Survey (USGS, the Survey) has more than 400 locations across the United States to provide reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; oversees water, biological, energy, and mineral resources; and enhance and protect quality of life. To support these mission areas, the Survey occupies nearly 1,200 assets, including buildings, land, structures, and large research vessels. The Survey's owned assets are worth an estimated $412.8 million.[2] The Survey estimates the deferred maintenance (DM) backlog on these assets is over $75 million, or approximately 18% of the value of its owned real property portfolio. With $7.3 million in DM funding approved for fiscal year (FY) 2011, the Survey should evaluate its assets and identify opportunities to reduce or avoid the continuously growing facilities-related costs.[3]

2.1.1. U.S. Geological Survey Governance Structure

The responsibility for managing the Survey's real property assets flows from the Associate Director (AD), Office of Administration and Enterprise Information (AEI), and Human Capital who serves as the Senior Asset Management Officer and provides Bureau-level direction over the management of the Survey's real property portfolio, to the Chief, Office of Management Services (OMS). The Chief of OMS serves as the Bureau Facilities Program Coordinator. Responsibility then flows from Chief of OMS to the Chief of OMS Operations (OMSO) to the Branch of Management Services (BMS) offices in Menlo Park, California (CA), Denver, Colorado (CO), and Reston, Virginia (VA).

The Facilities Management Branch (FMB), which also falls under OMS, is responsible for facility and space management policy and program oversight, including data collection and reporting to the Department of the Interior (DOI, the Interior), General Services Administration (GSA), and Office of Management and Budget (OMB). FMB requests data from the BMS offices to prepare for reporting requirements. The BMS offices work with Facility Managers and administrative staff within the Regional Executive (REx), mission areas, or national responsibility programs to gather real property asset information at the ground level. While the BMS offices work with Facility Managers and administrative staff, Facility Managers do not report to the BMS offices, they report to a supervisor in their REx or mission area. Science Center Facility Managers report to their Science Center Director, who reports to their AD or REx. **Figure 2.1** illustrates the Bureau governance and decision-making hierarchy for the Survey's real property assets.

[2] Based on Federal Real Property Profile data reported for the FY2011 submission.
[3] U.S. Geological Survey, *Asset Management Plan – Section 2.10 – Deferred Maintenance Trends*, 2011.

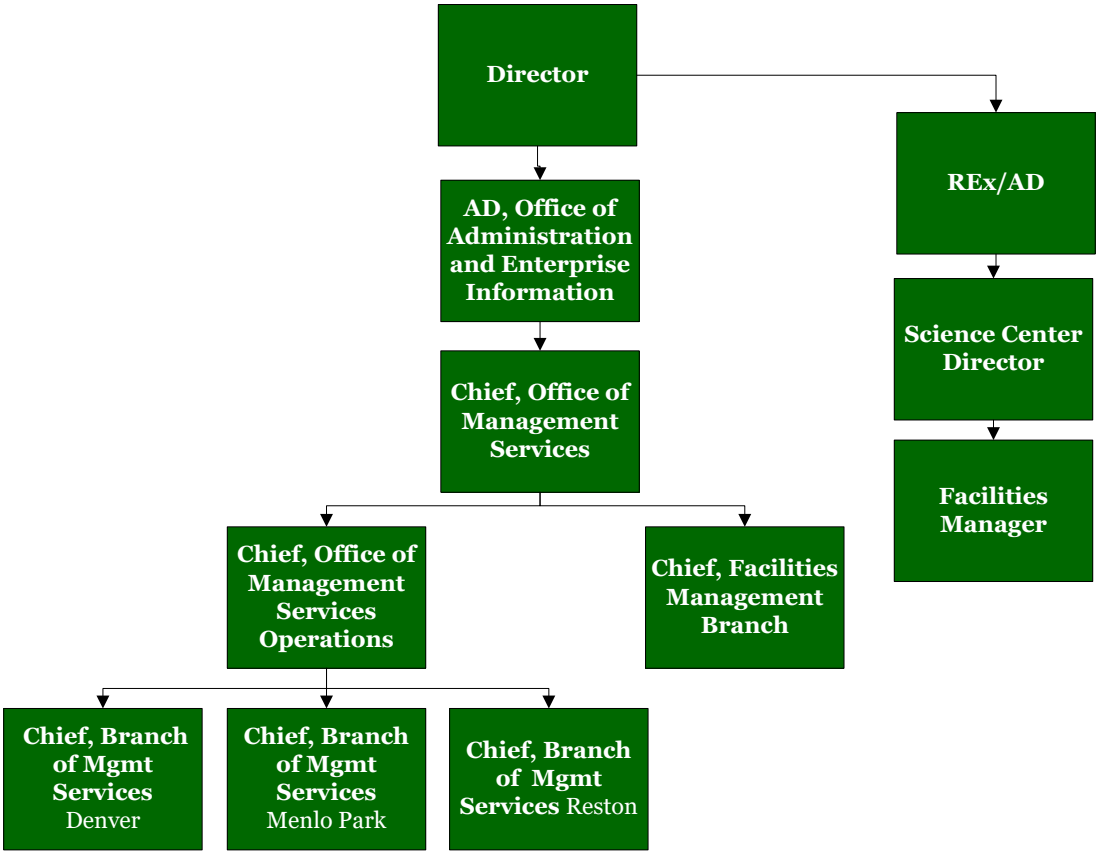

Figure 2.1. The Survey's Real Property Governance Structure

2.2. Executive Orders and Mandates

2.2.1. Executive Orders

Executive Orders (EO) are issued by the President, typically to help officers and agencies of the executive branch manage the operations within the Federal government itself, and have the full force and effect of the law until they are revoked, superseded, or modified. OMB assists the President by working to set budget and administration goals for each Federal agency in order to meet the requirements of EOs. President Bush issued EO 13327, *Federal Real Property Asset Management*, on February 4, 2004, establishing the Federal Real Property Council (FRPC) to develop guidance for, and to facilitate the success of each agency's *Asset Management Plan* (AMP). Specifically, EO 13327 requires agencies to prioritize their assets as they pertain to mission and outcome goals and to report data on owned, leased, and otherwise managed Federal real property assets, globally, to the Federal Real Property Profile (FRPP) on an annual basis.

FRPP data refers to the set of required data elements captured and reported annually. To assist agencies in capturing and reporting similar data, FRPC issues and updates the *Real Property Inventory Reporting* guidance each year. The annual guidance defines the FRPP data elements to promote consistency of data capturing strategies from one

agency to the next. The compilation of each agency's FRPP data is used to populate a single, comprehensive, and descriptive database of the executive branch agencies, used to assess agency compliance with EO 13327.

Additionally, President Obama issued EO 13576, *Delivering an Efficient, Effective, and Accountable Government*, on June 13, 2011, requiring agencies to reduce wasteful or ineffective programs, policies, and procedures, and to identify near-term priorities such as improving the management of Federal real estate.

2.2.2. Department of the Interior Guidance

The Interior released Asset Priority Index (API) Guidance on September 21, 2005, providing direction for the API scoring process to encourage Department-wide consistency of scoring and to meet EO 13327 requirements. Based on the Interior's API Guidance, Bureaus should score assets at least every five years, or if the use of the asset changes.

2.2.3. Cost Savings Targets

In accordance with government-wide cost cutting initiatives, OMB requested that Federal agencies focus on cost reduction opportunities at owned facilities and leased space. The Interior identified a cost savings target of $120 million for FY2012 to address the request, examining reduction opportunities for its Bureaus' leased and owned space.

For direct leased and GSA provided space, the Interior identified cost savings targets by freezing rental rates at their *Exhibit 54* FY2010 levels.[4] The Survey identified that rental rates would increase approximately $6.25 million from FY2010 to FY2012; therefore, its FY2012 cost savings target is $6.25 million for direct leased and GSA provided space. To quantify the cost savings target as a measure of space, the Interior divided the cost savings target by the national average of $25 per gross square foot (GSF). Based on the national average, the Survey has a FY2012 cost savings target of 250,160 GSF.

The Interior identified cost savings targets for owned buildings by multiplying the total annual operating costs per GSF submitted to FRPP in FY2010 by a 7.5% reduction in GSF. The Interior then added DM cost avoidance targets submitted by the Bureaus to receive a total owned cost savings target. As stated in the Assistant Secretary of the Interior's August 2, 2011 memorandum (memo), *Facilities and Space Management*, the Survey's cost savings target for owned assets in FY2012 is approximately $2.49 million.

Bureaus revised their *Real Property Cost Savings and Innovation Plan* (CSIP) by August 10, 2011 using the targets and templates outlined in the memo. The revisions included a summary of actions taken to date and cost savings/avoidances achieved, an analysis of currently excess/inactive assets, an analysis of currently active assets, and a section on direct leased and GSA provided space.

[4] GSA provides Exhibit 54 to agencies and contains a summary of leases and funding. Exhibit 54 is used to project rent for planned inventory changes.

2.3. Real Property Profile

Interior defines real property as "land and interests in land." This includes buildings, piers, docks, warehouses, right-of-way and basements, utility systems, and all other improvements permanently attached and ordinarily regarded as real estate."[5] The Survey further clarifies property as real or personal depending on whether it constitutes a temporary or permanent improvement to the land.

The Survey's real property portfolio consists of 1,184 assets; both owned and leased land, vessels, buildings, and structures. Of these assets, approximately 34% are provided by GSA or other parties. **Figure 2.2** provides an overview of the Survey's real property inventory and the legal interest associated with each asset type.[6]

Asset Type	Legal Interest	Number of Assets	Percent	SF (SF)[7]	Percent by SF
Buildings & Structures	Owned	630	53.21%	1,259,313	20.36%
	State Government Owned	70	5.91%	373,329	6.04%
	Leased	156	13.18%	342, 987	5.54%
	GSA provided	190	16.05%	4,210,710	67.90%
	Other Agency [8] Provided	7	0.59%	8,640	0.14%
	Cooperative Agreement	6	0.5-%	1,400	0.02%
Buildings & Structures Sub-Total		1,059	89.44%	6,185,669	100.00%
Large Research Vessels	Owned	8	0.68%	N/A	N/A
Large Research Vessels Sub-Total		8	0.68%	N/A	N/A
Land	Owned	58	4.90%	N/A	N/A
	State Government Owned	2	0.17%	N/A	N/A
	Leased	55	4.65%	N/A	N/A
	Other Agency Provided	1	0.16%	N/A	N/A
Land Sub-Total		117	9.88%	N/A	N/A
Total		**1,184**	**100%**	**6,185,669**	**100.00%**

Figure 2.2. The Survey's Asset Type Summary

Figure 2.3 illustrates the location of these assets across the United States and outlying areas.

[5] U.S. Department of the Interior, *Real Property Holdings–Terms and Concepts,* 2000.
[6] Legal Interest is a Federal Real Property Profile (FRPP) metric used to identify a real property asset as being owned, leased, or GSA provided by the Federal government.
[7] This square footage count examines RSF for GSA provided assets and GSF for assets of the other legal interests.
[8] The other agency provided SF count may be low due to potentially inaccurate SF counts of other Bureau assets occupied by USGS.

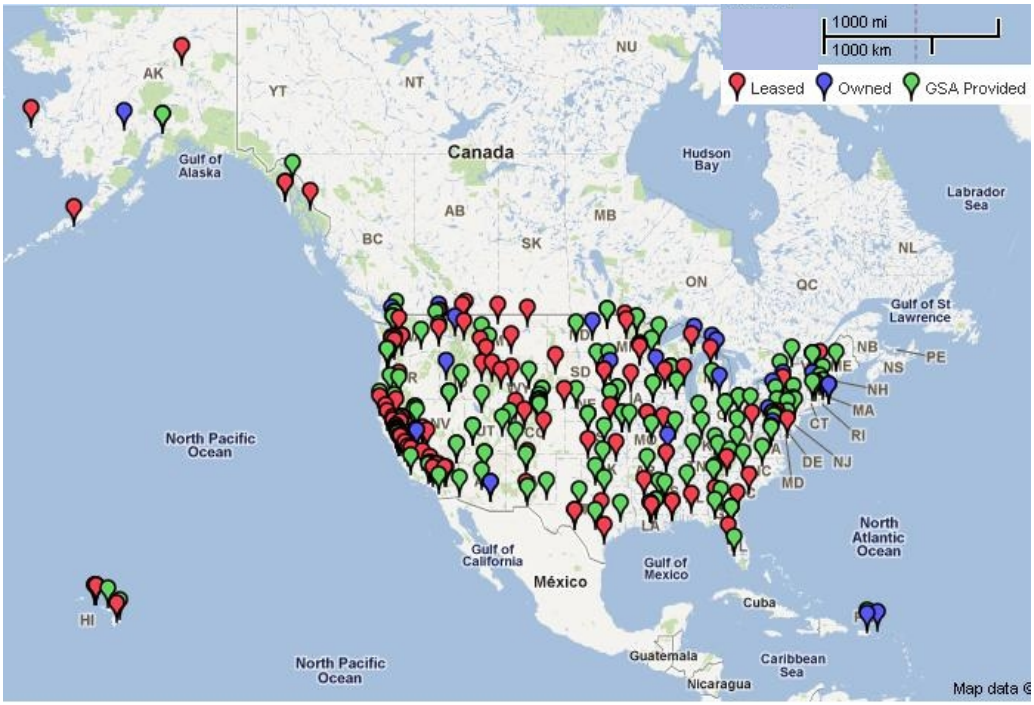

Figure 2.3. The Survey's Asset Locations Map

The Survey is split into eight REx areas (i.e., Northeast, Midwest, Southeast, Alaska, Northwest, Rocky Mountain, South Central, Southwest), six Mission Areas (i.e., Ecosystems; Climate, and Land-Use Change; Natural Hazards; Water; Energy and Minerals, and Environmental Health; Core Science Systems), and three national responsibilities (i.e., Director's office, AEI, human capital).

2.4. Portfolio Management Technology

The Survey uses three information management systems to manage its real property asset data and budgetary information. These systems are the Financial and Business Management System (FBMS), Facilities Maintenance Management System (FMMS), and Facilities Budget Activity and Rate Workbook System (FBARWS).

2.4.1. Financial and Business Management System

FBMS is the primary asset inventory tool and the system of record for the Survey since November 2010. FBMS includes personal property, real property, and fleet management modules. The Survey uses FBMS to process and pay its approximately $73 million in GSA rent and Department of Homeland Security (DHS) bills, as well as $7 million in direct lease payments. It is also the system of record for tracking the 25 required data elements for FRPP. Section 4.2.2- Collect Performance Metrics addresses some of the challenges that the Survey is facing with the new asset inventory system.

2.4.2. Facilities Maintenance Management System

According to the FY2011 AMP, FMMS is the Survey's implementation of the commercial maintenance management software application, Maximo™. The Interior mandated the use of FMMS to provide a common data structure for Bureaus managing facilities to more efficiently operate and maintain their facilities. In addition, the Survey uses FMMS to manage its deferred maintenance and capital improvement (DMCI) backlog. Certain data fields from FMMS feed into FBMS and vice versa.

2.4.3. Facilities Budget Activity and Rate Workbook System

As established in the FY2011 AMP, FBARWS is a web-based system designed to support facility-level budget formulation activity for the annual budget submission. The Survey populates FBARWS with asset data. FBARWS is opened annually for users to enter budgetary data for the rent, and operations and maintenance (O&M) components of the Survey's facilities budget activity.

Currently, FBARWS does not integrate with FBMS. Therefore, the real property data within FBARWS does not reconcile with the real property data set in FBMS and vice versa. This creates potential for real property budget data to be incomplete and inaccurate. The Survey is developing strategies to integrate FBMS and FBARWS real property data. This may improve the quality of real property and the cost/budget data. The integration is expected to be complete in FY2013.

2.5. FY2005 Strategic Facilities Master Plan

2.5.1. Asset Priority Index

The Survey first scored its assets in FY2005 as part of the development of the FY2005 Strategic Facilities Master Plan (SFMP). Due to time constraints and other limitations, only a portion of the Survey's portfolio was scored for owned assets and a few select strategic GSA provided spaces, such as the National Center in Virginia, and the Menlo Park Campus in California. In FY2005, the Survey only scored 33% of its real property portfolio. Of these scored assets, over 90% were defined as owned buildings.

The previous FY2005 API scoring process was time consuming and expensive, and resulted in only 33% of the Survey's assets receiving scores. The process for identifying the criteria in FY2005 was comprehensive and involved a group of leadership and facility experts representing the Executive Leadership Team (ELT), from different geographical regions and disciplines. The ELT designees developed the API scoring criteria and associated weights. Using the API scoring criteria, the team scored the Survey's owned buildings and a few strategic GSA provided assets.

2.5.2. Baseline Performance Metric and Benchmarking Matrix

When the Survey developed the FY2005 SFMP, FRPC was in its infancy and government-wide performance metrics were not available for benchmarking. The FY2005 SFMP's recommendations in regard to portfolio metrics focused on the following actions:

- Development of a comprehensive facilities data set with standardized data fields and consistent data sets; and
- Tracking of facility costs as opposed to cost center costs (in order to present actual costs at a constructed asset level).

The Survey's implementation of FBMS, FMMS, and FBARWS provided significant progress on these two actions, but some data quality issues remain due to the manual data collection and other shortcomings.

2.5.3. Business Case Analysis

The FY2005 SFMP provided recommendations to develop a standard Business Case Analysis (BCA) form for consistency across the Survey. Since the FY2005 SFMP, the Survey implemented a standard template and BCA tool for analyzing costs, risks, and benefits. The template also documents cost assumptions used to support the cost model for Status Quo and alternatives. As a result, the process became more transparent, so those preparing BCAs recognize the decision process and the required information for BCA submission.

2.5.4. Budget Strategy

In the FY2005 SFMP, the Survey examined Budget Initiatives and other actions to fully fund the Survey's facilities, which include the elimination of the DM backlog. The Survey noted unsustainable budget practices during the examination. These included the following:

- The Survey had a DM backlog of $38.1 million and DM funding of $3.8 million in 2004. The DM backlog was expected to grow and never be eliminated.
- Shortfall for facilities would continue to increase because appropriations were not keeping pace with costs.
- The Survey's space utilization rate was approximately 100 rentable square feet (RSF) greater than International Facility Management Association (IFMA) research organizations.
- Managers for individual cost centers were able to make vacating decisions that could negatively impact other cost centers.

The FY2005 SFMP included recommendations to maintain and improve funding level throughout the facilities. They were as follows:

- Reduce operating shortfall by improving space utilization and properly charging fees to customers based on the fair share of allocation for associated facility costs.
- Fund DM projects with high API scores that are assessed to be in poor condition.
- Set policy and review facilities decisions by cost centers to avoid cost center management decision that negatively affects the Bureau.
- Lease underutilized space to other agencies or organizations.

2.5.5. Implementation Strategies

The FY2005 SFMP establishes guidance the Survey can follow in creating a strategic planning program. The FY2005 implementation strategies prioritized recommendations and captured the timeline and suggested resources (e.g., FTEs and cost) needed to move forward with the proposed implementation. The FY2005 implementation strategies included the following: asset inventory and analysis, asset mission alignment, opportunity identification, business case development, and budget strategy.

2.5.6. State of Facilities Report

The FY2005 SFMP included a recommendation to "Establish a set of criteria for facilities performance metrics and ensure that periodic reporting summarizes facilities performance against these metrics at the national, regional, and science discipline levels." The State of Facilities Report (Report) found in Section 8.0 – State of Facilities Report provides an analysis of the Survey's facilities data at the portfolio level. In addition, the Report provides an analysis of several performance metrics at the REx, national responsibility, and mission areas (collectively, "areas").

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3.0 Alignment of USGS Facilities to Mission

3.1. Background

The President issued several EOs requiring agencies to prioritize actions to improve the management of their real property inventory and develop asset management strategies. The Interior's approach for prioritizing assets is to assign an API score for each asset to help establish a clear link to the mission for assets in the portfolio. API is a metric that helps asset managers assess the priority of assets relative to one another.

3.1.1. Deferred Maintenance Allocation

The Survey's DM costs have continued to steadily increase over the past three years. With the exception of funds provided through the American Recovery and Reinvestment Act of 2009 (ARRA), DM funding has decreased or remained constant. As prescribed by the Interior and identified through the Survey's O&M cost modeling, maintenance of the Survey's assets has been chronically underfunded.[9] **Figure 3.1** illustrates the DM budget and backlog for FY2009-2011.[10] The demand for the Survey's limited asset funding is high, with the Survey receiving about 9.9% of the FY2011 backlog of DM funding required.

FY2009			FY2010			FY2011		
Backlog	Funding	Percent Received	Backlog	Funding	Percent Received	Backlog	Funding	Percent Received
$68.0M	$7.3M	10.7%	$73.9M	$7.3M	9.9%	$75.9M	$7.3M	9.9%

Figure 3.1. Deferred Maintenance Funding FY2010-FY2012

The Interior's 2014 Budget Guidance, *Attachment G*, issued on October 12, 2011 indicates Bureaus should spend their limited resources on constructed assets that are most important to mission delivery (i.e., assets with high API scores) and that are in the worst condition (i.e., assets with high Facilities Condition Index [FCI] scores).[11] The guidance directs Bureaus to use the following weights when prioritizing projects for DMCI funding:

- 65% - API Score of the project (i.e., importance to mission)
- 35% - Ranking Factor (e.g., Critical Health and Safety DM)

Assets with high API scores are more important to the mission. Previously, the Interior placed only a 35% weight on API scores when determining DMCI funding. The Interior's direction is placing an increasing importance on mission dependency by using API scores to allocate direct limited DMCI funding, and increasing this component from 35% to 65%. This requirement is for allocating the DM budget for owned assets, which is approximately $7.3M for FY2011. The Survey has substantial demands competing for

[9] U.S. Department of the Interior. *Asset Management Plan – Section 2.7.1.0. – Operations and Maintenance Costs,* 2011.
[10] U.S. Geological Survey, *Asset Management Plan – Section 2.10 – Deferred Maintenance Trends,* 2011.
[11] FCI is a FRPP metric for assessing the relative condition of constructed assets.

limited asset funding; therefore, the Survey should allocate resources in a way that most positively impacts its mission. With limited DM funding and degrading assets, accurate API scores may help the Survey make budgetary decisions by identifying which owned assets should receive funding.

3.2. API Scoring Methodology

The Interior's AMP indicates Bureaus should align their investments with program missions and strategic goals. To identify which assets, or investments, support mission needs and the achievement of strategic goals, the Interior issued API Guidance in FY2005.[12] This document helps provide a clearer link to the Survey's mission for all assets in the real property portfolio, both owned and leased, and provides consistency for the API process across Bureaus.

Bureaus use API scores to help make budgetary decisions by aligning funding and resource allocation with the most valued assets, or those assets with the highest API scores. The Interior's *API Scoring Guidance* has three major steps, shown in **Figure 3.2** below.

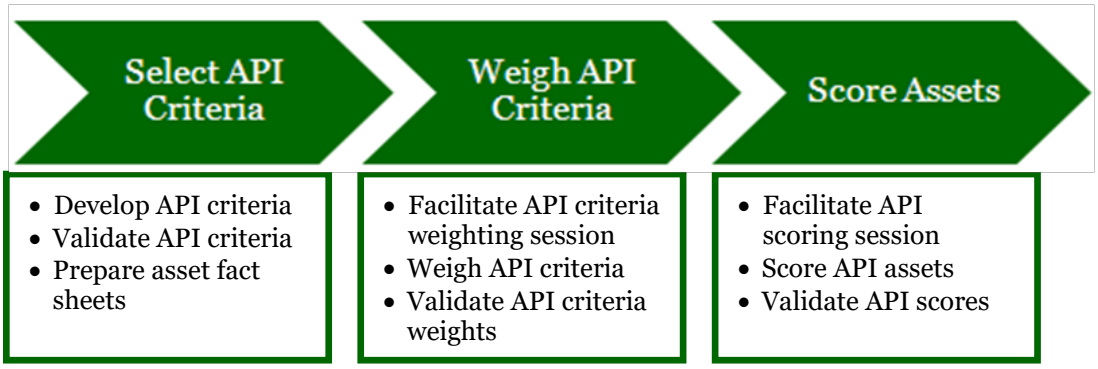

Figure 3.2. Interior API Scoring Methodology

3.2.1. Select API Criteria

In the first step, each Bureau is instructed to **select** an API criteria set that suits the organization. API is comprised of the following two factors:

- **Mission Dependency** - A measure of how critical a particular asset's function is to the performance of the Bureau's mission. The Mission Dependency component of API is composed of multiple criteria as identified by each Bureau. Each Bureau places different criticality measures on assets that serve the same basic function. To provide useful results in the interpretation of the API score, the Mission Dependency criteria must exhibit the following characteristics:
  - Must be mutually exclusive and cover aspects of the Bureau mission;
  - Must capture what is important to the organization;

[12] U.S. Department of the Interior, *Asset Management Plan – Section 2.4.1.1 Contribution to Mission*, 2008.

- Must have wide acceptance throughout the organization; and
- Must have clear definitions to allow for consistent scoring.

- **Substitutability** - A measure of an asset's ability to satisfy the operational requirements with an alternative or its "substitutability." An Asset Substitutability score factors in how easily the Bureau can replace an asset with another asset, the costs associated with the change, and the impact on the core mission.

Figure 3.3 illustrates the interrelationship between Mission Dependency and Substitutability. The highest priority assets are those that are critical to the Survey's mission and have a low Asset Substitutability.

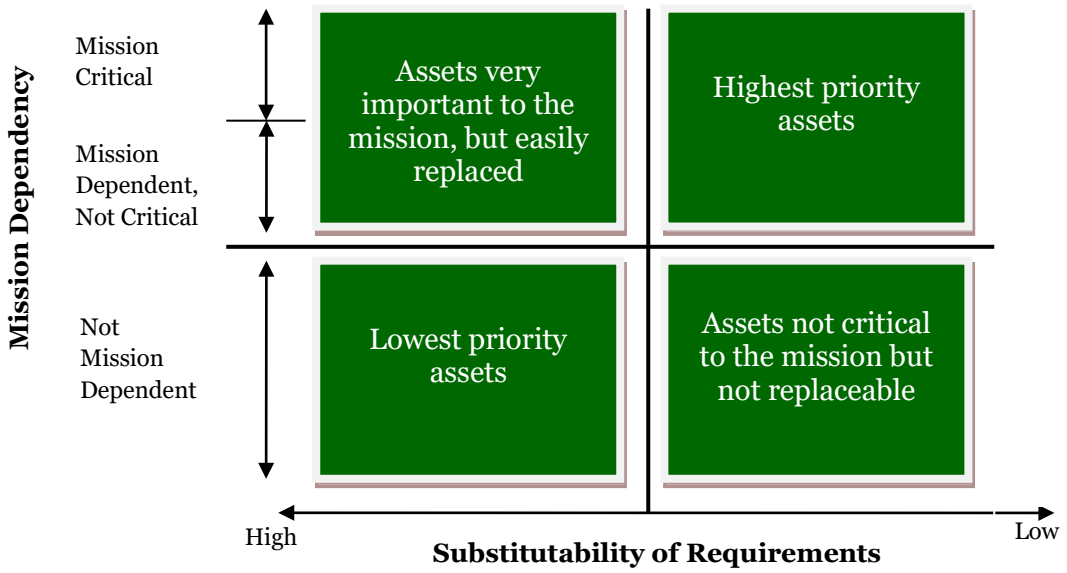

Figure 3.3. Interrelationship between Mission Dependency and Substitutability

3.2.2. Weigh API Criteria

The second step of the process is to weigh API criteria. Department guidance establishes a 0-100 point scale for API scores; Mission Dependency and Asset Substitutability comprise 80% and 20% of the API score, respectively. The Interior's guidance indicates the weight distribution between the two criteria and only provides flexibility for criteria within the Mission Dependency category. **Figure 3.4** illustrates the composition of the API score.

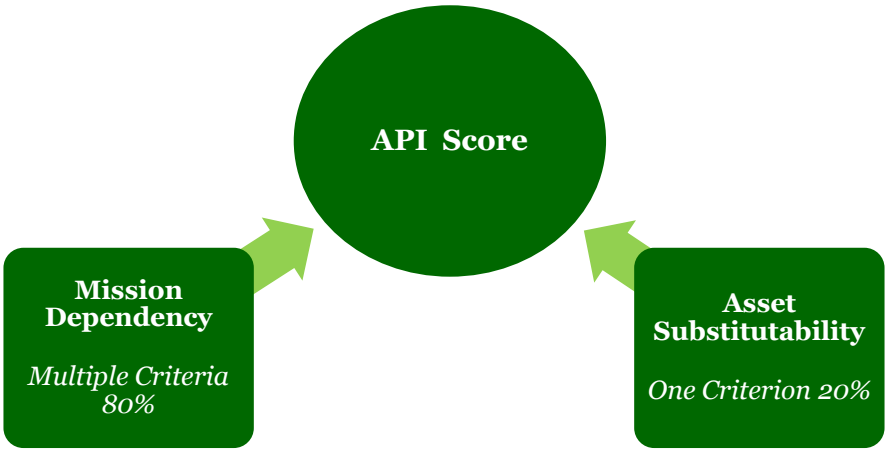

Figure 3.4. Department API Scoring Components

The criteria for Mission Dependency allow for the highest possible score of "80." A score of 80 means an asset is entirely critical to the mission of the Bureau. In order to weigh the API criteria, the guidance directs Bureaus to facilitate an API criteria **weighing** session. In this session, stakeholders can provide input on API criteria weights and validate the weighing of API criteria.

3.2.3. Score Assets

In the final step of the scoring process, the Department's guidance indicates Bureaus should facilitate an API **scoring** session to score assets and validate API scores. Bureaus also leverage quality control checks to help validate that stakeholders appropriately scored criteria consistently throughout the organization. The final API scores rank assets relative to one another on a 0-100 point scale.

3.3. FY2012 API Scoring Process

The FY2012 scoring process incorporates the Interior's guidance into the previous API scoring methodology to address all assets in the portfolio. To the extent possible, the Survey used information available, and decisions previously made to help gain efficiencies and recognize the effort put forth by executive stakeholders into the FY2005 process for the current API scoring process. In FY2005, the Survey was not able to score all assets in the portfolio. The FY2012 API scoring process is an effort the Survey performed between October and December of 2011. The Survey used modeling for the FY2012 scoring process to provide an API score to the assets in the Survey's real property portfolio. The Survey provided seven Investment Review Board (IRB) members with the opportunity to provide input on the API scoring process, including criteria and criteria weights, through interviews.

3.3.1. Select and Weigh API Criteria

Based on the input from the IRB interviewees, the first two steps outlined in the Interior's API scoring methodology (i.e., select criteria and weigh criteria) did not change for the rescoring process. The Survey reassessed whether the Mission Dependency criteria, which represents 80% of the total score, still accurately portrays how assets serve the Survey's mission. A majority of the IRB members indicated the criteria and weights developed in FY2005 were appropriate for the current FY2012 asset scoring process. A few IRB members suggested that the Survey should adjust the weights slightly given changes in the Survey's mission and economic factors; see Section 3.4.1.1 – Step One – Adjust API Criteria and Weights for additional information.

Given the IRB interview responses and effort put forth in FY2005 to identify and weigh the API criteria, the Survey did not change the criteria and weights for the FY2012 process. In addition, adjusting weights slightly, as suggested by some IRB members, did not materially affect the outcome of the API score ranges. **Figure 3.5** provides an overview of the mission dependency criteria and associated weights.

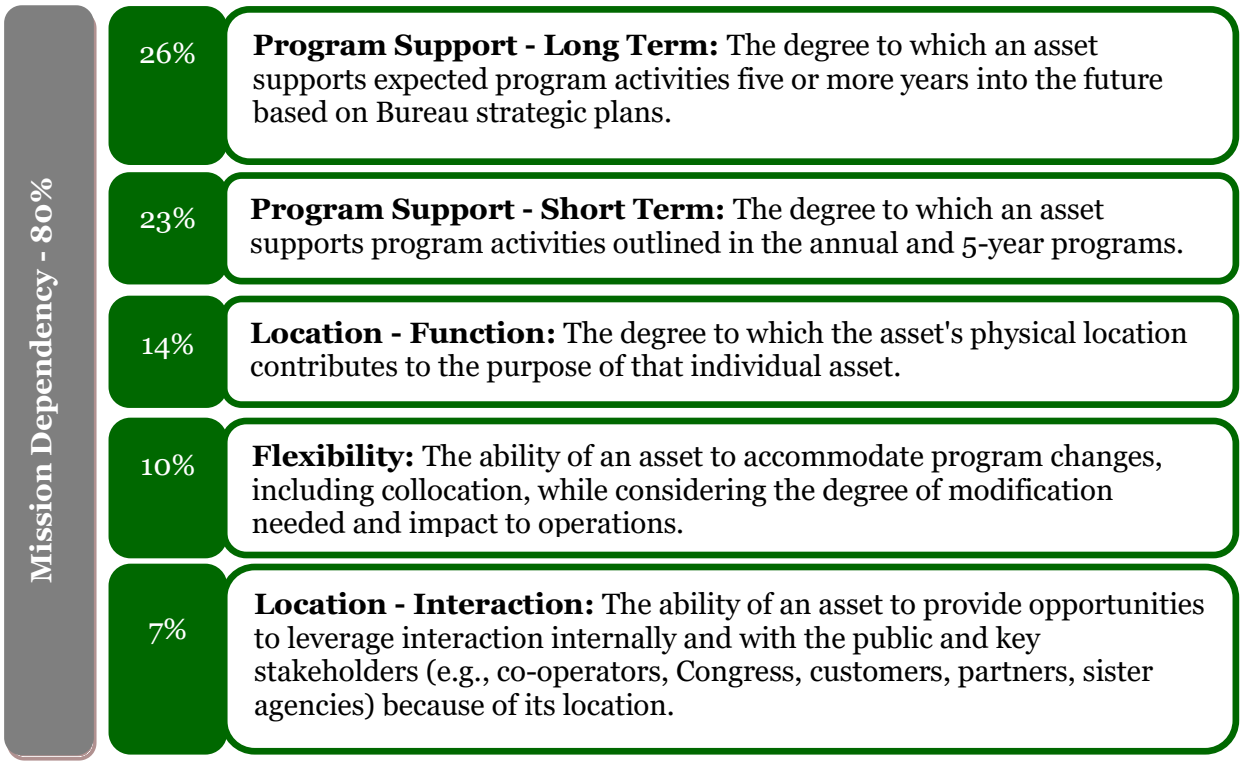

Figure 3.5. The Survey's Mission Dependency Criteria

3.3.2. Score Assets

The Survey developed a two-step process to score the real property portfolio. Rather than implementing an asset-by-asset approach to scoring the portfolio, the Survey used historical data and modeling to assign API scores, based on the asset's main usage type. This process placed fewer burdens, such as the level of effort and time-commitment on executives, as well as staff at the facility level. The Survey scored the complete real property portfolio, totaling 1,184 assets.

The Survey first categorized assets into ten groups (e.g., buildings, land), then categorized the assets by main usage type (e.g., research lab, pond). To identify appropriate API score ranges, the Survey scored each main usage type against the criteria. Appendix A - API Criteria Scoring Options provides a summary of the scoring options for each criterion and Appendix B - API Scoring Criteria Questions provides the scores for each main usage type. **Figure 3.6** provides an overview of the asset categories and score ranges.

Category	Number of Assets	API Score Range	Examples
Buildings – Laboratories (labs), Offices, and Industrial	437	50-95	Labs, Offices
Buildings - Other	276	23-60	Hospital, Warehouse, Dormitories
Vessels	8	55-60	Research Vessels
Land	74	55-70	Wilderness Area, R&D
Utility System	103	30-45	Generators, Electrical Distribution Systems
R&D (non-lab)	62	55-65	Ponds, Streams, Wetlands
Navigation	4	30-35	Radio Site
Harbor & Port	5	35-45	Piers, Docks
Storage	25	20-30	Sheds, Fuel Tanks
Other	9	10-45	Water Runoff Control, Wells, Iron Intake Pipe
Structures	181	1-20	Signs, Roads, Bridges

Figure 3.6. API Categories and Score Ranges

After identifying API scores for each asset category type, the Survey identified ranges of scores to assign assets within each main usage type. For example, "Industrial Office Buildings" received an API range of 50-70; however, the range of scores for the asset category, "Buildings," is 23-95. The large spread is due to the number and different uses of assets defined as a “Building.” The Survey also used the FY2005 API score averages for Mission Dependency to verify the scores and ranges were appropriate and in line with the previous process. Developing a range of asset scores reduced the time it took the Survey to perform the initial API asset scoring. This allowed the Survey to further

prioritize assets within main usage types and will assist with scoring in the future. For more detail on scoring ranges, see Appendix C - Asset Main Usage Type API Ranges.

Figure 3.7 illustrates the asset category ranges relative to one another. The API score ranges are for control purposes and are not binding. For future scoring efforts, the ranges help identify where specific asset types should fall in comparison to one another and help prevent bias or inappropriately scoring assets higher than others. In addition, it provides guidance for stakeholders to identify how assets should rank in comparison to another and decreases the level of effort for initial scoring. In some cases, assets may score higher, or lower, than their identified API score range due to their unique purpose.

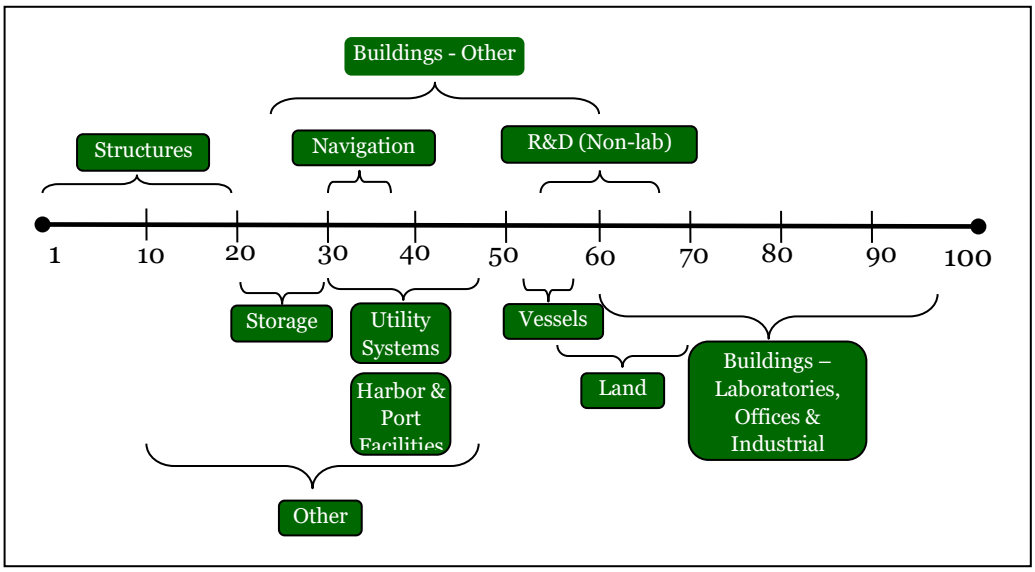

Figure 3.7. API Score Categories

Following the identification of ranges, the Survey used the available FY2005 API scores to scale assets within main usage type ranges. Only a portion of API scores (approximately 66% of the API scores) were available and matched to the current real property portfolio. Assets with FY2005 API scores were scaled to fit in the identified API score ranges. Assets without FY2005 API scores were given the average API score of the associated main usage type. Information beyond main usage type (e.g., science mission performed at facility) was not available and not used to assess an asset's API score.[13] See Appendix D - Updated FY2012 API Scores for the list of API scores for the Survey's real property portfolio.

3.3.3. API Score Confirmation

The Facilities Management Team briefed the IRB on the API scoring guidance and FY2012 scoring process in a February 2012 IRB meeting. For the FY2012 scoring process, the IRB had the opportunity to verify and adjust API scores and ranges, as well as confirm the process for implementing a more robust API scoring process. Confirming

[13] Available asset information (e.g., utilization rates, location, and personnel) does not identify if an asset is critical to the Survey's mission.

the API score ranges should help set guidelines on how the Survey performs scoring assets going forward and should help stakeholders identify outliers in API scores. API score ranges also provide a starting point for the Survey to begin the API scoring process in the future. **Figure 3.8** provides a comparison of the average API score for FY2005 and FY2012, by main usage type. As only a portion of the assets received scores in FY2005, the figure below only compares API scores provided to buildings and vessels.

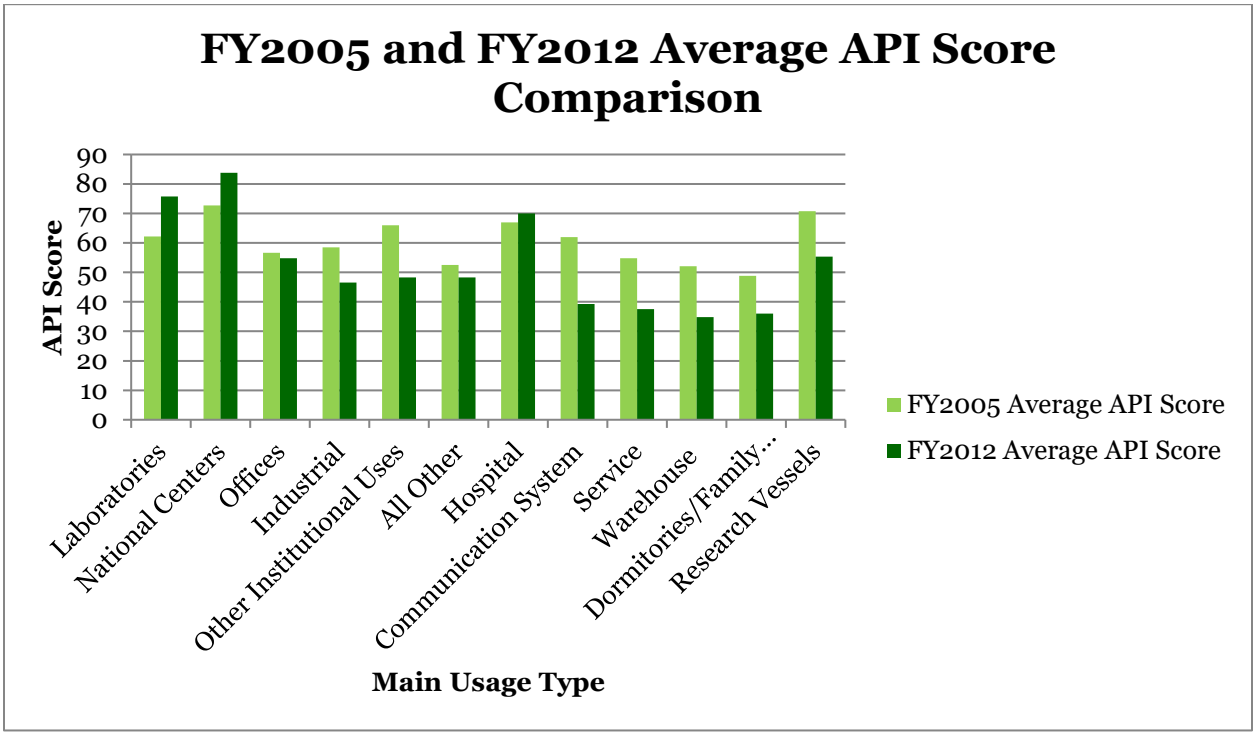

Figure 3.8. FY2005 and FY2012 Average API Score Comparison

3.4. Considerations for Future API Scoring Process

Given increasing budget constraints, decreasing or constant DM funding, and an increasing DM backlog, it is important for the Survey to employ a sustainable, transparent, and repeatable process for prioritizing assets. The following sections detail two considerations – enhancing the API scoring process to solidify asset prioritization and leveraging an API scoring tool— for future API scoring based on interviews with IRB members and an analysis of the current and past scoring processes.

3.4.1. Consideration One - Enhance API Scoring Process to Solidify Asset Prioritization

IRB members stressed the importance of accurate API scores as the Survey has seen an increase in the cost of facilities without an increase in DM funding. For the FY2012 API update, the Survey opted to score assets based on their main usage types and identify range controls for future scoring exercises. This process is sustainable; however, it is not robust and does not provide complete prioritization of assets within the real property

portfolio. The FY2012 scoring process provided an API score to all assets, but due to the lack of asset-specific information, the process does not incorporate asset details that may move an asset out of a given scoring range. The Survey can enhance the API scoring process by reassessing the API criteria and weights, establishing an approval process, and analyzing the API scores. Details outlining how to enhance the API scoring process are described in the following sections.

3.4.1.1. *Step One – Adjust API Criteria and Weights*

For future scoring exercises, the Survey should conduct a session with IRB members and other applicable stakeholders to reassess the API criteria weights so the weights accurately reflect the importance of the criteria. IRB members agreed that the Mission Dependency criteria accurately assessed how an asset relates to the Survey's mission, but suggested reassessing the associated weights. With decreasing budgets, the IRB emphasized the topic of collocation and flexibility when assessing how well an asset contributes to the Survey's mission, which may not have been as important in FY2005.

In addition to reweighing criteria, the majority of IRB members indicated there is little distinction between the "Program Support - Long Term" and "Program Support - Short Term" criteria. IRB members suggested either differentiating between the two criteria, or combining the two criteria into an "Overall Program Support" criterion.

Several stakeholders expressed concern that the “Substitutability” portion of the API score did not differ from the “Location – Interaction” or “Flexibility” criterion of Mission Dependency. Although Asset Substitutability is an API component required by the Interior, the Survey should clarify the definition and provide more robust examples of the Substitutability criterion. Updating the criteria and weights should be adjusted for future scoring exercises to more accurately portray how asset scores relate to the Survey's mission.

In addition to adjusting the API criteria and weights, several IRB members suggested that it would be beneficial to see assets scored at a business entity level (i.e., campus level). In order to score at that level, the Survey should consider having Facility Managers and/or Science Center Managers rank assets in their location. REx would then rank business entities, or campuses, in their area based on an entity’s criticality to the mission. For the future rescoring process, the Survey should consider asset dependency (e.g., assets that rely on one another to perform programs) when applying API scores. In order to determine dependencies, Facility Managers should establish associations between assets.

3.4.1.2. *Step Two – Establish an API Score Approval Process*

To facilitate a transparent and unbiased API scoring process, the Survey should employ a tiered scoring and approval process.[14] A majority of the IRB members identified that an approval process would be beneficial for future asset scoring as it would help normalize scores, reduce time spent scoring assets, and help enable scoring of the complete real property portfolio. In IRB interviews, members noted some buildings may

[14] Appendix E – Future API Scoring Process provides detailed actions and a process flow chart of the approval process.

have been disproportionately scored high compared to similar buildings, or had multiple buildings serving different purposes within a campus with the same API scores. The Department's API guidance suggests the following organizational hierarchy for validating API scores:

- Self validation at the field or facility level;
- Validation at Bureau state or regional office level; and
- Random validation at the Bureau level.

Figure 3.9 illustrates the Department's organizational hierarchy for validating API scores.

Figure 3.9. The Department's Suggested Organizational Hierarchy

The IRB members suggested a scoring approval level similar to the organizational hierarchy approval stages as outlined in the API Guidance. The Interior's organizational hierarchy serves as a backbone to the IRB's suggested approval process. To help eliminate bias or other objectives, initial scoring should be done with a small group of stakeholders who have appropriate knowledge about facilities and the Survey's mission. At a minimum, these groups should include Facility Managers and Science Center Directors. The groups could utilize Survey-provided fact sheets detailing information about the assets to score the assets appropriately.

Following initial scoring, REx can verify and validate API scores, and make adjustments to scores, as necessary. Similar to the initial scoring process, a small group of staff representing REx, with knowledge of the assets, should assist in verifying scores. This group includes a Regional Management Officer (RMO), Program Officer, and two to three employees knowledgeable about the region's assets. Although tedious and potentially time consuming, IRB members stressed the importance of involving middle-level management, including briefing REx on the scoring process and which assets they will assess. REx involvement in the process is also essential to reducing bias and effectively prioritizing assets within main usage types. For example, a REx should be better adept to identify how buildings within the same usage type should be prioritized against each other and identify if scores are disproportionately high or low.

Following the approval by the REx, the IRB confirms the API scores are appropriate across the Survey, for both regional and Science areas. The Facilities Investment Review Sub-committee (FIRS) members should assist the IRB in validating API scores. IRB members should have the opportunity to raise questions or send scores back to REx for reconsideration before finalizing the scores. This process can drive more consistent scores for similar assets across the Survey as they receive approval at each level.

Figure 3.10 illustrates the recommended approval process in line with the Interior's suggested organizational hierarchy.

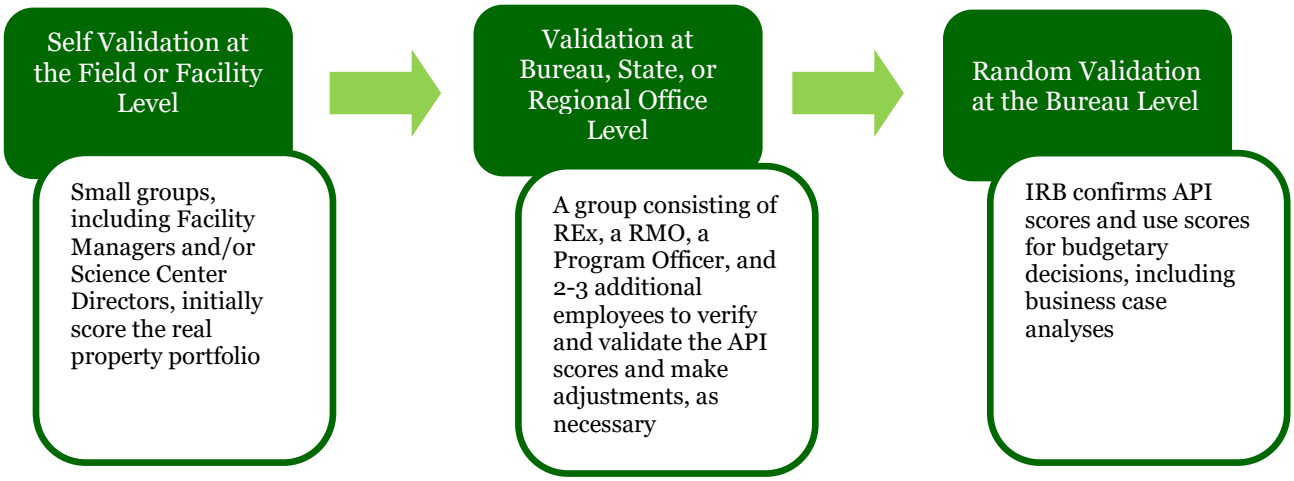

Figure 3.10. Recommended API Score Approval Process

Appendix E – Future API Scoring Process displays a process flowchart and detailed instructions outlining the decision steps for the approval process. This API scoring flowchart is beneficial for understanding the necessary approval levels and the controls that should take place to help ensure asset information and scores are complete, accurate, and valid.

3.4.1.3. *Step Three – Analyze API Scores*

For future asset scoring, the Survey should perform an in-depth sensitivity analysis on its complete asset portfolio. The validation of API scores should take place at organization hierarchy levels, and the IRB should provide the final approval for the list of API scores. An in-depth analysis should be performed following the validation of API scores by the IRB. In particular, the Survey should consider having FMB perform the following comparisons:

- Top 25 Assets based on API Scores- The Survey should assess the top 25 assets based on API scores from the FY2005 and FY2012 processes. This comparison may provide insight into some of the most valuable assets within the portfolio. If an asset is on the top 25 list in FY2005 and not in FY2012, the Survey should identify why the asset is no longer as important to the mission. In addition, the Survey should complete this analysis for each future rescoring process.
- Owned and GSA provided Assets - Approximately 70% of the square footage of the Survey's real property portfolio is comprised of GSA provided assets; therefore, the Survey should compare API scores of owned and GSA provided assets. For owned assets, the Survey can use the API scores to identify the most mission critical assets. For leased assets, the Survey can use API scores to identify the most mission critical assets and make sure they are kept in the asset portfolio

by renewing the leases or agreements, if applicable.

- Main Usage Analysis - The Survey should perform an analysis on asset scores within main usage types, taking into account areas, mission areas, and national responsibilities. This analysis may help identify if bias occurred during scoring or if the Survey ranked assets disproportionately low compared to other regions or assets.

The analyses described above are typical activities for agencies with mature real property portfolio management functions. In-depth analysis of the complete profile may help the Survey better manage its asset portfolio and align funding/resource allocations with the most valued assets.

3.4.2. Consideration Two - Leverage API Scoring Tool

To maintain a sustainable and transparent scoring process, the Survey should leverage an API scoring tool. IRB members confirmed the importance of leveraging an API scoring tool to enable a more repeatable and defensible scoring process by documenting decisions and providing a source to collect information from stakeholders across the country. In addition, a scoring tool improves the efficiencies and serves as a data repository. In order to leverage an API scoring tool, the Survey should identify tool requirements, evaluate tools in the marketplace, and identify the appropriate use for a tool. At the most recent IRB meeting, the Facilities Management Team briefed the IRB on the proposed future API scoring process and implementation plan. The IRB indicated the Facilities Management Team should proceed with developing an implementation timeline.

3.4.2.1. *Step One – Identify Tool Requirements*

The Survey asked IRB members to provide their opinion about an API scoring tool. A majority of the members indicated that they understood the importance of developing a sustainable API scoring process and agreed that a tool could improve future API scoring iterations. During the interviews, IRB members indicated several important features a tool should have the ability to perform, including the following:

- Access to real-time information;
- Access to API scoring history detailing past decisions;
- Ability for REx to change asset scores if the purpose of an asset changes;
- Access to asset-specific information (e.g., FCI, location, purpose);
- Allow users to easily and quickly compare up-to-date API scores for assets within identified categories (e.g., main usage types, regions, sciences); and
- Ability to use API scores beyond assessing DMCI funding (e.g., making decisions about lease expirations).

Although the IRB member discussion led the Survey to an initial list of requirements, the list is not exhaustive. The Survey should identify additional requirements, as applicable, and validate the requirements list is complete. In addition, the Survey should

consider the size of their portfolio when evaluating tools in the marketplace to identify the cost and benefit of procuring a tool.

3.4.2.2. *Step Two – Evaluate Tools in the Marketplace*

The Survey assessed different tool options, including external decision making tools, in-house developed web-based systems, and non web-based tools. Employing a scoring tool can allow the Survey to update API scores on a regular basis, in a geographically-dispersed and more informed manner, more rapidly and with an audit trail of decisions made. It may also help allocate the Survey's limited DMCI funding to the most mission critical assets and help identify assets for disposal or sale. Although not an exhaustive list, the Survey should consider assessing the following scoring tools: Commercial off the Shelf (COTS) decision making software, National Park Service (NPS) online tool, and Microsoft® Excel.

3.4.2.2.1. Decision Making Software

The Survey should consider existing software solutions that provide a process for group decision-making using effective methodologies. This type of software solution provides a method for quickly collecting and assessing qualitative information from multiple data sources and stakeholders. Leveraging a decision making software tool may help provide a more transparent and streamlined method for assessing criteria weights and scoring assets. Many of these tools provide users with the ability to identify anomalies in data or decisions and adjust and perform sensitivity analysis on weights.

One of the most important features of decision making software is the ability to run detailed reports and document decisions in the tool. For example, if a particular structure is mission critical, the Survey could score the structure outside of the main usage type range and document the reasoning. In addition, meeting with stakeholders to weigh qualitative criteria without a form of decision making software can result in "group think" and little documentation on the decision making process. For example, when discussing the FY2005 process with IRB members, very few Survey stakeholders could remember why decisions were made or who made them because they were not in the meeting or could not recall. A tool that helps facilitate these discussions, as well as aids in achieving buy-in and consensus around the decisions, may help provide transparency and sustainability to the API scoring process.

A decision making software tool would allow the Survey to weigh stakeholders' decisions, or votes, more heavily than others and allows for the Survey to enforce an approval process. Decision making software allows for the ability to assess API scores beyond the use of DMCI funding. This type of software provides the ability to input other factors (e.g., plant replacement value (PRV), utilization, condition index) to help identify projects to fund to improve a given portfolio. Although a decision making tool would likely need to be purchased outside of the Survey, the standup time for these systems is often substantially shorter than in-house systems. Many decision support software providers offer support and routine maintenance. Although decision making software addresses most of the requirements the IRB identified during interviews, the tool requires a large upfront investment. Along with an initial investment, decision

making software often has annual renewal fees and maintenance requirements. With a large upfront investment and the likelihood of yearly renewal fees, using decision making software would be the most costly of the three identified scoring tools. **Figure 3.11** shows a preliminary assessment of how decision making software tools may meet the requirements suggested by the IRB.

Requirement	Requirement Addressed?
Access to real-time information	Addresses
Access to API scoring history detailing past decisions	Addresses
Ability for REx to change asset scores if the purpose of an asset changes	Addresses
Access to asset-specific information	Addresses
Allow users to easily and quickly compare up-to-date API scores for assets within identified categories	Addresses
Ability to assess DMCI funding beyond the use of API scores	Somewhat Addresses

Figure 3.11. Decision Making Software Assessment of Requirements

3.4.2.2.2. National Park Service Online Tool

Bureaus are required to use FBMS and may modify Maximo to address asset management needs. NPS developed an HTML-based online API scoring tool in 2004. NPS developed the tool to reduce the challenges of using Microsoft Excel for asset scoring and to help reduce bias when users score an asset. An NPS information technology (IT) staff team developed the tool over a six month period and continues to provide maintenance and support to the system. NPS uses the tool to assign API scores for over 70,000 assets. Facility staff at each national park are able to access the system and score assets specific to their park. NPS does not allocate DM funding across the Bureau, but rather each park distributes DM funding. The Survey should consider this aspect of the tool as the Survey manages DMCI funding at the Bureau-level.

When NPS deployed the tool, each national park scored assets one by one during working sessions. Once the national parks score assets, the park's Superintendent and regional stakeholders approve the scores and submit to the NPS National Office in Washington, D.C. before final approval. NPS has not issued follow up data calls since the system was deployed, and users are instructed to update API scores as needed.

The web-based tool enables users to make changes when needed and NPS to run basic reports to view API scores. While the system is flexible and is low-maintenance, the tool does not run analytical reports or identify whether assets are ranked higher or lower than similar assts. The tool also does not enable users to facilitate a group weighting session; the tool is designed to score assets using a predetermined questionnaire and previously developed weights. In terms of cost, the Survey would not have an initial up-front investment, but would make an investment in terms of tailoring the system to fit the Survey's needs and the time an employee would spend to maintain the system. **Figure 3.12** shows a preliminary assessment of how the NPS scoring tool may meet the requirements suggested by the IRB.

Requirement	Requirement Addressed?
Access to real-time information	Addresses
Access to API scoring history detailing past decisions	Somewhat Addresses
Ability for REx to change asset scores if the purpose of an asset changes	Addresses
Access to asset-specific information	Does not Address
Allow users to easily and quickly compare up-to-date API scores for assets within identified categories	Somewhat Addresses
Ability to assess DMCI funding beyond the use of API scores	Does not Address

Figure 3.12. National Park Service Tool Assessment of Requirements

3.4.2.2.3. Microsoft® Excel

The Survey currently uses Excel to score its real property portfolio. While Excel is user-friendly, there are many associated challenges with using this software to score assets. Excel does not allow the user to keep track of asset transactions, but the conditional formatting function would help identify scoring changes or "flag" assets that are given a disproportionately high or low API score. Although relatively user-friendly, Excel does not show live up-to-date information. To update information, a staff member would be responsible for manually updating the spreadsheet as appropriate stakeholders provide changes.

Using Excel would be the least costly choice of the three tools identified. Using Excel would require an investment in terms of time spent developing a template for scoring, collecting information, and maintaining the spreadsheet. Although using Excel means no additional cost and little required upkeep, there is a risk that input data may contain errors because users manually input data. It is difficult to model decision making criteria in Excel, including the adjustment of weights, and requires stakeholders to maintain the system. Additionally, using Excel requires compilation of responses from multiple end users, which is time consuming and increases the risk of error. **Figure 3.13** shows a preliminary assessment of how Microsoft Excel may meet the requirements suggested by the IRB.

Requirement	Requirement Addressed?
Access to real-time information	Does not Address
Access to API scoring history detailing past decisions	Somewhat Addresses
Ability for REx to change asset scores if the purpose of an asset changes	Somewhat Addresses
Access to asset-specific information	Does not Address
Allow users to easily and quickly compare up-to-date API scores for assets within identified categories	Somewhat Addresses
Ability to assess DMCI funding beyond the use of API scores	Does not Address

Figure 3.13. Microsoft Excel Assessment of Requirements

3.4.2.3. *Step Three – Identify and Establish Use of an Appropriate Tool*

After evaluating the benefits and drawbacks of potential API scoring tools, the Survey should identify and establish use of the most appropriate tool across the Survey. Discussions with the IRB members indicated the IRB would be an appropriate party to select the tool that best fits the Survey's needs. Once the Survey selects a tool, they should decide how to manage it. This would include identifying who should be in charge of maintaining the system, selecting the appropriate users, and assigning user roles within the tool.

Before scoring assets, the Survey should also compile information for each identified asset in the real property portfolio. In most cases, only the name and location of the asset are available and information in the real property portfolio does not provide detail on the purpose of the asset. To accurately score the portfolio, the following information should be provided for each asset: a brief description, science program performed, special characteristics, and mission areas being supported. Following the compilation of information, the Survey should develop a training plan for users that outlines the tool's purpose and instructions on scoring and approval processes. Lastly, it is important for the Survey to identify proper controls over the use of the tool. These controls should help provide integrity of data and the API scores resulting from the tool.

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4.0 Baseline Performance Metric Improvement Plan and Benchmarking Matrix

4.1. Background

Benchmarking the Survey's real property portfolio to the portfolio of similar organizations provides a baseline to identify gaps in data, as well as anomalies and trends. Analyzing the results presents potential opportunities for cost savings. The following facts provide a high level context of the condition and cost to operate the Survey's real property assets (e.g., land, buildings, and structures) based on FY2011 data:

- Annual operating costs of owned and otherwise managed assets totalled $19.9 million
- Annual rent costs totaled $85.6 million
- Average asset condition index of buildings and structures is 83%[15]
- The current DM backlog is an estimated $75 million, or approximately 18% of the owned real property portfolio

Benchmarking real property performance data against external entities assists in identifying areas where assets are not performing to the standards of other similar organizations. The Survey can evaluate these trends to assess whether cost reduction is achievable for leases or changes in asset management strategies. In addition, benchmarking allows the Survey to set an acceptable range for outliers and evaluate assets with performance data outside the acceptable range for disposal or consolidation.

[15] See Appendix G - Performance Metric Definitions for definition.

4.1.1. Performance Metric Goals & Requirements

The existence of FRPP data at the Survey, and across Federal agencies, creates the opportunity for a consistent comparison of the performance of the Survey's real property portfolio against itself from year-to-year, as well as against other agencies that report FRPP data for similar asset types.

4.1.1.1. *Performance Metric Goals*

The goal of a performance metric benchmarking exercise is to identify data outliers that suggest the need or opportunity for improvement. The analysis may result in a performance metric improvement plan. Additionally, analyzing the data allows stakeholders to identify better management strategies for future acquisition, tracking, and accessing of timely real property performance data.

As illustrated in **Figure 4.1**, reliable performance data can help stakeholders identify opportunities for improvement by analyzing past performance from the portfolio level down to the individual project level. For example, at the real estate (RE) portfolio level, reliable lease cost data can help a stakeholder identify rents that are higher than the market average. At the facilities management level, tracking reliable utilization rate data can help stakeholders identify opportunities for collocation or consolidation. Finally, at the project level, reliable condition index and mission dependency index data informs stakeholders of the importance of an asset to the mission, and the current condition of the asset. Used together these metrics can help stakeholders prioritize available DMCI funding.

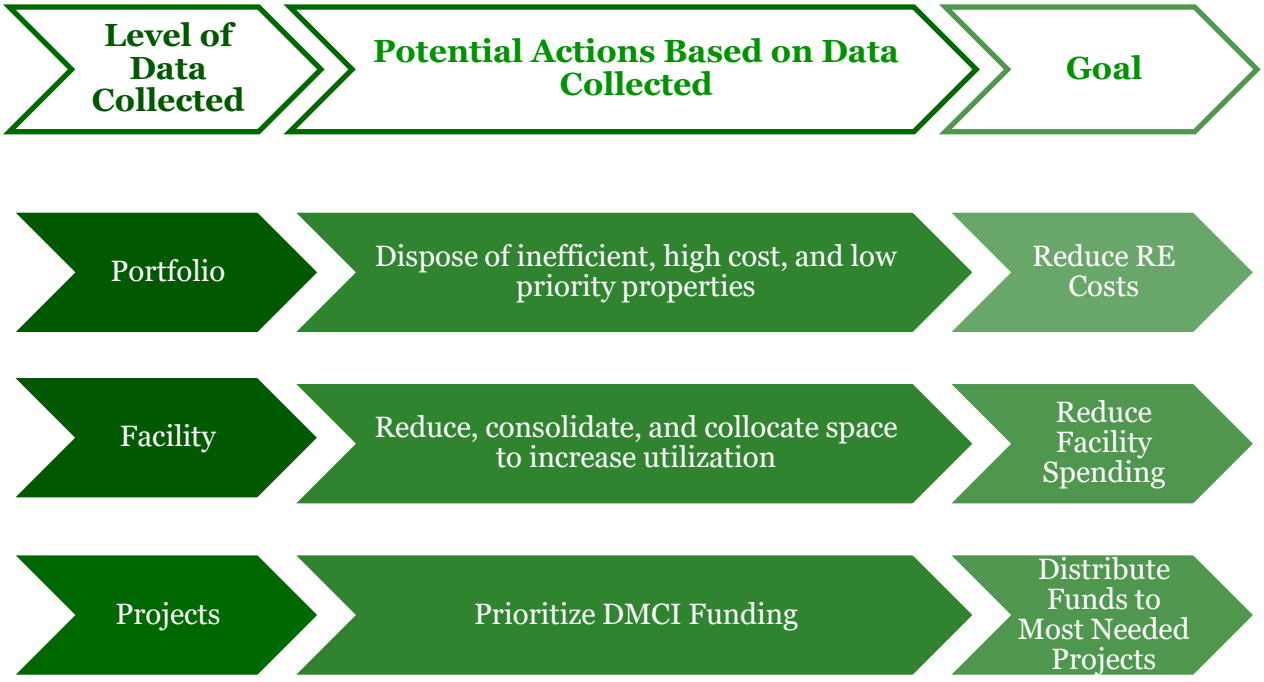


Figure 4.1. Performance Metric Goals Diagram

4.1.1.2. *Performance Metric Requirements*

The proper identification of performance metrics and the use of those performance metrics is critical to the success of a real property assessment. **Figure 4.2** provides the principal performance metric requirements used for benchmarking.

Performance Metric Requirement	Examples
Measure more than financial aspects	• Quality/productivity • Business risks • Social responsibility and sustainability
Provide benchmarks, targets, and progress measures for portfolio optimization	• Target utilization rate • Energy efficiency measures
Focus on organizational needs	• To be determined depending on organization
Use consistent units of measure	• Owned versus leased properties • RSF vs. Usable Square Footage (USF) vs. GSF
Establish targets	• Consistent with organizational strategy (Yes/No) • Within appropriate range when compared across entities

Figure 4.2. Performance Metric Requirements

4.2. Performance Metric Benchmarking & Analysis

The goal of this performance metric benchmarking and analysis exercise is to identify anomalies or trends that suggest potential improvements. The analysis results in the performance metric improvement plan. The Survey aligned the FY2011 AMP with FRPC principles to help guide the Survey's asset management planning. One of the key principles FRPC adopted is the use of public and commercial benchmarks and standard industry practices. As shown in **Figure 4.2**, an organization should choose benchmark performance metrics that focus on the organization's needs, and provide consistency with its real property strategy. The asset metrics chosen for the benchmarking exercise are the result of conversations with key Survey stakeholders and interviews with external organizations to identify and define critical asset metrics. **Figure 4.3** shows the activities used to drive the performance metric benchmarking and analysis.

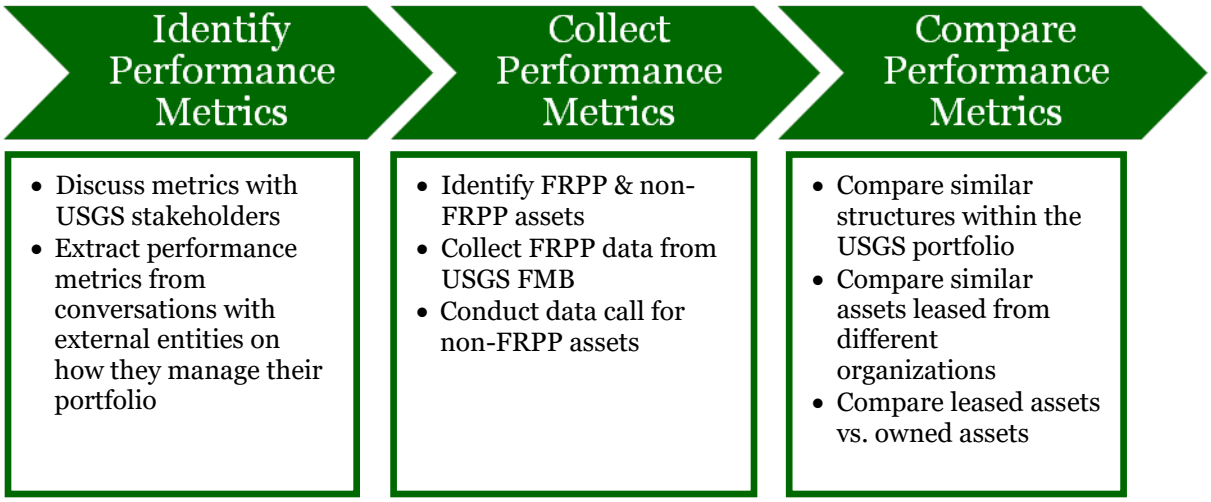


Figure 4.3. Benchmarking Methodology

4.2.1. Identify Performance Metrics

In this first step - Identify Performance Metrics - the Survey approved metrics fell into one of two categories, FRPP reported metrics or non-FRPP reported metrics. While FRPP reported data and metrics are the most readily available, Survey stakeholders wanted to examine the complete portfolio. By examining the entire portfolio, stakeholders believed they could identify opportunities and/or inefficiencies the Survey may not discover through examining FRPP data and metrics alone. Therefore, the benchmarking exercise includes additional non-FRPP metrics, derived from both the Survey's stakeholders as well as interviews conducted with external agencies. See Section 4.2.3.2 - Performance Metrics for the list of benchmarking performance metrics.

4.2.2. Collect Performance Metrics

The following are challenges which limited the Survey's collection of quality real property data:

- **Challenge 1**: FRPC changed, and will most likely continue to change, the reporting criteria without providing adequate time for agencies to collect and report the new information. This leads to rapid data calls that tend to provide lesser quality data. While this problem may lessen as FRPC finalizes metrics, the Survey and the Interior may benefit from collaborating to address the addition of data fields in FBMS. The Survey is dependent on the Interior to update FRPP fields within FBMS. Currently, when FRPC requires additional fields, FMB has to send manual data calls, which can be time consuming, to the three BMS offices.
- **Challenge 2:** The recent FBMS implementation and consolidation of real property databases presents difficulties as users need time to learn the new system. A large percentage of data entry issues are a result of the validations in FBMS which prevent the three BMS offices from entering certain incorrect

information. While there is short-term confusion regarding the correct values for certain fields, many of these issues should disappear as the users' level of experience with FBMS increases.

- **Challenge 3:** Lack of automation in the collection of asset performance data creates the opportunity for human error. In addition, individuals responsible for managing assets may report inflated mission dependency index scores or percent of space utilization to avoid scrutiny of their asset management. Data automation removes the human involvement.

4.2.3. Compare Performance Metrics

The following section presents a comparison of the FRPP reported data against other agencies and industry standards using Survey approved performance metrics. Section 4.2.3.1- Portfolio Asset Mix describes the asset mix of the Survey's portfolio and the Benchmark Candidates. Section 4.2.3.2 - Performance Metrics outlines the performance metrics used to evaluate the portfolios and the availability of those metrics at the Survey and each of the benchmarked organizations. The remaining sub-sections provide data analysis and accompanying observations on the Survey's portfolio, as well as the performance of its portfolio against the benchmarked organizations. The Survey's portfolio consists of 1,184 assets. Of the 1,184 assets, the Survey reported information on 748 assets to FRPP for the FY2011 FRPP submission. This benchmarking exercise focuses on those 748 FRPP reported assets, as well as 183 GSA provided assets.

FMB conducted a data call on the non-FRPP reported assets (i.e., GSA provided assets and assets valued at less than $5,000) to include in the report. BMS offices were not previously required to submit data on many of these assets; therefore, the information was not readily available for the data call. FMB collects data on many of the metrics for GSA provided space on an annual basis that they were able to contribute to this report to fill the gaps from the data call. Therefore, GSA provided assets are included in the report, while assets valued at less than $5,000 are not.

4.2.3.1. *Portfolio Asset Mix*

Figure 4.4 provides an overview of the 748 FRPP reported assets and 183 GSA provided assets. Within each asset type is a mix of owned, leased, and otherwise managed assets. Otherwise managed assets may be state-government owned or a grant/cooperative agreement.

Real Property Type	Legal Interest	Count	Percentage
Building	Owned	276	29.65%
	Leased	86	9.24%
	Otherwise Managed*	31	3.33%
	GSA provided	180	19.33%
Building Sub-Total		573	61.55%

Real Property Type	Legal Interest	Count	Percentage
Structures	Owned	291	31.26%
	Leased	4	0.43%
	Otherwise Managed	1	0.11%
	GSA provided	3	0.32%
Structures Sub-Total		299	32.12%
Land	Owned	30	3.22%
	Leased	26	2.79%
	Otherwise Managed	3	0.32%
Land Sub-Total		59	6.33%
Total		**931**	**100%**

Figure 4.4. FY2011 Survey FRPP reported Assets

Figure 4.5 illustrates the breakdown of real property type and legal interest of the Survey's FY2011 portfolio analyzed in this report.

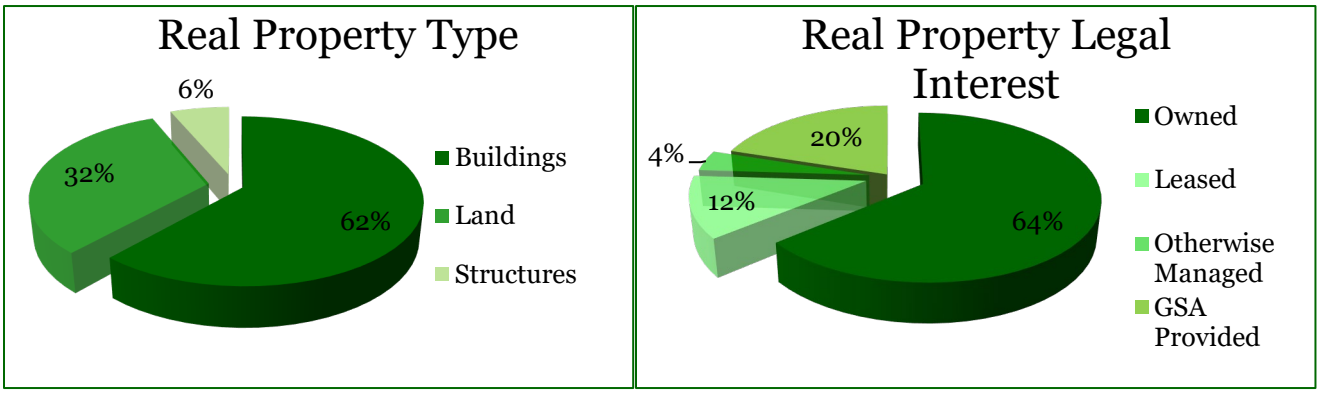


Figure 4.5. FY2011 FRPP reported Assets Type and Legal Interest

In addition, the Survey is divided into eight REx areas throughout the United States, Puerto Rico, and Guam. This analysis compares REx areas to illustrate how the assets in different REx areas are performing in relation to one another. The REx areas and their asset breakdown are illustrated in **Figure 4.6**.

REx Area	REx Area Acronym	Number of Assets	Percent
Alaska	AKR	37	3.97%
Midwest	MWR	224	24.06%
Northeast	NER	231	24.81%
Northwest	NWR	86	9.24%
Rocky Mountain	RMR	39	4.19%
South Central	SCR	94	10.10%
Southeast	SER	88	9.45%
Southwest	SWR	132	14.18%
Total		**931**	**100%**

Figure 4.6. REx Areas

Figure 4.7 illustrates the number of buildings over 2,000 SF in each REx area. For this analysis and the remainder of this report, owned, otherwise managed, and leased space is measured in GSF while GSA provided space is measured in RSF.

REx Area	REx Area Acronym	Number of Buildings over 2,000 SF	Percent
Alaska	AKR	12	4.05%
Midwest	MWR	57	19.26%
Northeast	NER	46	15.54%
Northwest	NWR	41	13.89%
Rocky Mountain	RMR	26	8.78%
South Central	SCR	44	14.87%
Southeast	SER	22	7.43%
Southwest	SWR	48	16.22%
Total		**296**	**100%**

Figure 4.7. Buildings over 2,000 SF

Asset Mix - Benchmark Candidates

Benchmark Candidates - This benchmarking exercise compares the Survey's FY2011 portfolio to the Survey's FY2009 and FY2010 FRPP submissions, two other Federal entities (i.e., Benchmark Candidate A, Benchmark Candidate B), and the *FY2009 GSA FRPC Summary Report*. *The FY2009 GSA FRPC Summary Report* provides an overview of trends identified in the FY2009 FRPP data. As of January 2012, GSA had yet to produce the FY2010 summary report.

In addition, this exercise includes information gained through interviews with three entities, Benchmark Candidates B, C, and D. For interview notes, see Appendix G - Benchmark Candidate Interviews.

Benchmark Candidate	Asset Mix
FY2010 USGS FRPP Submission Selected for data trending.	743 assets (mix of buildings, land, and structures - owned, otherwise managed, and leased assets).
FY2009 USGS FRPP Submission Selected for data trending.	754 assets (mix of buildings, land, and structures - owned, otherwise managed, and leased assets).
Benchmark Candidate A (FY2010 FRPP Submission) Selected for its science mission.	6,640 owned buildings. See **Figure 4.8** for a more comprehensive overview.
Benchmark Candidate B (FY2011 Data) Selected for its asset mix.	62,697 total assets (mix of buildings, land, and structures - owned, leased, and GSA provided assets). See **Figure 4.8** for a more comprehensive overview.
Benchmark Candidate C Selected for science mission.	Unable to provide benchmarking data; view Appendix G - Benchmark Candidate Interviews for information gathering interview results.
Benchmark Candidate D Private organization selected for progressive use of data automation technology.	Unable to provide benchmarking data; view Appendix G - Benchmark Candidate Interviews for information gathering interview results.
FY2009 GSA FRPC Summary Report Selected for government-wide comparison.	24 Federal agencies submitted FRPP data on a total of 429,000 Federal assets, encompassing 3.34 billion SF, in FY2009.

Figure 4.8 below shows the asset mix of Benchmark Candidates A and B. Understanding the Benchmark Candidates' asset mix can provide insight as to why their assets are performing a certain way relative to the Survey's portfolio. As shown below, Candidate A's portfolio is comprised of owned buildings, where Candidate B has owned, leased, and GSA provided assets. The majority of Candidate B's assets are owned structures.

Real Property Type	Legal Interest	Candidate A		Candidate B	
		Number	Percentage	Number	Percentage
Building	Owned	6,640	100.0%	9,868	15.74%
	Leased	0	0.0%	1,094	1.74%
	GSA Provided	0	0.0%	41	0.075%
Building Sub-Total		6,640	100.0%	11,003	17.55%
Land	Owned	0	0.0%	1,405	2.24%
	Leased	0	0.0%	5,631	8.98%
	GSA Provided	0	0.0%	6	0.01%
Land Sub-Total		0	0.0%	7,042	11.23%
Structures	Owned	0	0.0%	44,428	70.86%
	Leased	0	0.0%	223	0.36%
	GSA Provided	0	0.0%	1	0.00%
Structures Sub-Total		0	0.0%	44,652	71.22%
Total		**6,640**	**100%**	**62,697**	**100%**

Figure 4.8. Benchmark Candidate Asset Mix

4.2.3.2. *Performance Metrics*

Benchmark Performance Metrics

The following are the Survey approved performance metrics analyzed for the benchmarking exercise. As shown below, some of these metrics are FRPP metrics, while others are non-FRPP Metrics. Metrics are listed below in the order evaluated for this benchmarking exercise with usage, size, and value metrics first, and then operating metrics, condition metrics, utilization metrics, and mission dependency. (For a list of metric definitions, see Appendix H - Performance Metric Definitions).

- **FRPP Metrics**
  - Real Property Use
  - Legal Interest
  - Size
  - PRV
  - Annual Operating Costs - owned assets only
  - Lease Costs
    - Annual O&M Paid by Renter - leased assets only
    - Annual Net Rent to Lessor - leased assets only
  - Condition Index
  - Number of Federal Employees
  - Number of Contractor Employees
  - Number of Federal Teleworking Employees
  - Percent of Space Utilization
  - Status Indicator
  - Total Annual British Thermal Unit (BTU) Consumption
  - Mission Dependency
- **Non-FRPP Metrics**
  - Lease Costs per SF
  - Operating Efficiency
  - Cost of Repair Needs
  - Cost of Repair Needs per SF
  - USF
  - Number of Non-Federal, Non-Contractor Employees
  - Utilization Rate

Figure 4.9 illustrates the availability of each performance metric from the Benchmark Candidates, "X" denotes that the data was available and is included in this report.

	FY2011 USGS	FY2010 USGS	FY2009 USGS	Candidate A	Candidate B	GSA FRPC FY2009 Report
Real Property Use	X	X	X	X	X	
Legal Interest	X	X	X	X	X	X
Size/PRV	X	X	X	X	X	
Annual Operating Costs [Owned Assets]	X	X	X	X	X	X
Lease Costs	X	X	X		X	
Lease Costs per SF	X	X	X		X	X
Operating Efficiency	X	X	X	X	X	
Condition Metrics (Condition Index, Cost of Repair Needs)	X	X	X	X	X	
USF						
Number of Federal Employees/ Number of Contractor Employees	X				X	
Number of Federal Teleworking Employees/ Number of Non-Federal, Non-Contractor Employees						
Utilization Metrics (Utilization Rate/Percent of Space Utilization)	X				X	
Status Indicator	X	X	X	X	X	
Total Annual BTU Consumption						
Mission Dependency	X	X	X	X	X	

Figure 4.9. Benchmark Performance Metrics Availability

4.2.3.3. *Value Metric*

Value - FY2011 USGS Portfolio	
Definition: Value, also known as PRV or Functional Replacement Value (FRV) is the amount required to construct an asset of similar size in the same location.	
FRPC Requirement: Value is required for both owned and leased buildings and structures. Assets must have a value greater than zero.	
Count: 666[16] (active or excess buildings and structures)	Mean: $786,302
Minimum: $5,000	Maximum: $54,050,642

Figure 4.10 illustrates the value over GSF for Survey buildings.

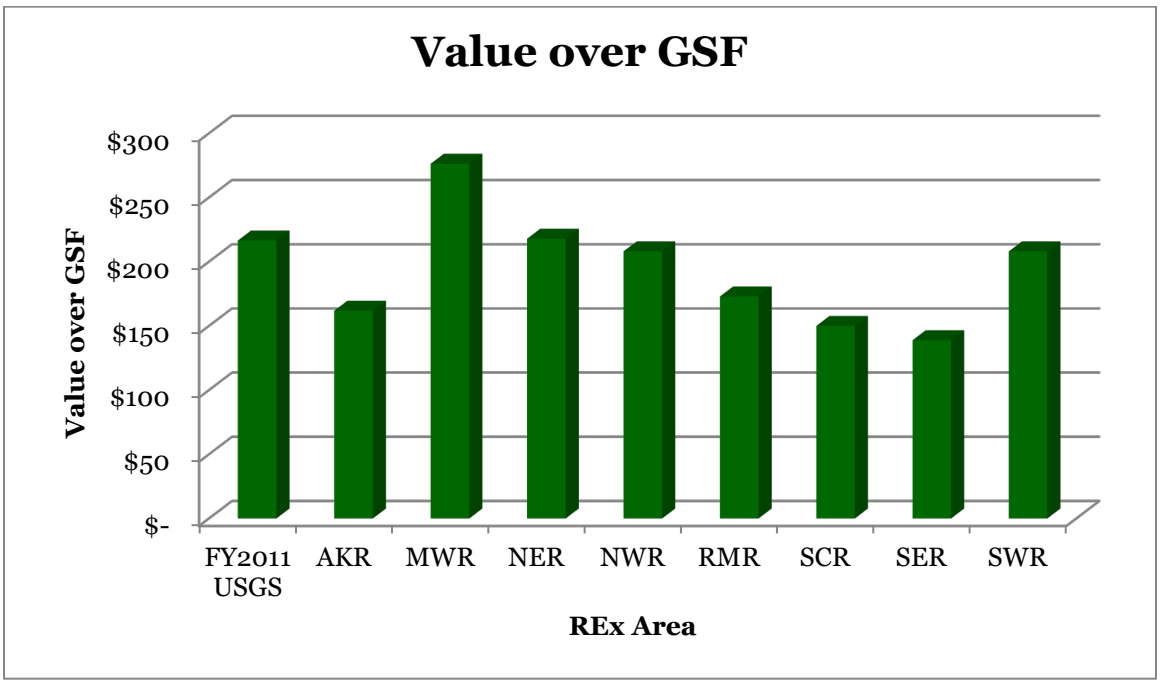


Figure 4.10. Survey Value over GSF

[16] USGS removed two buildings with reported values of $1 from the analysis.

Observations: USGS Value

- Value data is not available for the GSA provided assets.
- Approximately 45% of Survey buildings and structures are valued below $100,000.
- The Survey has 74 buildings and structures valued at more than $1 million.
- Buildings in the Midwest REx area are valued at approximately 22% more than the national average. This is due to several small generator and well house buildings in Wisconsin that have large, costly, infrastructure built into a small space. The value over GSF of buildings in Wisconsin is $558 per GSF. If Wisconsin is removed from the analysis, the value over GSF of buildings in the Midwest REx area would be $181 per GSF, instead of the current $276 per GSF.
- Buildings in the South Central REx area are valued at approximately 36% less than the national average. The South Central REx area has many boat sheds, boat storage units, boat barns, and trailers, which are generally less expensive assets.

Value - Benchmark Candidates

Figure 4.11 shows how the Survey's FY2011 buildings and structures compare Candidates A and B, as well as prior year data.

		FY2011 USGS	FY2010 USGS	FY2009 USGS	Candidate A	Candidate B
Buildings	Count	372	385	393	6,640	10,956
	Minimum	$5,000	$3,604	$3,604	$5,000	$0 (69 assets)
	Maximum	$54,050,642	$54,050,642	$54,050,642	$61,504,124	$186,559,421
	Mean	$1,136,630	$1,124,188	$1,113,567	$467,124	$499,431
Structures	Count	294	300	297	0	44,636
	Minimum	$5,050	$146	$146	N/A	$0 (38 assets)
	Maximum	$16,000,000	$16,000,000	$16,000,000	N/A	$109,646,368
	Mean	$343,031	$340,485	$338,435	N/A	$59,559
Overall	Count	666	685	690	6,640	55,592
	Minimum	$5,000	$146	$146	$5,000	$0 (107 assets)
	Maximum	$54,050,642	$54,050,642	$54,050,642	$61,504,124	$186,559,421
	Mean	$786,302	$780,960	$779,923	$467,124	$499,431

Figure 4.11. Benchmark Candidates PRV

Observations: Benchmark Candidates Value

- The mean value of the Survey's assets increased over the past three years for both buildings and structures, indicating the Survey is either acquiring higher dollar assets, disposing of their lower dollar assets, or the values are increasing with inflation.
- While the highest valued assets at Candidates A and B are greater than the highest valued asset at the Survey, in general, high-valued assets comprise a greater portion of the Survey's portfolio.
- The Survey does not report on structures valued below $5,000. The Interior does not require its Bureaus to report to FRPP on assets valued at less than $5,000. This threshold is set by the Interior, not GSA or OMB.

4.2.3.4. *Operations Metrics*

Annual Operating Costs - FY2011 USGS Portfolio
Definition: Annual operating costs consist of recurring maintenance and repair costs, utilities, cleaning and/or janitorial costs, and roads/ground expenses. In FY2010, annual operating costs for leased assets included annual rent costs. However, in FY2011 FRPC divided lease costs into two categories: annual net rent to lessor and annual operating and maintenance costs. Therefore, this section only assesses annual operating costs of owned assets and otherwise managed assets. The section to follow assesses lease costs. In addition, this section assesses operating costs by space type. The charts below compare annual operating costs of office, lab, warehouse, and other building space.
FRPC Requirement - Annual operating costs must be greater than or equal to zero. Required for buildings, land, and structures.

Figure 4.12 examines the current operating costs presented in the Survey's portfolio.

	Count	Minimum	Maximum	Mean	Median	Operating Cost per GSF (Buildings Only)
FY2011 USGS - Owned/ Otherwise Managed	625	$0.00 (67 assets)	$3,662,806	$29,886	$1,500	$10.45

Figure 4.12. FY2011 Survey FRPP reported Assets Operating Costs

Figures 4.13 illustrate the annual operating costs per GSF for owned and otherwise managed buildings in the eight REx areas versus the overall FY2011 portfolio.

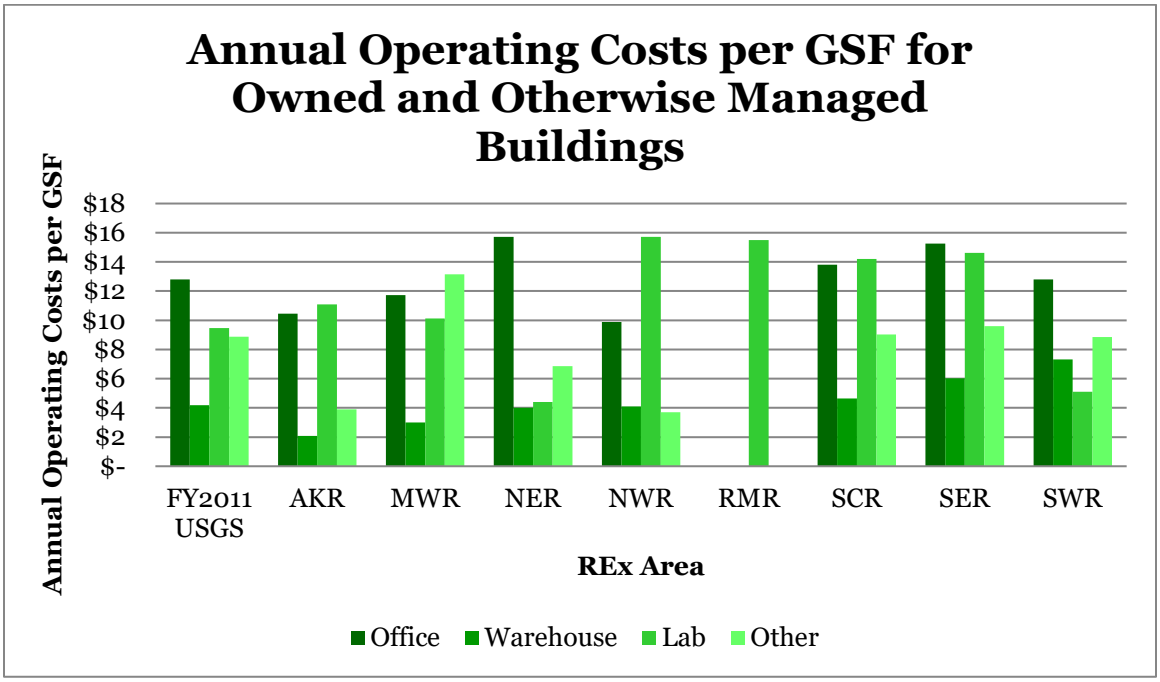


Figure 4.13. FY2011 Annual Operating Costs per GSF for Owned and Otherwise Managed Buildings

Observations: USGS Annual Operating Costs

- When performing a cost breakdown of the Survey's assets by space type, office space has the greatest overall annual operating costs per GSF for owned and otherwise managed buildings. This is expected, as the Survey houses full time personnel in office space but not in lab or warehouse space. Personnel use electricity, and technology, which have high associated operating costs. However, when examining annual operating costs per GSF by REx area, the Alaska REx area, Northwest REx area, and South Central REx area have greater lab operating costs than office operating costs.
  - The Alaska REx area has one owned or otherwise managed office, the "ORCA" building in Anchorage, Alaska. Operating the ORCA building costs the Survey $10.45 per GSF, which is lower than the national average for office space. In addition, the three "Barrow Observatories" in Alaska have high operating costs, ranging from $35.94 to $44.47 per GSF to operate. Without the Barrow Observatories, the Survey's operating costs of owned and leased labs in Alaska would be $2.79 per GSF, instead of $11.08.
  - The Northwest REx area has both higher lab operating costs than office space operating costs, and the most expensive owned and otherwise managed labs to operate. This is due to the location of the labs and offices in the Northwest. The Northwest labs are located in Washington, while, their offices are located in Washington and Idaho. The labs in Washington, generally, with the exception of one, are less expensive to operate than the offices in Washington.

However, they are more expensive to operate than the offices in Idaho. This is in line with the *Department of Defense (DOD) Pricing Guide*, where the sustainment rate of assets in Idaho is .92 of the national average, while assets in Washington are 1.09 of the national average.

  - The South Central REx area has higher lab operating costs than office operating costs of its owned and otherwise managed assets. This is due to the types of office and lab space in the South Central REx area. The lab space in Montana makes up 91% of the GSF, or 99% of the cost of labs in the South Central REx area. Amongst those labs are biology labs which can be expensive to operate. Additionally, many of the offices in the South Central REx area are trailers which cost less to operate than a conventional building.

- The annual operating costs per GSF of owned office buildings in the Northeast REx area are significantly higher than the rest of the REx areas. The Northeast REx area has office space in Massachusetts, Maryland, New York, and West Virginia. Buildings in Massachusetts and New York comprise of 79% of the GSF and 91% of the operating costs of the Northeast REx area. According to the *DOD Pricing Guide,* the sustainment rate of assets in Massachusetts is 1.23 of the national average, and the sustainment rate of assets in New York is 1.08 of the national average. Therefore, the office buildings in the Northeast REx area are in costly locations.
- The Northwest, Rocky Mountain, South Central, and Southeast REx areas have higher lab operating costs than the national average. The Survey has a total of 67 owned or otherwise managed labs, therefore one building can have a large impact on the totals, with the potential to skew the averages.
  - In the Northwest REx area, one large lab, the "WFRC - Dry Lab Building #415," affected the area's average. The building is 21,664 GSF, 45% of the area's lab space, and costs $22.17 per GSF to operate, or 64% of the area's lab operating costs.
  - The Rocky Mountain REx area has several small labs. The "Boulder Magnetic Observatory - Variations Building" is only 545 GSF but makes up 30% of the Survey's owned and otherwise managed lab space in the area. Costing $23.74 per GSF, the building makes up 46% of the Survey's owned and otherwise managed lab operating costs.
  - As noted above, the South Central REx area has several expensive biology labs in Montana.
  - In the Southeast REx area, one large lab, the "FISC - GVL - Main Research and Development Building," impacted the area's average. The building is 21,000 GSF, 93% of the area's lab space, and costs $14.97 per GSF to operate, or 95% of the area's lab operating costs.

Annual Operating Costs - Benchmark Candidates

Figure 4.14 compares the annual operating costs of owned buildings at each of the Benchmark Candidates, by space type.

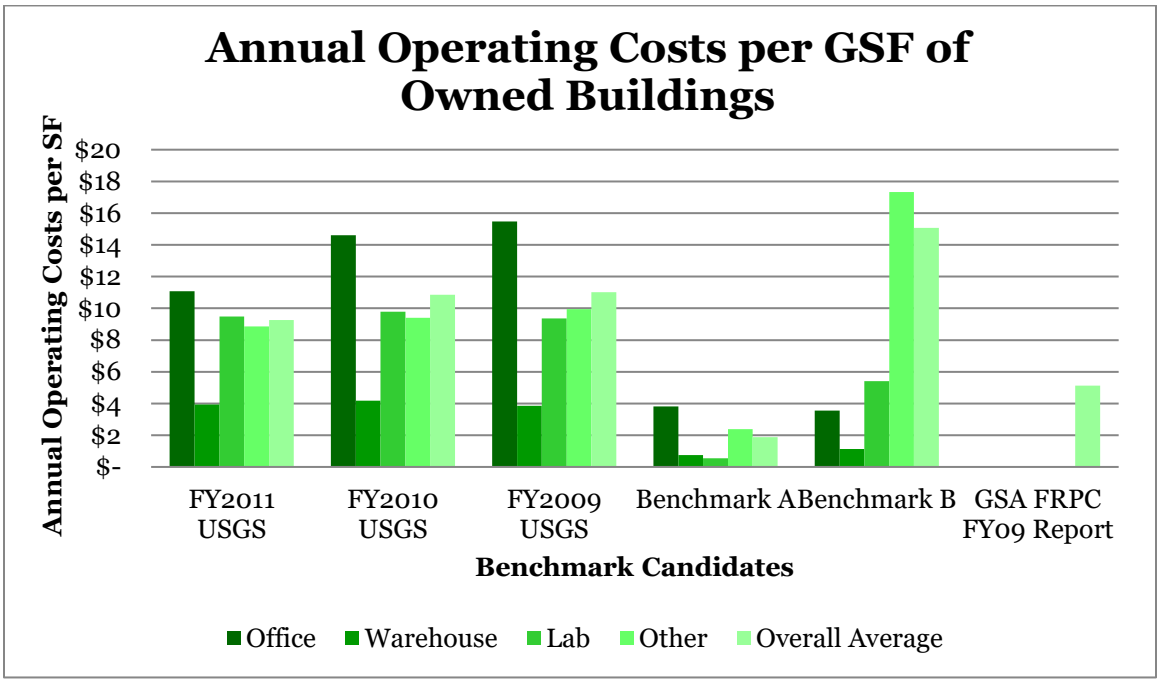


Figure 4.14. Annual Operating Costs of Owned Assets per GSF

Observations: Benchmark Candidates Annual Operating Costs

- Annual operating costs at the Survey have decreased over the past three years.
- Annual operating costs per GSF at the Survey are significantly higher than those at Benchmark Candidate A and the national Federal average in FY2009.
- Operating costs at the Survey are significantly higher than the office, warehouse, and lab buildings at Benchmark B. However, Benchmark B has other buildings with high operating costs, causing its total operating costs to be greater than the Survey's.

Lease Costs - FY2011 USGS Portfolio

Definition: In prior years, lease costs were reflected in the annual operating costs of leased assets, and the value of leased assets. In FY2011, FRPC added lease costs as a new metric consisting of annual operating and maintenance costs, and annual net rent to lessor.

FRPC Requirement - Lease costs must be greater than or equal to zero.

Figure 4.15 illustrates the lease costs per GSF at USGS for leased buildings, based on REx area.

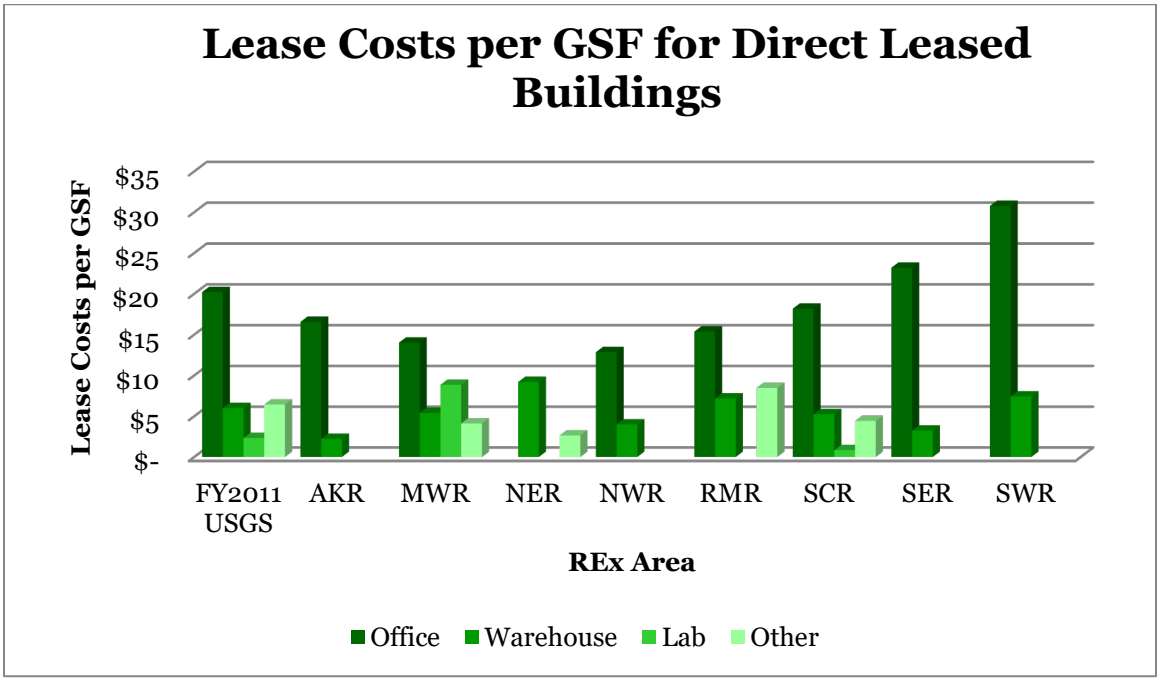


Figure 4.15. Lease Costs per GSF for USGS Leased Buildings

The Survey's total FY2011 FRPP reported asset portfolio includes 72 active leased buildings. Therefore, many of the regional figures shown in **Figure 4.15** include data from a very limited number of buildings.

Figure 4.16 illustrates the lease costs per RSF at USGS for GSA provided buildings, by REx area.

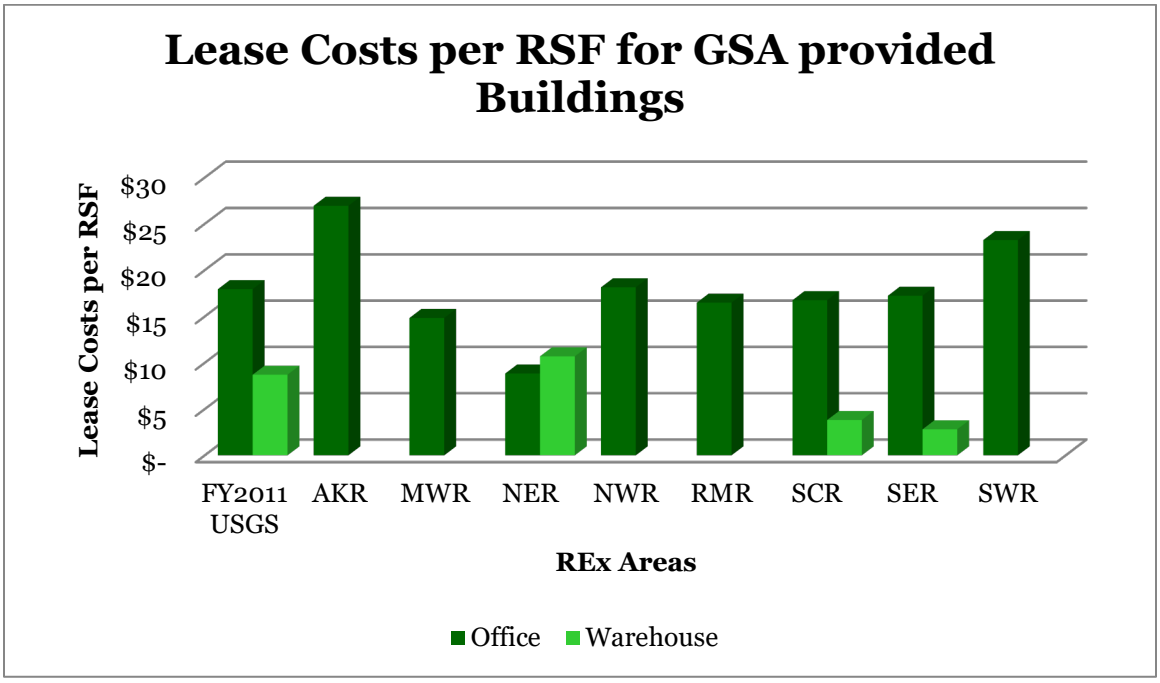


Figure 4.16. Lease Costs per RSF for GSA Provided Buildings

Observations: USGS Lease Costs

- The majority of lease costs at the Survey are captured in the annual net rent to lessor category of lease costs.
- Direct lease costs of offices in the Southwest REx area are significantly higher than the national average of the Survey's portfolio for direct leased assets. This is due to two offices in California that make up 75.8% of the GSF, and 85.2% of the lease costs of offices in the area. The two offices are the "Modoc Hall - CSUS" and "Pasadena Seismology Office - GD."
- Direct lease costs of offices in the Northwest REx area are significantly lower than the national average. The Northwest REx area has five offices located in Idaho, Montana, and Wyoming. Offices in Montana and Wyoming cost between $9.81 and $12.61 per GSF to lease.
- Lease costs per RSF of GSA provided assets in the Alaska REx area are significantly higher than the national average. Five of the eight GSA provided buildings in Alaska have higher lease costs per GSF than the national average. This may be due to the high costs to construct an asset in Alaska. According to the DoD Pricing Guide, the average cost to construct an asset in Alaska is 1.78 times the national average. The only state where it is more expensive to construct an asset, according to the DoD Pricing Guide, is Hawaii. This is also in line with the Survey's portfolio, where the average lease cost per RSF of GSA provided assets is greatest in Hawaii, resulting in high lease costs per RSF for the Southwest REx

area.

- Warehouses in the Northeast REx area have the highest lease costs per SF for both direct leased and GSA provided warehouses. This is in line with industry standards, where the Northeast is one of the most expensive areas to rent commercial warehouse space, due to the expensive cost of land.

Lease Costs - Benchmark Candidates

Figure 4.17 compares the total lease costs per SF for the Survey buildings to that of the Benchmark Candidates. For the purposes of this exercise, the FY2011 and Candidate B portfolios reflect "lease costs" as they were reported to FRPP in 2011 per FRPC guidance. The prior year figures are the "annual operating costs" of lease assets reported in prior years, which included rent.

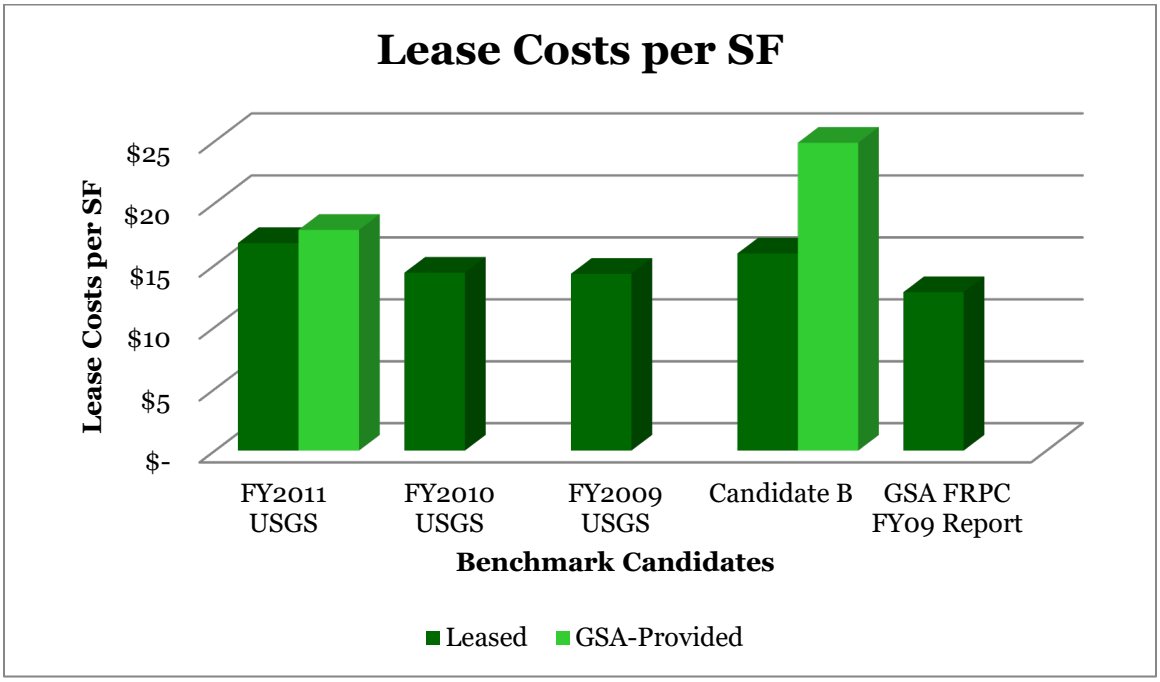


Figure 4.17. Benchmark Candidate Lease Costs per SF

Observations: Candidates Lease Costs per SF

- The Survey's lease costs per SF increased approximately 14% over the past year, and total lease costs increased 21.5% from $4.51 million to $5.75 million. However, the total number of leased building decreased from 79 to 72 active assets. This may be due to data quality issues. The Survey reported $5,747,377 in lease costs encompassing 342,987 GSF for its FY2011 FRPP submission. In FY2010, the Survey reported $4,513,490 in lease costs and 314,023 GSF. The Survey disposed of 15 assets in FY2011; the Survey marked 14 "disposed" in the FY2011 submission, and left one asset included in the FY2010 submission off the FY2011 submission. Those 15 assets had lease costs equal to $456,173 in FY2010

and 37, 023 GSF. Additionally, the Survey reported on an additional eight new leased buildings to FRPP in FY2011. The Survey pays $745,875.69 on those eight leases, and they encompass 34,339 GSF of space. However, 31,651 GSF of additional space and $944,184.37 of additional lease costs are not accounted for, unless the Survey added space to its existing direct leases.

- The Survey has higher lease costs per GSF for its direct leases than the other Benchmark Candidates. While Candidate B pays higher lease costs per RSF for its GSA provided assets than the Survey. This may be because the Survey only rents office and warehouse space from GSA, whereas Benchmark B also rents assets of "other institutional uses" and "communication systems."

Operating Efficiency - FY2011 USGS Portfolio	
Definition: Operating Efficiency is a metric used at other Federal agencies to measure the percentage of a building or structure's value spent in annual operating costs each year. In other words, the operating efficiency measures the annual cost to operate the asset over the value of the asset. The operating efficiency is calculated using the following formula:[17] $$Operating\ Efficiency = \left(1 - \frac{Annual\ Operating\ Costs}{Plant\ Replacement\ Value}\right) * 100$$ For leased assets, this formula takes into account total lease costs, not just the operating costs.	
Count: 668 (total active owned, otherwise managed, or direct leased, buildings and structures)	
Minimum: 29.4%[18]	Maximum: 100%
Mean: 96.8%	Median: 98.9%

[17] To have accurate operating efficiency data, the PRV should be updated annually with an inflation factor. The consumer price index (CPI) is an industry standard inflation factor.
[18] The Survey removed six assets showing a negative operating efficiency from this analysis due to higher reported annual operating costs than the building value.

Figure 4.18 provides a comparison of the operating efficiencies at the different REx areas.

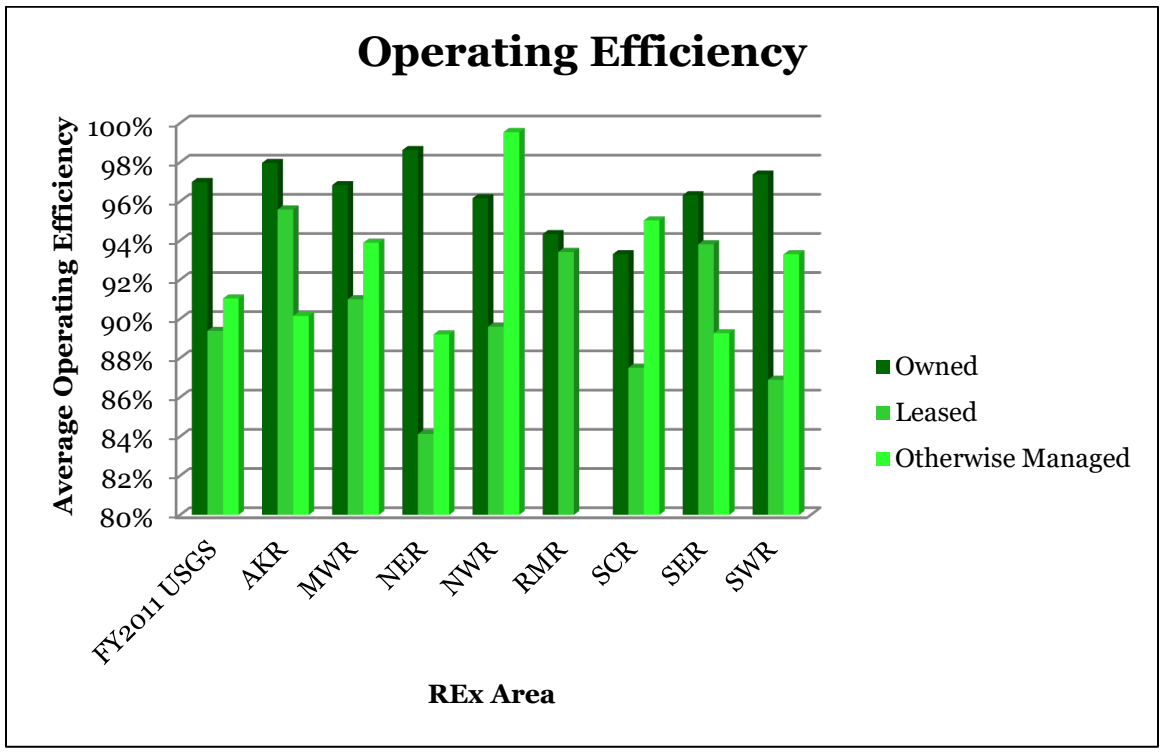


Figure 4.18. FY2011 USGS Operating Efficiency

Observations: USGS Operating Efficiency

- Operating efficiency data is not available for the GSA provided assets as value data is not available.
- Leased assets have a lower operating efficiency than owned and otherwise managed assets because operating efficiency of leased assets takes into account total lease costs, whereas owned and otherwise managed assets are only scored based on annual operating costs. Total lease costs include profit for the landlord captured in the annual net rent to lessor.
- There are a total of 28 otherwise managed buildings and structures so the operating efficiency of the assets at most REx areas are only based on the costs of a few assets, creating a great disparity between the operating efficiency of otherwise managed assets. For example, the chart above shows a very high operating efficiency for otherwise managed assets in the Northwest REx area. However, the Survey only has one otherwise managed asset in the Northwest REx area, "Idaho Falls Field Station." Idaho Falls Field Station has a value of $565,110, but reported only $2,601 for operating costs.
- Leased assets in the Northeast REx area appear to be the least efficient assets, while owned assets in the Northeast REx area appear to be the most efficient assets. This is most likely a data quality issue as the Survey reported $0.00

operating costs on many of their owned assets in New York.

- The South Central REx area has the least efficient owned assets, with an operating efficiency of 93.3%. This is due to the low operating efficiency of several "CERC" assets in Missouri.

Operating Efficiency - Benchmark Candidates

Figure 4.19 shows the operating efficiency at the Survey against those of the other Benchmark Candidates.

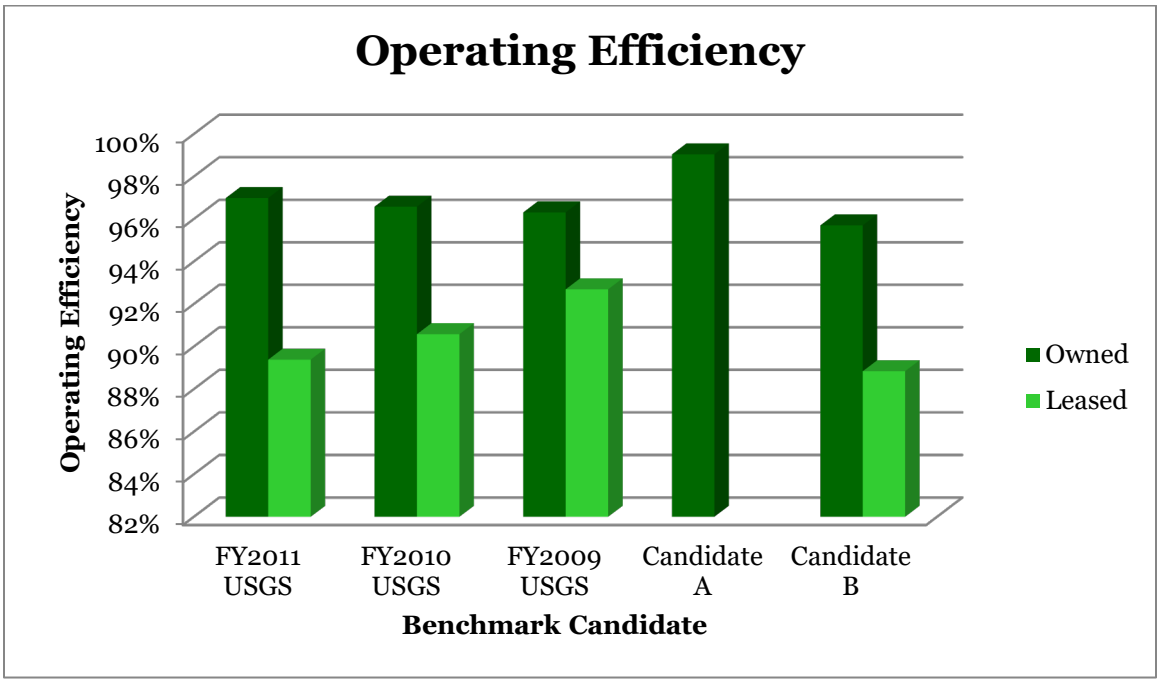


Figure 4.19. Operating Efficiency at Benchmark Candidates

Observations: Benchmark Candidates Operating Efficiency

- The Survey is operating its owned assets more efficiently this year than in prior years, while operating their leased assets less efficiently. This is due to the increased lease costs of the Survey's assets.
- The portfolio of Candidate A, on average, is operating more efficiently than the Survey's portfolio.

4.2.3.5. *Condition Metrics*

Condition Index - FY2011 USGS Portfolio	
Definition: The condition index is a general measure of a building or structure's condition at a specific point in time. The formula to calculate condition index is as follows: $$Condition\ Index = \left(1 - \frac{Cost\ of\ Repair\ Needs}{Plant\ Replacement\ Value}\right) * 100$$ In accordance with the formula, if an asset has no repair needs, the condition index should be 100%. The lower the condition index, the higher the cost of repair needs are as a percentage of the PRV.	
FRPC Requirement: The condition index must be greater than or equal to zero. Agencies should report a condition index on buildings and structures they are responsible for maintaining. Agencies denote that they are responsible for maintaining an asset by selecting "Y" under the "Lease Maintenance Indicator" field. Agencies should not report a condition index on buildings and structures they are not responsible for maintaining, with a "Lease Maintenance Indicator" of "N."	
Count: 594	
Maximum: 100% (203 buildings and structures)	Minimum: 1% (20 buildings and structures)
Mean: 82%	Median: 94%

Figure 4.20 illustrates the condition index of the overall portfolio versus the different REx areas for owned and otherwise managed buildings and structures, as well as leased buildings and structures where the Survey is responsible for the maintenance.

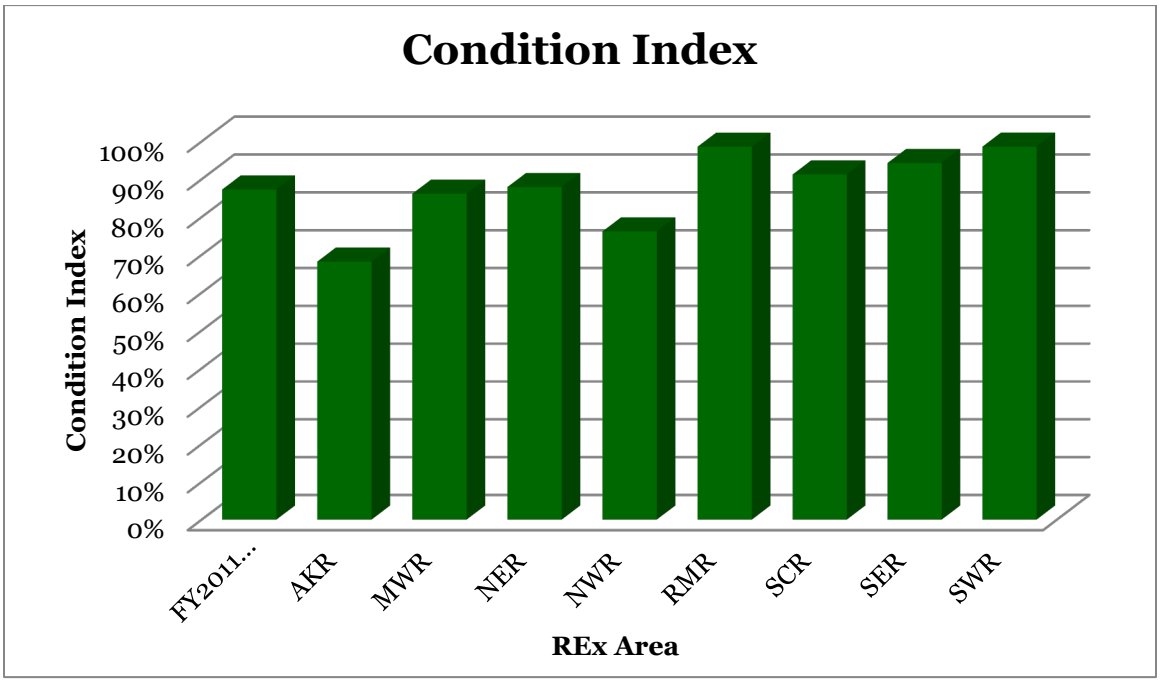


Figure 4.20. FY2011 USGS FRPP reported Assets Condition Index

Observations: USGS Condition Index

- Condition index data is not available for the GSA provided assets as the Survey is not responsible for their repair needs.
- The Survey reported a condition index of 1% for 20 buildings and structures, indicating those buildings and structures have repair needs equal to approximately 99% of the value of the asset.
- The Survey has three owned excess buildings with a condition index of 1%.
- The condition of assets in the Rocky Mountain and Southwest REx areas are better than the other REx areas. This may be due to the small sample size. There are only 10 buildings and structures in the Rocky Mountain REx area, and 18 in the Southwest REx area.
- Although the Alaska REx area and the Northwest REx area have a condition index of approximately 68% and 76%, respectively, these spaces have a minimal impact on the overall Survey condition index as they only comprise about 11% of the portfolio.

Condition Index - Benchmark Candidates

Figure 4.21 provides a breakdown by Benchmark Candidate of the condition index for their buildings, structures, and overall portfolio.

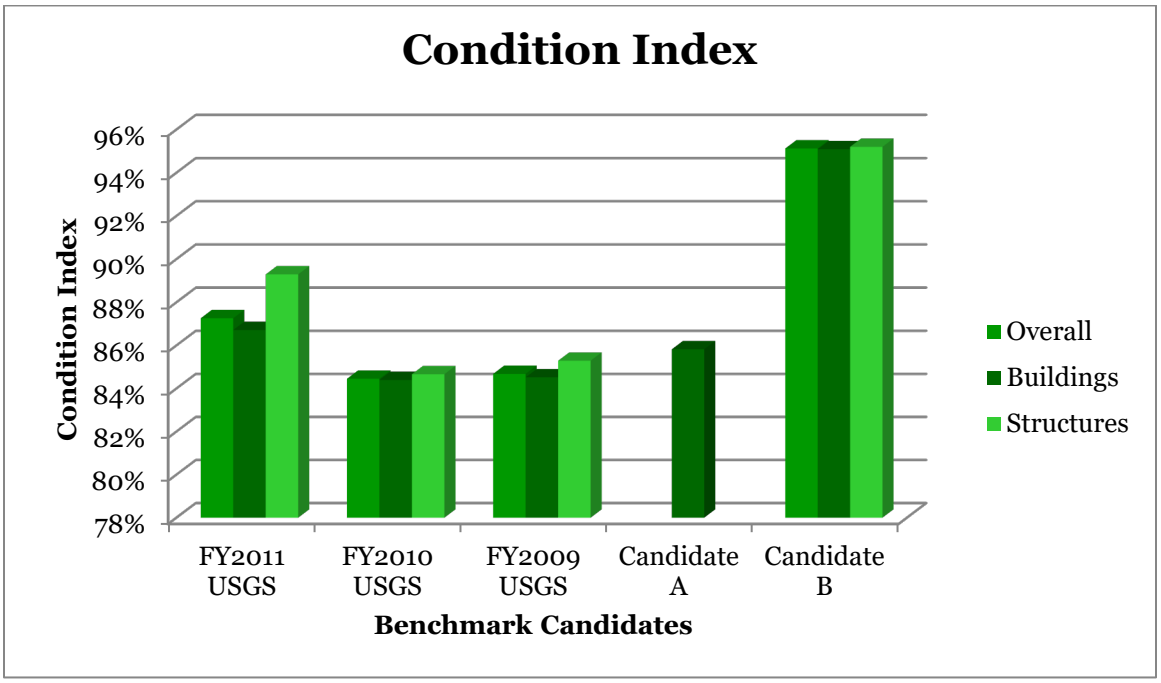


Figure 4.21. Benchmark Candidates Condition Index

Observations: Benchmark Candidates Condition Index

- The Survey increased the condition index of its overall portfolio over the past year; however, it has a lower condition index than Candidate B.
- The improved condition index of the Survey's buildings and structures could be due to the use of ARRA funding to make needed repairs and reduce the DM backlog.

Cost of Repair Needs - FY2011 USGS Portfolio

Definition: The cost of repair needs measures the amount required to restore a constructed asset to a condition substantially equivalent to the originally intended and designed capacity, efficiency, or capability. For this exercise, the cost of repair needs was derived from the condition index. As shown below, condition index is a measure of the cost of repair needs over the PRV.

$$Condition\ Index = \left(1 - \frac{Cost\ of\ Repair\ Needs}{Plant\ Replacement\ Value}\right) * 100$$

Therefore, cost of repair needs can be derived by reversing the formula, as follows:

$$Cost\ of\ Repair\ Needs = \left(1 - \frac{Condition\ Index}{100}\right) * Plant\ Replacement\ Value$$

FRPC Requirement: The cost of repair needs must be greater than or equal to zero.

Count: 592

Maximum: $6,486,077.04	Minimum: $0.00 (207 assets)
Mean: $102,130.00	Median: $6,481.89
Sum: $60,460,962.55	Cost per GSF (buildings only): $29.67

Figure 4.22 illustrates the cost of repair needs per GSF at each of the REx areas.

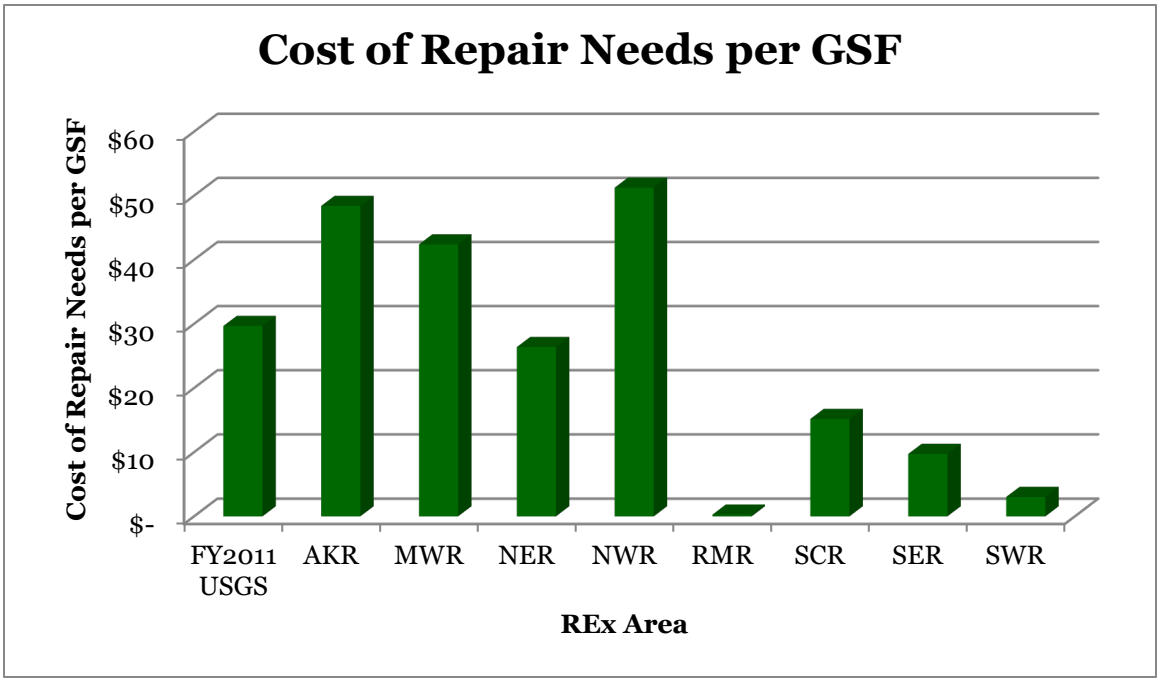


Figure 4.22. FY2011 USGS FRPP reported Assets Cost of Repair Needs per GSF

Observations: USGS Cost of Repair Needs

- Cost of repair needs per SF data is not available for the GSA provided assets since the Survey is not responsible for their repair needs.
- The portfolio has a total cost of repair needs of approximately $60.5 million.
- The cost of repair needs per GSF is higher in the Alaska, Midwest, and Northwest REx area than the overall FRPP reported buildings and structures.
  - The Alaska REx area has five assets with over $100 per GSF in needed repairs. The Survey is disposing of three of those assets at Government Hill. The other two assets located in Barrows and Sitka where the cost to repair an asset is generally higher.
  - The Midwest area has four assets with a very high DM backlog per GSF. The “Eros Security Booth Structure” and the three “UMESC” well houses. The three well houses have large pumps that are expensive to fix when they require repair.
  - The Northwest REx area has several assets with a high DM backlog per GSF. The Survey assesses and scores DM projects based on several criteria outlined by the Interior in its *Attachment G* guidance. The highest ranking of those criteria is the critical health and safety of the project. Several projects in Washington are included in the Survey's five year DM plan, which will reduce the DM backlog per GSF of assets in the Northwest REx area. However, several other assets in the Northwest have a high DM backlog per GSF that may have scored low in the annual DMCI scoring and ranking process.
- The cost of repair needs per GSF is significantly lower in the Rocky Mountain REx area. This is due to one large building, the "Albuquerque Seismological Lab" requiring $0 of repair needs, and being 94% of the GSF of buildings in the Rocky Mountain REx area. The Albuquerque Seismological Lab is a leased asset, which the Survey is required to repair. The $0 cost to repair estimate may be due to the Survey's focus on repairing its owned assets, rather than leased assets.

Cost of Repair Needs - Benchmark Candidates

Figure 4.23 outlines the cost of repair needs for the Survey against the Benchmark Candidates.

	Count	Minimum	Maximum	Mean	Median	Total Cost of Repair Needs
FY2011 USGS	592	$0 (201 assets)	$6,486,077	$102,130	$6,481	$60,460,962
FY2010 USGS	631	$0 (193 assets)	$7,024,836	$120,588	$8,567	$76,090,993
FY2009 USGS	642	$0 (203 assets)	$7,024,836	$115,715	$7,906	$74,288,997
Candidate A	6,640	$0 (4,399 assets)	$23,915,837	$561,665	$0	$3,099,828,887
Candidate B	62,295	$0 (7,361 assets)	$5,952,482	$6,371	$73	$396,433,844

Figure 4.23. Benchmark Candidates Cost of Repair Needs

Figure 4.24 provides the cost of repair needs per GSF for each Benchmark Candidate.

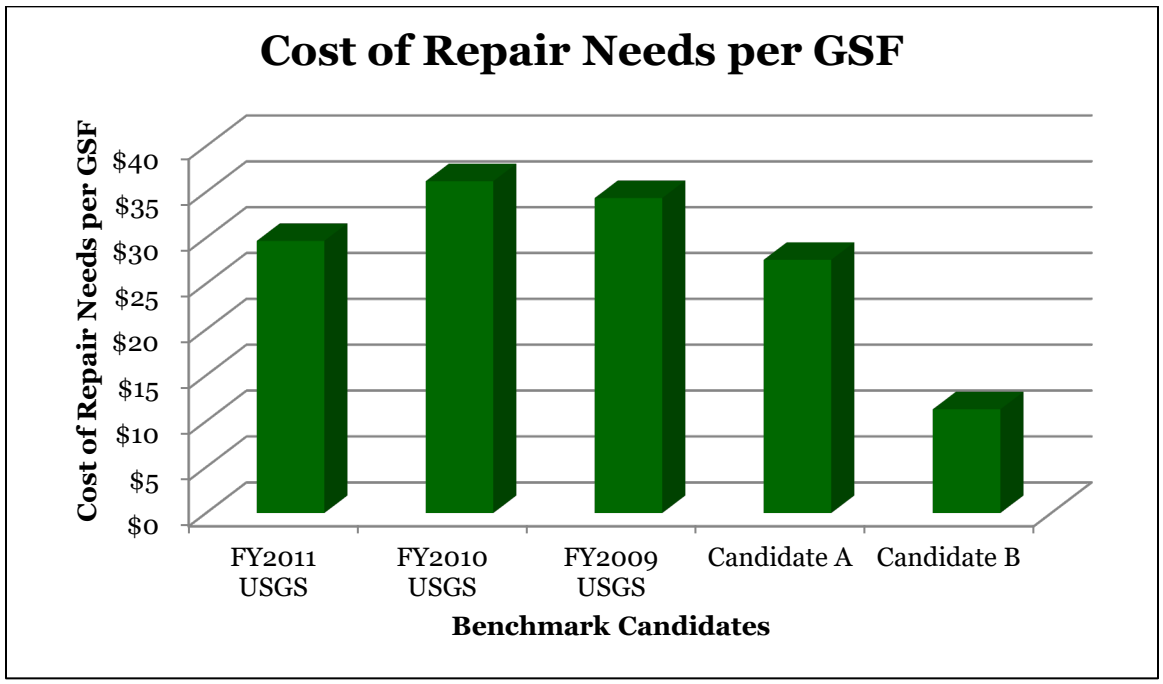


Figure 4.24. Benchmark Candidates Cost of Repair Needs per GSF

Observations: Benchmark Candidates Cost of Repair Needs

- The cost of repair needs per GSF for the Survey's assets decreased approximately 18% over the past year. This is most likely a result of ARRA funding reducing the DM backlog.
- The Survey's cost of repair needs per GSF is approximately 275% greater than that of Candidate B.

4.2.3.6. *Utilization Metrics*

Utilization Rate - FY2011 USGS Portfolio	
Definition: Utilization rate is measured as SF over total personnel. The Survey measures utilization rate as office USF over personnel.	
$$Utilization\ Rate = \frac{Office\ SF}{(Number\ of\ Federal\ Employees + Number\ of\ Contractor\ Employees)}$$	
FRPP Minimum: 22.58 GSA Provided Minimum: 16.33	FRPP Maximum: 1,066.67 [19] GSA Provided Maximum: 1,623.00

According to the *OMB Facilities/Space Cost Savings/Avoidance and Space Management Policy Changes* memo to the ELT, dated August 26, 2011, a waiver must be approved by the AD of AEI for new space that requires greater than 180 SF per person. The waiver attached to the memo defines the SF count as office USF.

Figure 4.25 presents the office space utilization rate of the Survey's FRPP reported and GSA provided assets at each of the REx areas.

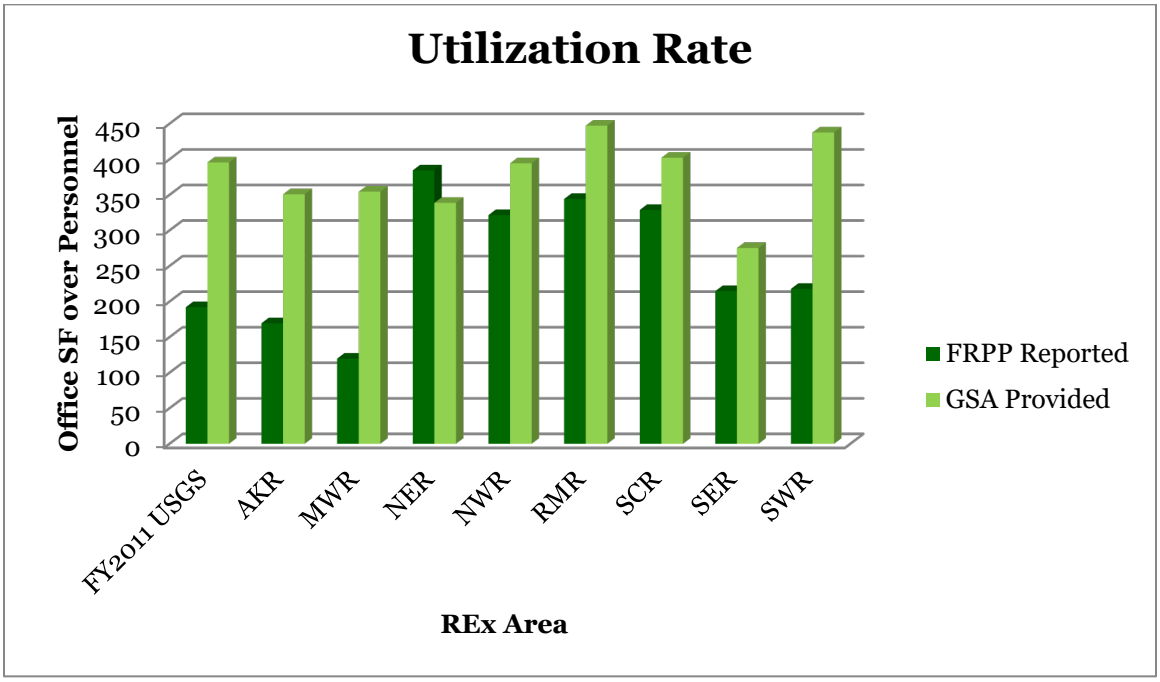


Figure 4.25. FY2011 USGS Utilization Rate (Office USF/personnel)

[19] Removed Guam from utilization rate because it is considered an outlier with utilization of 4,224 office SF/person.

Observations: USGS Utilization Rate

- The Survey is missing office USF counts for 22 of 75 active FRPP reported office buildings, and 34 of 173 active GSA provided office buildings. Additionally, another 14 active GSA provided office buildings, and another two FRPP reported office buildings reported no Federal employees or contractors. Therefore, this analysis is based on 176 of 248 active office buildings (51 of 75 active FRPP reported office buildings, and 125 of 173 active GSA provided buildings).
- The overall utilization rate at the FRPP reported assets is 191 office USF per person, which is in line with the Survey's goal of 180 office USF per person.
- The utilization rate of the FRPP reported assets are more than twice as efficient as GSA provided assets (191 office USF per person versus 395 office USF per person), indicating that there is a great opportunity for space consolidation at GSA provided space.
- The Rocky Mountain REx area has the greatest office USF per person for GSA provided space (447 office USF per person) and the second largest office USF per person for FRPP reported assets (344 office USF per person). Indicating that the Survey has the opportunity to reduce its footprint at the Rocky Mountain REx area.

Utilization Rate - Benchmark Candidates

The FRPC requirement to report on the number of Federal employees and contractor employees is new for FY2011; therefore, prior year submissions do not include personnel counts that can be used for benchmarking. Additionally, office USF is not an FRPP required data element; therefore, for the purposes of benchmarking, GSF is examined.

Figure 4.26 below provides a comparison of the FY2011 total GSF/person (FRPP) or RSF/person (GSA provided) to Candidate B's total GSF/person.

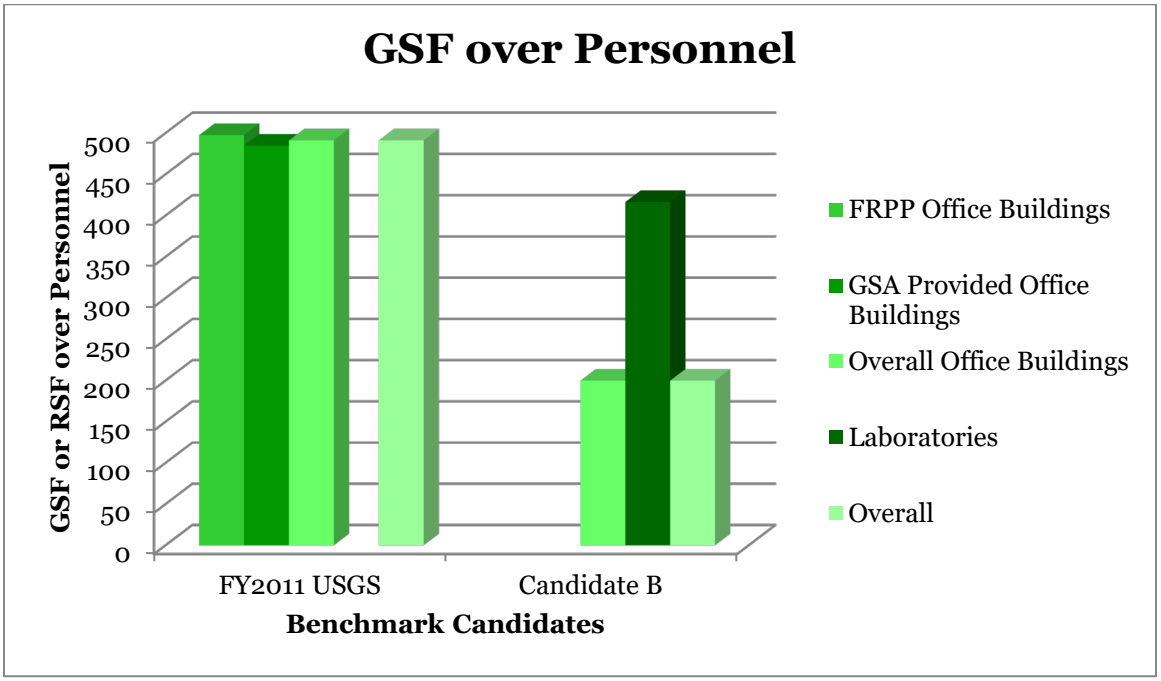


Figure 4.26. Benchmark Candidates Utilization Rate

Observations: Benchmark Candidates Utilization Rate

- Candidate B has significantly lower utilization rates than the Survey, using approximately 200 GSF/person in its office buildings, while the Survey has a utilization rate of approximately 491 GSF/person.
- Labs could not be compared to Candidate B because the Survey does not house Federal employees and contractor employees in the labs. Therefore, the Survey does not collect utilization for employees assigned to labs.

Percent of Space Utilization - FY2011 USGS Portfolio	
Definition: The percent of space utilization is a measure of a building's occupied space over the design capacity. The percent of space utilization is a new metric, to replace the old scale measuring simply if a building was "over-utilized," "utilized," "under-utilized," or "not utilized."	
FRPC Requirement: This metric is required for offices, hospitals, family housing, dormitories, barracks, warehouses, and labs. This metric must be greater than or equal to zero, and less than or equal to 100.	
Count: 453 (473 total offices, hospitals, family housing, dormitories, barracks, warehouses, and labs; 51 buildings required to report a percent of space utilization did not - the Survey defaulted those buildings to 85% for the FRPP submission; the Survey disposed of 18 FRPP reported assets, and 2 GSA provided assets.)	
FRPP Minimum: 0% (3 assets) GSA Provided Minimum: 0% (63 assets)	FRPP Maximum: 100% (179 assets) GSA Provided Maximum: 100% (93 assets)
FRPP Mean: 93.2% GSA Provided Mean: 62.4%	FRPP Median: 100% GSA Provided Median: 100%

Figure 4.27 compares the percent of space utilized of the FRPP reported assets at each of the REx areas.

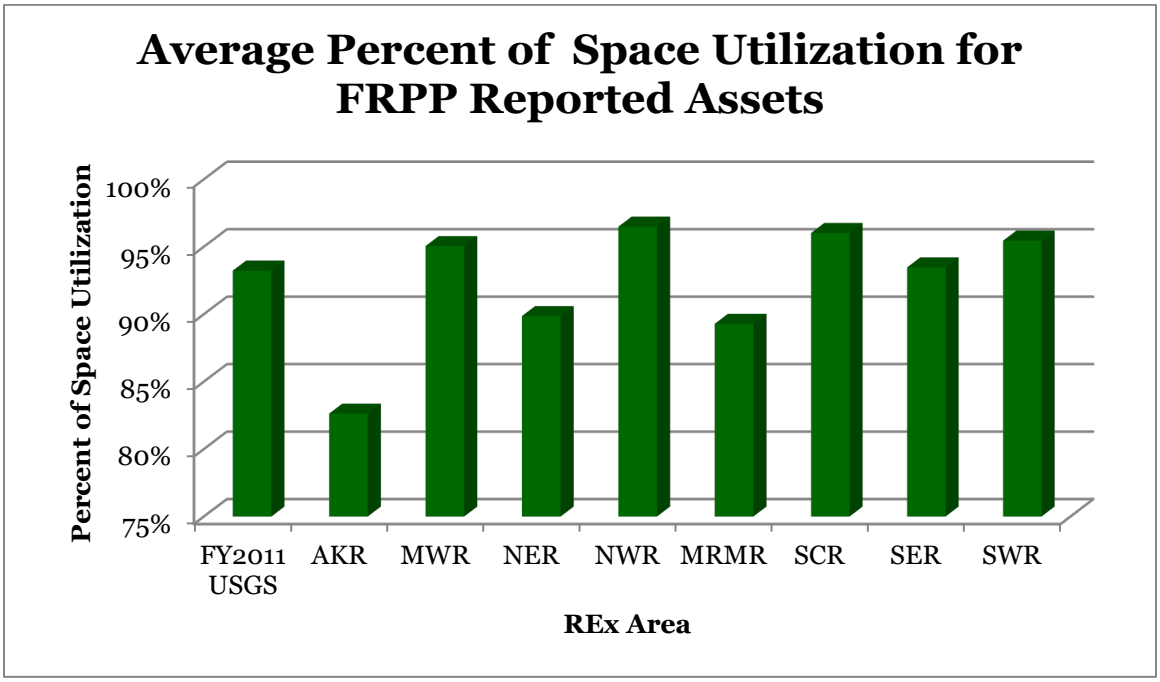


Figure 4.27. FY2011 USGS FRPP reported Assets Average Percent of Space Utilization

Figure 4.28 compares the percent of space utilized of GSA provided assets, by REx area.

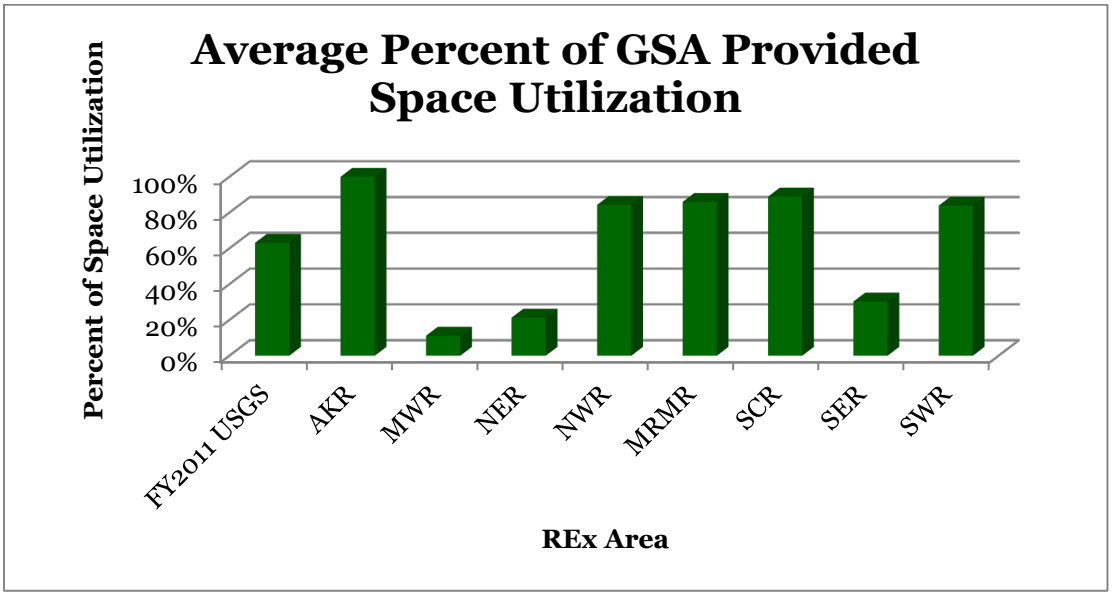


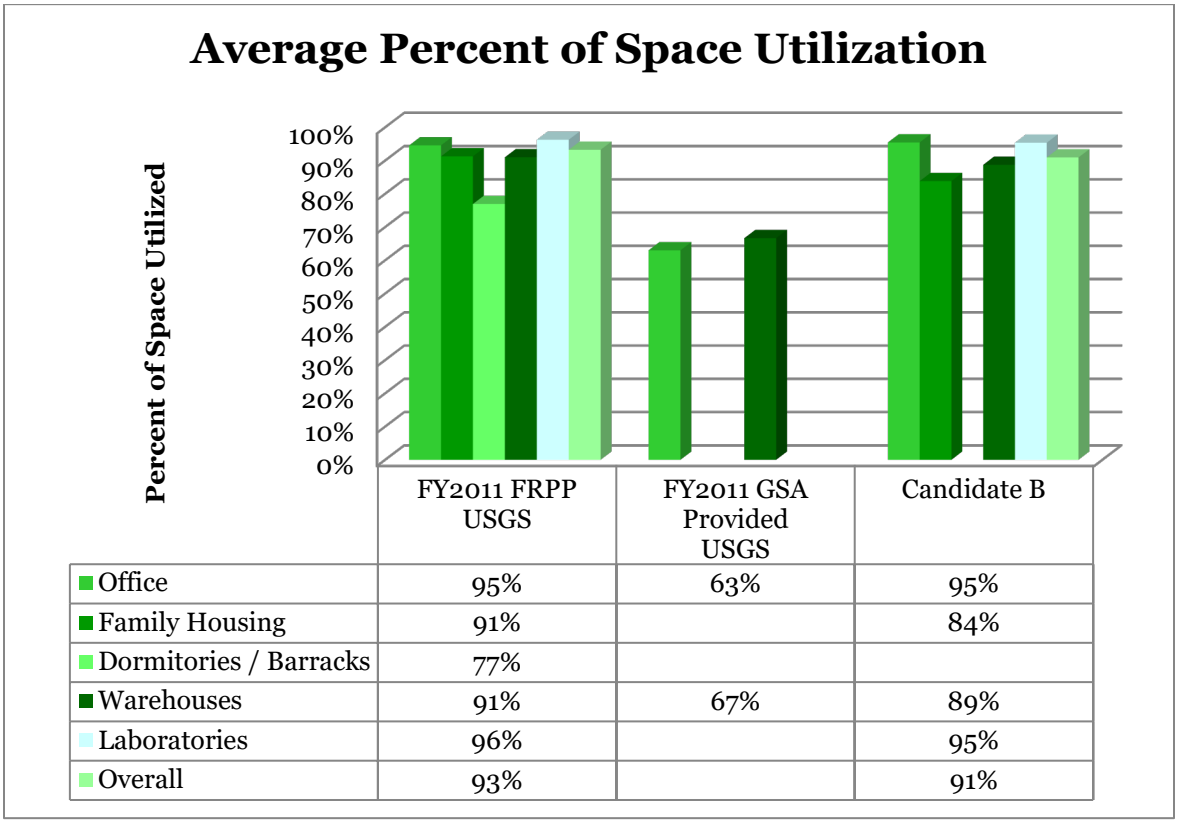
Figure 4.28. FY2011 USGS FRPP reported Assets Average Percent of Space Utilization

Observations: USGS Percent of Space Utilization

- Approximately 20% of buildings for which the Survey was required to report a percent of space utilization did not have this information. The Survey defaulted the percent of space utilization figure for those assets to 85%, which is a target number for many agencies.
- For 179 of the 247 assets, or approximately 72.5%, the Survey reported to FRPP a space utilization figure of 100%.
- For 93 of the 179 GSA provided assets, or approximately 52%, the Survey reported a space utilization figure of 100%.
- The Survey continues to improve the collection of space utilization data on its GSA provided space to assess the best approach to utilize space and collect personnel data. However, currently 63 of the 179 GSA provided assets, or 35.2%, reported 0% space utilization.
- The South Central REx area reported an FRPP average percent of space utilization of approximately 40%, meaning that space is generally under-utilized. However, the Southeast REx has reported an FRPP average percent of space utilization of approximately 93%.
- The Midwest REx area, Northeast REx area, and Southeast REx area reported an GSA provided average percent of space utilization of approximately 11%, 21% and 30%, respectively, meaning that space is generally under-utilized.
- The Alaska REx area reported a GSA provided average percent of space utilization of 100%, meaning each SF of space is occupied, not allowing for growth.

Percent of Space Utilization - Benchmark Candidates

Following the utilization metric change in FY2011 to a percentage, benchmarking data was only available for Candidate B on the percent of space utilized. **Figure 4.29** below provides a comparison of the USGS FRPP and GSA provided FY2011 percent of space utilization to Candidate B's percent of space utilization.



	FY2011 FRPP USGS	FY2011 GSA Provided USGS	Candidate B
Office	95%	63%	95%
Family Housing	91%		84%
Dormitories / Barracks	77%		
Warehouses	91%	67%	89%
Laboratories	96%		95%
Overall	93%		91%

Figure 4.29. Benchmark Candidate Average Percent of Space Utilization

Figure 4.31 shows the percentage of space utilization reported in FY2011 converted to the FY2010 one to four rating scale, and compared to prior year USGS data as well as the data of benchmarks. The scale used is presented in **Figure 4.30**.

	Office (10)	Hospital (21)	Warehouse (41)	Lab (74)	Housing (30, 31)
Over-Utilized (1)	> 95%	> 95%	> 85%	> 85%	N/A
Utilized (2)	75 - 95%	70 - 90%	50 - 85%	60 - 85%	85 - 100%
Under Utilized (3)	< 75%	25 - 70%	10-50%	30-60%	< 85%
Not Utilized (4)	N/A	< 25%	<10%	< 30%	N/A

Figure 4.30. FY2010 Utilization Scale

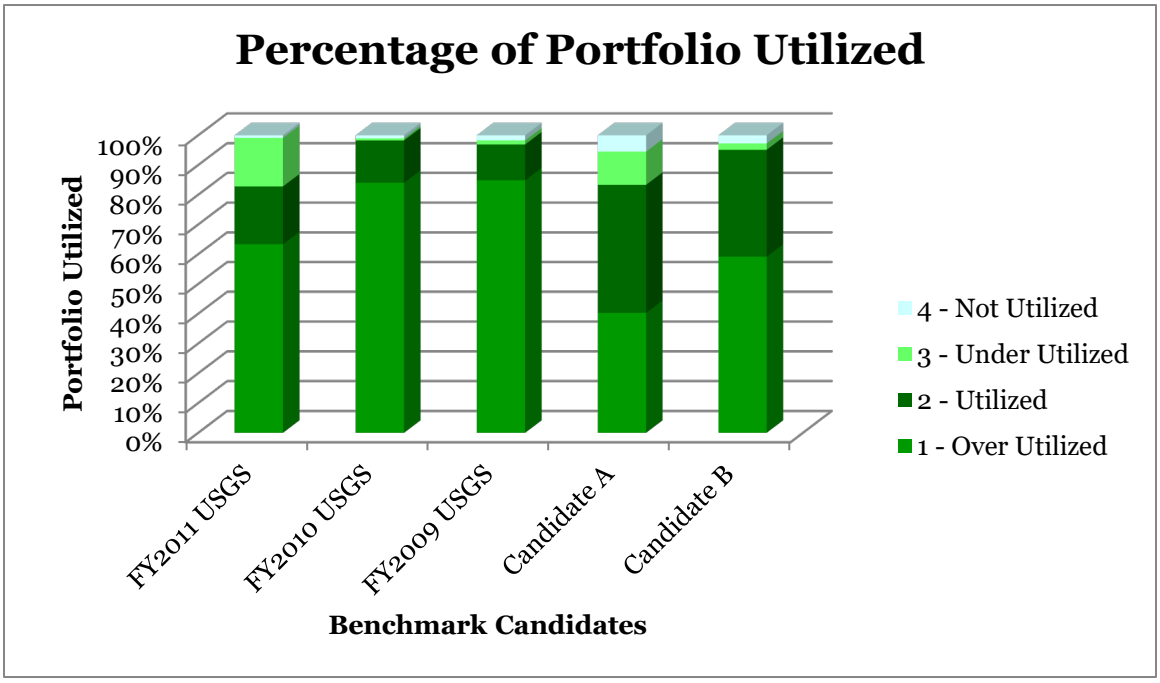


Figure 4.31. Benchmark Candidates Percentage of Portfolio Utilized

Observations: Benchmark Candidates Percent of Space Utilization

- Candidate B has higher percent of space utilization across its portfolio. However, using the FY2010 rating scale, the average office and lab for Candidate B is over-utilized. Using that same rating scale, the Survey's labs are over-utilized, while dormitories/barracks are under-utilized. On average, offices and warehouses are utilized adequately.
- Over the past two years, the Survey decreased the percentage of its portfolio considered "over-utilized," while increasing the percentage "not utilized" and "under-utilized."
- The Survey has an average utilization of 63% for GSA provided offices and 67% for GSA provided warehouses. These spaces are considered "under-utilized." However, this may be due to incomplete data as this is a new metric for this space type. The average has a potential to decrease as data collection improves for GSA provided spaces.
- Candidates A and B have a greater percentage of their portfolios "utilized" than the Survey.

4.2.3.7. *Mission Dependency*

Mission Dependency - FY2011 USGS Portfolio
Definition: Mission dependency is the value an asset brings to the performance of the mission.
FRPC Requirement - Assets must have a score from 1-3, unless they are DOD Base Realignment and Closure (BRAC) properties which are not rated.

Figure 4.32 provides an overview of asset mission dependency scores.

Code	Level of Dependency	Definition
1	Mission Critical	Without constructed asset or parcel of land, mission is compromised.
2	Mission Dependent, Not Critical	Does not fit into mission critical or not mission dependent categories.
3	Not Mission Dependent	Mission unaffected.
9	Not Rated	Used for DoD/BRAC properties only.

Figure 4.32. Mission Dependency Scale

Figure 4.33 illustrates the Survey's FY2011 FRPP reporting assets.

Code	Level of Dependency	Count	Percentage
1	Mission Critical	356	48.97%
2	Mission Dependent, Not Critical	352	48.42%
3	Not Mission Dependent	19	2.61%
Total		**727**	**100%**

Figure 4.33. FY2011 USGS FRPP reported Assets Mission Dependency Breakdown

Observations: USGS Mission Dependency

- Mission dependency data is not available for GSA provided assets.
- The Survey only considers approximately 2.61% of its assets "3 - not mission dependent."

Mission Dependency - Benchmark Candidates

Figure 4.34 illustrates the breakdown of mission dependency scores by Benchmark Candidate.

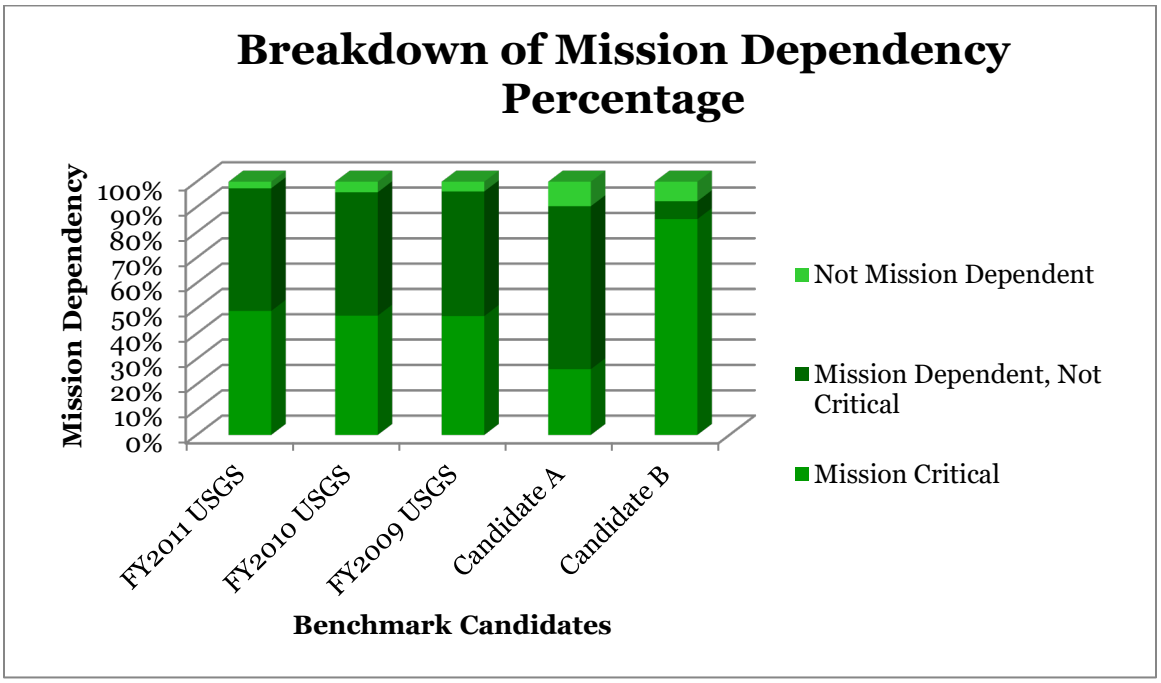


Figure 4.34. Mission Dependency

Observations: Benchmark Candidates Mission Dependency

- Candidate A considers fewer of its assets to be mission critical, while Candidate B considers more of its assets to be mission critical.
- The Survey's breakdown of mission dependency scores is consistent from year to year. The Survey modifies the API scores of its assets every five years. Mission dependency scores are based on API scores.
- The Survey considers less of its assets to be "3 - not mission dependent" than the Benchmark Candidates. While only approximately 2.6% of the Survey's assets are "3 - not mission dependent," Candidate A considers 9.7% of its assets "3 - not mission dependent," and Candidate B considers 7.7% of its assets "3 - not mission dependent." This may be due to the Facility Managers selecting a subjective mission dependency score for assets without API scores.

4.2.4. Performance Metric Observations Summary

The following section provides a summary of the observations made during the benchmarking exercise, Section 4.2.3 - Compare Performance Metrics. This summary provides an overall comparison of the FY2011 FRPP reported data against the benchmarked organizations in size and value metrics, operations metrics, condition metrics, utilization metrics, and mission dependency. The result of the benchmarking exercise and observations summary is the performance metrics improvement plan, found in Section 4.3 - Considerations.

4.2.4.1. *Size and Value Metrics*

The FY2011 FRPP reported real property portfolio consists of approximately 2 million GSF of buildings, and is valued at approximately $534 million (buildings, land, and structures). The average GSF and PRV of the Survey's buildings are larger than that of the Benchmark Candidates. Disparities between the Survey's data and the Candidates' could be data quality or the type of assets in the portfolio.

4.2.4.2. *Operations Metrics*

The annual operating cost per GSF for owned buildings is approximately 45% higher than the FY2009 Federal average, suggesting potential for cost savings through energy efficient measures, disposals, and consolidations. Data quality and reporting may be an issue as the Section 4.2.3 - Compare Performance Metrics analysis of annual operating costs suggests they may be driven by local factors (e.g., the Alaska and Rocky Mountain REx areas reported annual operating costs are extremely high compared to the other REx areas).

The Survey's direct lease costs per GSF are approximately 24% more than the FY2009 Federal average. This could be attributed to the science mission and locality requirements of select assets. However, while the lease costs per GSF were also higher than the Federal average in FY2009, lease costs per GSF within the USGS portfolio increased approximately 14% since FY2009. Therefore, additional research should be conducted on the lease management process to better define the costs associated with the 14% increase and the process to enter into and manage leases.

In addition, the operating efficiency of the Survey's assets is lower than that of Candidate A's (science based) assets, while higher than that of Candidate B's (mixed group) assets. This may also be a result of data quality issues. Since operating efficiencies are on a percentage scale, no asset should have an operating efficiency greater than 100% or less than 0%; however, several assets had an operating efficiency less than 0%, due to reported higher annual operating costs than PRV. These observations could suggest that these assets are in need of greater maintenance or capital improvements. Additionally, this could be caused by the PRV not being updated annually by Facility Managers. The Survey performs a condition assessment every five years to value its assets. Facility Managers are responsible for adjusting the value with an inflation factor each year. Using a simple inflationary model at the national level would confirm the true condition and establish a more realistic baseline. The consumer

price index (CPI) is an industry standard inflation factor.

4.2.4.3. *Condition Metrics*

The Survey reported a lower condition index on its assets than the Benchmark Candidates, indicating it has a greater proportion of needed repairs to the PRV of its buildings and structures than the Benchmark Candidates. However, the Survey's buildings have a greater cost of repair needs per GSF than Benchmark Candidate B's buildings. The cost of repair needs per GSF for buildings at the Survey grew from FY2009 to FY2010, and then decreased from FY2010 to FY2011. This is due to the cost of repair needs growing at a faster rate than funding to address DM from FY2009 to FY2010. Then the Survey received ARRA funds, covering a large portion of the DM backlog for FY2011.

4.2.4.4. *Utilization Metrics*

The square footage per employee is much higher at the Survey than Benchmark Candidate B. In addition, the space allocation at the Survey's GSA provided space is significantly higher than its 180 office USF per person target. Many of the interviewed Benchmark Candidates considered utilization rate the most important factor in reducing real property costs. Therefore, aside from data quality and reporting issues, decreasing the square footage per employee, especially at its GSA provided space, may be one of the greatest opportunities for cost savings at the Survey. Understanding utilization begins with managing space at the floor plan level, and leveraging a system to drive accurate data collection and reporting. The Survey should leverage existing floor plans to accurately populate square footage counts in FBMS. Additionally, the Survey should continue developing floor plans of their real property space. This may allow the Survey to make continual improvements and increase utilization.

4.2.4.5. *Mission Dependency*

The Survey considers more of its assets "mission critical" than Benchmark Candidate A, but less than Benchmark Candidate B. However, the Survey considers fewer of its assets "not mission dependent" than both Benchmark Candidate A and B. In addition, the Survey's mission dependency scores are relatively the same in FY2011 as FY2010 and FY2009. This indicates that the Survey's assets may not be assessed or reviewed each year. Moving forward, the Survey should provide more, or revised, guidelines to Facility Managers to help report assets.

4.3. Considerations

The following section outlines considerations for the Survey to improve the data quality of FRPP reported metrics, and improve management of real property assets at the Survey. The suggested additional metrics may help the Survey decide which assets are potential candidates for sale or disposal.

4.3.1. Conduct Data Improvement Assessment for FRPP Metrics

The Survey is required to report on the performance of its owned, leased, and otherwise managed assets valued at over $5,000 each fiscal year to FRPP. FRPC guidance requires information on approximately 25-30 data elements for each asset. As FRPP reporting is a relatively new Federal requirement, started in 2005, the reporting requirements evolve each year. Agencies should be prepared to deal with changing requirements, providing accurate and complete data on new fields and requirements.

4.3.1.1. *Monitor the Performance of Inactive and Excess Assets*

Currently, the Survey assesses assets previously identified as "inactive" at the time of the FRPP submission. The Survey listed assets identified as inactive in FY2010 as "excess" in FY2011, in accordance with FRPC guidance.

The Survey should evaluate its inactive and excess assets every six months to assess if an "inactive" asset should be processed for disposal, which often reduces O&M costs. Assessing inactive and excess more often may allow the Survey to identify more cost savings throughout the fiscal year. **Figure 4.35** provides the three buildings the Survey reported to FRPP as "excess" in FY2011.

Real Property Unique ID	Name	City	State	Main Usage Type
07000142	GOVERNMENT HILL - STOR BLD 500	Anchorage	AK	Building Warehouse
07000143	GOVERNMENT HILL - STOR BLD 501	Anchorage	AK	Building Warehouse
07000144	GOVERNMENT HILL - STOR BLD 502	Anchorage	AK	Building Warehouse

Figure 4.35. Excess Assets

4.3.1.2. *Improve upon the Collection of Complete and Accurate Data in Advance of the FRPP Submission Timeline*

The Survey should establish proactive protocols, early in the year, to gather data. They may decide to require BMS offices, working with facility managers, to post data on previously required fields to FBMS on October 15th of each year. This would provide the facility managers and BMS offices fifteen days to complete year end reconciliations. FMB may then assess the data for accuracy, such as evaluating the value over GSF and lease costs compared to value to assess if the data appears accurate. FMB has the opportunity to respond to BMS offices with questions by November 1st, providing 15 days for correction. Sufficient time for responses may lead to higher-quality data.

4.3.1.3. *Use the new Asset Priority Index to re-evaluate Mission Dependency Scores*

In FY2005, the Survey created API scores for 392 assets and used those scores to identify mission dependency scores, where appropriate. For the remainder of the portfolio, the Survey authorized the three BMS offices to select a mission dependency

score from one to three for their assets. BMS selected a score based on how mission critical it believes its asset is, and not based on a defined calculation. As part of this overall assessment, the Survey categorized assets into groups by type and use, and provided a range. The Survey should use this new range to update mission dependency scores.

4.3.2. Utilize non-FRPP Portfolio-Wide Metrics

FRPP metrics are useful for identifying data trends and evaluating the overall portfolio. However, in order to evaluate the cost to benefit analysis on individual assets, additional metrics designed for and/or used in this analysis are suggested in the sections below. The Survey can calculate each of these metrics using existing FRPP data fields. The Survey currently uses some of these metrics to assess individual assets when a lease is nearing expiration or an asset is evaluated for disposal. However, establishing these metrics portfolio-wide, and assessing them every six months may allow the Survey to harvest additional cost savings.

4.3.2.1. *Lease Cost per SF*

The Survey should evaluate lease costs per SF for its leased and GSA provided assets every six months. Currently the Survey assesses lease costs when a lease is nearing expiration. Examining lease costs every six months may help the Survey assess if the lease should be terminated. This metric may help the Survey decide if the lease costs of the asset are in line with other leased assets in the REx area. If the lease cost per SF is at least 25% greater for a leased or GSA provided building than the other leased assets in the REx area, the Survey should assess if the asset is critical to the mission, or if the lease can be terminated.

4.3.2.2. *Utilization Rate*

The Survey should gain a better understanding of the current portfolio at the interior layout and floor plan design level to improve the utilization rate of its assets. This metric may help the Survey assess how well it utilizes space, and help stakeholders identify consolidation opportunities. For example, if two office buildings within 15 miles of each other both have high square footage per personnel counts, the Survey can consider consolidation opportunities. In addition, this figure may allow the Survey to begin examining alternative workstation opportunities for its teleworking staff.

Currently the Survey assesses utilization rate for new Occupancy Agreements (OAs) and assets nearing lease expiration. Periodically examining utilization rates of office buildings on a portfolio-wide scale may provide the Survey with large cost saving opportunities.

4.3.2.3. *Operating Efficiency*

The Survey should begin assessing operating efficiency on a semi-annual basis. The operating efficiency formula, (1-(Annual Operating Costs/PRV)) * 100, evaluates the annual operating costs over the value of the asset. If a building has a very low operating

efficiency (e.g., below 50%), the Survey spends at least 50% of the value of the building in operating expenses each year. The Survey should assess whether more energy efficient measures can resolve the majority of those operating expenses or if the asset requires disposal.

The Survey has several assets with higher reported operating costs or lease costs than its value, creating a negative operating efficiency. This may point to a data quality issue, or very high operating and/or lease costs. The Survey should individually assess these assets and the underlying reason for their low operating efficiency. **Figure 4.36** provides the four owned assets that had an operating efficiency of less than 50% in FY2011.

Real Property Unique ID	Name	City	State	Real Property Type	Main Usage Type	REx Area	Operating Efficiency
07001120	PTX - U OF GA-Forestry RES-2561	Athens	GA	Building	Building - Laboratory	SER	45.83%
07001122	PTX - U OF GA-Sch of Forest RES 2500	Athens	GA	Building	Building - Laboratory	SER	-22.50%
07001126	Stennis Absolutes Gazebo	Bay St. Louis	MS	Structure	Research and Development (Non-Lab)	SER	29.42%
07001204	CERC - Open Storage	Columbia	MO	Structure	Storage (Other than building)	SCR	45.89%

Figure 4.36. Owned Assets with an Operating Efficiency below 50%

Figure 4.37 provides the six leased assets that had an operating efficiency of less than 50% in FY2011.

Real Property Unique ID	Name	City	State	Real Property Type	Main Usage Type	REx Area	Operating Efficiency
07001290	Albuquerque Seismological Lab	Bernalillo	NM	Building	Building - Office	RMR	-188.75%
07001289	Dielman Business Center	Olivette	MO	Building	Building - Office	SCR	29.73%

Real Property Unique ID	Name	City	State	Real Property Type	Main Usage Type	REx Area	Operating Efficiency
07000428	Mingo Valley Trade Center	Tulsa	OK	Building	Building - Office	SCR	38.09%
G100006702 0000000	National Storage Center Lease	Lancaster	CA	Building	Building - Warehouses	SWR	-170,300.00%
G100006832 0000000	Oakhurst, CA WERC Field Office	Oakhurst	CA	Building	Building - Office	SWR	-2,936,600.72%
07000259	Redwood City MAR FAC-SANDF WHARF	Redwood City	CA	Structure	Harbor and Port Facilities	SWR	-13.64%

Figure 4.37. Leased Assets with an Operating Efficiency below 50%

4.3.2.4. *Cost of Repair Needs per SF*

With a DM backlog of approximately $75.9 million and funding of only $7.3 million, the Survey should assess whether the cost of needed repairs for some assets is too significant compared to the asset value. If DM funding went solely towards the repair of owned buildings, the DM backlog per GSF would be $60.27, compared to a DM budget allocation of $5.80 per GSF. This cost of repair needs per SF metric is critical for the Survey to make strategic decisions going forward. The Survey should leverage existing information to prioritize assets maintenance using the API and establish a longer term plan to consolidate and/or dispose of buildings in poor condition.

4.3.3. Automate Data Collection

The evolution of real property software has changed how companies and Federal agencies collect asset information. Software exists that enables organizations to manage their assets more efficiently by automating data collection activities. It also frees managers to focus on higher priority activities such as analysis, transactions, additional opportunities for automation, paying market rate prices, operating expenses, energy efficiency, facility audits, and developing strategies to deploy assets efficiently.

While the long term goal is to automate as much data collection as possible, in the short term, the Survey could identify ways to automate a handful of selected high-value performance metrics (e.g., utilization rates, value*)*. The Survey already automates annual operating costs and annual rent through FBMS. In many cases, the information already exists. Employee internet protocol (IP) addresses, for example, may provide an opportunity for a homegrown system of tracking utilization rates. In addition, the Survey already conducts a condition assessment every five years to value its assets. The

Survey leaves the responsibility of assigning an inflation index to the assets to the BMS offices. The Survey can use FBMS or other software to assign a standard inflation index by state to the overall portfolio. In order to fully automate data collection in the long term, the Survey should research the market and identify software that fits with the Survey's mission and needs. Advanced software exists that can automate the cost of repair needs for buildings.

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5.0 Business Case Analysis

As part of the Survey's effort to consolidate space and reduce current facilities costs to support the strategy of operating within available funds, the Survey assessed three BCAs. Given increasing budget constraints, decreasing DM funding, and increasing DM backlog, it is important for the Survey to identify ways to avoid costs by consolidating space. One of the Survey's major goals, outlined in both the CSIP and *FY2011 Five Year Space Management Plan*, is to consolidate space and reduce rent costs. The following provides additional detail on the Survey's major goals:

- CSIP - "The U.S. Geological Survey is dependent on General Services Administration provided space for nearly 70 percent of the space that it occupies, and with limited capability to reduce fixed rental rates at these sites, the USGS can accrue significant facility cost reductions only when large amounts of space are vacated and returned to GSA."
- FY2011 *Five Year Space Management Plan* - According to the plan, the Survey will meet performance targets by "improving space utilization, controlling rent and operating costs, releasing unneeded space, and increasing collocation consistent with science program objectives."

5.1. Business Case Analysis Selection

For this SFMP, the Survey's Achieving Cost Efficiencies for Science (ACES) Team identified three business case opportunities that could address the needs outlined in the CSIP and FY2012 *Five Year Space Management Plan*. The three business cases are outlined below, with the detailed template provided in Appendix I - Solid States Physics Laboratory Business Case Analysis, Appendix J - Denver Federal Center Business Case Analysis, and Appendix K - Menlo Park Business Case Analysis:

1. **Solid State Physics Laboratory, Reston, VA** - Evaluate alternatives for the Solid State Physics Laboratory to include demolition, renovation, or construction of another facility.[20]
2. **Denver Federal Center, CO**- Evaluate the feasibility of consolidating USGS employees, labs, and storage in Buildings 25, 95, and 810. This would mean vacating the older buildings - Buildings 20, 21, 21A, and 53.
3. **Menlo Park, CA** - Assess the feasibility of consolidating employees and functions into the highest quality facilities on Menlo Park Campus that would lead to vacating an entire building (e.g., Building 2 or 3).

Throughout the space consolidation efforts, it is important for the Survey to collaborate with GSA to identify space it is willing to take back. GSA approval on released space is imperative in order for the Survey to remove the space from its inventory and discontinue lease payments for the space. Throughout the BCA analyses, the following two terms are used:

[20] The ACES team recommended construction of a smaller facility; however, with limited information on facility needs, the Survey assumed the hypothetical constructed building would be similar in size and function when compared to the current Solid State Physics Laboratory.

- **Vacating Space** - Vacating space refers to when a cost center moves out of space for which another cost center plans to backfill. In these cases, the Survey continues to pay for the vacated space.
- **Releasing Space** - Releasing space refers to space slated to be returned to GSA. In these cases, the Survey will remove this space from its accounting records and will no longer pay lease costs. Released space must be approved by GSA.

The focus on consolidating space in the three largest centers at the Survey can serve as an example to smaller facilities on cost avoidances that could be achieved. In addition, because of their size and space reduction potential, the cost savings or avoidances can be material. The Survey's primary needs for consolidating space are as follows:

1. **Meet science mission needs** - To meet its mission, the Survey requires facilities that can accommodate the science performed. Many of the buildings the Survey currently occupies are deteriorating and do not effectively meet its needs. For example, Building 21 at the DFC houses reimbursable cost centers and is very lab intensive; however, there are multiple leaks in the roof, and the building does not have a backup generator should the power fail. One of the leaks in Building 21 is directly above a costly scientific instrument. Because GSA has been unable to identify the source of the leak, a tarp above the instrument serves as a cover to avoid water damage. Such measures to protect expensive scientific equipment put the mission at undue risk.
2. **Meet the Interior's 180 office USF utilization requirement** - The Survey is required to meet the Interior's average utilization requirement of 180 office USF per person when entering any new lease agreements. Currently, the buildings at the three centers have high utilization rates and upcoming agreement expirations. Although some buildings have a few years or more on their OAs, these cost centers can begin working towards the average utilization goal of 180 office USF per person and could assist other cost centers by providing them their available space to occupy.[21]
3. **Offset budget shortfalls** - Given increasing budget cuts, notably the $11 million facility rent budget shortfall the Survey is experiencing in FY2012, the Survey is in the process of identifying methods to cover the shortfall. When the facility funding request is not met, rent costs are taken from science funding. The Survey expects to experience an even larger shortfall next year, approximately $20 million. As the Survey cannot control rent increases when renewing leases in GSA provided buildings (rent increases are results of GSA rent appraisals), or budget reductions, the best option to achieve cost avoidances is through releasing space back to GSA and utilizing its space more efficiently.

[21] The Building Owners and Management Association (BOMA) define USF as the amount of functional space that can be used. Rentable square feet (RSF) is the area of enclosed interior space including common areas, heating, ventilation and air conditioning (HVAC) systems, ducts, and pillars.

5.2. Considerations

There are important facility considerations the Survey could implement to continue to work towards consolidating space and identifying ways to decrease its shortfall. The Survey should also consider emphasizing the funding strategies in the BCA process going forward.

5.2.1. Facility Considerations

As part of the BCA development process, the Survey walked through the three main centers and identified areas to consider when consolidating space. These considerations take into account the unique mission the Survey performs and the need to reduce the increasing budget shortfall.

5.2.1.1. *Reduce Library Collections and Space*

Each of the three centers in Reston, Denver, and Menlo Park house library collections in GSA provided space. Over the past several years, the Survey has worked to reduce the size of the libraries by disposing of (e.g., donating) materials. The Survey's goal is to own only one copy of a specific material (e.g., publication) across the three locations, with the material located at the most relevant site. However, with the requirements to consolidate space, and the escalation of lease cost per RSF at each of the three centers, the Survey is facing pressure to find ways to consolidate the libraries even further. In some of the centers, it is integral for the libraries to vacate space for cost centers to utilize as office space. In addition, given the advancements in the internet and online sharing, much of the information contained in the library is available online, or could potentially be digitized for online reference. **Figure 5.1** provides an overview of the breakdown of library space at each of the centers.

Center	RSF	Cost per RSF	Annual Lease Cost
Reston	20,682	$28.42	$587,782
Menlo Park	24,654	$35.74	$881,134
Denver	27,937	$15.09	$421,569
Total	**73,273**	**$25.80**	**$1,890,485**

Figure 5.1. Library Space, by Facility

The Survey should consider ways to reduce its library space without jeopardizing the need for scientists and researchers to use the materials to perform the mission. In addition, the libraries are public facilities, meaning the libraries should be accessible to the public and contain information most regularly used (e.g., aerial photographs in Menlo Park Library). Overall, as the libraries are often located in the more expensive buildings on the campus, it is important to identify how much space the survey needs for library materials.

5.2.1.2. *Identify Need for Overall Authority*

To effectively carry out the numerous space actions required for cost centers to either achieve an average utilization of 180 office USF per person, or to vacate space in a building the center identified to release back to GSA, there should be a single point of authority overseeing the moves. Each campus has a designated Space Team comprised of members from cost centers to provide a Bureau prospective on space actions that should occur to meet the Survey's strategic goals and objectives. However, other than the teams, there is no authority requiring moves to be made.

As a result of the recent reorganization, lines of authority have shifted. In certain cases, this has made it difficult to successfully consolidate and relocate - particularly at the larger centers. Consolidation requires cooperation from all units involved in a given facility or center. In the past, Regional Directors, at the recommendation of BMS office, had authority to approve a consolidation or relocation project. Having one decision making body helps enable agile change. Under the current organizational structure, multiple cost centers reporting to different REx must come to unanimous agreement prior to approval and implementation of a plan. The result is a difficult and time intensive process that, based on feedback from center stakeholders, lacks one authoritative voice to expedite the decision-making process.

Currently, the BMS office serves as "consultants" for cost centers on how to configure space (e.g., provide AutoCAD® drawings), contact vendors (e.g., movers), and facilitate the space moves. Therefore, no single person can direct a single program or cost center to move. Space moves are dependent on one another and specific sequential actions. If one cost center chooses not to move, it affects multiple other cost centers' plans for moving. Also, as funding is not available, moves are financed through the moving cost center; therefore, cost centers may be hesitant to move out of space should requirements change in future years.

One of the methods the centers are using to combat the lack of a central authority for moves is through the Space Teams. For example, the Denver Federal Center Space Team (DFCST) votes on space actions on whether they meet the overall strategy of releasing space back to GSA in specific buildings. If the space action does not fit that need, the DFCST does not approve the action.

5.2.1.3. *Assess Laboratory Utilization*

One of the largest challenges in moving and consolidating space is accounting for the science performed in laboratories. Laboratories are expensive to move because of the equipment located in many of the laboratories, and because of the potential result in down time for laboratories performing science as part of a reimbursable activity. More importantly, laboratories are expensive to operate and in some cases, maintain. Cost centers with laboratories are charged for overtime utilities and may pay high lease costs to be in newer facilities. Although laboratory space is not included in the average utilization rate calculation of 180 office USF per person, it is important for the Survey to identify potential ways to consolidate laboratory space or identify ways to better share laboratory space. A laboratory utilization study could help the Survey identify laboratory

consolidation opportunities which could help decrease lease costs.

5.2.1.4. *Decrease Warehouse and Storage Space*

Based on the FY2011 FRPP submission, the Survey has approximately 238,000 RSF of warehouse and storage space that continues to accumulate materials (e.g., rock samples, furniture, maps). Although warehouse space typically costs less per RSF than office space, employees often store materials in office space regardless of available warehouse space. Office space, regardless of its use, is included in the utilization calculations.

With accumulating materials, and infrequent removal of resources, the Survey should identify which materials are critical to the mission, and which can be disposed of, or donated. For example, one of the warehouses in Menlo Park houses rock and core samples. Some of the rock samples are from scientists no longer working at the Survey. In addition, after the reorganization, cost centers' may be unaware that they are now "owners" of those materials. In these instances, the cost center is paying for the space the rock samples occupy and could benefit from identifying which samples should continue to be stored and which should not. Another example is core samples; programs should identify the cost of storing the core samples for a long period of time (e.g., 30 years) versus going into the field to recollect the samples should they be needed in the future.

The availability of warehouse space should allow those storing science materials in office space, or even in laboratories which has an even higher cost per RSF, to move them to a more cost-effective, and appropriate location. The Survey should also identify a process for purging materials and identifying materials that should be kept for future needs.

5.2.1.5. *Work Closely with GSA to Release Space*

During the space consolidation process, it is important for the Survey to work closely with GSA to agree on space to release. For example, if GSA does not approve already vacated space, or space the Survey is in the process of vacating, the Survey is required to continue to pay for the space. Through discussions with the Space Teams, there have been cases where GSA indicated it would take back space, and then decided the space was not marketable. Therefore, the BMS office now works more closely with GSA to identify space it will take back. Going forward, it will be important for facilities to work with the GSA representatives early in the process and understand the procedure for releasing space. Under GSA's defined agency rights and options, the Survey can release space within four months of written notice if the following conditions are met:[22]

- There is no longer a need for the space;
- The space is in marketable blocks;
- The space is not designated as non-cancelable in the tenant OA; and
- The tenant is at least 16 months into its occupancy term.

The Survey has experienced challenges in releasing marketable blocks of space, based on GSA guidance. GSA defines marketable blocks of space as the following:

[22] GSA Pricing Desk Guide, Fourth Edition, October 3, 2011, http://gsa.gov/graphics/pbs/PDG_4th_Ed.pdf.

- **Location and Usage** - A block of space is considered marketable if it can be assigned to another Federal tenant agency or to a private-sector tenant. The space must also be accessible from the building's common corridor; however, GSA may not refuse a release just because there may not be a suitable tenant. Another factor is conformance with the predominant real estate use pattern (e.g., a single tenant may not return loading dock space as the space is only marketable to the tenant of the building, which is the tenant releasing space).
- **Size of the Space** - For space to be marketable, the block of space must be a minimum size in some cases. Specifically, space is considered unmarketable if a tenant agency wants to return a single office bordering on the common corridor, which has no exterior accessibility, or a tenant agency wants to return a series of noncontiguous offices located throughout the building. If the space is not marketable in its existing configuration, but could be made marketable by constructing a wall or separate entrance, the space may be released. The costs in this situation are funded by the tenant agency. If a tenant releases an entire block of space, it is considered marketable.

If the planned space to be released is approved by GSA, the Survey must also pay the principal balance remaining on any tenant improvements (TIs). If there is an outstanding TI balance after a partial release of space, the unamortized balance may be reamortized over the remaining space in the OA.[23]

5.2.2. BCA Process

The Survey first chartered the BCA process in March 2003, and has updated its process based on recommendations identified in the 2005 SFMP. However, the Survey should consider emphasizing the BCA funding strategies in the template.

5.2.2.1. *Emphasize BCA Funding Strategies*

One of the major obstacles for proceeding with an approved BCA is the funding associated with the project. The IRB has the authority to approve BCAs, but does not have the authority, or ability, to fund projects. Therefore, it is imperative for BCAs to contain funding strategies. Without funding strategies, many approved BCAs are never implemented. The Survey should consider updating the BCA template to clearly identify the funding strategy for proceeding with the project.

[23] GSA Pricing Desk Guide, Fourth Edition, October 3, 2011, http://gsa.gov/graphics/pbs/PDG_4th_Ed.pdf.

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6.0 Facilities Budget and Funding Assessment

6.1. Background

The Survey funds its facilities needs through O&M and rent appropriations, as well as DMCI funding. Rent funding primarily covers the payment of costs in the Survey's GSA OAs and direct leases. The Survey uses its O&M funding to handle preventive and recurring maintenance, as well as general housekeeping and unexpected repairs estimated below $25,000 at its owned centers and other centers where the Survey is responsible for maintenance. According to the Survey's FY2012 *Budget Justification (Greenbook)*, DMCI "subactivity funds address the highest priority USGS facility and equipment needs according to departmental guidance." The Survey uses DMCI funds on projects estimated to be greater than $25,000. Many of the Survey's DMCI projects are a result of the Survey not performing adequate preventive maintenance and housekeeping tasks on its facilities.

The Survey does not have a construction funding line item or process to evaluate when to replace a facility. In order to offset the lack of a construction line item, the Survey developed a Budget Initiatives process in FY2007 as a means for requesting "over target" funding from Congress. These requests would provide funding for asset needs not covered through its current appropriations.

As the government strives to be more efficient and effective with the management of its real property assets, Congress and the Interior continue to tighten budgets. As a result, the Survey's total enacted O&M and rent funding continues to decrease at a rate of approximately 4%, while O&M and rent costs continue to increase at a rate of approximately 5%. In the short term this caused an increasing O&M and rent shortfall. In the long term this may cause an increase in the DM backlog. In FY2012, the Survey set out to evaluate its budget processes to assess:

- Gaps or risks associated with the current processes;
- Methods to more adequately fund its facilities;
- Other budgetary processes needed to fully fund assets; and
- The impact of the facilities budget on the Survey's science mission.

To adequately document and analyze the existing processes, the Survey interviewed several process owners and stakeholders from OMS. For the stakeholder interview questionnaire see Appendix L – Facilities Budgeting and Funding Stakeholder Interview Questionnaire.

6.2. O&M and Rent Funding

In November 2007 the Survey chartered the Facilities Budget Allocation Team (FBAT) to examine their current O&M and rent allocation process. The FBAT was led by upper management from AEI, formerly known as the Office of Administrative Policy and Services (APS). The team included members from varying levels and organizations within the Survey. Their objective was to recommend and establish an approach for effectively and efficiently allocating O&M and rent funding. Historically, the Survey used an incremental budgeting approach to distribute O&M costs to its facilities. The FBAT assessed five proposed cost models to budget and allocate O&M and rent funds with the following five decision criteria:

- **Criteria A:** Transparency
- **Criteria B:** Corporate behavior
- **Criteria C:** National process
- **Criteria D:** Cost center incentives
- **Criteria E:** Facilities issues

Figure 6.1 illustrates the five proposed cost models FBAT brainstormed and evaluated, and how they scored against each of the five decision criteria.

Model	Criteria A - Transparency	Criteria B - Corporate Behavior	Criteria C - National Process	Criteria D - Cost Center Incentives	Criteria E - Facilities Issues
Model One - "National Rate Managed at the Bureau Level"	No	No	Yes	No	No
Model Two - "Regional Rate Managed at the Regional Level"	No	No	Yes	No	No
Model Three - "National Rate Managed at the Regional Level"	No	No	Yes	No	No
Model Four - "Improved Cost Center Model"	Yes	Yes	Yes	Yes	Yes
Model Five - "Return Facilities Budget Activity (FBA) to Science Program Appropriation"	No	No	Yes	Yes	No

Figure 6.1. FBAT Analyzed Cost Models

The FBAT chose model four, "Improve Cost Center Model," based on its compatibility with each of the five criteria. This model generated the following seven procedural changes to the O&M and rent budgeting and allocation processes:

1. **Adopting a zero-based budgeting (ZBB) system**, where total budgetary funds are examined each year, instead of the historical, incremental allocation process.
2. **Equally distributing the facilities shortfall Bureau-wide**, so it is not the sole responsibility of the lowest levels of the organization.
3. **Creating a holdback**, where USGS retains a portion of its allocation to handle unforeseen facilities funding problems throughout the fiscal year.
4. **Allocating funds at the outset of the fiscal year**, without a mid-year reassessment or year-end adjustment.
5. **Creating a savings strategy**, where any IRB approved plan that has a reduction on the FBA line item of at least $100,000 will be applied equally to the Bureau-level and Regional level. The Region should distribute at least half of its 50% of savings to the cost center level.
6. **Requiring each cost center to populate a rate workbook**, with a justification between the previous year's actual costs relative to the current year's projections.
7. **Shifting funding of *special projects* from the regional to Bureau level**. With incremental base budgeting, the O&M distribution was effected by regional special project funding. Using ZBB, regional special project funding is not needed as part of the O&M distribution process.

The FBAT recommended a phased approach to the new O&M and rent allocation process, implementing ZBB in FY2009 and O&M cost modeling in FY2010.

6.2.1. FY2009 O&M and Rent Budget Process

In FY2009, the Survey implemented a ZBB system. ZBB requires that each cost center function be reviewed each year, and that each budget request be justified in complete detail by its Center Manager. In addition, the Survey must justify each full year's expenditure, rather than increase O&M costs on an inflation factor, and rent costs based on the OAs cost increase from the prior year's budget.

6.2.1.1. *Impact of Zero-Based Budgeting*

The Survey already collected the data necessary to calculate ZBB in its budgetary system, the Facilities Budget Activity (FBA) Online system, now known as FBARWS, which provided the Survey with a smooth transition from incremental budgeting to ZBB. ZBB did not impact the way the Survey assessed its O&M or rent needs, however, it impacted the allocation of funds. Under ZBB, the allocation of funds could equal the appropriated need.

6.2.2. FY2010 to Current O&M and Rent Budget Process

In FY2010, the Survey began performing cost modeling for budgeting facility O&M costs. Cost modeling takes into account ZBB. The Survey created an O&M Cost Model Team, which consisted of FMB staff and a representative from each BMS office and a few Cost Center Managers, to assess the Survey's modeling needs. The O&M Cost Model Team examined the Survey's assets and recognized a need for 30 different cost models to represent the Bureau's unique set of facilities. The O&M Cost Model Team leveraged the models of other agencies for standard space types and created additional models for space unique to the Survey and its mission. BMS office representatives and cost center staff selected which of the cost model(s) suited their cost centers and assignments were confirmed by the O&M Cost Model Team.

Currently, the Survey uses approximately 30 different cost models. The Survey leveraged three of those models from other Bureaus, and hired an architecture and engineering (A&E) firm to develop the remaining models. The A&E firm assessed facilities in Madison, Wisconsin, and Ann Arbor, Michigan to create the models. The cost models include several cost categories, including: pest control, utilities, trash services, custodial, preventive maintenance, recurring maintenance, and unexpected maintenance. In FY2010, the Survey identified a need for five more models to evaluate its more unique assets. The Survey used the cost factors and criteria established by the A&E firm to create the additional models.

6.2.2.1. *O&M and Rent Budget and Allocation Process*

The O&M and rent budget and allocation processes are complex. These processes consist of several steps, outlined below:

1. Estimating O&M and rent costs
2. Calculating and negotiating fixed cost increases
3. Calculating cost center rates and reimbursable totals
4. Calculating and distributing the shortfall

Section 6.2.2.1.1 - Updating Cost Models and *Section 6.2.2.1.2 - Cost Budgeting and Allocation Process* further explain the steps to accomplish the budgeting, allocation, and funding of O&M and rent.

6.2.2.1.1. Updating Cost Models

Each March, the O&M Cost Model Team convenes to review the cost models. At that time, BMS representatives may request to switch cost models or initiate the development of a new O&M cost model(s) used at their facilities. The BMS representative must provide a justification to switch or develop a model that may better suit the requirements of their facilities. The O&M Cost Model Team assesses the request, and performs the necessary updates to the models. The team then imports the models into FBARWS in April.

The request to adjust or develop cost models begins with Cost Center Managers. If Cost Centers Managers wish to adjust or develop a cost model, they must notify his/her local

BMS office of any facilities that require cost model adjustments or development. Cost centers must provide their BMS offices with the name of the facility and a rationale why the current O&M model does not reflect the facility's operations prior to March. The BMS office notifies FMB that a model review is requested. The BMS office provides the O&M Cost Model Team with the justification and a potential solution for the team to review and discuss annually in March.

The Survey does not reassess or update the cost factors that affect its models each year, but it does apply inflation indexes (e.g., Locality Index, Consumer Price Index) to its models each year. Additionally, the Survey uses FRPP data and metrics to adjust models. Currently, the cost models take into account the following three FRPP metrics: status, utilization (as defined in the FY2010 guidance), and mission dependency. Each of those metrics are scaled on a one to four scale and assigned a percentage according to its relation on the scale. The Survey then multiplies those three percentages to calculate the model adjuster for that asset. **Figure 6.2** provides the Survey's O&M cost model allocation scale.

Mission Dependency		Utilization		Status	
Metric Scale	Metric Adjustment	Metric Scale	Metric Adjustment	Metric Scale	Metric Adjustment
1 - Mission Critical	100%	1 - Over Utilized	100%	Active	100%
2 - Mission Dependent, Not Critical	75%	2 - Utilized	100%	Inactive	25%
3 - Not Mission Dependent	50%	3 - Under Utilized	85%	N/A	N/A
4 - Not Rated	25%	4 - Not Utilized	25%	N/A	N/A
N/A	N/A	Not Rated	100%	N/A	N/A

Figure 6.2. Performance Metric Adjustment Scale

Figure 6.3 illustrates the performance metric adjustment calculation.

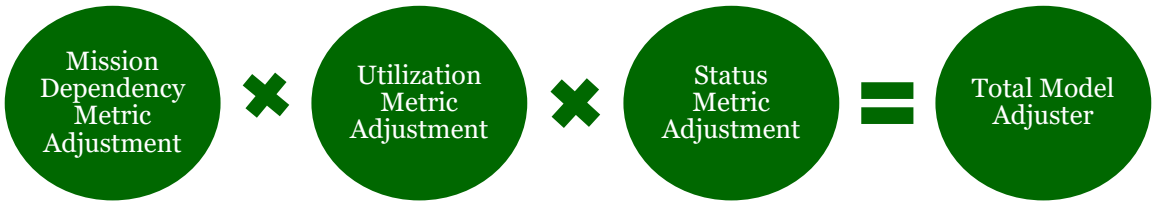

Figure 6.3. Performance Metric Adjustment Multiplication

The Survey also applies a locality factor to its cost models to more accurately assess estimated costs by region.

6.2.2.1.2. Cost Budgeting and Allocation Process

Cost Center Managers must provide cost estimates for each of their owned and rented facilities during the FBARWS "facilities estimate" module open period from March to May. Cost Center Managers provide the O&M costs calculated by the model as their owned cost estimate, and the cost listed on their OA, lease, cooperative agreement, or other form of rent agreement for their rent estimate. Once the cost centers enter their estimates into the "facilities estimate" module, their respective BMS office representatives review and validate the estimates. FMB uses those rent estimates, plus the GSA provided rent estimates to develop their *Space Budget Justification (Exhibit 54)*.

Concurrently with the preparation of the Exhibit 54, OAFM issues a data call for Cost Center Rates Workbooks for the calculation of rates to reimbursable customers. These workbooks have the following tabs: common services, facilities, reimbursable, appropriated, other than full rate, rates, cost center totals, and current versus prior year trend information. The cost estimates entered into the “facilities estimate” module of FBARWS automatically populates the facilities cost tab of the "rates workbook" module. Cost Center Managers populate the other tabs. Once the "rates workbook" module in FBARWS closes, FMB and OAFM review the workbooks. FMB reviews the facilities tab, while OAFM performs a detailed review and approval of the workbooks, and then loads the approved rates into FBMS.

Once the Survey receives its approved appropriation, FMB calculates the O&M and rent shortfall, and holdback in FBARWS. The "allocation" module in FBARWS then populates the O&M and rent allocation templates. FMB reviews the allocation and informs OAFM, who allocates the funds to cost centers. OAFM also issues O&M carry over guidance to the Cost Center Managers. The O&M carry over guidance describes how to handle excess O&M funding from the prior year's allocation, since the Survey handles its O&M appropriations in two year cycles.

One quarter after the allocation occurs, FMB drafts holdback guidance for Cost Center Managers. The AD of AEI issues the guidance to the REx, ADs, Science Center Directors, and SMOs. The Survey holds back no more than $1.5 million from both its O&M and rent allocations each year to be used as an emergency fund, for a total holdback of no more than $3 million. If Cost Center Managers have a potential emergency project that requires funding, they must submit holdback requests to OMS, which forwards them to FMB. FMB reviews holdback requests and prioritizes the projects based on criticality. The AD of AEI reviews the ranking and documentation provided by FMB, and reassesses as necessary. The AD of AEI then informs OAFM of the priority projects. OAFM allocates holdback to the projects selected by the AD of AEI. For a more detailed review of the O&M and rent budget and allocation processes see Appendix M - Current O&M and Rent Budget Process and Appendix N - Current O&M and Rent Workbook Preparation and Allocation Process.

6.2.2.2. *Budgetary Environment*

Agencies must begin their baseline budgetary request with the enacted amount from the prior year. In addition, Congress and the Interior have created additional "Conference Mark" and "Across the Board" reductions and cost savings goals in recent years. Congress provides a fixed cost increase each year, but in recent years this increase did not equal the requested fixed cost increase to cover increasing rent costs as listed in the *Exhibit 54*. Therefore, while rent and O&M costs are continually increasing, agencies must find a way to reduce their funding needs.

6.2.2.3. *Impact of the Current Process and Budgetary Environment*

From FY2011 to FY2012, the Survey's O&M and rent shortfall increased from 3% to 10.5%, and in FY2013 it is expected to grow to 20%. The Survey is assessing its O&M and rent budget allocation process to examine where the Survey can lower its shortfall, and how it can more equitably allocate costs to its cost centers. A culmination of the new budget and allocation process, the transition to FBMS, and the decreasing appropriations has created several challenges for the Survey, including the following:

- An increasing shortfall
- No method to reconcile budget to actual, as FBMS and FBARWS do not interface
- Certain cost centers reporting that they are receiving too great of an appropriation, while others communicate they are receiving too small of an appropriation

The FY2012 cost models estimated a total O&M appropriated need of approximately $28 million, and rent budget need of approximately $79 million, creating a total O&M and rent appropriated need of approximately $107 million. This $107 million appropriated need makes up 80% of the Survey's O&M and rent needs. The other 20% is funded through reimbursable dollars. The Survey's available appropriations for FY2012 are approximately $92 million, creating a $15 million shortfall. The Survey used discretionary spending to cover $4 million of shortfall, leaving the Survey with an $11 million shortfall that the Survey's programs and science centers will need to cover with program appropriated funds.

The Survey's programs are required to charge their reimbursable customers for the cost of doing business which includes facilities costs. That cost is roughly 20% of the Survey's O&M and rent needs. Concerned that this might result in the loss of customers as O&M and rent costs increase, the Survey implemented a glide path to full cost accounting methodology. Cost centers were given the option to apply an adjustment to the cost model costs over three years (FY2010 to FY2012), with the understanding that full costs need to be captured by FY2013.

6.3. DMCI Funding

The Survey follows the Interior's *Attachment G* Guidance on the proper methodology to prioritize DMCI funds. *Attachment G* provides Bureaus with a structured scoring guidance to evaluate and rank DMCI projects. The highest ranked projects are entered into the Bureaus Five Year DMCI Plan. DMCI funds address the highest priority USGS facility and equipment needs, according to *Attachment G*. Projects executed with DMCI funding are typically a result of operating or cyclic maintenance activities the Survey did not perform when scheduled. Maintenance activities include items such as replacing exhaust systems, installing fire sprinklers, or performing safety renovations.

6.3.1. FY2012 DMCI Scoring Criteria

According to the Interior's *Attachment G* Guidance, Bureaus are to contract qualified personnel to perform condition assessments at a minimum every five years. In addition, local staff are to perform a condition assessment each year. *Attachment G* Guidance states that the condition assessment provides "the condition and accuracy of the inventory and DM needs" of real property assets. Once the condition assessments are conducted, Bureau personnel score the DM needs of a project using nine ranking factors based on *Attachment G* and the API score. The API score reflects the assets' criticality to the mission of the Bureau.

Scores from *Attachment G's* nine ranking factors are multiplied by an Interior-defined weight, and then used to calculate 65% of the project's total score. The asset's API score is multiplied by a weight of ten and then used to calculate the other 35% of the project's total score, as illustrated in **Figure 6.4.**

Figure 6.4. FY2012 DMCI Project Score

If a project is comprised of multiple assets, the Bureau should use an average API score of the assets to compute the project's overall API score. **Figure 6.5** provides the Interior's nine ranking factors and their respective weights in *Attachment G* to compute a project's ranking factor score.

Rank	Criteria	Criteria Acronym	Interior Defined Weight
1	Critical Health and Safety Deferred Maintenance	CHSdm	10
2	Critical Health and Safety Capital Improvement	CHSci	9
3	Critical Resource Protection Deferred Maintenance	CRPdm	7
4	Critical Resource Protection Capital Improvement	CRPci	6
5	Energy Policy, High Performance, Sustainable Buildings Condition Index	EPHPBSci	6
6	Code Compliance Capital Improvement	CCci	4
7	Critical Mission Deferred Maintenance	CMdm	4
8	Other Deferred Maintenance	Odm	3
9	Other Capital Improvements	Oci	1

Figure 6.5. FY2012 DMCI Ranking Factors

Figure 6.6 details the formulae used to compute a project's total score.

Project Total Criteria	Total Criteria Formula	Total Project Score Multiplier	Total Project Formula
Total Ranking Factor	(%**CHSdm** x 10) + (%**CHSci** x 9) +(%**CRPdm** x 7) + (%**CRPci** x 6) + (%**EPHPBSci** x 6) + (%**CCci** x 4) + (%**CMdm** x 4) + (%**Odm** x 3) + (%**Oci** x 1)	65%	Total Ranking Factor * 65%
Total API Score	**Asset API** x 10	35%	Total API Score * 35%

Figure 6.6. FY2012 DMCI Project Scores

The Survey submits the highest scored projects with estimated project costs equal to the projected five year DMCI funding for the Interior approval in the USGS Five Year DMCI Plan.

6.3.1.1. *Future DMCI Scoring Criteria*

The Interior is revising the current DMCI scoring criteria for FY2013 and FY2014. In FY2013, the API score weight will increase from 35% to 65% of the total DMCI score, and the ranking factors will decrease from 65% to 35% of the total DMCI score. The change in weights illustrates the Interior's focus on allocating DMCI funding to assets that are most critical to the Bureau's mission for FY2013.

In FY2014, the Interior is simplifying the scoring criteria to create a less time-consuming DMCI scoring process. The Interior is modifying the scoring criteria from the nine ranking factors and API score, to four overarching scoring criteria. In addition, a points system will be used to score DMCI projects. The Interior is still assessing the

criteria with Bureaus and examining the proper point distribution for the DMCI allocation process. **Figure 6.7** lists the four ranking criteria and current point distribution.

Rank	Criteria	Criteria Acronym	Point Distribution
1	API and Facility Condition Index	API and FCI	40
2	Scope of Project Benefits	SPB	20
3	Return on Investment	ROI	20
4	Consequences of Failure to Act	CFA	20

Figure 6.7. Future DMCI Scoring Criteria

As shown in **Figure 6.8**, the Interior created a well-defined API and FCI criteria score based on the asset's API and FCI. However, the current scoring criteria for SPB, ROI, and CFA are subjective, high level guidelines.

API Score	FCI Score	Point Distribution
>80	<.15	40
>80	> .15	30
50 - 80	<.15	20
50 - 80	> .15	10
< 50	<.15	5
< 50	> .15	0

Figure 6.8. Future API and FCI Scoring Criteria

6.3.2. DMCI Budget and Allocation Process

The Survey hires an independent party to assess the repair needs of 20% of its assets each year, so that each asset is assessed every five years. The contractor provides Facility Managers with an itemized list of needed repairs and estimates. As shown in **Figure 6.9**, Facility Managers assess the cost of the repair needs and enter repairs valued at less than $25,000 into FMMS, as an annual operating cost project or work order. Facility Managers enter repairs valued at greater than $25,000 into FMMS as DM backlog work orders or projects with the notation "DMFP." The "DMFP" notation stands for DM Five Year Plan and represents a project scored and assessed for potential inclusion in the Five Year DMCI Plan.

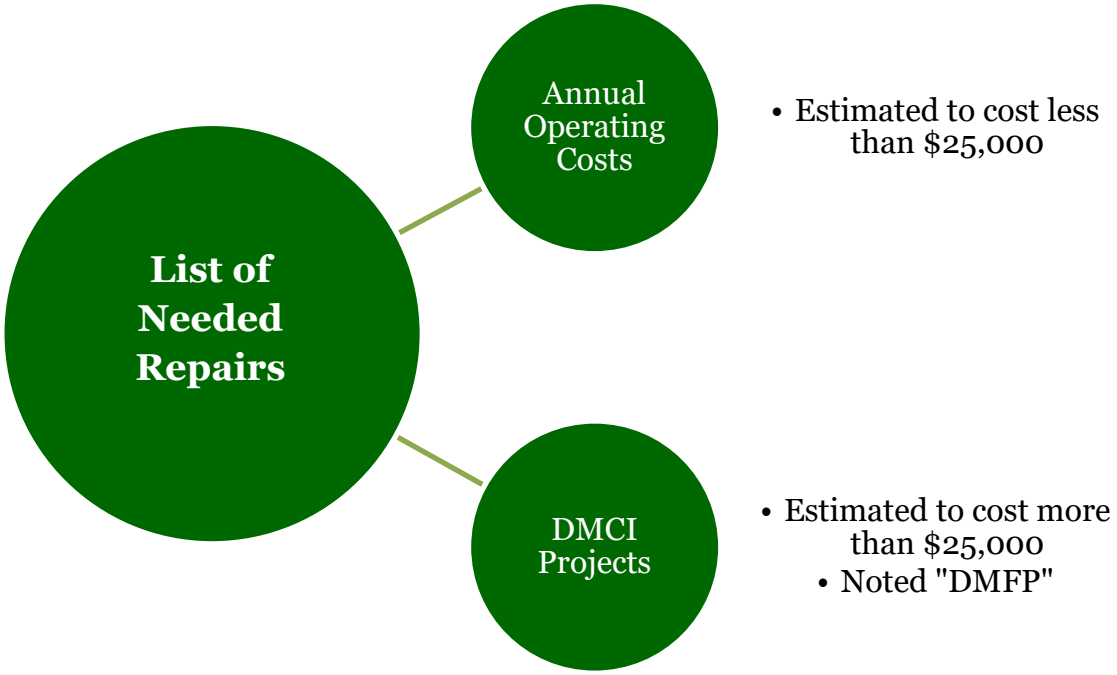

Figure 6.9. Assessment of Needed Repairs

Facility Managers assign a preliminary score for DMFP projects based on *Attachment G* guidance, and complete a system generated project data sheet (PDS). The PDS outlines the project description, cost estimates, needs, and expected benefits. Once Facility Managers complete the PDS and scoring, they mark the projects "site approved." Additionally, Facility Managers perform their own condition assessment of assets each year outside of the assessment conducted by the independent party and enter those projects and their respective scores into FMMS. FMMS calculates the DM backlog.

After Facility Managers mark projects as "site approved," BMS offices review project scores under their oversight and revise project scores as they deem necessary. After the BMS representative reviews and approves the projects, they mark those projects as "BMS approved" in FMMS. In instances where sites do not have Facility Managers, BMS office representatives must also enter those projects into FMMS, and then mark them as "BMS approved."

After BMS approval, the DMCI Scoring Team, consisting of FMB staff and a representative from each BMS office, convenes to review and rank projects. This annual meeting takes place over a two to three day period and allows BMS offices to normalize scores across the Bureau. The DMCI Scoring Team assesses whether the projects with the highest scores are the highest priority. Once scores are finalized, FMB enters the final list of priority projects into the Five Year DMCI Plan and provides it to the BMS offices and major cost centers for review. If BMS offices or cost centers have changes, FMB assesses if they need to reconvene with the representatives from the BMS offices or if FMB can make the change. FMB provides the Interior with the final Five Year DMCI Plan through the Survey's Budget Office. The Interior may respond back with questions on projects or ask the Survey to update descriptions. Once the Interior approves the Five

Year DMCI Plan, FMB marks current fiscal year projects in FMMS as "Survey approved." Once the Survey receives funding for the fiscal year, the Survey allocates funds to current fiscal year projects, and FMB marks those projects as "DOI approved" in FMMS. For a more detailed description of the DMCI scoring and allocation processes, see Appendix O - Current DMCI Process.

6.3.3. Impact of USGS DMCI Budget and Allocation Process

The intention of the Survey's process for compiling the Five Year DMCI Plan is to prioritize projects appropriately prior to submitting them to the Interior. However, USGS did experience some challenges creating the FY2013 to FY2017 five year plan (created in FY2011), including the following:

- FMB identified some large cost centers which did not have site approved and/or BMS approved projects.
- FMB noted that some projects were scored high by Facility Managers but not reviewed by their respective BMS office.
- There are possible irregularities in determining priority. For example, the highest scored project submitted by a Facility Manager, and reviewed by BMS, was rescored by FMB and BMS office representatives at the DMCI scoring session and did not make it into the five year DMCI plan.
- In some cases where large cost centers did not have site approved projects, FMB discovered that Facility Managers had important projects, but did not submit them to their BMS office due to reported workload and resource issues.

6.4. Budget Initiatives

In FY2007, the Survey developed the Budget Initiatives program to examine asset needs not accounted for in the current facilities budget, but identified by the Cost Center Managers as priority assets that require funding. This was in response to the Survey's lack of a construction line item in its budget. Approved Budget Initiatives are submitted to Congress as "over target" requests for two budget cycles in the future. Budget Initiatives do not have a minimum dollar threshold and are started at the Cost Center Manager level of the facilities organization.

6.4.1. Budget Initiatives Approval Process

OMS initiates the Budget Initiatives process by sending out a data call to Cost Center Managers. This data call requests Budget Initiatives two years in advance of the needed funding. Cost Center Managers prepare facility initiatives in the prescribed format in September, and attach existing BCAs. BCAs are voluntary submissions for Budget Initiatives and are not a requirement. The submissions of BCAs are provided as additional support to demonstrate a thorough examination of the financial impact of the proposed initiatives and its alternatives.

After Cost Center Managers prepare their initiatives and applicable attachments, they

submit them to OMSO and FMB for review. Beginning the second half of FY2012, OMSO will forward the initiatives to the FIRS in November for review. In the past, the Regional IRB approved Budget Initiatives after FMB and OMSO review. However, the Regional IRB no longer exists and FIRS will take their place in the process, once the FIRS is established. The IRB will review FIRS approved Budget Initiatives in January. The IRB decides if any Budget Initiatives should be submitted to the Director for inclusion in the budget request. FMB prepares a packet for the Director and a budget justification for IRB approved Budget Initiatives. FMB then forwards the priority initiatives with their packets and justifications to the Office of Budget and Performance (OBP). OBP reviews the budget justifications and presents the initiatives to the Director.

The Director reviews the Budget Initiatives and informs the OBP and OMS of approved initiatives. The OMS integrates the approved initiatives into the facilities budget plan and submits it to OBP to integrate into the Survey's budget. Then, OBP submits the budget with the "over target" requests to the Interior in April. For a more detailed overview of the current Budget Initiatives approval process, see Appendix P - Budget Initiatives Approval and Funding Process.

6.4.2. Impact of the Current Budget Initiatives Process

In FY2012, OMSO presented twelve Budget Initiatives to the IRB for FY2014 on behalf of Cost Center Managers. Several of those initiatives should have been considered DMCI projects due to their size and project type. Additionally, the IRB concluded that the initiatives did not include sufficient detail or a well examined financial analysis for their approval. The IRB requested that the Cost Center Managers reexamine the initiatives and present them again in the future with additional detail.

Historically the Interior and Congress have approved very few of the Survey's initiatives. The majority of the Survey's passed initiatives involved Patuxent National Wildlife Refuge (NWR). The Survey has experienced difficulty passing other less visible initiatives. Most of the Survey's initiatives do not make it past the IRB because of the budget climate.

Further, the current process creates the potential for sites to submit requests for funding through both the Budget Initiatives and DMCI processes. Although this is currently acceptable, the Survey can potentially fund a project twice through Budget Initiatives and DMCI funds. This issue has not occurred, as very few Budget Initiatives have been approved; this could, however, be a concern in the future.

6.5. Considerations

The Survey assessed its DMCI, O&M and rent, and Budget Initiatives processes. This assessment resulted in the identification of areas for process improvement. Upon further review, the Survey also identified missing funding pieces that can assist with fully funding the needs of the Survey's facilities.

6.5.1. O&M and Rent Considerations

This section contains considerations for the Survey to strategically improve its O&M and rent processes. **Figure 6.10** outlines the O&M and rent considerations.

Section	Consideration	Overview
6.5.1.1	Establish FRPP Data Governance Process	The Survey should continue to conduct a data clean-up exercise whereby FMB identifies potentially inconsistent or inaccurate data and provides it back to the BMS offices for correction.
6.5.1.2	Reassess FRPP Metrics Used in O&M Cost Models Annually	The Survey should reassess the FRPP metrics used in their cost models annually.
6.5.1.3	Incorporate Cost Model Requirements into O&M Calendar in FMMS	The Survey should establish a Survey-wide facilities O&M calendar in FMMS. The calendar would state the frequency and the date the facilities need to perform their O&M duties in accordance with cost model requirements.
6.5.1.4	Perform Budget to Actual Analysis	The Survey should assess where the modeled, allocated costs and actual expenditures vary.
6.5.1.5	Increase Training for O&M and Rent Budget and Allocation Processes	The Survey should consider implementing an annual WebEx or online training for the O&M and rent budget and allocation process. The trainings should be targeted at the different staff levels, from Cost Center Managers, to BMS office representatives, to FMB staff.
6.5.1.6	Further Examine Incentivizing Shortfall or Holdback	The Survey should examine incentivizing its Facility Managers to meet the Survey's target utilization rate of 180 office USF per person.
6.5.1.7	Provide Metrics to Executive Leadership for their Review	The Survey should provide REx and ADs with the metrics for their area to track their area's progress towards their utilization goals and other targets.
6.5.1.8	Require Contingency Planning for Shortfall	The Survey should begin requiring Cost Center Managers to provide the Facilities Program Coordinator with a contingency plan approved by the proper individuals. The contingency plan should provide details on how the cost centers will cover a potential shortfall in future budget years.
6.5.1.9	Establish Process to Evaluate the Renewal of OAs	The Survey should establish a process to evaluate an OA prior to its expiration. The process should establish criteria to evaluate if the Survey should continue with the agreement or if there is an opportunity to negotiate more favorable terms. A decision making tool can assist the Survey in the evaluation of the OA.

Section	Consideration	Overview
6.5.1.10	Pursue Alternative Financing	Research alternative financing options such as Energy Savings Performance Contracts (ESPCs), Utility Energy Savings Contracts (UESCs), and Power Purchase Agreements (PPAs) that may allow the Survey to lower O&M costs.

Figure 6.10. O&M and Rent Considerations

6.5.1.1. *Establish FRPP Data Governance Process*

Currently the Survey uses some FRPP data such as SF as an input into its O&M models and others as cost model modifiers to calculate its assets' O&M costs. Therefore, the Survey's O&M Cost Models are only as accurate as the FRPP data applied to the models. While the Survey is continually improving upon its collection and submission of FRPP data, the Survey can benefit from establishing a governance process to accelerate its data improvement efforts. The Survey should emphasize that FRPP data used in the cost models to encourage BMS offices to continually improve their data reporting. Additionally, the Survey should conduct a data clean-up exercise where FMB evaluates two to three different data fields each year to identify potentially inconsistent or inaccurate data and provide it back to the BMS offices for correction. FMB can evaluate the value over GSF and O&M costs over value to highlight outliers in the portfolio and require that BMS offices correct potentially unreliable asset data.

6.5.1.2. *Reassess FRPP Metrics Used in O&M Cost Models Annually*

The Survey should reassess the FRPP metrics used as cost model modifiers annually. Currently, the Survey uses status, utilization (as defined in the FY2010 FRPP guidance), and mission dependency to assess what percentage of cost modeled funds should be applied to its facilities. Additionally, the FRPP utilization metric used in FY2010 assesses if an asset is over utilized, utilized, underutilized, or not utilized based on the percent of space occupied versus available, not taking into account the space occupied per person. As FRPP metrics evolve, and the Survey's FRPP data becomes more accurate, the Survey should assess whether those same metrics are relevant to the O&M process. The Survey may benefit from evaluating condition index, as allocation of O&M may impact the DM backlog in the future. Status may be a more useful metric to evaluate if the Survey enters the true status of assets into its O&M models, instead of the FRPP reported status.

6.5.1.3. *Incorporate Cost Model Requirements into O&M Calendar in FMMS*

One of the factors affecting the O&M shortfall and DM backlog is the varied approach Facility Managers take to conducting O&M tasks. Some facilities are maintaining upkeep above the Survey's standards, while others are not keeping up with their day to day O&M requirements. This causes an increase in the DM backlog over time and may decrease employee moral due to poor working conditions. Some facilities not keeping up with their day to day O&M needs would prefer to reduce their O&M allocation as to also decrease their costs to their reimbursable customers.

The Survey has a checklist in FMMS which lists standard O&M preventive maintenance work orders on the Survey's equipment. FMB enters new equipment into FMMS and assigns the equipment a job plan based off of GSA guide cards. The GSA guide cards estimate the type and number of cyclical and routine maintenance needed on equipment each year by type. FMMS generates work orders off of the job plan and submits them to handheld devices in "awaiting" status five days prior to when the repair is required. End users use their handheld devices to mark completed work orders as "complete." The Survey should leverage that capability in FMMS and establish a Survey-wide facilities O&M calendar in FMMS for housekeeping and other non-preventive maintenance O&M duties. The calendar would state the frequency and the date facilities need to perform their O&M duties based off the factors listed in the O&M cost models. Facility Managers can check off their O&M activities in FMMS after completing them. This may allow the Survey to recognize how various facilities are treating their O&M allocation. Depending on their treatment, the Survey has the ability to assess if they need to adjust their cost models. This may also help train new Facility Managers on how to manage their facilities in the short term, and reduce the O&M shortfall and DM backlog in the long term.

6.5.1.4. *Perform Budget to Actual Analysis*

In November 2010, the Survey switched to a new financial and real property inventory system, FBMS. Currently FBMS does not interface with FBARWS so the Survey is only able to perform budget to actual analysis on its O&M costs at a very high level (i.e., fund level, as opposed to asset or asset class level). The Survey is creating a tool to reconcile FBARWS to FBMS. Once the Survey establishes this tool, it should perform an analysis of budget to actual expenses to assess where the modeled costs and actual expenditures vary to the greatest degree.

On a periodic basis, the Survey could review the budgeted to actual funds for each facility. By tracking facility costs, the Survey could assess which site's actuals conform to the cost models. This assessment can help the Survey decide which sites are using the wrong models and which models require updates. Based on this assessment, the Survey can evaluate sites whose expenditures are less than the cost model estimate, and ask the following questions:

- Is the correct cost model being applied? Is the model accurate/reliable?
- Are the site’s expenditures low because it does not perform proper maintenance?
- Does the site have a large DM backlog?

Site's requesting more appropriations could indicate similar concerns, including:

- Is the model accurate?
- Does the site over perform maintenance?
- Does the site have a small DM backlog?

By reviewing budget to actuals on a periodic basis, the survey can monitor if facilities are properly utilizing the correct models or properly performing maintenance and housekeeping tasks.

6.5.1.5. *Increase Training for O&M and Rent Budget and Allocation Processes*

As the O&M and rent budget and allocation processes are extremely complex processes, the Survey should continue to focus on providing its staff with training on the processes and their roles within the processes. The Survey should consider implementing an annual WebEx or online required training to those involved in the process. The trainings should be targeted at the different staff levels, from Cost Center Managers, to BMS office representatives, to FMB staff. Increasing the knowledge of staff on the O&M process may help staff identify where cost models require adjustments to continue to develop the cost modeling process. Increasing the knowledge of staff on the rent processes may help staff understand the need to plan ahead for the end of their OAs, leases, and other rent agreements.

6.5.1.6. *Further Examine Incentivizing Shortfall or Holdback*

Some of the Survey's stakeholders communicated that they would like to reduce the Survey's O&M and rent costs in the long term by reducing overall space usage. This could be accomplished by incentivizing Facility Managers to meet the Survey's target utilization rate of 180 office USF per person. USGS stakeholders examined the idea of incentivizing reduction of shortfall, so that assets performing well on space standards receive a smaller portion of the shortfall. This would incentivize Facility Managers to better manage the performance of their assets.

As part of the reorganization the Survey appointed a Senior Asset Management Officer (i.e., the AD of AEI) to oversee the space consolidation decisions of its programs. In addition, the Survey created a space team at each of their three largest sites in Denver, CO; Menlo Park, CA; and Reston, VA as well as a space waiver approval program. However, programs may not be aware of the new management structure, and their role in the process. In the past, if a space team or program could not reach a decision their collocated Regional Director could provide an ultimate decision. In the current state, they need to consult the Senior Asset Management Officer in Reston, which may not be viewed as accessible. Therefore, programs may not feel that they have a common supervisor they can ask to direct their consolidations. However, there is an equal distribution of shortfall to the programs through their percentage of costs. Therefore, if a program vacates space and other programs do not fill it, the program is still responsible for its portion of the other programs' shortfall. Additionally, a program is only required to meet the Survey's 180 office USF per person target when an OA is renewed or a new OA is established. Therefore, there is little financial incentive for programs to reach their target utilization rate.

Reducing the portion of the shortfall for programs reaching the Survey's 180 office USF per person target may motivate programs to reach that target sooner because they will be less responsible for the shortfall of other programs. In addition, programs that do not reach the 180 office USF per person target will have a greater shortfall, and be motivated to consolidate their space. As a result, programs as a whole will be motivated to consolidate their space, lowering the Survey's overall O&M and rent costs. The Survey can take a phased approach to space consolidation as OAs expire. The phased approach

can take place over the next five to ten years.

One challenge the Survey must navigate is that the utilization target only applies to office space, as the Survey has not found a way to measure the target utilization of its laboratory space (different types of laboratory space require varying amounts of space per person). Therefore, incentivizing shortfall without considering special use space could negatively impact a science program in the long term, which is counter to mission. The Survey would need to find a way to separate its office space shortfall allocation from its laboratories, warehouses, etc. In addition, the Survey would need to consider the impact incentivizing shortfall may have on certain programs whose utilization rate is above 180 office USF per person. While the incentive would improve their utilization in the long term, in the short term those programs may suffer, and may need to use program dollars to cover their ever increasing shortfall.

It may be more beneficial for the Survey to incentivize its holdback. Currently, the Survey holds back no more than $1.5M from its O&M and rent allocations each year to be used as an emergency fund, for a total holdback of no more than $3 million. If Cost Center Managers find they have a potential emergency project that requires funding, they may submit a holdback request to FMB. FMB reviews holdback requests and prioritizes them based on criticality, with the final decision resting with the AD of AEI. The Survey should examine distributing holdback funds to facilities meeting their utilization goal, or using FRPP metrics to prioritize holdback requests.

If the Survey chooses to incentivize shortfall or holdback, the Survey should assess ten assets each year against their reported data as an internal control to assess inputs. Creating this check will allow the Survey to discern if facilities are inaccurately adjusting their data to receive the holdback or shortfall.

6.5.1.7. *Provide Metrics to Executive Leadership for their Review*

The Survey should provide REx and ADs with the metrics for their area to track their area's progress towards their utilization goals and other targets. By providing the ELT with these metrics, programs may be motivated to improve their asset management and as a result reduce their O&M and rent need. In addition, the ELT will have the responsibility to oversee the operations of their programs.

6.5.1.8. *Require Contingency Planning for Shortfall*

The Survey's O&M and rent shortfall is projected to continue to grow over the coming years. Currently, FMB calculates the Survey's O&M shortfall, and populates the O&M and rent allocation templates based on the Survey's approved O&M and rent appropriation. Then Cost Center Managers establish a method to cover their portion of the shortfall through program or other funds. Cost Center Managers sometimes exhaust funding and request last minute assistance to assess how to cover their remaining shortfall from other sources. The Survey should begin requiring Cost Center Managers to provide the Facilities Program Coordinator with a contingency plan for how to cover a potential shortfall in future budget years. The Survey should require that Cost Center Managers have their contingency plans signed by their REx or ADs and a representative from the program or office funding the shortfall. This will help programs more

adequately plan for the future year.

6.5.1.9. *Establish Process to Evaluate the Renewal of OAs*

The Survey should establish a process to assess the benefit of renewing an OA, or funding a new lease. Currently the Survey has a *Space Waiver* process in place where Cost Center Managers must complete a form upon renewal of an OA or funding a new OA. The form evaluates the operating costs of the new OA, the SF, the number of occupants, etc. A waiver signed by the AD of AEI is required if operating costs are estimated to grow by more than 25%, if there is an increase in SF, if utilization is greater than 180 per office USF, or if the OA is non-cancellable. However, the Survey does not require the form be completed by a specified date. Therefore, some Cost Center Managers do not budget for the end of an OA until the lease ends or they receive a reminder from their BMS office. There is then a lost opportunity to strategically assess space needs, look for reductions in rates, or negotiate more favorable terms. The Survey should create a process with a standard timeline for when to begin assessing the renewal of an OA, and define who should be involved in the process. FMB should provide Cost Center Managers with a report periodically stating upcoming expirations in the next 36 months to initiative the process. The Survey should evaluate the use of a decision making tool to assess OAs.

6.5.1.10. *Pursue Alternative Financing*

The Survey's future O&M shortfall is estimated to increase, while O&M funding will either remain at current levels or be lowered. It is important for the Survey to use funding as efficiently as possible. One potential solution is to research green initiatives that may enable the Survey to lower O&M costs and fulfill Federal environmental initiatives. Researching green initiatives is in accordance with the Presidential memo titled *Implementation of Energy Savings Projects and Performance-Based Contracting for energy savings*, dated December 2, 2011. The memo states that "Agencies shall fully implement energy conservation measures (ECMs) in Federal buildings with a payback time of less than 10 years, consistent with real property and capital improvement plans." It also states that the Federal government shall enter into a minimum of $2 billion in performance based contracts for energy efficiency in the next two years.

These performance based contracts for energy efficiency include ESPCs, UESCs, and PPAs. Solar leasing is a form of PPA. Solar leasing has been utilized by the military and Federal agencies to cut utility costs and lessen their carbon footprint. Solar leasing allows the opportunity to obtain solar panels for little or no capital investment by leasing the solar panels instead of the customer buying them outright. The company installs and maintains the panels and the customer pays the cost of the solar energy produced. The Survey should research and evaluate whether owned assets are capable of utilizing solar leasing to lower O&M costs, which may have the potential to lower the shortfall.

6.5.2. DMCI Considerations

This section contains considerations for the Survey to strategically improve its DMCI process. **Figure 6.11** details the DMCI considerations.

Section	Consideration	Overview
6.5.2.1	Create Standard Queries as a Process Step for an Internal Control	Develop queries that will have the capability to evaluate DMCI project status and completion.
6.5.2.2	Establish Periodic DMCI Budget Allocation Training	Provide periodic DMCI training to stakeholders at each level.
6.5.2.3	Create a DMCI Project Descriptions and Scoring Ranges Guide	Develop high level Bureau standards for completing DMCI Project Descriptions. When FY2014 *Attachment G* guidance is finalized, the Survey should provide clear scoring criteria guidance.
6.5.2.4	Rotate Members of the DMCI Scoring Team	The Survey should include two to three Facility Managers on the DMCI Scoring Team, rotating through Facility Managers each year. The Survey may also examine rotating the BMS office representative included on the team.
6.5.2.5	Take a Holistic Approach to Funding Projects at a Facility	The Survey should assess the total number of projects and funding required to repair a facility. Based on the assessment, the Survey should establish if it would be beneficial to repair the asset based on the condition of the facility.
6.5.2.6	Contract with Other Agencies to Perform condition assessments	The Survey should examine if other Federal agencies or companies could perform condition assessments at a lower cost than its current contractors.

Figure 6.11. DMCI Considerations

6.5.2.1. *Create Standard Queries a Process Step for an Internal Control*

Over 100 projects are evaluated each year in the DMCI budget allocation process. BMS offices have at times overlooked the review of some projects due to their workload demands and/or knowledge that the projects will be rescored in the DMCI Scoring Team meeting. Additionally, some Facility Managers have forgotten to enter and score important projects by the deadline.

FMMS allows users to execute private or public queries to examine data. FMB should develop a public query for each of the three BMS offices to evaluate which "DMFP" projects are "site approved" and not "BMS approved." Additionally, FMB should set up a public query for each of the three BMS offices to evaluate which cost centers have not submitted "DMFP" projects. These checks can assess if each Facility Manager is entering his/her projects into FMMS, and whether BMS offices are reviewing each project. On a periodic basis, BMS office staff and FMB should review the results to assess whether "DMFP" projects exist for each cost center, and that each project approved at a site level is also reviewed at the BMS level. This should create a more complete project list for the DMCI Scoring Team's review.

6.5.2.2. *Establish Periodic DMCI Budget Allocation Training*

As USGS continues to experience turnover in its Facility Manager position and strives to continue the quality of its operations, it is important for USGS to continue to be proactive in training. Recently, USGS stakeholders noted that the quality of the DMCI scores and descriptions have lowered over the last few years. In response to this concern, USGS should initiate periodic trainings on how to evaluate projects against the scoring criteria and develop successful PDSs. The trainings should be instructed by staff at the FMB level to help establish equal access to training information by staff in each REx or mission area. FMB staff conduct annual end-user training on entering projects into FMMS. However, FMB should examine grouping these trainings or creating an annual two part training series.

6.5.2.3. *Create a DMCI Project Descriptions and Scoring Ranges Guide*

FMB staff on the DMCI Scoring Team reported that they spend several days rewriting project descriptions in less technical terms for Congress. While there is value-added in including a detailed, technical description of a project, the project description should also be understandable to those in other fields. As such, FMB should create a guide for DMCI project descriptions and provide it to Facility Managers. The guide can include a few examples of well written PDSs of projects that scored high in the past to provide context to new Facility Managers. The example PDSs should portray a variety of different project types.

In addition, the Interior is in the process of finalizing the FY2014 *Attachment G* guidance, making it subject to change in the upcoming months. However, the new guidance provides subjective measures to assess quantitative measures such as ROI. If the Interior keeps the current "maximum," "moderate," and "minimal" scoring ranges, the Survey should be prepared to provide additional guidance on what the Survey defines as "maximum," "moderate," or "minimal."

6.5.2.4. *Rotate Members of the DMCI Scoring Team*

The DMCI Scoring Team has been consistent each year with its FMB staff and BMS office representatives. This may cause staff to be complacent and perform improper scoring of some projects, knowing they will be reassessed as a team. Additionally, some BMS office representatives enter projects into FMMS, approve them, and are then involved in the ranking process as part of the DMCI Scoring Team. This creates a potential for a knowledge gap between BMS offices which have scored projects and those that not do have experience properly scoring DMCI projects. The Survey should include two to three Facility Managers on the DMCI Scoring Team, rotating through Facility Managers each year. The Survey may also examine rotating the BMS office representative included on the team. This would allow the DMCI scoring process to be more transparent and more staff would have knowledge of properly scoring DMCI projects and the DMCI budget allocation process.

6.5.2.5. *Take a Holistic Approach to Funding Projects at a Facility*

The current DMCI process evaluates each individual project in a detailed manner, but does not examine the total number of projects and funding required for each facility. The Survey should assess the total number of projects and funding required to repair the facility. During the review of the analysis, the Survey should assess whether it would be beneficial to repair the asset based on the condition of the facility. This would allow the Survey to establish which facilities require the greatest amount of repairs. In addition, the reviews would identify which repairs would have a minimal impact to the facility due to the amount of overall repairs required for it to function properly. Taking a holistic approach will also allow the Survey to assess if it may be less costly to perform the identified repairs for a facility at once. This holistic approach to DMCI funding is in line with the Interior's FY2014 *Attachment G* guidance which takes into account FCI as part of the scoring criteria.

6.5.2.6. *Contract with other Agencies to Perform Condition Assessments*

Currently the Survey spends approximately $215,000 of its DMCI appropriation on its condition assessments. The Survey should examine if other Federal agencies or companies could perform condition assessments at a lower cost than its current contractors. GSA provides basic condition assessments at a minimal fee to Federal agencies under its GSA Target Asset Review (TAR) program. USGS should compare Federal agency fees to private firm fees for similar services as part of its cost saving initiatives.

6.5.3. Budget Initiative Considerations

This section contains considerations for the Survey to strategically improve its Budget Initiatives process. **Figure 6.12** outlines the Budget Initiative considerations.

Section	Consideration	Overview
6.5.3.1	Require an Approved BCA Prior to Submitting a Budget Initiative	The Survey should require that Budget Initiative submissions include an approved BCA with a set minimum dollar threshold. Then the Survey should modify the Budget Initiative schedule for participants to have the proper time to prepare.
6.5.3.2	Assess Budget Initiatives More Thoroughly at the Lower Levels of the Organization	The Survey should require that Cost Center Managers submit their Budget Initiatives to their local supervisor for approval, and REx or AD for approval and prioritization prior to submitting to OMS.
6.5.3.3	Update the Budget Initiatives Template	The Survey should break down the justification section of the Budget Initiatives Template to include a facility and science category.

Figure 6.12. Budget Initiatives Considerations

6.5.3.1. *Require an Approved BCA Prior to Submitting a Budget Initiative*

Currently, the process for submitting a BCA is more rigorous than the process for submitting a Budget Initiative. However, approved Budget Initiatives are submitted to Congress as an "over target" request. It is technically possible for a Budget Initiative to

get passed before its financial impact is properly examined.

The Survey should require an approved BCA prior to the submittal of a Budget Initiative. This permits only well examined initiatives to be submitted for IRB approval, and potentially to Congress. Additionally, the submitter examines the alternative solutions in the BCA approval process, including if the Survey should acquire GSA provided space or buildings, before constructing owned assets, as mandated in the *OMB Circular A-11*.

6.5.3.1.1. Modify Budget Initiative Schedule to Accommodate Proper BCA Integration

Currently, the Budget Initiatives process begins in August. In order to properly integrate BCA approval into the initiatives process the Survey should begin the process in April. That would give Cost Center Managers four months to prepare a BCA and obtain the necessary approvals before the August IRB meeting. If the IRB approves the BCA in August, the Cost Center Manager can submit the BCA as an initiative to the FIRS in November, pending local approval, as shown in **Figure 6.13**.

Figure 6.13. Potential Budget Initiatives Timeline

Under special circumstances, such as organizational realignment, it may not be feasible to prepare and receive approval for a BCA prior to submitting a Budget Initiative. In those cases, a BCA can be examined concurrently with the Budget Initiative but a justification should be required in those cases to explain why a BCA was not prepared beforehand.

6.5.3.1.2. Require a Minimum Dollar Threshold

The Survey has not set a minimum dollar threshold on Budget Initiatives. Stakeholders communicated that if the Survey submits initiatives of a low dollar amount compared to the budget, such as a $50,000 request, it may be reviewed with scrutiny as the Survey has a $1 billion total budget. Based on the budget, Congress may question why the Survey could not locate the necessary funds for such a small scale project within its appropriation. Therefore, the Survey should create a minimum threshold parameter. The threshold can be between $250,000 and $500,000 for general O&M related projects, and $2 million for construction projects.

Currently BCAs and other budgetary requests examined by the IRB have a minimum threshold of $2 million. If the Survey enacts a minimum dollar threshold of $250,000 for Budget Initiatives, the Survey should consider creating a new standard. This

standard would allow BCAs of $250,000 and up be presented to the IRB as part of the Budget Initiatives process.

6.5.3.2. *Assess Budget Initiatives More Thoroughly at the Lower Levels of the Organization*

The Budget Initiatives process requires Cost Center Managers to submit requests to OMS, which reviews the requests and submits approved requests to the FIRS. As discussed in Section 6.4.2 - Impact of the Current Budget Initiatives Process, the Budget Initiatives presented to the IRB in FY2012 included projects that could be defined as DMCI projects. This issue could have been prevented if Cost Center Directors and local REx supervisors were involved in the Budget Initiatives process. The Cost Center Directors may have redirected those requests to the DMCI process. The purpose for Cost Center Directors to be more involved in the overall budget process is because of their experience and knowledge of the facilities, DMCI, rent, and O&M. They can properly discern which funding line each project should be assigned.

The Survey should also require REx or AD approval and prioritization of initiatives prior to submitting to OMS. Allowing RExs and ADs to prioritize initiatives will allow the IRB to decipher which initiatives are most important to the area. Having this understanding will allow the IRB to make more informed decisions.

The Survey should require that Cost Center Managers submit their requests to their local supervisors for approval, and then to their REx or AD for approval and prioritization prior to submitting to OMS. In addition, the Survey should consider revising the Budget Initiatives form to include a signature block for Cost Center Director, REx or AD, and OMS approval.

6.5.3.3. *Update the Budget Initiatives Template*

Currently the Budget Initiatives template requests a justification for additional funding. The Survey should break down the justification section into a facility and science category so that both topics are covered. The Survey may be more successful with Budget Initiatives if it provides a detailed explanation as to how the project helps support the science mission. The updated template can include examples and questions, including: does this project enable the facility to do more research? Does it support the sciences? OMS should work with the IRB to update the template. Involving the IRB in the process will allow OMS to develop a clearer understanding of what makes a project successful from the IRB's point of view.

6.5.4. Additional Budgetary Considerations

In addition to the Budget Initiatives assessment, O&M and rent costs, and DMCI funding, the Survey evaluated its additional facility funding needs. The evaluation resulted in the following additional budgetary considerations:

- The Survey should further investigate component renewal.
- The facilities division should work with the science programs to evaluate the impact of facilities on the Survey's science mission.
- The Survey should evaluate the efficient use of its laboratory space.

6.5.4.1. *Investigate Component Renewal*

The Interior defines component renewal as "the planned replacement of a component or system that will reach the end of its useful life based on condition and life cycle analysis within the facility's lifetime. Examples of component renewals include roof systems utility components, pavement, and other major dynamic equipment."[24] Additionally, the Interior outlines that individual components of constructed assets should be tracked in FMMS, to adequately plan for and monitor component renewal costs.

In the Interior's *Sustainment Cost Template for Constructed Assets*, the Interior provides a component renewal calculation worksheet to be filled out for each constructed asset. Interior specifies in this document that component renewal relates to the planned replacement of components with a useful life of greater than ten years, while preventive maintenance examines costs that occur every one to ten years.

Currently, the Survey tracks components in FMMS for preventive maintenance, but not for component renewal. Additionally, the Survey calculates the useful life of its assets for accounting purposes, but does not apply those useful life counts to its facilities for the purposes of component renewal. Instead the Survey waits for the component or asset to require repair, and then include it in the DM backlog. The Survey has taken this approach due to the absence of a funding source for component renewal. According to the Bureau of Land Management's (BLM) AMP, BLM developed a holistic approach to the funding of its constructed assets, including component renewal. The Survey should examine how other Bureaus, such as BLM, are funding component renewal and develop a process to similarly fund it.

6.5.4.2. *Work with Science Programs to Evaluate the Impact of Facilities on Science Mission*

The Survey funds its science mission at approximately ten times the amount that it funds facilities. Facilities are designed to support the science mission. Therefore, OMS should work with the science programs to assess the extent to which the current facilities are supporting the mission. If a facility needs replacement, science programs can work with the facilities staff to drive the replacement of that facility. For example, the Survey has several costly libraries, offices used as storage space, and data centers

[24]Department of the Interior, *Policy on Deferred Maintenance, Current Replacement Value and Facility Condition Index in Life-Cycle Cost Management*, 2008.

that may no longer support the mission. The Survey has costly libraries in Reston, Denver, and Menlo Park. For more information on these libraries see Section 5.2.1.1 - Reduce Library Collections and Space. OMS should work with the science programs to periodically assess the mission's needs and how that impacts the Survey's real property portfolio. Funds tied up in under-utilized facilities or spaces can be used for another facility or returned to science.

6.5.4.3. *Evaluate the Efficient Use of Laboratory Space*

The Survey has several expensive laboratory spaces that are not currently utilized but funded through facilities dollars. The Survey should find a way to evaluate the efficient use of its laboratory space. The Survey can assess if space is used for its designated purpose and if less costly space is available in the Survey's portfolio. For example, some laboratory spaces, such as the Reston Solid State Physics laboratory, are not housing hazardous materials and are currently used as storage space. For more information on the Solid State Physics laboratory see Appendix I - Solid State Physics Laboratory Business Case Analysis. The Survey has several warehouses that can house its science collections safely and more cost effectively.

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7.0 Implementation Strategies

The Survey is required to comply with EO 13327, *Federal Real Property Asset Management*. EO 13327 requires agencies to, "promote the efficient and economical use of America's real property assets and assure management accountability for implementing Federal property management reforms." Additionally, the EO mandates that Federal agencies comply with the following activities:

- Prioritize actions to improve the operational and financial management of every agency's real property inventory; and
- Support the goals of the agency's overall strategic plan with asset management strategies.

To address these goals and requirements, as well as improve the management, funding, and performance of its asset portfolio, the Survey developed a SFMP (See **Figure 7.1**). The SFMP addresses how the Survey's current real property portfolio meets its mission and diverse science programs, as well as challenges presented by reductions in facilities funding.

Figure 7.1 SFMP Goals

The SFMP, and the activities and information contained within, is an integral part of the Survey's facility operations. The SFMP addresses how facilities support the mission, including opportunities for improvement, and helping the Survey prepare for the future in management of its facilities. **Figure 7.2** provides a holistic framework linking the activities outlined in the SFMP and other documents (e.g., CSIP) to how the Survey supports the overall mission.

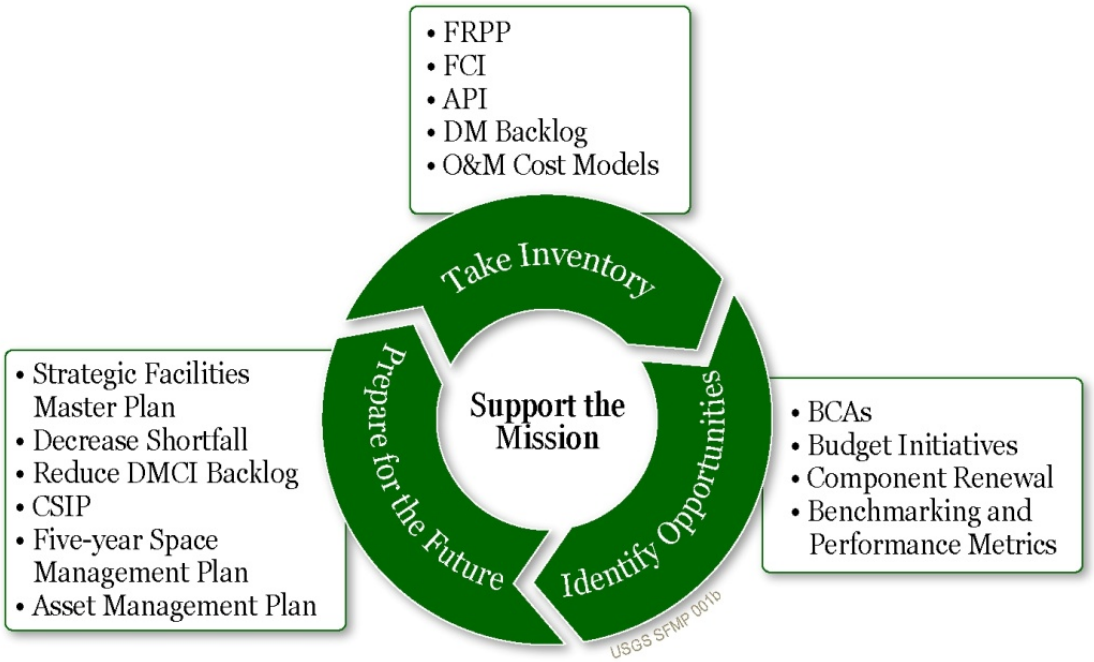

Figure 7.2 SFMP Framework

The Survey identified opportunities for optimally funding facilities, as well as detailed plans for shorter term actions that can enable the Survey to work toward the goal of meeting compliance requirements and operating within available funding. The SFMP incorporates the following considerations for the Survey:

- Improve decisions and processes regarding facilities operations and investments;
- Identify cost avoidance opportunities;
- Better integrate science-facilities planning;
- Strengthen budgetary processes; and
- Improve facilities' support of Bureau science programs.

Due to challenges presented by reductions in facilities funding, and budget and resource constraints (e.g., time, level of effort), the Survey may not be able to implement the opportunities concurrently, or within the near future. To address this challenge, the Survey developed a prioritization framework to assess whether an opportunity was a high, medium-high, medium-low, or low priority when compared to the other opportunities.

7.1. Considerations and Opportunities

Through the activities (See **Figure 7.3**) performed as part of the SFMP update and opportunities presented in the CSIP, the Survey identified a number of considerations and opportunities to improve management, funding, and performance of its asset portfolio.

SFMP Reference	Activity
Section 3.0 - Alignment of USGS Facilities to Mission	Aligned the Survey's facilities to the mission through API scores.
Section 4.0 - Baseline Performance Metric Improvement Plan and Benchmarking Matrix	Identified performance metrics and assessed the performance of the Survey's facilities to other Federal agencies and industries.
Section 5.0 - Business Case Analysis	Assessed the feasibility of opportunities to reduce current facilities costs at the Survey's three main centers and compiled information into Business Cases Analyses (BCAs).
Section 6.0 – Facilities Budget and Funding Assessment	Assessed the current facilities budget and funding strategies for gaps. Identified opportunities for minimizing the facilities financial shortfall and DM backlog.

Figure 7.3 SFMP Sections and Activities

The considerations presented throughout the SFMP may help avoid costs or enhance processes around the Survey's facilities and budget planning. The considerations were compiled into an implementation plan, provided in Section 7.3 - Implementation Plan, to include detail on the strategy, as well as high-level steps that may be used to implement the strategy. The opportunities are categorized into the following sections:

- Opportunity Identification;
- Asset Mission Alignment;
- Asset Inventory Analysis;
- Business Case Development;
- Budget Strategies - O&M and Rent Considerations;
- Budget Strategies - DMCI Considerations;
- Budget Strategies - Budget Initiative Considerations; and
- Budget Strategies - Additional Budgetary Considerations.

These implementation categories are based on the FY2005 SFMP areas for implementation planning, but were adapted to fit the current needs of the Survey, as well as the updated SFMP.

7.2. Opportunity Criteria and Prioritization Framework

The opportunities presented throughout the SFMP provide the Survey with actionable items to pursue to achieve cost savings or avoidances. To provide additional detail on how to implement these opportunities, the implementation plan includes a definition of the opportunity, potential implementation steps, and other key components for the implementation strategies. The following provides additional information on the key components and how the Survey assessed the opportunities:[25]

- **Level of Effort** - Level of effort is assigned based on the estimated number of employees or full time equivalents (FTE), given a specified period of time, to implement the opportunity. **Figure 7.4** provides the scoring used to assess the level of effort needed for the opportunity.

Assessment	Definition
High	FTE effort is estimated to be greater than one FTE for more than six months.
Medium	FTE effort is considered to be outside the normal responsibilities of one FTE for less than six months.
Low	FTE effort is negligible; activities may be performed as responsibilities of an existing employee(s).

Figure 7.4 Level of Effort Assessment

- **Potential Cost Savings or Avoidances -** This criterion categorizes the potential cost savings or avoidances the Survey may realize if the opportunity is implemented. **Figure 7.5** provides the scoring used to assess the potential cost savings or avoidances of the opportunity.

Assessment	Definition
Potential for Significant Cost Savings or Avoidances	The opportunity has potential for significant cost savings or avoidances.
Potential for Some Cost Savings or Avoidances	The opportunity has potential for some cost savings or avoidances.
No Potential for Cost Savings or Avoidances	The opportunity has no, or negligible, potential for cost savings or avoidances.

Figure 7.5 Potential Cost Savings or Avoidances Assessment

[25] The categorizations are based on the proposed implementation strategies. Should the Survey change the implementation strategies the criteria should be reassessed.

- **Compliance -** This criterion categorizes how an opportunity contributes to complying with Federal (e.g., EOs), Interior, and Survey requirements**. Figure 7.6** provides the scoring for assessing how an opportunity meets compliance requirements.

Assessment	Definition
Meets	The opportunity meets compliance requirements (e.g., Federal, Interior, or Survey requirements).
Somewhat Meets	The opportunity somewhat meets, or helps to work towards meeting compliance requirements (e.g., Federal, Interior, or Survey requirements)
Does not Meet	The opportunity does not meet compliance requirements (e.g., Federal, Interior, or Survey requirements) or is not associated with compliance.

Figure 7.6 Compliance Assessment

- **Mission Delivery -** This criterion categorizes how an opportunity impacts mission delivery. **Figure 7.7** provides the scoring for assessing how beneficial an opportunity is to the Survey's mission.

Assessment	Definition
Positive	The opportunity positively impacts mission delivery.
Somewhat Positive	The opportunity somewhat positively impacts mission delivery.
No Impact	The opportunity does not impact mission delivery.

Figure 7.7 Mission Delivery Assessment

- **Time to Achieve** - The time to achieve is assigned based on the estimated timeframe for implementing the opportunity. **Figure 7.8** provides the scoring used to categorize the time to achieve the opportunity.

Assessment	Definition
Short	Implementation of the opportunity may be completed in fewer than three months.
Near	Implementation of the opportunity may be completed between three months and one year.
Long	Implementation of the opportunity may be completed in greater than one year.

Figure 7.8 Time to Achieve Assessment

- **Estimated Costs -** Estimated costs are based on how much it may cost (i.e., in dollars, not time or FTEs) to implement a given opportunity. Costs are an estimate and are dependent on the implementation of the opportunity. For example, estimated costs include external contracting (e.g., relocation services), software costs, or other costs the Survey would pay outside of employee salaries. The Survey prepared the cost estimates and recognizes the costs are subject to change based on how the opportunity is implemented. Estimates may also include recurring costs, if applicable. **Figure 7.9** provides the scoring used to assess the estimated cost needed for the opportunity.

Assessment	Definition
High	Costs are estimated to be over $1 million.
Medium	Costs are estimated to be between $500,000, and less than $1 million.
Low	Costs are estimated to be less than $500,000.
No Cost	Costs are estimated to be negligible or no cost.

Figure 7.9 Estimated Costs Assessment

- **Priority -** Priority is assigned based on the prioritization framework outlined in Section 7.2.1 - Prioritization Framework, below.

7.2.1. Prioritization Framework

The opportunities presented throughout the SFMP range in level of effort, estimated costs, and cost savings or avoidances, among other factors. Given declining budgets and increased scrutiny on government spending, it is important for the Survey to identify which opportunities appear to have the most optimal cost/benefit relationship, to effectively identify which opportunities to pursue first.

The prioritization framework accounts for the different organizational interests across the Survey. Each organization has criteria it prioritizes as most important in meeting the Survey's mission. **Figure 7.10** displays these organizational interests and how the applicable criteria relate to the relative prioritization score.

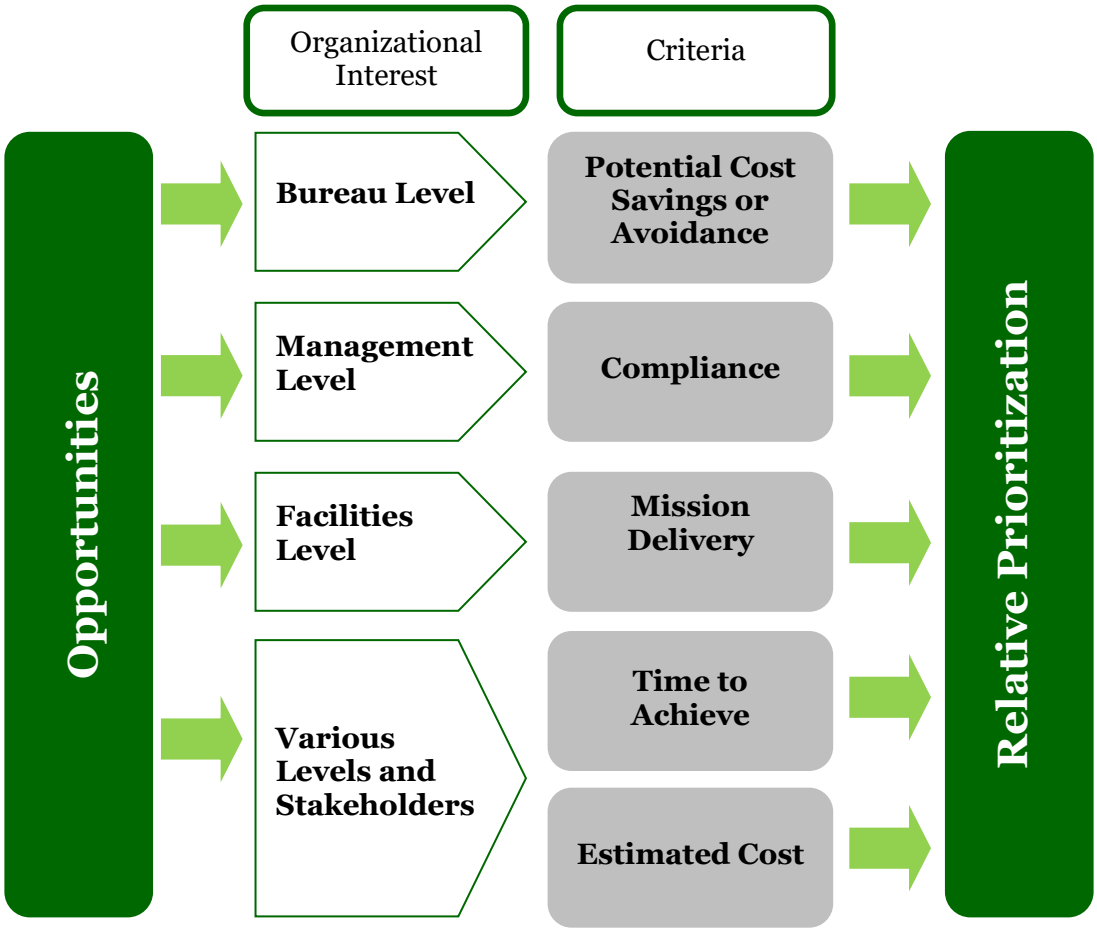

Figure 7.10 Prioritization Framework

At each level of the organization, there are various areas of focus, and therefore, different priorities. The following provides detail on the priorities at the different stakeholder levels:

- **Bureau Level -** At the Bureau level, stakeholders are likely to prioritize initiatives based on potential cost savings and avoidances. For example, opportunities that help offset the shortfall would rank high among these stakeholders.
- **Management Level -** At the management level, stakeholders are likely to prioritize initiatives based on how they help meet compliance requirements. For example, opportunities that help the Survey get closer to the Interior's utilization requirement average of 180 office USF per person would rank high among these stakeholders.
- **Facility Level -** At the facility level, stakeholders are likely to prioritize initiatives that improve mission delivery. For example, an initiative that helps reduce facilities cost and enables cost centers to spend their science funding on the mission, rather than cover a budget shortfall, would rank high among these stakeholders. Additionally, Facility Managers may rank opportunities that

improve facility performance to accomplish the mission higher than other stakeholders.

- **Various Levels and Stakeholders -** Various management levels and stakeholders across the Survey are likely to prioritize initiatives based on their estimated cost and time to achieve. With decreasing budgets, and the expectation for high performance, stakeholders at different levels consider how much an opportunity costs to implement, and the time frame. For example, an initiative that is quick to implement and requires minimal funding would likely rank high among stakeholders.

A high priority opportunity may be one that addresses the five identified criteria. A low priority opportunity, however, may be one that only addresses one or two of these factors. The opportunities were assessed based on the proposed implementation strategies, and would change should multiple opportunities be implemented at once, or if the implementation strategies change.

Figure 7.11 displays a summary of the opportunities in the implementation plan and their relative prioritization scores. The Survey used the framework as described above to prioritize the opportunities. Section 7.3 - Implementation Plan provides the detail for the opportunities.

Priority	Opportunity
High	Emphasize BCA funding strategies.
	Enhance API Scoring Process.
	Incorporate cost model requirements into O&M calendar in FMMS.
	Improve process to evaluate the renewal of OAs.
	Create a DMCI project descriptions and scoring ranges guide.
	Improve space utilization at the J.W. Powell Building and Solid State Physics Laboratory (National Center) in Reston, VA.
	Reduce portfolio of GSA provided space.
	Conduct data improvement assessment for GSA FRPC Metrics.
	Decrease warehouse and storage space.
	Work closely with GSA to release space.
	Improve FRPP data governance process.
	Create standard queries as a process step for an internal control.
	Take a holistic approach to funding projects at a facility.
	Require an approved BCA prior to submitting a Budget Initiative.
Medium-High	Improve space utilization at Menlo Park, CA.
	Reduce the number of non-mission critical direct leases.
	Continue space consolidation.
	Improve space utilization at the DFC.

Priority	Opportunity
	Leverage an API Scoring Tool
	Assess library collections and space.
	Further examine incentivizing shortfall or holdback.
	Provide metrics to executive leadership for their review.
	Pursue alternative funding for financing of projects.
	Rotate members of the DMCI Scoring Team.
	Assess Budget Initiatives more thoroughly at the lower levels of the organization.
	Update the Budget Initiatives template.
	Investigate component renewal.
	Work with science programs to evaluate the impact of facilities on science mission.
Medium-Low	Increase the number of teleworkers.
	Dispose non-mission critical and high-cost assets.
	Utilize non-FRPP portfolio-wide metrics.
	Reassess FRPP metrics used in O&M cost models annually.
	Require contingency planning for shortfall.
Low	Assess laboratory utilization.
	Increase training for O&M and rent budget and allocation process.
	Establish periodic DMCI budget allocation training.
	Automate data collection.
	Perform budget to actual analysis.

Figure 7.11 Relative Prioritization Outcome

7.3. Implementation Plan

The figure below displays the opportunities, and their associated implementation strategies, presented throughout the SFMP. The implementation categories are based on the 2005 SFMP areas for implementation planning, but were adapted to fit the current needs of the Survey, as well as the updated SFMP. The related criteria (e.g., level of effort, priority) are dependent on the proposed implementation strategy and are subject to change based on the Survey's actual implementation approach. In addition, the level of effort is based on the associated opportunity and may change if other opportunities are implemented in tandem.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Opportunity Identification						
1. Improve space utilization at the National Center in Reston, VA.	**Description:** With decreasing budgets and increasing rent costs at the J.W. Powell Building, the Survey may achieve significant facility cost reductions when releasing space back to GSA. The Survey's current utilization at the J.W. Powell Building is approximately 308 USF per person, excluding special use space (e.g., laboratories, common areas). The Survey and Space Assessment Team (the Team) assessed the space utilization at the J.W. Powell Building in Reston, VA and developed an approach to consolidate its GSA provided space. The Team identified a phased approach methodology to vacate approximately 180,200 RSF to achieve a utilization of approximately 218 USF per person over two phases. The first phase involves the Survey vacating approximately 147,858 RSF to achieve a utilization of approximately 232 USF per person. The Survey's preference is to collocate with another Bureau before releasing space to GSA. To date, the Survey has vacated 27,000 RSF and provided space to the Interior for a computer center and 74,000 RSF to a Federal tenant, which provides cost avoidance savings of approximately $983,000 annually. The Survey should also identify if cost centers in the J.W. Powell Building can vacate space and move into the Solid State Physics Laboratory which is adjacent to the J.W. Powell Building. **Status:** The National Center Space Team is reviewing the National Center Consolidation Report and identifying potential modifications to the phased approach. The Survey is also developing a project plan for the execution of the consolidation approach and identifying potential tenants to occupy the space. The Survey intends to release approximately 94,000 RSF to GSA by the end of 2012 by implementing the first three steps of Phase 1 in the consolidation plan. Through the SFMP BCA process, the Survey assessed the feasibility of locating a cost center in the Solid States Physics Laboratory (See Appendix H). This plan helps the Survey to get the National Center close to 180 office USF per person, but does not fully meet compliance requirements.	CSIP Section I, SFMP Appendix I	1. Meet with National Center Space Team to discuss proposed steps. 2. Assess feasibility of moving cost centers to the Solid State Physics Laboratory. 3. Work with GSA to identify marketable blocks of space to release. 4. Implement Project Management Office (PMO) to coordinate activities. 5. Work with Program Offices and Mission Areas to identify space needs and prepare program of requirements. 6. Perform physical space moves over proposed timeframe. 7. Continue to increase teleworking efforts by encouraging staff to work from home or other locations. 8. Seek to eliminate space for contractors and shift those costs out of the facilities activity budget.	**High -** The associated level of effort is high as multiple FTE may be required to implement the plans, both internally (e.g., National Operations Branch) and externally (e.g., moving contractors).	• Avoids approximately $4.2 million in lease costs, per year, based on FY2012 annual lease costs. • Helps the Survey work towards reducing GSA provided real property inventory. • Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person. • Increases collocation efforts with other Bureaus. • Reduces greenhouse gas (GHG) emissions by decreasing utility costs. • Increases cost avoidances in regards to rent increases.	**High -** • Potential Cost Savings or Avoidances - **Significant;** the opportunity prevents the potential for avoiding approximately $4.2 million in lease costs over the two phased approach. • Compliance - **Somewhat meets;** the opportunity helps the Survey work towards the Interior's utilization requirement of 180 office USF per person, but does not fully meet the requirement. • Mission Delivery - **Somewhat positive;** reducing facility costs allows cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. • Time to Achieve - **Near**; the Survey expects to release marketable space by late 2012. Cost centers are moving and vacating their space using a phased approach. • Estimated Cost - **Medium;** the Team estimates the project cost (e.g., improvements or the reconfiguring of new space to meet requirements), space planning cost (e.g., facility planning, furniture management, plotting services, architectural services), and physical relocation to be approximately $762,000 for steps 1-3 of Phase 1.[26]

[26] Cost per rentable square foot and relocations are based on the headquarters estimate provided in the IFMA, "Annual Facility Costs Benchmark Research Reports #30." RSF includes the building exterior gross area minus exterior walls, major vertical penetrations, interior parking space, and void areas.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
2. Improve space utilization at Menlo Park, CA.	**Description:** As a major center, the Survey places a primary emphasis on space utilization improvements and consolidation efforts in Menlo Park, CA. The Survey relocated a portion of offices from the Menlo Park campus to Santa Cruz, CA. These moves resulted in the release of approximately 42,725 RSF to GSA in FY2011 but were offset by an increase of 40,943 RSF in Santa Cruz. The net savings is approximately 1,782 RSF. The cost avoidance of this move is approximately $360,000 annually due to the expected GSA rate increase in FY2013 from a recent rent appraisal. Additional savings through improved utilization may yield an additional 14,000 RSF, resulting in annual cost savings of $325,000. **Status**: As part of the SFMP BCA process, the Survey assessed the feasibility of multiple alternatives for consolidation at different Menlo Park buildings and the Santa Cruz facility. The Menlo Park Space Team identified Building 3 as the desired facility to vacate, as it is an older, lower-quality facility. The OA for the building expires in September 2012; therefore requiring a decision on space consolidation efforts in a timely manner. The Menlo Park Space Team worked with GSA to release space on the first floor of Building 3, avoiding a significant cost increase as rent was set to increase by 47%, according to GSA rent appraisal estimates for FY2013. In this case, the residents of Building 3 will consolidate into other buildings on the campus. The opportunity is based off of Alternative 1 in the Menlo Park BCA (See Appendix J).	CSIP Section I, Appendix K	1. Coordinate space needs and potential moves with Menlo Park Space Team. 2. Develop a plan for consolidation and relocation activities. 3. Work with GSA to confirm space to release. 4. Work with cost centers to identify space needs and prepare program of requirements. 5. Perform physical space moves over proposed timeframe. 6. Seek to eliminate space for contractors and shift those costs out of the facilities activity budget. 7. Communicate long term plan of space needs with GSA (e.g., new building in location of Building 3).	**Medium -** To vacate the remaining space on the first floor of Building 3, approximately 90 employees, 6 cost centers, and the map store will need to consolidate and relocate. However, the space the cost centers are relocating to require little renovation.	• Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person. • Increases collaboration/ communication between scientists and costs centers. • Helps reduce GHG emissions by decreasing utility costs. • Increases cost avoidances of approximately $1.4 million in rent and DHS fees. • Helps the Survey work towards reducing GSA provided real property inventory. • Progresses the Survey toward the goal of a high quality facility that can withstand an earthquake.	**Medium-High -** • Potential Cost Savings or Avoidances - **Significant**; as GSA is expected to increase rent costs for the building by 47%, releasing space can help avoid potential significant costs. • Compliance - **Somewhat Meets;** the opportunity helps the Survey work towards the Interior's utilization requirement of 180 office USF per person, but does not fully meet the requirement. • Mission Delivery - **Somewhat positive**; reducing facility costs allows cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. The opportunity also supports Menlo Park's long term goal of working with GSA to construct a building to house the earthquake science center, enabling them to perform their science during earthquakes. • Time to Achieve - **Near**; the Menlo Park Space Team plans to vacate the remaining space by September 2012. • Estimated Cost - **Medium**; vacating the first floor of Building 3 should cost approximately $675,000, which includes moving costs, TIs, and IT/telecommunications costs.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
3. Increase the number of teleworkers.	**Description:** The Survey's Senior Asset Management Officer issued a memo asking to increase the number of teleworkers. Various Federal initiatives are calling for implementation of teleworking to reduce costs and GHG emissions. Survey leadership has not yet provided Bureau-wide telework guidelines or requirements; however, some organizations have developed telework guidelines on their own to set policies and space standards (e.g., AEI). On August 27, 2010 the AD of AEI issued a memo asking each AEI Office Chief to submit a plan in October 2010 to increase the number of employees who telework. In the future, employees who telework three days or more per week are required to share a workstation. The AEI Office Chiefs have been instructed to establish shared workstations in order to consolidate and liberate space that can be removed from the real property inventory, or can be repurposed for a higher-priority use. **Status:** In many cases, an employee's job function prevents him/her from teleworking (e.g., scientists with laboratory experiments). However, each organization is working to implement its own teleworking plan. The Survey does not currently track telework information at the National level or, in many cases, at the campus or facility level.	CSIP Section I	1. Establish a telework policy that can be replicated across regional areas and science programs. 2. Identify opportunities where the Survey can increase teleworkers and decrease utilization by providing space to another entity or releasing space back to GSA. 3. Identify whether employees are able to telework based on the job function. 4. Work with regional areas and science programs to monitor teleworking and adjust space needs based on telework changes, whether it is vacating an office to occupy a cubicle or sharing a telework space. 5. Identify if multiple employees are located closer to another facility, or within equidistance of a facility with a lesser cost per RSF. 6. Assess the feasibility of allowing the employee to telework or station their workspace at an alternate facility. The following information can help identify if teleworking and/or moving program areas is feasible: • Employee zip code; • Employee duty station; • Survey facilities within the vicinity of the employee's organizational code; • Employee organization code with organization description; and • Employee occupational series.	**Low -** The effort associated with increasing the number of teleworkers is low as there is negligible amount of additional work for the Survey. The participants should provide appropriate paper work and participate in required trainings; however, their managers should have minimal additional work.	• Increases collaboration for scientists. • Increases the potential for additional space for science-specific use (e.g., lab space). • Enables cost avoidances related to overhead/administrative space. • Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person. • Helps the Survey work towards reducing GSA provided real property inventory. • Repurposes freed up assets for higher-priority use. • Addresses Federal telework initiatives. • Decreases employee commuter travel, which falls under EO 13514 scope 3 emissions goals.	**Medium-Low -** • Potential Cost Savings or Avoidances - **Some**; there is potential for some cost savings. The opportunity may allow the Survey to release space in GSA provided facilities, as well as realize avoidances in overhead/ administrative space. • Compliance - **Somewhat meets**; somewhat meets the purpose of the Telework Mandate Act, as well as supports EO 13514. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Long**; this opportunity may take longer than a year to implement as the Survey should develop telework policies, and identify and enable employees to telework. In addition, this opportunity is likely to be ongoing for the foreseeable future. • Estimated Cost - **Low;** there is little to no cost associated with increasing the number of teleworkers. The Survey should consider the associated costs for moving the employee's workstation should the manager or cost center have policies on workstations size for teleworkers. In addition, if the employee does not have a laptop or portable computer, the Survey may have to issue a laptop before the employee can telework.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
4. Dispose non-mission critical and high-cost assets.	**Description:** The Survey tracks excess/inactive inventory, including disposal plans, and savings and cost avoidances. The Survey uses this information to provide an asset-level analysis and plan for excess/inactive assets to make efficient use of its real property portfolio. The analysis also helps to address regulation and compliance related to rapid disposal of assets. **Status:** According to the CSIP, the Survey has four assets listed as inactive and zero assets with a status of excess.	CSIP Section II	1. Design a tracking mechanism to proactively identify assets ready for disposal. For example, assets with performance metrics that do not meet standards (e.g., high utilization rates, low API score, high FCI) should be considered for disposal. 2. Develop an extended list of assets that can be marked for disposal. Assets that are low priority and are in poor condition should be considered assets for disposal. The followings steps should be taken to perform the analysis: • Eliminate assets that are mission critical from the analysis (e.g., API score > 50). • Identify assets that are in bad condition (e.g., FCI > 0.15). • Identify assets that have annual operating costs (e.g., > $12 per RSF for owned assets). • Identify buildings that have a high cost of repair needs (e.g., >$50 per RSF). 3. Consider the costs for disposing the assets or "moth ball" the asset should additional funds be available at a later date to address repairs.	**Medium -** Disposing excess/inactive assets may require external resources (e.g., moving or construction companies).	• Helps ensure that mission-critical assets (i.e., the assets that most support the science mission) are receiving the most funding. • Helps to reduce GHG emissions. • Reduces O&M costs. • Helps to reduce DM backlog.	**Medium-Low -** • Potential Cost Savings or Avoidances - **Significant**; disposing of excess/inactive inventory has the potential for significant cost savings due to the decreases in the associated O&M funding for the assets. • Compliance - **Somewhat meets;** disposing of non-mission critical assets helps the Survey meet the Interior's Attachment G guidance to direct limited resources to high priority assets, and to reduce DM. Disposing of these assets may help decrease the DM backlog should the asset have associated projects requiring DM funding. • Mission Delivery - **No impact**; disposing of non-mission critical assets should have no impact to the mission. • Time to Achieve - **Long**; this opportunity may take longer than a year to implement, and is likely to be a recurring assessment. • Estimated Cost - **Low** - the estimated cost is dependent on the type of asset disposal, but is expected to be low.
5. Reduce the number of non-mission critical direct leases.	**Description:** In direct response to anticipated increases in lease costs in the near future, the Survey is planning to perform an analysis on expiring direct leases to identify additional lease reductions and terminations. **Status:** Based on initial analysis by the Survey, 33 direct leases are expiring within calendar year (CY) 2012. The Survey plans to retain all but two of these leases as either a succeeding lease or via a new OA.	CSIP Section IV	1. Identify expiring direct leases. 2. Evaluate utilization rates and lease cost per SF to assess which leases to terminate. Assets with high utilization rates, high lease costs, and collocation options should be considered for termination. 3. Identify owned and leased facilities near the expiring lease site and evaluate lease cost per SF and utilization rates. 4. Identify and assess consequences for termination of lease agreements. 5. Identify feasible locations for relocating employees in direct lease buildings to other owned or leased facilities.	**High -** Identifying space to vacate, as well as coordinating the physical space moves is time and resource intensive. Multiple FTEs should be required to implement the plans, both internal (e.g., BMS) and external (e.g., moving contractors).	• Reduces lease costs which may help to reduce the facilities shortfall impacting science budgets. • Helps reduce GHG emissions by decreasing utility costs. • Improves space efficiency. • Increases cost avoidances in regards to rent increases.	**Medium-High -** • Potential Cost Savings or Avoidances - **Some**; reducing the number of direct leases may not necessarily equate to significant cost savings or avoidances. However, moving from direct leased space to GSA or owned space may help avoid increases in lease costs. • Compliance - **Meets**; per the Federal Acquisition Regulation (FAR), OMB requires agencies to move to GSA provided space, where available, when their leases expire and require them to enter new lease agreements. In addition, entering a new lease agreement will require the Survey to meet the Interior's utilization goal of 180 office SF per person. • Mission Delivery - **Somewhat positive;** decreasing space needs and lease costs may result in reduced facilities spending, allowing funds to be spent on the science mission. • Time to Achieve - **Long;** this opportunity may be a recurring activity. In addition, the Survey will have direct leases expiring in upcoming years. • Estimated Cost - **Medium**; the estimated costs will vary based on the size of the facility the Survey vacates, and the location and type of space available for relocation.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
6. Reduce portfolio of GSA provided space.	**Description:** GSA provided space accounts for nearly 70% of the space the Survey occupies. Funding gaps are largely attributed to rent appraisal increases at GSA owned facilities. The Survey has a total of 64 GSA OAs expiring prior to the end of CY2012. The Survey plans to retain all but three of these OAs. USGS has upcoming rent increases of approximately $2.3 million at the J.W. Powell Building in Reston, VA and $4.7 at Menlo Park, CA. There are an additional 74 OAs expiring prior to the end of CY2015. USGS plans to retain all but one of these OAs. **Current Status:** The Survey has identified centers where there are multiple GSA provided buildings and assessed the feasibility for consolidation. For example, the Survey is vacating space at the three major centers in Reston, VA, Menlo Park, CA, and Denver, CO. In addition, the Survey is currently identifying opportunities in Anchorage, AK and Flagstaff, AZ.	CSIP Section IV, Appendix I, Appendix J, Appendix K	1. Eliminate assets that are not GSA provided from the analysis (e.g., owned, state government owned, commercial leases). 2. Identify GSA provided assets that have high lease costs per SF (e.g., > $20 per RSF). 3. Identify assets with high utilization rates (e.g., > 400 USF per person). 4. Perform a location analysis. • Identify locations where USGS has either GSA provided buildings or owned assets in the same location. • Identify locations where other Bureaus occupy GSA provided space in the same location.	**High -** Identifying space to vacate, as well as coordinating the physical space moves is time and resource intensive. Multiple FTE should be required to implement the plans, both internal (e.g., BMS) and external (e.g., moving contractors).	• Reduces lease costs. • Reduces GSA provided real property inventory. • Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person.	**High -** • Potential Cost Savings or Avoidances - **Significant**; the potential for cost avoidances is high as nearly 70% of the Survey's space is GSA provided. • Compliance - **Somewhat meets;** this opportunity does not meet any Federal mandates. However, entering new lease agreements will require the Survey to meet the Interior's utilization goal of 180 office USF per person. • Mission Delivery - **Somewhat positive**; reducing facility costs allows cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. • Time to Achieve - **Long;** this opportunity may be a recurring activity. In addition, the Survey will have GSA leases expiring in upcoming years. • Estimated Cost - **Medium**; the estimated costs will vary based on the size of the facility the Survey vacates, and the location and type of space available for relocation.
7. Continue space consolidation.	**Description:** In response to EO 13576, the Interior's Assistant Secretary for Policy, Management and Budget set forth utilization guidance in the *Facilities and Space Management* memo. The August 2011 memo details a utilization of 180 office USF per person as the targeted utilization. FMB implemented procedures requiring space actions, including renewals, to meet a utilization of 180 office USF per person. Space actions not meeting the utilization requirement of 180 office USF per person require a waiver signed by the AD for AEI. **Status**: The Survey is currently consolidating space at its three major centers, as well as other locations across the country.	CSIP Section IV	1. Improve hoteling and teleworking strategies to expand on space-sharing to reduce the space required for employees. 2. Analyze utilization rates at owned and leased facilities to identify strategies for reducing space. The following steps should be taken to perform an analysis on space consolidation: • Identify assets that have high lease costs (e.g., > $20 per RF) and/or assets that have high annual operating costs (e.g., >$12 per RSF for owned buildings). • Identify assets that have high utilization rates (e.g., > 400 USF per person). 3. Delay space actions resulting in cost increases.	**Medium** - The level of effort is dependent on the size of the space, however most moves may require several cost centers to consolidate.	• Reduces lease costs. • Increases delivery of science mission by collocating researchers. • Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person. • Increases collocation with other Bureaus and external entities. • Helps reduce GHG emissions by decreasing utility costs. • Helps the Survey work towards reducing GSA provided real property inventory.	**Medium-High -** • Potential Cost Savings or Avoidances - **Some;** consolidating space may result in some cost savings or avoidances. • Compliance **- Somewhat meets;** helps the Survey work towards the Interior's utilization requirement of 180 office USF per person, but does not fully meet the requirement. • Mission Delivery - **Somewhat positive**; reducing facility costs allows cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. • Time to Achieve - **Long;** this opportunity may be a recurring activity. In addition, consolidating space across multiple facilities will likely take more than one year. • Estimated Cost - **Low;** cost estimates are dependent on the size of the space. If the space can be easily vacated and consolidated into existing space with little TI or reconfiguration, the cost is low. However, if walls need to be built, heating, ventilation, and air conditioning, (HVAC) need to be reconfigured, and furniture needs to be purchased, the estimated cost could be higher.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
8. Improve space utilization at DFC.	**Description:** DFC is a major USGS center, with over 1 million RSF, annual lease costs of $18.5 million, and 13 separate GSA provided facilities. The average rental cost of space is $15.56 per RSF. With increasing rent costs, the situation leaves staff dispersed in inefficient and outdated facilities that do not meet safety requirements or research needs. In addition, many of the buildings have high utilization rates and do not necessarily meet the science needs. **Status:** As part of the SFMP BCA process, the Survey assessed the feasibility of multiple alternatives for consolidation at the DFC. The DFCST's plan is to vacate as many older buildings as possible and move into the newer buildings located on the campus. The DFCST developed a Synthesis Plan detailing which buildings they plan to vacate and release back to GSA. The DFCST has approved a few space actions which are expected to occur before the end of FY2012. These actions would release space in Building 53, first floor (H1126-E1306) and release space in building 53 on the second floor. As a result, the Survey would remain in the 13 separate locations, but would decrease its footprint by approximately 31,868 USF; therefore, occupying approximately 906,371 USF. The strategy is based on Alternative 2 from the DFC BCA (Appendix I).	CSIP Section IV, Appendix J	1. Coordinate space needs and potential moves with DFCST. 2. Develop consolidation plan to identify approach for consolidation and relocation. 3. Work with GSA to confirm space to release. 4. Work with cost centers to identify space needs and prepare program of requirements. 5. Perform physical space moves over proposed timeframe. 6. Seek to eliminate space for contractors and shift those costs out of the facilities activity budget. 7. Communicate long term plan of space needs with GSA (e.g., new building construction).	**Medium -** The Survey should seek help to move laboratory equipment in some locations. Multiple FTE may be required to implement the plans, both internally (e.g., National Operations Branch) and externally (e.g., moving contractors).	• Increases cost avoidances in rent and DHS fees of approximately $220,000 in on the first floor, and $381,000 on the second floor, of Building 53. • Increases collocation efforts with other Bureaus and external entities. • Helps reduce GHG emissions by decreasing utility costs. • Helps the Survey work towards reducing GSA provided real property inventory. • Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person.	**Medium-High -** • Potential Cost Savings or Avoidances - **Significant**; the opportunity presents significant potential for cost savings and avoidances as the Survey will be vacating a large amount of space. • Compliance - **Somewhat Meets;** the opportunity helps lower the utilization rates to the required 180 office USF per person, but does not fully meet the requirement. • Mission Delivery - **Somewhat positive**; reducing facility costs allows cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. The opportunity also moves the employees and science mission from older facilities to newer, higher-quality facilities. • Time to Achieve - **Near;** the DFCST plans to vacate space in Building 53 before the end of FY2012. • Estimated Cost - **High -** many of the older buildings house expensive laboratory equipment that is costly to relocate.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Asset Mission Alignment						
9. Enhance API Scoring Process.	**Description:** Given increasing budget constraints, and the decrease in DM funding, it is important to employ a sustainable, transparent, and repeatable process for prioritizing assets. The Survey can enhance the API scoring process by reassessing the API criteria and weights, establishing an approval process, and analyzing the API scores. **Status:** During the FY2012 API scoring process, IRB members generally confirmed that the Mission Dependency API criteria accurately reflected how an asset related to the Survey's mission. However, members suggested that the associated weights be reassessed. The Survey developed a tiered approval process describing the steps for future scoring iterations.	SFMP 3.4.1	1. Adjust API criteria and weights. • FIRS should evaluate API criteria and weights on a yearly basis. • FIRS should adapt the criteria and weights to support the USGS mission, if necessary. 2. Establish an API approval process for future scoring iterations. • Initial scoring should be performed at the local level and scored by Facility Managers and Science Center Directors. ○ At this level, Facility Managers should identify asset dependencies. • The initial scores should be sent to the regional level for validation. A team consisting of REx, RMOs, and applicable Program Officers, and 2-3 knowledgeable employees should validate the API scores and send back the local level for any changes. ○ REx should rank business entities, or campuses, in their area based on an entity's criticality to the mission. • The IRB, with help from the FIRS, should confirm that the API scores are complete and accurate across program areas and regions. 3. Analyze API scores. • After API scores are applied to assets, the Survey should consider having FMB perform the following comparisons: ○ Top 25 Assets based on API scores; ○ Owned and GSA provided assets; and ○ Main usage analysis.	**Medium**- The Survey should establish a process for scoring and approving API scores. This should include leveraging a tool or database to provide to REx, RMOs, and applicable Program Officers.	• Increases accuracy of API scores. • Helps stakeholders understand how an asset relates to the mission. • Improves likelihood that assets directly supporting the mission receive the limited funding. • Helps normalize API scores across programs and geographical regions. • Reduces time spent scoring assets in the future. • Helps prevent scoring bias. • Establishes a transparent and sustainable scoring process.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Meets;** implementing this opportunity meets Attachment G and the DOI API Guidance requirements. • Mission Delivery - **Positive**; accurate API scores identify the most mission critical assets and help ensure that these assets receive the limited DMCI funding. • Time to Achieve - **Near;** implementing this opportunity may be somewhat time intensive, but may be completed in less than a year. • Estimated Cost - **Low;** the Survey could utilize internal resources to carry out the initial steps for developing the approval process. There may be some costs associated with training employees on the new scoring process.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
10. Leverage an API Scoring Tool.	**Descriptions:** The Survey should leverage an API scoring tool to help enable a more repeatable and defensible scoring process by documenting decisions and providing a source to collect information from stakeholders across the country. **Status:** The IRB identified several initial tool requirements. The Survey assessed different tool options, including external decision making tools, in-house developed web-based systems, and non web-based tools. The IRB agreed the Survey should pursue leveraging a tool and indicated AEI should move forward in identifying a timeline for implementation.	SFMP 3.4.2	1. Identify timeline for implementing an API scoring tool. 2. Identify full list of tool requirements. 3. Evaluate tools in the marketplace. The Survey should assess different types of tools to address the list of tool requirements. The Survey should consider assessing the following tools: • COTS decision making software; • In-house developed (e.g., Microsoft Excel®); • Maximo; and • Microsoft SharePoint®. 4. Identify and establish use of an appropriate tool. 5. Identify and establish use of the most appropriate tool across the Survey. USGS should then implement the tool, which includes: • Identifying users; • Setting roles; • Configuring the tool to meet approval process requirements; and • Collecting asset information (e.g., asset name, a brief description, science programs performed, special characteristics, and mission areas being supported). 6. Develop training (e.g., quick reference guides, webcasts) to help facilitate use of the tool. The trainings should be included for facility, REx/Program Officers, IRB members, and FMB.	**Low to Medium -** Identifying tool requirements and evaluating tools in the marketplace is a relatively low level of effort. However, depending on the tool the Survey chooses, the level of effort could increase. For example, an Excel tool would likely require in-house development and increase the level of effort whereas a COTS tool would require less effort.	• Helps ensure that API scores accurately reflect the most mission critical assets. • Improves likelihood that assets directly supporting the mission receive the limited funding. • Provides real property efficiencies. • Provides a central repository for real property data and documentation of scoring decisions. • Enhances portfolio tracking and analysis capabilities. • Provides a repeatable scoring process. • Provides ability to more easily change future API scores. • Provides access to asset-specific information. • Enables stakeholders to compare API scores across areas, disciplines, and asset types.	**Medium-High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** the opportunity does not help meet any compliance requirements. • Mission Delivery - **Positive**; accurate API scores identify the most mission critical assets and helps ensure that these assets receive the limited DMCI funding. • Time to Achieve - **Near;** the opportunity could be implemented within the next year. The type of tool the Survey chooses may increase or decrease the time to implement. • Estimated Cost - **Low;** although dependent on the type of tool the Survey chooses, the cost is expected to be low. Given the size of the Survey's portfolio, it may not be cost effective to purchase a tool greater than $500,000. Should the Survey choose to develop a tool in-house, the cost would be in terms of a resource's time. Implementing a COTS tool would require addition fees, including licensing and upfront investments.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Asset Inventory and Analysis						
11. Conduct data improvement assessment for GSA Federal Real Property Council Metrics.	**Description:** The Survey is required to report on the performance of its owned, leased, and otherwise managed assets valued over $5,000 each fiscal year. FRPC reporting requirements continue to evolve and often change yearly. Agencies should be prepared to deal with changing requirements, and to provide accurate and complete data on new fields and requirements. **Status:** To the extent possible, the Survey already attempts to collect complete and accurate data, and to collect information in advance of the FRPP submission timeline.	SFMP 4.3.1	1. Monitor the performance of inactive assets. • Assess assets every six months to identify if an "inactive" asset should be processed for disposal, which often reduces O&M costs. 2. Improve upon the collection of complete and accurate data in advance of FRPP submission timeline. • Establish proactive protocols, early in the year, to gather data. 3. Use new API scores to re-evaluate mission dependency scores.	**Low** - The implementation strategies could be performed as part of an existing employee's responsibilities.	• Increases real property efficiencies. • Improves completeness and accuracy of real property data. • Reduces O&M costs in the future.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Meets;** the opportunity helps ensure that the Survey accurately reports metrics to FRPC as part of the annual FRPP submission. • Mission Delivery - **No impact**; FRPP submitted data has no impact to the mission. • Time to Achieve - **Near;** the opportunity could be implemented before the next reporting cycle. • Estimated Cost - **No Cost**; the cost of this effort would be negligible.
12. Utilize non-FRPP portfolio-wide metrics.	**Description:** In order to evaluate individual assets (e.g., cost-benefit analysis), the Survey should identify additional metrics to collect for analysis. The metrics include the following: • Lease cost per SF; • Utilization rate; • Operating efficiency; and • Cost of repair needs per SF. **Status:** The Survey can calculate each of these metrics using existing FRPP data fields, and currently uses some of these metrics to assess individual assets when a lease is nearing expiration or an asset is evaluated for disposal.	SFMP 4.3.2	1. Establish new metrics portfolio-wide. 2. Assess the metrics every six months.	**Medium** - Utilization of non-FRPP portfolio-wide metrics may require multiple FTEs to request information via data calls, as well as validate and maintain the data.	• Improves ability to measure asset performance. • Allows users to determine future plans for assets (e.g., disposal, consolidation).	**Medium-Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there is no requirement that states the Survey must collect or submit non-FRPC metrics and information. • Mission Delivery - **No impact**; FRPC submitted data has no impact to the mission. • Time to Achieve - **Near;** the opportunity could be implemented before the next reporting cycle. • Estimated Cost - **No cost;** the cost of this effort would be negligible.
13. Automate data collection.	**Description:** The Survey should identify ways to automate a handful of selected high-value performance metrics (e.g., utilization rates, values). **Status:** The Survey already automates annual operating costs and annual rent through FBMS. In many cases, the information already exists. Employee IP addresses, for example, may provide an opportunity for a home-grown system of tracking utilization rates. Additionally, the Survey already conducts a condition assessment over a five year cycle to value its assets.	SFMP 4.3.3	1. Identify data automation needs based on data requirements (e.g., FRPP submission, utilization rates). 2. Evaluate existing software to identify its data automation capabilities. 3. Assess if existing software meets data automation needs. • Identify potential COTS software if existing software does not meet data automation needs. 4. Implement data automation software. 5. Interface data automation with FBMS.	**Medium -** Depending on the size of the data, multiple FTEs may be required to automate the data collection.	• Streamlines data collection activities. • Enables managers to focus additional time on priority activities (e.g., analysis, energy efficiency, process improvement).	**Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there is no requirement that states the Survey must submit non-FRPC metrics and information. • Mission Delivery - **No impact**; FRPC submitted data does has no impact to the mission. • Time to Achieve - **Long;** automating data collection could take longer than a year, and is likely a recurring activity. • Estimated Cost - **Low;** the Survey may need to implement new technology to automate their data collection. Additionally, some computer-aided design (CAD) drawings may be needed to estimate square footages of facilities.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Business Case Development						
14. Assess library collections and space.	**Description:** Each of the three major centers in Reston, Denver, and Menlo Park house library collections in GSA provided space. The Survey should consider ways to reduce its library space without jeopardizing the need for scientists and researchers to use the materials to perform the mission. **Status:** Over the past several years, the Survey has worked to reduce the size of the libraries by disposing (e.g., donating) materials. However, the three libraries continue to occupy a large amount of space, often times at a high cost per SF in newer facilities.	SFMP 5.2.1.1	1. Meet with USGS stakeholders to discuss the "as-is" state and future purposes of each library. 2. Identify the content in each library and identify if the material is located at the most relevant site. 3. Conduct a library utilization study to identify consolidation opportunities. • Work with stakeholders to assess the possibility of digitizing material for online reference. • Assess the feasibility of transporting materials and references to less expensive space (e.g., owned facilities). 4. Report laboratory study finding to USGS stakeholders and identify consolidation opportunities. 5. Meet with scientists occupying the laboratories to discuss consolidation opportunities, if applicable.	**Medium -** To reduce library collections and space, the Survey would need a dedicated resource to inventory the library materials and identify items for disposal (e.g., donation).	• Helps to improve space efficiency and work towards the Interior's utilization requirement of an average 180 office USF per person. • Saves approximately $470,000 to $945,000 in lease costs per year, based on FY2012 annual lease costs for library space if the Survey vacated 25% or 50% of the space, respectively. • Allows for the science mission to be performed in higher-quality facilities as the libraries are, in some locations, located in newer buildings.	**Medium-High -** • Potential Cost Savings or Avoidances - **Significant;** releasing space at the three major centers has the potential for high cost savings or avoidances. Consolidating space may allow cost centers to occupy the library space and provide their old space back to GSA. • Compliance - **Somewhat meets;** there is no requirement that states the Survey must release library space. However, the Survey current excludes library space in utilization calculations. Should the Interior provide more specific guidance on what types of space are included in the utilization calculation, downsizing the libraries should help avoid a significant increase in utilization. In some cases, vacating library space may allow the Survey to vacate and provide space back to GSA more quickly, while reaching a utilization of 180 office USF per person in the space previously occupied by the library (e.g., Building 3 in Menlo Park). • Mission Delivery – **No Impact;** assessing library collections would have no impact to the mission. • Time to Achieve - **Long;** identifying materials to dispose of and vacating space at the Survey's libraries is likely to take longer than a year. • Estimated Cost - **Low;** to reduce the library collection and consolidate space, the cost is estimated to be less than $500,000. The cost is dependent on the amount of RSF to be released (i.e., the more space released the higher the cost). In addition, should the Survey choose to digitize the information; the cost to digitize the information may be material.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
15. Assess laboratory utilization.	**Description:** Laboratory space is not included in the average utilization rate calculation of 180 office USF per person; however, laboratory space is typically more expensive on a SF basis than office space as cost centers are charged for overtime usage. One of the largest challenges regarding moving and consolidating laboratory space is accounting for the science performed in laboratories. Because of expensive equipment and the science experiments being performed, laboratories can be both expensive and difficult to move. **Status:** The Survey is not currently assessing laboratory utilization; however, some facilities may have technology that would help enable a study.	SFMP 5.2.1.3	1. Meet with USGS stakeholders to identify the "as-is" state of the laboratories. 2. Identify if laboratories are located within space identified to be released back to GSA, or if vacating a laboratory would make the space contiguous or more marketable. 3. Conduct a laboratory utilization study to identify consolidation opportunities. • The utilization study should include the number of full time scientists in each laboratory and the laboratory's frequency of use. • The study should begin at the three largest centers in Reston, Denver, and Menlo Park, where there is the greatest opportunity for consolidation efforts and realization for cost savings. 4. Report laboratory utilization study findings to USGS stakeholders and identify consolidation opportunities. 5. Meet with scientists occupying the laboratories to discuss consolidation opportunities, if applicable. 6. Identify if the vacated laboratory space is in a marketable block of space or if it can be converted to other use.	**Medium** - The level of effort to assess laboratory utilization would be medium as multiple utilization studies would need to occur over an appropriate period of time (e.g., a month) to gain useful and normalized data.	• Improves space efficiency and helps work towards the Interior's utilization requirement of an average 180 office USF per person. • Helps identify how to improve laboratory utilization rates.	**Low -** • Potential Cost Savings or Avoidances - **None**; implementing a laboratory utilization study has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there is no requirement that states the Survey must perform utilization studies on laboratories. • Mission Delivery - **No impact**; a laboratory utilization study will have no impact to the mission. • Time to Achieve - **Near;** a laboratory utilization study could be completed in less than a year. • Estimated Cost - **Low;** the costs associated with assessing laboratory utilization is low to medium, depending on how the assessments are implemented. Smaller, individual studies at the facility level would be a lower level of effort as compared to a Bureau-wide assessment. The study should detail the types of laboratories studied, utilization by laboratory type, and an assessment on how to effectively consolidate laboratories, if applicable.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
16. Decrease warehouse and storage space.	**Description:** The Survey has approximately 238,000 RSF of warehouse and storage space in its real property inventory. Office space is often used as storage space; however, the space is included in utilization calculations despite its use. Decreasing warehouse and storage space can help free up space to move items stored in office space. As the office space is almost always more expensive than warehouse or storage space, the Survey should store materials in the appropriate location. In addition, freeing up office space can help the Survey consolidate and vacate space. **Status:** With accumulating materials, and infrequent removal of resources, the Survey should identify which materials are critical to the mission, and which can be disposed of or donated.	SFMP 5.2.1.4	1. Provide an initial assessment of the materials in each warehouse, such as type of material (e.g., science related or property, plant, equipment). 2. Establish an inventory of materials. • This activity should be completed by the cost centers with materials in a given warehouse or storage space. 3. Identify materials that can be purged (e.g., donated or disposed). • This activity should be completed by cost centers. 4. Identify materials that are currently stored in offices or laboratories to be moved to warehouse space. 5. Work with GSA to identify marketable space to be released, whether office or warehouse space, if space is GSA provided. 6. Release warehouse or office space back to GSA, if applicable. 7. Work with cost centers and stakeholders to develop a process for inventorying materials (e.g., documenting what materials are in which warehouse). • Documentation should include a description of the material being stored, and an estimated date for length of storage. 8. Work with cost centers and stakeholders to develop a process for identifying materials to be disposed of or kept for future used. 9. Implement both processes and inform cost centers of necessary steps.	**Medium** - This implementation strategy may require at least one representative from cost centers at each location to inventory materials. The implementation should begin at the three largest centers (i.e., Reston, Denver, and Menlo Park), but the process should eventually be conducted at other warehouse facilities across the country.	• Increases cost savings or avoidances as a result of releasing space back to GSA, if applicable. • Helps enable employees to locate materials more quickly and easily. • Provides the Survey with an inventory of materials. • Helps free up space in warehouse and storage space for materials stored in office space.	**High -** • Potential Cost Savings or Avoidances - **Some**; some potential for cost savings or avoidances, based on releasable space. • Compliance - **Somewhat meets;** freeing up office space may help enable the release of space; helping the Survey work towards the Interior's utilization requirement of 180 office USF per person. • Mission Delivery - **Somewhat positive;** disposing of unnecessary materials may help ensure that the most mission critical assets are stored in the warehouse for science purposes. • Time to Achieve - **Near;** assessing warehouse and storage space could be completed in less than a year. • Estimated Cost - **Low;** the Survey could perform most of the inventorying and disposing of materials in-house; therefore decreasing the potential cost for disposing and relocating storage materials.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
17. Work closely with GSA to release space.	**Description:** Under GSA's defined agency rights and options, the Survey can release space within four months of written notice if the following conditions are met: • There is no longer a need for the space; • The space is in marketable blocks; • The space is not designed as non-cancelable in the tenant OA; and • The tenant is at least 16 months into it occupancy term. It is important for BMS and Space Teams to work with GSA representatives early in the space consolidation process for a given facility (or facilities) and understand the procedure for releasing space. GSA must approve released space before the Survey can discontinue paying lease costs. **Status:** The BMS office is beginning to work closely with GSA to identify space it will take back.	SFMP 5.2.1.5	1. Work with GSA to identify marketable space. 2. Work with Space Teams to identify if cost centers can release the marketable space. • Develop plans with cost centers to consolidate space. • If a cost center is unable to release space, work with GSA to identify an additional marketable space or to negotiate terms. 3. Work with GSA to identify an potential setbacks (e.g., TIs, environmental cleanup) 4. Continue to frequently update GSA on the progress of space consolidation.	**Low** - The implementation strategies could be performed as part of an existing employee's responsibilities.	• Increases the likelihood of GSA agreeing to take back space; therefore reducing facilities costs. • Prevents the Survey from vacating space GSA will not agree to take back.	**High -** • Potential Cost Savings or Avoidances - **Some**; the opportunity presents some potential for cost savings or avoidances as the Survey can vacate space GSA agrees to take back. • Compliance - **Somewhat meets;** helps the Survey work towards the Interior's utilization requirement of 180 office USF per person, but does not fully meet the requirement. • Mission Delivery - **Somewhat positive;** reducing facility costs allows cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. • Time to Achieve - **Long;** this opportunity is recurring. • Estimated Cost - **No cost;** the cost of this effort would be negligible.
18. Emphasize BCA funding strategies.	**Description:** One of the major obstacles for proceeding with an approved BCA is the funding associated with the project. The IRB has the authority to approve BCAs, but does not have the ability, or money, to fund projects. Cost centers should provide a funding strategy (e.g., Budget Initiative, DM funding, program funding) when submitting a BCA. **Status:** BCAs do not require a funding strategy, but approved BCAs that contain a funding strategy are more likely to be implemented. The Survey should consider making it mandatory that BCAs include a funding strategy.	SFMP 5.2.2.1	1. Confirm with the IRB that the funding strategy is major obstacle for implementing BCAs. 2. Work with the FIRS and IRB to update the BCA template with a funding strategy section. 3. Update the BCA template. • The template should allow the user to select a funding option (e.g., DMCI funding, request for funding from Congress) or input their own funding strategy. 4. Incorporate IRB feedback, if applicable, into the updated BCA template. 5. Inform USGS stakeholders of the change in template and that the funding strategy must be filled out before submitting a BCA.	**Low** - Updating the BCA template should not require a high level of effort and could be completed as part of an existing employee's responsibilities.	• Increases likelihood of BCA implementation. • Informs stakeholders that the IRB does not fund BCAs, only approves BCAs.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Meets;** this meets the compliance requirement for BCAs. The IRB recommends that each BCA incorporate a funding strategy to increase the likelihood of implementation. • Mission Delivery - **No impact;** adding a funding strategy to the BCA template will have no impact to the mission. • Time to Achieve - **Short;** updating the BCA template may be done in a short amount of time. • Estimated Cost - **No cost;** the cost of this effort would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Budget Strategies – O&M and Rent Considerations						
19. Improve FRPP data governance process.	**Description:** The Survey can benefit from establishing a process to govern data quality. As a result, the Survey may receive more accurate data. **Status:** Currently the Survey uses some FRPP data such as SF as an input into its O&M models and others as modifiers to calculate an asset's O&M costs.	SFMP 6.5.1.1	1. Identify data errors that are used as an input or modifier in the O&M models. 2. Work with BMS offices to develop the governance process. 3. Develop test runs and a trial period for the new governance process. 4. Incorporate changes, if necessary. 5. Provide trainings on the new governance process to those who input FRPP data. 6. Periodically conduct a clean-up exercise. • The FMB evaluates two to three different data fields each year to identify potentially inconsistent or inaccurate data. 7. Send any inaccurate data back to the BMS office for correction.	**Low -** Establishing a process to identify outliers could be performed as part of an employee's regular responsibilities when submitting the FRPP data.	• Increases accuracy of FRPP data. • Helps BMS offices recognize inconsistent or inaccurate data. • Increases accuracy of O&M cost model and allocation.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat meets;** the opportunity may help improve the quality of FRPP data submitted to FRPC. • Mission Delivery - **No impact**; adding a governance process will have no impact to the mission. • Time to Achieve - **Short;** a governance process could be implemented fairly quickly. • Estimated Cost - **No cost;** the cost of this effort would be negligible.
20. Reassess FRPP metrics used in O&M cost models annually.	**Description:** The Survey uses some FRPP metrics as cost model modifiers. As the FRPP metrics evolve and the Survey's FRPP data becomes more accurate, the Survey should assess whether those same metrics are relevant to the O&M process annually. **Status:** Currently, the Survey uses status, utilization (as defined in the FY2010 FRPP guidance), and mission dependency to assess what percentage of cost modeled funds should be applied to its facilities.	SFMP 6.5.1.2	1. Confirm metrics used as cost model modifiers. 2. Assess whether metrics are relevant to the O&M process. • This should be done as frequently as FRPP metrics evolve and data becomes more accurate. 3. Identify any additional metrics that may be used for O&M cost models. • Consider using condition index, as allocation of O&M may impact the DM backlog in the future. 4. Correct O&M cost models if metrics were either reassessed or added to the model. 5. Utilize the cost models for a more accurate O&M cost prediction.	**Low -** Reassessing FRPP metrics used in the O&M cost model would be fairly low and can be performed by the O&M Cost Model Team during their annual meeting.	• Helps appropriately allocate O&M costs.	**Medium-Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there is no compliance requirement for reassessing FRPP metrics. • Mission Delivery - **Somewhat positive;** the opportunity may help more appropriately allocate DM backlog in the future. • Time to Achieve - **Long;** assessing and changing the O&M cost models would take a significant amount of time. • Estimated Cost - **No cost;** the cost of this effort would be negligible.
21. Incorporate cost model requirements into O&M calendar in FMMS.	**Description:** The Survey should establish a Bureau-wide facilities O&M calendar in FMMS. The calendar should state the frequency and the date the facilities need to perform their O&M duties in accordance with cost model requirements. **Status:** One of the factors affecting the O&M shortfall and DM backlog is the varied approach Facility Managers take to conduct O&M tasks. Some facilities are performing their duties (e.g., custodial duties) above the Survey's standards, while others are not keeping up with their day to day O&M requirements. Overtime, this causes an increase in the DM backlog. Some facilities that are not keeping up with their day to day O&M needs may prefer to reduce their O&M allocation in order to decrease costs to their reimbursable customers.	SFMP 6.5.1.3	1. Develop a Survey-wide facilities O&M calendar for housekeeping and other non-preventive maintenance O&M duties. • The calendar should state the frequency and the date facilities need to perform their O&M duties based off the "five day standard" stated in the O&M cost models. 2. Review calendar with Facility Managers and incorporate feedback. 3. Import Survey-wide facilities O&M calendar into FMMS. 4. Identify O&M activities in FMMS as complete. • This activity should be completed by the Facility Manager.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Allows the Survey to recognize how various facilities are applying their O&M allocation. • Assesses the need for adjusting cost models. • Helps train new Facility Managers on how to manage their facilities in the short term, and reduce the O&M shortfall and DM backlog in the long term.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat meets;** the opportunity helps meet day-to-day Survey O&M requirements. • Mission Delivery - **Somewhat positive;** the opportunity may help reduce O&M shortfall and DM backlog in the future. This may help divert rent and O&M costs back to the science mission. • Time to Achieve - **Short;** this opportunity could be implemented fairly quickly. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
22. Perform budget to actual analysis.	**Description:** The Survey is creating a tool to reconcile FBARWS to FBMS. Once the Survey establishes this tool, it should perform an analysis of budget to actual expenses to assess where the modeled costs and actual expenditures vary to the greatest degree. **Status:** In November 2010, the Survey switched to a new financial system, FBMS, which also serves as its real property inventory system. Currently FBMS does not interface with FBARWS so the Survey is only able to perform budget to actual analysis on its O&M costs at a very high level (i.e., fund level, as opposed to asset or asset class level).	SFMP 6.5.1.4	1. Establish the tool to reconcile FBARWS to FBMS. 2. Run tests to confirm the tool is working properly. 3. Perform a test that produces budget to actual expenses for each facility. 4. Perform an analysis to assess where the modeled, allocated costs and actual expenditures vary. 5. Review the budgeted to actual funds for each facility. 6. Identify which site's actuals agree with the cost models. 7. Reassess, or correct, cost factors for facilities that are not properly utilizing the models.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Monitors if facilities are properly utilizing the correct models and properly using cost factors. • Identifies cost and actual expenditures that vary to the greatest degree.	**Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there is no compliance requirement for performing a budget to actuals analysis. • Mission Delivery - **No impact**; performing a budget to actual analysis will have no impact to the mission. • Time to Achieve - **Long;** performing the analysis may take at least a full budget cycle. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.
23. Increase training for O&M and rent budget and allocation processes.	**Description:** As the O&M and rent budget and allocation processes are extremely complex, the Survey should continue to provide its staff with training, and their roles within the processes. **Status:** The Survey currently offers some training.	SFMP 6.5.1.5	1. Identify the need to provide staff with training on O&M and rent budget and allocation processes, and their roles within the processes. • The training should be targeted at the different staff levels, from Cost Center Managers, to BMS office representatives, to FMB staff. 2. Work with USGS management to identify subjects for the training. 3. Develop training documents (e.g., WebEx, online required trainings, handouts). 4. Prepare presentations. 5. Implement annual trainings for those involved in O&M and rent budget and allocation processes. 6. Offer the training on an annual, or bi-annual, basis.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Increases staff knowledge regarding O&M and rent budget and allocation processes. • Provides the ability to identify where cost models require adjustments to continue to develop the cost modeling process. • Provides the ability to identify where cost models require adjustments.	**Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat meets;** the opportunity helps meet Survey O&M and rent budget and allocation process requirements. • Mission Delivery - **No impact;** increasing training would have no impact to the mission. • Time to Achieve - **Long;** the time to implement this opportunity would include identifying the need for training, developing the training, and delivering the training. • Estimated Cost - **Low;** although costs would be incurred to improve or distribute training more frequently, the Survey may be able to leverage previously developed materials.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
24. Further examine incentivizing shortfall or holdback.	**Description:** The Survey should examine incentivizing its Cost Center Managers to meet the Survey's target utilization rate of 180 office USF per person. USGS stakeholders examined the idea of incentivizing reduction of shortfall so that assets meeting, or almost meeting, space standards receive a smaller portion of the shortfall. **Status:** Some of the Survey's stakeholders communicated they would like to reduce the facilities costs in the long term by reducing overall space usage.	SFMP 6.5.1.6	1. Examine distributing holdback funds to facilities meeting their utilization goals. 2. Assess the options to incentivize cost centers to consolidate space. 3. Develop process for assessing accuracy of data inputs, if the Survey chooses to incentivize shortfall or holdback. • Assess if facilities are inaccurately adjusting their data to receive the holdback or shortfall. • Assess a sample of assets each year against their reported data to identify accuracy of reported information.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Motivates programs to consolidate their space to decrease their shortfall. • Increases cost avoidances in O&M and rent costs.	**Medium-High -** • Potential Cost Savings or Avoidances - **Some;** the opportunity has potential for some cost savings or avoidances. • Compliance - **Somewhat meets;** the opportunity may help cost centers work towards the Interior's utilization requirement of 180 office USF per person to reduce their shortfall, but does not fully meet the requirement. • Mission Delivery - **No impact**; the opportunity benefit some facilities by decreasing their shortfall, while increasing shortfall at other facilities. Assuming these increases and decrease offset, the opportunity would a neutral impact to the mission. • Time to Achieve - **Near;** assessing how to incentivize shortfall may take less than a year. • Estimated Cost - **Low;** the costs associated with assessing the feasibility of incentivizing the reduction of shortfall should be minimal. Should the Survey seek external assistance, the cost would be fairly low given the level of effort.
25. Provide metrics to executive leadership for their review.	**Description:** The Survey should provide REx and ADs with the metrics for their area to track their area's progress towards their utilization goals and other targets. **Status:** By providing the ELT with these metrics, programs may be motivated to improve their asset management and as a result reduce their O&M and rent need.	SFMP 6.5.1.7	1. Identify metrics that provide information on asset management. 2. Identify asset management goals and targets for each metric. 3. Calculate the metric at each asset by cost center. 4. Provide the ELT with the targets for each metric and asset data calculations.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Motivates programs to improve asset management. • Helps increase ELT involvement in asset management.	**Medium-High -** • Potential Cost Savings or Avoidances - **None;** the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat meets;** the opportunity may help cost centers work towards the Interior's utilization requirement and other Survey targets, but does not fully meet the requirement. • Mission Delivery - **No impact**; providing the ELT with performance metrics would have no impact to the mission. • Time to Achieve - **Short;** the Survey could provide the ELT with performance metrics in less than three months. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
26. Require contingency planning for shortfall.	**Description:** FMB calculates the Survey's facilities shortfall and populates the O&M and rent allocation templates based on the Survey's approved O&M and rent appropriation. Cost Center Managers then disburse their allocation and establish a method to cover their portion of the shortfall through program funds or reimbursable dollars. **Status:** The Survey has a hold back process of $1.5 million for rent and $1.5 million for O&M that cost centers can request for emergency facility needs.	SFMP 6.5.1.8	1. Work with Cost Center Managers to identify needs and inputs for the contingency plan. 2. Identify strategies for covering potential shortfalls in future years. 3. Develop approval process for contingency plans. 4. Develop contingency plans. • The contingency plan should provide details on how the cost centers will cover a potential shortfall in future budget years. 5. Populate contingency plans, by cost center. 6. Gain approval for the contingency plans.	**Low -** The level of effort would be fairly low and should ideally be completed by Cost Center Managers. This effort could be completed during the annual budgeting process.	• Helps cost centers plan more adequately for future years. • Helps ensure that cost centers do not exhaust their funding to cover remaining shortfall. • Provides transparency to BMS offices because they know how cost centers plan to disburse their allocation.	**Medium-Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there are no compliance requirements for shortfall contingency plans. • Mission Delivery - **No impact**; developing contingency plans would have no impact to the mission. • Time to Achieve - **Near;** the Survey could work with cost centers to develop contingency plans in less than a year. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.
27. Improve process to evaluate the renewal of OAs.	**Description:** Currently, the Survey has a Space Waiver process in place where Cost Center Managers must complete a form upon renewal of an OA or funding a new OA. The Survey should clarify the timeline for a process to evaluate an OA prior to its expiration **Status:** The Space waiver form used by cost centers to renew or fund an OA does not have to be completed by a specified date. Some Cost Center Managers do not budget for the end of an OA until the lease ends or they receive a reminder from their BMS office.	SFMP 6.5.1.9	1. Identify the Survey's current OAs. 2. Work with stakeholders, particularly the BMS office, to create a process for when to assess the OA renewal. 3. Work with USGS stakeholders to define who should be involved in the OA renewal process. 4. Develop a process where OMs provides Cost Center Managers with a report periodically stating upcoming expirations in the next 12, 24, and 36 months. 5. Assess whether the OA should be renewed. • Cost Center Managers and management stakeholders should work together for this assessment. 6. Identify and assess decision making tools that can assist the Survey in the evaluation of OAs.	**Low -** The level of effort associated with this opportunity would be low as it would only be required when OAs are expiring, and not on a recurring basis.	• Helps strategically assess space needs. • Helps the Survey negotiate more favorable terms with lessors.	**High -** • Potential Cost Savings or Avoidances - **Some**; the opportunity has potential for some cost savings or avoidances. • Compliance - **Does not meet;** there are no compliance requirements for evaluating a lease prior to its expiration date. • Mission Delivery - **Somewhat positive**; the opportunity may help the Survey get favorable rental rates, allowing cost centers to redirect their science funding used to cover the facilities shortfall back to activities to support the mission. • Time to Achieve - **Short;** the Survey could update the process of renewing OAs in a short amount of time. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
28. Pursue alternative funding for financing of projects.	**Description:** The Survey's future O&M shortfall is estimated to increase, while O&M funding will either remain at current levels or decrease. It is important for the Survey to use funding as efficiently as possible. One potential solution is to research green initiatives that may enable the Survey to lower O&M costs and fulfil Federal environmental initiatives. **Status:** The Survey has not implemented green initiatives through alternative funding. Solar leasing, however, has been utilized by the military and other Federal agencies to reduce utility costs and lower their GHG emissions.	SFMP 6.5.1.10	1. Research alternative financing options, such as solar leasing, that may allow the Survey to lower O&M costs. 2. Identify feasible financing options. 3. Develop a cost-benefit analysis for the financing options. 4. Implement financing options that will help lower O&M costs.	**Medium -** The level of effort depends on the type of alternative funding pursued as an internal, or external, resource may need to oversee the project(s).	• Helps lower O&M costs, which may have the potential to lower the facilities shortfall. • Reduces GHG emissions. • Decreases utility costs. • Allows cost centers to use their limited funding to support the mission.	**Medium-High -** • Potential Cost Savings or Avoidances - **Some**; the opportunity has potential for some cost savings or avoidances. • Compliance - **Somewhat Meets;** researching green initiatives are in accordance with the Presidential memo titled *Implementation of Energy Savings Projects and Performance-Based Contracting for energy savings*. • Mission Delivery - **Somewhat positive;** the opportunity can help cost centers use their limited funding to support the mission. • Time to Achieve - **Long;** this opportunity may take considerable time to implement as the Survey will need to work with other agencies or companies to identify projects eligible for alternative funding. • Estimated Cost - **Low -** the costs associated for this opportunity will vary based on the type of alternative funding sought, and agreed upon.
Budget Strategies - DMCI Considerations						
29. Create standard queries as a process step for an internal control.	**Description:** Over 100 projects are evaluated each year in the DMCI budget allocation process. BMS offices have, at times, overlooked the review of some projects due to their workload demands and/or knowledge that the projects will be rescored in the DMCI Scoring Team meeting. Additionally, some Facility Managers fail to enter and score important projects by the deadline. The Survey should consider developing queries that will have the capability to evaluate DMCI project status and completion. **Status:** FMMS allows users to execute private or public queries to examine data.	SFMP 6.5.2.1	1. Develop a public query for each of the three BMS offices to evaluate which "DMFP" projects are "site approved" and not "BMS approved." 2. Develop a public query for each of the three BMS offices to evaluate which cost centers have not submitted "DMFP" projects. 3. Inform Facility Managers of the changes and instruct them on how to input responses for the new queries. 4. Periodically check that Facility Managers are correctly inputting project information into FMMS. 5. Periodically have BMS office staff and FMB review the results to assess whether "DMFP" projects exist for each cost center, and that each project approved at a site level is also reviewed at the BMS level.	**Low -** The level of effort associated with this opportunity would be low as the implementation steps involve developing a query that could be performed as part of an existing employee's responsibilities.	• Creates a more complete project list for the DMCI Scoring Team's review. • Allows users to actively, and more accurately, track the status of their project.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat Meets;** the opportunity sets up process step to evaluate DMCI data. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Short;** the Survey could develop queries in a short amount of time. • Estimated Cost - **No cost -** the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
30. Establish periodic DMCI budget allocation training.	**Description:** The Survey continues to experience turnover in its Facility Managers position. To help continue the quality of its DMCI process, the Survey needs to continue to be proactive in training. **Status:** Facility Managers are responsible for inputting DMCI scores and descriptions of the assets in FMMS.	SFMP 6.5.2.2	1. Work with Facility Managers to develop an understanding for the need of a plan (e.g., topics that the training should cover). 2. Develop a training to evaluate projects against the scoring criteria and develop successful PDSs. 3. Prepare training materials (e.g., presentations and handouts). 4. Provide the training to Facility Managers. • The training should be instructed by staff at the FMB level to help establish equal access to training information by staff in each REx or mission area. 5. Conduct annual end-user training on entering projects into FMMS. 6. Periodically provide training for Facility Managers.	**Medium -** The effort involved in outlining a training plan, developing the training plan, and providing training may be outside the normal responsibilities of an existing employee.	• Helps train Facility Managers on how to input DMCI scores and descriptions in FMMS more accurately. • Improves DMCI scores and descriptions.	**Low -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat Meets;** the opportunity helps provide more accurate DMCI scores, as required by Attachment G. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Long**; this opportunity may take considerable time to implement as this is a recurring task and trainings should be conducted on an annual basis. • Estimated Cost - **Low;** the costs associated with this opportunity would likely require funding to plan, develop, and present the training to the Facility Managers.
31. Create a DMCI project descriptions and scoring ranges guide.	**Description:** FMB staff on the DMCI Scoring Team reported that they spend several days rewriting project descriptions. The Survey should consider developing high level Bureau standards for completing DMCI project descriptions. When FY2014 *Attachment G Guidance* is finalized, the Survey should provide clear scoring criteria guidance. **Status:** Currently, the Survey does not have a DMCI project description and scoring range guide. In addition, the Interior is in the process of finalizing the Attachment G, making it difficult for the Survey to provide guidance as it is subject to change in the upcoming months. However, the new guidance provides subjective measures to assess quantitative measures such as ROI.	SFMP 6.5.2.3	1. Identify ways to improve DMCI project descriptions and scoring ranges. 2. Develop a guide for DMCI project descriptions and provide it to Facility Managers for input. • The guide should include a few example PDSs of projects that scored high in the past to provide context to new Facility Managers. 3. Incorporate Facility Managers input into the guide. 4. Finalize the guide and provide to USGS stakeholders for use. 5. Periodically reassess the guide, and update, as necessary. • If the Interior keeps the current "maximum," "moderate," and "minimal" scoring ranges, the Survey should be prepared to provide additional guidance on what the Survey defines as "maximum," "moderate," or "minimal."	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Helps eliminate the need for FMB staff to the rewrite project descriptions for DMCI projects sent to Congress. • Establishes consistency across the submitted DMCI projects. • Provides training to new Facility Managers on the DMCI scoring process.	**High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Meets;** the opportunity meets Attachment G guidance by providing a clear scoring guide. • Mission Delivery - **Somewhat positive;** the opportunity increases the likelihood that DMCI projects are funded by Congress, thus increasing funds for the science mission. • Time to Achieve - **Short;** the Survey could create a guide in a short amount of time. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
32. Rotate members of the DMCI Scoring Team.	**Description:** The DMCI Scoring Team consists of FMB and BMS office representatives. The team has stayed consistent over the past several years. The Survey should consider including Facility Managers on the DMCI team. **Status:** As the members have been consistent each year, some staff may perform improper scoring of some projects, knowing they will be reassessed as a team. Additionally, some BMS office representatives enter projects into FMMS, approve them, and are then involved in the ranking process as part of the DMCI Scoring Team. This creates a potential for a knowledge gap between BMS offices, which scored projects, and those that not do have experience properly scoring DMCI projects.	SFMP 6.5.2.4	1. Identify the members making up the DMCI Scoring Team. 2. Assign two to three Facility Managers to assist the DMCI Scoring Team. 3. Communicate rules and responsibilities to the new DMCI Scoring Team Members. 4. Rotate the Facility Managers each year. 5. Examine the possibility of rotating the BMS office representative included on the team.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Provides a more transparent DMCI scoring process. • Helps ensure that staff has the appropriate knowledge of properly scoring DMCI projects. • Enhances knowledge of the overall DMCI budget allocation process.	**Medium-High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not Meet;** there is no compliance requirement for rotating members of the DMCI Scoring Team. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Short;** the change in the DMCI Scoring Team composition could be completed in a short timeframe. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.
33. Take a holistic approach to funding projects at a facility.	**Description:** The Survey should assess the total number of projects and funding required to repair a given facility. Taking a holistic approach will allow the Survey to assess whether it would be beneficial to repair the asset based on the condition of the facility. **Status:** The current DMCI process evaluates each individual project in a detailed manner, but does not examine the total number of projects and funding required for each facility.	SFMP 6.5.2.5	1. Create a workbook that calculates the total number of projects and funding required to repair a facility. 2. Evaluate facilities with a high DM backlog. 3. Assess the benefit to repair the asset based on the condition of the facility.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Allows the Survey to identify which facilities require the greatest amount of repairs. • Identifies which repairs would have a minimal impact to the facility due to the amount of overall repairs required for it to function properly. • Helps ensure the approach to DMCI funding is consistent with the Interior's FY2014 Attachment G guidance, which takes into account FCI as part of the scoring criteria.	**High -** • Potential Cost Savings or Avoidances - **Some**; the opportunity has potential for some cost savings or avoidance. • Compliance - **Somewhat Meets;** the opportunity helps ensure that the approach is in line with Attachment G guidance. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Near;** the Survey could begin taking a holistic approach to repairing facilities within the next year. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Budget Strategies - Budget Initiative Considerations						
34. Require an approved BCA prior to submitting a Budget Initiative.	**Description:** Currently, the process for submitting a BCA is more rigorous than the process for submitting a Budget Initiative. However, approved Budget Initiatives are submitted to Congress as an "over target" request. It is technically possible for a Budget Initiative to get passed before its financial impact is properly examined. **Status:** Currently, submitting a BCA with a Budget Initiative is optional.	SFMP 6.5.3.1	1. Work with stakeholders to develop a process for Budget Initiative submissions to include an approved BCA. 2. Develop guidelines for the process, including setting a minimum threshold for an approved BCA. 3. Modify the Budget Initiatives schedule for participants to have the proper time to prepare. 4. Work with stakeholders to inform appropriate parties about the Budget Initiatives process and timeline.	**Low -** The implementation strategies could be performed as part of an existing employee's responsibilities.	• Helps ensure that Budget Initiatives are not being submitted without a proper BCA. • Helps ensure that Budget Initiatives are not used as an "over target" request.	**High -** • Potential Cost Savings or Avoidances - **Some**; the opportunity has potential for some cost savings or avoidances. • Compliance - **Does not meet;** there are no compliance requirements for including an approved BCA when submitting a Budget Initiative. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Short;** adding a step to the Budget Initiative process could be done quickly. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.
35. Assess Budget Initiatives more thoroughly at the lower levels of the organization.	**Description:** The Budget Initiatives process requires Cost Center Managers to submit requests to OMS which reviews and submits approved requests to the FIRS. **Status:** The Budget Initiatives presented to the IRB in FY2012 included projects that could be defined as DMCI projects.	SFMP 6.5.3.2	1. Work with cost centers to identify ways to improve Budget Initiatives request. 2. Identify ways to improve Cost Center Director involvement in the overall budget process. • Cost Center Directors have experience and knowledge of the facilities, DMCI, rent, and O&M. 3. Require that Cost Center Managers submit their Budget Initiatives to their local supervisor for approval prior to submitting to OMS. 4. Identify which funding line each project should be assigned, to be performed by Cost Center Directors. 5. Submit Budget Initiatives to OMS for review. 6. Perform final submission of request to the FIRS.	**Low -** These implementation strategies could be performed as part of the budget Initiatives process.	• Helps properly discern which funding line to assign for a project. • Evaluates the feasibility and need for Budget Initiative at the lower levels of the organization.	**Medium-High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there are no compliance requirements for assessing Budget Initiatives more thoroughly. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Short;** assessing Budget Initiatives more thoroughly can be implemented as part of the current review process. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.
36. Update the Budget Initiatives template.	**Description:** The Budget Initiatives template includes field for justification of additional funding. The Survey should break down this justification to include information on how the Budget Initiative supports the mission and the facility. **Status:** The Budget Initiatives presented to the IRB in FY2012 included projects that could be defined as DMCI projects.	SFMP 6.5.3.3	1. Categorize the justification section into a facility and science section. 2. Create an updated template with the new justification sections. The new template should include examples and questions, including: • Does this project enable the facility to do more research? • Does it support the sciences? 3. Work with the IRB to approve the new Budget Initiatives template.	**Low -** The updated template could be performed as part of an existing employee's responsibilities.	• Helps ensure that the Budget initiatives clearly explain how it supports the science mission. • Increases likelihood of a more successful additional funding request.	**Medium-High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Does not meet;** there are no compliance requirements for including justifications in the Budget Initiatives template. • Mission Delivery - **No impact**; the opportunity has no impact to the mission because updating a template does not mean the initiative is funded. • Time to Achieve - **Short**; updating the Budget Initiatives template could be done quickly. • Estimated Cost - **No cost**; the costs associated with this opportunity would be negligible.

Opportunity	Description and Status	Reference	Proposed Implementation Strategies	Level of Effort	Potential Benefits/Cost Savings	Priority
Budget Strategies – Additional Budgetary Considerations						
37. Investigate component renewal.	**Description**: The Interior defines component renewal as "the planned replacement of a component or system that will reach the end of its useful life based on condition and life cycle analysis within the facility's lifetime." The Interior outlines that individual components of constructed assets should be tracked in FMMS, to adequately plan for and monitor component renewal costs. **Status**: Currently, the Survey tracks preventive maintenance in FMMS, but not for component renewal.	SFMP 6.5.4.1	1. Assess whether the definition for component renewal is still appropriate. 2. Make changes to the definition, if necessary. 3. Identify ways to track component renewal. 4. Examine how other Bureaus are funding component renewal. 5. Leverage research to develop a process to track and fund component renewal.	**Medium -** More than one employee will need to be involved to assess and change, if necessary, the definition of component renewal. It may also require a team of employees to identify and assess new ways to track component renewal.	• Helps provide a more accurate measure of component renewal. • Helps reduce the DM backlog. • Establishes a process for component renewal funding.	**Medium-High -** • Potential Cost Savings or Avoidances - **None**; the opportunity has no, or negligible, potential for cost savings or avoidances. • Compliance - **Somewhat meets;** the opportunity meets the Interior's *Policy on Deferred Maintenance, Current Replacement Value and Facility Condition Index in Life-Cycle Cost Management*. • Mission Delivery - **No impact**; the opportunity has no impact to the mission. • Time to Achieve - **Near;** investigating a process for component renewal could be completed in less than a year. • Estimated Cost - **No cost;** the costs associated with this opportunity would be negligible.
38. Work with science programs to evaluate the impact of facilities on science mission.	**Description:** The Survey funds its science mission at approximately ten times the amount that it funds facilities. Facilities are designed to support the science mission. Therefore, OMS should work with the science programs to assess the extent to which the current facilities are supporting the mission. **Status:** If a facility needs replacement, science programs can work with the facilities staff to drive the replacement of that facility.	SFMP 6.5.4.2	1. Assess the Survey's mission needs. 2. Identify how the mission, and any changes, impacts the Survey's real property portfolio. 3. Identify where funding is spent on under-utilized facilities, or facilities that are not critical to the mission. 4. Redistribute funds that are used in under-utilized facilities to a more mission-critical facility or returned to science. 5. Reassess periodically.	**Medium -** This will require OMS employee and science programs to work together to assess mission needs.	• Helps ensure that the facilities in the real property portfolio support the Survey's mission needs.	**Medium-High -** • Potential Cost Savings or Avoidances - **Some**; the opportunity has potential for some cost savings or avoidances. • Compliance - **Does not Meet;** there are no compliance requirements for component renewals. • Mission Delivery - **Positively impacts the mission**; the opportunity helps ensure that the facilities meet the science mission needs. • Time to Achieve -**Long;** working with science programs to evaluate the impact of the facilities on the mission will take a significant amount of time. • Estimated Cost - **Low;** costs for this opportunity are expected to be low.

Figure 7.12 Implementation Strategies

8.0 State of Facilities Report

As part of the FY2012 SFMP update, the Survey developed this State of Facilities Report (Report). The Report includes a Microsoft Excel companion which the Survey will use on a quarterly basis to help summarize USGS portfolio data. The Report provides an overview of the Survey's facilities by REx, national responsibility, and mission area. The Report will help enable REx, national responsibilities, and mission areas to better manage the performance of their assets, as well as to improve data quality and external reporting.

Most of the data for this report is extracted from the Survey's FBMS, which is also the data source for the Survey's FRPP submission. As noted in Section 6.2.2.2 - Cost Modeling Methodology, Standards, and Requirements, FRPP reported data is also used as an input into O&M cost models. Improving the Survey's data quality, and presenting REx, national responsibilities, and mission areas with pertinent information (e.g., upcoming lease expirations), can help improve the Survey's asset management. **Figure 8.1** provides an overview of the areas evaluated in the quarterly State of Facilities Report.

Area Type	Area	Acronym[27]
REx area	Alaska Area	WA
	Midwest Area	EM
	Northeast Area	EN
	Northwest Area	WN
	Pacific Southwest Area	WS
	Rocky Mountain Area	CM
	South Central Area	CS
	Southeast Area	ES
National responsibility	AEI	HA
	Director's Office	HD
	Human Capital	HU
Mission area	Climate and Land-Use Change	HC
	Core Science Systems	HI
	Ecosystems	HE
	Energy and Minerals and Environmental Health	HM
	Natural Hazards, Risk, and Resilience Assessment	HH
	Water	HW

Figure 8.1. Area Types and Acronyms

[27]Area Type, Name, and Acronyms found in the FMB furnished report, Cost Center to Area Report, February 22, 2012.

The sections below describe the purpose of the Report, summarize the Survey's portfolio data, and explain the Excel workbook used to prepare the Report.

8.1. Purpose of State of Facilities Report

The Survey designed the State of Facilities Report to provide a high level overview of the Survey's assets. In addition, the State of Facilities Report helps stakeholders identify data abnormalities and outliers in each area, with the expectation that areas will correct inaccurate or abnormal data. Data outliers are data points outside of the Survey-defined outlier threshold range.[28] **Figure 8.2** provides the Survey's defined outlier range.

	Outlier Threshold	
Metric	**Minimum**	**Maximum**
Value per GSF	$50	$400
Costs per SF - GSF or RSF	$1	$20
Cost per Value	0.001	0.2
Condition Index	50%	--
DM backlog per GSF	--	$80
Utilization Rate (Office SF per Personnel)	100	300
Cost per Person	$1,000	$10,000

Figure 8.2.Survey Defined Outlier Range

Section 8.2 – FY2012 State of Facilities Report provides an overview of the current state of the Survey's assets. Appendix Q – State of Facilities Report Template provides a template the Survey may use in future iterations of the Report.

8.2. FY2012 State of Facilities Report

This Report analyzes the following Survey-selected performance metrics at each of the areas:

- Size
- Value per GSF
- Costs per SF
- Costs per value
- Condition index
- DM backlog per GSF
- Utilization Rate
- Cost per person

[28]Note, as data becomes more accurate and changes are made, the Survey may redefine its outlier threshold range.

8.2.1. Size

The Survey's portfolio is comprised of over 1,100 buildings, structures, and land assets. **Figure 8.3** below provides a representation of the total size of the Survey's portfolio by area in terms of acreage, GSF, and RSF. RSF is the unit of measure for GSA provided space.

Area	Sum of Acreage[29]	Sum of GSF	Sum of RSF[30]
CM –Rocky Mountain Area	514	115,695	1,416,828
CS – South Central Area	48	255,947	170,591
EM – Midwest Area	853	405,881	336,459
EN – Northeast Area	562	544,245	361,301
ES – Southeast Area	--	224,915	184,366
HA – AEI	--	63,678	597,219
HC – Climate and Land-Use Change	319	306,930	68,414
HD – Director's Office	--	5,695	166,147
HE – Ecosystems	--	- -	12,645
HH – Natural Hazards, Risk, and Resilience Assessment	--	- -	14,888
HI – Core Science Systems	--	--	334,116
HM – Energy and Minerals and Environmental Health	--	--	21,592
HU – Human Capital	--	7,864	30,199
HW – Water	--	109,818	455,030
WA – Alaska Area	2	44,726	206,084
WN – Northwest Area	41	224,408	78,359
WS – Pacific Southwest Area	12	256,101	620,195
Grand Total	**2,349**	**2,565,903**	**5,074,434**

Figure 8.3.Size by Area

In total, approximately 66% of the Survey's building space portfolio is GSA provided. **Figure 8.4** illustrates the Survey's SF by its three main usage types: office, lab, and warehouse.

[29]Acreage and GSF counts derived from Object Measurements Report, April 6, 2012.
[30]RSF counts derived from Contract Measurements Report, February 22, 2012.
[31]Usable Office, Lab, and Warehouse SF counts derived from Object Measurements Report, April 6, 2012.

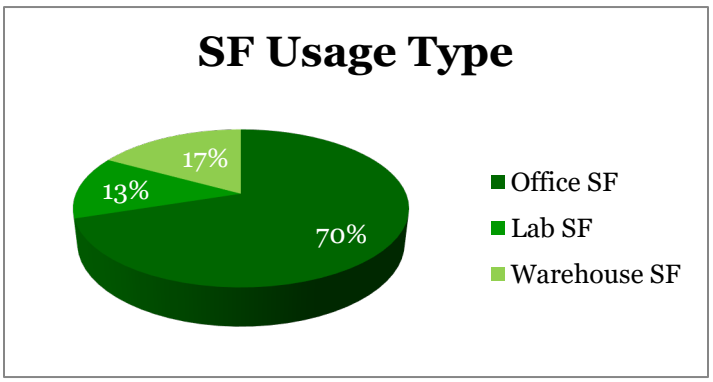

Figure 8.4. Survey's SF by Usage Type

Figure 8.5 provides a breakdown of the Survey's office SF, lab SF, and warehouse SF, by area. As shown below, each area has more office SF than lab or warehouse SF.

Area	Sum of Office SF	Sum of Lab SF	Sum of Warehouse SF
CM –Rocky Mountain Area	618,478	129,520	17,200
CS – South Central Area	213,495	45,987	51,064
EM – Midwest Area	259,791	86,865	76,031
EN – Northeast Area	281,034	77,953	74,522
ES – Southeast Area	186,621	16,936	14,369
HA – AEI	331,060	28,668	29,689
HC – Climate and Land-Use Change	119,148	1,875	17,200
HD – Director's Office	100,721	9,692	2,438
HE – Ecosystems	7,051	800	--
HH – Natural Hazards, Risk, and Resilience Assessment	8,174	974	--
HI – Core Science Systems	206,597	17,735	10,732
HM – Energy and Minerals and Environmental Health	9,481	2,792	1,044
HU – Human Capital	21,379	1,636	1,336
HW – Water	140,174	69,698	11,606
WA – Alaska Area	112,726	6,314	34,817
WN – Northwest Area	127,298	41,205	63,513
WS – Pacific Southwest Area	399,279	42,152	65,979
Grand Total	**3,142,508**	**580,804**	**763,768**

Figure 8.5. SF Usage Type by Area

8.2.2. Value per GSF

The Survey's portfolio -- including buildings, structures, and land assets -- is valued at $636,260,953 (not including GSA provided space for which the Survey is not required to report a value). **Figure 8.6** provides a breakdown of the value per GSF for each area. Areas that do not have owned, direct leased, or otherwise managed buildings are noted with an "N/A."

Area	Sum of Value	Sum of GSF	Value per GSF
CM –Rocky Mountain Area	$14,353,916	115,695	$124
CS – South Central Area	$37,956,997	255,947	$148
EM – Midwest Area	$127,516,481	405,881	$314
EN – Northeast Area	$125,988,917	544,245	$231
ES – Southeast Area	$26,854,628	224,915	$119
HA – AEI	$13,695,171	63,678	$215
HC – Climate and Land-Use Change	$62,053,892	306,930	$202
HD – Director's Office	$262,978	5,695	$46
HE – Ecosystems	--	- -	--
HH – Natural Hazards, Risk, and Resilience Assessment	N/A	N/A	N/A
HI – Core Science Systems	N/A	N/A	N/A
HM – Energy and Minerals and Environmental Health	N/A	N/A	N/A
HU – Human Capital	$1,847,489	7,864	$235
HW – Water	$31,767,812	109,818	$289
WA – Alaska Area	$2,473,328	44,726	$55
WN – Northwest Area	$35,062,663	224,408	$156
WS – Pacific Southwest Area	$27,678,367	256,101	$108
Grand Total	**$507,512,640**	**2,565,903**	**$198**

Figure 8.6. Value per GSF by Area

As shown in **Figure 8.6**, the average value of the Survey's buildings is $198 per GSF. The Ecosystems mission area (HE) shows a value and GSF of $0, because although the mission area has owned, direct leased, or otherwise managed buildings, those buildings do not have a value or GSF in FBMS.

Figure 8.7 illustrates the value per GSF of non-GSA provided buildings at each of the areas with owned, direct leased, and otherwise managed buildings.

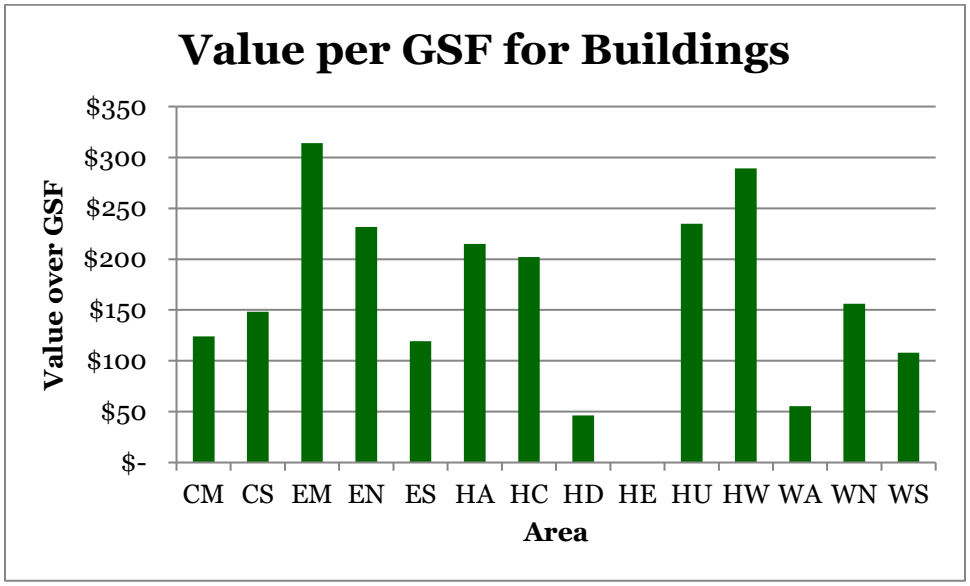

Figure 8.7. Value per GSF Chart

8.2.3. Costs per SF

The Survey spent $50,366,282 in operating and lease costs since the beginning of FY2012. **Figure 8.8** provides a breakdown of the year-to-date (YTD) cost per GSF at each of the areas. This analysis does not include GSA provided space which uses RSF as the unit of measure. Areas that do not have owned, direct leased, or otherwise managed buildings are noted with an "N/A."

Area	Sum of YTD Operating Costs / Lease Costs	Sum of GSF	Costs per GSF
CM –Rocky Mountain Area	$337,458	108,685	$3.10
CS – South Central Area	$1,552,423	241,734	$6.42
EM – Midwest Area	$935,638	331,653	$2.82
EN – Northeast Area	$855,533	512,142	$1.67
ES – Southeast Area	$380,216	105,869	$3.59
HA – AEI	$111,228	12,396	$8.97
HC – Climate and Land-Use Change	$1,651,831	306,930	$5.38
HD – Director's Office	$8,700	1,315	$6.62
HE – Ecosystems	--	--	--
HH – Natural Hazards, Risk, and Resilience Assessment	N/A	N/A	N/A
HI – Core Science Systems	N/A	N/A	N/A
HM – Energy and Minerals and Environmental Health	N/A	N/A	N/A
HU – Human Capital	$70,563	7,864	$8.97
HW – Water	$269,299	106,238	$2.53
WA – Alaska Area	$32,975	39,409	$0.84
WN – Northwest Area	$538,938	146,427	$3.68
WS – Pacific Southwest Area	$947,911	227,551	$4.17
Grand Total	**$7,692,712**	**2,148,213**[32]	**$3.58**

Figure 8.8. Cost per GSF by Area

The YTD cost per GSF of the Survey's owned, direct leased, and otherwise managed assets is $3.58. However, some areas, such as AEI (i.e., HA), and Human Capital (i.e., HU), have much more expensive space to operate.

[32]This chart only takes into account buildings with YTD costs, therefore the GSF count stated, 2,148,213 GSF, is less than the USGS total GSF previously noted, 2,565,903 GSF. Taking into account the total USGS GSF, the cost per GSF would be $3.00.

Figure 8.9 provides a breakdown of the YTD cost per RSF at each of the areas. This analysis evaluates the costs incurred at the Survey's GSA provided space.

Area	Sum of YTD Operating Costs / Lease Costs	Sum of RSF	Costs per RSF
CM –Rocky Mountain Area	$4,194,417	947,071	$4.43
CS – South Central Area	$1,222,404	132,654	$9.21
EM – Midwest Area	$3,465,176	333,480	$10.39
EN – Northeast Area	$4,452,402	358,789	$12.41
ES – Southeast Area	$1,528,577	144,178	$10.60
HA – AEI	$6,872,998	596,595	$11.52
HC – Climate and Land-Use Change	$1,569,598	63,699	$24.64
HD – Director's Office	$2,308,152	143,544	$6.08
HE – Ecosystems	$239,395	12,645	$18.93
HH – Natural Hazards, Risk, and Resilience Assessment	$280,555	14,888	$18.84
HI – Core Science Systems	$1,596,981	134,541	$11.87
HM – Energy and Minerals and Environmental Health	$333,593	21,592	$15.45
HU – Human Capital	$520,972	30,199	$17.25
HW – Water	$6,010,766	449,425	$13.37
WA – Alaska Area	$2,193,190	206,084	$10.64
WN – Northwest Area	$586,346	72,710	$8.06
WS – Pacific Southwest Area	$4,323,037	561,328	$7.70
Grand Total	**$41,698,558**	**4,223,422**[34]	**$9.87**

Figure 8.9. Cost per RSF by Area

As shown in **Figure 8.8**, the owned, direct leased, and otherwise managed assets have a YTD cost per SF of $3.58, while GSA provided space, shown in **Figure 8.9**, costs $9.87 per SF YTD.

[33]YTD costs are derived from the Costs Report, February 22, 2012. RSF counts are derived from the Contract Measurements Report, February 22, 2012.
[34]This chart only takes into account buildings with YTD costs, therefore the RSF count stated, 4,223,442 RSF, is less than the USGS total RSF previously noted, 5,074,434 RSF. Taking into account the total USGS RSF, the cost per RSF would be $8.22.

Figure 8.10 shows the cost per GSF and RSF for each area.

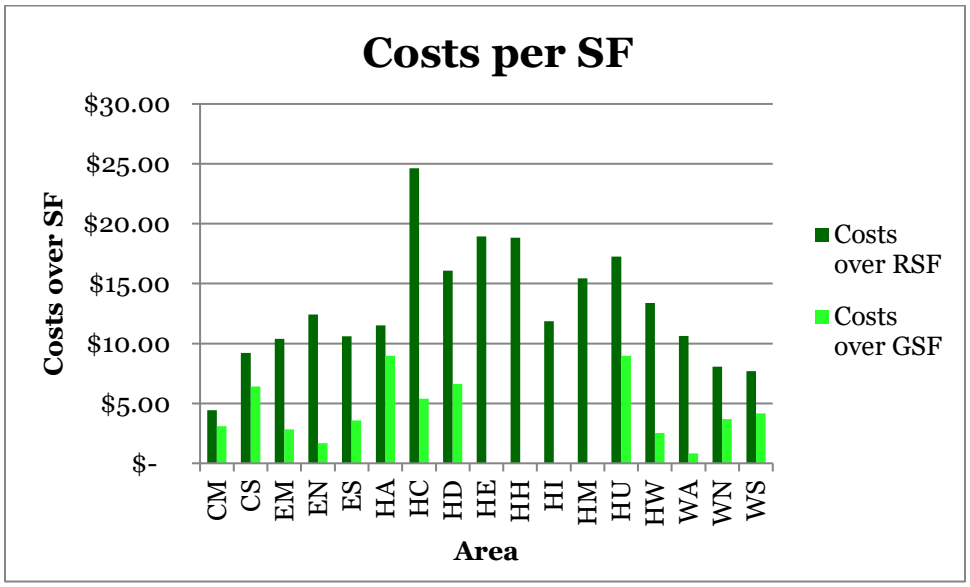

Figure 8.10. Cost per RSF

As shown in **Figure 8.10**, the cost per SF is greater with RSF (i.e., GSA provided space) than GSF (i.e., non-GSA provided space).

8.2.4. Costs per Value

This analysis provides information on how much is spent (as a percent of asset value) each year to operate the asset. For the purpose of this report, the cost per value is evaluating how much of the value of an asset the Survey spent in the first five months of the fiscal year, as the cost data starts at the beginning of the fiscal year, or October 1, 2011 for FY2012. **Figure 8.11** provides the total cost per value at each of the areas**.**

Area	Sum of YTD Operating Costs / Lease Costs	Sum of Value	Costs per Value
CM –Rocky Mountain Area	$4,545,934	$14,658,191	0.31
CS – South Central Area	$2,866,080	$39,798,287	0.07
EM – Midwest Area	$4,418,869	$131,736,759	0.03
EN – Northeast Area	$5,544,314	$159,225,965	0.03
ES – Southeast Area	$1,922,560	$22,547,870	0.09
HA – AEI	$6,986,555	$14,349,332	0.49
HC – Climate and Land-Use Change	$3,262,809	$82,015,800	0.04
HD – Director's Office	$2,316,853	$262,978	8.81
HE – Ecosystems	$239,395	- -	N/A
HH – Natural Hazards, Risk, and Resilience Assessment	$280,555	- -	N/A
HI – Core Science Systems	$1,596,981	- -	N/A
HM – Energy and Minerals and Environmental Health	$333,593	- -	N/A
HU – Human Capital	$591,535	$1,847,489	0.32
HW – Water	$6,285,581	$31,412,812	0.20
WA – Alaska Area	$2,288,684	$2,323,464	0.99
WN – Northwest Area	$1,139,021	$34,008,548	0.03
WS – Pacific Southwest Area	$5,335,136	$25,779,248	0.21
Grand Total	**$49,954,456**[36]	**$559,966,744**	**0.09**

Figure 8.11. Cost per Value by Area

The Survey's overall YTD cost per value is .09. In other terms, approximately every 11 of these five month periods or four and a half years, the Survey pays the total value of their assets in operating costs. If the cost per value is one or greater this indicates that the area has spent at least 100% the asset value in operating the asset over the period**.** As

[35]YTD costs are derived from the Costs Report, February 22, 2012. Values are derived from the Buildings Report, February 22, 2012.
[36]This chart takes into account buildings, land, and structures. Therefore, the YTD costs and value stated in Figure 8.11 are greater than the previously stated YTD costs and value which were applied only to buildings. Additionally, this chart is only examining the value if the asset incurred YTD costs.

shown in **Figure 8.11**, Alaska REx area, with a value close to 1.0, has spent almost as much in YTD operating costs and lease costs than the value of its assets. The Director's office has the largest cost per value.

8.2.5. Condition Index

This analysis provides information on the condition of the assets as a measure of the DM backlog per the value (i.e., 1 - (DM backlog/Value))*100). The calculation of this metric does not include GSA provided space as GSA is responsible for the DM backlog at the majority of those facilities. **Figure 8.12** provides the overall condition index of assets at each of the areas. Areas that do not have owned, direct leased, or otherwise managed buildings or structures are noted with an "N/A."

Area	Sum of DM Backlog	Sum of Value	Condition Index
CM –Rocky Mountain Area	$2,872,319	$15,303,933	81.23%
CS – South Central Area	$3,761,894	$41,586,578	90.95%
EM – Midwest Area	$24,210,146	$156,484,485	84.53%
EN – Northeast Area	$18,359,535	$179,267,540	89.76%
ES – Southeast Area	$1,258,614	$33,544,580	96.25%
HA – AEI	$720,996	$25,132,311	97.13%
HC – Climate and Land-Use Change	$8,243,823	$82,015,800	89.95%
HD – Director's Office	--	$262,978	100.00%
HE – Ecosystems	--	--	--
HH – Natural Hazards, Risk, and Resilience Assessment	N/A	N/A	N/A
HI – Core Science Systems	N/A	N/A	N/A
HM – Energy and Minerals and Environmental Health	N/A	N/A	N/A
HU – Human Capital	N/A	$1,847,489	100.00%
HW – Water	$23,296	$31,804,102	99.93%
WA – Alaska Area	$1,818,454	$3,207,199	43.30%
WN – Northwest Area	$13,090,395	$37,579,135	65.17%
WS – Pacific Southwest Area	--	$28,233,894	100.00%
Grand Total	**$74,359,472**	**$636,270,025**[37]	**88.31%**

Figure 8.12. Condition Index by Area

The condition index of the Survey's portfolio is 88.31%. This indicates that the amount of the Survey's DM backlog is equal to 11.69% of the value of the Survey's assets.

[37]This chart takes into account buildings, land, and structures. Therefore, the values stated in Figure 8.12 are greater than the previously stated values which were applied only to buildings or assets which incurred YTD costs.

Figure 8.13 illustrates the condition index of assets at each of the areas.

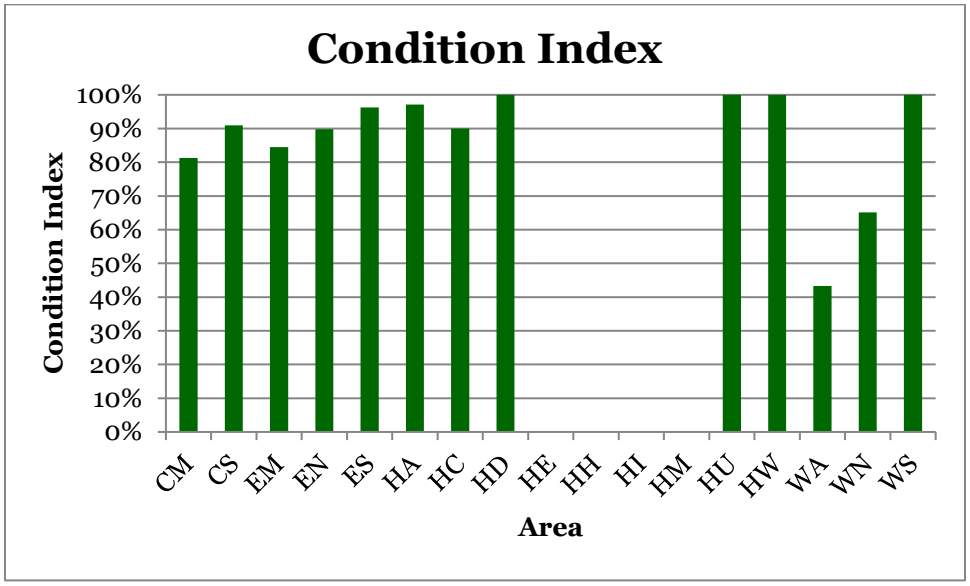

Figure 8.13. Condition Index

8.2.6. DM Backlog per GSF

This analysis provides information on the condition of assets as a measure of DM backlog per GSF. The calculation of this metric does not include GSA provided space as GSA is responsible for the DM backlog at the majority of those facilities. **Figure 8.14** provides the DM backlog per GSF at each of the areas with a backlog. Areas that do not have owned, direct leased, or otherwise managed buildings are noted with an "N/A."

Area	Sum of DM Backlog	Sum of GSF	DM Backlog per GSF
CM –Rocky Mountain Area	$2,481,152	115,695	$21.45
CS – South Central Area	$3,602,517	255,947	$14.08
EM – Midwest Area	$20,424,097	405,881	$50.32
EN – Northeast Area	$10,056,588	544,245	$18.48
ES – Southeast Area	$1,214,614	224,915	$5.40
HA – AEI	$720,996	63,678	$11.32
HC – Climate and Land-Use Change	$7,868,439	306,930	$25.64
HD – Director's Office	--	5,695	--
HE – Ecosystems	--	- -	--
HH – Natural Hazards, Risk, and Resilience Assessment	N/A	N/A	N/A
HI – Core Science Systems	N/A	N/A	N/A
HM – Energy and Minerals and Environmental Health	N/A	N/A	N/A
HU – Human Capital	--	7,864	--
HW – Water	$13,296	109,818	$0.12
WA – Alaska Area	$1,413,454	44,726	$31.60
WN – Northwest Area	$11,519,824	224,408	$51.33
WS – Pacific Southwest Area	--	256,101	--
Grand Total	**$59,314,977**[38]	**2,565,903**	**$23.12**

Figure 8.14. DM Backlog per GSF by Area

The Survey's DM backlog per GSF is $23.12, indicating that, on average, each building SF has approximately $20-$25 of needed repairs. As shown in **Figure 8.14**, this figure varies greatly by area.

[38]This chart only takes into account the DM backlog associated with buildings, which differs from the DM backlog of the overall portfolio previously stated.

Figure 8.15 illustrates the DM backlog per GSF at each of the areas with a backlog.

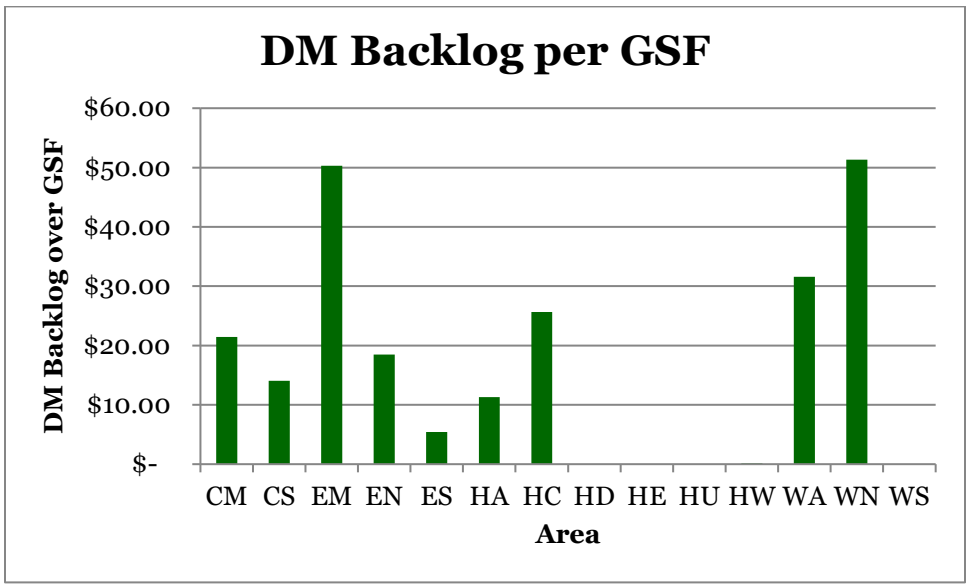

Figure 8.15. DM Backlog per GSF Chart

8.2.7. Cost per Person

This analysis provides information on the total cost per person since the start of FY2012. Cost data is derived from FBMS, while personnel data is derived from Lotus Notes name and address book. **Figure 8.16** shows the overall cost per person at each of the areas.

Area	Sum of YTD Operating Costs / Lease Costs	Sum of Number of People	Cost per Person
CM –Rocky Mountain Area	$4,306,014	810	$5,316
CS – South Central Area	$2,407,427	574	$4,194
EM – Midwest Area	$3,796,516	974	$3,898
EN – Northeast Area	$4,737,369	994	$4,766
ES – Southeast Area	$1,882,945	463	$4,067
HA – AEI	$6,279,657	451	$13,924
HC – Climate and Land-Use Change	$2,761,317	206	$13,404
HD – Director's Office	$1,386,885	164	$8,457
HE – Ecosystems	$236,607	36	$6,572
HH – Natural Hazards, Risk, and Resilience Assessment	$275,478	20	$13,774
HI – Core Science Systems	$1,054,384	91	$11,587
HM – Energy and Minerals and Environmental Health	$327,315	35	$9,35
HU – Human Capital	$556,657	70	$7,952
HW – Water	$4,417,549	467	$9,459
WA – Alaska Area	$1,991,933	442	$4,507
WN – Northwest Area	$701,595	274	$2,561
WS – Pacific Southwest Area	$4,700,476	1,258	$3,736
Grand Total	**$41,820,124**[40]	**7,329**	**$5,706**

Figure 8.16. Cost per Person by Area

As shown in **Figure 8.16**, the Survey's average cost per person is $5,706. This indicates that the Survey spends $5,706 operating or leasing buildings to accommodate its staff members.

[39]YTD costs are derived from the Costs Report, February 22, 2012 Number of people are derived from the Personnel Data Report, March 28, 2012.
[40]This chart only takes into account the number of people in buildings with YTD costs, therefore the YTD costs stated, $41,820,124, is less than the USGS total YTD costs previously noted, $49,954,456. Taking into account the total USGS YTD costs, the cost per person would be $6,816.

Figure 8.17 illustrates the overall cost per person at each of the areas.

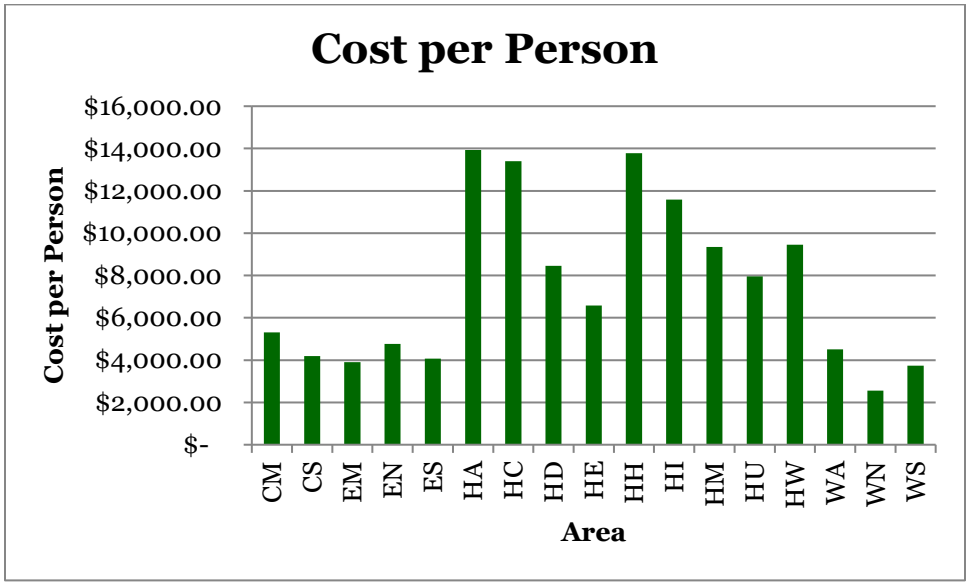

Figure 8.17. Cost per Person Chart

8.3. State of Facilities Workbook

To prepare the State of Facilities Report, the Survey created an Excel workbook with repeatable functionality that can be updated on a quarterly, or as-needed, basis. The workbook enables users to update data from the ten input sources in their respective worksheets to develop the Report. See Section 8.3.1 – The Inputs for more information on the input reports. Based on the input reports (in the appropriate worksheets), the workbook contains calculations to update information inside the Output Master Sheet. The Output Master Sheet consolidates the input data into one master worksheet. Following the update of the Output Master Sheet, worksheets containing tables on the Survey's selected performance metrics will update. See Appendix R - Steps to Updating the State of Facilities Workbook for details on how to update the workbook each quarter.

Within the State of Facilities workbook, the performance metric worksheets help stakeholders assess buildings, structures, and land by their respective by REx, national responsibility, or mission area. FMB staff indicated it was important to evaluate asset information by cost center, as a REx may not be responsible for assets in its geographic region. For example, an asset may be located in the Southwest, but a mission area is responsible for the asset, not of the Southwest REx. Additionally, the Southwest REx may be responsible for the asset management of certain floors, while a mission area is responsible for the other floors. While performing an analysis by REx, national responsibility, or mission area provides a more accurate depiction of the performance of the responsible party's assets rather than looking at assets across geographic regions, it adds a level of complexity since the Survey cannot simply assess assets by state. To keep the workbook reflective of the current state, and in an effort to help continually improve

data quality, the Survey will need to continue to update its FMB-furnished reports.

The sections below describe the inputs, and provide an explanation of the use of REx, national responsibilities, and mission areas in the Report. See Appendix S – Static versus Dynamic Fields in the State of Facilities Report Workbook Output Master Sheet for an explanation of the use of certain fields in the State of Facilities Workbook's Output Master Sheet. See Appendix T –State of Facilities Workbook Output Master Sheet Fields for a description of the columns in the Output Master Sheet.

8.3.1. The Inputs

The Survey uses seven FBMS reports and three other data reports as inputs. **Figure 8.18** outlines the name of each report, the data source, and the report purpose.

Report Name	Data Source	Purpose of Report
Buildings Report	FBMS	Lists buildings or structures, legal interests, values, and DM backlog.
Land Report	FBMS	Lists land assets and legal interests.
Object Measurements Report	FBMS	Provides size data on owned and leased assets. Also includes office, lab, and warehouse USF counts on GSA provided space.
Contract Measurements Report	FBMS	Provides RSF data for GSA provided assets. Also includes lease expirations for direct leased and GSA provided space.
Rental Objects Report	FBMS	Provides the rental object(s) for each building, if applicable.
Cost Report	FBMS	Outlines the costs posted to each object and the posting date.
Settlement Report	FBMS	Ties buildings to their funded programs and cost center. Additionally, provides a settlement rule for each building's funded programs stating the percentage or equivalence of costs and SF to assign to each program.
Personnel Data Report	Lotus Notes Name and Address Book	Provides personnel data assigned to each building and cost center.
Cost Center to Area Report	FMB Sourced	Reconciles the allocation organization code and the cost center code to the REx area, mission area, or national responsibility.
FBMS Building Code Report	FMB Sourced	Reconciles the old building codes to the FBMS building codes. Used to reconcile personnel data to FBMS data.

Figure 8.18. Report Inputs

8.3.2. Connecting Buildings to Areas and Costs

The Survey has buildings under the control of one REx, national responsibility, or mission area, and others under the control of multiple areas. Therefore, the Survey cannot allocate asset costs or SF directly to an area. To address this challenge, the Survey evaluated and correlated the cost centers, or work breakdown structure (WBS) codes, associated with the asset and area.

As assets may not correlate directly to a WBS code, challenges exist in the assignment process. In some instances, a building may map to one or more rental objects, or rental contracts, which correlate to WBS codes. In these cases, costs are not allocated at the building level to cost centers, they are allocated from rental objects to cost centers, and the rental object becomes the Sender identification (ID). The Sender ID is the asset or rental object allocating costs to WBS codes.

The Sender ID, matching WBS codes, and percentage of costs to settle (allocate) can be found inside the Settlement Report. The percentage of costs to settle can be assessed either through a Survey-defined percentage or an equivalence factor. The Survey can extract a percentage of costs to settle from the equivalence factor by dividing the equivalence factor (usually a SF) applied to that Sender ID/WBS code by the sum of equivalence factors at that Sender ID.

In order to simplify this complexity, the Survey created the following assumptions for the purposes of the State of Facilities Report and the associated workbook:

1. If the record has a settlement rule to WBSs, that distribution is used.
2. If the record has a rental object and no settlement rule, the sum of the ROs rule are used.
3. If the record has no settlement rule and no rental objects, the distribution is 100% to the WBs that is directly on the record.

Figure 8.19 provides an example of how an asset's costs and SF are generally allocated to multiple WBS codes through their Sender ID.

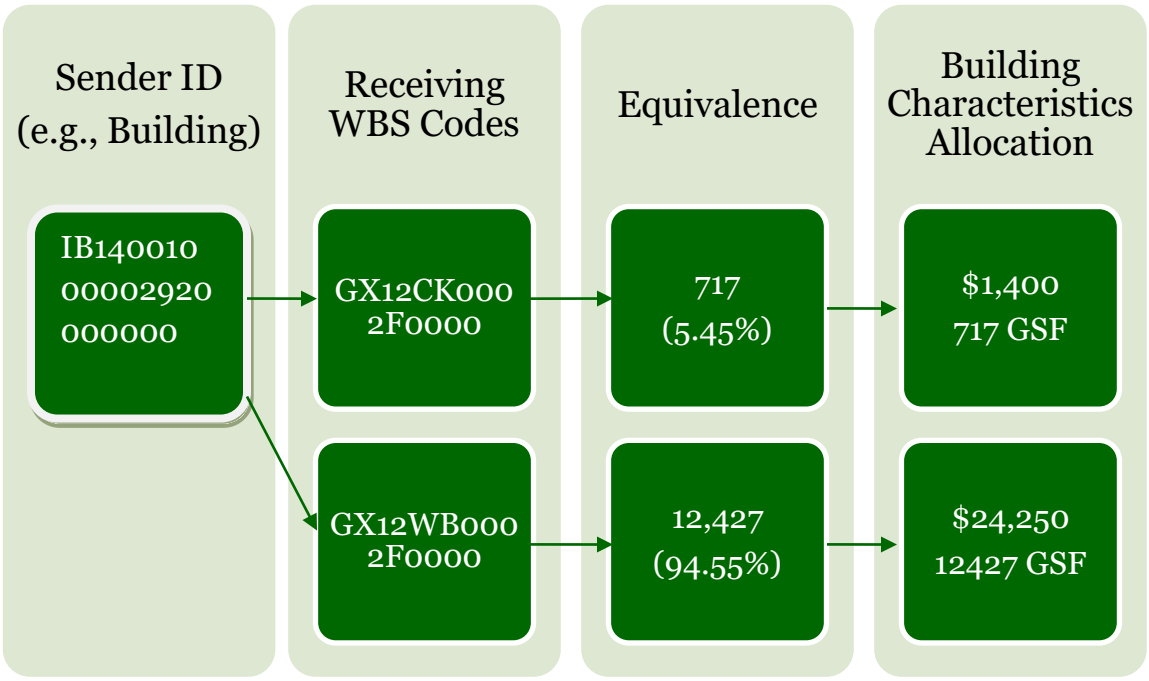

Figure 8.19. Standard Sender ID to WBS Code

An additional layer of complexity exists if the rental object code is used, as detailed in assumption two. **Figure 8.20** shows how characteristics are distributed from the building level if the Sender ID is a rental object and there are multiple rental objects allocated to a building. As shown, the Settlement Report will state which equivalence or percentage of funds to settle to the WBS codes associated with the rental objects. This is the process if the Sender ID is a building or land asset. While this is the process, this does not take into account what percentage of the total building to settle to each rental object.

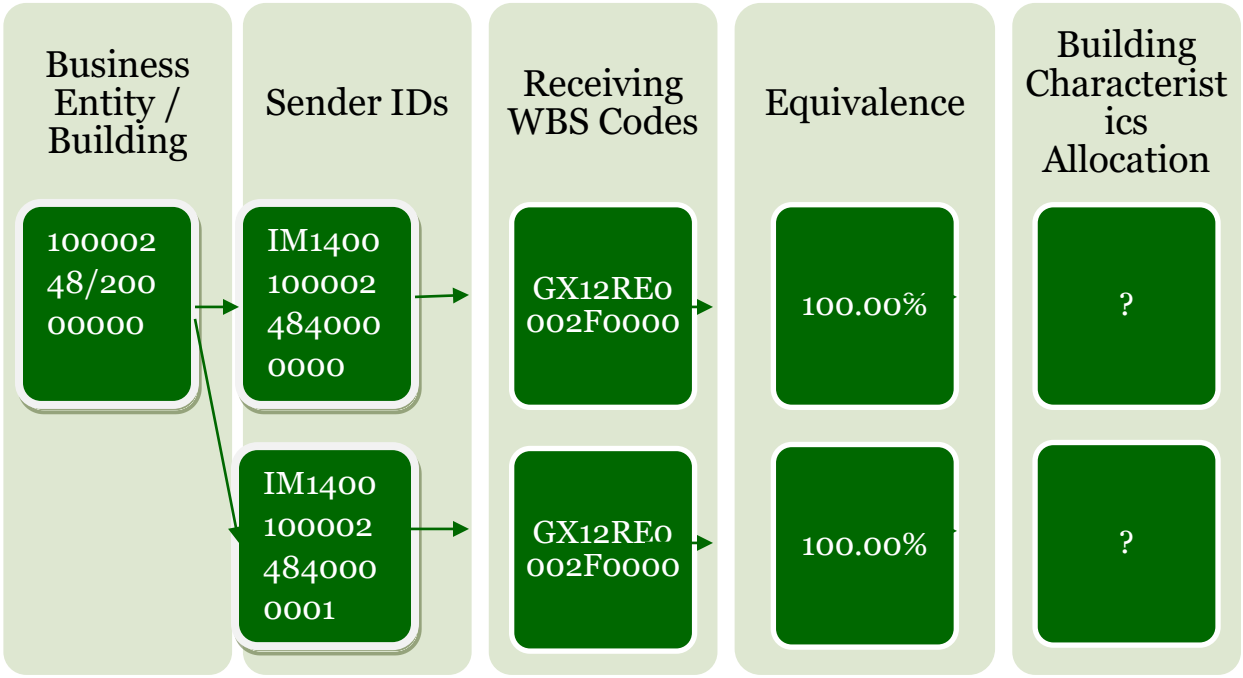

Figure 8.20. Sender ID to WBS Code where Sender is a Rental Object

To address this challenge, the Survey developed a settlement rule for calculating the distribution of building characteristics to the rental object level. As shown in **Figure 8.21**, the settlement rule is the percentage of cost or SF to allocate to an asset's rental objects, divided by the SF of the rental object over the total SF of the buildings rental objects. In cases where a rental object is the Sender ID, the Output Master Sheet multiplies the settlement rule in the Settlement Report by the rental object settlement allocation.

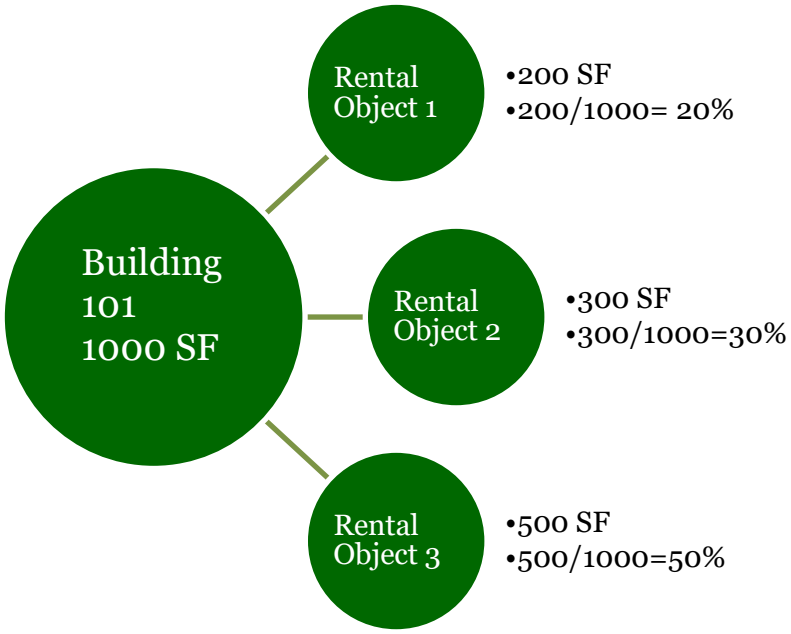

Figure 8.21. Rental Object Settlement Rule

9.0 Appendices

Appendix A. API Criteria Scoring Options

API scores are comprised of two components —Mission Dependency and Asset Substitutability. The following sections detail the scoring definition for each criterion based on guidance from the FY2005 process.

Mission Dependency (80% of total API score)

Program Support – Long Term (26%) - Degree to which an asset supports expected program activities five or more years based on Bureau strategic plans.

Scoring	Definition
Very High	Asset has a very high likelihood of providing capabilities required by future program needs.
High	Asset has a high likelihood of providing capabilities required by future program needs.
Medium	Asset has a moderate likelihood of providing capabilities required by future program needs.
Low	Asset has a low likelihood of providing capabilities required by future program needs.
Very Low	Asset has no likelihood of providing capabilities required by future program needs.

Figure 9.1 API: Program Support-Long Term

Program Support – Short Term (23%) - Degree to which an asset supports program activities outlined in the annual and five-year program plans.

Scoring	Definition
Very High	Asset provides capabilities critical to several national and regional programs, including capabilities essential for the immediate protection of public health and safety.
High	Asset provide capabilities to several national and regional programs OR capabilities essential for the immediate protection of public health and safety.
Medium	Asset provides capabilities important to a few national or regional programs, none of which are essential for the immediate protection of public health and safety.
Low	Asset plays in indirect role in supporting short-term program activities.
Very Low	Asset has no direct or indirect relationship to short-term program activities.

Figure 9.2 API: Program Support-Short Term

Location – Function (14%) - Degree to which the asset's physical location contributes to the purpose of that individual asset.

Scoring	Definition
Very High	The asset's physical location is essential to the purpose of that individual asset.
High	The asset's physical location is important to the purpose of that individual asset.
Medium	The asset's physical location directly contributes to the purpose of that individual asset.
Low	The asset's physical location indirectly contributes to the purpose of that individual asset.
Very Low	Asset cannot accommodate program change or collocation.

Figure 9.3. API: Location - Function

Flexibility (10%) - Ability of an asset to accommodate program changes, including collocation, which considering degree of modification needed and impact to operations.

Scoring	Definition
Very High	Asset can accommodate program change AND collocation with little impact on current operations and with little or no modification.
High	Asset can accommodate program change OR collocation with little impact on current operations and with little or no modification.
Medium	Asset can accommodate program change, including collocation. Change will require some modification or will impact current operations.
Low	Asset can accommodate program change, including collocation, but only after significant impact on current operations and with significant operation.
Very Low	Asset cannot accommodate program change or collocation.

Figure 9.4. API: Flexibility

Location – Interaction (7%) - Ability of an asset to provide opportunities to leverage interaction internally and with the public and key stakeholders (e.g., co-operators, Congress, customers, partners, and sister agencies) because of its location.

Scoring	Definition
Very High	Asset provides continuous exposure to stakeholders and the public AND it directly contributes to a very high level of internal interactions and to strategic relationships.
High	Asset provides frequent exposure to stakeholders and the public AND it directly contributes to a high level of internal interactions and to strategic relationships.
Medium	Asset provides some exposure to stakeholders and the public AND it indirectly contributes to internal interactions and to strategic relationships.
Low	Asset provides some exposure to stakeholders and the public OR it indirectly contributes to internal interactions and to strategic relationships.
Very Low	Asset does not provide exposure to stakeholders and the public. The asset does not contribute to strategic relationships.

Figure 9.5. API: Location - Interaction

Asset Substitutability (20% of total API score)

Asset Substitutability - The degree to which a comparable substitute asset could be acquired to fulfill the functional requirements or purpose of that asset.

Scoring	Definition
Very High	Asset is truly unique – no suitable "alternatives" could be acquired for the requirement or purpose of this asset.
High	An alternative asset could be acquired but the cost AND operational impact of using the alternative asset is high.
Medium	An alternative asset could be acquired but the cost OR operational impact of using the alternative asset is high.
Low	An alternative asset or assets could be acquired and scheduled OR operational impact of using the alternative asset is low.
Very Low	Using the alternative to this asset has no cost AND no operational impact.

Figure 9.6. API: Asset Substitutability

Appendix B. API Scoring Criteria Questions

Figure 9.7 summarizes the Survey's main usage types and the associated API scores. The main usage type was scored against the criteria to assist in developing the ranges for asset categories.

Main Usage Type	Program Support - Long Term (26%)	Program Support - Short Term (23%)	Location - Function (14%)	Flexibility (10%)	Location - Interaction (7%)	Substitutability (20%)	API Score
Building – Lab	High	Very High	High	Low	High	High	75.8
Buildings - National Centers	Very High	Very High	Medium	High	High	High	83.8
Wilderness Area	Medium	Medium	High	Low	Low	Very High	59.3
R & D	Medium	High	High	Low	Low	Very High	65.0
All-Other Land	Medium	Medium	High	Low	Low	Very High	59.3
Building – Office	Medium	High	Low	High	Medium	Medium	54.8
R & D (Non-Lab)	Medium	High	Low	Low	Low	Very High	58.0
All Other - (Ponds)	Medium	High	Low	Low	Low	Very High	58.0
Vessels	High	High	Very Low	Very Low	Medium	High	55.3
Building – Industrial	Medium	Medium	Medium	Medium	Very Low	Medium	46.5
Building – Other Institutional Uses	Medium	Medium	Medium	Medium	Low	Medium	48.3
Building – All Other	Medium	Medium	Medium	Medium	Low	Medium	48.3
Building – Hospital	High	High	High	Low	High	High	70.0
Service (Other than Building)	Low	Low	Medium	High	Very Low	High	41.8
Water Distribution System/Water Well	Low	Low	High	Low	Very Low	High	40.3

Main Usage Type	Program Support - Long Term (26%)	Program Support - Short Term (23%)	Location - Function (14%)	Flexibility (10%)	Location - Interaction (7%)	Substitutability (20%)	API Score
Irrigation & Reclamation	Low	Low	High	High	Very Low	Medium	40.3
Building – Communication System	Low	Low	Medium	Medium	Very Low	High	39.3
Communication Tower	Low	Low	Medium	Medium	Very Low	High	39.3
Electrical Distribution System	Low	Low	Low	High	Very Low	High	38.3
Power Development & Distribution	Low	Low	Low	High	Very Low	High	38.3
Power Distribution System	Low	Low	Low	High	Very Low	High	38.3
Pier	Low	Low	High	Very Low	Very Low	High	37.8
Building – Service	Low	Medium	Medium	High	Very Low	Low	37.5
Building - Warehouse	Medium	Low	Low	High	Very Low	Low	34.8
Harbor & Port Facilities	Low	Low	Medium	Low	Low	High	38.5
Office Building Location	Medium	Medium	High	Low	Low	Very High	59.3
Building – Greenhouse	Medium	Medium	Low	Low	Low	Low	37.3
Building – Dormitories/Family Housing	Low	Low	Low	Medium	High	Medium	36.0
Building – Pump Well House	Low	Low	Medium	Medium	Low	Medium	36.0
Utility System	Very Low	Very Low	Medium	Medium	Low	Very High	33.8
Flood Control & Navigation	Low	Low	Low	Medium	Low	Medium	32.5
Navigation & Traffic Aids	Low	Low	Low	Medium	Low	Medium	32.5
Storage	Low	Low	Low	High	Very Low	Very Low	23.3
Storage (Other than Building)	Low	Low	Low	High	Very Low	Very Low	23.3

Main Usage Type	Program Support - Long Term (26%)	Program Support - Short Term (23%)	Location - Function (14%)	Flexibility (10%)	Location - Interaction (7%)	Substitutability (20%)	API Score
Building – Garage Detached	Very Low	Very Low	Low	High	Low	Medium	22.8
Structure	Very Low	Very Low	Very Low	High	Very Low	Medium	17.5
All Other - (Structures)	Very Low	Very Low	Very Low	High	Very Low	Medium	17.5
Road/Bridge	Very Low	Very Low	Low	High	Very Low	Low	16.0
Recreation	Very Low	Very Low	Very Low	High	Low	Low	14.3
Parking Lot/Parking Structure	Very Low	Very Low	Very Low	High	Very Low	Low	12.5
Gate/Fencing	Very Low	Very Low	Very Low	High	Very Low	Low	12.5
Signs	Very Low	Very Low	Very Low	High	Very Low	Very Low	7.5

Figure 9.7. API Asset Categories

Appendix C. Asset Main Usage Type API Ranges

Figure 9.8 provides an overview of the updated API scores and ranges, by main usage type, based on historical data and modeling.

Main Usage Types	# of Assets	Examples	Avg FY2005 API Score	FY2012 API Score	API Range
Buildings					
Building – Lab	71		62.2	75.8	**65-95**
Building – National Centers	3	Reston, Menlo, Lakewood	72.7	83.8	**80-90**
Building – Office	359		56.7	54.8	**50-70**
Building – Industrial	7	Electrical Distribution Building, Pumphouse,	58.5	46.5	**40-50**
Building – Other Institutional Uses	2	CERC Library, Sailsbury Hangars	66*	48.3	**40-60**
Building – All Other	45	Fredericksburg OBS- RANDD Buildings,	52.5	48.3	
Building – Hospital	1	Vet Hospital (Laurel, MD)	67*	70.0	**70**
Building – Communication System	5	Radio building, antenna building	62*	39.3	**40-50**
Building – Service	63	Service shops, garages, barns	54.8	37.5	**30-40**
Building – Pump Well House	2		--	36.0	
Building – Warehouse	138		52.13	34.8	
Building – Greenhouse	1		--	37.3	**37**
Building – Dormitories/Family Housing	16		48.8	36.0	**30-40**
Building – Garage Detached	1	Facility shop garage	--	22.8	**23**
Vessels					
Research Vessels	8	R/V Grayling	70.78	55.3	**55-65**
Land					

23-95

55-60

Main Usage Types	# of Assets	Examples	Avg FY2005 API Score	FY2012 API Score	API Range	
Wilderness Area	1	Jack Ranch	--	59.3	55-70	55-70
R & D	61	Land, Seismograph Stations	--	65.0		
All-Other Land	12		--	59.3		
Office Building Location	2		--	59.3		
Utility Systems						
Electrical Distribution System	1	Newport Generator	--	38.3	35-40	30-45
Service (Other than Building)	4	Well, Generator	--	41.8		
Water Distribution System/Water Well	2	Steilacoom Well House (Tacoma, WA)	--	40.3		
Power Development & Distribution	2	Generator (Hawaii Nat'l Park)	--	38.3		
Utility System	94	Drain lines, sewer lines, water lines, pump house	--	33.8	30-40	
R&D (Non-Lab)						
R & D (Non-Lab)	17	Ponds, steams, wetlands	--	58.0	55-65	55-65
All Other - (Ponds)	45		--	58.0		
Navigation						
Flood Control & Navigation	1	Steel Sheet Piling	--	32.5	30-35	30-35
Navigation & Traffic Aids	3	Radio Site, Bullion Mountain	--	32.5		
Harbor & Port Facilities						
Harbor & Port Facilities	4	Boat Ramp, Dock, Marina	--	38.5	35-45	35-45
Pier	1	Williamson River Fishing Pier	--	37.8		
Storage						
Storage	11	Buildings (sheds)	--	23.3	20-30	20-30

Main Usage Types	# of Assets	Examples	Avg FY2005 API Score	FY2012 API Score	API Range
Storage (Other than Building)	14	Fuel Tanks	--	23.3	
Other					
Irrigation & Reclamation	7	Water runoff control, wells, iron intake pipe	--	42	**35-45**
Recreation	2	Recreation shed & picnic shelter	14*	14.3	**10-20**
Structures					
All Other - (Structures)	101		--	17.5	**10-20**
Structure	2	Redzone Fish Camp (New Iberia, LA)	--	17.5	
Road/Bridge	47		--	16.0	
Gate/Fencing	16		--	12.5	
Parking Lot/Parking Structure	13		--	12.5	
Signs	2	Entry sign in Nordland, WA, sign in Cook, WA	--	7.5	**1-10**

10-45

1-20

Figure 9.8. API Ranges

*Indicates only one asset was scored.

Appendix D. Updated FY2012 API Scores

Figure 9.9 provides the updated FY2012 API score for the Survey's real property asset portfolio.

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000032	CERC - A-3 MAIN OFFICE/LAB	COLUMBIA	MO	Bldg Laboratories	South Central	95.00
07000310	CERC - C-5, BIOLOGY WEST	COLUMBIA	MO	Bldg Laboratories	South Central	95.00
07000033	CERC - D-13 BIOLOGY LAB	COLUMBIA	MO	Bldg Laboratories	South Central	95.00
07000313	CERC - D-25, ANALYTICAL LAB	COLUMBIA	MO	Bldg Laboratories	South Central	95.00
07000004	FISC - GVL - MAIN R and D BUILDING	GAINESVILLE	FL	Bldg Laboratories	Southeast	93.89
07001006	LSC - FISH HEALTH LAB (205)	KEARNEYSVILLE	WV	Bldg Laboratories	Northeast	93.89
07000019	LSC - SO CONTE - FISH PASSAGE CMPLX	TURNERS FALLS	MA	Bldg Laboratories	Northeast	93.89
07000098	NWHC - MAIN BUILDING	MADISON	WI	Bldg Laboratories	Midwest	93.89
07000100	NWHC - TIGHT ISOLATION	MADISON	WI	Bldg Laboratories	Midwest	93.89
07000092	UMESC - LABORATORY/OFFICE - #1	LA CROSSE	WI	Bldg Laboratories	Midwest	93.89
07000018	LSC - SO CONTE - RESEARCH LAB	TURNERS FALLS	MA	Bldg Laboratories	Northeast	90.56
CA0915OO	MCKELVEY BLDG 15	MENLO PARK	CA	Bldg Office	Southwest	90.00
07000314	CERC - C-3 POLLUTION ABATEMENT	COLUMBIA	MO	Bldg Laboratories	South Central	89.44
07000073	LSC - NARL - LAB	WELLSBORO	PA	Bldg Laboratories	Northeast	89.44
07000496	MARROWSTONE-WET LABORATORY NEW	NORDLAND	WA	Bldg Laboratories	Northwest	89.44
07000495	MARROWSTONE-WET LABORATORY OLD	NORDLAND	WA	Bldg Laboratories	Northwest	89.44
07000088	WFRC - DRY LAB BLDG #415	SEATTLE	WA	Bldg Laboratories	Northwest	89.44
07000046	NPWRC - AUTOPSY LAB BLDG	JAMESTOWN	ND	Bldg Laboratories	Midwest	86.11
07000045	NPWRC - RIVERSIDE BLDG	JAMESTOWN	ND	Bldg Laboratories	Midwest	86.11
07000436	WFRC - WET LABORATORY BLD #414	SEATTLE	WA	Bldg Laboratories	Northwest	86.11

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000679	GLSC - HB - OFC LAMPREY STER	MILLERSBURG	MI	Bldg Laboratories	Midwest	83.89
07000678	GLSC - TLAS - OFC, LAB, LOWER RANDLDG	CORTLAND	NY	Bldg Laboratories	Northeast	83.89
VA1468BR	JOHN W POWELL FB	RESTON	VA	Bldg Office	Northeast	83.33
07000024	GLSC - HB - OFFICE AND LAB	MILLERSBURG	MI	Bldg Laboratories	Midwest	80.56
07000113	LSC - R/T LAB (144)	KEARNEYSVILLE	WV	Bldg Laboratories	Northeast	80.56
CO0659AA	BUILDING 95	LAKEWOOD	CO	Bldg Office	Rocky Mountain	80.00
07000494	MARROWSTONE - DRY LABORATORY	NORDLAND	WA	Bldg Laboratories	Northwest	78.33
07001099	BARROW OBS - FLUXGATE BUILDING	BARROW	AK	Bldg Laboratories	Alaska	75.75
07001094	BOULDER MAG OBS- SENSOR BD 1	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	75.75
07001095	BOULDER MAG OBS- SENSOR BD 2	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	75.75
07001035	CEET GREENHOUSE	LAFAYETTE	LA	Bldg Laboratories	South Central	75.75
07001096	DEL RIO MAG OBS-ABSOLUTES BLD	DEL RIO	TX	Bldg Laboratories	South Central	75.75
07001097	DEL RIO MAG OBS-ELECTRONICS BD	DEL RIO	TX	Bldg Laboratories	South Central	75.75
07001098	DEL RIO MAG OBS-MAGSENSOR BD	DEL RIO	TX	Bldg Laboratories	South Central	75.75
G1000069220000000	KAWISHIWI FIELD LABORATORY	ELY	MN	Bldg Laboratory	Midwest	75.75
07001686	MAGNETIC OBS BUILDING ARCTIC STCR	BARROW	AK	Bldg Laboratories	Alaska	75.75
07001123	MSU LAB	EAST LANSING	MI	Bldg Laboratories	Midwest	75.75
07001120	PTX - U OF GA-FORESTRY RES-2561	ATHENS	GA	Bldg Laboratories	Southeast	75.75
07001122	PTX - U OF GA-SCH OF FOREST RES 2500	ATHENS	GA	Bldg Laboratories	Southeast	75.75
07001242	SHINGOBEE LAKE	AKELEY	MN	Bldg Laboratories	Midwest	75.75

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
G1000067320000000	USDA/ARS INTERAGENCY AGREEMENT 2000 E ALLEN RD, AZ	TUCSON	AZ	Bldg Laboratories	Southwest	75.75
G1000036620000001	WET LAB BUILDING B	COOK	WA	Bldg Laboratories	Northwest	75.75
07000080	YFS - R and D BLD	YANKTON	SD	Bldg Laboratories	Midwest	75.75
07000166	ADAK OBS - RANDD - SEISMIC VAULT	ADAK STATION	AK	Bldg Laboratories	Alaska	72.78
07000148	BARROW OBS - ABSOLUTE BUILDING	BARROW	AK	Bldg Laboratories	Alaska	72.78
07000147	BARROW OBS - PROTON SENSOR BLDG	BARROW	AK	Bldg Laboratories	Alaska	72.78
07000145	BARROW OBS - STORAGE BLDG	BARROW	AK	Bldg Laboratories	Alaska	72.78
07001029	GUAM - ABSOLUTE BUILDING	MAITE	GU	Bldg Laboratories		72.78
07000440	GUAM - VARIATIONS BUILDING	MAITE	GU	Bldg Laboratories		72.78
07000224	NEWPORT - ABSOLUTE BLD-BLDG 10	NEWPORT	WA	Bldg Laboratories	Northwest	72.78
07000225	NEWPORT - ABSOLUTE BLD-BLDG 11	NEWPORT	WA	Bldg Laboratories	Northwest	72.78
07000223	NEWPORT - ABSOLUTE BLD-BLDG 9	NEWPORT	WA	Bldg Laboratories	Northwest	72.78
07000222	NEWPORT - SEISMIC VAULT-BLDG 8	NEWPORT	WA	Bldg Laboratories	Northwest	72.78
07000226	NEWPORT - VARIATIONS BLD-BLD12	NEWPORT	WA	Bldg Laboratories	Northwest	72.78
07000466	NWRC - GREEN HOUSE COMPLEX	LAFAYETTE	LA	Bldg Laboratories	South Central	72.78
07000161	SITKA - MAGNETIC ABSOLUTE BLDG	SITKA	AK	Bldg Laboratories	Alaska	72.78
07000159	SITKA - SEISMOGRAPH VAULT	SITKA	AK	Bldg Laboratories	Alaska	72.78
07000162	SITKA - VARIATIONS BLDG	SITKA	AK	Bldg Laboratories	Alaska	72.78
07000160	SITKA-RAPID-RUN VARIATIONS BLD	SITKA	AK	Bldg Laboratories	Alaska	72.78
07000168	TUCSON - ABSOLUTE OBSERVATION BUILDING 'B'	TUCSON	AZ	Bldg Laboratories	Southwest	72.78
07000167	TUCSON - ELECTRONICS BLDG 'A'	TUCSON	AZ	Bldg Laboratories	Southwest	72.78

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000170	TUCSON - TOTAL FIELD INSTRUMENT C-2	TUCSON	AZ	Bldg Laboratories	Southwest	72.78
07000169	TUCSON - VARIATIONS INSTRUMENT C-1	TUCSON	AZ	Bldg Laboratories	Southwest	72.78
07000171	TUCSON - VARIATIONS INSTRUMENT C-3	TUCSON	AZ	Bldg Laboratories	Southwest	72.78
07000174	BOULDER MAG OBS - INSTRUMENT UTILITY BLDG	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07000176	BOULDER MAG OBS-ABSOLUTES BLD	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07001078	BOULDER MAG OBS-COIL CALIBR BD	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07001079	BOULDER MAG OBS-COIL CONTRL BD	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07001050	BOULDER MAG OBS-ELECTRONICS BD	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07001051	BOULDER MAG OBS-MAGSENSOR BD	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07000175	BOULDER MAG OBS-VARIATIONS BLD	LONGMONT	CO	Bldg Laboratories	Rocky Mountain	70.56
07001218	DEL RIO MAG OBS-MAGSENSOR BD 2	DEL RIO	TX	Bldg All Other	South Central	70.00
07000120	EROS - MUNDT FEDERAL BUILDING	SIOUX FALLS	SD	Bldg Office	Midwest	70.00
07000814	PTX - VET HOSPITAL	LAUREL	MD	Bldg Hospital (35210000)	Northeast	70.00
CO1628ZZ	18TH AND ILLINOIS	GOLDEN	CO	Bldg Office	Rocky Mountain	68.55
CA0903OO	USGS BLDG 3	MENLO PARK	CA	Bldg Office	Southwest	67.82
07000295	CERC - G-21 CONFERENCE CENTER	COLUMBIA	MO	Bldg Office	South Central	67.09
07000037	GLSC - TLAS - OFC, LAB, UPPER RANDD	CORTLAND	NY	Bldg Office	Northeast	67.09

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
	BLDG					
07000015	GLSC - AA - R AND D BLDG	ANN ARBOR	MI	Bldg Office	Midwest	66.73
CO0624AA	DFC BLDG 810	LAKEWOOD	CO	Bldg Office	Rocky Mountain	66.36
07000311	CERC - STREAM BUILDING	COLUMBIA	MO	Bldg Laboratories	South Central	66.11
07000112	LSC - HOLDING HOUSE (119)	KEARNEYSVILLE	WV	Bldg Laboratories	Northeast	66.11
07000105	LSC - ADMINISTRATION BLDG (2)	KEARNEYSVILLE	WV	Bldg Office	Northeast	65.27
CA0909OO	USGS BLDG 11	MENLO PARK	CA	Bldg Office	Southwest	65.27
07001280	BARROW LAND	BARROW	AK	Research and Development	Alaska	65.00
07001264	BIG SANDY SEISMIC STATION	BIG SANDY	MT	Research and Development	Rocky Mountain	65.00
07000126	BOISE - LAND	BOISE	ID	Research and Development	Northwest	65.00
07001268	BOULDER MAG OBS - LAND	LONGMONT	CO	Research and Development	Rocky Mountain	65.00
07001162	BREWTON AL SEISMIC STATION	BREWTON	AL	Research and Development	Southeast	65.00
07001040	CAL DEP OF FORESTRY - MP-L-277	CALISTOGA	CA	Research and Development	Southwest	65.00
07001055	CAL DEP OF FORESTRY - MP-L-801	RIO DELL	CA	Research and Development	Southwest	65.00
07001056	CAL DEP OF FORESTRY - MP-L-802	LAYTONVILLE	CA	Research and Development	Southwest	65.00
07001054	CAL DEP OF FORESTRY- MP-L-2058	KING CITY	CA	Research and Development	Southwest	65.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000264	CAR HILL	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07001295	CAWSC DRILL RIG WAREYARD	HENDERSON	NV	Research and Development	Southwest	65.00
07000025	CERC - LAND	COLUMBIA	MO	Research and Development	South Central	65.00
07001145	CHEVRON U.S.A.	BAKERSFIELD	CA	Research and Development	Southwest	65.00
07000240	DEEP DRILL HOLE - LAND LEASE	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07001272	DEL RIO MAG OBS - LAND	DEL RIO	TX	Research and Development	South Central	65.00
07001137	DONNA LEE THOMASON	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07001142	DOUG THOMASON	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07000124	EROS - LAND	SIOUX FALLS	SD	Research and Development	Midwest	65.00
07000195	FREDERICKSBURG OBS - LAND	CORBIN	VA	Research and Development	Northeast	65.00
07001165	FREMONT PEAK (MOUNTAIN TOP)	SALINAS	CA	Research and Development	Southwest	65.00
07000747	GEORGE WORK RANCH - MP-216	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07000013	GLSC - AA - LAND	ANN ARBOR	MI	Research and Development	Midwest	65.00
07000676	GLSC - CVB - LAND	CHEBOYGAN	MI	Research and Development	Midwest	65.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000023	GLSC - HB - LAND	MILLERSBURG	MI	Research and Development	Midwest	65.00
07000681	GLSC - HB - MOBILE LAB	MILLERSBURG	MI	Bldg Laboratories	Midwest	65.00
07000036	GLSC - TLAS - LAND	CORTLAND	NY	Research and Development	Northeast	65.00
07001140	IRV MCMILLAN	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07001146	JAYNE AND JACK HAM-MISSION CREEK	CUPERTINO	CA	Research and Development	Southwest	65.00
07001138	JEFF AND KIM HORWEDEL	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07001143	JOHN RANDALL - RANCH	EAGLE CREEK	OR	Research and Development	Northwest	65.00
07001139	KAREN WILSON	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07000558	LA FLOOD CONTROL	ALHAMBRA	CA	Research and Development	Southwest	65.00
07000104	LSC - LAND	KEARNEYSVILLE	WV	Research and Development	Northeast	65.00
07000071	LSC - NARL - LAND	WELLSBORO	PA	Research and Development	Northeast	65.00
07000017	LSC - SO CONTE - CTR LAND	TURNERS FALLS	MA	Research and Development	Northeast	65.00
07000083	MARROWSTONE - LAND	NORDLAND	WA	Research and Development	Northwest	65.00
07000262	MIDDLE MOUNTAIN - LAND/GD	SAN MIGUEL	CA	Research and Development	Southwest	65.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000215	NEWPORT GEOPHYSICAL OBS - LAND	NEWPORT	WA	Research and Development	Northwest	65.00
07000043	NPWRC - LAND	JAMESTOWN	ND	Research and Development	Midwest	65.00
07000097	NWHC - LAND	MADISON	WI	Research and Development	Midwest	65.00
07000008	NWRC - LAND	LAFAYETTE	LA	Research and Development	South Central	65.00
07001183	PORT OF REDWOOD CITY - LAND	REDWOOD CITY	CA	Research and Development	Southwest	65.00
4002578	R/V Kiyi	ASHLAND	WI	Vessel		65.00
07001149	RANCHO ARROYO-WALPERT	ALAMEDA	CA	Research and Development	Southwest	65.00
07001296	RANIER COMM SITE - CVO	CRYSTAL MOUNTAIN	WA	Research and Development	Northwest	65.00
07000370	SAN JUAN OBSV - LAND	CAYEY	PR	Research and Development	Southeast	65.00
07001017	SEISMOGRAPH STATION	BOULDER	WY	Research and Development	Rocky Mountain	65.00
07001173	SEISMOGRAPH STATION	SHERIDAN	MT	Research and Development	Rocky Mountain	65.00
07001175	SEISMOGRAPH STATION	ASPEN	CO	Research and Development	Rocky Mountain	65.00
07001018	SEISMOGRAPH STATION - LAND	LITTLETON	NH	Research and Development	Northeast	65.00
07001021	SEISMOGRAPH STATION - WI	MINERAL POINT	WI	Research and Development	Midwest	65.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07001020	SEISMOGRAPH STATION SC	SUMMERVILLE	SC	Research and Development	Southeast	65.00
07001019	SEISMOGRAPH STATION-NY	MAINE	NY	Research and Development	Northeast	65.00
07001136	SHARON OWENS	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07001022	SHUMAGIN CORP.	SAND POINT	AK	Research and Development	Alaska	65.00
07001174	SOLAR SEISMIC STATION	BIG SPRINGS	NE	Research and Development	Midwest	65.00
07000347	U OF AK - CIGO OBSERVATORY	FAIRBANKS	AK	Research and Development	Alaska	65.00
07000091	UMESC - LAND	LA CROSSE	WI	Research and Development	Midwest	65.00
07000181	USGS GAGING STATION - LAND	ST REGIS	MT	Research and Development	Rocky Mountain	65.00
07001144	W JAMES EDWARDS	RED BLUFF	CA	Research and Development	Southwest	65.00
07001147	WAYNE PEARSON	SAN MIGUEL	CA	Research and Development	Southwest	65.00
07000085	WFRC - LAND	SEATTLE	WA	Research and Development	Northwest	65.00
07000077	YFS - LAND	YANKTON	SD	Research and Development	Midwest	65.00
3387218	R/V Sturgeon	CHEBOYGAN	MI	Vessel		64.88
3357770	R/V Grayling	CHEBOYGAN	MI	Vessel		64.82
MT5595ZZ	THE TRANSPORTATION AND SYSTEMS	BOZEMAN	MT	Bldg Office	Rocky	64.55

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
					Mountain	
MO1591ZZ	U S GEO SURVEY BLDG	ROLLA	MO	Bldg Office	South Central	64.55
07000044	NPWRC - ADMIN/LIBRARY BLDG	JAMESTOWN	ND	Bldg Office	Midwest	64.18
07000009	NWRC - OFFICE/LAB BUILDING	LAFAYETTE	LA	Bldg Office	South Central	64.18
3400711	Kaho	OSWEGO	NY	Vessel		63.96
07000593	TX DISTRICT OFFICE	AUSTIN	TX	Bldg Office	South Central	63.82
07000435	WFRC - ADMINISTRATION BLD #416	SEATTLE	WA	Bldg Office	Northwest	63.82
07000316	CERC - TECH CENTER	COLUMBIA	MO	Bldg Office	South Central	63.45
CO0511AA	DFC BLDG 20	LAKEWOOD	CO	Bldg Office	Rocky Mountain	63.45
CA0916OO	PALEOMAGNETIC LAB BLDG 16	MENLO PARK	CA	Bldg Office	Southwest	63.45
07000813	PTX - GABRIELSON OFFICE	LAUREL	MD	Bldg Office	Northeast	63.45
CA0906OO	USGS BLDG 3A	MENLO PARK	CA	Bldg Office	Southwest	63.45
07000027	CERC - TRAILER #1	COLUMBIA	MO	Bldg Office	South Central	63.09
07000296	CERC - TRAILER #2	COLUMBIA	MO	Bldg Office	South Central	63.09
07000753	CERC - TRAILER #3 - OWNED	COLUMBIA	MO	Bldg Office	South Central	63.09
07000754	CERC - TRAILER #4 - OWNED	COLUMBIA	MO	Bldg Office	South Central	63.09
07000297	CERC - TRAILER #5	COLUMBIA	MO	Bldg Office	South Central	63.09
07000374	CERC - TRAILER #6	COLUMBIA	MO	Bldg Office	South Central	63.09
07000811	PTX - CAPTIVE PROP. LAB	LAUREL	MD	Bldg Office	Northeast	63.09
07000389	UMESC - OFFICE - PROP NO 2	LA CROSSE	WI	Bldg Office	Midwest	63.09
07001103	WHSC GOSLING BLDG (MOBILE OFFICE)	WOODS HOLE	MA	Bldg Office	Northeast	62.73
CO0652AA	BLDG. 21B	LAKEWOOD	CO	Bldg Office	Rocky	62.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
					Mountain	
CO0643AA	DFC BLDG 21A	LAKEWOOD	CO	Bldg Office	Rocky Mountain	62.00
CA0914OO	ROCK PROC LAB BLDG 4	MENLO PARK	CA	Bldg Office	Southwest	61.64
CO0625AA	DFC BLDG 15	LAKEWOOD	CO	Bldg Office	Rocky Mountain	61.27
CA0912OO	ROLM SWITCH BLDG 1C	MENLO PARK	CA	Bldg Office	Southwest	61.27
G1000036520000003	FRESNO ABSOLUTES BUILDING	COARSEGOLD	CA	Building	Southwest	61.25
CO0514AA	DFC BLDG 25	LAKEWOOD	CO	Bldg Office	Rocky Mountain	60.91
CO0530AA	DFC BLDG 53	LAKEWOOD	CO	Bldg Office	Rocky Mountain	60.91
07000130	BOISE - BLDG 4	BOISE	ID	Bldg Office	Northwest	60.55
07000967	LSC - R/T OFFICE (126)	KEARNEYSVILLE	WV	Bldg Office	Northeast	60.55
07000355	SAN JUAN OBSV - OFFICE	CAYEY	PR	Bldg Office	Southeast	60.55
CO0512AA	DFC BLDG 21	LAKEWOOD	CO	Bldg Office	Rocky Mountain	60.18
07000208	FREDERICKSBURG OBS - RANDD BLD10	CORBIN	VA	Bldg All Other	Northeast	60.00
07000209	FREDERICKSBURG OBS - RANDD BLD11	CORBIN	VA	Bldg All Other	Northeast	60.00
07000210	FREDERICKSBURG OBS - RANDD BLD12	CORBIN	VA	Bldg All Other	Northeast	60.00
07000200	FREDERICKSBURG OBS - RANDD BLDG2	CORBIN	VA	Bldg All Other	Northeast	60.00
07000201	FREDERICKSBURG OBS - RANDD BLDG3	CORBIN	VA	Bldg All Other	Northeast	60.00
07000205	FREDERICKSBURG OBS - RANDD BLDG7	CORBIN	VA	Bldg All Other	Northeast	60.00
07000206	FREDERICKSBURG OBS - RANDD BLDG8	CORBIN	VA	Bldg All Other	Northeast	60.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
VA0337ZZ	ADVANCED SYSTEMS CTR	RESTON	VA	Bldg Office	Northeast	59.82
07001025	GUAM - OFFICE	MAITE	GU	Bldg Office		59.82
07001290	ALBUQUERQUE SEISMOLOGICAL LAB	BERNALILLO	NM	Bldg Office	Rocky Mountain	59.30
G1000069320000000	CORAM NY WSC FIELD OFFICE	CORAM	NY	Office Building Locations	Northeast	59.30
G1000036630000000	CRRL Land	COOK	WA	Land	Northwest	59.30
G1000036530000000	FRESNO OBS LAND	COARSEGOLD	CA	Land	Southwest	59.30
G1000016530000001	GUAM - SANTA ROSA LAND	MAITE	GU	Land		59.30
G1000016530000000	GUAM LAND	MAITE	GU	Land		59.30
G1000069730000000	HONOLULU LAND	EWA BEACH	HI	Land	Southwest	59.30
G1000015030000000	HVO LAND	HONOLULU	HI	Land	Southwest	59.30
07000732	JACK RANCH	SHANDON	CA	Wilderness Areas	Southwest	59.30
G1000036230000003	SHUMAGIN LAND	SAND POINT	AK	Land	Alaska	59.30
G1000036230000002	SHUMAGIN TOTAL FIELD	SAND POINT	AK	Land	Alaska	59.30
07000156	SITKA OBSERVATORY GROUNDS	SITKA	AK	All Other Land	Alaska	59.30
G1000015330000000	TUCSON LAND	TUCSON	AZ	Land	Southwest	59.30
G1000069030000000	USGS MP-566 PORT OF CLARKSTON, WA	CLARKSTON	WA	Land	Northwest	59.30
G1000013830000002	WFRC LAND RECORD	SEATTLE	WA	Land	Northwest	59.30
07001129	WHSC WHOI GROUNDS	WOODS HOLE	MA	Office Building Locations	Northeast	59.30
CA0902OO	GSA BLDG 2	MENLO PARK	CA	Bldg Office	Southwest	59.09
CA0901OO	GSA BLDG 1	MENLO PARK	CA	Bldg Office	Southwest	58.73
07000317	CERC - ARTIFICIAL STREAM	COLUMBIA	MO	Research and Development (Non-Lab)	South Central	58.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000321	CERC - LAGOON TOXIC POND	COLUMBIA	MO	Research and Development (Non-Lab)	South Central	58.00
07000035	CERC - RESEARCH PONDS	COLUMBIA	MO	Research and Development (Non-Lab)	South Central	58.00
07001256	EROS - AERATION PONDS	SIOUX FALLS	SD	All Other	Midwest	58.00
07000983	FISC - GVL - ABSORPTION MOUND	GAINESVILLE	FL	Research and Development (Non-Lab)	Southeast	58.00
07000980	FISC - GVL - POND #1	GAINESVILLE	FL	Research and Development (Non-Lab)	Southeast	58.00
07000981	FISC - GVL - POND #2	GAINESVILLE	FL	Research and Development (Non-Lab)	Southeast	58.00
07000982	FISC - GVL - POND #3	GAINESVILLE	FL	Research and Development (Non-Lab)	Southeast	58.00
07001222	GLSC - TLAS - NORTH SPRING POND AND CONTROL STRUCT	CORTLAND	NY	All Other	Northeast	58.00
07000115	LSC - ALL RESEARCH PONDS	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000925	LSC - CANALS AND DITCHES	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000956	LSC - COLLECTION KETTLE	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07001199	LSC - K POND	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000864	LSC - NARL - POND 1, KETTLE	WELLSBORO	PA	All Other	Northeast	58.00
07000865	LSC - NARL - POND 2, KETTLE	WELLSBORO	PA	All Other	Northeast	58.00
07000866	LSC - NARL - POND 3, KETTLE	WELLSBORO	PA	All Other	Northeast	58.00
07000867	LSC - NARL - POND 4, KETTLE	WELLSBORO	PA	All Other	Northeast	58.00
07000868	LSC - NARL - POND 5, KETTLE	WELLSBORO	PA	All Other	Northeast	58.00
07000869	LSC - NARL - POND 6, KETTLE	WELLSBORO	PA	All Other	Northeast	58.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000887	LSC - NARL - PRIMARY SETTLING POND	WELLSBORO	PA	All Other	Northeast	58.00
07000888	LSC - NARL - SECONDARY SETTLING POND	WELLSBORO	PA	All Other	Northeast	58.00
07000918	LSC - RESEARCH PONDS (21)	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000116	LSC - RESERVOIR A1	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000118	LSC - RESERVOIR A2	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000927	LSC - RESERVOIR A3	KEARNEYSVILLE	WV	All Other	Northeast	58.00
07000901	LSC - SO CONTE - FISH TRAP	TURNERS FALLS	MA	Research and Development (Non-Lab)	Northeast	58.00
07000899	LSC - SO CONTE - INLET STRUCTURE	TURNERS FALLS	MA	Research and Development (Non-Lab)	Northeast	58.00
07000910	LSC - SO CONTE - LOWER BURROW POND	TURNERS FALLS	MA	Research and Development (Non-Lab)	Northeast	58.00
07000900	LSC - SO CONTE - OUTLET STRUCTURE	TURNERS FALLS	MA	Research and Development (Non-Lab)	Northeast	58.00
07000909	LSC - SO CONTE - UPPER BURROW POND	TURNERS FALLS	MA	Research and Development (Non-Lab)	Northeast	58.00
07000065	NPWRC - WATER FOWL PONDS	JAMESTOWN	ND	Research and Development (Non-Lab)	Midwest	58.00
07000463	NWRC - CREATED WETLANDS	LAFAYETTE	LA	Research and Development (Non-Lab)	South Central	58.00
07000465	NWRC - TANK FARM	LAFAYETTE	LA	Research and Development (Non-Lab)	South Central	58.00
07000363	SAN JUAN OBSV - MAG ABSOLUTES BLD1	CAYEY	PR	Bldg All Other	Southeast	58.00
07000362	SAN JUAN OBSV - MAG VARIATIONS BLD	CAYEY	PR	Bldg All Other	Southeast	58.00
07000361	SAN JUAN OBSV - MAGNETIC LAB BLD	CAYEY	PR	Bldg All Other	Southeast	58.00

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07000365	SAN JUAN OBSV - SEISMO VAULT1	CAYEY	PR	Bldg All Other	Southeast	58.00
07000366	SAN JUAN OBSV - SEISMO VAULT2	CAYEY	PR	Bldg All Other	Southeast	58.00
07001126	STENNIS ABSOLUTES GAZEBO	BAY ST LOUIS	MS	Research and Development (Non-Lab)	Southeast	58.00
07000378	UMESC - CLAY POND-RES #19	LA CROSSE	WI	All Other	Midwest	58.00
07000401	UMESC - CLAY POND-RES #20	LA CROSSE	WI	All Other	Midwest	58.00
07000402	UMESC - CLAY POND-RES #21	LA CROSSE	WI	All Other	Midwest	58.00
07000403	UMESC - CLAY POND-RES #22	LA CROSSE	WI	All Other	Midwest	58.00
07000404	UMESC - CLAY POND-RES #23	LA CROSSE	WI	All Other	Midwest	58.00
07000405	UMESC - CLAY POND-RES #24	LA CROSSE	WI	All Other	Midwest	58.00
07000406	UMESC - CLAY POND-RES #25	LA CROSSE	WI	All Other	Midwest	58.00
07000407	UMESC - CLAY POND-RES #26	LA CROSSE	WI	All Other	Midwest	58.00
07000408	UMESC - CLAY POND-RES #27	LA CROSSE	WI	All Other	Midwest	58.00
07000409	UMESC - CLAY POND-RES #28	LA CROSSE	WI	All Other	Midwest	58.00
07000410	UMESC - CLAY POND-RES #29	LA CROSSE	WI	All Other	Midwest	58.00
07000411	UMESC - CLAY POND-RES #30	LA CROSSE	WI	All Other	Midwest	58.00
07000412	UMESC - CLAY POND-RES #31	LA CROSSE	WI	All Other	Midwest	58.00
07000413	UMESC - CLAY POND-RES #32	LA CROSSE	WI	All Other	Midwest	58.00
07000414	UMESC - CLAY POND-RES #37	LA CROSSE	WI	All Other	Midwest	58.00
07000377	UMESC - CONCRETE POND-RES #13	LA CROSSE	WI	All Other	Midwest	58.00
07000392	UMESC - CONCRETE POND-RES #14	LA CROSSE	WI	All Other	Midwest	58.00
07000393	UMESC - CONCRETE POND-RES #15	LA CROSSE	WI	All Other	Midwest	58.00
07000394	UMESC - CONCRETE POND-RES #16	LA CROSSE	WI	All Other	Midwest	58.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000395	UMESC - CONCRETE POND-RES #17	LA CROSSE	WI	All Other	Midwest	58.00
07000396	UMESC - CONCRETE POND-RES #18	LA CROSSE	WI	All Other	Midwest	58.00
07000397	UMESC - CONCRETE POND-RES #33	LA CROSSE	WI	All Other	Midwest	58.00
07000398	UMESC - CONCRETE POND-RES #34	LA CROSSE	WI	All Other	Midwest	58.00
07000399	UMESC - CONCRETE POND-RES #35	LA CROSSE	WI	All Other	Midwest	58.00
07000400	UMESC - CONCRETE POND-RES #36	LA CROSSE	WI	All Other	Midwest	58.00
07000376	UMESC - EARTHEN LAGOON - #11	LA CROSSE	WI	All Other	Midwest	58.00
07000391	UMESC - EARTHEN LAGOON - #12	LA CROSSE	WI	All Other	Midwest	58.00
CA0908OO	USGS BLDG 9G	MENLO PARK	CA	Bldg Office	Southwest	58.00
07000090	WFRC - ARTIFICIAL STREAMS	SEATTLE	WA	Research and Development (Non-Lab)	Northwest	58.00
07000680	GLSC - HB - OFC LIMNO, WOOD	MILLERSBURG	MI	Bldg Office	Midwest	57.64
07000106	LSC - QUARTERS/DORMATORY (123)	KEARNEYSVILLE	WV	Bldg Office	Northeast	57.64
CO0648AA	DFC BLDG 10	LAKEWOOD	CO	Bldg Office	Rocky Mountain	57.27
CO0533AA	DFC BLDG 56	LAKEWOOD	CO	Bldg Office	Rocky Mountain	57.27
07000470	FISC - GVL - PORTABLE OFFICE BLDG	GAINESVILLE	FL	Bldg Office	Southeast	57.27
07000815	PTX - COBURN ANNEX	LAUREL	MD	Bldg Office	Northeast	57.27
07000808	PTX - QUARANTINE BUILDING	LAUREL	MD	Bldg Office	Northeast	57.27
CA6699ZZ	GEO KIDS BLDG 13	MENLO PARK	CA	Bldg Office	Southwest	56.91
CA0913OO	USGS BLDG 12	MENLO PARK	CA	Bldg Office	Southwest	56.18
CA0904OO	BLDGS 9E	MENLO PARK	CA	Bldg Office	Southwest	55.45
07000129	BOISE - BLDG 3	BOISE	ID	Bldg Office	Northwest	55.45

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
	R/V Gyre			Vessel		55.30
	R/V Polaris			Vessel		55.30
	R/V Turning Tide			Vessel		55.30
G1000036520000000	FRESNO VARIATIONS BUILDING	COARSEGOLD	CA	Bldg All Other	Southwest	55.00
3400219	R/V Muskie	SANDUSKY	OH	Vessel		55.00
WI1746ZZ	465	MADISON	WI	Bldg Office	Midwest	54.80
UT1469ZZ	#B - BLACKROCK VILLAGE	CEDAR CITY	UT	Bldg Office	Southwest	54.80
CA7403ZZ	(400 NATURAL BRIDGES DRIVE)	SANTA CRUZ	CA	Bldg Office	Southwest	54.80
MA5842ZZ	10 BEARFOOT ROAD	NORTHBORO	MA	Bldg Office	Northeast	54.80
CT3373ZZ	101 PITKIN STREET	EAST HARTFORD	CT	Bldg Office	Northeast	54.80
MI3011ZZ	1048 PIERPONT	LANSING	MI	Bldg Office	Midwest	54.80
CA6242ZZ	11075 BLACK MARBLE WAY	REDDING	CA	Bldg Office	Southwest	54.80
NM1548ZZ	114 S. HALAGUENO	CARLSBAD	NM	Bldg Office	Rocky Mountain	54.80
KS1537ZZ	1390 E 8TH ST.	HAYS	KS	Bldg Office	South Central	54.80
HI7615ZZ	1714 KAHAI STREET	HONOLULU	HI	Bldg Office	Southwest	54.80
AZ7265ZZ	1769 W. UNIVERSITY DR	TEMPE	AZ	Bldg Office	Southwest	54.80
MO1945ZZ	1801 E 10TH ST. BLDG D	ROLLA	MO	Bldg Office	South Central	54.80
TX2577ZZ	19241 DAVID MEMORIAL DRIVE	SHENANDOAH	TX	Bldg Office	South Central	54.80
UT1409ZZ	2329 AND 2369 WEST ORTON CIRCLE	WEST VALLEY CITY	UT	Bldg Office	Southwest	54.80
WI1611ZZ	313 WEST KNAPP	RICE LAKE	WI	Bldg Office	Midwest	54.80
TN2251ZZ	3231 MIDDLE BROOKE PIKE	KNOXVILLE	TN	Bldg Office	Southeast	54.80
NH6119ZZ	361 COMMERCE WAY	SUNCOOK	NH	Bldg Office	Northeast	54.80

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AR1197ZZ	401 HARDIN RD	LITTLE ROCK	AR	Bldg Office	South Central	54.80
MN1515ZZ	415 S POKEGAMA AV SO	GRAND RAPIDS	MN	Bldg Office	Midwest	54.80
CA7295ZZ	455 RESERVATION ROAD SUITE F	MARINA	CA	Bldg Office	Southwest	54.80
CO2053ZZ	4725 NAUTILUS LLC	BOULDER	CO	Bldg Office	Rocky Mountain	54.80
HI6851ZZ	474 KALANIKOA ST	HILO	HI	Bldg Office	Southwest	54.80
CA6720ZZ	5229 N LAKE BLVD	CARNELIAN BAY	CA	Bldg Office	Southwest	54.80
NV6490ZZ	5325 LOUIE LANE	RENO	NV	Bldg Office	Southwest	54.80
NM1502ZZ	5338 MONTGOMERY BLVD	ALBUQUERQUE	NM	Bldg Office	Rocky Mountain	54.80
CA7591ZZ	560 S. ALAMEDA ST.	LOS ANGELES	CA	Bldg Office	Southwest	54.80
IL2507ZZ	650 B PEACE ROAD	DE KALB	IL	Bldg Office	Midwest	54.80
HI6244ZZ	677 ALA MOANA	HONOLULU	HI	Bldg Office	Southwest	54.80
PA0800ZZ	770 PENNSYLVANIA DRIVE BLDG	EXTON	PA	Bldg Office	Northeast	54.80
KS1536ZZ	7920 WEST KELLOGG	WICHITA	KS	Bldg Office	South Central	54.80
WI1637ZZ	8505 RESEARCH WAY	MIDDLETON	WI	Bldg Office	Midwest	54.80
LA1301ZZ	AFTON VILLA OFC CNDO	BATON ROUGE	LA	Bldg Office	South Central	54.80
TX2276ZZ	ALTA MESA COURT	FORT WORTH	TX	Bldg Office	South Central	54.80
G1000066820000000	ARROWHEAD BUILDING #2 - NMSU - NM WSC FIELD OFFICE	LAS CRUCES	NM	Bldg Office	Rocky Mountain	54.80
TX2237ZZ	ARROYO BLDG	SAN ANGELO	TX	Bldg Office	South Central	54.80
07001101	AUM TECHNACENTER	MONTGOMERY	AL	Bldg Office	Southeast	54.80
G1000069920000000	BIOLOGY BUILDING	TUSCALOOSA	AL	Bldg Office	Southeast	54.80
07001239	BISHOP FIELD OFFICE	BISHOP	CA	Bldg Office	Southwest	54.80

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AZ5427ZZ	BLDGS.4AND5	FLAGSTAFF	AZ	Bldg Office	Southwest	54.80
RI7149ZZ	BLUE STREET CAPITOL	LINCOLN	RI	Bldg Office	Northeast	54.80
07001059	BOISE - BLDG 1 NEWELL BUILDING	BOISE	ID	Bldg Office	Northwest	54.80
07001292	BOX SPRINGS FIELD OFFICE	RIVERSIDE	CA	Bldg Office	Southwest	54.80
07000726	BRD NWRC FIELD OFFICE	BATON ROUGE	LA	Bldg Office	South Central	54.80
G1000068020000000	BRD WFRC RENO FIELD STATION: P.O. NO. G10PG00207	RENO	NV	Bldg Office	Southwest	54.80
OK1347ZZ	BROADWAY EXECUTIVE PARK	OKLAHOMA CITY	OK	Bldg Office	South Central	54.80
NC2126ZZ	BUCK SHOALS BUS. PK	ARDEN	NC	Bldg Office	Southeast	54.80
AZ5208ZZ	BUILDING 3	FLAGSTAFF	AZ	Bldg Office	Southwest	54.80
AZ7281ZZ	BUILDING 6	FLAGSTAFF	AZ	Bldg Office	Southwest	54.80
GA2351ZZ	C WAREHOUSE BLDG	TIFTON	GA	Bldg Office	Southeast	54.80
07000530	CALIFORNIA DISTRICT OFFICE	SACRAMENTO	CA	Bldg Office	Southwest	54.80
OR6669ZZ	CANNERY MALL BUILDING	CORVALLIS	OR	Bldg Office	Northwest	54.80
07000548	CASCADIA FIELD STATION	SEATTLE	WA	Bldg Office	Northwest	54.80
FL3281ZZ	CEDAR'S COMPLEXTR	TALLAHASSEE	FL	Bldg Office	Southeast	54.80
07000518	CENTER FOR EARTHQUAKE RESEARCH	MEMPHIS	TN	Bldg Office	Southeast	54.80
AK3351ZZ	CHAMBER OF COMMERCE BUILDING	ANCHORAGE	AK	Bldg Office	Alaska	54.80
07001182	CHILDERS BUILDING	RIVERTON	WY	Bldg Office	Rocky Mountain	54.80
07000587	COASTAL MINI STORAGE	BRUNSWICK	GA	Bldg Office	Southeast	54.80
07001160	COLLEGE PLACE SHOPS	CLEMSON	SC	Bldg Office	Southeast	54.80
07000580	COLORADO PLATEAU FIELD STATION	FLAGSTAFF	AZ	Bldg Office	Southwest	54.80

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
WA7818ZZ	COLUMBIA TECH CENTER	VANCOUVER	WA	Bldg Office	Northwest	54.80
07001130	COLUMBUS FIELD STATION	COLUMBUS	OH	Bldg Office	Midwest	54.80
07000619	CORVALLIS RESEARCH GROUP	CORVALLIS	OR	Bldg Office	Northwest	54.80
IA1505ZZ	COUNCIL BLUFFS FEDERAL BUILDIN	COUNCIL BLUFFS	IA	Bldg Office	Midwest	54.80
07000520	COVENTRY COTTAGE - OFFICE	STORRS	CT	Bldg Office	Northeast	54.80
FL3110ZZ	CROWN POINT	GAINESVILLE	FL	Bldg Office	Southeast	54.80
07001068	CRU - NEBRASKA COOP FANDW RES UN	LINCOLN	NE	Bldg Office	Midwest	54.80
07000769	CRU COOP - ARIZONA F&W RES UNIT	TUSCON	AZ	Bldg Office	Southwest	54.80
07000768	CRU COOP - ARKANSAS FANDW RES UN	FAYETTEVILLE	AR	Bldg Office	South Central	54.80
07000770	CRU COOP - COLORADO FANDW RES UN	FORT COLLINS	CO	Bldg Office	Rocky Mountain	54.80
07000773	CRU COOP - IOWA FANDW RES UNIT	AMES	IA	Bldg Office	Midwest	54.80
07000775	CRU COOP - KANSAS FANDW RES UNIT	MANHATTAN	KS	Bldg Office	South Central	54.80
07000776	CRU COOP - LOUISIANA FANDW RES U	BATON ROUGE	LA	Bldg Office	South Central	54.80
07000779	CRU COOP - MISSOURI FANDW RES UN	COLUMBIA	MO	Bldg Office	South Central	54.80
07000762	CRU COOP - MONTANA FISH RES UN	BOZEMAN	MT	Bldg Office	Rocky Mountain	54.80
07000795	CRU COOP - MONTANA WILDLIFE RU	MISSOULA	MT	Bldg Office	Rocky Mountain	54.80
07000782	CRU COOP - NEW MEXICO FANDW RU	LAS CRUCES	NM	Bldg Office	Rocky Mountain	54.80
07000784	CRU COOP - OKLAHOMA FANDW RES UN	STILLWATER	OK	Bldg Office	South Central	54.80
07000763	CRU COOP - OREGON FANDW RES UNIT	CORVALLIS	OR	Bldg Office	Northwest	54.80
07000787	CRU COOP - S DAKOTA FANDW RES UN	BROOKINGS	SD	Bldg Office	Midwest	54.80

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07000788	CRU COOP - TEXAS FANDW RES UNIT	LUBBOCK	TX	Bldg Office	South Central	54.80
07000793	CRU COOP - WYOMING FANDW RES UN	LARAMIE	WY	Bldg Office	Rocky Mountain	54.80
CO1860ZZ	DALE D. CLAXTON MEMORIAL BUILD	DURANGO	CO	Bldg Office	Rocky Mountain	54.80
G1000067820000000	DESIGN SPACE MODULAR (TRAILER)	CORVALLIS	OR	Bldg Office	Northwest	54.80
CO0527AA	DFC BLDG 50	LAKEWOOD	CO	Bldg Office	Rocky Mountain	54.80
07001289	DIELMAN BUSINESS CENTER	OLIVETTE	MO	Bldg Office	South Central	54.80
G1000025120000001	DIXON OFFICE TRAILER	DIXON	CA	Bldg Office	Southwest	54.80
07001060	DUPREE BUILDING	BILLINGS	MT	Bldg Office	Rocky Mountain	54.80
07001224	EAGANDALE BUSINESS CENTER	EAGAN	MN	Bldg Office	Midwest	54.80
G1000069420000000	EL PASO TX WSC	EL PASO	TX	Bldg Office	South Central	54.80
G1000012720000001	ELKO H FACILITY - OFFICE	ELKO	NV	Bldg Office	Southwest	54.80
SD1393ZZ	ENGINEER&COMP SCIENCE BUILDING	BROOKINGS	SD	Bldg Office	Midwest	54.80
07000670	ENRB	TUCSON	AZ	Bldg Office	Southwest	54.80
OR6473ZZ	EPA BUILDING (JSB)	CORVALLIS	OR	Bldg Office	Northwest	54.80
G1000067520000000	EUREKA WATER RESOURCES OFFICE SMOSER CA8222ZZ	EUREKA	CA	Bldg Office	Southwest	54.80
AL0074ZZ	FB-CT	TUSCALOOSA	AL	Bldg Office	Southeast	54.80
07000757	FCSC - MODULAR OFFICE TRAILER	GAINESVILLE	FL	Bldg Office	Southeast	54.80
07001161	FDG PROPERTIES	FORT DODGE	IA	Bldg Office	Midwest	54.80
WA0045ZZ	FED BLDG U S POST OF	SPOKANE	WA	Bldg Office	Northwest	54.80

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IA0119ZZ	FED BLDG USPO	IOWA CITY	IA	Bldg Office	Midwest	54.80
WA0036ZZ	FED OFFICE BLDG	SEATTLE	WA	Bldg Office	Northwest	54.80
NE0056ZZ	FEDERAL BG USPO CTHS	NORTH PLATTE	NE	Bldg Office	Midwest	54.80
VT0026ZZ	FEDERAL BLDG USPOANDCT	MONTPELIER	VT	Bldg Office	Northeast	54.80
IL0222ZZ	FEDERAL BUILDING	MT VERNON	IL	Bldg Office	Midwest	54.80
07001114	FISC - FT LAUDERDALE OFFICE BLDG A	FORT LAUDERDALE	FL	Bldg Office	Southeast	54.80
07001115	FISC - FT LAUDERDALE OFFICE BLDG B	FORT LAUDERDALE	FL	Bldg Office	Southeast	54.80
07001090	FISC - FT. LAUDERDALE OFFICE AADMINISTRATION	FORT LAUDERDALE	FL	Bldg Office	Southeast	54.80
07001178	FISC - ORLANDO OFFICE COOP AT CFU	ORLANDO	FL	Bldg Office	Southeast	54.80
07000508	FISC-ST PETE OFC STUDEBAKER BD	ST PETERSBURG	FL	Bldg Office	Southeast	54.80
07001117	FL WSC - TAMPA OFFICE	TAMPA	FL	Bldg Office	Southeast	54.80
HI0013ZZ	FORT ARMSTRONG PARKING	HONOLULU	HI	Bldg Office	Southwest	54.80
G1000036520000001	FRESNO ELECTRONICS BUILDING	COARSEGOLD	CA	Bldg Office	Southwest	54.80
G1000036520000002	FRESNO OFFICE BUILDING	COARSEGOLD	CA	Bldg Office	Southwest	54.80
07001100	FROSTBURG STATE U - TAWES HALL ROOM 128	FROSTBURG	MD	Bldg Office	Northeast	54.80
NM0511AA	FSS WAREHOUSE DEPOT	ALBUQUERQUE	NM	Bldg Office	Rocky Mountain	54.80
07001033	GABBERT RAPTOR CENTER	ST PAUL	MN	Bldg Office	Midwest	54.80
NC2069ZZ	GEOLOGICAL SURV BLDG	RALEIGH	NC	Bldg Office	Southeast	54.80
MS2096ZZ	GEOLOGICAL/APHIS	JACKSON	MS	Bldg Office	Southeast	54.80
AK3371ZZ	GIBERTONI BUILDING	FAIRBANKS	AK	Bldg Office	Alaska	54.80
AK3466ZZ	GLENN OLDS HALL	ANCHORAGE	AK	Bldg Office	Alaska	54.80

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07001285	GLSC - Antigo WI DNR OFFICE	ANTIGO	WI	Bldg Office	Midwest	54.80
AK3214ZZ	GOULD HALL	ANCHORAGE	AK	Bldg Office	Alaska	54.80
ND1311ZZ	GR FORKS PKG RAMP	GRAND FORKS	ND	Bldg Office	Midwest	54.80
AK3239ZZ	GRACE HALL (APU)	ANCHORAGE	AK	Bldg Office	Alaska	54.80
TN2124ZZ	GRASSMERE V1	NASHVILLE	TN	Bldg Office	Southeast	54.80
07000633	GRAYLING FIELD OFFICE	GRAYLING	MI	Bldg Office	Midwest	54.80
MA5645ZZ	GREENGATE ROAD WRHSE	FALMOUTH	MA	Bldg Office	Northeast	54.80
WI1644ZZ	GREENWAY RESEARCH CN	MIDDLETON	WI	Bldg Office	Midwest	54.80
PR0521FP	GSA CENTER--GUAYNABO	"GUAYNABO, SAN JUAN"	PR	Bldg Office	Southeast	54.80
HI6563ZZ	HARBOR SQUARE PARKING	HONOLULU	HI	Bldg Office	Southwest	54.80
PA0651ZZ	HEPBURN PLAZA	WILLIAMSPORT	PA	Bldg Office	Northeast	54.80
VA1605ZZ	HERNDON WAREHOUSE	HERNDON	VA	Bldg Office	Northeast	54.80
07000637	HIF - STENNIS SPACE CENTER	BAY ST LOUIS	MS	Bldg Office	Southeast	54.80
NC2111ZZ	HIGHLAND PRK COMM	CHARLOTTE	NC	Bldg Office	Southeast	54.80
HI6993ZZ	HILO LAGOON CTR	HILO	HI	Bldg Office	Southwest	54.80
MI2104ZZ	HOLIDAY OFFICE PARK NORTH	LANSING	MI	Bldg Office	Midwest	54.80
HI8091ZZ	HOOHANA SQUARE	KAHULUI	HI	Bldg Office	Southwest	54.80
CO1637ZZ	HORIZON BLDG	GRAND JUNCTION	CO	Bldg Office	Rocky Mountain	54.80
VA0334ZZ	HUNT BUS PK BLD 2B	HERNDON	VA	Bldg Office	Northeast	54.80
G1000015020000003	HVO REGINALD T. OKAMURA BUILDING	HONOLULU	HI	Bldg Office	Southwest	54.80
07000561	INEEL MAIN PROJECT OFFICE	SCOVILLE	ID	Bldg Office	Northwest	54.80

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07001158	IRVINE RANCH LAND RESERVE TRUST (IRLRT)	IRVINE	CA	Bldg Office	Southwest	54.80
07000643	ITHACA OFFICE	ITHACA	NY	Bldg Office	Northeast	54.80
KY1667ZZ	JACKSON OFFICE BLDG	WILLIAMSBURG	KY	Bldg Office	Midwest	54.80
AK3279ZZ	JUNEAU FLITE CENTER	JUNEAU	AK	Bldg Office	Alaska	54.80
07001240	KALMONT PROPERTIES	KALISPELL	MT	Bldg Office	Rocky Mountain	54.80
07001063	KAUAI FIELD OFFICE - WRD	LIHUE	HI	Bldg Office	Southwest	54.80
WA7938ZZ	KENNEWICK USGS BUILDING	KENNEWICK	WA	Bldg Office	Northwest	54.80
CO1964ZZ	KITTRIDGE BUSINESS CENTER	GOLDEN	CO	Bldg Office	Rocky Mountain	54.80
WA7909ZZ	KRESS/PAYLESS BUILDING	TACOMA	WA	Bldg Office	Northwest	54.80
G1000070220000000	KS WATER SCIENCE CENTER - HAYS PROGRAM OFFICE	HAYS	KS	Bldg Office	South Central	54.80
07001171	LA DNR (IN-KIND)	LAFAYETTE	LA	Bldg Office	South Central	54.80
07000514	LAKE ERIE BIOLOGICAL STATION	SANDUSKY	OH	Bldg Office	Midwest	54.80
NY6296ZZ	LAKE ST AND W 3RD ST	OSWEGO	NY	Bldg Office	Northeast	54.80
IN1631ZZ	LAKESIDE PHASE II	INDIANAPOLIS	IN	Bldg Office	Midwest	54.80
07000614	LAWRENCE FIELD OFC - BIA IA	LAWRENCE	KS	Bldg Office	South Central	54.80
NE1431ZZ	LINCOLN INDUSTRIAL PARK SOUTH	LINCOLN	NE	Bldg Office	Midwest	54.80
07000345	LINCOLNWAY BUILDING	CHEYENNE	WY	Bldg Office	Rocky Mountain	54.80
ND1233ZZ	LK PROPERTY BLDG	BISMARCK	ND	Bldg Office	Midwest	54.80
G1000036620000000	MAIN BUILDING A	COOK	WA	Bldg Office	Northwest	54.80

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07000519	MAIN INTERIOR BUILDING	WASHINGTON	DC	Bldg Office		54.80
UT1391ZZ	MAJOR POWELL BLDG	MOAB	UT	Bldg Office	Southwest	54.80
VA0669ZZ	MARION PLAZA SHOPPING CENTER	MARION	VA	Bldg Office	Northeast	54.80
NY6497ZZ	MARKET SQUARE MALL	POTSDAM	NY	Bldg Office	Northeast	54.80
07001023	MBEST	MARINA	CA	Bldg Office	Southwest	54.80
G1000068220000000	MCA COMMERCE PARK UTAH WATER SCI	CEDAR CITY	UT	Bldg Office	Southwest	54.80
DE0037ZZ	MCDANIEL PARK	DOVER	DE	Bldg Office	Northeast	54.80
PA0860ZZ	MILFORD PROFESSIONAL PARK	MILFORD	PA	Bldg Office	Northeast	54.80
07000428	MINGO VALLEY TRADE CENTER	TULSA	OK	Bldg Office	South Central	54.80
07001064	MODOC HALL - CSUS	SACRAMENTO	CA	Bldg Office	Southwest	54.80
G1000012320000001	MODOC HALL GSA LEASE SUITE 2010	SACRAMENTO	CA	Bldg Office	Southwest	54.80
MN1595ZZ	MOUNDS VIEW BUSINESS CENTER	MOUNDS VIEW	MN	Bldg Office	Midwest	54.80
NJ4502ZZ	MTN VIEW OFFICE PK	TRENTON	NJ	Bldg Office	Northeast	54.80
07001061	MUNISING BIOLOGICAL STATION	MUNISING	MI	Bldg Office	Midwest	54.80
AZ5128ZZ	NE COR 19ST AND 3RD AV	YUMA	AZ	Bldg Office	Southwest	54.80
07000594	NEW MEXICO STATE UNIVERSITY	LAS CRUCES	NM	Bldg Office	Rocky Mountain	54.80
VA0394ZZ	NEWINGTON BUSINESS PARK CENTER	LORTON	VA	Bldg Office	Northeast	54.80
VA0599ZZ	NORTH RUN VI	RICHMOND	VA	Bldg Office	Northeast	54.80
UT1380ZZ	NPS/FS BUILDING	MOAB	UT	Bldg Office	Southwest	54.80
CO1907ZZ	NRRC BLDG C	FORT COLLINS	CO	Bldg Office	Rocky Mountain	54.80
SD1282ZZ	NW PUBLIC SVE BLDG	HURON	SD	Bldg Office	Midwest	54.80

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07000759	NWHC - MODULAR OFFICE TRAILER	MADISON	WI	Bldg Office	Midwest	54.80
WI1583ZZ	NYE DEVELOPMENT BLDG	ASHLAND	WI	Bldg Office	Midwest	54.80
07000644	NYWSC - TROY DISTRICT OFFICE	TROY	NY	Bldg Office	Northeast	54.80
07001270	OA - FWS, ELK REFUGE, WY	JACKSON	WY	Bldg Office	Rocky Mountain	54.80
07001275	OA - NPS, GLACIER NP, MET	WEST GLACIER	MT	Bldg Office	Rocky Mountain	54.80
07001253	OA - US FOREST SERVICE, ST. PAUL	ST PAUL	MN	Bldg Office	Midwest	54.80
07001276	OA - US FOREST SERVICE, MISSOULA, MT	MISSOULA	MT	Bldg Office	Rocky Mountain	54.80
07001277	OA - USDA, WOODWARD, OK	WOODWARD	OK	Bldg Office	South Central	54.80
G1000068320000000	OAKHURST CA WERC FIELD OFFICE	OAKHURST	CA	Bldg Office	Southwest	54.80
07001243	OALS (OFFICE OF ARID LANDS STUDIES)	TUCSON	AZ	Bldg Office	Southwest	54.80
07000352	OFC AND PARKING FOR JACK T	FAIRBANKS	AK	Bldg Office	Alaska	54.80
G1000036320000003	OFFICE	HAWAII NATIONAL PARK	HI	Bldg Office	Southwest	54.80
G1000067720000000	OLYMPIC FIELD STATION	PORT ANGELES	WA	Bldg Office	Northwest	54.80
07000590	ORCA	ANCHORAGE	AK	Bldg Office	Alaska	54.80
07001246	OREGON WATER SCIENCE CENTER COOP	PORTLAND	OR	Bldg Office	Northwest	54.80
VT8099ZZ	PARKER PROFESSIONAL CENTER	BERLIN	VT	Bldg Office	Northeast	54.80
07000266	PASADENA SEISMOLOGY OFC - GD	PASADENA	CA	Bldg Office	Southwest	54.80
GA2055ZZ	PEACHTREE BUS PARK	ATLANTA	GA	Bldg Office	Southeast	54.80
07000660	PIERC - KILAUEA FIELD STATION	HAWAII NATIONAL PARK	HI	Bldg Office	Southwest	54.80

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ID4304ZZ	PLAZA WEST	MOSCOW	ID	Bldg Office	Northwest	54.80
WY1209ZZ	PLAZA WEST BUILDING	CASPER	WY	Bldg Office	Rocky Mountain	54.80
07000528	POINT REYES FIELD STATION	POINT REYES STATION	CA	Bldg Office	Southwest	54.80
07001039	POST FALLS FIELD STATION	POST FALLS	ID	Bldg Office	Northwest	54.80
HI0011ZZ	PRINCE J. KUHIO FOB and CTHS	HONOLULU	HI	Bldg Office	Southwest	54.80
07001225	PRODENTAL PLAZZA - SC REX	COLUMBIA	MO	Bldg Office	South Central	54.80
07000517	PTX - 104 CLARK HALL	CHARLOTTESVILLE	VA	Bldg Office	Northeast	54.80
07001086	PTX - BELTSVILLE AGRICULTURE CENTER	BELTSVILLE	MD	Bldg Office	Northeast	54.80
07000810	PTX - COBURN LAB	LAUREL	MD	Bldg Office	Northeast	54.80
07000512	PTX - COLL OF ENV SCIENCE AND FORESTRY	SYRACUSE	NY	Bldg Office	Northeast	54.80
07000803	PTX - HENSHAW OFFICE	LAUREL	MD	Bldg Office	Northeast	54.80
07000804	PTX - MERRIAM OFFICE	LAUREL	MD	Bldg Office	Northeast	54.80
07000506	PTX - MUSEUM OF NATURAL HISTORY	WASHINGTON	DC	Bldg Office		54.80
07000515	PTX - NARRAGANSETT BAY CAMPUS	NARRAGANSETT	RI	Bldg Office	Northeast	54.80
07000802	PTX - NELSON OFFICE	LAUREL	MD	Bldg Office	Northeast	54.80
07000801	PTX - STICKEL LABORATORY	LAUREL	MD	Bldg Office	Northeast	54.80
07001118	PTX - U OF GA-SCH OF FOREST RES10-44	ATHENS	GA	Bldg Office	Southeast	54.80
07000510	PTX - U OF GA-SCHOOL OF FOR RES-2524	ATHENS	GA	Bldg Office	Southeast	54.80
07000516	PTX - VIRGINIA TECH	BLACKSBURG	VA	Bldg Office	Northeast	54.80
KS1483ZZ	QUAIL CREST PL AND	LAWRENCE	KS	Bldg Office	South Central	54.80

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07001032	RED HOOK FACILITY	ST. THOMAS	VI	Bldg Office	Southeast	54.80
07000525	REDWOOD FIELD STATION	ARCATA	CA	Bldg Office	Southwest	54.80
PA0647ZZ	ROBINSON TNSHP MUN	PITTSBURGH	PA	Bldg Office	Northeast	54.80
ND0008ZZ	RONALD N. DAVIES FEDERAL BLDG	GRAND FORKS	ND	Bldg Office	Midwest	54.80
FL3098ZZ	ROYAL PALM SQUARE	FT MYERS	FL	Bldg Office	Southeast	54.80
WV0192ZZ	SACRED HEART CATHED.	CHARLESTON	WV	Bldg Office	Northeast	54.80
07001159	SALTON SEA FIELD STATION	LA QUINTA	CA	Bldg Office	Southwest	54.80
07001247	SAN DIEGO STATE UNIVERSITY	SAN DIEGO	CA	Bldg Office	Southwest	54.80
07000545	SAN FRANCISCO BAY FLD STATION	VALLEJO	CA	Bldg Office	Southwest	54.80
07000542	SANTA CRUZ FIELD STATION	SANTA CRUZ	CA	Bldg Office	Southwest	54.80
07001252	SD WSC	RAPID CITY	SD	Bldg Office	Midwest	54.80
G1000067620000000	SEDRO WOOLLEY FIELD OFFICE	SEDRO WOOLLEY	WA	Bldg Office	Northwest	54.80
07000544	SEQUOIA AND KINGS CANYON FLD ST	THREE RIVERS	CA	Bldg Office	Southwest	54.80
AK3346ZZ	SHIP CREEK WAREHOUSE	ANCHORAGE	AK	Bldg Office	Alaska	54.80
G1000036220000001	SHUMAGIN ABSOLUTES	SAND POINT	AK	Bldg Office	Alaska	54.80
G1000036220000002	SHUMAGIN ELECTRONICS	SAND POINT	AK	Bldg Office	Alaska	54.80
G1000036220000000	SHUMAGIN OFFICE BUILDING	SAND POINT	AK	Bldg Office	Alaska	54.80
G1000036220000003	SHUMAGIN VARIATION	SAND POINT	AK	Bldg Office	Alaska	54.80
CA7259ZZ	SKYWAY BUSINESS PARK	SANTA MARIA	CA	Bldg Office	Southwest	54.80
07000546	SNAKE RIVER FIELD STATION	BOISE	ID	Bldg Office	Northwest	54.80
07000579	SONORAN DESERT FIELD STATION	TUCSON	AZ	Bldg Office	Southwest	54.80
07001131	SOUTHERN APPALACHIAN RES BR	KNOXVILLE	TN	Bldg Office	Southeast	54.80

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OR6689ZZ	SOUTHTOWNE COMMERCE CENTER	KLAMATH FALLS	OR	Bldg Office	Northwest	54.80
GA2044ZZ	SPALDING WDS BDG 100	NORCROSS	GA	Bldg Office	Southeast	54.80
07001403	STENNIS MAGNETIC OBSERVATORY	BAY ST LOUIS	MS	Bldg Office	Southeast	54.80
NV7435ZZ	STEPHANIE BELTWAY CENTER	HENDERSON	NV	Bldg Office	Southwest	54.80
CA7222ZZ	TECH CENTER DRIVE	POWAY	CA	Bldg Office	Southwest	54.80
07000727	TEXAS GULF COAST FIELD STATION	CORPUS CHRISTI	TX	Bldg Office	South Central	54.80
07001284	TEXAS WATER SCIECNE CENTER - AUSTIN	AUSTIN	TX	Bldg Office	South Central	54.80
MO1949ZZ	THE ALLISON BUILDING	ROLLA	MO	Bldg Office	South Central	54.80
MS2098ZZ	THOMAS BLDG	VICKSBURG	MS	Bldg Office	Southeast	54.80
WA0064ZZ	THOMAS S. FOLEY US COURTHOUSE	SPOKANE	WA	Bldg Office	Northwest	54.80
GA2603ZZ	TIFT CO ADMIN BLDG	TIFTON	GA	Bldg Office	Southeast	54.80
07001215	TN WSC - GROUND WATER INSTITUTE	MEMPHIS	TN	Bldg Office	Southeast	54.80
OR0501PT	TROUTDALE WEST FED WHSE	TROUTDALE	OR	Bldg Office	Northwest	54.80
G1000068520000000	TX WSC WICHITA FALLS PRORGRAM OFFICE	WICHITA FALLS	TX	Bldg Office	South Central	54.80
NV0002ZZ	U S POST OFFICE	ELKO	NV	Bldg Office	Southwest	54.80
OH2202ZZ	U.S.G.S. BUILDING	COLUMBUS	OH	Bldg Office	Midwest	54.80
07000552	UKIAH FIELD OFFICE	UKIAH	CA	Bldg Office	Southwest	54.80
G1000069820000000	UMBC RESEARCH PARK	BALTIMORE	MD	Bldg Office	Northeast	54.80
TX2398ZZ	UNIVERSITY HEIGHTS BUSINESS PK	SAN ANTONIO	TX	Bldg Office	South Central	54.80
G1000067120000000	UNIVERSITY OF ARIZONA COOP (W MINERAL & ENVIR RE)	TUCSON	AZ	Bldg Office	Southwest	54.80
07001180	UNIVERSITY OF COLORADO	BOULDER	CO	Bldg Office	Rocky	54.80

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					Mountain	
07001113	UNIVERSITY OF FL. DAVIE CAMPUS	FORT LAUDERDALE	FL	Bldg Office	Southeast	54.80
07001084	UNIVERSITY OF ILLINOIS, USGS	URBANA	IL	Bldg Office	Midwest	54.80
07000586	UNIVERSITY OF NEVADA	RENO	NV	Bldg Office	Southwest	54.80
G1000067420000000	US FOREST SERVICE COOP WISCONSIN WATER SCIENCE CTR	RHINELANDER	WI	Bldg Office	Midwest	54.80
CA4218ZZ	US GEOLOGICAL SURVEY	DIXON	CA	Bldg Office	Southwest	54.80
KY2058ZZ	USGS BUILDING	LOUISVILLE	KY	Bldg Office	Midwest	54.80
07001181	USGS BUILDING	PUEBLO	CO	Bldg Office	Rocky Mountain	54.80
NV7676ZZ	USGS BUILDING	CARSON CITY	NV	Bldg Office	Southwest	54.80
OR0521MM	USGS BUILDING	MEDFORD	OR	Bldg Office	Northwest	54.80
MT5504ZZ	USGS BUILDING	HELENA	MT	Bldg Office	Rocky Mountain	54.80
TX2242ZZ	USGS BUILDING	WICHITA FALLS	TX	Bldg Office	South Central	54.80
ME4132ZZ	USGS BUILDING	AUGUSTA	ME	Bldg Office	Northeast	54.80
07001011	USGS BUILDING - RUSTON	RUSTON	LA	Bldg Office	South Central	54.80
AK3342ZZ	USGS WAREHOUSE	ANCHORAGE	AK	Bldg Office	Alaska	54.80
OR0522MM	USGS WAREHOUSE	MEDFORD	OR	Bldg Office	Northwest	54.80
MO1916ZZ	VICTPK GSA LLC	LEES SUMMIT	MO	Bldg Office	South Central	54.80
WA7664ZZ	W SPOKANE IND. PARK BLDG B1-1	SPOKANE	WA	Bldg Office	Northwest	54.80
OH1897ZZ	WABASH MEDICAL BLDG.	NEW PHILADELPHIA	OH	Bldg Office	Midwest	54.80
ID4225ZZ	WARBERG BUILDING	TWIN FALLS	ID	Bldg Office	Northwest	54.80
07000623	WGandL FEDERAL STATION	ALBANY	GA	Bldg Office	Southeast	54.80

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07001250	WHITEMAN BUILDING	MEEKER	CO	Bldg Office	Rocky Mountain	54.80
07001127	WHSC CRAWFORD BUILDING (COOP)	WOODS HOLE	MA	Bldg Office	Northeast	54.80
07001128	WHSC GOSNOLD BUILDING -GD/WR (COOP)	WOODS HOLE	MA	Bldg Office	Northeast	54.80
07001102	WHSC HEDWIG BLDG (MOBILE OFFICE)	WOODS HOLE	MA	Bldg Office	Northeast	54.80
07000618	WILLAMETTE RESEARCH STATION	CORVALLIS	OR	Bldg Office	Northwest	54.80
07000634	WRD MI DISTRICT OFFICE	LANSING	MI	Bldg Office	Midwest	54.80
07000651	WRD PROJECT OFFICE	MILWAUKEE	WI	Bldg Office	Midwest	54.80
G1000069520000000	WYOMING WSC - CHEYENNE	CHEYENNE	WY	Bldg Office	Rocky Mountain	54.80
PA0716ZZ	YELLOW BREECHES OFFICE CENTER	NEW CUMBERLAND	PA	Bldg Office	Northeast	54.80
07000527	YOSEMITE FIELD STATION	EL PORTAL	CA	Bldg Office	Southwest	54.80
07000114	LSC - AERATION BLDG (143)	KEARNEYSVILLE	WV	Bldg All Other	Northeast	54.00
CA0917OO	CENTRAL SERVICE BLDG 20	MENLO PARK	CA	Bldg Office	Southwest	53.27
CA0905OO	USGS BLDG 10	MENLO PARK	CA	Bldg Office	Southwest	52.91
CO0519AA	DFC BLDG 45	LAKEWOOD	CO	Bldg Office	Rocky Mountain	51.82
CO0660AA	WHSE BLDG 94	LAKEWOOD	CO	Bldg Office	Rocky Mountain	51.82
07000021	LSC - SO CONTE - COMPRESSOR BLDG	TURNERS FALLS	MA	Bldg All Other	Northeast	51.50
07000031	CERC - L-1 LIBRARY	COLUMBIA	MO	Bldg Other Institutional Uses	South Central	50.00
CA5149ZZ	GS GEO DIV ROCK STO	MENLO PARK	CA	Bldg Office	Southwest	50.00
CA2312ZZ	GS WAREHOUSE	MENLO PARK	CA	Bldg Office	Southwest	50.00

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07000368	SAN JUAN OBSV - AC CONTROL BLD	CAYEY	PR	Bldg Industrial	Southeast	50.00
07000367	SAN JUAN OBSV - ELECTRIC DISTRIB BLD	CAYEY	PR	Bldg Industrial	Southeast	50.00
CA0907OO	USGS BLDG 9F	MENLO PARK	CA	Bldg Office	Southwest	50.00
G1000036320000002	AVIARY	HAWAII NATIONAL PARK	HI	Bldg All Other	Southwest	48.30
07000122	EROS - R AND O BUILDING	SIOUX FALLS	SD	Bldg All Other	Midwest	48.30
G1000016520000006	GUAM - GENERATOR	MAITE	GU	Bldg All Other		48.30
G1000069720000001	HONOLULU ABSOLUTES BUILDING	EWA BEACH	HI	Bldg All Other	Southwest	48.30
G1000069720000002	HONOLULU ELECTRONICS BUILDING	EWA BEACH	HI	Bldg All Other	Southwest	48.30
G1000069720000000	HONOLULU VARIATIONS BUILDING	EWA BEACH	HI	Bldg All Other	Southwest	48.30
G1000015020000002	HVO GENERATOR	HONOLULU	HI	Bldg All Other	Southwest	48.30
G1000015020000004	HVO SHOP BUILDING	HONOLULU	HI	Bldg All Other	Southwest	48.30
07001008	LSC - AEL (210)	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001109	LSC - DEGASSER BLDG (208)	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001191	LSC - DEGASSER PUMP HOUSE (208A)	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001005	LSC - FILTER BLDG (163)	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001007	LSC - GREENHOUSE (215)	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001110	LSC - INCINERATOR BLDG	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001111	LSC - PAVILION AT FISHING POND	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07001198	LSC - UV BUILDING	KEARNEYSVILLE	WV	Bldg All Other	Northeast	48.30
07000231	NEWPORT-FIRE STATIONS-16 A,B,C	NEWPORT	WA	Bldg All Other	Northwest	48.30
07001221	NWRC-METAL COVER FOR RESEARCH VEHICLE	LAFAYETTE	LA	Bldg All Other	South Central	48.30

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G1000018020000015	NWRC-METAL COVER FOR RESEARCH VEHICLE WITH GARAGE	LAFAYETTE	LA	Bldg All Other	South Central	48.30
07001254	SALISBURY REG. APT- HANGARS T63 AND T70	SALISBURY	MD	Bldg Other Institutional Uses	Northeast	48.30
07000364	SAN JUAN OBSV - MAG ABSOLUTES BLD2	CAYEY	PR	Bldg All Other	Southeast	48.30
07001266	USGS GAGING STATION 2001	ST REGIS	MT	Bldg All Other	Rocky Mountain	48.30
07000123	EROS - AERATION BUILDING	SIOUX FALLS	SD	Bldg All Other	Midwest	48.00
07000202	FREDERICKSBURG OBS - RANDD BLDG4	CORBIN	VA	Bldg All Other	Northeast	47.00
07000203	FREDERICKSBURG OBS - RANDD BLDG5	CORBIN	VA	Bldg All Other	Northeast	47.00
07000204	FREDERICKSBURG OBS - RANDD BLDG6	CORBIN	VA	Bldg All Other	Northeast	47.00
07001156	CENTRAL REGION RESEARCH DRILLING PROGRAM (CRRDP)	WHEAT RIDGE	CO	Bldg Industrial	Rocky Mountain	46.50
07001282	CORPUS CHRISTI BOAT STG	CORPUS CHRISTI	TX	Bldg Industrial	South Central	46.50
07001092	EROS - GENERATOR BUILDING	SIOUX FALLS	SD	Bldg Industrial	Midwest	46.50
07001283	OXLEY RENTALS	COUNCIL BLUFFS	IA	Bldg Industrial	Midwest	46.50
07000005	FISC - GVL - DRILLED WELL W/CASING 1	GAINESVILLE	FL	Service (Other than building)	Southeast	41.80
G1000036620000008	GENERATOR	COOK	WA	Service (Other than building)	Northwest	41.80
07000922	LSC - GRAY SPRING HOUSE	KEARNEYSVILLE	WV	Service (Other than building)	Northeast	41.80
07001232	LSC - SO CONTE - WET LAB WELL	TURNERS FALLS	MA	Service (Other than building)	Northeast	41.80
G1000015020000007	ANTENNA TOWERS	HONOLULU	HI	Communication Tower	Southwest	41.00

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07000450	EROS - LANDSAT-7 BUILDING	SIOUX FALLS	SD	Bldg Communications Systems	Midwest	41.00
07000847	EROS-MODIS ANTENNA RADOME BLDG	SIOUX FALLS	SD	Bldg Communications Systems	Midwest	41.00
G1000015020000006	HVO RADIO BUILDING	HONOLULU	HI	Bldg Communications Systems	Southwest	41.00
07000749	RAY REMMEL COMMUNICATIONS	SONOMA	CA	Communication System	Southwest	41.00
07000449	EROS -RECLAMATION AND IRRIGATION	SIOUX FALLS	SD	Reclamation and Irrigation	Midwest	40.30
07000696	GLSC - HB - IRON INTAKE PIPE	MILLERSBURG	MI	Reclamation and Irrigation	Midwest	40.30
07000698	GLSC - HB - WELL	MILLERSBURG	MI	Reclamation and Irrigation	Midwest	40.30
07000701	GLSC - HB - WELL (SMF)	MILLERSBURG	MI	Reclamation and Irrigation	Midwest	40.30
G1000013030000005	NEWPORT WATER SYSTEM	NEWPORT	WA	Water Distribution System	Northwest	40.30
07000334	NPWRC- EARTH FILL WATER CONTRL	JAMESTOWN	ND	Reclamation and Irrigation	Midwest	40.30
07000333	NPWRC-WATER RUN OFF CNTRL EAST	JAMESTOWN	ND	Reclamation and Irrigation	Midwest	40.30
07000068	NPWRC-WATER RUN OFF CNTRL WEST	JAMESTOWN	ND	Reclamation and Irrigation	Midwest	40.30
G1000009920000004	STEILACOOM WELL HOUSE	TACOMA	WA	Water Well	Northwest	40.30
07000030	CERC - F-11 MAINT. OFFICE/SHOP	COLUMBIA	MO	Bldg Service	South Central	40.00
07000207	FREDERICKSBURG OBS - RANDD BLDG9	CORBIN	VA	Bldg All Other	Northeast	40.00
07000511	GLSC - CVB - WAREHOUSE	CHEBOYGAN	MI	Bldg Warehouses	Midwest	40.00

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07000084	MARROWSTONE - MAIN HOUSE	NORDLAND	WA	Bldg Family Housing	Northwest	40.00
07000232	NEWPORT - PUMPHOUSE - BLDG 17	NEWPORT	WA	Bldg Industrial	Northwest	40.00
07000359	SAN JUAN OBSV - SEISMIC REC BLD1	CAYEY	PR	Bldg All Other	Southeast	40.00
07000360	SAN JUAN OBSV - SEISMIC REC BLD2	CAYEY	PR	Bldg All Other	Southeast	40.00
07000493	WFRC - MAINTENANCE BLDG #413	SEATTLE	WA	Bldg Warehouses	Northwest	39.29
07000498	MARROWSTONE - PUMP HOUSE	NORDLAND	WA	Bldg Service	Northwest	39.12
07000383	UMESC - CHEMICAL STG BLDG -#52	LA CROSSE	WI	Bldg Warehouses	Midwest	39.00
07000380	UMESC - CHEMICAL STORAGE NORTH - #4	LA CROSSE	WI	Bldg Warehouses	Midwest	39.00
07000675	GLSC - CVB - DOCK	CHEBOYGAN	MI	Harbor and Port Facilities	Midwest	38.50
07000690	GLSC - HB - CONCRETE BOAT RAMP	MILLERSBURG	MI	Harbor and Port Facilities	Midwest	38.50
07000259	REDWOOD CITY MAR FAC-SANDF WHARF	REDWOOD CITY	CA	Harbor and Port Facilities	Southwest	38.50
07001189	WILLOW BERM MARINA	ISLETON	CA	Harbor and Port Facilities	Southwest	38.50
G1000036320000001	GENERATOR	HAWAII NATIONAL PARK	HI	Power Distribution System	Southwest	38.30
G1000013020000015	NEWPORT GENERATOR	NEWPORT	WA	Electrical Distribution System	Northwest	38.30
07000433	NEWPORT GEOPHYS OBS- WATER WELL	NEWPORT	WA	Power Development and Distribution	Northwest	38.30
07000390	UMESC - EFFLUENT TREATMENT BLDG - #3	LA CROSSE	WI	Bldg Service	Midwest	38.25
07000093	UMESC - METERING - PROP NO 5	LA CROSSE	WI	Bldg Service	Midwest	38.25

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07000469	UMESC - TREAT GENERATOR BLDG - #55	LA CROSSE	WI	Bldg Service	Midwest	38.25
07000132	BOISE - BLDG 6	BOISE	ID	Bldg Warehouses	Northwest	38.00
07000074	LSC - NARL - TANK BUILDING	WELLSBORO	PA	Bldg Warehouses	Northeast	38.00
07000384	UMESC - INCINERATOR BLDG - #53	LA CROSSE	WI	Bldg Service	Midwest	37.89
07000381	UMESC - STORAGE BUILDING - #50	LA CROSSE	WI	Bldg Warehouses	Midwest	37.86
07001294	WILLIAMSON RIVER FISHING WIER	CHILOQUIN	OR	Pier	Northwest	37.80
07000146	BARROW OBS - ELECTRONICS BUILDING	BARROW	AK	Bldg Warehouses	Alaska	37.71
07001030	UMESC - MAIN GENERATOR	LA CROSSE	WI	Bldg Service	Midwest	37.54
07000119	EROS - SERVICE BLDG	SIOUX FALLS	SD	Bldg Service	Midwest	37.50
07001080	EROS-SECURITY BOOTH STRUCTURE	SIOUX FALLS	SD	Bldg Service	Midwest	37.50
07000478	FISC - GVL - POLE BARN 1	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000479	FISC - GVL - POLE BARN 2	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000480	FISC - GVL - POLE BARN 3	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000481	FISC - GVL - POLE BARN 4	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000482	FISC - GVL - POLE BARN 5	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000483	FISC - GVL - POND FILTRATION BLDG	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000003	FISC - GVL - SERVICE GARAGE and SHOP	GAINESVILLE	FL	Bldg Service	Southeast	37.50
07000213	FREDERICKSBURG OBS - SVC BLDG1	CORBIN	VA	Bldg Service	Northeast	37.50
07000686	GLSC - HB - GLVZ STEEL-FLA STG	MILLERSBURG	MI	Bldg Service	Midwest	37.50
07001028	GUAM VAULT	GUAM	GU	Bldg Service		37.50
07001196	LSC - BLOWER BLDG	KEARNEYSVILLE	WV	Bldg Service	Northeast	37.50
07001190	LSC - CHLORINATION PLANT (196)	KEARNEYSVILLE	WV	Bldg Service	Northeast	37.50

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07001194	LSC - PUMP HOUSE RESERVOIR B	KEARNEYSVILLE	WV	Bldg Service	Northeast	37.50
07001195	LSC - PUMP HOUSE SEWAGE TREATMENT #128	KEARNEYSVILLE	WV	Bldg Service	Northeast	37.50
07001227	LSC - SO CONTE - UV SHED	TURNERS FALLS	MA	Bldg Service	Northeast	37.50
07001248	OFFICE #6 (RESIDENCE)	KEARNEYSVILLE	WV	Bldg Service	Northeast	37.50
07000812	PTX - CAPTIVE PROP. SHOP	LAUREL	MD	Bldg Service	Northeast	37.50
07000807	PTX - MERRIAM GARAGE	LAUREL	MD	Bldg Service	Northeast	37.50
07000809	PTX - SERVICE BUILDING	LAUREL	MD	Bldg Service	Northeast	37.50
07000805	PTX - SERVICE GARAGE	LAUREL	MD	Bldg Service	Northeast	37.50
07000806	PTX - WHITE BARN	LAUREL	MD	Bldg Service	Northeast	37.50
07000239	STEILACOOM-REPAIR SHOP-BLDG 22	TACOMA	WA	Bldg Service	Northwest	37.50
G1000069120000000	GREENHOUSE RENTAL USFS	FLAGSTAFF	AZ	Bldg Greenhouse	Southwest	37.25
07000853	LSC - NARL - GARAGE	WELLSBORO	PA	Bldg Warehouses	Northeast	37.14
07000072	LSC - NARL - STORAGE BLDG	WELLSBORO	PA	Bldg Warehouses	Northeast	37.14
07000020	LSC - SO CONTE - VEHICLE STORAGE	TURNERS FALLS	MA	Bldg Warehouses	Northeast	37.14
07000099	NWHC - STORAGE BLDG	MADISON	WI	Bldg Warehouses	Midwest	37.14
07000468	UMESC - COLD STORAGE BUILDING	LA CROSSE	WI	Bldg Warehouses	Midwest	37.14
07000086	WFRC - VISITING SCIENTIST QTRS	SEATTLE	WA	Bldg Family Housing	Northwest	37.06
07000110	LSC - GARAGE (110)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	36.86
07000022	LSC - SO CONTE - STORAGE	TURNERS FALLS	MA	Bldg Warehouses	Northeast	36.86
07001053	LSC - SO CONTE - STORAGE BLDG #3	TURNERS FALLS	MA	Bldg Warehouses	Northeast	36.86
07000136	BOISE - BLDG 5	BOISE	ID	Bldg Service	Northwest	36.84
07000687	GLSC - HB - WOOD FRM PUMP/ELEC	MILLERSBURG	MI	Bldg Service	Midwest	36.84

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07000371	CERC - CHEMICAL STORAGE BLDG	COLUMBIA	MO	Bldg Warehouses	South Central	36.71
07000014	GLSC - AA - SERVICE BLDG	ANN ARBOR	MI	Bldg Service	Midwest	36.67
07000439	GUAM - STORAGE	MAITE	GU	Bldg Service		36.49
07000220	NEWPORT - SHOP/GARAGE BLDG 2	NEWPORT	WA	Bldg Service	Northwest	36.49
07000011	NWRC - SHOP/GREENHOUSE	LAFAYETTE	LA	Bldg Service	South Central	36.49
07000163	SITKA - DETACHED GARAGE	SITKA	AK	Bldg Service	Alaska	36.49
07000049	NPWRC - DORM/DRY LAB, BRD009	JAMESTOWN	ND	Bldg Dormitories/ Barracks	Midwest	36.47
07000087	WFRC - CHEMICAL STORAGE BLDG	SEATTLE	WA	Bldg Warehouses	Northwest	36.29
07000661	GLSC - TLAS - RESIDENCE Q1	CORTLAND	NY	Bldg Family Housing	Northeast	36.18
07000038	GLSC - TLAS - RESIDENCE Q2	CORTLAND	NY	Bldg Family Housing	Northeast	36.18
07000662	GLSC - TLAS - RESIDENCE Q50	CORTLAND	NY	Bldg Family Housing	Northeast	36.18
07000107	LSC - QUARTERS (111)	KEARNEYSVILLE	WV	Bldg Family Housing	Northeast	36.18
07000108	LSC - QUARTERS (5)	KEARNEYSVILLE	WV	Bldg Family Housing	Northeast	36.18
07000010	NWRC - MEZZANINE STORAGE BLDG	LAFAYETTE	LA	Bldg Warehouses	South Central	36.14
07000052	NPWRC - CHEMICAL STORAGE BLDG	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.86
07000460	NWRC-CHEMICAL STORAGE BUILDING	LAFAYETTE	LA	Bldg Warehouses	South Central	35.86
07000111	FACILTIES MAINTENANCE/GARAGE (213)	KEARNEYSVILLE	WV	Bldg Service	Northeast	35.79
07000041	GLSC - TLAS - MAINTENANCE GARAGE	CORTLAND	NY	Bldg Service	Northeast	35.79
07000663	GLSC - TLAS - ONE-CAR GARAGE Q50	CORTLAND	NY	Bldg Service	Northeast	35.79
07000664	GLSC - TLAS - TWO CAR GARAGE Q-1	CORTLAND	NY	Bldg Service	Northeast	35.79
07000101	NWHC - GARAGE-MAINTENANCE/STG	MADISON	WI	Bldg Service	Midwest	35.79
07000385	UMESC - WELL GENERATOR BLD-#54	LA CROSSE	WI	Bldg Service	Midwest	35.79

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07000386	UMESC - WELL HOUSE - PROP NO 7	LA CROSSE	WI	Bldg Service	Midwest	35.79
07000387	UMESC - WELL HOUSE - PROP NO 8	LA CROSSE	WI	Bldg Service	Midwest	35.79
07000388	UMESC - WELL HOUSE - PROP NO 9	LA CROSSE	WI	Bldg Service	Midwest	35.79
07000308	CERC - FWS BOAT BARN	COLUMBIA	MO	Bldg Warehouses	South Central	35.71
07000303	CERC - USGS BOAT BARN	COLUMBIA	MO	Bldg Warehouses	South Central	35.71
07000053	NPWRC - EQUIPMENT STORAGE BLDG	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.71
07000846	NPWRC - FIRE GARAGE	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.71
07000057	NPWRC - JEEP SHED STORAGE BLDG	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.71
07000055	NPWRC - MARVEL STEEL STG BLDG	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.71
07000050	NPWRC- 7 STALL GARAGE, STG BLD	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.71
07000437	GUAM - QTR1	MAITE	GU	Bldg Family Housing		35.59
07000438	GUAM - QTR2	MAITE	GU	Bldg Family Housing		35.59
07000217	NEWPORT GEOPHYS OBS-BLDG 3	NEWPORT	WA	Bldg Family Housing	Northwest	35.59
07000157	SITKA - MAIN QUARTERS and OFFICE	SITKA	AK	Bldg Family Housing	Alaska	35.59
07000158	SITKA-ASSISTANT'S QUARTERS Q-2	SITKA	AK	Bldg Family Housing	Alaska	35.59
07000682	GLSC - HB - GALVZ GARAGE/STG	MILLERSBURG	MI	Bldg Service	Midwest	35.44
07000688	GLSC - HB - GLVZ LAMPRICID STG	MILLERSBURG	MI	Bldg Service	Midwest	35.44
07000684	GLSC - HB - WOOD FRAME SHOP	MILLERSBURG	MI	Bldg Service	Midwest	35.44
07000683	GLSC - HB - WOOD GARAGE/STG	MILLERSBURG	MI	Bldg Service	Midwest	35.44
07000121	EROS - HEAVY EQUIPMENT STORAGE	SIOUX FALLS	SD	Bldg Warehouses	Midwest	35.43
07000040	GLSC - TLAS - ONE-CAR GARAGE Q-2	CORTLAND	NY	Bldg Warehouses	Northeast	35.43
07000039	GLSC - TLAS - PORTABLE BLD/FIELD EQP	CORTLAND	NY	Bldg Warehouses	Northeast	35.43

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07000989	LSC - QUARTERS/STORAGE (124)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	35.43
07000990	LSC - QUARTERS/STORAGE (125)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	35.43
07000357	SAN JUAN OBSV - STORAGE BLDG	CAYEY	PR	Bldg Warehouses	Southeast	35.43
07000382	UMESC - GAS STORAGE BLDG - #51	LA CROSSE	WI	Bldg Warehouses	Midwest	35.43
07000028	CERC - BRICK SHED	COLUMBIA	MO	Bldg Warehouses	South Central	35.29
07000309	CERC - ECOLOGY STORAGE SHED	COLUMBIA	MO	Bldg Warehouses	South Central	35.29
07000302	CERC - MAINTENANCE STG SHED	COLUMBIA	MO	Bldg Warehouses	South Central	35.29
07000307	CERC - OVEN SHED	COLUMBIA	MO	Bldg Warehouses	South Central	35.29
07000301	CERC - STORAGE SHED 06	COLUMBIA	MO	Bldg Warehouses	South Central	35.29
07000752	NPWRC - GARDEN SHED	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.29
07000054	NPWRC- FIELD EQUIPMENT STG BLD	JAMESTOWN	ND	Bldg Warehouses	Midwest	35.29
07000728	CERC - BOAT STORAGE	COLUMBIA	MO	Bldg Warehouses	South Central	35.14
07000343	NWRC - BOAT SHED #1	LAFAYETTE	LA	Bldg Warehouses	South Central	35.14
07000344	NWRC - BOAT SHED #2	LAFAYETTE	LA	Bldg Warehouses	South Central	35.14
07001164	2400 PORT STREET ASSOCIATES	WEST SACRAMENTO	CA	Bldg Warehouses	Southwest	34.80
07001076	AAAAAAA'S MINI BUDGET STORAGE	TUCSON	AZ	Bldg Warehouses	Southwest	34.80
07001057	ALASKA MINI STORAGE - O D H 67	FAIRBANKS	AK	Bldg Warehouses	Alaska	34.80
07000458	BEMINDJI STORAGE UNITS	BEMIDJI	MN	Bldg Warehouses	Midwest	34.80
07001244	BLUE VALLEY TRAILERS	WATERVILLE	KS	Bldg Warehouses	South Central	34.80
07001166	BOISE - BLDG 10 NEW	BOISE	ID	Bldg Warehouses	Northwest	34.80
07000647	BROOK ROAD MINI STORAGE	GLEN ALLEN	VA	Bldg Warehouses	Northeast	34.80
07000630	CALOUETTE INDUSTRIAL PROPERTY	GLADSTONE	MI	Bldg Warehouses	Midwest	34.80

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000306	CERC - METAL SHED #3	COLUMBIA	MO	Bldg Warehouses	South Central	34.80
07001237	CLIMASTOR 6	BATON ROUGE	LA	Bldg Warehouses	South Central	34.80
07001400	CMRS (STORAGE)	ST PETERSBURG	FL	Bldg Warehouses	Southeast	34.80
07000666	COVENTRY COTTAGE - STORAGE	STORRS	CT	Bldg Warehouses	Northeast	34.80
07000656	ELKINS AIRPORT	ELKINS	WV	Bldg Warehouses	Northeast	34.80
07001087	EMIGRANT STORAGE - NORTH RENO	RENO	NV	Bldg Warehouses	Southwest	34.80
NJ5031ZZ	ENTERPRISE PARK	EWING TOWNSHIP	NJ	Bldg Warehouses	Northeast	34.80
07001157	FANDH WAREHOUSE STORAGE	ALBANY	OR	Bldg Warehouses	Northwest	34.80
07001119	FISC - FT LAUDERDALE OFFICE GARAGE	FORT LAUDERDALE	FL	Bldg Warehouses	Southeast	34.80
07000475	FISC - GVL - BATTERY STORAGE SHED 5	GAINESVILLE	FL	Bldg Warehouses	Southeast	34.80
07000002	FISC - GVL - CHEMICAL STORAGE BLDG	GAINESVILLE	FL	Bldg Warehouses	Southeast	34.80
07000471	FISC - GVL - STORAGE SHED 1	GAINESVILLE	FL	Bldg Warehouses	Southeast	34.80
07000472	FISC - GVL - STORAGE SHED 2	GAINESVILLE	FL	Bldg Warehouses	Southeast	34.80
07000473	FISC - GVL - STORAGE SHED 3	GAINESVILLE	FL	Bldg Warehouses	Southeast	34.80
07000474	FISC - GVL - STORAGE SHED 4	GAINESVILLE	FL	Bldg Warehouses	Southeast	34.80
07000632	GOODALE'S STORAGE	GRAYLING	MI	Bldg Warehouses	Midwest	34.80
07001401	GROVE WAY MINI STORAGE	CASTRO VALLEY	CA	Bldg Warehouses	Southwest	34.80
OK0503OC	GSA PMD CENTER WAREHOUSE	OKLAHOMA CITY	OK	Bldg Warehouses	South Central	34.80
07000736	GUAM - DORM 1 OFFICE BUILDING	MANGILAO	GU	Bldg Warehouses		34.80
07001083	HAUSER MINI STORAGE	HAUSER LAKE	ID	Bldg Warehouses	Northwest	34.80
07000178	HAWAII VOLCANO OBS - STG BLDG	HONOLULU	HI	Bldg Warehouses	Southwest	34.80
07001167	HAWAIIAN VOLCANO OBS - STG BLD NEW	HONOLULU	HI	Bldg Warehouses	Southwest	34.80

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07000560	IDAHO FALLS FIELD STATION	IDAHO FALLS	ID	Bldg Warehouses	Northwest	34.80
07000584	INDIO SECURITY (STORAGE)	INDIO	CA	Bldg Warehouses	Southwest	34.80
07000722	IOWA CITY WAREHOUSE	IOWA CITY	IA	Bldg Warehouses	Midwest	34.80
07000715	JOHN ELLIS STORAGE YARD	WRANGELL	AK	Bldg Warehouses	Alaska	34.80
07001108	LSC - CHEMICAL STORAGE (106)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07000993	LSC - FARM STORAGE (8)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07001192	LSC - GARAGE # 9	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07001003	LSC - GARAGE (8 - BY Q.6)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07001193	LSC - POLE BARN (EQUIPMENT STORAGE) # 260	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07001197	LSC - RT BLDG TEMP STORAGE SHED	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07001230	LSC - SO CONTE - CARPENTER SHOP STORAGE BLDG	TURNERS FALLS	MA	Bldg Warehouses	Northeast	34.80
07001228	LSC - SO CONTE - OUTDOOR PAD STORAGE BLDG	TURNERS FALLS	MA	Bldg Warehouses	Northeast	34.80
07001231	LSC - SO CONTE - STORAGE #2 - MASH TENT	TURNERS FALLS	MA	Bldg Warehouses	Northeast	34.80
07001229	LSC - SO CONTE - UPPER BURROW STORAGE BLDG	TURNERS FALLS	MA	Bldg Warehouses	Northeast	34.80
07001226	LSC - SO CONTE - VEHICLE STORAGE STORAGEF BLDG	TURNERS FALLS	MA	Bldg Warehouses	Northeast	34.80
07000968	LSC - STORAGE (127)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	34.80
07000351	MAMMOTH COMM WATER DIST	MAMMOTH LAKES	CA	Bldg Warehouses	Southwest	34.80
07001058	MAMMOTH MINI STORAGE #119	MAMMOTH LAKES	CA	Bldg Warehouses	Southwest	34.80
07000261	MAMMOTH MINI STORAGE #125	MAMMOTH LAKES	CA	Bldg Warehouses	Southwest	34.80

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07000497	MARROWSTONE - BOAT HOUSE	NORDLAND	WA	Bldg Warehouses	Northwest	34.80
07001255	MIDDLETON WAREHOUSE	MIDDLETON	WI	Bldg Warehouses	Midwest	34.80
07001135	MISSION GROVE SELF STORAGE	RIVERSIDE	CA	Bldg Warehouses	Southwest	34.80
G1000067020000000	NATIONAL STORAGE CENTER LEASE	LANCASTER	CA	Bldg Warehouses	Southwest	34.80
07000555	NATIONAL STORAGE CENTERS	LANCASTER	CA	Bldg Warehouses	Southwest	34.80
WV0118ZZ	NELSON TRANS and STOR	CHARLESTON	WV	Bldg Warehouses	Northeast	34.80
07001202	NPWRC - BOAT STORAGE BLDG	JAMESTOWN	ND	Bldg Warehouses	Midwest	34.80
07001201	NPWRC - SAND SHED	JAMESTOWN	ND	Bldg Warehouses	Midwest	34.80
07000252	OVERPASS INVESTORS-WRD STORAGE	GRAND FORKS	ND	Bldg Warehouses	Midwest	34.80
07001082	PARKFIELD STORAGE BUILDING	SAN MIGUEL	CA	Bldg Warehouses	Southwest	34.80
07001010	PASADENA SELF STG - GD #445	PASADENA	CA	Bldg Warehouses	Southwest	34.80
07000267	PASADENA SELF STG-GD #9	PASADENA	CA	Bldg Warehouses	Southwest	34.80
07000719	PRAXAIR	IDAHO FALLS	ID	Bldg Warehouses	Northwest	34.80
07000816	PTX - BOAT STORAGE	LAUREL	MD	Bldg Warehouses	Northeast	34.80
07001121	PTX - U OF GA-SCH OF FOREST RES2558	ATHENS	GA	Bldg Warehouses	Southeast	34.80
G1000036620000005	PUMPHOUSE	COOK	WA	Bldg Pump House Well House	Northwest	34.80
07000650	RIB'S RENTALS	MONTPELIER	VT	Bldg Warehouses	Northeast	34.80
07001013	RIVERSIDE STORAGE	FORT PECK	MT	Bldg Warehouses	Rocky Mountain	34.80
07000557	SACRAMENTO FIELD OFFICE	SACRAMENTO	CA	Bldg Warehouses	Southwest	34.80
07000622	SHIGAMO DEVELOPMENT INC.	ELKO	NV	Bldg Warehouses	Southwest	34.80
07001188	SITKA MINI STORAGE COMPANY	SITKA	AK	Bldg Warehouses	Alaska	34.80

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07000125	SOLID STATE LAB - R AND D BLD	RESTON	VA	Bldg Warehouses	Northeast	34.80
G1000066920000000	SOUTHSIDE STORAGE LEASE	LINCOLN	NE	Bldg Warehouses	Midwest	34.80
07000237	STEILACOOM-WAREHOUSE - BLDG 20	TACOMA	WA	Bldg Warehouses	Northwest	34.80
G1000068420000000	STOR A WAY SELF STORAGE - OTIS ORCHARDS, WA	OTIS ORCHARDS	WA	Bldg Warehouses	Northwest	34.80
07001297	STORAGE DEPOT	CORVALLIS	OR	Bldg Warehouses	Northwest	34.80
07001184	TB-48 STORAGE UNIT	BOULDER	CO	Bldg Warehouses	Rocky Mountain	34.80
07001089	U-STORE-IT	YUCAIPA	CA	Bldg Warehouses	Southwest	34.80
07000733	WAYNE HILL WAREHOUSE	CHEVAK	AK	Bldg Warehouses	Alaska	34.80
07001245	WAYNE HILL WAREHOUSE	CHEVAK	AK	Bldg Warehouses	Alaska	34.80
G1000036620000007	WELL HOUSE E	COOK	WA	Bldg Pump House Well House	Northwest	34.80
07001287	WESTSIDE WAREHOUSE CENTER	MIDDLETON	WI	Bldg Warehouses	Midwest	34.80
07000645	WRD STORAGE	COLUMBUS	OH	Bldg Warehouses	Midwest	34.80
07000646	WRD STORAGE	NEW PHILADELPHIA	OH	Bldg Warehouses	Midwest	34.80
07000653	WRD STORAGE	MIDDLETON	WI	Bldg Warehouses	Midwest	34.80
07000273	WRD STORAGE BLDG AND WAREYARD	CEDAR CITY	UT	Bldg Warehouses	Southwest	34.80
07000078	YFS - SRV BLD	YANKTON	SD	Bldg Warehouses	Midwest	34.80
07000079	YFS - STG BLD	YANKTON	SD	Bldg Warehouses	Midwest	34.80
07000061	NPWRC - HEATED GARAGE	JAMESTOWN	ND	Bldg Service	Midwest	34.04
07000058	NPWRC - SHOP/GARAGE	JAMESTOWN	ND	Bldg Service	Midwest	34.04
07000060	NPWRC - TECH SHOP	JAMESTOWN	ND	Bldg Service	Midwest	34.04
07000848	BOISE - BLDG 4A	BOISE	ID	Bldg Warehouses	Northwest	33.86

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07001185	ANIMAL RESEARCH UTILITIES SYSTEM	LAUREL	MD	Utility System	Northeast	33.75
07001279	BARROW UTILITY SYSTEMS	BARROW	AK	Utility System	Alaska	33.75
07000131	BOISE - UTILITIES	BOISE	ID	Utility System	Northwest	33.75
07000034	CERC - WATER TANK AND WELL #1	COLUMBIA	MO	Utility System	South Central	33.75
G1000010420000038	CERC - WELL #1	COLUMBIA	MO	Utility System	South Central	33.75
07000319	CERC - WELL #2	COLUMBIA	MO	Utility System	South Central	33.75
07000318	CERC -WATER DISTRIBUTION LINES	COLUMBIA	MO	Utility System	South Central	33.75
G1000036630000001	COOK UTILITY SYSTEM	COOK	WA	Utility System	Northwest	33.75
07001052	EROS - OTHER SANDF UTILITIES	SIOUX FALLS	SD	Utility System	Midwest	33.75
07001249	EROS - WATER TOWER	SIOUX FALLS	SD	Utility System	Midwest	33.75
07000975	FISC - GVL - DRAIN LINES #1	GAINESVILLE	FL	Utility System	Southeast	33.75
07000976	FISC - GVL - DRAIN LINES #2	GAINESVILLE	FL	Utility System	Southeast	33.75
07000006	FISC - GVL - DRILLED WELL W/CASING 2	GAINESVILLE	FL	Utility System	Southeast	33.75
07000007	FISC - GVL - DRILLED WELL W/CASING 3	GAINESVILLE	FL	Utility System	Southeast	33.75
07000984	FISC - GVL - EMERGENCY GENERATOR	GAINESVILLE	FL	Utility System	Southeast	33.75
07000972	FISC - GVL - SUPPLY LINE #1	GAINESVILLE	FL	Utility System	Southeast	33.75
07000973	FISC - GVL - SUPPLY LINE #2	GAINESVILLE	FL	Utility System	Southeast	33.75
07000974	FISC - GVL - SUPPLY LINE #3	GAINESVILLE	FL	Utility System	Southeast	33.75
07000977	FISC - GVL - UNDERDRAIN LINE #1	GAINESVILLE	FL	Utility System	Southeast	33.75
07000978	FISC -GVL - UNDERDRAIN LINE #2	GAINESVILLE	FL	Utility System	Southeast	33.75
07000979	FISC -GVL - UNDERDRAIN LINE #3	GAINESVILLE	FL	Utility System	Southeast	33.75
G1000036530000003	FRESNO UTILITIES	COARSEGOLD	CA	Utility System	Southwest	33.75

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07000851	GLSC - AA - WELL #3 - 3 DIAMETER	ANN ARBOR	MI	Utility System	Midwest	33.75
07000852	GLSC - AA - WELL #4 - 6 DIAMETER	ANN ARBOR	MI	Utility System	Midwest	33.75
07000697	GLSC - HB - IRON INTAKE PIPE	MILLERSBURG	MI	Utility System	Midwest	33.75
07001213	GLSC - TLAS - DOMESTIC SEWAGE SYST	CORTLAND	NY	Utility System	Northeast	33.75
07001212	GLSC - TLAS - ELECTRICAL DISTRIBUTION SYST	CORTLAND	NY	Utility System	Northeast	33.75
07000838	GLSC - TLAS - GENERATOR AND ELEC DI	CORTLAND	NY	Utility System	Northeast	33.75
07000833	GLSC - TLAS - GENERATOR AND ELEC. D	CORTLAND	NY	Utility System	Northeast	33.75
07001211	GLSC - TLAS - GENERATOR AND TRANSFER SWITCH	CORTLAND	NY	Utility System	Northeast	33.75
07001206	GLSC - TLAS - HEAD TANK	CORTLAND	NY	Utility System	Northeast	33.75
07001207	GLSC - TLAS - LIQUID OXYGEN SYSTEM	CORTLAND	NY	Utility System	Northeast	33.75
07000828	GLSC - TLAS - PUMP HOUSE WELLI	CORTLAND	NY	Utility System	Northeast	33.75
07000837	GLSC - TLAS - RESERVOIR	CORTLAND	NY	Utility System	Northeast	33.75
07000829	GLSC - TLAS - WATER COLLECTION TANK	CORTLAND	NY	Utility System	Northeast	33.75
07001214	GLSC - TLAS - WATER DISTRIBUTION SYST	CORTLAND	NY	Utility System	Northeast	33.75
07000834	GLSC - TLAS - WELL 'E-2' AND PUMP HOUSE	CORTLAND	NY	Utility System	Northeast	33.75
07000835	GLSC - TLAS - WELL 'R' FOR REARING	CORTLAND	NY	Utility System	Northeast	33.75
07000836	GLSC - TLAS - WELL 'S' AND PUMP HOUSE	CORTLAND	NY	Utility System	Northeast	33.75
07001205	GLSC - TLAS - WELL 'T' AND PUMP HOUSE	CORTLAND	NY	Utility System	Northeast	33.75
07000140	GOVERNMENT HILL - SANDF UTIL	ANCHORAGE	AK	Utility System	Alaska	33.75
G1000016530000005	GUAM SANTA ROSA - SITE UTILITIES	MAITE	GU	Utility System		33.75

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000923	LSC - BALCH SPRING HOUSE	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000954	LSC - DOMESTIC WATER DIST	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000953	LSC - DOMESTIC WATER TOWER	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000934	LSC - DRAINLINE SEWAGE SYSTEM	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000933	LSC - MANHOLES SEWER SYSTEM	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000898	LSC - NARL - DEGASSER TANK	WELLSBORO	PA	Utility System	Northeast	33.75
07000895	LSC - NARL - ELECTRICITY and LIGHTING	WELLSBORO	PA	Utility System	Northeast	33.75
07000891	LSC - NARL - SEPTIC TANK and LIFT	WELLSBORO	PA	Utility System	Northeast	33.75
07000894	LSC - NARL - SEWAGE DISTR. PIPING	WELLSBORO	PA	Utility System	Northeast	33.75
07000886	LSC - NARL - WASTEWATER DIST PIPING	WELLSBORO	PA	Utility System	Northeast	33.75
07000854	LSC - NARL - WATER DISTRIBUTION	WELLSBORO	PA	Utility System	Northeast	33.75
07000855	LSC - NARL - WATER INTAKE STRUCTURE	WELLSBORO	PA	Utility System	Northeast	33.75
07000075	LSC - NARL - WELL 1	WELLSBORO	PA	Utility System	Northeast	33.75
07000076	LSC - NARL - WELL 10	WELLSBORO	PA	Utility System	Northeast	33.75
07000858	LSC - NARL - WELL 2	WELLSBORO	PA	Utility System	Northeast	33.75
07000856	LSC - NARL - WELL 3	WELLSBORO	PA	Utility System	Northeast	33.75
07000859	LSC - NARL - WELL 5	WELLSBORO	PA	Utility System	Northeast	33.75
07000860	LSC - NARL - WELL 6	WELLSBORO	PA	Utility System	Northeast	33.75
07000861	LSC - NARL - WELL 7	WELLSBORO	PA	Utility System	Northeast	33.75
07000862	LSC - NARL - WELL 8	WELLSBORO	PA	Utility System	Northeast	33.75
07000863	LSC - NARL - WELL 9	WELLSBORO	PA	Utility System	Northeast	33.75
07000921	LSC - PUMP HOUSE A	KEARNEYSVILLE	WV	Utility System	Northeast	33.75

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07000920	LSC - PUMP HOUSE B	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000917	LSC - PUMP HOUSE/SERVICE #1	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000940	LSC - RESEARCH WATER DISTRIBUTION LINE	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000939	LSC - SEWAGE CONTROL (128)	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000932	LSC - SEWAGE PLANT (209)	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000936	LSC - SEWER LINE #2	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000935	LSC - SEWER LINES	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000117	LSC - WATER DRAIN #1	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000928	LSC - WATER DRAIN #2	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000938	LSC - WATER TREATMENT	KEARNEYSVILLE	WV	Utility System	Northeast	33.75
07000504	MARROWSTONE - SEWER SYSTEM	NORDLAND	WA	Utility System	Northwest	33.75
07000502	MARROWSTONE - WATER SYSTEM	NORDLAND	WA	Utility System	Northwest	33.75
07000500	MARROWSTONE-ELECTRICAL SYSTEM	NORDLAND	WA	Utility System	Northwest	33.75
G1000013030000001	NEWPORT UTILITIES	NEWPORT	WA	Utility System	Northwest	33.75
07000338	NPWRC - WATER DISTRIB LINES 4	JAMESTOWN	ND	Utility System	Midwest	33.75
07000067	NPWRC - WATER DISTRIB LINES 6	JAMESTOWN	ND	Utility System	Midwest	33.75
07000335	NPWRC - WATER DISTRIB LINES 8	JAMESTOWN	ND	Utility System	Midwest	33.75
07000336	NPWRC - WTR DIST LINE/2HP PUMP	JAMESTOWN	ND	Utility System	Midwest	33.75
07000066	NPWRC- MAIN WATER STORAGE TANK	JAMESTOWN	ND	Utility System	Midwest	33.75
07000337	NPWRC- WATER DISTRIB LINES 10	JAMESTOWN	ND	Utility System	Midwest	33.75
07000340	NPWRC-WTR DIST LINE 6 66 LNFT	JAMESTOWN	ND	Utility System	Midwest	33.75
07000339	NPWRC-WTR DIST LINES 462 LNFT	JAMESTOWN	ND	Utility System	Midwest	33.75

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000102	NWHC - SOLAR PANELS	MADISON	WI	Utility System	Midwest	33.75
07000369	SAN JUAN OBSV - UTILITY SYSTEM	CAYEY	PR	Utility System	Southeast	33.75
G1000036230000001	SHUMAGIN UTILITIES	SAND POINT	AK	Utility System	Alaska	33.75
07000164	SITKA MAGNETIC OBS - SANDF UTIL	SITKA	AK	Utility System	Alaska	33.75
07000429	TUCSON-UNDERGROUND UTIL TRENCH	TUCSON	AZ	Utility System	Southwest	33.75
07000426	UMESC - TANK, STEEL DIESEL-#49	LA CROSSE	WI	Utility System	Midwest	33.75
07000089	WFRC-WATER DISTRIBUTION LINES	SEATTLE	WA	Utility System	Northwest	33.75
07000081	YFS - S and F UTIL	YANKTON	SD	Utility System	Midwest	33.75
07000689	GLSC - HB - GLVZ STEEL STORAGE	MILLERSBURG	MI	Bldg Service	Midwest	33.68
07000685	GLSC - HB - GLVZ STEEL-NET STG	MILLERSBURG	MI	Bldg Service	Midwest	33.68
07000379	UMESC - POND STORAGE - #6	LA CROSSE	WI	Bldg Service	Midwest	33.68
07000059	NPWRC - OIL SHED	JAMESTOWN	ND	Bldg Service	Midwest	33.51
07000056	NPWRC - WOOD SHOP STORAGE BLDG	JAMESTOWN	ND	Bldg Service	Midwest	33.51
07000051	NPWRC- GREEN METAL STORAGE BLD	JAMESTOWN	ND	Bldg Service	Midwest	33.51
07000332	NPWRC-RECYCL MATERIAL STG SHED	JAMESTOWN	ND	Bldg Service	Midwest	33.51
07001251	BULLION MOUNTAIN	MARIPOSA	CA	Navigation and Traffic Aids (other	Southwest	32.50
07000737	CRYSTAL PEAK RADIO SITE	LOS GATOS	CA	Navigation and Traffic Aids (other	Southwest	32.50
07000691	GLSC - HB - STEEL SHEET PILING	MILLERSBURG	MI	Flood Control and Navigation	Midwest	32.50
07001044	MITCHELL MILIAS - LAND LEASE	GILROY	CA	Navigation and Traffic Aids	Southwest	32.50
07000133	BOISE - BLDG 7A	BOISE	ID	Bldg Warehouses	Northwest	32.43

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000134	BOISE - BLDG 8	BOISE	ID	Bldg Warehouses	Northwest	32.43
07000109	LSC - QUARTERS (1 MT MISERY)	KEARNEYSVILLE	WV	Bldg Warehouses	Northeast	31.57
07000358	SAN JUAN OBSV - INDUSTRIAL BLDG	CAYEY	PR	Bldg Service	Southeast	31.23
07000047	NPWRC - RESIDENCE 7, BRD0007	JAMESTOWN	ND	Bldg Family Housing	Midwest	30.88
07000048	NPWRC - RESIDENCE 8, BRD0008	JAMESTOWN	ND	Bldg Family Housing	Midwest	30.88
07000180	GR WSC MN WAREHOUSE STG BLDG	GRAND RAPIDS	MN	Bldg Warehouses	Midwest	30.14
07000138	BOISE - BLDG 7	BOISE	ID	Bldg Service	Northwest	30.00
07000142	GOVERNMENT HILL - STOR BLD 500	ANCHORAGE	AK	Bldg Warehouses	Alaska	30.00
07000143	GOVERNMENT HILL - STOR BLD 501	ANCHORAGE	AK	Bldg Warehouses	Alaska	30.00
07000144	GOVERNMENT HILL - STOR BLD 502	ANCHORAGE	AK	Bldg Warehouses	Alaska	30.00
07000356	SAN JUAN OBSV - QUARTERS	CAYEY	PR	Bldg Family Housing	Southeast	30.00
07000260	B&W MARINA	ISLETON	CA	Storage (Other than building)	Southwest	23.25
07001204	CERC - OPEN STORAGE	COLUMBIA	MO	Storage (Other than building)	South Central	23.25
07000184	ELKO 'H' FACILITY - LAND	ELKO	NV	Storage	Southwest	23.25
07000484	FISC - GVL - ABOVE GRND GASOLINE TANK	GAINESVILLE	FL	Storage (Other than building)	Southeast	23.25
07000971	FISC - GVL - ABV GRND DIESEL FUEL TANK	GAINESVILLE	FL	Storage (Other than building)	Southeast	23.25
07000988	FISC - GVL - TANKS (3)	GAINESVILLE	FL	Storage (Other than building)	Southeast	23.25
07000485	FISC -GVL - WATER TOWER 1	GAINESVILLE	FL	Storage (Other than building)	Southeast	23.25
07000486	FISC -GVL - WATER TOWER 2	GAINESVILLE	FL	Storage (Other than	Southeast	23.25

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
				building)		
07000139	GOVERNMENT HILL - LAND	ANCHORAGE	AK	Storage	Alaska	23.25
07000179	GR WSC MN WAREHOUSE - LAND	GRAND RAPIDS	MN	Storage	Midwest	23.25
G1000015020000005	HAWAII VOLCANO OBS - STG BLDG	HONOLULU	HI	Storage	Southwest	23.25
07000912	LSC - SO CONTE - FUEL STORAGE	TURNERS FALLS	MA	Storage (Other than building)	Northeast	23.25
07000911	LSC - SO CONTE - PROPANE STORAGE	TURNERS FALLS	MA	Storage (Other than building)	Northeast	23.25
07000735	MOFFETT - TRAILER STORAGE	MOFFETT FIELD	CA	Storage	Southwest	23.25
G1000069620000000	MP-567, BAKERSFIELD, CA DERREL'S MINI STORAGE	BAKERSFIELD	CA	Storage	Southwest	23.25
07000064	NPWRC - CONVAULT FUEL TANKS	JAMESTOWN	ND	Storage (Other than building)	Midwest	23.25
07000914	NWHC - FUEL TANK #1	MADISON	WI	Storage (Other than building)	Midwest	23.25
07000915	NWHC - FUEL TANK #2	MADISON	WI	Storage (Other than building)	Midwest	23.25
07000462	NWRC - CONVAULT FUEL TANKS	LAFAYETTE	LA	Storage (Other than building)	South Central	23.25
07001223	OWSC WAREYARD	PORTLAND	OR	Storage	Northwest	23.25
07000236	STEILACOOM - LAND	TACOMA	WA	Storage	Northwest	23.25
07000665	STEILACOOM - OPEN STORAGE	TACOMA	WA	Storage (Other than building)	Northwest	23.25
G1000036620000002	STORAGE BUILDING C	COOK	WA	Storage	Northwest	23.25
G1000036620000003	STORAGE BUILDING H	COOK	WA	Storage	Northwest	23.25
G1000036620000004	STORAGE BUILDING I	COOK	WA	Storage	Northwest	23.25

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
G1000012720000002	ELKO H FACILITY SHOP GARAGE	ELKO	NV	Bldg Garage Detached	Southwest	22.75
07001093	BOISE - PARKING LOT -UNPAVED	BOISE	ID	All Other	Northwest	17.50
07001271	BOULDER MAG OBS - PARKING AREA	LONGMONT	CO	All Other	Rocky Mountain	17.50
07000323	CERC - CHAIN LINK FENCING	COLUMBIA	MO	All Other	South Central	17.50
07000324	CERC - EAST PARKING LOT	COLUMBIA	MO	All Other	South Central	17.50
07001274	DEL RIO MAG OBS - FENCE	DEL RIO	TX	All Other	South Central	17.50
07001281	ELKO 'H' FACILITY - FENCE	ELKO	NV	All Other	Southwest	17.50
07001257	EROS - DAM	SIOUX FALLS	SD	All Other	Midwest	17.50
07001258	EROS - FENCING	SIOUX FALLS	SD	All Other	Midwest	17.50
07000755	EROS - OTHER SANDF 80	SIOUX FALLS	SD	All Other	Midwest	17.50
07000985	FISC - GVL - FENCE	GAINESVILLE	FL	All Other	Southeast	17.50
07000489	FISC - GVL - FISH DOCK	GAINESVILLE	FL	All Other	Southeast	17.50
07000986	FISC - GVL - GATE #1	GAINESVILLE	FL	All Other	Southeast	17.50
07000987	FISC - GVL - GATES #2, #3, #4	GAINESVILLE	FL	All Other	Southeast	17.50
07000849	GLSC - AA - ASPHALT PARKING LOT	ANN ARBOR	MI	All Other	Midwest	17.50
07001235	GLSC - AA - FRONT CENTER SIGN	ANN ARBOR	MI	All Other	Midwest	17.50
07001234	GLSC - AA - SIDEWALKS	ANN ARBOR	MI	All Other	Midwest	17.50
07000692	GLSC - HB - CHAIN LINK FENCE	MILLERSBURG	MI	All Other	Midwest	17.50
07000703	GLSC - HB - CHAIN LINK FENCE	MILLERSBURG	MI	All Other	Midwest	17.50
07000693	GLSC - HB - CHAIN LINK GATE	MILLERSBURG	MI	All Other	Midwest	17.50
07000704	GLSC - HB - CONCRETE SLAB	MILLERSBURG	MI	All Other	Midwest	17.50
07000702	GLSC - HB - GATE @FISH TANKS	MILLERSBURG	MI	All Other	Midwest	17.50

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000695	GLSC - HB - LOOKOUT TOWER	MILLERSBURG	MI	All Other	Midwest	17.50
07000700	GLSC - HB - PARKING LOT	MILLERSBURG	MI	All Other	Midwest	17.50
07000705	GLSC - HB - PARKING LOT(SMF)	MILLERSBURG	MI	All Other	Midwest	17.50
07000694	GLSC - HB - WEATHER TOWER	MILLERSBURG	MI	All Other	Midwest	17.50
07001209	GLSC - TLAS - CONCRETE PAD #6 URD BLDG	CORTLAND	NY	All Other	Northeast	17.50
07001210	GLSC - TLAS - CONCRETE PAD #7 MNT BLDG	CORTLAND	NY	All Other	Northeast	17.50
07000841	GLSC - TLAS - CONCRETE PAD2	CORTLAND	NY	All Other	Northeast	17.50
07000822	GLSC - TLAS - CULVERT PIPELINE	CORTLAND	NY	All Other	Northeast	17.50
07000824	GLSC - TLAS - DAM1	CORTLAND	NY	All Other	Northeast	17.50
07000827	GLSC - TLAS - DAM2	CORTLAND	NY	All Other	Northeast	17.50
07000839	GLSC - TLAS - FENCE	CORTLAND	NY	All Other	Northeast	17.50
07001208	GLSC - TLAS - FENCE METAL	CORTLAND	NY	All Other	Northeast	17.50
07000832	GLSC - TLAS - LAB BLDG SIDEWALKS	CORTLAND	NY	All Other	Northeast	17.50
07000826	GLSC - TLAS - PIPELINE	CORTLAND	NY	All Other	Northeast	17.50
07000830	GLSC - TLAS - RACEWAYS	CORTLAND	NY	All Other	Northeast	17.50
07000825	GLSC - TLAS - RETAINING WALL	CORTLAND	NY	All Other	Northeast	17.50
07001260	GR WSC MN WAREHOUSE - FENCE	GRAND RAPIDS	MN	All Other	Midwest	17.50
07001259	GR WSC MN WAREHOUSE - UTILITY SYSTEMS	GRAND RAPIDS	MN	All Other	Midwest	17.50
07000952	LSC - ACCESS BRIDGE TO UV/K POND	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000926	LSC - BALL FIELD	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000951	LSC - BOARDWALK FISHING AREA	KEARNEYSVILLE	WV	All Other	Northeast	17.50

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000943	LSC - CENTER SIGNAGE (ALL)	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000937	LSC - CHAIN LINK FENCING	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000941	LSC - FENCE #2	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000957	LSC - FENCE BOUNDARY	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000944	LSC - INFORMATION SIGN #2	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000896	LSC - NARL - 6 WELL CASING	WELLSBORO	PA	All Other	Northeast	17.50
07000892	LSC - NARL - DRAIN FIELD, NORTH	WELLSBORO	PA	All Other	Northeast	17.50
07000893	LSC - NARL - DRAIN FIELD, SOUTH	WELLSBORO	PA	All Other	Northeast	17.50
07000881	LSC - NARL - ENTRANCE SIGN	WELLSBORO	PA	All Other	Northeast	17.50
07000879	LSC - NARL - FENCE FOR INCINERATOR	WELLSBORO	PA	All Other	Northeast	17.50
07000890	LSC - NARL - FENCE, SETTLING POND	WELLSBORO	PA	All Other	Northeast	17.50
07000880	LSC - NARL - FLAGPOLE	WELLSBORO	PA	All Other	Northeast	17.50
07000870	LSC - NARL - HEAD TANK	WELLSBORO	PA	All Other	Northeast	17.50
07000878	LSC - NARL - INCINERATOR	WELLSBORO	PA	All Other	Northeast	17.50
07000877	LSC - NARL - PARKING LOT	WELLSBORO	PA	All Other	Northeast	17.50
07000883	LSC - NARL - PARKING, VISITORS	WELLSBORO	PA	All Other	Northeast	17.50
07000873	LSC - NARL - RACEWAYS	WELLSBORO	PA	All Other	Northeast	17.50
07000884	LSC - NARL - SIDEWALKS and CURBS	WELLSBORO	PA	All Other	Northeast	17.50
07000897	LSC - NARL - TANK PAD AND FENCE	WELLSBORO	PA	All Other	Northeast	17.50
07000942	LSC - SIDEWALKS (ALL)	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000902	LSC - SO CONTE - FENCING AND GATES	TURNERS FALLS	MA	All Other	Northeast	17.50
07000913	LSC - SO CONTE - FLT MIG DIV SCREEN	TURNERS FALLS	MA	All Other	Northeast	17.50

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000907	LSC - SO CONTE - PARKING AND LOAD #2	TURNERS FALLS	MA	All Other	Northeast	17.50
07000904	LSC - SO CONTE - PARKING and LOADING	TURNERS FALLS	MA	All Other	Northeast	17.50
07000945	LSC - STONE WALL @ FISH HEALTH LAB	KEARNEYSVILLE	WV	All Other	Northeast	17.50
07000499	MARROWSTONE - FENCE	NORDLAND	WA	All Other	Northwest	17.50
07000501	MARROWSTONE - FLAG POLE	NORDLAND	WA	All Other	Northwest	17.50
07000503	MARROWSTONE - WALKS	NORDLAND	WA	All Other	Northwest	17.50
07000235	NEWPORT GEOPHYS OBS-GATEANDFENCE	NEWPORT	WA	All Other	Northwest	17.50
07000432	NEWPORT GEOPHYS OBS-SANDF OTHER	NEWPORT	WA	All Other	Northwest	17.50
07000329	NPWRC - BOUNDARY FENCING	JAMESTOWN	ND	All Other	Midwest	17.50
07000330	NPWRC - CHAIN LINK FENCING	JAMESTOWN	ND	All Other	Midwest	17.50
07000327	NPWRC - FENCING 68 AND 70	JAMESTOWN	ND	All Other	Midwest	17.50
07000328	NPWRC - FENCING FOX PENS	JAMESTOWN	ND	All Other	Midwest	17.50
07000069	NPWRC-WETLAND CHAIN LINK FENCE	JAMESTOWN	ND	All Other	Midwest	17.50
07000103	NWHC - FENCE/CHAIN LINK	MADISON	WI	All Other	Midwest	17.50
07000962	NWHC - GATE	MADISON	WI	All Other	Midwest	17.50
07000959	NWHC - PARKING LOT	MADISON	WI	All Other	Midwest	17.50
07000964	NWHC - TRAIL	MADISON	WI	All Other	Midwest	17.50
07000965	NWHC- KIOSK	MADISON	WI	All Other	Midwest	17.50
07000461	NWRC - CHAIN LINK FENCING	LAFAYETTE	LA	All Other	South Central	17.50
07001262	NWRC - GATES	LAFAYETTE	LA	All Other	South Central	17.50
07000464	NWRC - PARKING LOT	LAFAYETTE	LA	All Other	South Central	17.50
07001261	NWRC - UTILITY SYSTEMS	LAFAYETTE	LA	All Other	South Central	17.50

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
G1000036620000006	OZONE SHED F	COOK	WA	Structure	Northwest	17.50
07001265	REDFISH POINT CAMP	NEW IBERIA	LA	Structure	South Central	17.50
07000672	SANDUSKY DOCKING	SANDUSKY	OH	All Other	Midwest	17.50
07000415	UMESC - CONCRETE RACEWAY #38	LA CROSSE	WI	All Other	Midwest	17.50
07000416	UMESC - CONCRETE RACEWAY #39	LA CROSSE	WI	All Other	Midwest	17.50
07000417	UMESC - CONCRETE RACEWAY #40	LA CROSSE	WI	All Other	Midwest	17.50
07000418	UMESC - CONCRETE RACEWAY #41	LA CROSSE	WI	All Other	Midwest	17.50
07000419	UMESC - CONCRETE RACEWAY #42	LA CROSSE	WI	All Other	Midwest	17.50
07000420	UMESC - CONCRETE RACEWAY #43	LA CROSSE	WI	All Other	Midwest	17.50
07000421	UMESC - CONCRETE RACEWAY #44	LA CROSSE	WI	All Other	Midwest	17.50
07000422	UMESC - DONUT POND-RACEWAY #45	LA CROSSE	WI	All Other	Midwest	17.50
07000423	UMESC - FENCE, CHAIN LINK -#46	LA CROSSE	WI	All Other	Midwest	17.50
07000424	UMESC - PARKING AREA-PAVED #47	LA CROSSE	WI	All Other	Midwest	17.50
07000375	UMESC - WATER TANK, METAL -#10	LA CROSSE	WI	All Other	Midwest	17.50
07001267	USGS GAGING STATION - FENCE	ST REGIS	MT	All Other	Rocky Mountain	17.50
07000505	WFRC - PUMP PIT	SEATTLE	WA	All Other	Northwest	17.50
07000325	YFS - PARKING LOT AND FENCING	YANKTON	SD	All Other	Midwest	17.50
07001278	BARROW ROADWAY	BARROW	AK	Road and Bridge	Alaska	16.00
G1000014230000004	BOISE PAVED ROAD	BOISE	ID	Road Paved	Northwest	16.00
G1000014230000001	BOISE UNPAVED ROAD	BOISE	ID	Road Dirt	Northwest	16.00
07001269	BOULDER MAG OBS - ROAD	LONGMONT	CO	Road and Bridge	Rocky Mountain	16.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07001293	BRIDGE	JAMESTOWN	ND	Road and Bridge	Midwest	16.00
07000320	CERC - GRAVEL ROAD	COLUMBIA	MO	Road and Bridge	South Central	16.00
07001273	DEL RIO MAG OBS - ROAD	DEL RIO	TX	Road and Bridge	South Central	16.00
07000448	EROS - ROADS AND BRIDGES	SIOUX FALLS	SD	Road and Bridge	Midwest	16.00
G1000036530000002	FRESNO ROAD	COARSEGOLD	CA	Road Dirt	Southwest	16.00
07001233	GLSC - AA - FRONT ENTERANCE DRIVEWAY	ANN ARBOR	MI	Road and Bridge	Midwest	16.00
07000699	GLSC - HB - ENTRANCE ROAD	MILLERSBURG	MI	Road and Bridge	Midwest	16.00
07000823	GLSC - TLAS - ENTRANCE ROAD and PAVE	CORTLAND	NY	Road and Bridge	Northeast	16.00
07000831	GLSC - TLAS - SHOP TO LAB ACCESS	CORTLAND	NY	Road and Bridge	Northeast	16.00
07000141	GOVERNMENT HILL - SANDF RDS/BR	ANCHORAGE	AK	Road and Bridge	Alaska	16.00
G1000016530000004	GUAM ROAD	MAITE	GU	Road Dirt		16.00
07000946	LSC - ACCESS BRIDGE TO AEL	KEARNEYSVILLE	WV	Road and Bridge	Northeast	16.00
07000958	LSC - ACCESS BRIDGE TO FISHING AREA	KEARNEYSVILLE	WV	Road and Bridge	Northeast	16.00
07000924	LSC - GRAVEL ROADS	KEARNEYSVILLE	WV	Road and Bridge	Northeast	16.00
07000885	LSC - NARL - CULVERT@ENTRANCE RD	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000871	LSC - NARL - ROAD AROUND POND	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000874	LSC - NARL - ROAD AROUND RACEWAYS	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000872	LSC - NARL - ROAD TO PONDS	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000875	LSC - NARL - ROAD TO TANK	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000876	LSC - NARL - ROAD TO WET LAB	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000882	LSC - NARL - ROAD, ENTRANCE	WELLSBORO	PA	Road and Bridge	Northeast	16.00
07000889	LSC - NARL - ROAD, SETTLING POND	WELLSBORO	PA	Road and Bridge	Northeast	16.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000916	LSC - PAVED ROADS	KEARNEYSVILLE	WV	Road and Bridge	Northeast	16.00
07000905	LSC - SO CONTE - ACCESS ROAD	TURNERS FALLS	MA	Road and Bridge	Northeast	16.00
07000903	LSC - SO CONTE - ROADS AND DRIVEWAYS	TURNERS FALLS	MA	Road and Bridge	Northeast	16.00
07000906	LSC - SO CONTE - SERVICE ROAD	TURNERS FALLS	MA	Road and Bridge	Northeast	16.00
07000908	LSC - SO CONTE - SERVICE ROAD #2	TURNERS FALLS	MA	Road and Bridge	Northeast	16.00
07000434	NEWPORT GEOPHYS OBS-PAVED ROADANDPARKING LOT	NEWPORT	WA	Road and Bridge	Northwest	16.00
G1000013030000002	NEWPORT PAVED ROADWAYS	NEWPORT	WA	Road Paved	Northwest	16.00
07000070	NPWRC - ASPHALT SERVICE TRAIL	JAMESTOWN	ND	Road and Bridge	Midwest	16.00
07000342	NPWRC - SERVICE ROAD	JAMESTOWN	ND	Road and Bridge	Midwest	16.00
07000341	NPWRC - USGS-OWNED BRIDGE	JAMESTOWN	ND	Road and Bridge	Midwest	16.00
07000961	NWHC - ENTRANCE ROADS	MADISON	WI	Road and Bridge	Midwest	16.00
07000960	NWHC - SERVICE ROAD #1	MADISON	WI	Road and Bridge	Midwest	16.00
07000963	NWHC - SERVICE ROAD #2	MADISON	WI	Road and Bridge	Midwest	16.00
G1000012430000002	ROADWAYS	NORDLAND	WA	Road Gravel	Northwest	16.00
G1000036230000004	SHUMAGIN PATHWAYS	SAND POINT	AK	Road Dirt	Alaska	16.00
07000165	SITKA MAGNETIC OBS - S&F ROADS	SITKA	AK	Road and Bridge	Alaska	16.00
G1000015330000001	TUCSON UNPAVED ROADWAY	TUCSON	AZ	Road Dirt	Southwest	16.00
07000425	UMESC - PAVED ROADS - #48	LA CROSSE	WI	Road and Bridge	Midwest	16.00
G1000015030000002	UNPAVED ROADWAY	HONOLULU	HI	Road Gravel	Southwest	16.00
G1000013830000004	WFRC ROADWAYS	SEATTLE	WA	Road Gravel	Northwest	16.00
07000082	YFS - ASPHALT ROAD	YANKTON	SD	Road and Bridge	Midwest	16.00

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
07000729	CERC - RECREATION SHELTER	COLUMBIA	MO	Recreation	South Central	14.25
07001203	EROS - PICNIC SHELTER	SIOUX FALLS	SD	Recreation	Midwest	14.25
G1000014230000002	BOISE FENCE	BOISE	ID	Fencing	Northwest	12.50
G1000014220000012	BOISE GATE	BOISE	ID	Gate	Northwest	12.50
G1000014230000003	BOISE PARKING LOT	BOISE	ID	Parking Lot	Northwest	12.50
07000322	CERC - PARKING LOT	COLUMBIA	MO	Parking Structures	South Central	12.50
G1000067920000000	FED CTR SITE - TX0800FW	FORT WORTH	TX	Parking Lot	South Central	12.50
G1000015030000001	FENCING	HONOLULU	HI	Fencing	Southwest	12.50
G1000036630000004	FENCING	COOK	WA	Fencing	Northwest	12.50
G1000036530000001	FRESNO FENCE	COARSEGOLD	CA	Fencing	Southwest	12.50
G1000016530000002	GUAM FENCE	MAITE	GU	Fencing		12.50
G1000016520000007	GUAM GATE	MAITE	GU	Gate		12.50
G1000016530000003	GUAM PARKING	MAITE	GU	Parking Lot		12.50
G1000068920000000	HARBOR SQUARE PARKING	HONOLULU	HI	Parking Lot	Southwest	12.50
G1000013030000004	NEWPORT FENCE	NEWPORT	WA	Fencing	Northwest	12.50
G1000013020000016	NEWPORT GATE	NEWPORT	WA	Gate	Northwest	12.50
G1000013030000003	NEWPORT PAVED PARKING LOT	NEWPORT	WA	Parking Lot	Northwest	12.50
07000326	NPWRC - PARKING LOTS	JAMESTOWN	ND	Parking Structures	Midwest	12.50
G1000036630000002	PAVED PARKING LOTS	COOK	WA	Parking Lot	Northwest	12.50
G1000036230000000	SHUMAGIN FENCE	SAND POINT	AK	Fencing	Alaska	12.50
G1000012830000001	SITKA - FENCE	SITKA	AK	Fencing	Alaska	12.50
G1000012820000009	SITKA - GATE	SITKA	AK	Gate	Alaska	12.50

Real Property Unique ID	Building Name/Name of Land	City	State	Main Usage Type	Area	API
G1000012830000002	SITKA - PARKING AREA	SITKA	AK	Parking Lot	Alaska	12.50
G1000009930000001	STEILACOOM FENCING	TACOMA	WA	Fencing	Northwest	12.50
G1000009920000003	STEILACOOM GATE	TACOMA	WA	Gate	Northwest	12.50
G1000009930000002	STEILACOOM PARKING LOT	TACOMA	WA	Parking Lot	Northwest	12.50
G1000036630000003	UNPAVED PARKING	COOK	WA	Parking Lot	Northwest	12.50
G1000012430000001	UNPAVED PARKING LOT	NORDLAND	WA	Parking Lot	Northwest	12.50
G1000013820000009	WFRC AUTOMATIC GATE	SEATTLE	WA	Gate	Northwest	12.50
G1000013830000003	WFRC FENCING	SEATTLE	WA	Fencing	Northwest	12.50
G1000013830000001	WFRC PAVED PARKING LOTS	SEATTLE	WA	Parking Lot	Northwest	12.50
G1000012420000012	ENTRY SIGN	NORDLAND	WA	Sign	Northwest	7.50
G1000036620000009	SIGN	COOK	WA	Sign	Northwest	7.50

Figure 9.9. FY2012 API Scores

Appendix E. Future API Scoring Process

Figure 9.10 provides a future API scoring process flow chart with detailed actions outlining the prospective steps for a future approval process.

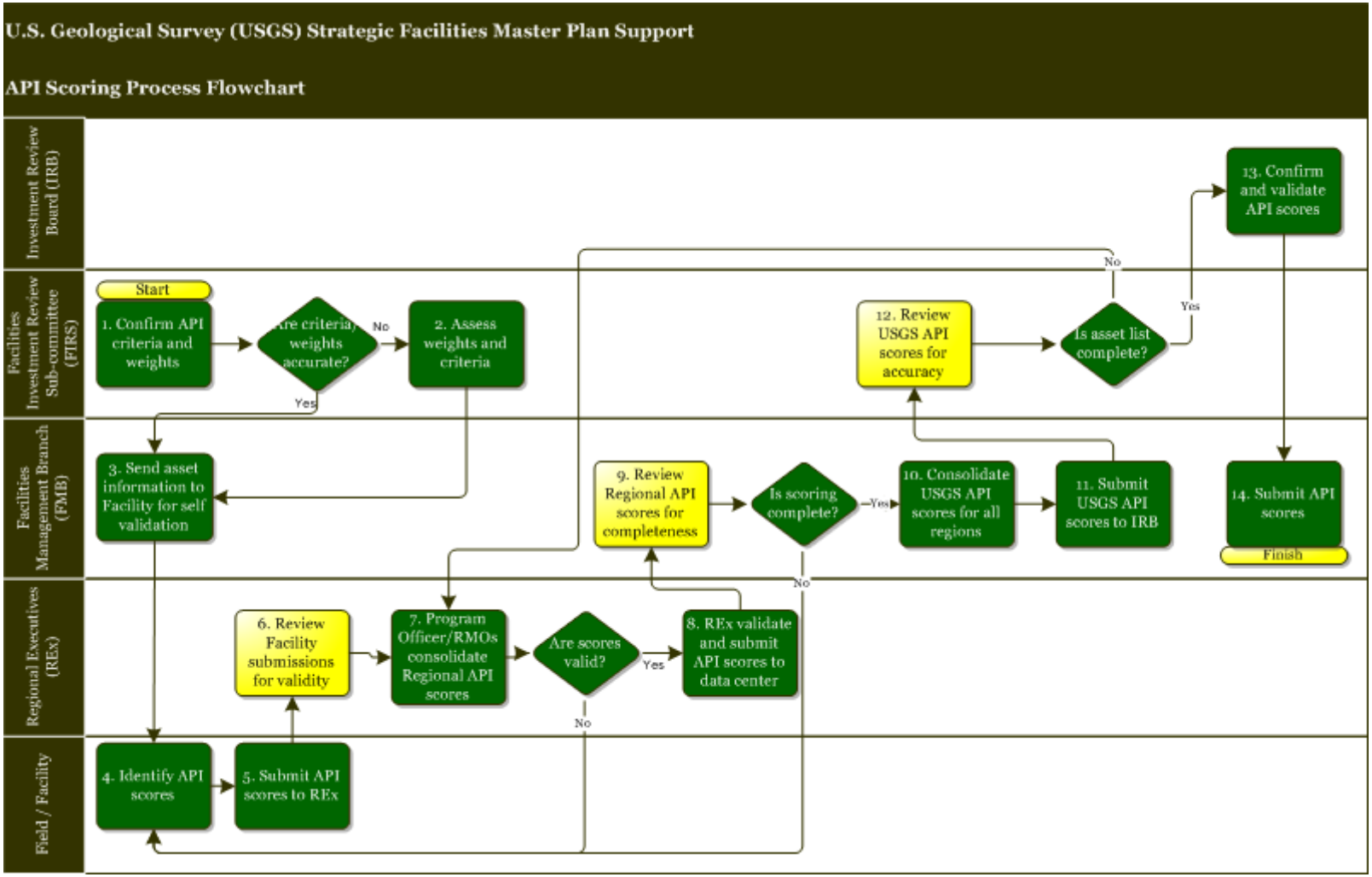

Figure 9.10. Future API Scoring Process

Figure 9.11 provides the actions and the responsible party for each prospective step in the approval process. Potential alternatives are provided for the use of an automated tool.

Process Step Descriptions:

	Steps	Actions	Responsible Party	Potential Alternative
1	Confirm API criteria and weights	The Regional IRB may serve as a representative for the Bureau IRB. The Regional IRB should confirm the API criteria and weights, if still appropriate to the mission.	FIRS	
2	Assess weights and criteria	If the Regional IRB does not agree that the weights and criteria are adequate representations of the Survey's mission, they should reassess the criteria. Once assessed and finalized, the real property portfolio should be compiled at the data center.	FIRS	An automated tool that may help facilitate the pair wise comparison may reduce the time it takes to assess the criteria and decreases the likelihood for bias.
3	Send asset information to Facility requesting self validation	The following steps should be performed to compile asset information used to apply API scores: a) The data center should request FRPP and non-FRPP data from Facility Managers. b) Send out asset information to Facility Managers across the nation.	FMB	An automated tool that may collect, consolidate, and distribute data at this step would make the process more efficient and reduce data error (e.g., missing fields, duplicate information).
4	Identify API scores	Using a team of Facility Managers and/or Science Center directors, assets are given an initial API scores. This group should have the appropriate knowledge of assets and the Survey's mission.	Field/Facility Level	A tool allowing Facility mangers to easily and quickly update API scores would reduce the time and effort needed to initially scores assets. In addition, a tool that allows access to asset-specific information (e.g., FCI, location, purpose) would help ensure that Facility managers have adequate information for appropriately scoring assets.
5	Submit API scores to REx	The Facilities team should submit the API scores of the Survey's to REx to validate the scores and make adjustments, as necessary.	Field/Facility Level	A tool that allows the user to see real-time information and changes would help with consolidation efforts.
6	Review Facility submissions for validity	Before validating scores, facility scores across the nation should be checked for validity and consistency.	REx	A tool that identifies outliers (e.g., assets scores disproportionately high or low) would assist with the consistency check.
7	Program Officer/RMOs consolidate Regional API scores	A group of staff representing the REx, with knowledge of assets should assist in verifying the scores. This group should be composed of a RMO, a Program Officer, and 2-3 employees knowledgeable about the region's assets.	REx	The verification of scores may be quicker with a tool that has the ability to access API scoring history detailing past decisions. REx would be able to check previous API scores to help ensure that assets are receiving similar scores each year.
8	REx validate and submit API scores to data center	REx may validate the API scores for their region and submit the scores to the data center. The REx involvement is essential to reducing bias and effectively prioritizing assets.	REx	

	Steps	Actions	Responsible Party	Potential Alternative
9	Review Regional API scores for completeness	The data center should check API scores from Regions to help ensure that the Survey's real property portfolio is complete.	FMB	
10	Consolidate USGS API scores for all regions	Using API scores from the REx, the data center should consolidate scores to be provided to the Regional IRB and Bureau IRB for final confirmation.	FMB	An automated tool that compiles asset scores and information across USGS regions would reduce the time needed to be put forth by the data center.
11	Submit USGS API scores to IRB	API scores and real property portfolio information are submitted to the Regional and Bureau IRB. The Regional IRB should check the real property portfolio for complete API scores. At this step the Regional IRB should look at the top 50-100 assets to help ensure that assets were given appropriate API scores.	FMB	
12	Review USGS API scores for accuracy	The Regional IRB has the opportunity to raise questions and/or send scores back to REx for reconsideration before finalizing the API scores. In addition, the Regional IRB should check the real property portfolio for overall accuracy.	FIRS	
13	Confirm and validate API scores	The Bureau IRB should confirm the finalized API scores.	FIRS	
14	Submit API scores	The Survey's real property portfolio is submitted, and the API scores should be used for budgetary decisions, including business case analyses.	FMB	A tool that has the ability to assess DMCI funding (e.g., using other factors to help optimize a real property portfolio) beyond the use of API scores would benefit the Survey.

Figure 9.11. Future API Scoring Process Step Descriptions

Appendix F. Benchmark Matrix

Figure 9.12 provides the template used to perform the benchmarking data analysis exercise in Section 4.2.3 - Compare Performance Metrics. The performance metrics listed in dark green are FRPP reported metrics. The remaining metrics, listed in light green, are non-FRPP reported metrics, designed for this exercise.

PERFORMANCE METRIC	FY2011 USGS	FY2010 USGS	FY2009 USGS	FY2010 Benchmark Candidate A	FY2011 Benchmark Candidate B	FY2009 GSA FRPC Summary Report
Real Property Use (2-digit number)						
Legal Interest Indicator (letter)						
Size (#)						
PRV ($)						
Annual Operating Cost [owned assets] ($)						
Annual O&M Paid By Renter [leased assets] ($)						
Annual Net Rent To Lessor [leased assets] ($)						
Condition Index (%)						
Cost of Repair Needs ($)						
Number of Federal Employees (#)						
Number of Contractor Employees (#)						

PERFORMANCE METRIC	FY2011 USGS	FY2010 USGS	FY2009 USGS	FY2010 Benchmark Candidate A	FY2011 Benchmark Candidate B	FY2009 GSA FRPC Summary Report
Number of Federal Teleworking Employees (#)						
Percent of Space Utilization (%)						
Status Indicator (A,I,E,D)						
Total Annual BTU Consumption (MBTU)						
Mission Dependency (#)						
Lease Costs per SF ($)						
Operating Efficiency (%)						
Cost of Repair Needs per SF ($)						
Utilization Rate (#)						
USF (#)						
Number of Non-Federal, Non-Contractor Employees (#)						

Figure 9.12. Benchmark Matrix

Appendix G. Benchmark Interviews

The following section provides interviews conducted with Benchmark Candidates B, C, and D.

Benchmark Candidate B Interview

Benchmark Candidate B (Federal agency)
Please describe your portfolio:
The portfolio consists of approximately 63,000 assets. The majority of assets (i.e., 45,000) are structures. The portfolio has approximately 500 office buildings. Many of the buildings in general are very small. A building is a structure with four walls and a roof.
What strategies have you taken to reduce O&M costs?
Currently Candidate B is focused on improving its portfolio-wide data quality and facility managers are responsible for creating efficiency. After the data quality improves they will work on portfolio-wide O&M reducing strategies. Currently Candidate B is in a reactive mode where they wait for a data issue to assess the data; they would like to work towards a preventative mode. Some of the data challenges deal with the system used. Currently utilities cost data is housed in the financial system which does not tie to the real estate system. The financial system has more data than the real estate system but it only looks at monetary figures. In addition, some facilities use their own systems so facility data is not aggregated at the Bureau level.
What strategies have taken to reduce Utilization rates (What are your Utilization Rate goals)?
Currently field stations are providing the headquarters office with a percent of space utilized figure on their assets for the FRPP submission. These field stations do not want to lose their space so they are reporting 100% figures, even though that is generally considered "over-utilized" per FRPC and not a good thing. Candidate B is working with the space management planning system, Archibus, to do a floor plan of their buildings to improve utilization rates. Candidate B calculates its utilization rate as GSF over personnel.
What strategies have you take to better data quality and increase data accessibility.
Currently there is very little interaction with the field offices to improve data quality. In addition, 11 different real property systems are used in the field. In addition, there is no data control and the people importing data need training. Candidate B plans to better train the people importing data, and work towards a more robust technological system. Currently the system used is a free text system that does not have data entry restrictions (e.g., zip codes do not need to be 5 or 9 digits).
What is your organization doing to evaluate the link between mission and facilities? How do you decide how well the asset is supporting the mission?
Originally the field stations chose a mission dependency score for their assets. However, approximately 99% of Candidate B's assets were scored as mission critical. OMB asked that no more than 90% of assets be listed as mission critical so Candidate B made some general changes at the Bureau level (e.g., sidewalks and fences are now 2 or 3).

Figure 9.13. Benchmark Candidate B Interview

Benchmark Candidate C Interview

Benchmark Candidate C (Federal agency)

Please describe your portfolio:

The portfolio consists of a lot of biology and chemistry labs with sophisticated mechanical, electrical, and plumbing (MEP) systems.

Candidate C owns most of its labs and limits the leasing of buildings to offices. Candidate C performed a data analysis and concluded that it is more cost effective to own their own laboratories than to lease them.

Candidate C builds where they can easily renovate. They prefer to demolish a building than make massive changes.

What strategies have you taken to reduce O&M costs?

Before assessing operational inefficiencies, Candidate C identified the condition of each building. Candidate C conducts a facility condition assessment of their buildings every 5 years. The assessment identifies deficiencies. Items are categorized as recapitalization, repair needs, or operation costs. Recapitalization costs are for buildings that cannot be modernized. In addition the assessment examines preventive or predictive maintenance areas. In between assessments buildings are monitoring by a team of engineers and architects.

Candidate C uses a 75% renovation cost to facility replacement value threshold for determining whether or not to replace a building.

In addition, they have an aggressive energy reduction program.

- Most new buildings are LEED certified
- Candidate C examines cost savings in labs through:
    - Air Changes/hour
    - Monitoring equipment usage, water, and electricity
    - User Interface: IT sets equipment to power down at night
    - Recycling rain water and recapturing its condensation
- Peak-shaving strategies:
    - Natural gas generators for producing energy on-site during peak hours.
- Purchase Green Energy Credits
- Buy direct from Georgia Energy

What strategies have taken to reduce Utilization rates (What are your Utilization Rate goals)?

Candidate C changed their target utilization rate in their office space from 215 to 170. They have different target utilization rates for their different asset types, such as labs.

In addition, Candidate C implemented a telework and hoteling policy. To make the policy successful, Candidate C examines the daily utilization rate of office space, as opposed to simply looking at the number of people assigned to a space, since many people work out in the field stations for part of the week.

The Chief Information Security Officer, Procurements, Finance, and IT all needed to work together to reduce space utilization. In the case of teleworking, IT needed to create a secure network, accessible from other locations. The initial changes were costly but generally had a 2-3 year payback.

What strategies have you take to better data quality and increase data accessibility.

Candidate C uses a hoteling system, Citrix, and a building management system, TRIRIGA, which links to their computer aided design (CAD) system.

Some of the newer buildings use building information modeling (BIM) systems, and billing management systems (BMS).

What is your organization doing to evaluate the link between mission and facilities? How do you decide how well the asset is supporting the mission?
Mission dependency is a very subjective measure so each agency deals with it differently. Candidate C assesses the security level of assets when scoring mission dependency. In addition, they evaluate if the asset is a national strategic asset.

Figure 9.14. Benchmark Candidate C Interview

Benchmark Candidate D Interview

Benchmark Candidate D (Private Organization)
Please describe your portfolio:
Candidate D does not own its office space, they only lease office space. Furniture, furnishings, and equipment are generally leased on a 10-year basis. The portfolio consists of 5.2 million SF of space made up of offices and some data centers. Candidate D outsources many of their real estate services (e.g., brokering, greening, property management) to CBRE.
What strategies have you taken to reduce O&M costs?
Automating data collection allowed Candidate D to reduce operating expenses and reduce energy consumption.
What strategies have taken to reduce Utilization rates (What are your Utilization Rate goals)?
Candidate implemented a detailed hoteling system where: • Personnel who spend 80% or more of their time in the office have a dedicated work space • Personnel who spend less than 80% of their time in the office are considered a mobile worker • Anyone who checks in less than 40% of the time is considered a short time hoteller Their hoteling system is considered to be one of the most innovative systems. The system examines three metrics: • Who badges into the building? • Who is online at Candidate D? • Who hotels into a workspace? Candidate D also examines HR data as an important factor into space planning. They use PeopleSoft and examine which group and staff class is using the space. Candidate D puts their most changing practice on the top or bottom floors of its leased space so they can easily request another floor or return another floor back to the lessor. Using their hoteling system with PeopleSoft, Candidate D can do a profile for any person, office, or group within the organization (the organization would rarely need to zoom into a person, but the data is available). Candidate D maintains a utilization rate of approximately 135 SF/person, with a target utilization rate of 120 SF/person. In addition, Candidate D also measures percent of space utilization as the number of people in the office on a given day over the number of available work spaces/offices (i.e. people/work spaces). Their target utilization is 80%. • 70-80% is good to make room for growth • If an office is at 50-60%, the office model will change to allow full hoteling, where everyone must hotel To more efficiently utilize space, Candidate D has included touch-down spaces in their offices, which are included in the percent of space utilization calculation, but conference rooms are not. In addition, Candidate D focuses on the SF/seat, and then calculates what percentage of seats are utilized, instead of

SF/person because that's a more relative number given the business model.

In addition, they made space that is easy to alter. For example, partner offices are also used as team rooms.

Cubes at Candidate D are generally 6x8 feet, sometimes 6x6 feet.

What strategies have you take to better data quality and increase data accessibility.

Candidate D never conducts data calls. Everything at Candidate D is automated and becoming more and more digital. In about a year personnel will be able to hotel through their phones

All contracts, payments, etc. are automated. However, Candidate D still needs analysts to scrub data for potential errors. The entire Candidate D U.S. practice has six data analysts. At Candidate D, the Employee ID, email address, and every other name field ties to the employee badge, so it's all tied together, help with automation.

One of the benefits of data automation is that time can be used for:

- Capital classifications
- Transactions
- Finding other opportunities to automate (e.g. contracts and payables)
- Verifying that their paying market prices
- Reducing operating expenses
- Reducing energy consumption
- Facility audits.

What is your organization doing to evaluate the link between mission and facilities? How do you decide how well the asset is supporting the mission?

N/A

Figure 9.15. Benchmark Candidate D Interview

Appendix H. Performance Metric Definitions

The following section outlines definitions for FRPP metrics and non-FRPP metrics. The definitions for FRPP metrics are as used by GSA FRPC in the FRPP User Guidance. The definitions for non-FRPP metrics were researched and designed for this benchmarking exercise.

FRPP Metric Definitions

Mission Dependency (#): FRPC defines *Mission Dependency* as the value an asset brings to the performance of the mission as decided by the governing agency (valid codes are in parentheses)

- Mission Critical (1)
- Mission Dependent, Not Critical (2)
- Not Mission Dependent (3)
- Not Rated (9)

Condition Index (%): FRPC defines *Condition Index* as a general measure of the constructed asset's condition at a specific point in time. *Condition Index* is calculated as the ratio of Repair Needs to PRV.

Cost of Repair Needs ($): FRPC defines *Cost of 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. Agencies will initially estimate repair needs based on existing processes, with a future goal to further refine and standardize the definition.

Size (#): FRPC defines *Size* as size of the real property asset according to appropriate units of measure. The unit of measure used for the three real property types is as follows:

- For land, the unit of measure is acreage and is designated as either Rural Acres or Urban Acres.
- For buildings, the unit of measure is area in SF and is designated as GSF.
- For structures, refer to the Structural Unit and the Unit of Measure for reporting the size of specific types of structures.

Percent of Space Utilization (%): FRPC defines *Percent of Space Utilization* as the percentage of the space utilized in a building asset. Each building asset will provide a percentage from 0% to 100%.

- Offices, Hospitals - percentage should be based on ratio of occupancy to current design capacity.
- Family Housing, Dormitories and Barracks - percentage should be based on the individual units that are occupied.
- Warehouses - ratios of GSF occupied to current design capacity.
- Laboratories - ratio of lab modules/stations to current design capacity.

Plant Replacement Value ($): FRPC defines *Plant Replacement Value* (or Functional Replacement Value) as the cost of replacing an existing asset at today's standards.

Annual Rent to Lessor [Leased Assets] ($): FRPC defines *Annual Net Rent* to Lessor as the fully serviced rental to the lessor minus the annual operating and maintenance costs.

Annual O&M Paid by Renter [Leased Assets] ($): FRPC defines *Annual O&M Costs* as the reoccurring maintenance and repair costs including: Utilities (includes plant operation and purchase of energy); Cleaning and/or janitorial costs (includes pest control, refuse collection, and disposal to include recycling operations). Roads/grounds expenses (includes grounds maintenance, landscaping, and snow and ice removal from roads, piers, and airfields).

Annual Operating Cost [Owned Assets] ($): FRPC defines *Annual Operating Cost* as costs that consist of the following:

- Recurring maintenance and repair costs.
- Utilities (includes plant operation and purchase of energy).
- Cleaning and/or janitorial costs (includes pest control, refuse collection, and disposal to include recycling operations).
- Roads/grounds expenses (includes ground maintenance, landscaping, and snow and ice removal from roads, piers, and airfields).
- Agencies are to provide actual costs annually.

Number of Federal Employees (#): The total number of Federal personnel (including full-time teleworkers) assigned to the building in FTEs. Agencies should consult OMB Circular A-11 for guidance on defining FTE. Agencies are to coordinate all totals with the personnel office at their agency.

Number of Contractor Employees (#): For purposes of submitting data on real property assets, a contractor employee is an employee working under a contract as defined by Part 2.101 of FAR. Agencies are to coordinate all totals with the personnel office at their agency. Agencies should not report not report those people who are unpaid interns or performing volunteer work.

*Number of Federal Teleworking Employees (#):*Agencies are to provide the total number of personnel who telework at least one day per week on a regular and recurring basis, pursuant to a signed telework agreement, in FTE's. Agencies should consult OMB Circular A-11 for guidance on defining FTE.

Status Indicator (A,I,E,D): FRPC states that *Status Indicator* reflects the predominant physical/operational status of the asset. Buildings, structures, and land assets will have one of the following attributes (valid codes are in parentheses):

- Active (A): Currently assigned a mission by the reporting agency.
- Inactive (I): Not currently being used but may have a future need. Includes real property in a caretaker status (closed pending disposal; for example, facilities that are pending a BRAC action) and closed installations with no assigned current Federal mission or function.
- Excess (E): Formally identified as having no further program use of the property

by the landholding agency.

- Disposed (D): Required for assets that have exited the Federal portfolio of assets during the current reporting period.

Real Property Use (2-digit Number code): FRPC states that *Real Property Use* indicates the asset's predominant use in one of the following categories:

- Land Predominant Use (24 categories)
- Building Predominant Use (16 categories)
- Structure Predominant Use (22 categories)

Total Annual BTU Consumption (MBTU): FRPC defines *Total Annual BTU Consumption* as the total energy consumption of the asset in units of million British thermal units (MBTU's) in terms of energy delivered to the asset (site-delivered BTU). This measure should not include generation and transmission losses for electricity and steam/chilled water.

Legal Interest Indicator (Letter code): Legal Interest Indicator is used to identify a real property asset as being owned by the Federal government or otherwise managed by the Federal government (valid codes are in parentheses):

- Owned (G): The Federal government has fee simple interest for the real property asset.
- Leased (L): The rights to use the real property asset have been assigned to the Federal government by a private entity or a non-Federal government entity for a defined period of time in return for rental payments.

Otherwise Managed:

- State Government-Owned (S): A U.S. state government holds title to the real property asset but rights for use have been granted to a Federal government entity in a method other than a leasehold arrangement.
- Foreign Government-Owned (F): A foreign government holds title to the real property asset but rights for use have been granted to a Federal government entity in a method other than a leasehold arrangement.
- Museum Trust (M): A trust entity holds title to the real property asset predominantly used as a museum, but Federal funds may be received to cover certain operational and maintenance costs.

Non-FRPP Metric Definitions

Lease Costs per SF ($): *Lease Costs per SF* is calculated as (Annual Net Rent to Lessor + Annual O&M Paid by Renter)/Size

Utilization Rate (#): *Utilization Rate* is defined as GSF/(Number of Federal Employees + Number of Contractor Employees).

Operating Efficiency (%): *Operating Efficiency* is defined as (1 - (Annual Operating Costs/PRV))*100

Cost of Repair Needs per SF ($): *Cost of Repair Needs per SF* is defined as Cost of

Repair Needs/Size.

Deferred Maintenance ($): *Deferred Maintenance* is defined as the total dollar amount of maintenance that was put off or delayed for a future period.

Capital Improvement ($): *Capital Improvement* is defined as the budgeted fiscal year 2011 costs of construction, installation, or assembly of a new asset, or the alteration, expansion, or extension of an existing asset to accommodate a change of function or unmet programmatic needs, or to incorporate new technology.

Appendix I. Solid State Physics Laboratory Business Case Analysis

- **Project Title:** Solid State Physics Laboratory Space Consolidation Project
- **Date:** March 30, 2012
- **Prepared by:** FMB
- **Region:** Eastern
- **Discipline:** Integrated
- **Type of Project:** Consolidate Space

Executive Summary

The Solid State Physics Laboratory in Reston, Virginia is located adjacent to the J.W. Powell Building (collectively referred to as the National Center). The Solid State Physics Laboratory was constructed in the early 1970s and currently has a number of deficiencies, making it, in many cases, inadequate to perform the science mission. The laboratory presents a number of issues related to cost inefficiency, safety, and underutilized space. The BCA assesses Status Quo and alternatives to allow the Survey to ultimately improve facility conditions, costs, and utilization of the space. The Status Quo is to remain in the current situation, and the remaining three proposed alternatives include: Alternative 1 – renovate and consolidate cost centers into the Solid State Physics Laboratory; Alternative 2 – make the Solid State Physics Laboratory inactive to reduce costs; Alternative 3 – demolish the Solid State Physics Laboratory and using the previous foundation, construct a warehouse or storage facility.

The Survey's preferred alternative is Alternative 1. Under this alternative, Eastern Geological & Paleoclimate Science Center (EGPSC) plans to release 3,100 RSF of space in the J.W. Powell Building and consolidate into space in the Solid State Physics Laboratory. In addition, the facility will undergo correction to Category 1 (i.e., facility corrections needing to take place within five years) and Category 2 (i.e., facility corrections needing to take place after five years) deficiencies from the FY2005 condition assessment to improve the quality of the facility. The proposed alternative may allow staff and equipment from EGPSC to perform their mission in the Solid State Physics Laboratory. The alternative would realize significant improvements in facility and laboratory safety and compliance, improve management, and allow for consolidation projects at the J.W. Powell Building to occur. As stated in the Survey's *Five-Year Space Management Plan*, "to successfully carry out its science mission, the Survey will need to continue investing in facility modernization, repair, and maintenance." Doing so can help ensure a healthy, safe, secure, and productive environment for employees, while providing the best facility for mission performance.

The preferred alternative would initially include some renovation costs (e.g., repairing the necessary deficiencies), but would be offset due to anticipated efficiencies gained in the release of space in the National Center. A ten-year projection shows substantial cost avoidance in facilities under Alternative 1, versus remaining in the current situation, making the facility inactive, or demolishing and constructing a new warehouse under Alternative 3. When factoring in cost considerations, the renovation and consolidation

under Alternative 1 may provide a more efficient and safer facility, improve science capabilities, and allow the Survey, particularly the EGPSC, to better attain its mission goals and objectives. **Figure 9.16** displays a summary comparison of the quantitative results of the alternatives analysis.

Alternative	Name	Description
Status Quo	Baseline	The Survey's Solid State Physics Lab is located at the National Center in Reston, VA. According to the FY2011 FRPP submission, the building is valued at $2,505,271, and is approximately 13,441 RSF, or 12,201 USF. This alternative does not allow the Survey to address any safety issues. The Survey will continue to pay operating and maintenance fees on a facility that will continue to remain underutilized, in terms of overall building usage.
Alternative 1	Renovate and consolidate cost centers from the J.W. Powell Building into Solid State Physics Laboratory	This alternative relocates a subset of employees and laboratory functions from the J.W. Powell Building into the Solid State Physics Laboratory. This could be accomplished by moving the appropriate number of employees out of the J.W. Powell Building, where lease and operating costs per RSF of laboratory space is over $34, to the Solid State Physics Lab, which has operating costs of approximately $15.03 per RSF. The Solid State Physics Laboratory currently has $537,121 cost of repair needs. In order to produce a higher quality working environment, this alternative assumes the Survey corrects the Category 1 and Category 2 deficiencies. This alternative will allow the Survey to address some of the safety concerns, while utilizing the facility to its fullest capacity. Additionally, this alternative will release space in the J.W. Powell Building which may lead to future space consolidation projects. Although Alternative 1 requires an upfront investment to correct the Category 1 and Category 2 deficiencies, the facility will help support the science programs performed.
Alternative 2	Deactivate Solid State Physics Laboratory	Alternative 2 is to deactivate (e.g., mothball) the Solid State Physics Laboratory. An inactive asset is a facility not currently being used but may have a future need. These assets include property in a caretaker status (i.e., closed pending disposal) and closed installations with no assigned current Federal mission or function.[41] Machinery and laboratories are kept in working order so that production may be restored quickly if needed. The operating costs involved when a facility is mothballed are negligible. The analysis incorporates the upfront investment required to put an asset safely in "mothballed" status. This facility requires a smaller upfront investment than the other alternatives, but it does not effectively address the safety concerns or fully utilize the facility to meet science mission needs. The Survey will incur little costs for utilities during the inactive status period.
Alternative 3	Demolish and construct a warehouse	Alternative 3 is to consider the feasibility of demolishing the Solid State Physics Laboratory and construct a similar sized facility. The analysis also incorporates financial implications and non-financial risks associated with demolition of the building. Under this alternative, the Survey will realize full benefit of a high quality warehouse, or storage facility. Under Status Quo, the facility houses many core samples and drilling equipment. The new warehouse will house the drilling equipment, and the core samples should be moved to storage in a warehouse in Herndon, VA. Due to remediation costs, demolition of the facility may require a large upfront investment, as well as the associated construction costs.

Figure 9.26 Solid State Physics Laboratory BCA Alternatives

[41] 2011 Guidance for Real Property Inventory Reporting, Version 3. Federal Real Property Council. Issues October 4, 2011.

Issue Identification

The Solid State Physics Laboratory is located on the east end of the USGS National Center. It is a two-story, owned asset with over 13,300 RSF and a current replacement value of $2,505,273.[42] The building operates at $15.30 per USF. In 2005, the Solid State Physics lab had over $700,000 in repair needs, which is the equivalent of $52.19 per RSF.[43] Currently, the Solid State Physics Laboratory does not house full time employees and limited working laboratory equipment. The space is in need of repair and is largely underutilized. The Survey's goal is to identify what the best use of space of the building to meet the mission.

Facilities

The Survey constructed the Solid State Physics Laboratory in 1973 to house research laboratories; store samples and vehicles; and provides space for drill rig repairs and maintenance. The front, two-story portion, of the building is primarily used for labs and sample storage. The rear, one-story portion, of the building is used for ship, vehicle storage, staging, and large sample storage. The building could potentially accommodate up to six laboratories, and the other rooms are used primarily for storage, with some administration use.

In 2005, the building had a total cost of approximately $705,158 in Category 1, 2, and 3 deficiencies. The following information provides detail on category deficiencies:[44]

- Category 1 Deficiencies - require correction within five years.
- Category 2 Deficiencies - require correction after five years.
- Category 3 Deficiencies - work that would improve the facility, but is not required to perform the mission.

Office space is limited in the building; however, some of the rooms have the potential to be converted into space for administrative use. Some of the laboratory, warehouse, and other spaces cannot be used effectively and safely due to location and design. According to the FY2005 Conditions Assessment and Building Engineering Report, the building did not meet current fire and safety standards. Since the last condition assessment, the Survey performed some safety repairs (e.g., installed a new fire system) to meet fire and safety code.

The two air handling units (AHUs) were installed as part of the original construction in 1973 and are nearing the end of their service life. The associated duct work for these units is also part of the original construction and should be replaced when the AHUs are replaced. According to the National Center Operations Branch, the HVAC system will need to be replaced within five years.

The building is not energy-efficient, as the Survey has never retrofitted the facility. Exterior wells are non-insulated with brick on the outside and glazed tile on the inside. The initial use of the building originally included working with radio-active materials. Although the building no longer houses radio-active materials, there are limited

[42] 2011 Federal Real Property Profile submission.
[43] USGS Solid State Physics Lab Condition Assessment and Building Engineering Report, 2005.
[44] USGS Solid State Physics Laboratory Condition Assessment and Building Engineering Report, 2005.

amounts stored in a nearby shed within a fenced area. Some of the inefficiencies and safety/compliance concerns do not provide adequate facilities for the carrying out the mission. These issues affect the Survey's ability to conduct lab-based research in this facility.

Management

The Survey owns the Solid State Physics Laboratory, and therefore has control over the costs. The age of the building systems (e.g., wiring and plumbing) affects the Survey's ability to meet some of the science and safety compliance needs. The API score of this asset helps identify when the building should be allocated the limited DMCI funding. The Solid State Physics Laboratory received an API score of 39 in FY2012, which ranks the facility in the bottom third of the real property portfolio.

Communications/Collaboration

The Solid State Physics Laboratory is the only owned building on the National Center. The building is not accessible from the J.W. Powell Building, and the scientists in the Solid State Laboratory have few opportunities to collaborate with scientists in the J.W. Powell building on an informal basis. Current cost centers occupying space there are segments of the Mineral Resources Science Center, the Earth Surface Processes Science Center (e.g., ESPSC), and AEI.[45] Although these cost centers occupy space in the Solid State Physics Laboratory, there is little to no science being performed in the facility.

Costs

Based on the FY2011 FRPP data, the building's current replacement value is approximately $2,505,273 and has an annual O&M cost of $183,365.[46] With few scientists currently occupying the building, the operating cost per RSF is $15.03. The J.W. Powell Building has lease and operating costs of over $34 per RSF.

In 2005, the cost of repair needs, $705,158, is more than 25% of the building value. **Figure 9.17** displays the type of deficiencies and the estimated costs. These values were taken in 2005 with the condition assessment.

Type of Deficiencies	Estimated Cost
Category 1 **(deficiencies requiring correction within five years)**	$636,736
Category 2 **(deficiencies requiring correction after five years)**	$66,059
Category 3 **(work that would improve the facility, but is not required to perform the mission)**	$2,362
Total	**$705,158**

Figure 9.17. 2005 Category Deficiencies and Estimated Costs

[45] The space is vacant; however, the National Center Office of Administration and Enterprise Information and Human Capital cost center covers the cost.
[46] USGS FY2012 Headquarters Space, Rent, DHS Security, and Operations & Maintenance Distribution. July 2011.

Since 2005, the Survey has funded several of the Category 1 deficiencies. According to the National Center Operations Branch, **Figure 9.18** displays which Category 1 deficiency projects received funding.

Deficiency Project	Description	Cost
Trim Bushes	Trim bushes to allow better security and accommodate building maintenance.	$ 337
Monitor Slab Movement	Slab settlement has occurred along north side of building. Cracking should be monitored to determine if it is continuing to worsen or if the movement is seasonal.	$ 0
Remove and Replace ACT	Remove and replace asbestos containing floor tile in rooms 101, 102, 104, and 109.	$21,573
Clean Roof Drains	Drains are clogged.	$422
Piping Support	Provide proper support and insulation for exposed piping	$1,519
Demo Abandoned Piping	Remove exposed piping that has been abandoned in place. Cap piping above accessible ceiling.	$675
Construct Rated Corridor	First and second floor corridors are required to have a 1 hour rating which Required them to extend to the underside of the deck above. Need to fire tape both sides.	$88,259
Install 20 Minute Doors	Because of vehicle storage in Rooms 119 and 11, doors between these rooms and Room 109 need to be 20 minute rated assemblies.	$4,767
Install Safety Cage	Install safety cages on roof ladder.	$751
Fire Alarm System	The previous fire alarm system was over 30 years old and used equipment that was obsolete. It did not meet safety code requirements.	$42,185
One Hour Separation	A one-hour separation is required between the elevator and the exit corridor. Install 20 minute door assembly with a magnetic hold open.	$7,333
J-Box Covers and Device Faceplants	National Electric Code (NEC) required work clearances in front panels and control equipment is not maintained in multiple locations. Relocate panels and/or equipment and storage items to provide for required clearances.	$215
Total		**$168,036**

Figure 9.18 Category 1 Deficiencies Projects funded/completed since 2005

Figure 9.19 displays the remaining deficiencies and costs for the Solid State Physics Laboratory. In the 2005 condition assessment, engineers suggested that the Survey monitor, not correct, the slab settlement on the north side of the building and the cracking of the foundation. Since the FY2005 condition assessment, the slab settlement worsened to the point of repair. The Survey recently used approximately $177,574 in DMCI funding to fix the slab settlement. [47]

Type of Deficiencies	Estimated Cost
Category 1 **(deficiencies requiring correction within five years)**	$468,700
Category 2 **(deficiencies requiring correction after five years)**	$66,059
Category 3 **(work that would improve the facility, but is not required to perform the mission)**	$2,362
Total	**$537,121**

Figure 9.19 Remaining Category Deficiencies and Estimated Costs

In summary, the Solid State Physics Laboratory does not meet safety requirements or research needs. The building, however, is an owned asset that does not have uncontrolled and escalating rent costs like many other GSA provided assets.

Purpose of Initiative

The purpose of the initiative is to identify the best use of the Solid State Physics Laboratory. The building is the only owned asset at the National Center, and is underutilized, in terms of actual building usage. This initiative is to also improve the conditions of the facilities in which science mission programs are being performed (e.g., whether by renovation, construction of a new facility) and to identify additional cost avoidance opportunities.

Description of Alternatives

Status Quo: *The Solid State Physics Laboratory continues to have limited use, but the Survey continues to pay operating and maintenance costs.*

The building was constructed for laboratory intentions, but the asset is currently empty and primarily used for storage. According to FY2011 FRPP metrics, the building is valued at $2,505,271, and is approximately of 13,441 RSF. As previously stated, the building has $543,721 in repair needs. In its current use, the Solid State Physics Laboratory is a storage area for core samples. The building is typically vacant, and not used as office or administration space. The Status Quo does not involve any renovations or changes to the building; the Survey would continue to operate the building in its current state.

[47] Funding amount was given to the Survey by the National Center Operations Branch.

Alternative 1: *Renovate the Solid State Physics Laboratory and consolidate space with science programs and administrative use.*

Alternative 1 involves renovating (e.g., correcting the necessary deficiencies) the Solid State Physics Laboratory and opening the space to employees and science programs currently housed in the J.W. Powell Building. Under this alternative, the Survey would realize the full benefit of collocation of staff. The Physics building, however, has $543,721 cost of repair needs. In order to produce a more high quality working environment, the Survey should correct the Category 1 and Category 2 deficiencies, which are estimated to cost $534,759 over a ten year period. Some of these deficiencies include removing asbestos on the second floor, removing and repairing HVAC units, and repairing electrical issues that are safety hazards. In addition, the initial use of the building included working with radio-active materials; remediation costs should be included with renovation efforts.

Alternative 1 would be accomplished by moving the appropriate number of employees out of the J.W. Powell Building, where lease, operating costs, and overtime utility costs are $34.96 per RSF.[48] The Solid State Physics Laboratory has operating costs of $15.03 per USF. With 12,201 USF, the Physics building could accommodate up to six laboratories.

In this alternative, EGPSC could vacate some of its existing space in the J.W. Powell Building to move to the Solid State Physics Laboratory. The EGPSC currently does analysis on rock samples in the J.W. Powell Building. Their laboratory work requires rock sawing, which is completed in "dirty laboratories." In addition to the rock samples being both heavy and dirty, scientists have the burden of bringing rock samples through security every time they enter the J.W. Powell facility. Transferring this function to the Solid State Physics Laboratory could reduce the burden of transporting the rock samples across campus and through security. The scientists may be able to use the forklift and other equipment at the Solid State Physics Laboratory to transfer rock samples. This transfer also requires few equipment moves from the J.W. Powell Building; the EGPSC would have to move a rock saw and a small amount of materials.

EGPSC could move out of the following rooms in the J.W. Powell Building to help with consolidation efforts in that facility:

- 4B303
- 4C318
- 3B232
- 4B403
- 4B401
- 3B329

These rooms equal approximately 3,100 USF. The functions, equipment, and people in these rooms could consolidate into rooms 104, 105, 209, and 210 in the Solid State Physics Laboratory. In addition, room 202 in the Laboratory could be used as an administrative space for visiting scientists and student offices.

[48] 2012 Operating and Maintenance Cost Allocation.

In this alternative, Survey staff could realize the full benefits of consolidation as the renovated building could be designed to optimize efficiencies and staff interactions. The space should be joint use with administrative and laboratory functions and should meet industry standards. Renovation of the Solid State Physics Laboratory would improve the condition of the facility in which the Survey performs its mission. Refer to **Figures 9.22** and **Figures 9.23** for cost assumptions and cost model for these moves.

Alternative 2: *Deactivate Solid State Physics Laboratory.*

Alternative 2 is to make the Solid State Physics Laboratory inactive. An inactive asset, or "mothballed" asset, is an asset not currently being used but may have a future need. These assets include property in a caretaker status (i.e., closed pending disposal) and closed installations with no assigned current Federal mission or function. Machinery and laboratories are kept in working order so that production may be restored quickly if needed. The operating costs involved when a facility is mothballed are negligible. However, mothballing would not allow the science mission to be performed at any capacity. The current science performed in the Solid State Physics Laboratory (e.g., one laboratory belonging to the Minerals Resource Science Center) would have to be relocated to the J.W. Powell Building. In addition, the core samples would need to be moved to the warehouse in Herndon, VA.

Long-term mothballing must be done properly, which requires the stabilization of the exterior, properly designed security protection, and continued maintenance and surveillance monitoring. The following steps are involved when properly mothballing a building:[49]

- **Documentation**
  - Document the architectural and historical significance of the building
  - Prepare a condition assessment of the building
- **Stabilization**
  - Structurally stabilize the building, based on a professional condition assessment
  - Exterminate or control pests, including termites and rodents
  - Protect the exterior from moisture penetration
- **Mothballing**
  - Secure the building and its component feature to reduce vandalism or break-ins
  - Provide adequate ventilation to the interior
  - Secure or modify utilities and mechanical systems
  - Develop and implement a maintenance and monitoring plan for protection

To prevent further deterioration, mothballing also includes remediation projects (e.g., removing asbestos and any hazardous materials). It is difficult to determine an exact cost for remediation and clean-up before making the Solid State Physics Laboratory

[49] National Park Service, Mothballing Facilities, http://www.nps.gov/hps/tps/briefs/brief31.htm#MOTHBALLING

inactive, but most estimates predict a significant investment. Mothballing, however, requires less of an upfront investment than renovating or demolishing the facility.

Alternative 3: *Demolish the facility and construct a warehouse to store drilling equipment.*

Alternative 3 is to consider the feasibility of demolishing the Solid State Physics Laboratory and constructing a warehouse in its place. The warehouse should be constructed on the current foundation of the Solid State Physics Laboratory. The core samples, which currently occupy a majority of space in the facility, should be transferred and consolidated with the core samples located in a warehouse in Herndon, VA. The purpose of the warehouse is to store the drilling equipment. The analysis will also incorporate financial implications and non-financial risks associated with demolition of the building. The average cost of demolition would be $11.23 per RSF.[50] Additional costs may incur during the demolition process, and it is important to consider the following factors when preparing for a demolition:

- Cost to relocate existing science and storage
- Asbestos removal costs
- Length of demolition and worker's wagers
- Equipment rental, if necessary
- Landfill and hauling feeds
- Remediation costs (e.g., radiation and lead)
- Salvageability of the facility (e.g., certain building materials like copper and windows)

Remediation and clean-up costs in preparation for the demolition will be significant. As the Survey has not performed an assessment on environmental clean-up, costs cannot be estimated at this time. Due to the potential significant costs for clean-up and budget restrictions, Alternative 3 is not a feasible solution at this time.

In this alternative, the Survey would construct a new warehouse in place of the Solid State Physics Laboratory. The new warehouse would be approximately 9,000 RSF, the current size of the first floor Solid State Physics Laboratory. Costs associated with this alternative will include: moving and storing the core samples to a warehouse in Herndon, Virginia; construction of a new warehouse; setting up utilities, plumbing, and other engineering aspects, and the recurring O&M costs. Refer to **Figures 9.22** and **Figures 9.23** for cost assumptions and cost model for these moves.

Scope

The preferred alternative is Alternative 1. This alternative has high initial upfront costs for repairing Category 1 and 2 deficiencies, but the Survey should see cost avoidances in the long run due to released space in the J.W. Powell Building.

[50] U.S. Department of Veterans Affairs, VISN 5 – Eighth 3 Project Types. October 2011.

Schedule

It is proposed that USGS strongly consider implementing one of these alternatives prior to the end of FY2013.

Costs

Figure 9.20 displays the utility costs for the Solid State Physics Lab from 2007 to 2011.

Year	Electric	Water	Total
2011	$34, 563.95	$196.04	**$34,759.99**
2010	$ 36,077.19	$ 168.08	**$36,245.27**
2009	$39,338.11	$130.11	**$39,468.22**
2008	$33,658.20	$145.52	**$33,803.72**
2007	$31,152.22	$141.59	**$31,293.81**

Figure 9.20 Remaining Category Deficiencies and Estimated Costs

Figure 9.21 displays an exponential distribution used to predict the future utility costs.

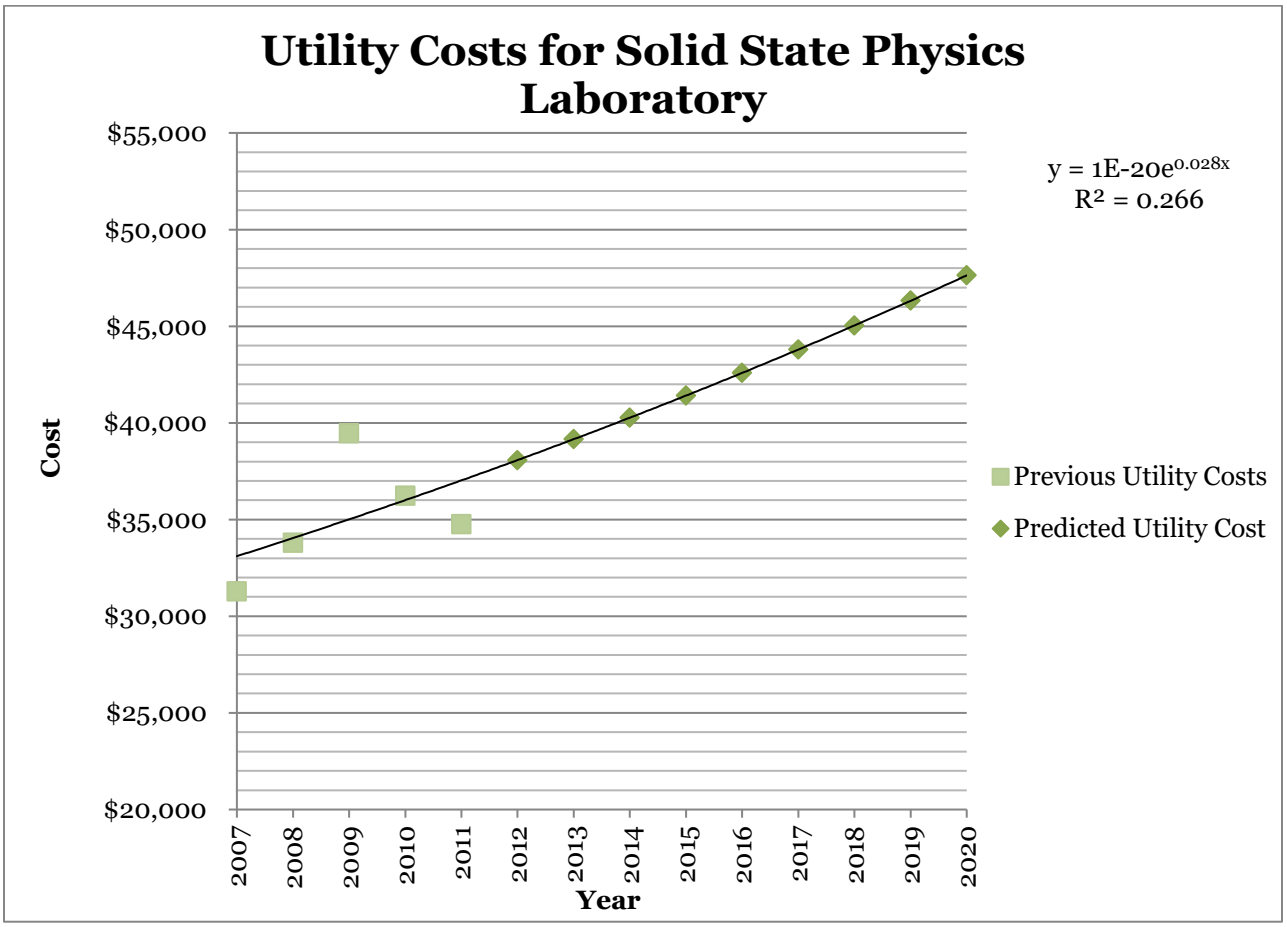

Figure 9.21 Utility Costs for Solid State Physics Laboratory

Figure 9.22 displays the costs of investment for Status Quo and the alternatives for five years after the initial investment (e.g., from 2012 to 2016). **Figure 9.8** identifies the cost assumptions that were made for the cost models.

	2012	2013	2014	2015	2016
Status Quo					
2.4 Lease	(-$108,376)	(-$108,376)	(-$108,376)	(-$108,376)	(-$108,376)
2.5.1 Utilities	(-$38,081)	(-$39,162)	(-$40,274)	(-$41,418)	(-$42,594)
2.6.2 Preventive/Recurring	(-$183,365)	(-$183,365)	(-$183,365)	(-$183,365)	(-$183,365)
Cost Total	**(-$329,822)**	**(-$330,903)**	**(-$332,015)**	**(-$333,159)**	**(-$334,335)**
Alternative 1 – Renovate and Consolidate					
2.5.1 Utilities	(-$38,081)	(-$39,162)	(-$40,274)	(-$41,418)	(-$42,594)
2.6.1 Component Renewal	(-$93,740)	(-$93,740)	(-$93,740)	(-$93,740)	(-$93,740)
2.6.2 Preventive/Recurring	(-$183,365)	(-$183,365)	(-$183,365)	(-$183,365)	(-$183,365)
Cost Total	**(-$315,186)**	**(-$316,267)**	**(-$317,379)**	**(-$318,523)**	**(-$319,699)**
Alternative 2 – Make Inactive					
1.6 Construction Management	(-$78,630)				
1.9 Moves[51]	(-$44,500)				
1.12 IT/Telecommunications	(-$800)				
2.4 Lease	(-$132,896)	(-$132,896)	(-$132,896)	(-$132,896)	(-$132,896)
Cost Total	**(-$256,826)**	**(-$132,896)**	**(-$132,896)**	**(-$132,896)**	**(-$132,896)**
Alternative 3 – Demolish and Construct					
1.5 Construction		(-$450,000)			
1.6 Construction Management		(-$50,000)			
1.9 Moves	(-$43,300)				
2.4 Lease	(-$132,896)	(-$132,896)	(-$132,896)	(-$132,896)	(-$132,896)
2.5.1 Utilities		(-$39,162)	(-$40,274)	(-$41,418)	(-$42,594)
2.6.2 Preventive/Recurring	(-$183,365)	(-$44,460)	(-$44,460)	(-$44,460)	(-$44,460)
3.2 Demolition	(-$150,942)				
Cost Total	**(-$510,533)**	**(-$716,518)**	**(-$217,6304)**	**(-$218,774)**	**(-$219,950)**

Figure 9.22 Solid State Physics Laboratory Cost Assumptions

[51] Values for Moves and IT/Telecommunications were given to the Survey from National Center Operations Branch.

Assumptions

Figure 9.23 displays the cost assumptions used for the analysis. The column titled "Cost Estimate" refers to the cost model in the BCA template.

Cost Element	Description	Assumption
1.5	Construction	Construction costs for a new warehouse are estimated to be approximately $50 per RSF
1.6	Construction Management	Mothball costs are $5.85 per RSF[52]
1.6	Construction Management	Approximately $50,000 for utilities, plumbing, and other engineering aspects[53]
1.9	Moves	Two movers at $75 an hour each for eight hours to move equipment from the Solid State Physics Laboratory to the J.W. Powell Building (e.g., $1,200 total)
1.9	Moves	Rental truck cost to move core samples from Solid State Physics Laboratory is approximately $2,500
1.9	Moves	Four movers at $75 an hour each for 17 days to move core samples from Solid State Physics Laboratory to the Herndon warehouse (i.e., $40,800 total)
1.12	IT/Telecommunications	Cost approximately $800 to disconnect and reconnect IT and communications from the Solid State Physics Laboratory to the J.W. Powell Building
2.4	Lease	Lease costs for the EGPSC in the J.W. Powell Building are $108,376
2.4	Lease	Lease costs in the Herndon warehouse are $12.26 per RSF (e.g., $24,520 for 2,000 RSF)
2.5.1	Utilities	Future electric and water utilities were predicted with an exponential distribution
2.6.1	Component renewal	Category 1 Deficiencies are $468,700 ($93,740/year for five years)
2.6.1	Component renewal	Category 2 Deficiencies are $66,059 ($13,212/year for five years)
2.6.2	Preventive / recurring	Annual operating and maintenance costs for the Solid State Physics Laboratory are $183,365
2.6.2	Preventive / recurring	Annual operating and maintenance costs for the newly constructed warehouse are $44,460(e.g., $4.94/RSF)
3.2	Demolition	Demolition costs are $11.23 per RSF[54]

Figure 9.23 Cost Assumptions

Figure 9.24 displays the costs for space in the J.W. Powell Building, the Solid States Physics Laboratory, and Herndon Warehouse. The cost center currently occupies 3,100 RSF in the J.W. Powell Building which it could vacate under Alternative 1. EGPSC pays approximately $108,376 annually in lease and overtime utilities.

[52] U.S. Department of Veterans Affairs, VISN 5 – Eighth 3 Project Types. October 2011.
[53] The National Center Operations Branch provided values for engineering construction costs.
[54] U.S. Department of Veterans Affairs, VISN 5 – Eighth 3 Project Types. October 2011.

Building	Lease Costs/RSF	Overtime Utilities/RSF	O&M/RSF	Total
J.W. Powell Building	$16.28	$ 6.59	$11.99	**$34.96**
Solid State Physics Laboratory	-	-	$15.03	**$15.03**
Herndon Warehouse	$12.26	-	-	**$12.26**
Detached Garage Model			$4.94	**$4.94**

Figure 9.24 Lease Costs at the National Center in Reston, VA

The Survey uses cost modeling to determine O&M costs for its owned and leased facilities. Assuming that cost centers do not put in a request to change the O&M cost model for the Solid State Physics Laboratory, the preventive and recurring costs are assumed to be maintained at approximately $183,400 annually. The Survey could use the O&M cost model for detached garages to identify the preventive and recurring costs for the newly constructed warehouse under Alternative 3.

Risk Assessment

Listed below in **Figure 9.25** are the risks associated with each alternative. The impact is a score given from 0-10, where zero is no impact to the mission and ten is mission failure. Each risk is assessed on the likelihood of it occurring. A zero is defined as no probability of the risk occurring, and a ten means there is a certain occurrence.

				Baseline	Alt. №1	Alt. №2	Alt. №3
ID	Risk Type	Description	Impact	Status ...	Renova ...	Mothba ...	Demoli ...
0	PLACE HOLDER	DO NOT DELETE					
1	Administrative	Safety concerns related to facility conditions	9	10	2	2	0
2	Administrative	Remediation clean up	6	0	8	5	10
3	Cost/Financial	Alternative exceeds availability of funds	5	0	4	6	6
4	Organizational	Restricts consolidation efforts at the National Center	8	10	1	10	10
5	Organizational	Disruption to science programs caused by moves	5	0	2	2	5
6	Technical	Quality of facility causing negative impact	8	10	1	0	1
7	Technical	Inefficient space utilization	7	10	2	0	10
End Risk Scores							

Figure 9.25 Risks associated with each alternative

Figure 9.26 displays the overall risk of impacts, as well as a summary for each risk type. Alternative 1 addresses the overall risks of impacts more effectively than the Status Quo option and the remaining alternatives.

		Baseline	Alt. №1	Alt. №2	Alt. №3
Risk Type	(n)	Status Quo Alter ...	Renovate and con ...	Mothball the Sol ...	Demolition and c ...
Administrative	(2)	●●●●●●●●○	●●●●●●●○○○	●●●●○○○○○○	●●●●●○○○○○
Cost/Financial	(1)	○○○○○○○○○○	●●○○○○○○○○	●●●○○○○○○○	●●●○○○○○○○
Legal/Contractual	(0)	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○
Organizational	(2)	●●●●●●●●○○	●●○○○○○○○○	●●●●●●●●●○	●●●●●●●●●●
Schedule	(0)	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○
Technical	(2)	●●●●●●●●●●	●●○○○○○○○○	○○○○○○○○○○	●●●●●●●●○○
Average Risk	(7)	●●●●○○○○○○	●●○○○○○○○○	●●●○○○○○○○	●●●●○○○○○○

Figure 9.263 Risks associated with each alternative

Administrative Risks

The safety concerns related to the facility conditions presents a real impact to the ability of the science missions being performed. The Solid State Physics Laboratory is in poor condition and some of the inefficiencies do not provide a facility that meets contemporary standards. The Solid State Physics Laboratory, which was built in the 1970s, was previously used for lead calibration and may still have remnants of radioactive material. Safety concerns related to the facility conditions poses the biggest risk for the Status Quo alternative. Renovation under Alternative 1, which includes funding for Category 1 and 2 deficiencies, greatly reduces the safety concerns.

Remediation clean up, which includes removing asbestos, disposing of lead bricks, and eliminating the remaining radioactive material, poses a risk to Alternatives 1, 2, and 3. The facility must undergo deficiency correction in order for it to be ready for employees and science functions.

Cost

The Survey is currently experiencing limited funding due to budget restrictions. Science centers are required to use their science mission dollars and/or reimbursable funds to assist with funding shortfalls. Therefore, budget restrictions limit the feasibility of funding and implementing some of these alternatives. The Status Quo provides the most cost effective option and Alternative 3 is the least cost effective option, due to a significant investment of demolition and remediation costs. Alternatives 1 and 2 are both feasible options for the Survey.

Organization

Some science programs support the mission through reimbursable funding. Requiring employees, equipment, and functions to move to the Solid State Physics laboratory may put a halt to the reimbursable funding received from performing the science mission. While Alternative 1 provides a higher quality facility for the science mission to be performed, it may also result a break in service while renovations occur.

New space requirements task agencies with reducing their utilization rates. The Survey is in the process of reducing its GSA provided space in the J.W. Powell Building. Not using the space in the Solid State Physics Laboratory restricts the consolidation efforts that need to occur at the J.W. Powell Building. Moving the laboratories and functions of the EGPSC cost center from the J.W. Powell Building to the Solid State Physics Laboratory will open up space for other cost centers to either move into or release back to GSA. Alternative 1 is the only alternative that supports the need for consolidating and vacating additional space at the J.W. Powell Building.

Technical

The Survey does not currently report space utilization rates for warehouses and laboratories. In terms of building usage, not the number of employees occupying space, the Solid State Physics Laboratory is underutilized. The risk of inefficient space utilization rates strongly supports the Alternatives over the Status Quo. Alternatives 1 and 3 allow for programs and employees to occupy the Solid State Physics laboratory,

thus improving the building's usage. Status Quo leaves the facility in its current state—typically vacant and used for storage. Alternative 2, to make the facility inactive, received a risk score of 0. If a facility is inactive, the Survey would report zero personnel in the FRPP submission; therefore, the utilization rate would be not applicable.

Benefits

Figure 9.27 shows how the Status Quo and Alternatives were scored for the benefits. Most of the benefit analysis focuses on how Alternatives contribute to the USGS mission. A score of a ten was given if the factor had an optimal benefit to the alternative.

		Baseline Status ...	Alt. №1 Renova ...	Alt. №2 Mothba ...	Alt. №3 Demoli ...
Mission Dependency	► Degree to which this alternative supports program activities outlined in the annual and five-year program plans	0	10	4	4
	► Degree to which this alternative supports expected program activities five or more years into the future based on bureau strategic plans	2	10	4	4
	► Degree to which this alternative will accommodate program changes, including collocation, while considering degree of modification needed and impact to operations	2	7	1	1
	► Degree to which this alternative provides a suitable physical location that contributes to the purpose of the project being considered	8	8	8	8
	► Degree to which this alternative provides opportunities to leverage interaction internally, and with the public and key stakeholders (e.g. cooperators, Congress, customers, partners and sister agencies) because of its location	8	8	8	8
	► Degree to which this alternative fulfills a functional requirement or purpose that cannot be fufilled by an existing facility or program	2	8	0	0
Condition Index	► Degree to which this altrernative will result in a desirebable Facility Condition Index (FCI)	0	10	1	6
Operating Benchmarks	► Degree to which this alternative will result in recurring maintenance and repair costs, utility costs, cleaning and janitorial costs, and roads/grounds expenses that are consistent or better than industry benchmark data	0	8	10	9
Facility Utilization Index	► Degree to which this alternative will result in a desireable Facility Utilization Index defined as the percentage of office space occupied versus the design amount	0	8	0	0

Figure 9.27 Scoring of the Benefits

Alternative 1 has a positive impact on Mission Dependency, a component of API scores, and support the program activities outlined in the Survey's short- and longer-term plans. Mission is impacted in Alternatives 2 and 3 in that the facility cannot be used by any existing facilities or programs to perform the mission. Mothballing the asset does not allow the facility to accommodate program changes. The physical location of the facility positively impacts the mission in both the Status Quo and the three Alternatives. The laboratory is adjacent to the J.W. Powell Building and other Federal agencies located in Washington, DC.

Alternative 1 also improves facility standards, including condition index, repair costs, operating costs, and other expenses related to the maintenance of the building, to meet industry benchmarks.

Figure 9.28 displays the outcome of the benefit analysis. Alternative 1 strongly supports the Survey's mission and meet operating benchmark and facility utilization index recommendations.

Benefit	Baseline Status Quo Alter ...	Alt. №1 Renovate and con ...	Alt. №2 Mothball the Sol ...	Alt. №3 Demolition and c ...
Mission Dependency	●●●○○○○○○○	●●●●●●●●●○	●●●●○○○○○○	●●●●○○○○○○
Condition Index	○○○○○○○○○○	●●●●●●●●●●	●○○○○○○○○○	●●●●●○○○○○
Operating Benchmarks	○○○○○○○○○○	●●●●●●●●○○	●●●●●●●●●●	●●●●●●●●●○
Facility Utilization Index	○○○○○○○○○○	●●●●●●●●○○	○○○○○○○○○○	○○○○○○○○○○
Weighted Average	●●○○○○○○○○	●●●●●●●●●○	●●●●○○○○○○	●●●●○○○○○○

Figure 9.28 Scoring of the Benefits

Comparison of Alternatives

Status Quo has the greatest overall risk that the facility will impact the science mission. The poor quality of the facility and the underutilization, in terms of building usage, pose risks to the science mission that the other Alternatives do not. Under Status Quo, the Survey may not see cost avoidances, but instead, carry forward the costs associated with operations, maintenance, and utilities. It may not benefit the Survey to continue to fund the Solid State Physics Laboratory when little to no science is being performed in the facility.

Alternative 1 most effectively addresses the risk of impacts to the science mission. It also addresses the safety concerns and remediation clean up through correction of Category 1 deficiencies. By consolidating EGPSC into the Solid State Physics Laboratory, Alternative 1 addresses the risk of inefficient space utilization and lack of science programs performing the mission. In regards to supporting the mission and improving the condition index, Alternative 1 also appears to have the greatest benefits. Correcting deficiencies will improve the facility standards to help meet operating benchmark and facility utilization standards. Alternative 1 requires initial investment for the repair of the Category 1 deficiencies, but will achieve a cost avoidance of approximately $108,376 annually in rent, overtime utility, and DHS costs for space in the J.W. Powell Building. Although the cost avoidances may not be as significant short term, the limited risks and benefits greatly support this Alternative. [55]

Alternative 2 may result in greater cost avoidance than the other Alternatives, but it does not effectively address the risks. Instead of repairing the deficiencies, mothballing delays TIs. In addition, mothballing does not allow science programs, such as those performed by EGPSC, to be performed in the Solid State Physics Laboratory. Consolidation into the Solid State Physics Laboratory will improve and speed up consolidation efforts that are being implemented in the J.W. Powell Building;

[55] Number calculated from overtime utilities, lease costs, and DHS costs for 3,100 RSF in the J.W. Powell Building.

mothballing this asset does not improve consolidation efforts. Other than meeting operating benchmark standards (e.g., utility costs will be low because there are no employees stationed in the facility), mothballing the Solid State Physics Laboratory has limited benefits.

Alternative 3 has the greatest upfront investment for demolition and construction costs, and the smallest cost avoidance. Like Alternative 2, Alternative 3 does not improve consolidation efforts or allow science programs to be performed in the facility. The newly constructed warehouse will be used for drilling equipment storage and little to no science will be performed in the facility. Alternative 3, however, would meet operating benchmark standards. Utility costs are fairly low for warehouses, and utilization rates will not be reported to FRPP, as there should be no employees housed in the newly constructed storage facility.

Figure 9.29 displays a comparison of the analysis.

		Baseline Status Quo Alternative	Alt. №1 Renovate and consolidate the Solid	Alt. №2 Mothball the Solid State Physics	Alt. №3 Demolition and construction of a new
Summary of Life Cycle Cost Estimate					
(A)	Investment (Inflated Dollars)	$0	$0	($123,930)	($553,574)
	Investment Period	No Investment	No Investment	2012	2012 to 2013
(B)	Recurring Costs (2012 to 2021)	($3,679,402)	($3,054,535)	($1,458,424)	($2,524,945)
(C)	Disposal Costs (2012 to 2021)	$0	$0	$0	($150,942)
(D)	Reimbursable Income (2012 to 2021)	$0	$0	$0	$0
(E)	Total 10-Year Inflated Alternative Costs (π=2.0%) (A+B+C+D)	($3,679,402)	($3,054,535)	($1,582,354)	($3,078,519)
Net Present Value (NPV)					
(F)	Total Discounted Costs (Nom. Discount Rate = 4.6%)	($2,756,052)	($2,341,015)	($1,218,483)	($2,587,066)
(G)	Net Present Value (F less $F_{Baseline}$)		$415,037	$1,537,570	$168,986
Return On Investment (ROI)					
(H)	Total Discounted Investment	$0	$0	($123,930)	($521,341)
(I)	Net Discounted Investment (H less $H_{Baseline}$)		$0	($123,930)	($521,341)
(J)	Total Discounted Recurring Costs/Income	($2,756,052)	($2,341,015)	($1,094,553)	($2,065,725)
(K)	Net Return (J less $J_{Baseline}$)		$415,037	$1,661,500	$690,327
(L)	Return On Investment (ROI) (K÷I) (10-Year Annualized)		No Investment	30.6%	8.8%
Internal Rate of Return (IRR)					
(M)	Internal Rate of Return (2012 to 2021)		No Investment	No IRR	13%
Payback Period					
(N)	Year of Analysis when NPV is equal to zero		No Payback	No Payback	6.4 Years
Average Risk		●●●●●○○○○○	●●○○○○○○○○	●●●○○○○○○○	●●●●○○○○○○
Average Benefit		●●○○○○○○○○	●●●●●●●●●○	●●●●○○○○○○	●●●●○○○○○○

Figure 9.29 Summary of the Analysis

Recommendation

Alternative 1 may result lower cost to the Survey and a cost savings over time, while providing facilities that meet science and organizational needs and improve the Survey's ability to meet benchmarking and utilization standards. Benefits in Mission Dependency, Condition Index, Operating Benchmarking, and Facility Utilization are supported by minimal financial, administrative, and technical risks.

Alternative 1, particularly the Category 1 deficiencies, should be funded 100% through

DMCI funding. The cost centers that plan to occupy the space (e.g., EGPSC and Minerals Resource Science Center) may be responsible for paying O&M costs, and any additional costs associated with TI.

Status Quo and Alternative 1 have reduced Mission Dependency benefits, as well as administrative and organizational risks. Alternative 3 is constrained by availability of funding and budget restrictions.

Appendix J. Denver Federal Center Business Case Analysis

- **Project Title:** DFC Space Consolidation Project
- **Date:** March 30, 2012
- **Prepared by:** BMS
- **Region:** Central, Rocky Mountain
- **Discipline:** Integrated
- **Type of Project:** Consolidate space

Executive Summary

Denver, Colorado has the largest concentration of Federal employees outside of the national capital area. At the DFC, the Survey occupies 13 separate GSA provided facilities and pays escalating rent and DHS costs. The BCA assesses the Status Quo and alternatives to allow the Survey to effectively meet its short and longer-term strategic goals. The Status Quo is to remain in the current situation, and the three alternatives include: Alternative 1 – perform initial consolidation steps that were outlined in the DFCST Synthesis Plan; Alternative 2 – consolidate, vacate, and release space back to GSA; and Alternative 3 – construct a GSA lease building on the DFC to appropriately meet the Survey's science needs.

Due to increasing budget constraints, increasing rent costs, and new space utilization guidelines, the Survey is faced with the challenge of consolidating its GSA provided space. Currently, costs centers are responsible for covering facility shortfalls with their science program dollars. To effectively consolidate space and offset rent increases, the preferred alternative is Alternative 2. This Alternative should result in the consolidation of Buildings 25, 53, 95, and 810, the vacating of space in Buildings 21 and 21B, and the release of space in Building 20, while addressing identified inefficiencies and underutilized space.

The proposed alternative could initially include some consolidation cost increases for space moves, but would be offset due to the anticipated efficiencies gained in space utilization and consolidation. A ten-year projection shows substantial savings in facilities under Alternative 2, versus remaining in the current situation or other alternatives. When factoring costs and risk considerations, Alternative 2 most effectively addresses the Survey's current needs, as well as long-term strategic goals.

Figure 9.30 displays a summary comparison of the quantitative results of the alternatives analysis.

Alternative	Name	Description
Status Quo	Baseline	Remain in 13 separate locations and do not consolidate in fewer GSA provided buildings. The existing buildings comprise 1,173,165 RSF at an average rental cost of $15.65/RSF. Based on these values, the Survey spends approximately $184 million on rent and DHS costs at the DFC. This situation does not allow USGS to address identified inefficiencies, safety concerns, and expected uncontrolled future rent costs. Additionally, organizational goals that involve enhanced coordination and collaboration may not be achieved.
Alternative 1	Remain in 13 separate locations, but consolidate space	Remain in 13 separate locations, but consolidate within GSA provided space. This would include the approved, and funded, space action of releasing space in Building 53, first floor (H1126-E1306) and release space in building 53 on the second floor. As a result, the Survey would remain in the 13 separate locations, but would decrease its footprint by approximately 31,868 USF; therefore, occupying approximately 906,371 USF. In addition, this space consolidation effort includes releasing and vacating warehouse space in the A-bay of Building 810. While this alternative allows USGS to address some identified inefficiencies, it does not address moving people, equipment, and functions into a higher quality working environment. In this alternative, utilization rates would be reduced, and therefore, cost centers may make progress in working towards the utilization goal of 180 office USF per person. However, these consolidation plans are minor and would require additional consolidation.
Alternative 2	Vacate older buildings and consolidate into existing space	Based on the approved DFCST actions, the Survey would consolidate space into newer facilities—Buildings 25, 53, 95, 810—and begin to release space in older GSA provided buildings—Buildings 20, 21, 21A, 21B, and 53 – to meet USGS' needs. These projects include consolidating Buildings 25, 53, 95, and 810; vacating Buildings 21 and 21B; and releasing space in Building 20. The Survey would work to consolidate and release as much space, as feasible, back to GSA while renovating the space needed to carry out its mission. Staff per SF in this proposal is comparable to recommendations from the Survey's *OMB Facilities/Space Cost Savings/Avoidance and Space Management Policy* memo. This alternative better allows USGS to meet their scientific missions, and will provide staff with a higher quality working environment than currently exists. In addition, initial analysis suggests the Survey may realize its ROI in a short period of time (i.e., less than 4.5 years).
Alternative 3	Vacate older buildings and construct/move into new space	As part of this alternative, the Survey would relocate employees and functions from five separate, older buildings - Buildings 20, 21, 21A, 21B, and 53 - into newer facilities- Buildings 810, 95, and 25. To execute this plan, the Survey would terminate GSA leases at older buildings, resulting in

Alternative	Name	Description
		estimated savings of $6,398,320 in annual lease and operating costs.[56] Due to current space needs, if the Survey vacated the older buildings, cost centers would need space to move into. Space in the newer buildings is not adequate to house the number of employees currently located in the older buildings. The Survey could consider constructing a building or identify new space to occupy - whether through collocation or a new lease agreement. Under this alternative, the Survey would realize the full benefit of collocation of staff, enhanced internal coordination and efficiencies, and a higher quality working environment. It is worth noting that moving out of Building 21 would result in expenses estimated as high as $1.5 million to accommodate the relocation of numerous laboratories currently in use. [57]

Figure 9.30 DFC BCA Alternatives

Issue Identification

The Survey has approximately 1,260 staff and various equipment located at the DFC in Lakewood, CO (outside Denver).[58] Survey staff and equipment are spread across 13 separate GSA provided buildings at various locations across the DFC. The DFC houses multiple agencies including the Survey, the U.S. Fish and Wildlife Service (FWS), BLM, Bureau of Indian Affairs (BIA), Department of Labor (DOL), NPS, Bureau of Reclamation (BoR), and GSA. GSA primarily owns and maintains the buildings located in the DFC. The Survey is the largest occupant of the DFC, occupying approximately 1.17 million RSF, of the DFC's approximately 4 million RSF. Currently, some 57 cost centers occupy 13 buildings across the DFC.

Prior to housing government employees, the DFC served primarily as warehouses to manufacture artillery during World War II in the 1940s. Following the end of World War II, a portion of the campus was converted into office space, warehouses, and laboratories for several Federal agencies. Given the age of the buildings and the original building use, many of the buildings are deteriorating and are not currently meeting the Survey's needs. In many cases, renovating or vacating buildings involves incurring significant costs, including asbestos abatement and environmental cleanup.

The Survey has put forth effort in working with GSA to renovate some of the deteriorating buildings, or identify newer space to move to at DFC or elsewhere. However, GSA has been unable to meet these needs for the following reasons:

1. **OMB and the President are increasingly scrutinizing agencies on how well they utilize their space -** Given the increased demand to vacate space, many agencies are identifying space to release back to GSA; however, GSA is primarily interested in contiguous, marketable space. This means agencies must provide an area that is similar to a "suite" in that there are separate entrances to

[56] Value based on FY2011 FRPP submission.
[57] DFCST Synthesis Report.
[58] Employee numbers provided by DFCST utilization study.

the space, restrooms, and other amenities. To release space, the Survey must reach agreement with GSA on the space being returned, unless the space is provided back at the end of an OA.

2. **Increased demand for government space -** As part of FAR, OMB requires agencies to move to GSA provided space, where available, when their leases expire and require them to enter new lease agreements. [59] As the second most Federally-populated area in the U.S., demand for space in the DFC is higher than other locations; therefore, GSA is unable to find the Survey better alternative, existing space.
3. **Cost for modifying space -** The costs associated with renovating space are extremely high given the costs related to asbestos abatement for some of the facilities. GSA generally does not pay for asbestos abatement as it is the occupying agencies' responsibility to pay for renovations, and associated costs to those modifications. In addition, as the Survey has occupied some of the buildings for over 20 years; the environmental cleanup costs may be significant.

The Survey's DFCST coordinates efforts on how Bureau space is allocated, managed (both for occupied and vacant space), and released.[60] The Space Team's goal is to optimize the equitable and efficient use of space by offices and cost centers in buildings the Survey occupies at the DFC. One of the primary goals of the DFCST is to review and approve space actions. Space actions include vacating and releasing space back to GSA, and renewing, terminating, or identifying new OAs. One of the DFCST challenges is releasing space back to GSA. GSA is willing to take back space, if approved, during an OA with 120 days notice. However, if the Survey renews its OA, it cannot release space back to GSA within the first 16 months. With upcoming expiring OAs, it is important for the DFCST to approve space actions that align with its strategic goal of vacating a portion of the Survey's space, to not only meet the utilization requirement of an average of 180 office USF for renewing leases, but to decrease the shortfall in the facilities budget.

To date, the DFCST has approved several space actions that align to the overall strategic vision of vacating space. In March 2012, DFCST members submitted space consolidation strategies to the BMS office for compilation into the DFC *Synthesis Report*. The purpose of the Synthesis Report is to document recommended space actions and serve as a starting point for the DFC space consolidation efforts. The document is intended to be a "snap shot" of time and continuously updated as decisions are made and strategies are adjusted. The purpose of this BCA is to assess the feasibility of alternatives for vacating space at the DFC as many of the buildings the Survey occupies are old, deteriorating, and underutilized.

Facilities

The buildings the Survey occupies at DFC are GSA provided. Other Bureaus, such as NPS, BoR, and BLM, occupy space in Buildings 810, 25, 50, and 53. Some of the facilities at the DFC—Buildings 810, 95, and 25—have been recently renovated to improve the conditions in which science is taking place. The older facilities (e.g.,

[59] FMR Subchapter C – Real Property, Part 102-79, Assignment and Utilization of Space.
[60] DFCST Charter.

Buildings 20, 21, 21A, and 53) are in need of significant renovation, while some of the laboratories are antiquated, and may not meet contemporary laboratory standards. The following information provides detail on space distribution (defined by USF) and annual lease costs (defined by RSF). **Figure 9.31** provides an overall summary of the facilities.[61]

Building	Total RSF	Cost/RSF	Total Cost
Building 20	254,180	$15.04	$3,821,887.09
Building 21A	458	$7.19	$3,293.02
Building 21B	5,696	$17.49	$99,615.20
Building 21	22,303	$9.39	$209,428.42
Building 25	11,989	$19.36	$1,391,024.76
Building 53	172,825	$13.43	$2,320,775.54
Building 95	163,206	$20.19	$3,295,129.14
Building 810	409,628	$10.86	$4,450,197.43
Total	**1,040,285**	**$14.99**	**$15,591,350.60**

Figure 9.31 Summary of Metrics of Buildings

Building 20

Building 20 is comprised of primarily office and laboratory space. The building also houses the center's library and the following cost centers: Crustal Geophysics & Geochemistry, Branch of Publications Services, Mineral Resource Science Center, Minerals Information Team, Central Energy Resources Science Center, Central Mineral & Environmental, and Rocky Mountain Area Regional Executive. The building was renovated almost 30 years ago, and contains asbestos in the walls. **Figure 9.32** breaks down the amount of space used as office, warehouse, and laboratory in Building 20, which equates to a total of 177,165 USF.

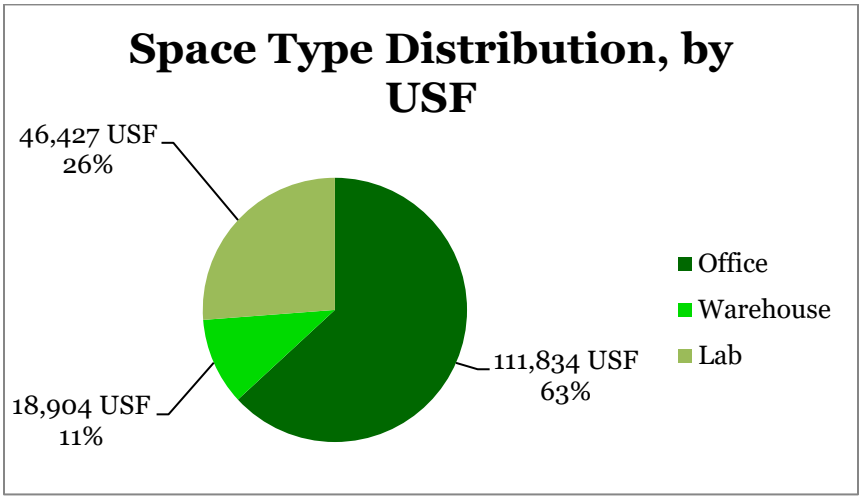

Figure 9.32 Distribution of USF in Building 20

[61] Information provided by Denver Area GSA Locations and Rental Rates Snap Shot from February 2012. These rates do not include overtime utilities, preventive maintenance, or DHS security costs. DHS security costs, however, were included in the costs analysis.

As shown in **Figure 9.33**, lease costs for Building 20 are approximately$3.8 annually.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	254,180	$ 7.64	$ 1,942,691.12
Operating Cost	254,180	$ 5.90	$ 1,499,005.85
Joint Use – Building Amenities	10,213	$ 20.80	$ 212,425.41
Joint Use – Surface Parking	483	$ 347.45	$ 167,764.71
Total			**$ 3,821,887.09 ($15.04/RSF)**

Figure 9.33 Building 20 Facility Costs

Building 21A

Building 21A, at approximately 458 RSF, is solely used for warehouse purposes.[62] **Figure 9.34** provides detail on the costs associated with Building 21A.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	458	$ 5.85	$ 2,679.30
Operating Cost	458	$ 1.34	$ 613.72
Total			**$ 3,293.02 ($7.19/RSF)**

Figure 9.34 Building 21A Facility Costs

Building 21B

Building 21B is approximately 5,696 RSF, or 4,938 USF. The facility is solely used for office and administration purposes and is occupied by three cost centers. **Figure 9.35** provides detail on the rental rate, operating, and joint use costs total approximately $99,615.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	5,696	$ 9.02	$ 51,374.31
Operating Cost	5,696	$ 6.59	$ 37,534.00
Joint Use – Building Amenities	288	$ 20.80	$ 5,987.28
Joint Use – Surface Parking	14	$ 346.52	$ 4,719.60
Total			**$ 99,615.20 ($17.49/RSF)**

Figure 9.35 Building 21B Facility Costs

[62] In this case, rentable square feet are equivalent to USF. Building 21A has 458 USF.

Building 21

Building 21 is approximately 14,072 USF, and is comprised of office and laboratory space. Building 21 houses a mass spectrometer, a multi-million dollar piece of laboratory equipment, which is located in the open laboratory space on the first floor. The laboratory space in Building 21 does not meet contemporary laboratory standards. There is a leak in the ceiling that could potentially destroy the mass spectrometer and the experiments that are taking place in the facility. **Figure 9.36** displays a photograph of the tarp covering the mass spectrometer.

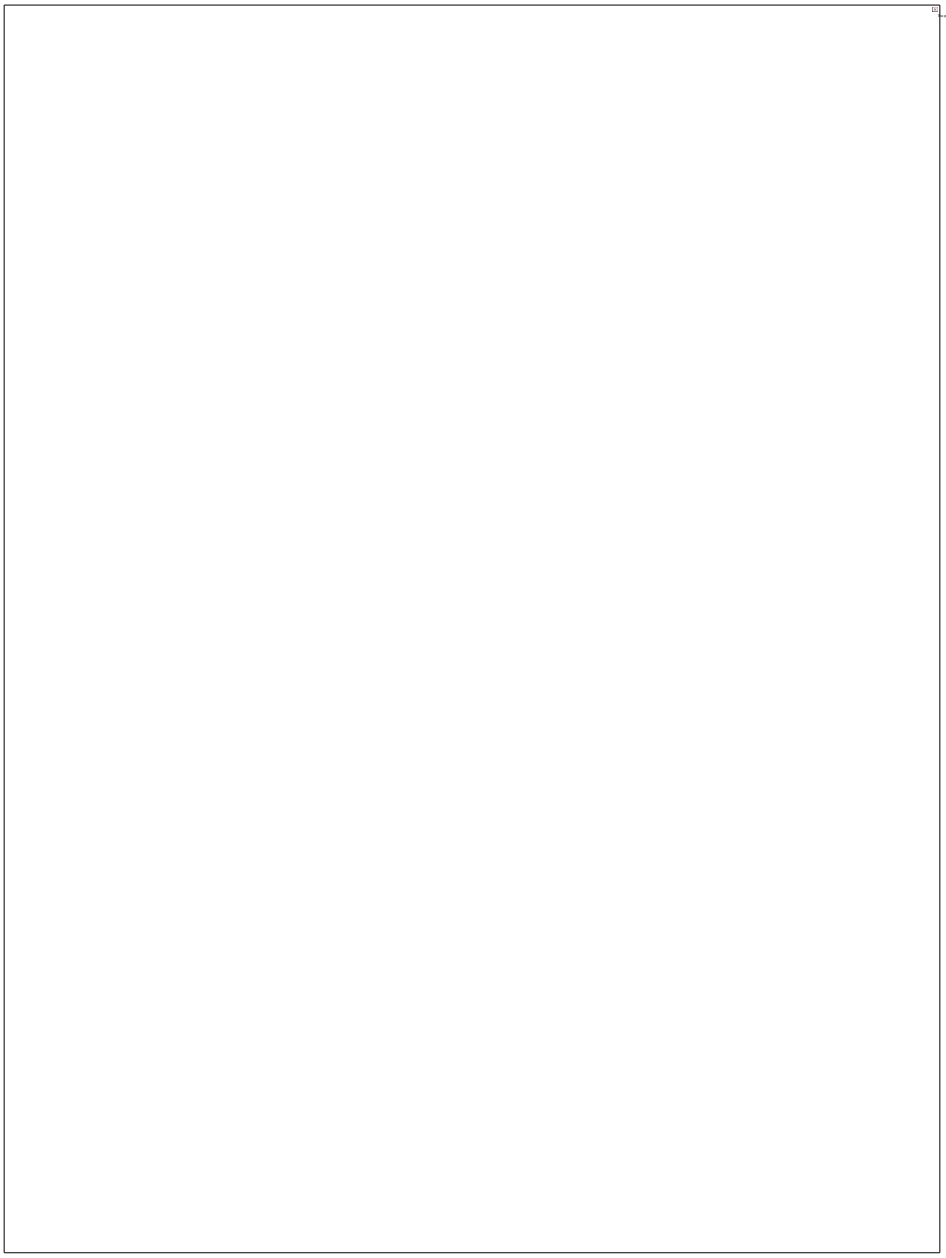

Figure 9.36 Tarp covering the Mass Spectrometer in Building 21

In addition to the leak, Building 21 lacks a backup generator. If there is a power outage, data on science experiments are lost. Because the facility may not have suitable conditions for the science programs taking place, the laboratory functions in Building 21 should be moved to a higher quality facility.

Figure 9.37 provides detail on the breakdown of space.

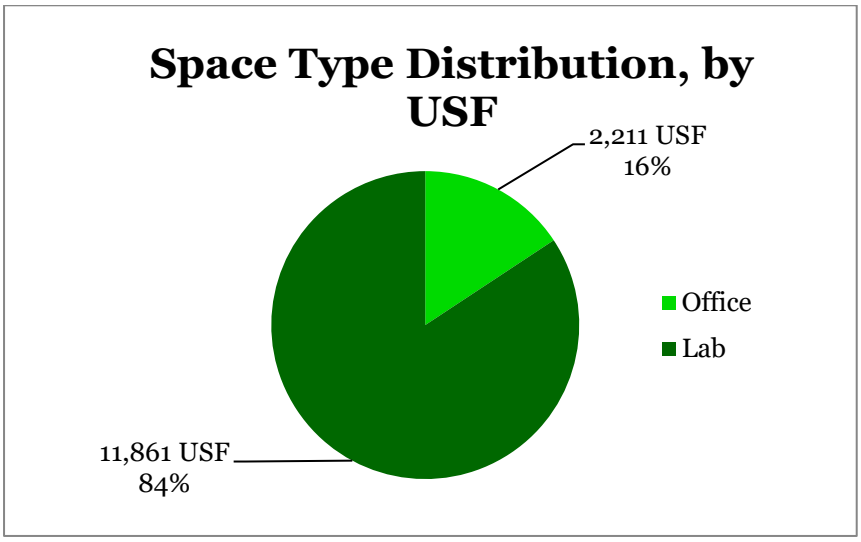

Figure 9.37 Distribution of USF in Building 21

Figure 9.38 provides detail on the costs associated with Building 21.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	22,303	$ 3.40	$ 75,830.20
Operating Cost	22,303	$ 4.72	$ 105,270.16
Joint Use – Building Amenities	762	$ 20.80	$ 15,842.94
Joint Use – Surface Parking	36	$ 346.52	$ 12,485.12
Total			**209,428.42 ($9.39/RSF)**

Figure 9.38 Building 21 Facility Costs

Building 25

Building 25 is approximately 95,129 USF, with 90,447 USG used for prime office space. **Figure 9.39** displays the breakdown of space distribution types by USF. The remaining USF is used for laboratory space.

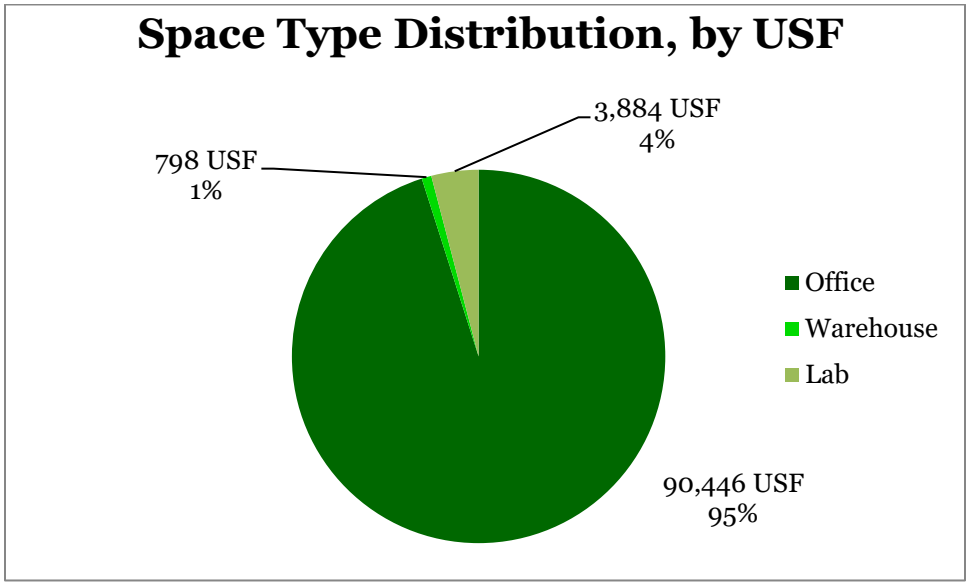

Figure 9.39 Distribution of USF in Building 25

The building is a higher quality facility than some of the older GSA provided facilities, such as Building 21 and 53. As a newer facility, this space is considered "prime" real estate on the DFC. Because this facility has a high quality working environment, total annual costs are higher than other facilities at $2,283,908, as shown in **Figure 9.40**.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	117,983	$ 11.79	$ 1,391,024.76
Operating Cost	117,983	$ 5.89	$ 694,922.46
Parking: Surface (# of spaces)	16	$347.04	$ 5,552.64
Joint Use – Building Amenities	5,173	$ 20.80	$ 107,604.64
Joint Use – Surface Parking	245	$ 346.52	$ 84,803.84
Total			**$2,283,908.34 ($19.36/RSF)**

Figure 9.40 Building 25 Facility Costs

Building 53

Building 53 previously served as an ammunition production facility, but is currently home to several operations for the Survey and DoL. For the Survey to reduce their footprint and achieve cost avoidances on rent, consolidation efforts need to occur as quickly as possible while delivering the largest possible blocks of marketable space back to GSA. **Figure 9.41** identifies the space distribution type in USF for Building 53. At 11,813 USF, Building 53 is used primarily for office use.

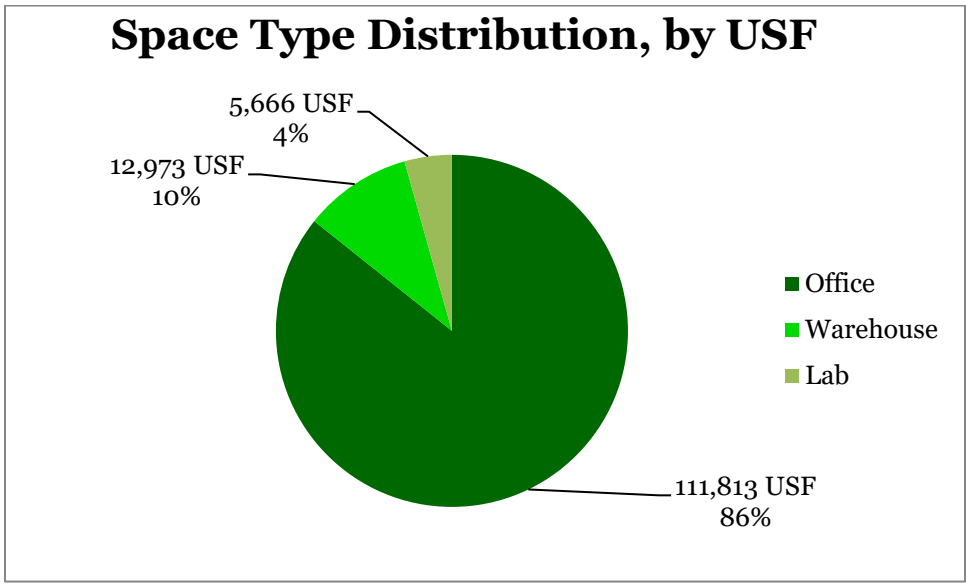

Figure 9.41 Distribution of USF in Building 53

The Survey pays approximately $2.3 million in rent and operating costs annually, as shown in **Figure 9.42**.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	172,825	$ 5.84	$ 1,010,097.42
Operating Cost	163,206	$ 6.02	$ 1,039,554.33
Parking: Surface (# of spaces)	26	$ 40.04	$ 1,041.04
Joint Use – Building Amenities	7,262	$ 20.80	$ 119,040.02
Joint Use – Surface Parking	344	$ 346.52	$ 151,042.74
Total			**$ 2,320,775.54 ($13.43 / SF)**

Figure 9.42 Building 53 Facility Costs

Building 95

Building 95 is approximately 120,884 USF and roughly one-third of that space (36,805 USF) is used for laboratory functions. A total breakdown of distributed space is shown in **Figure 9.43**. This facility was constructed in 1990 and is a much higher quality facility than some of the other GSA provided assets.

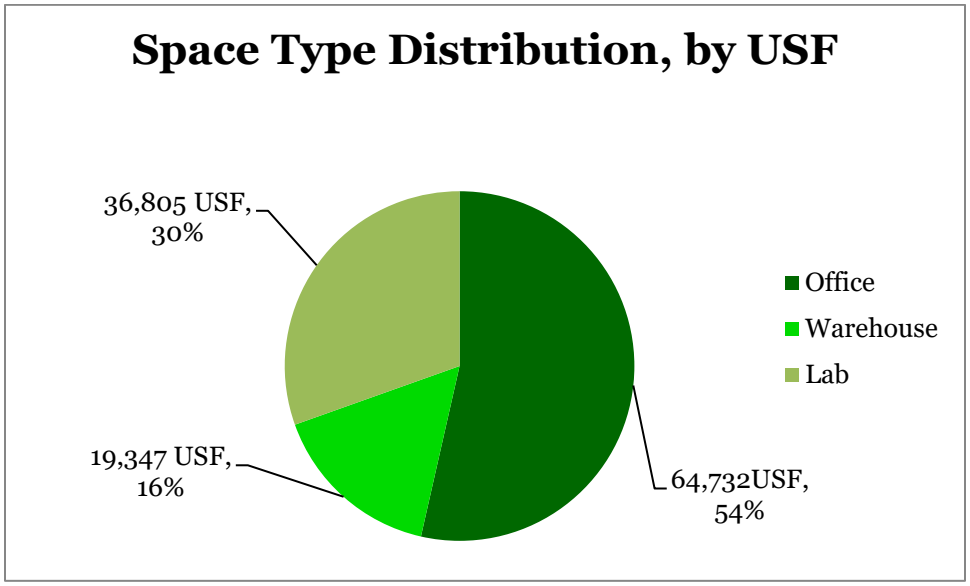

Figure 9.43. Distribution of USF in Building 95

With state of the art laboratories and offices with windows, rent and operating costs are approximately $29.00 per SF in Building 95. The rental rate, operating costs, and joint use charges costs $4,733,604.12 annually. Cost breakdowns by charge types are shown in **Figure 9.44**.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	163,206	$ 20.19	$ 3,295,129.14
Operating Cost	163,206	$ 7.50	$ 1,224,045.00
Joint Use – Building Amenities	5,765	$ 20.80	$ 119,920.11
Joint Use – Surface Parking	273	$ 346.52	$ 94,509.86
Total			**$ 4,733,604.12 ($29.00 /RSF)**

Figure 9.44. Building 95 Facility Costs

Building 810

Building 810 is primarily warehouse space, as shown in **Figure 9.45**, but some of the storage space could possibly be converted to office space. The Rocky Mountain Mapping Center, which includes the Map Store, occupies a significant amount of space in Building 810.

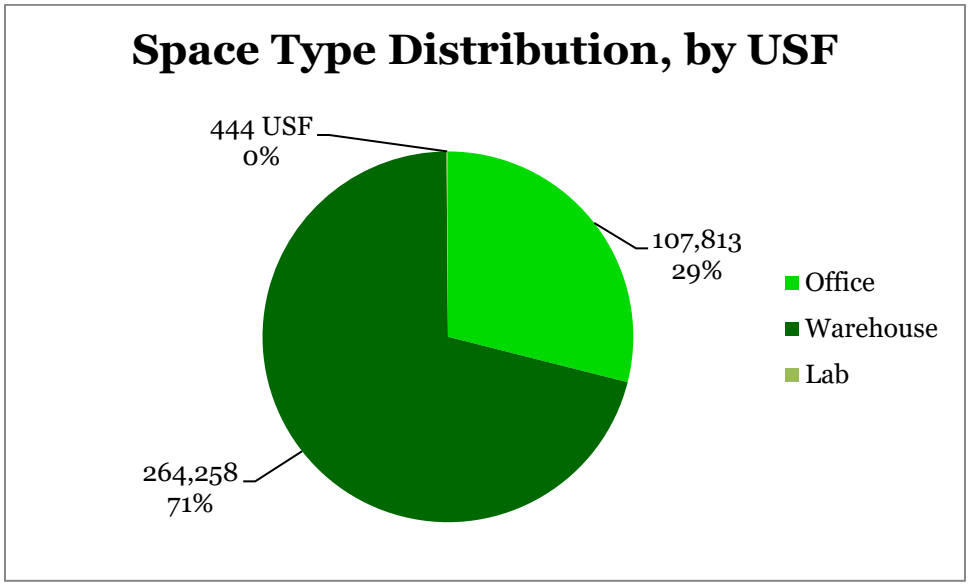

Figure 9.45. Distribution of USF in Building 95

Like Buildings 25 and 95, Building 810 is a higher quality facility than some of the other buildings located on the DFC. For this reason, GSA charges high shell rental rate per RSF, as shown in **Figure 9.46**. The building infrastructure (HVAC, fire suppression, and electrical systems) were last upgraded in 1976.

Charge Type Description	RSF	Annual Rate	Total Amount
Shell Rental Rate	409,628	$ 6.93	$ 2,839,324.91
Operating Cost	409,628	$ 7.50	$ 1,368,817.97
Parking (spaces)	46	$347.04	$ 15,963.84
Joint Use – Building Amenities	6,079	$ 20.80	$ 126,441.95
Joint Use – Surface Parking	288	$ 346.52	$ 99,648.76
Total			**$ 4,450,197.43 ($10.86 /RSF)**

Figure 9.46. Building 95 Facility Costs

Management

Fifty-seven cost centers occupy the 13 GSA provided facilities across the DFC. BMS is challenged with assisting the multiple cost centers relocating and consolidating their space across the campus while achieving the DFCST's overall strategy. With no authority, the BMS office can only facilitate moves and assist as "consultants" to the individual cost centers. Despite the lack of authority, the DFCST members are working

together, with assistance from the BMS office, to outline, and agree upon, an overall strategy for vacating and releasing space. The team does not approve space actions unless the group agrees the move supports the overall strategy. There is no formal line of authority requiring programs to move by specific dates.

Communications/Collaboration

The Denver area houses many Interior Bureaus which increases collaboration and collocation among employees. In addition, the GSA provided buildings are located across the DFC campus, and fairly accessible to one another. Therefore, scientists and researchers have the opportunity to work together informally.

Costs

Because the buildings the Survey occupies are GSA provided, the Survey has little control over the facility lease costs. However, most of the buildings have relatively high rates of utilization per person, indicating consolidation efforts could help offset increases in rent costs, while helping reach the Interior's goal of achieving an average utilization of 180 office USF per person. GSA has continued to raise lease costs for their buildings, and it is unlikely that the rent will decrease. The current situation leaves Survey staff dispersed in inefficient and outdated facilities that cannot meet all safety requirements or research needs.

The Survey is currently experiencing limited funding due to budget reductions. The average shortfall at each USGS center is approximately $200,000. Cost centers are required to use their science mission dollars or reimbursable funds to assist with funding this shortfall. Cost centers are spending money to cover the shortfall when the funds should be allocated to support the science mission. To help reduce the science program dollars that are being used for the shortfall, cost centers are focusing on reducing their footprint by consolidating space.

Purpose of Initiative

The purpose of the initiative is to fully consolidate employees, equipment, and storage into newer, higher quality facilities located at the DFC to save on lease costs, improve space utilization, fully integrate scientific capacity, and improve science capabilities. To achieve these objectives, a solution should improve utilization rates, improve the conditions of the facilities in which science mission programs are being performed, and provide more control over future facility costs.

Description of Alternatives

Status Quo: *Staff and equipment remain in 13 separate locations.*

The Survey's *OMB Facilities/Space Cost Savings/Avoidance and Space Management Policy* memo to the USGS ELT requires a waiver to be signed for new space requests greater than 180 office USF per person. The Survey currently leases 13 GSA provided buildings at the DFC. These buildings account for over 1 million RSF and cost USGS $18,357,277 in annual operating and lease costs.

This situation does not allow USGS to address identified inefficiencies, safety concerns,

and expected uncontrolled future rent costs. Staying in 13 separate locations does not allow USGS to meet, or even approach, utilization standards of 180 office USF per person.

Alternative 1: *Remain in 13 separate locations, but begin to consolidate space.*

Alternative 1 is to remain in 13 separate locations, but consolidate within GSA provided space. The DFCST approved three space consolidation projects at its March Space Team meeting. The plans are to release and/or vacate a total of 83,132 USF in Building 53. After backfilling into existing space, the Survey would decrease its footprint in Building 53 by approximately 31,868 USF.

FY2012 Moves

Building 53 – The first space consolidation project in Building 53 would require cost centers on the first floor (H1126-E1306) to release 38,184 USF of space and backfill into 26,432 USF in the Yucca Mountain space on the second floor of Building 53. This move may result in an annual rent and DHS cost avoidance of approximately $222,000.

The second space consolidation project is for the Colorado Water Science Center and National Research Program cost centers to vacate 44,948 USF on the second floor of Building 53. These cost centers may backfill into 24,832 USF of vacant space in Building 53. This move may result in an annual rent and DHS cost avoidance of approximately $381,000. This move requires an initial investment of over $1.5 million. **Figure 9.47** provides a breakdown of results from space moves in Building 53 in FY2012.[63]

Building 53	
Total amount of space released and/or vacated	83,132 USF
Reduction of real property footprint	38,184 USF
Total approximate cost avoidance in rent and DHS for released space	$222,000
Total approximate cost avoidance in rent and DHS for released and vacated	$603,000

Figure 9.47. Building 53 Breakdown

[63] Reduction of real property footprint is the amount of space released back to GSA.

Building 810 – Alternative 1 also includes releasing and vacating space in Building 810, which is primarily used as warehouse space and storage. The Science and Information Delivery cost center has plans to release 77,733 USF of warehouse space and vacate 3,400 USF of office space in the A-Bay. This space consolidation may result in a rent and DHS cost savings of approximately $794,000. **Figure 9.48** provides a breakdown of results from space moves in Building 810 in FY2012.[64]

Building 810	
Total amount of space released and/or vacated	81,133 USF
Reduction of real property footprint	77,733 USF
Total approximate cost avoidance in rent and DHS for released space	N/A
Total approximate cost avoidance in rent and DHS for released and vacated	$794,000

Figure 9.48. Building 810 Breakdown

Alternative 2: *Vacate older buildings and consolidate into existing space.*

Alternative 2 is to release space in some of the older GSA provided Buildings – 20, 21, 21A, and 21B — and move into newer facilities – Buildings 25, 95, and 810. This would include consolidating Buildings 25, 53, 95, and 810; vacating Buildings 21 and 21B; and releasing space in Building 20.

This alternative assumes that the Survey should move into space available in Building 53, although not a new facility. The working conditions in Building 53 may not fully meet Survey standards, but the building has the capacity to house employees, equipment, and storage from several of the older facilities. Building 53 is not considered "prime" real estate, but must be used in Alternative 2 as swing space to accommodate consolidation in other facilities. In order for some space plans to take place, some cost centers in Buildings 20, 25, 53, 95, and 810 may need to consolidate into their existing space.

Implementing some of the FY2012/2013 high priority projects may create a cost

[64] Total approximate cost avoidance in released space cannot be calculated due to unavailable information.

avoidance of approximately $2.6 million in rent and DHS costs.[65] In addition, consolidation may create more efficient utilization rates in Buildings 20, 21A, 21B, 25, 53, 95, and 810. The total release of Building 21 may not be completed until FY2014/2015 due to the phased approach for vacating laboratory space.

Alternative 2 could be implemented in a phased approach. The information below details space moves from fiscal year 2012 to 2015. Reduction of the real property footprint is the amount of space released back to GSA. The total cost avoidance in rent and DHS for the Survey is calculated from savings from releasing space back to GSA. The total cost avoidance in rent and DHS for cost centers is calculated by the savings to vacate and release space.

FY2012/FY2013 Moves

Building 20 – To help meet utilization standards, the Crustal Geophysics and Geochemistry Science Center and Central Mineral and Environmental Resources Science Center would release approximately 16,331 USF of space on the first floor of Building 20 and consolidate into its existing space. Not taking into account other costs or factors, the release of this space may result in a rent and DHS cost avoidance of an estimated$370,000.

In the D1000 wing of Building 20, the Rocky Mountain Area REx would vacate 7,352 USF of space and backfill space in the 1600 wing of Building 25, a newly created "Science Executive" wing. Vacating this space may result in a cost avoidance of approximately $96,000 in rent and DHS savings. The DFCST approved this project in March 2012. Vacating this space may result in a reduction of approximately 200 SF per person.

The Minerals Information Cost Center should also release approximately 1,400 USF in the north end of the second floor in Building 20. Like the Rocky Mountain REx area cost center, the Minerals Information cost center would also move to the "Science Executive" wing of Building 25. Although rent costs per SF are higher in Building 25 than Building 20, the release of this space may result in a rent and DHS cost avoidance of approximately $2,000.

In addition, the Branch of Publication would release approximately 11,000 USF back to GSA in the north end of the second floor. The OA for this space expires in August 2012. Release of this space and not renewing the OA may result in a cost avoidance of approximately $142,000.

Implementing these space consolidations and releases could result in an annual cost avoidance of approximately $610,000 in rent and DHS costs. **Figure 9.49** provides a breakdown of results from space moves in Building 20 in FY2012/FY2013.[66]

[65] Denver Space Team March 2011 Synthesis Plan.
[66] Reduction of real property footprint is the amount of space released back to GSA.

Building 20	
Total amount of space released and/or vacated	36,152 USF
Reduction of real property footprint	28,800 USF
Total approximate cost avoidance in rent and DHS for released space	$514,000
Total approximate cost avoidance in rent and DHS for released and vacated	$610,000

Figure 9.49 Building 20 Breakdown

Building 25 – The OA for Building 25 expires in the summer of 2012, and because this facility is in higher-quality than others, the Survey plans to renew this lease. To reduce the Survey's space and meet the utilization average of 180 office USF per person goal, employees may be required to move into Building 25, even though the rent is slightly more expensive than some of the other facilities. The total rent amount is $2,283,908 (or $19.36/RSF), which includes shell rental rates, operating costs, and joint use charges.

Under this alternative, the Central Energy Resources Science Center would vacate 4,871 USF of space in the 1925 area and consolidate into its existing space in Building 25. This may result in a rent and DHS cost avoidance of approximately $135,000.

In addition, the Geology and Environmental Change Cost Center should vacate 7,642 USF in the 1600 wing of Building 25. This 1600 wing should become the "Science Executive" wing for employees and functions from Buildings 20 and 53. **Figure 9.50** provides a breakdown of results from space moves in Building 25 in FY2012/FY2013.

Building 25	
Total amount of space released and/or vacated	12,513 USF
Reduction of real property footprint	0 USF
Total approximate cost avoidance in rent and DHS for released space	$ 0
Total approximate cost avoidance in rent and DHS for released and vacated	$347,000

Figure 9.50. Building 25 Breakdown

Building 53 – For this alternative, space consolidation plans will also include those mentioned in Alternative 1. Building 53 will release over 38,000 USF on the first floor and vacate 44,948 USF on the second floor.

Some additional space consolidation efforts include vacating 6,783 USF in the G2200 wing on the second floor of Building 53. This cost center, Enterprise Information, may consolidate into its existing space on the first floor. In addition, the cost centers in the F1200 wing on the first floor would vacate their space of 7,630 USF and backfill the 1600 "Science Executive" wing in Building 25.

In order to provide a higher quality facility, USGS should also consider asbestos and air filtration treatment. The Survey should work with GSA to acquire budget approval for asbestos cleanup in Building 53. **Figure 9.51** provides a breakdown of results from space moves in Building 53 in FY2012/FY2013.

Building 53	
Total amount of space released and/or vacated	97,545 USF
Reduction of real property footprint	83,132USF
Total approximate cost avoidance in rent and DHS for released space	$ 603,000
Total approximate cost avoidance in rent and DHS for released and vacated	$791,000

Figure 9.51. Building 53 Breakdown

Building 95 – Room 2451, which is vacant, could be the new facility for the mass spectrometer currently located in Building 21. To help further consolidation efforts, the Branch of Quality Services, could vacate approximately 2,800 of USF of office space and 6,500 USF of laboratory space. **Figure 9.52** provides a breakdown of results from space moves in Building 95 in FY2012/FY2013.

Building 95	
Total amount of space released and/or vacated	9,413 USF
Reduction of real property footprint	0 USF
Total approximate cost avoidance in rent and DHS for released space	$ 0
Total approximate cost avoidance in rent and DHS for released and vacated	$377,000

Figure 9.52. Building 95 Breakdown

Building 810 – This alternative includes releasing 77,733 USF of warehouse space in FY2012 and vacating 4,529 USF of office space in the A-bay for a rent and DHS cost avoidance of approximately $794,000. The Rocky Mountain Geographic Science Center, could also vacate 4,529 USF of space in the 8102 and 8104C area. **Figure 9.53** provides a breakdown of results from space moves in Building 810 in FY2012/FY2013. [67]

Building 810	
Total amount of space released and/or vacated	85,662 USF
Reduction of real property footprint	77,733 USF
Total approximate cost avoidance in rent and DHS for released space	N/A
Total approximate cost avoidance in rent and DHS for released and vacated	$895,000

Figure 9.53. Building 810 Breakdown

FY2013/FY2014 Moves –

Building 21B – The following cost centers comprise Building 21B: Crustal Geophysics & Geochemistry Science Center, Central Mineral & Environmental Resources Science Center, and Geology and Environmental Change Science Center. These cost centers could release space in Building 21B and consolidate into its existing space in Buildings 15, 21, and 25. The return of this building to GSA may result in a cost avoidance of approximately $110,000. **Figure 9.54** provides a breakdown of results from space moves in Building 21B in FY2013/FY2014.

[67] Data is unavailable for total approximate cost avoidance in rent and DHS for released space.

Building 21B	
Total amount of space released and/or vacated	5,660 USF
Reduction of real property footprint	5,660 USF
Total approximate cost avoidance in rent and DHS for released space	$110,000
Total approximate cost avoidance in rent and DHS for released and vacated	$110,000

Figure 9.54. Building 21B Breakdown

Building 53 – For FY2013-2014, the Office of Organizational and Employee Development could vacate 2,394 USF for an estimated rent and DHS cost savings of $26,000. This cost center should consolidate into their existing space in Building 53. **Figure 9.55** provides a breakdown of results from space moves in Building 53 in FY2013/FY2014.

Building 53	
Total amount of space released and/or vacated	2,394 USF
Reduction of real property footprint	0 USF
Total approximate cost avoidance in rent and DHS for released space	$ 0
Total approximate cost avoidance in rent and DHS for released and vacated	$26,000

Figure 9.55. Building 53 Breakdown

FY2014/FY2015 Moves –

Building 21 – The cost centers located in Building 21 (i.e., Crustal Geophysics & Geochemistry Science Center, Central Mineral & Environmental Resources Science Center, and Geology & Environmental Change Science Center) could release the entire building to GSA. The laboratory functions could be consolidated into space on the second floor of Building 95. Building 95 has more appropriate facilities that meet contemporary science standards.

The release of this space in Building 21, however, would require significant funding. These laboratory functions are partially funded through reimbursable services, meaning the scientists using the equipment are providing services to customers who then reimburse the Survey. Therefore, the release of this space should be completed in a phased approach to enable the cost center to continue to provide their reimbursable services. In addition, releasing Building 21 may require some supplementary clean-up costs. Despite costs, it is important the science mission being performed is done so in the most appropriate and quality work environments. For the first phase, USGS should release 22,000 USF of space and backfill into Building 95. **Figure 9.56** provides a breakdown of results from space moves in Building 21 in FY2013/FY2014.[68]

Building 21	
Total amount of space released and/or vacated	22,000 USF
Reduction of real property footprint	22,000 USF
Total approximate cost avoidance in rent and DHS for released space	- $143,000
Total approximate cost avoidance in rent and DHS for released and vacated	- $143,000

Figure 9.56. Building 21 Breakdown

[68] The release of space in Building 21 requires employees to backfill space in Building 95. This would result in a cost increase of approximately $143,000.

Building 810 – The Core Science Center and National Geospatial Technical Operations Center could vacate approximately 1,508 USF of space in the 7100 area and backfill into their existing space. The Core Science Center cost center could backfill into the 8000 area at 1,238 USF, and the National Geospatial Technical Operations Center into the 3040 area.

In addition, Office of Communications and Branch of Publications cost centers could move into 3,018 USF in the 2600 area, into 1,323 USF in the Lobby, and into 1,705 USF in the 8204 area of Building 810. **Figure 9.57** provides a breakdown of results from space moves in Building 810 in FY2013/FY2014.

Building 810	
Total amount of space released and/or vacated	1,508 USF
Reduction of real property footprint	0 USF
Total approximate cost avoidance in rent and DHS for released space	$ 0
Total approximate cost avoidance in rent and DHS for released and vacated	$ 31,000

Figure 9.57. Building 810 Breakdown

Alternative 3: *Vacate older buildings and construct/move into new space.*

Alternative 3 is to relocate employees and functions from five separate, older facilities – Buildings 20, 21, 21A, 21B, and 53 – into newer facilities – Buildings 25, 95, an 810. The Survey may realize its ROI in a longer period of time than Alternative 2 (i.e., more than five years). Alternative 3 consists of a potential two phase approach, as follows:

- Phase 1 - Vacate as much space as possible, as quickly as possible. For this phase, USGS should implement the steps as described in Alternative 2. Building 53 should be used as swing space to allow for cost centers to vacate space in older facilities while consolidating within their existing space.
- Phase 2 - Obtain GSA approval to construct a new facility that meets the science mission needs and contemporary working environment standards. The Survey would work with GSA to develop construction plans that meet science mission goals and objectives.

In addition, it is important to note that there may be some significant costs involved with releasing Building 21, which is primarily used for laboratory purposes. The facility is laboratory-intensive, and there would be costs associated with moving equipment and facilitating laboratory clean-up costs. It is estimated that the transfer of the mass spectrometer and clean-up may cost upwards of $1.0 million.

Due to current space needs, if the Survey vacated the older buildings, cost centers would need space into which to move. Space in the newer facilities, such as Buildings 95 and 810, do not have enough vacant space to house the number of employees currently located in the older facilities. The Survey would most likely need to use Building 53 and other older buildings, if appropriate, as swing space to accommodate the transfer of cost centers. Consolidation moves should be completed by FY2016 in order to build a new facility.

Alternative 3 also includes the opportunity to have GSA construct a new facility that meets the science mission needs and contemporary working environment standards at the DFC. In order to construct a new facility, the Survey must release its space in the older facilities. This alternative has a large upfront investment for USGS in terms of consolidation moves, and investments from GSA for construction and possibly demolition. In addition, the Survey may face significantly higher rent costs in a new, higher quality facility. However, in the long-term, a new facility may make it easier to meet 180 utilization requirements. Meeting utilization standards may help the Survey pay for less space, even though it is at a higher cost.

Scope

The preferred alternative is Alternative 2. This is a proposal to vacate older, lower quality GSA provided buildings, which have high lease and operating costs, and consolidate into newer facilities, where possible. This proposal would vacate Buildings 21 and 21B; release space back to GSA in Building 20; and consolidate employees, equipment, and storage in Buildings 25, 53, 95, and 810. This proposal would improve space utilization, address facilities repairs and upgrades, provide more efficient and contemporary space for science programs, and reduce uncontrolled lease cost increases.

Schedule

Provided no unanticipated hurdles, it is anticipated that USGS may vacate approximately 400,000 RSF by the end of FY2014. It is anticipated that Building 21 may be released to GSA by the end of FY2014 because the space release must be completed in a phased approach to accommodate the science mission that is performed in that building.

Costs

The proposed alternative (Alternative 2) would address utilization challenges, provide staff with a high quality working environment, as well as release space back to GSA. The release of space will help the Survey realize cost avoidances in rent and DHS fees. Funding for this alternative would come from several sources including: any funds that cost centers may have and DMCI funding.

In FY2012/2013, the Survey should see a release of space in Buildings 20, 53, and 810.

For FY2013/2014, the Survey should see a release of space in Building 21B, and for Building 21 in FY2014/2015.

It should be noted that the reduction in rental rates alone do not accurately depict the costs associated with the Alternatives as there are a number of intangible savings including enhancements in science support and safety, increased productivity, and improved utilization rates; which are all important but difficult to assign specific dollar values. Other disadvantages, however, such as TIs and costs to move employees and functions, are investments that will eventually be returned.

Considering the tangible annual costs – rental fees, operating costs, and investments – Alternative 1 provides a larger cost savings realized through this proposal than the Status Quo and other alternatives. Alternative 2 will require an upfront investment in FY2012 of approximately $3.15 million, most of which will be used for TIs.

Assumptions

Figure 9.58 displays the cost assumptions used for the analysis.[69]

Cost Element	Description	Assumption
1.12	IT / Telecommunications	IT reconfiguration costs are $150/person
1.8	Tenant Build Out	Office TI costs are approximately $50/SF
1.8	Tenant Build Out	Laboratory TI costs are approximately $75/SF
1.9	Moves	Moving costs are approximately $600/20 people
1.13	Environmental	Environmental cleanup for labs is approximately $55/SF

Figure 9.58. Cost Assumptions

Risk Assessment

Provided below in **Figure 9.59** are the risks associated with each alternative. This table is from the BCA template and used to assess the overall risk for the alternatives. The impact is a score given from 0-10, where zero is no impact to the mission and ten is mission failure. Each risk is assessed on the likelihood of it occurring. A zero is defined as no probability of the risk occurring, and a ten means there is a certain occurrence.

[69] Cost assumptions were given to the Survey by the Denver Federal Center Branch of Management Services.

ID	Risk Type	Description	Impact	Baseline Status ...	Alt. №1 Consol ...	Alt. №2 Vacate ...	Alt. №3 Vacate ...
0	PLACE HOLDER	DO NOT DELETE					
1	Administrative	Safety concerns related to facility condition	9	10	10	6	2
2	Administrative	GSA approval of alternative	8	0	2	6	10
3	Administrative	Lack of buy-in from stakeholders (e.g., cost centers, administration)	7	2	2	6	8
4	Administrative	GSA funding of alternative (e.g., funding for asbestos removal)	6	0	5	5	10
5	Administrative	Remediation clean up	2	0	0	6	10
6	Cost/Financial	Disruption to science and inability to receive reimbursable income	10	2	2	9	10
7	Cost/Financial	Increased rent costs/SF	8	8	6	4	8
8	Cost/Financial	Alternative exceeds availability of funds	6	0	8	9	10
9	Organizational	Inability of alternative to sustain future operations	9	8	6	4	2
10	Organizational	Disruption to science programs caused by moves	8	0	4	10	10
11	Organizational	Inability to perform mission	8	8	7	6	5
12	Technical	Inefficient space utilization	8	10	8	4	3
13	Technical	Shorten lifespan of equipment and components	8	9	9	4	2
End Risk Scores							

Figure 9.59. Risks Assessment

Because there are a number of facilities and factors involved with the move, there is a high risk associated with the Alternatives. Listed below in **Figure 9.60** are the risks associated with each alternative. The impact is a score given from 0-10, where zero is no impact to the mission and ten is mission failure. Each risk is assessed on the likelihood of it occurring. A zero is defined as no probability of the risk occurring, and a ten means there is a certain occurrence.

Risk Type	(n)	Baseline Status Quo Alter ...	Alt. №1 Consolidate into ...	Alt. №2 Vacate older bui ...	Alt. №3 Vacate older bui ...
Administrative	(5)	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
Cost/Financial	(3)	●●●●●●●●○○	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
Legal/Contractual	(0)	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○
Organizational	(3)	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
Schedule	(0)	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○	○○○○○○○○○○
Technical	(2)	●●●●●●●●●●	●●●●●●●●●●	●●●●●○○○○○	●●●○○○○○○○
Average Risk	(13)	●●●●●●●●○○	●●●●●●●●●○	●●●●●●●●●●	●●●●●●●●●●

Figure 9.60. Overall Risk Analysis

Administrative Risks

The safety concerns identified are currently a high risk, and must eventually be addressed to meet modern standards. Several of the older facilities, which were constructed in the 1940s, have asbestos contaminated walls. Alternatives 2 and 3 will address some of the safety concerns by moving employees and equipment out of lower quality facilities and into the newer buildings on the DFC. Remediation clean up, however, poses a greater risk to these Alternatives (e.g., asbestos abatement can be costly).

One of the greatest risks associated with consolidating and releasing space back is receiving GSA approval to take back the space. As many agencies are reducing their real property footprint to lower their rent and meet space requirements, GSA has received an influx of space. In an effort to market space to potential tenants, and meet their safety

and accessibility requirements, GSA will only take back marketable space (e.g., fairly large blocks of space that have private entry and exit locations, window offices). The more space the Survey vacates across multiple buildings, the greater the risk that GSA does not agree to take back the space. GSA approval of releasing space poses the greatest risk to Alternatives 2 and 3.

In addition to GSA approval, there is a risk that Alternatives 2 and 3 will not receive funding assistance through GSA. GSA is only required to provide agencies with the shell of a building, and generally does not pay for asbestos abatement or any other remediation costs. Alternative 2 requires that asbestos abatement be performed before either consolidating into space or returning the space back to GSA. Alternative 3 includes the possibility of having GSA build a new facility in replacement of the older, poor quality facilities.

Alternatives 1, 2, and 3 have some consolidation dependencies (e.g., cost centers must move out of space before other cost centers can move into space). Lack of buy-in from stakeholders poses a risk to Alternatives 2 and 3. These alternatives cause stakeholders to consolidate within their own space and possibly move into swing space that is not defined as prime real estate. The greatest risk to these alternatives comes from the lack of authority from any one stakeholder to tell cost centers when and where to vacate or release space. There is also no guarantee that cost center interests are taken into account during the consolidation process. The more consolidation moves involved, the greater risk that cost centers are not satisfied with the suggest moves and releases of space.

Cost

As the Survey has witnessed recent budget reductions, cost is a primary driver in this analysis. Rental cost increases associated with GSA provided buildings, as well as projections for future uncontrolled rental increases, facility upgrades, and consolidation costs, must factor into this analysis.

Some of the science programs support the mission through reimbursable income, meaning some of the funding received from customers is allocated back to the supported cost center. This reimbursable income helps cost centers support their shortfall. Disruption to science and the inability to receive reimbursable is a risk for Alternatives 2 and 3. For these alternatives, space is being released in Building 21, which is primarily used for laboratory work. Transferring equipment, such as the mass spectrometer from Building 21 to Building 95, may suspend the science program being performed.

The Survey has experienced rental cost increases associated with GSA provided buildings over the past several years. Bureaus are tasked with reducing their utilization rates, which can partially be achieved by releasing space back to GSA. Increased rental costs poses the greatest risks to the Status Quo, the option that has the Survey remain in 13 separate locations and not remain in fewer number of GSA provided buildings.

Organization

The Status Quo does not meet the mission objective of performing the science mission. For example, a multi-million dollar piece of laboratory equipment in Building 21 is placed underneath a tarp due to a leak in the ceiling. GSA is unable to identify the source of the leak and poor quality facilities may endanger the science being performed

in some buildings. The Survey needs adequate facilities to support regular collaboration and communication and enhance the science programs that are being performed.

The space moves associated with Alternatives 2 and 3 influence the risk of disrupting the science programs. The transfer of employees, equipment, and functions from one building to another could take several days. There is a possibility that the science programs will be disrupted during this time.

Technical

Alternatives 2 and 3 address the overall risks of impacts more than the Status Quo. The risks associated with the potential for inefficient space utilization would be minimized under the Alternatives. Fully consolidating employees, equipment, and storage into newer, higher quality facilities will enhance the visibility of USGS and improve space utilization rates.

Additionally, lifespan of equipment and components is best addressed under Alternatives 2 and 3, with a greater risk occurring under the Status Quo and Alternative 1 options. Poor quality facilities could possibly shorten the lifespan of equipment and components.

Benefits

Figure 9.61 shows how the Status Quo and Alternatives were scored for the benefits. Most of the benefit analysis focuses on how Alternatives contribute to the USGS mission.

Figure 9.61. Scoring of the Benefits

Consolidation under Alternatives 1, 2, or 3 have positive impacts on Mission Dependency, facilitates the goals of USGS, and increases opportunities to fulfil functional requirements or purposes. Alternatives 2 and 3 have an overall positive impact on overall Mission Dependency, and help support the Survey's both the short and longer-term strategic goals and objectives.

The benefits scores reflect issues related to consolidation and escalating rent cost and indicate that Alternative 2 and 3 best meet the needs of the cost centers at the DFC. The Status Quo and Alternative 1 represent the least dependable and efficient facility options. **Figure 9.62** displays the outcome of the benefit analysis. Alternatives 2 and 3 most strongly support the Survey's mission and meet operating benchmark and facility utilization index recommendations.

Benefit	Baseline Status Quo Alter ...	Alt. №1 Consolidate into ...	Alt. №2 Vacate older bui ...	Alt. №3 Vacate older bui ...
Mission Dependency	●●●●○○○○○○	●●●●●●○○○○	●●●●●●●●○○	●●●●●●●●●○
Condition Index	○○○○○○○○○○	○○○○○○○○○○	●●●●●●○○○○	●●●●●●●●●○
Operating Benchmarks	○○○○○○○○○○	●●●○○○○○○○	●●●●●●○○○○	●●●●●●○○○○
Facility Utilization Index	○○○○○○○○○○	●●●●○○○○○○	●●●●●●●●○○	●●●●●●●●●○
Weighted Average	●●●○○○○○○○	●●●●●○○○○○	●●●●●●●●○○	●●●●●●●●●○

Figure 9.62. Overall Benefit Analysis

Comparison of Alternatives

The proposal (Alternative 2) will result in short term cost avoidances in rent costs, due to consolidation of space, and meets mission and organizational goals for the Survey at the DFC. Ultimately, Alternative 2 is predicted to result in the lowest costs to the Survey (with cost avoidance over time) while providing facilities that meet science and organizational needs.

Overall, the alternatives all have a high risk to the impact of the mission. Status Quo has the minimum risk that will impact the science mission, but also has the fewest benefits. The poor quality of the older facilities (e.g., Building 20, 21, and 53) and high utilization rates pose risks to the science mission that other Alternatives address. In the Status Quo option, cost centers are required to use their science mission funding to support the remaining short fall. Other alternatives appropriately address this short fall. In addition, the Status Quo option includes increased and uncontrollable rent and DHS costs for their GSA provided facilities.

Alternative 1 is to begin the consolidation process into Buildings 53 and 810. Although the Survey may achieve cost avoidance by consolidating its space, employees and equipment are still located in poor quality facilities. This alternative requires a smaller upfront investment, but may see smaller cost savings in future years. This Alternative begins to address improving utilization rates, while also supporting the program activities outlined in the Survey's short and longer-term plans.

Alternative 2, the preferred alternative, addresses the safety concerns of occupying older facilities, and is projected to meet the Survey's strategic plan facility goals. Alternative 2 addresses the risk of inefficient space utilization by consolidating cost centers into their existing space. This alternative also addresses the escalating rent and DHS issue by releasing space in older facilities back to GSA. Alternative 2 may require some initial investment for the space moves, but is estimated to achieve annual cost avoidance over time. The cost avoidance is achieved by reducing the amount the Survey pays in lease

costs to GSA. The alternative also provides a solution for cost centers that attribute to the short fall with their science program dollars. Alternative 2 requires cost centers to work together to consolidate and vacate space; this may require cost centers to temporarily occupy less desirable space while other consolidation moves open up areas for occupancy. Although there are some risks associated with this alternative, the benefits appear to support the Survey's mission and strategic goals.

Alternative 3, to vacate the older buildings and obtain approval for GSA to construct a new facility, has the greatest benefit to Mission Dependency, Condition Index, Operating Benchmarks, and Facility Utilization Index. A new facility would meet condition index standards, as well as utilization rate requirements. While this alternative could meet the Survey's needs, it is not a feasible option. GSA will only agree to construct a new facility when its current available space does not meet the mission needs of USGS.

Figure 9.63 displays the overall summary of the analysis.

		Baseline Status Quo Alternative	Alt. №1 Consolidate into existing space	Alt. №2 Vacate older buildings and	Alt. №3 Vacate older buildings and
Summary of Life Cycle Cost Estimate					
(A)	Investment (Inflated Dollars)	$0	($3,143,883)	($7,211,963)	($7,211,963)
	Investment Period	No Investment	2012	2012 to 2016	2012 to 2016
(B)	Recurring Costs (2012 to 2021)	($172,523,976)	($155,778,756)	($132,892,668)	($132,892,668)
(C)	Disposal Costs (2012 to 2021)	$0	$0	$0	$0
(D)	Reimbursable Income (2012 to 2021)	$0	$0	$0	$0
(E)	Total 10-Year Inflated Alternative Costs (π=2.0%) (A+B+C+D)	($172,523,976)	($158,922,639)	($140,104,631)	($140,104,631)
Net Present Value (NPV)					
(F)	Total Discounted Costs (Nom. Discount Rate = 4.6%)	($129,479,906)	($120,762,445)	($108,036,725)	($108,036,725)
(G)	Net Present Value (F less $F_{Baseline}$)		$8,717,461	$21,443,181	$21,443,181
Return On Investment (ROI)					
(H)	Total Discounted Investment	$0	($3,143,883)	($6,633,431)	($6,633,431)
(I)	Net Discounted Investment (H less $H_{Baseline}$)		($3,143,883)	($6,633,431)	($6,633,431)
(J)	Total Discounted Recurring Costs/Income	($129,479,906)	($117,618,562)	($101,403,293)	($101,403,293)
(K)	Net Return (J less $J_{Baseline}$)		$11,861,344	$28,076,613	$28,076,613
(L)	Return On Investment (ROI) (K÷I) (10-Year Annualized)		16.9%	18.0%	18.0%
Internal Rate of Return (IRR)					
(M)	Internal Rate of Return (2012 to 2021)		46%	70%	70%
Payback Period					
(N)	Year of Analysis when NPV is equal to zero		2.5 Years	1.8 Years	1.8 Years
Average Risk		●●●●●●●●○○	●●●●●●●●●○	●●●●●●●●●●	●●●●●●●●●●
Average Benefit		●●●○○○○○○○	●●●●○○○○○○	●●●●●●●●○○	●●●●●●●●●○

Figure 9.63. Overall Summary of Analysis

Recommendation

Alternative 2—consolidate into new buildings (e.g., 25, 95, and 810), vacate older buildings (21 and 21B), and release space in Building 20 – is the best overall value to the Survey and Interior. This alternative will result in a release of space in GSA provided facilities, while consolidating into the Survey's new buildings. This alternative effectively begins to address the shortfall that must be covered by cost centers; by consolidating

space, there should be a decrease in shortfall.

This recommendation should be planned using DMCI funding. Cost savings achieved from the FY2012/2013 moves will be used to help fund additional space consolidation projects in FY2013/2014/and 2015.

The DFC, including USGS buildings highlighted in blue, is shown in **Figure 9.64.**

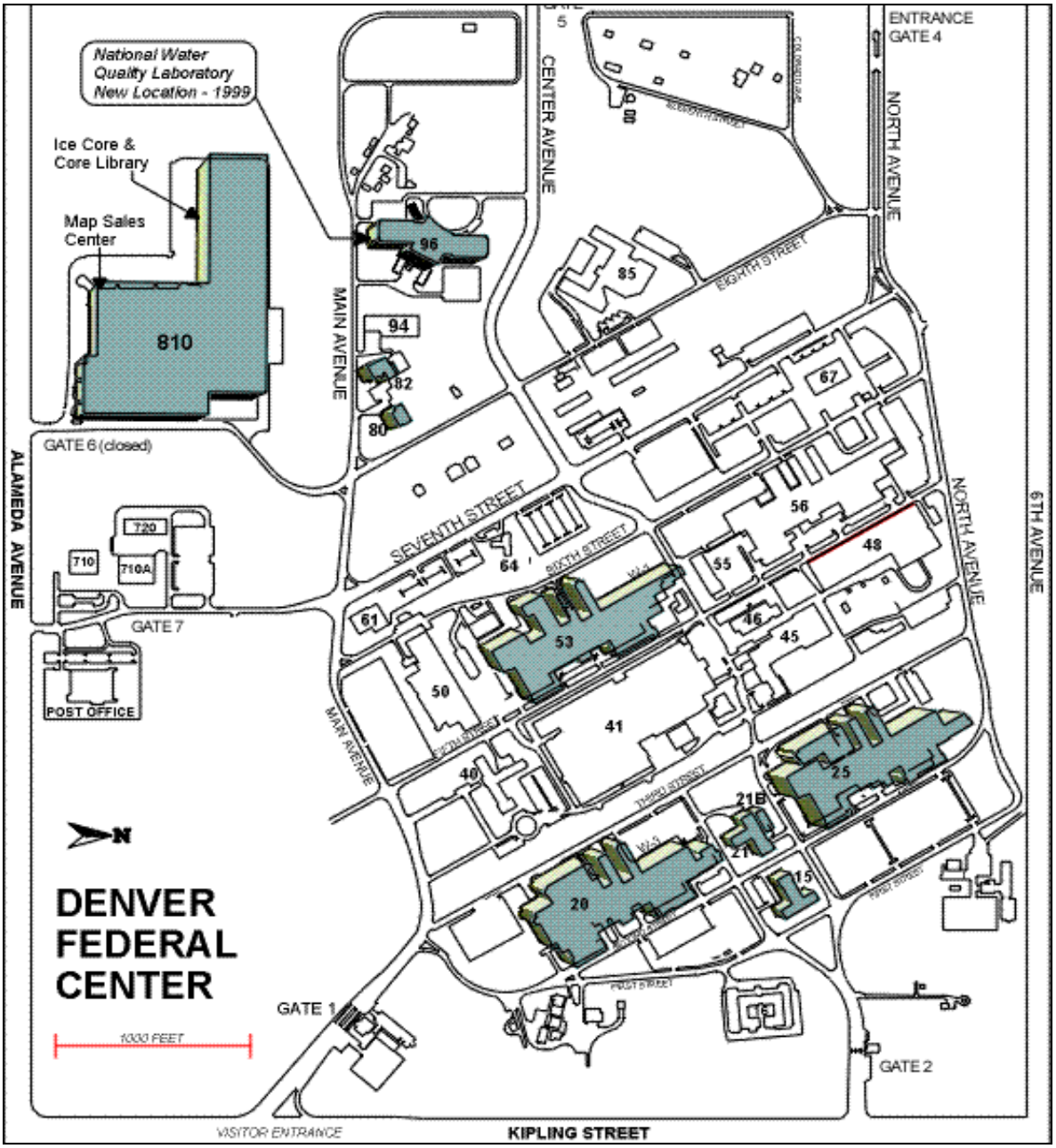

Figure 9.64. USGS Federal Center Buildings

Appendix K. Menlo Park Campus Business Case Analysis

- **Project Title:** Menlo Park Campus Space Consolidation Project
- **Date:** March 30, 2012
- **Prepared by:** BMS
- **Region:** Western
- **Discipline:** Integrated
- **Type of Project:** Consolidate space

Executive Summary

The Menlo Park Campus (Menlo Park) in California consists of 22 cost centers, occupying space in 15 separate, GSA provided buildings. These buildings vary in size, level of use, condition, and purpose. A common theme among the building tenants is an inability to conduct effective science with efficient use of facilities in the current housing situation. Associated challenges include aging facilities that, in some cases, do not meet the demands of a premier scientific organization; decreasing population due to decentralization of cost centers from Menlo Park to be closer to the science (e.g., Vancouver, Alaska, Arizona); and increasing rent cost of up to approximately $4.7 million within the current Menlo Park footprint according to GSA rent appraisal estimates for FY2013.[70] As one of the three major centers, Menlo Park is a key component to helping the Survey meet goals set forth in the *Five-Year Space Management Plan: FY2011 - 2015* related to strategic planning for space.[71] To do this, Menlo Park must "optimize facilities use… by improving space utilization, controlling rent and operating costs, releasing unneeded space, and increasing collocation consistent with science objectives."

The following BCA assesses alternatives to reduce facility costs and consolidate employees and functions into the highest quality facilities on Menlo Park. Ultimately, the alternatives work towards Menlo Park's ten year strategic plan of releasing Building 2, Building 3, and Building 3A to construct a new facility that addresses structural deficiencies that negatively impact the scientific mission. **Figure 9.65** provides detail on the Status Quo and three alternatives.

[70] USGS Cost Savings and Innovation Plan, page 3.
[71] *Five-Year Space Management Plan: FY2011 - 2015*, page 12.

Alternative	Name	Description
Status Quo	Baseline	Remain in 15 separate buildings and do not consolidate staff and equipment to release space on the Menlo Park campus. The existing buildings comprise 365,674 RSF at an average rental cost of $26.65 per RSF. This situation does not allow Menlo Park to address identified inefficiencies, facility functionality challenges, and expected future lease cost increases. Additionally, organizational strategic plans including improved space utilization metrics to realize cost avoidance will not be achieved.
Alternative 1	Consolidate and release the first floor of Building 3	Under this alternative Menlo Park will release almost the entire first floor of Building 3 to GSA in September 2012 and release the rest of Building 3 to GSA in September 2017. This will result in space reduction of 38,327 RSF in 2012 and 51,229 RSF in 2017, totaling 89,556 RSF released to GSA. Cost centers involved in the plan will consolidate into existing spaces and will not require new additional space. This alternative involves the relocation of approximately 162 people and involves 8 cost centers plus the California Geological Survey. Completion of this alternative will improve Building 3 space utilization from approximately 354 USF to 205 USF per person.
Alternative 2	Consolidate and release Building 3, GSA builds new building	Under this alternative Menlo Park will vacate Building 3 and release the facility back to GSA. This will result in a space reduction of 89,556 RSF and reduction of the Menlo Park campus footprint from 15 separate buildings to 14 separate buildings. Cost centers involved in the plan will relocate and/or consolidate into existing space and will not require new additional space. This alternative involves consolidation of the library, relocation of approximately 200 people, and involves 9 cost centers plus the California Geological Survey. Completion of this alternative will improve Menlo Park's total space utilization from approximately 254 USF to 161 USF per person.
Alternative 3	Backfill Santa Cruz; consolidate and release Building 3, GSA builds new building	Under this alternative Menlo Park will vacate Building 3 and release the facility back to GSA in September 2013 and move into a new building in January 2016. The new building will also allow USGS to release Building 2, Building 3A, Building 4, Building 9E, and Building 9G to GSA. This will result in a space reduction of 87,558 RSF and reduction of the Menlo Park campus footprint from 15 separate buildings to 11 separate buildings. This alternative involves the consolidation of the library, relocation of approximately 40 people from Menlo Park to space in Santa Cruz, relocation of approximately 160 people within Menlo Park, and involves 9 cost centers plus the California Geological Survey. Completion of this alternative will improve Menlo Park's total space utilization from approximately 254 USF to 176 USF per person.

Figure 9.65. Menlo Park Campus Metrics

Issue Identification

The Survey is challenged at the Menlo Park Campus by a decreasing population, aging facilities that are difficult to consolidate or release, and significant lease cost increases expected in FY2013. A major hurdle is coordinating space consolidation among the 22 cost centers while accommodating Emeriti, senior scientists, and Senior Executives.

Efforts to achieve a reduced footprint at Menlo Park are underway. In 2010, the Western Coastal and Marine Geology team relocated from 42,725 RSF in Building 1 to a 40,943-RSF facility in Santa Cruz. This move, along with efforts by other cost centers (i.e., BMS, HR, Branch of Fiscal Services [BFS], Office of Communications, REx) to consolidate within Menlo

Park, reduced the Survey's current footprint by 1,782 RSF and allowed Menlo Park to release Building 1 to GSA. This resulted in estimated cost avoidance of $360,000 annually (based on expected GSA rate increases), and facilitated the collocation of the California Water Science Center into the Santa Cruz facility.[72] A second action taken by Menlo Park was release of the GeoKids Building 13, reducing the Survey's space by an additional 7,291 RSF, resulting in estimated cost savings avoidance of $276,207 annually due to expected GSA rate increases, as provided by Menlo Park facilities management. The Menlo Park campus in California consists of 15 separate GSA provided facilities to date.

The Survey is attempting additional efforts to improve conditions while reducing footprint through collaboration with GSA. This includes possible space consolidation, space release, and space renovation. However, GSA has been unable to meet these needs for the following reasons at Menlo Park:

1. **OMB and the President are increasingly scrutinizing agencies on how well they utilize their space -** Given the increased demand to vacate space, many agencies are identifying space to release back to GSA; however, GSA is primarily interested in contiguous, marketable space. This means agencies must provide an area that is similar to a "suite" in that there are separate entrances to the space, restrooms, and other amenities. To release space, the Survey has to reach agreement with GSA on the space being provided back, unless the space is provided back at the end of an OA.
2. **Lack of local demand for government space -** As part of the FAR, OMB requires agencies to move to GSA provided space, where available, when their leases expire and require them to enter new lease agreements. This decreases the leverage the Survey has on GSA to relocate to newer, more cost effective facilities if Menlo Park is not sufficient.[73] As a sparsely Federally-populated area, demand for Federal space in Menlo Park is low. This negates the potential to partner with other Federal entities through consolidation and collocation efforts.
3. **Cost for modifying space -** With aging infrastructure and increasing fiscal pressures from the economic downturn, it is increasingly difficult to modify space (e.g., laboratory updates) in ways necessary to accommodate space consolidation without impacting the progress of scientific research. Additionally, with infrastructure designed and constructed 30 or more years ago, it is not possible to retrofit much of the space to reduce large offices.

Facilities

Due to recent trends of cost center decentralization to be closer to the science, substantial lease cost increases, and the high utilization rates, there is potential to release space back to GSA. Coordinating the consolidation of 22 cost centers in a way that addresses the Survey's space needs (e.g., close to lab space, windows, privacy) while also opening up marketable space is key to successful cost reduction. Consolidating space in buildings that are generally decades behind modern building efficiencies and standards presents additional challenges. Details for buildings impacted by one or more of the alternatives are provided in the following section.

[72] USGS Cost Savings and Innovation Plan, page 1.
[73] FMR Subchapter C – Real Property, Part 102-79, Assignment and Utilization of Space.

Building 2

Building 2 is approximately 44,117 RSF comprised of mostly office space, with large offices located along the inside and outside perimeters. Moving to this building would require extensive renovation or "doubling" in office spaces. **Figure 9.66** displays metrics for Building 2.

GSA Building 2 Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$915,406	44,117	$20.7 5	572.9	59.1
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
Volcano Science Center (VSC)		8,784	44	200
Geology, Minerals, Energy, and Geophysics (GMEG)		19,348	74	261
Pacific Coastal & Marine Science Center (CMG)		3,102	20	155
Earthquake Science Center (ESC)		212	0	-
Office of Science Quality & Integrity (OSQI)		253	1	253
Alaska Science Center (ARC)		204	1	204
Astrogeology (ASTRO)		204	1	204

Figure 9.66. Building 2 Metrics

Building 3

Building 3 is approximately 89,556 RSF of primarily office space. Building 3 houses map sales and a visitor center. The cost for the visitor center is currently shared by the cost centers located on Menlo Park. Building 3 also houses the Survey's computer room, which is expensive to relocate, the auditorium, and executive conference rooms. The Survey currently holds 23,052 RSF in vacant space; however, GSA indicated they will not take back the space as there is no separate entrance and it is not marketable. Building 3 is in need of retrofitting (e.g., HVAC). **Figure 9.67** displays metrics for Building 3.

GSA Building 3 Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$2, 195,666	89,556	$24.52	844.9	67.8
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
ESC		2,8613	76	376
Western Geographic Science Center (WGSC)		11,037	38	290
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
Science Publishing Network (SPN)		4,982	14	356
Office of Information Technology Services (OITS)		7,027	18	390
BMS		4,049	14	289
Branch of Fiscal Services (BFS)		134	1	134
Branch of Human Resources (HR)		450	1	450
Regional Executive Pacific-Southwest Area (REx)		980	0	-

Figure 9.67. Building 3 Metrics

Building 3A

Building 3A is approximately 11,075 RSF. Originally constructed as a map warehouse, USGS converted Building 3A to office space and workshops in the mid 1980s. The workshops are located in the center of the facility with offices on the outside. **Figure 9.68** displays metrics for Building 3A.

GSA Building 3A Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$205,912	11,075	$18.59	395.5	63.5
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
ESC		6,686	41	163

Figure 9.68. Building 3A Metrics

Building 4

Building 4 is approximately 11,457 RSF. Built in the 1980s, it is primarily laboratory space. Some of the laboratories are classified as "dirty laboratories" because they are used for crushing rocks, other laboratories deal with specialized materials (e.g., methane). This can make it difficult to consolidate other cost centers in the building if they require a clean lab environment. **Figure 9.69** displays metrics for Building 4.

GSA Building 4 Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$295,204	11,457	$25.77	3,819.0	61.6
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
ESC		433	4	108

Figure 9.69. Building 4 Metrics

Building 9E

Building 9E is approximately 2,223 RSF. This building is primarily used for workshop space with some storage. **Figure 9.70** displays metrics for Building 9E.

GSA Building 9E Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$23,601	2,223	$10.62	1,111.5	55.5
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
ESC		777	2	389

Figure 9.70. Building 9E Metrics

Building 9G

Building 9G is approximately 5,167 RSF, and was constructed as a non-permanent building to house laboratories and offices. According to Survey facilities management, the building has far surpassed its usable life; however, the building is low rent so occupancy continues. The laboratories house radioactive materials; therefore, moving the laboratories would be costly. **Figure 9.71** displays metrics for Building 9G.

GSA Building 9G Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$102,382	5,167	$19.81	738.1	58.0
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
VSC		685	3.5	196
GMEG		1,902	6.5	293

Figure 9.71. Building 9G Metrics

Building 11

Building 11 is approximately 10,048 RSF. Originally lab space, this building has been retrofitted with the necessary communication devices to serve as the west coast's primary earthquake seismic network, providing real time seismic information. As a result, equipment relocation would be costly. **Figure 9.72** displays metrics for Building 11.

GSA Building 11 Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$203,342	10,048	$20.24	386.5	65.3
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
ESC		5336	27	198
VSC		326	1	326

Figure 9.72. Building 11 Metrics

Building 15

Building 15 is approximately 145,622 RSF. It is comprised of office space, the newest laboratories on the campus, and the library. The building cost an estimated $25 million to construct in the early 2000s and was considered "state of the art." The building was built with scientists in mind; therefore, laboratories are located along the inside of the building with adjacent offices on the perimeter. **Figure 9.73** displays metrics for Building 15.

McKelvey Building 15 Metrics				
Total Lease Costs	**RSF**	**Lease Costs per RSF**	**Utilization**	**FY2012 API Score**
$5,203,579	145,603	$35.74	1,086.6	80.0
Cost Center Detail				
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
GMEG		5087	17	299
CMG		3179	20	159
VSC		1675	9	186
National Research Program		24917	116	215
OITS		1497	5	299
Core Science Systems (CSS)		1581	9	176
Office of Communications and Publications (OCP)		3051	12	254
California Water Science Center (CGS)		170	1	170
OMS		310	1	310
Enterprise Information & Investment Management (EIIM)		158	1	158
Cost Center		**SF**	**Full Time Equivalent**	**Utilization (%)**
National Water Quality Assessment (NWQA)		209	1	209
Office of Surface Water (OSW)		209	1	209

Figure 9.73. Building 15 Metrics

Management

Facilities management is challenged with trying to help 22 separate cost centers within one campus. With no authority, it is difficult to implement comprehensive projects that would reduce the Survey's footprint significantly or in a way that would provide marketable space. Renovation requirements needed to accommodate consolidation efforts are difficult due to structure design of some buildings (e.g., Building 2 has large offices that cannot be divided without work to the HVAC). Successful updates have been accomplished with buildings where

possible (e.g., Building 3A was converted from a map warehouse to office space). Efforts to release less desirable buildings are often complicated by specific circumstances (e.g., Building 3 has a computer room located on the first floor, which would be costly to duplicate).

Communications/Collaboration

The Menlo Park campus was one of the largest science centers at the Survey until fairly recently when employees relocated to be closer to the science (e.g., Santa Cruz) and became more decentralized. Menlo Park at one time had over 2,200 employees and now houses approximately 500 employees. The communication and collaboration among other science centers within close proximity is moderate. Santa Cruz is located less than 50 miles away, but the OA does not expire until 2023, decreasing the incentive to achieve an average utilization of 180 office USF per person. However, 40 scientists remain in Menlo Park despite being assigned to Santa Cruz as part of project plan negotiations to gain Survey approval for the Santa Cruz lease. This is important relative to Menlo Park space consolidation efforts, including the alternatives discussed in this BCA. For example, there is not enough space in the other occupied buildings to comfortably house Building 3 employees if the Survey plans to release Building 3. If the Western Coastal and Marine Geology cost center moved their remaining employees to Santa Cruz per the original agreement, it would free up space in Menlo Park for employees in Building 3. However, there is a high degree of collaboration between the remaining employees and cost centers in Menlo Park, making it challenging to separate the scientists. Additionally, construction of laboratory space needs to be completed in Santa Cruz prior to relocation of remaining Menlo Park Western Coastal and Marine Geology scientists to avoid disruption to the science.

Costs

Rent costs at Menlo Park campus are anticipated to increase by as much as approximately $4.7 million - a 47% escalation on current rent costs, according to GSA rent appraisal estimates for FY2013.[74] Additionally, the Survey is unable to release nearly 20,000 SF of vacant in various buildings on the campus because GSA does not consider the space marketable. This figure is expected to rise as tenants retire, consolidate, or move to other locations.

In summary, the current situation places the Survey at risk of not being able to complete important scientific mission objectives due to aging facilities that lack necessary structural integrity. Also, it forces the cost centers to use their limited budget to pay for a growing amount of vacant space. With little onsite authority, it is extremely difficult for the staff at the campus to make significant progress with consolidation and renovation efforts. With increasing pressures on budgets and a focus on efficient use of space, the future funding for science is at risk unless significant action is taken soon.

Purpose of Initiative

In the short term, the initiative is to consolidate space at Menlo Park campus to allow the Survey to release as much space as possible to GSA. The long term goal is to release two or three entire buildings on the campus and collaborate with GSA to build a new facility that will properly accommodate the scientific mission. More specifically, a new facility must be

[74] USGS Cost Savings and Innovation Plan, page 3.

constructed with proper reinforcements to withstand an earthquake. The facility should enable continued functionality of vital earthquake research and monitoring equipment during, and after an earthquake. As identified by Survey scientists, the current buildings will not accommodate this type of scenario. It will be a loss to the Survey's scientific progress if monitoring is compromised during and after an earthquake as a result of insufficient building reinforcements, and could potentially have a negative impact on the public perception of the Survey as a premier scientific organization. A solution must be identified that releases marketable space to GSA, provides cost centers with necessary space and accommodations for science, and works toward long term goals of Menlo Park.

Description of Alternatives

Status Quo: *Staff and equipment remain in 15 separate locations and do not consolidate or collocate.*

Currently 581 scientists, staff, emeriti, and reimbursable clients occupy the Menlo Park campus.[75] The existing buildings comprise 365,674 RSF at an average rental cost of $26.65 per RSF[76] with an estimated increase to $39.00 per RSF in FY2013.[77] Some buildings are 30 or more years old and do not meet the structural requirements necessary to accomplish important scientific objectives. There is approximately 23,000 RSF in vacant space that GSA will not take back because it is not marketable. This situation forces the Survey to perform science under the risk of facilities inhibiting the mission. It does not allow the Survey to meet Federal and internal objectives related to reduced footprint and efficient use of space. Additionally, organizational strategic plans including improved space utilization metrics to realize cost avoidance are not achieved under the Status Quo.

Alternative 1: *Consolidate and release Building 3.*

Under this alternative Menlo Park will release almost the entire first floor of Building 3 to GSA in September 2012 and release the rest of Building 3 to GSA in September 2017. This will result in space reduction of 38,327 RSF in 2012 and 51,229 RSF in 2017, totaling 89,556 RSF released to GSA. Cost centers involved in the plan will consolidate into existing spaces and will not require new additional space. This alternative involves the relocation of approximately 162 people and involves 8 cost centers plus the California Geological Survey. Completion of this alternative will improve Menlo Park's space utilization from approximately 354 USF to 155 USF per person. The following steps will be taken with this alternative:

FY2012 Moves –

1. Move Earthquake Science Center (ESC) from Building 3-second floor North into Building 3-second floor South and Building 11.
2. Move Western Geographic Science Center (WGSC) from the east side of Building 3-first floor into Building 3-second floor North.
3. Move California Geological Survey (CGS) from Building 3-first floor South into Building 3-second floor North.
4. Discontinue Map Sales and vacate Map Sales space in Building 3-first floor South.

[75] Utilization metrics provided by USGS Menlo Park facilities group on March 17, 2012.
[76] Square footage and rental cost metrics identified in FRPP data.
[77] GSA estimated appraisal increase.

5. Move Geology, Minerals, Energy, and Geophysics (GMEG) from Building 15-third floor into Building 2.
6. Move BMS, BFS, and Branch of Human Resources (BHR) from Building 3-firstt floor into Building 15-third floor.
7. Release the Building 3-first floor, with the exception of the computer room, to GSA.

FY2016 Space Moves –

1. Relocate the computer room and remaining Building 3 functions to a location to-be-determined.

This project will work towards Menlo Park's long-term plan of releasing Building 3 to GSA with an anticipated release of September 2017. Menlo Park submitted a CSIP PDS funding request to fund the 2012 portion of this alternative.

Alternative 2: *Consolidate and release Building 3, GSA builds a new building.*

Under this alternative Menlo Park will vacate Building 3, release the facility back to GSA in September 2013, and move into a new building in January 2016. The new building will also allow USGS to release Building 2, Building 3A, Building 4, Building 9E, and Building 9G to GSA. This will result in a space reduction of 87,558 RSF and reduction of the Menlo Park campus footprint from 15 separate buildings to 11 separate buildings. This alternative involves consolidation of the library, relocation of approximately 200 people, and involves 9 cost centers plus the California Geological Survey. Completion of this alternative will improve Menlo Park's total space utilization from approximately 254 USF to 186 USF per person. The following steps will be taken with this alternative:

FY2013 Moves –

1. Consolidate the library to 9,862 RSF (40% its current size).
2. Renovate Building 2 to make more efficient use of office space.
3. Construct a new auditorium and create cubicle space in the 14,792 RSF of Building 15 formerly housed by the library.
4. Relocate GMEG and Volcano Science Center (VSC) from Building 9G to Building 2 (approximately 10 FTE).
5. Relocate GMEG from Building 15 to Building 2 (approximately 17 FTE).
6. Relocate Pacific Coastal and Marine Science Center (CMG) from Building 15 to Building 9G (approximately 20 FTE).
7. Relocate Science Publishing Network (SPN), Office of Information Technical Services (OITS), BMS, BHR, and BFS from Building 3 to Building 15 (approximately 48 FTE).
8. Relocate WGSC and ESC from Building 3 to Building 15 (approximately 38 FTE).
9. Relocate ESC from Building 3 to Building 9E (approximately 2 FTE).
10. Relocate ESC from Building 3 to Building 11 (approximately 3 FTE).
11. Release Building 3 to GSA.

FY2014 through FR2015 Moves – GSA constructs new building.

FY2016 Moves –

1. Consolidate ESC (approximately 150 FTE), VHZ (approximately 47.5 FTE), GMEG

(approximately 97.5 FTE), OSQI (approximately 1 FTE), ASC (approximately 1 FTE), and ASTRO (approximately 1 FTE) into newly constructed GSA building (approximately 298 FTE total).

2. Relocate CMG to Building 11 (approximately 20 FTE).

This project will expedite Menlo Park's ten year plan to release Buildings 2, 3, and 3A, along with providing a new building which will mitigate the risk of an earthquake halting the USGS mission.

Alternative 3: *Backfill Santa Cruz, consolidate and release Building 3, GSA builds a new building.*

Under this alternative Menlo Park will vacate Building 3 and release the facility to GSA, resulting in space reduction of 89,556 RSF, decreasing the Menlo Park campus footprint from 15 buildings to 14 buildings. Cost centers involved in the plan will relocate and/or consolidate into existing space and will not require additional space. This alternative involves the consolidation of the library, relocation of approximately 40 people from Menlo Park to space in Santa Cruz, relocation of approximately 160 people within Menlo Park, and involves 9 cost centers plus the California Geological Survey. Completion of this alternative will improve the space utilization at Menlo Park from an average of 254 USF to 176 USF per person. The following steps will be taken with this alternative:

FY2013 Moves –

1. Consolidate the library to 9,862 RSF (40% its current size).
2. Construct remaining laboratory space in Santa Cruz.
3. Construct a new auditorium and create cubicle space in the 14,792 RSF of Building 15 formerly housed by the library.
4. Relocate Pacific CMG from Building 15 to Santa Cruz (approximately 20 FTE).
5. Relocate Pacific CMG from Building 2 to Santa Cruz (approximately 20 FTE).
6. Relocate OITS from Building 3 to Building 2 (approximately 18 FTE).
7. Relocate GMEG from Building 15 to Building 2 (approximately 17 FTE).
8. Relocate ESC from Building 3 to Building 11 (3 FTE).
9. Relocate WGSC, ESC, SPN, BMS, BHR, BFS from Building 3 to Building 15 (approximately 130 FTE).
10. Release Building 3 to GSA.

FY2014 through FY2015 Moves – GSA constructs new building.

FY2016 Moves –

1. Consolidate ESC (approximately 150 FTE), VSC (approximately 48.5 FTE), GMEG (approximately 97.5 FTE), OSQI (approximately 1 FTE), ASC (approximately 1 FTE), and ASTRO (approximately 1 FTE) into newly constructed GSA building (approximately 299 FTE total).

This project will expedite Menlo Park's ten year plan to release Buildings 2, 3, and 3A, along with providing a new building which will mitigate the risk of an earthquake halting the USGS mission.

Scope

The preferred alternative is Alternative 1. This is a proposal to vacate Building 3 in a two phased approach. Under this alternative, the Survey will release the first floor of Building 3 in September 2012, with the exception of the computer room, back to GSA. This proposal improves the space utilization of Building 3 in the near term, allows the Survey to avoid significant rent cost increases beginning in FY2013, and ultimately allows Menlo Park to achieve its goal of releasing Building 3 entirely.

Schedule

Provided no unforeseen hurdles, it is anticipated that the initial phase of the project will complete by the end of September, 2012. Menlo Park submitted the CSIP PDS to request funding for the initial phase and awaits approval. It is important to note upcoming expirations of OAs at the end of March. Once funding is approved for the initial phase, Menlo Park will begin quantifying cost avoidances resulting from the consolidation as part of the funding strategy that will be developed to complete the second phase of the project in 2017.

Costs

The proposed alternative (Alternative 1) would require an upfront invest in FY2012 of approximately $675,000. Because the Survey is expected to see GSA rent costs increase almost double in FY2013, the lease costs for Status Quo will steadily rise, whereas the upfront costs of alternatives 2 and 3 far exceed that of Alternative 1.

The rental rates alone do not accurately depict the cost avoidances. There are a number of intangible savings – improved utilization rates, working toward the goal of a high quality facility that can withstand an earthquake, and increased collaboration/ communication between scientists and costs centers – that cannot be assigned a dollar amount.

Assumptions

Figure 9.74 displays the cost assumptions used for the analysis.

Cost Element	Description	Assumption
1.1.1	Requirements definition	Requirements definition costs are $0.63 per RSF.
1.5	Construction	Construction costs are $4,450.00 per FTE.
1.8	Tenant build out	Tenant build out costs are $0.92 cents per RSF.
1.9	Moves	Move costs are $990.00 per FTE.
2.0	Recurring Costs	Recurring costs reflect combined lease costs (i.e., items such as operating costs and DHS fees are not included) for Buildings 2, 3, 3A, 4, 9e, and 9g.
2.4	Lease	Lease cost for new GSA building in alternative 2 and alternative 3 is estimated at $100.00 per RSF.
N/A	N/A	Construction of a new building for alternatives 2 and 3 will be completed by GSA leveraging a Budget Initiative.

Figure 9.74. Cost Assumptions

Risk Assessment

Listed below in **Figure 9.75** are the risks associated with each alternative. The impact is a score given from 0-10, where zero is no impact to the mission and ten is mission failure. Each risk is assessed on the likelihood of it occurring. A zero is defined as no probability of the risk occurring, and a ten means there is a certain occurrence.

				Baseline	Alt. №1	Alt. №2	Alt. №3
ID	Risk Type	Description	Impact	Status ...	Consol ...	Consol ...	Backfi ...
0	PLACE HOLDER	DO NOT DELETE					
1	Administrative	GSA approval of alternative	9	0	1	8	8
2	Administrative	Lack of buy-in from stakeholders (e.g., cost centers, administration)	7	6	1	4	10
3	Administrative	GSA funding of alternative	6	9	2	8	8
4	Administrative	Remediation clean up	2	3	1	8	8
5	Cost/Financial	Increased rent costs/ SF	9	10	3	1	3
6	Cost/Financial	Disruption to science	8	10	2	3	3
7	Cost/Financial	Alternative exceeds availability of funds	6	10	2	8	10
8	Legal/Contractual	Challenges gaining neccesary approvals for construction of a new building	10	0	0	8	8
9	Organizational	Inability of asset to sustain future operations	9	8	4	1	1
10	Organizational	Disruption to science programs caused by moves	8	0	4	6	7
11	Organizational	Inability to perform mission	8	8	4	1	2
12	Organizational	Alternative results in negative public image	4	8	4	1	2
13	Schedule	Difficulty completing project within anticipated timeframe	7	0	2	5	8
14	Technical	Inefficient space utilization	8	10	2	2	6
End Risk Scores							

Figure 9.75. Risks Assessment

Listed below in **Figure 9.76** are the risks associated with each alternative. The impact is a score given from 0-10, where zero is no impact to the mission and ten is mission failure. Each risk is assessed on the likelihood of it occurring. A zero is defined as no probability of the risk occurring, and a ten means there is a certain occurrence.

		Baseline	Alt. №1	Alt. №2	Alt. №3
Risk Type	(n)	Status Quo Alter ...	Consolidate and ...	Consolidate and ...	Backfill Santa C ...
Administrative	(4)	●●●●●●●●●	●●●○○○○○○○	●●●●●●●●●	●●●●●●●●●
Cost/Financial	(3)	●●●●●●●●●	●●●●●●○○○○	●●●●●●●●○○	●●●●●●●●●
Legal/Contractual	(1)	○○○○○○○○○	○○○○○○○○○	●●●●●●●○○	●●●●●●●○○
Organizational	(4)	●●●●●●●●●	●●●●●●●●●	●●●●●●○○○	●●●●●●●●○
Schedule	(1)	○○○○○○○○○	●○○○○○○○○	●●●○○○○○○	●●●●●○○○○
Technical	(1)	●●●●●●●○○	●●○○○○○○○	●●○○○○○○○	●●●●○○○○○
Average Risk	(14)	●●●●●●●●●	●●●●○○○○○	●●●●●●○○○	●●●●●●●●●

Figure 9.76. Overall Risk Analysis

Administrative Risks

Gaining GSA approval is necessary if the Survey is going to release space as part of its consolidation efforts. This risk is lowest for Alternative 1 as the Survey in the process of discussions with GSA and potential Building 3 space that is agreeable for release has already been identified. Gaining GSA approval to construct an entirely new building will be most difficult. Leveraging alternative funding strategies (e.g., Strategic Initiative from Congress) will be essential in gaining GSA support for this type of objective and will have to go through GSA since the building will be built on GSA owned land. Buy-in from occupants of Menlo Park is a challenge regardless of the alternative. This should be accepted considering the challenging environment related to financial pressures and policy pushing for a deceased

footprint; however, receiving the necessary stakeholder buy-in for Alternative 3 will be extremely difficult with significant push-back anticipated should this alternative be pursued. If the Survey succeeds in releasing Building 3, associated clean-up costs will be a key consideration as an anticipated cost.

Cost

GSA reports project significant rent cost increases on the Menlo Park campus beginning as early as FY2013. This is a key concern for cost centers already shouldering the burden of the facilities shortfall. Alternative one provides the most immediate relief by reducing the footprint in Building 3. It is important for the Survey to consolidate and release space as quickly as possible to realize cost savings and avoidance necessary to maintain the scientific mission in an environment where the government is expected to do more (or at least the same) with much less.

Considering tightening budgets, it is clear that the Survey will be challenged with affording implementation of the alternatives. Alternative 1 provides the least upfront costs, key to identifying a consolidation option that is feasible. However, the long-term implications suggest value in constructing a new building sooner rather than later. This will reduce operational costs and attract top reimbursable clients to Menlo Park. Ultimately, affording construction of a new building is a significant challenge. As mentioned previously, this will only be possible if an alternative funding source, such as approved strategic initiative from Congress to GSA for construction of the building, is identified.

Legal

For Alternatives 1 and 2, construction of a new building poses challenges to gaining necessary approvals. For example, the building will be constructed on GSA owned land. This means strategic initiative funding would need to be appropriated to GSA, assigning the funding as interagency funding intended for a Survey building. With Alternative 1, this challenge does not exist.

Organization

The ability to continue the Survey's scientific mission is under constant threat in the current facilities. In the event of an earthquake, it is likely the facilities will lose functionality. Under most circumstances, this would be an understandable disruption to science. What makes this situation unique is the type of science that would be halted - earthquake science. In order to avoid the missed opportunity of significant earthquake related research, it is important for the Survey to seriously consider options for constructing a new building sooner rather than later. For the time being, Alternative 1 moves towards the goal of a new building with less upfront investment in the near term.

Technical

Alternative 1 results in the best utilization metrics of the alternatives at 155 USF per person at the Menlo Park campus. Accomplishing this will require effective use of cubicle space and a significant effort at gaining buy-in from Menlo Park occupants to make these tight quarters a sustainable work environment. Alternative 2 will require a significant effort and teamwork with GSA to accomplish due to the need for enough funding to construct a new building, but will result in 186 USF per person at the Menlo Park campus. Alternative 3 has similar

pressures for a new building, plus the addition of gaining buy-in to relocate approximately 40 occupants to Santa Cruz. This alternative would lead to 190 USF per person at the Menlo Park campus. Alternative 1 has initial buy-in from the Menlo Park space team, making it a reasonable alternative.

Benefits

Figure 9.77 shows how the Status Quo and Alternatives were scored for the benefits. Most of the benefit analysis focuses on how Alternatives contribute to the Survey mission.

		Baseline Status ...	Alt. №1 Consol ...	Alt. №2 Consol ...	Alt. №3 Backfi ...
Mission Dependency	► Degree to which this alternative supports program activities outlined in the annual and five-year program plans	4	8	9	9
	► Degree to which this alternative supports expected program activities five or more years into the future based on bureau strategic plans	2	8	9	9
	► Degree to which this alternative will accommodate program changes, including collocation, while considering degree of modification needed and impact to operations	3	9	7	6
	► Degree to which this alternative provides a suitable physical location that contributes to the purpose of the project being considered	6	8	9	8
	► Degree to which this alternative provides opportunities to leverage interaction internally, and with the public and key stakeholders (e.g. cooperators, Congress, customers, partners and sister agencies) because of its location	7	7	7	8
	► Degree to which this alternative fulfills a functional requirement or purpose that cannot be fufilled by an existing facility or program	4	6	9	9
Condition Index	► Degree to which this altrernative will result in a desirebable Facility Condition Index (FCI)	0	5	9	9
Operating Benchmarks	► Degree to which this alternative will result in recurring maintenance and repair costs, utility costs, cleaning and janitorial costs, and roads/grounds expenses that are consistent or better than industry benchmark data	0	8	6	6
Facility Utilization Index	► Degree to which this alternative will result in a desireable Facility Utilization Index defined as the percentage of office space occupied versus the design amount	0	9	9	7

Figure 9.77. Scoring of the Benefits

Overall Alternatives 2 and 3 have the biggest positive impact on facilities condition. This relates to construction of a new building and the potential to release multiple buildings to GSA (e.g., Building 2, Building 3, Building 3A). Alternative 1 has a positive impact as well, particularly relating to the utilization metrics at Menlo Park. Maintenance costs will be reduced from a new building that meets modern building quality standards and efficiencies.

Figure 9.78 displays the outcome of the benefit analysis. Alternatives 2 and 3 most strongly support the Survey's mission and meet operating benchmark and facility utilization metric recommendations.

Benefit	Baseline Status Quo Alter ...	Alt. №1 Consolidate and ...	Alt. №2 Consolidate and ...	Alt. №3 Backfill Santa C ...
Mission Dependency	●●●○○○○○○○	●●●●●●●●○○	●●●●●●●●●○	●●●●●●●●○○
Condition Index	○○○○○○○○○○	●●●●○○○○○○	●●●●●●●●●○	●●●●●●●●●○
Operating Benchmarks	○○○○○○○○○○	●●●●●●●●○○	●●●●●○○○○○	●●●●●○○○○○
Facility Utilization Index	○○○○○○○○○○	●●●●●●●●●○	●●●●●●●●●○	●●●●●●○○○○
Weighted Average	●●○○○○○○○○	●●●●●●●●○○	●●●●●●●●○○	●●●●●●●●○○

Figure 9.78. Overall Benefit Analysis

Comparison of Alternatives

Figure 9.79 displays the Menlo Park campus. Alternative 1 releases the first floor of Building 3, while Alternatives 2 and 3 allow the Survey to release all of Building 3 to GSA.

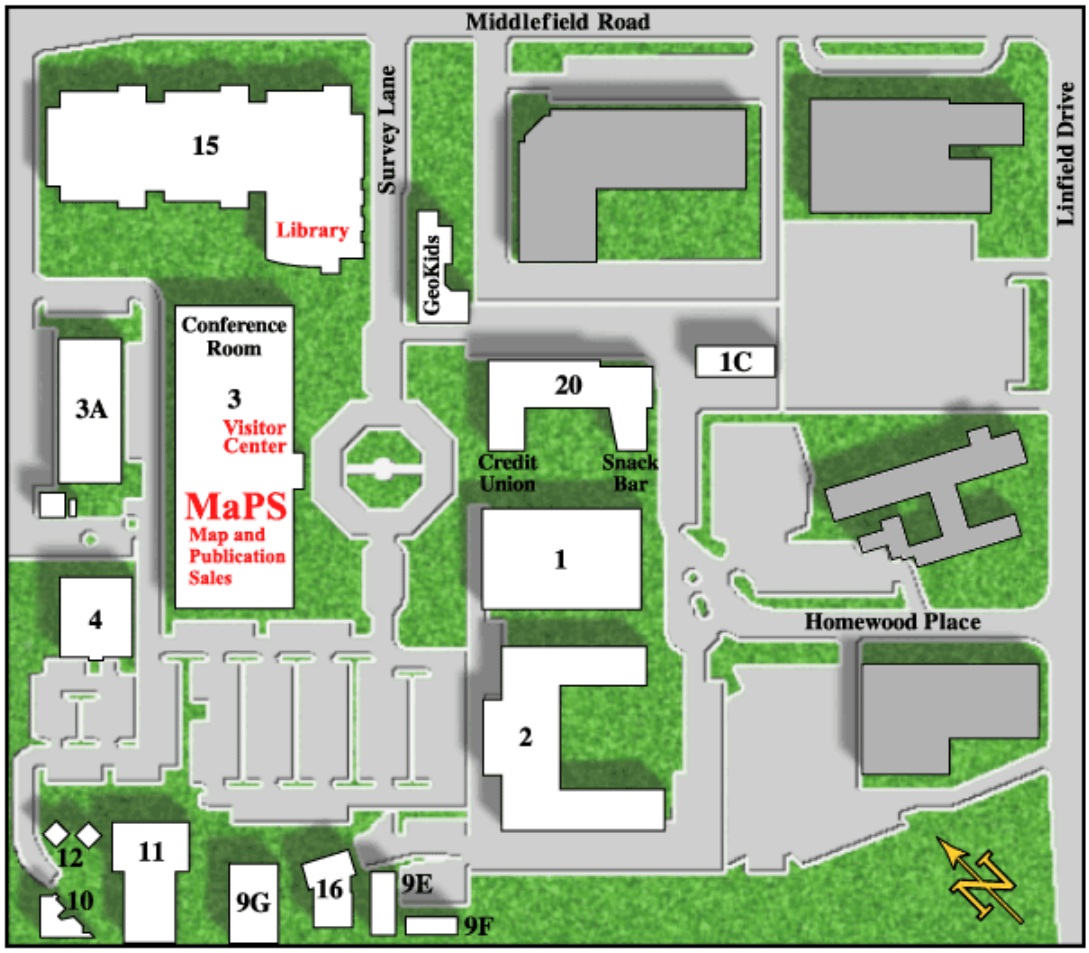

Figure 9.79. Menlo Park Campus

The Status Quo will prevent Menlo Park and the Survey from achieving multiple goals including CSIP plans to reduce space and Federal mandates to consolidate. It will result in poor use of space and cause a negative impact on the science mission as funding will be used to cover lease costs of vacant, unneeded space.

Alternative 1 is the middle ground between Status Quo and Alternatives 1 and 2. It allows the Survey to improve space utilization while still working towards the ultimate plan of releasing Building 3. With an estimated upfront cost of $675,254, it is the most affordable of the alternatives and already has initial buy-in from the Menlo Park space team.

Alternative 2 significantly expedites Menlo Park's plan to release Building 3 and construct a new facility. Achieving a successful outcome to this alternative would require strong leadership to help garner the necessary stakeholder buy-in, in particular buy-in of Menlo Park occupants. During construction of the new building, use of cubicle space will be required. The biggest challenge associated with this opportunity is identifying the necessary funds, up to $30 million to fund construction of the new building.

Alternative 3 could be the ideal alternative if a solution is identified for cost and stakeholder buy-in. Similar to Alternative 2, this alternative requires significant investment. To accommodate science moving to Santa Cruz, additional funds will be required beyond the nearly $30 million for construction of a new facility. Lastly, stakeholder buy-in will be difficult based on feedback from Menlo Park occupants because relocating to Santa Cruz represents a significant commute hardship for many of the 40 occupants still in Menlo Park and is therefore unlikely to be accomplished.

Figure 9.80 displays the overall summary of the analysis.

		Baseline Status Quo Alternative	Alt. №1 Consolidate and release Building 3	Alt. №2 Consolidate and release Building 3, GSA builds	Alt. №3 Backfill Santa Cruz, consolidate, and
Summary of Life Cycle Cost Estimate					
(A)	Investment (Inflated Dollars)	$0	($2,577,136)	($3,312,219)	($3,055,684)
	Investment Period	No Investment	2012 to 2016	2013 to 2016	2013 to 2016
(B)	Recurring Costs (2012 to 2021)	($66,982,221)	($36,005,011)	($69,142,596)	($69,142,596)
(C)	Disposal Costs (2012 to 2021)	$0	$0	$0	$0
(D)	Reimbursable Income (2012 to 2021)	$0	$0	$0	$0
(E)	Total 10-Year Inflated Alternative Costs (π=2.0%) (A+B+C+D)	($66,982,221)	($38,582,147)	($72,454,815)	($72,198,280)
Net Present Value (NPV)					
(F)	Total Discounted Costs (Nom. Discount Rate = 4.6%)	($48,409,366)	($29,716,698)	($51,348,627)	($51,108,297)
(G)	Net Present Value (F less $F_{Baseline}$)		$18,692,667	($2,939,261)	($2,698,931)
Return On Investment (ROI)					
(H)	Total Discounted Investment	$0	($2,140,213)	($2,766,529)	($2,526,200)
(I)	Net Discounted Investment (H less $H_{Baseline}$)		($2,140,213)	($2,766,529)	($2,526,200)
(J)	Total Discounted Recurring Costs/Income	($48,409,366)	($27,576,485)	($48,582,098)	($48,582,098)
(K)	Net Return (J less $J_{Baseline}$)		$20,832,881	($172,732)	($172,732)
(L)	Return On Investment (ROI) (K÷I) (10-Year Annualized)		26.8%	-0.6%	-0.7%
Internal Rate of Return (IRR)					
(M)	Internal Rate of Return (2012 to 2021)		213%	30%	26%
Payback Period					
(N)	Year of Analysis when NPV is equal to zero		0.5 Years	1.4 Years	1.3 Years
Average Risk		●●●●●●●●●●	●●●●○○○○○○	●●●●●●●○○○	●●●●●●●●●●
Average Benefit		●●●○○○○○○○	●●●●●●●●○○	●●●●●●●●○○	●●●●●●●●○○

Figure 9.80. Overall Summary of Analysis

Recommendation

Alternative 1 will result in short term cost avoidances in rent costs due to consolidation of space, and meets mission and organizational goals for the Survey at the Menlo Park. Alternative 1 provides the highest potential for successful implementation, in particular because of the following three reasons: 1) Initial upfront costs are more manageable than the other alternatives and a request for CSIP funds has already been submitted to the Survey; 2) Discussions are already underway between the Survey and GSA, with a promising outlook to identifying agreeable space to release; and 3) the Menlo Park space team is under general agreement about the necessary moves to implement this Alternative.

Appendix L. Facilities Budgeting and Funding Stakeholder Interview Questionnaire

Figure 9.81 provides the questionnaire used to interview key stakeholders on the Survey's current facilities funding processes.

Name:	**Title:**
Office/Branch:	**Date:**
Roles and Responsibilities / Current Knowledge	
1. What are your primary roles and responsibilities related to the Survey's asset management?	
DMCI Budget and Allocation Process	
2. The current DMCI process requires that Facility Managers enter projects into FMMS, BMS offices review the projects, and then FMB staff meet with one representative from each BMS office to review and rescore projects, as needed. Currently, there are approximately over 100 projects evaluated each year. In your opinion, are sufficient resources allocated to score the DMCI projects?	
3. In prior interviews, it was noted that the FY2011 DMCI scoring team adjusted several project scores. The scoring team adjusted some scores to normalize similar project scores, and adjusted others due to oversight at the BMS level. It is possible that BMS offices do not want to focus too much time and attention on scoring projects that will be rescored during the DMCI scoring team meeting? In your opinion, is the current DMCI budgeting approval process the most effective and efficient process for obtaining approvals?	
4. Do you think the correct projects are currently listed in the 5-Year DMCI plan?	
5. Currently the survey uses an audit trail in FMMS to note when a project score is changed, who changed the score, and what the score was prior, so the Survey can track how scores are evolving as different levels of the organization review and approve the projects. Do you believe a query highlighting projects not reviewed by BMS offices, or centers where there are no projects would be helpful?	

6. Do you believe Facility Managers have adequate knowledge of FMMS and the DMCI scoring process? Do they know what makes a PDS accurate or successful?
7. Is there an established DMCI scoring training for new Facility Managers? Do you believe that Facility Managers are sufficiently trained to score and complete PDSs?
8. Briefly describe what you believe to be the main strengths and challenges of the DMCI budget allocation process. What should be done differently?
O&M and Rent Budget and Allocation
9. How would you describe the impact of O&M Cost Modeling?
10. How can the Survey more adequately allocate O&M costs? Do you feel there's a way to reduce O&M costs that the Survey has not yet explored?
11. Currently the Survey ties some FRPP metrics to the allocation of O&M costs; specifically, status (if an asset is active, inactive, excess, or disposed), utilization as a measure of space occupied versus space available, and mission dependency. Should additional metrics, such as utilization rate be used to impact the allocation?
12. Currently there is an equal distribution of shortfall across cost centers and no one program will be more impacted by the shortfall than another. How can the Survey more adequately distribute its shortfall? One example is to determine an average cost for SF per person then apply that average to a set amount of office space per person (ex. one person = $2 SF and each person requires on average 30 SF, so each person would cost $60). If a site goes over that average per person then USGS would require the sites to phase in the difference through program funds or reimbursable dollars.

13. The Survey holds back approximately $1.5M from their O&M and rent allocation each year to be used as an emergency fund. Facility Managers must submit hold back requests to OMS who prioritizes holdback requests. Should the Survey examine incentivizing hold back so facilities performing well receive the holdback?
14. Do you believe staff of all levels are sufficiently trained to perform the O&M and Rent Allocation process?
15. Briefly describe what you believe to be the main strengths and challenges of the O&M and rent budget allocation process. What should be done differently?
Budget Initiatives
16. Briefly describe why you believe Budget Initiatives in the past did not make it to the "over target" line for Congress's approval?
17. Currently BCAs are not required for Budget Initiatives to be submitted to the IRB for approval. Technically, a Budget Initiative can be passed as an "over target" line for Congress without analyzing the financials. Do you agree that requiring an approved BCA prior to submitting a Budget Initiative would allow only feasible and well vetted initiatives to be presented to the IRB?
18. Currently Budget Initiatives do not have a minimum or maximum dollar threshold. Do you agree that the same $2M minimum required for BCAs and IRB approval should be applied to the Budget Initiatives?

19. Briefly describe what you believe to be the main strengths and challenges of the Budget Initiatives approval process. What should be done differently?
Summary
20. As discussed, the current facilities budget process allocates funding for O&M and rent, and DMCI. Additionally, the Survey has a Budget Initiatives approval process. What other funding sources do you believe facilities require to be fully funded?
21. Do you believe all funding requirements for the budget process are covered? What about component renewal, construction line, etc.?
22. Do you believe the current facilities funding and budgeting process takes into account the Survey's science mission needs?
23. What are your thoughts on how the Survey can minimize its shortfall or budget more accurately within its means?
24. Do you have any concluding thoughts on the overall facilities budget and allocation process?

Figure 9.81. Overall Summary of Analysis

Appendix M. Current O&M and Rent Budget Process

Figure 9.82 provides the O&M and rent budget process flow chart outlining the current process.

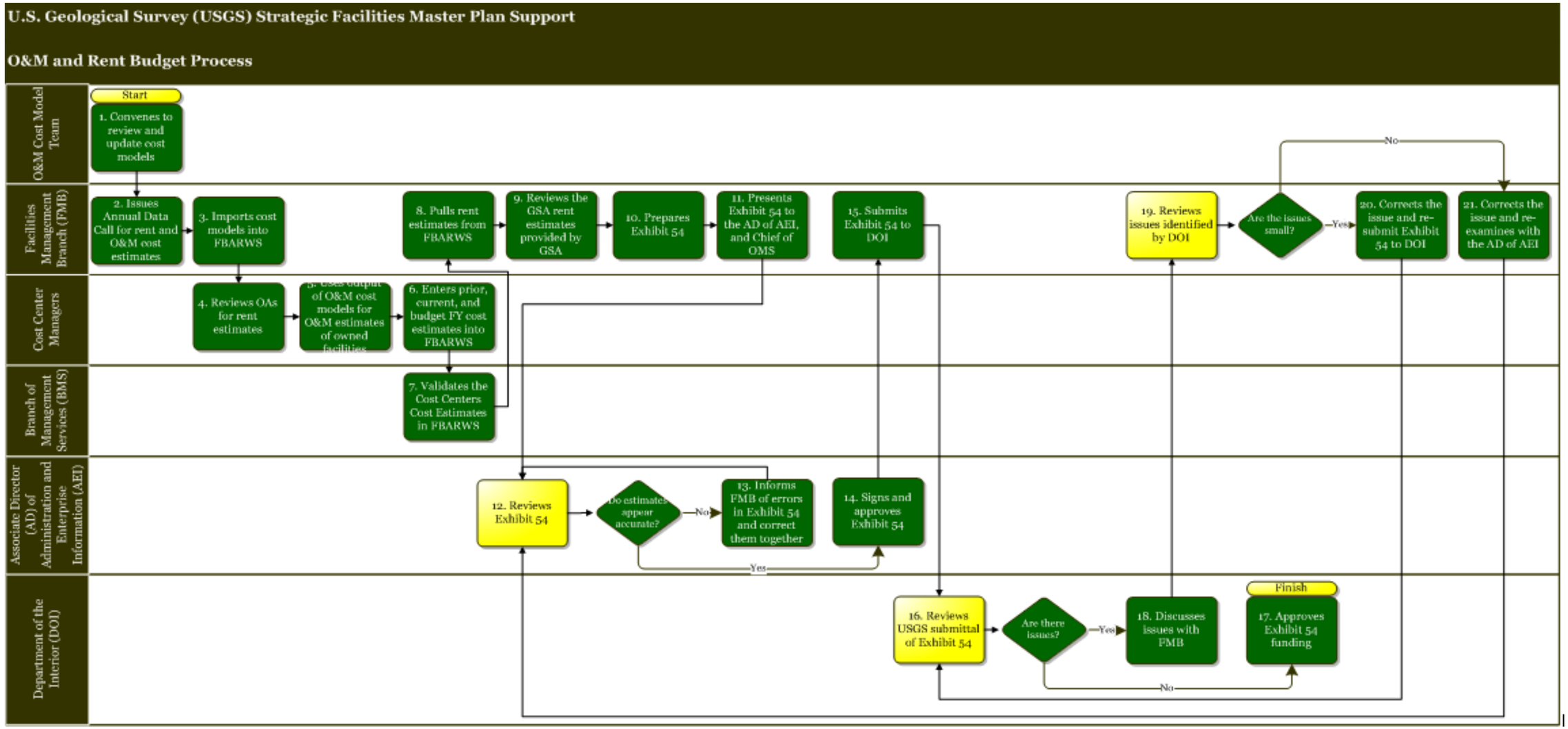

Figure 9.82. O&M and Rent Budget Process

Figure 9.83 provides the actions, responsible party, and timing for each step in the scoring process.

Process Step Descriptions:

	Steps	Actions	Responsible Party	Timing
1	Convenes to review and update cost models	The O&M Cost Model Team consisting of FMB staff and a representative from each BMS office convene to review the O&M cost models. At the meeting, BMS office representatives may request to change the model used to calculate O&M costs at their buildings and provide a justification. The O&M Cost Model Team assesses the request and updates models as needed.	O&M Cost Model Team	March
2	Issues Annual Data Call for rent and O&M cost estimates	FMB issues the annual data call for rent and O&M cost estimates in March, while the O&M Cost Model Team is convening to discuss the cost models.	FMB	March
3	Imports cost models into FBARWS	After finalizing which facilities will have their costs captured in which cost models, FMB imports the cost models into FBARWS.	FMB	April
4	Reviews OAs for rent estimates	During the first six weeks of the FBARWS "facilities estimate" module "open period," Cost Center Managers review their OAs to gather their rent estimates.	Cost Center Managers	March - May (first six weeks of eight week window)
5	Uses output of O&M cost models for O&M estimates of owned facilities	During the first six weeks of the FBARWS "facilities estimate" module "open period," Cost Center Managers use the output of the O&M cost models of their facilities for the O&M estimates of their owned facilities.	Cost Center Managers	March - May (first six weeks in eight week window)
6	Enters prior, current, and budget FY cost estimates into FBARWS	During the first six weeks of the FBARWS "facilities estimate" module "open period," Cost Center Managers enter in their rent and owned prior, current, and budget FY cost estimates into FBARWS.	Cost Center Managers	March - May (first six weeks in eight week window)
7	Validates the Cost Centers Cost Estimates in FBARWS	During the final two weeks of the FBARWS "facilities estimate" module "open period," BMS offices validate the cost estimates their Cost Center Managers entered into FBARWS.	BMS	May (last two weeks in eight week window)
8	Pulls rent estimates from FBARWS	After the close of the FBARWS open period FMB staff pull the rent estimates entered into FBARWS from the Reports module.	FMB	Mid May
9	Reviews the GSA rent estimates provided by GSA	FMB staff review the GSA rent estimates provided by GSA.	FMB	Mid May
10	Prepares the Exhibit 54	FMB staff use the rent estimates from FBARWS and the GSA rent estimates to prepare the Exhibit 54.	FMB	Late May

	Steps	Actions	Responsible Party	Timing
11	Presents the Exhibit 54 to the AD of AEI, and Chief of OMS	FMB staff meet with the AD of AEI and the Chief of OMS to present the Exhibit 54.	FMB	Early June
12	Reviews the Exhibit 54	The AD of AEI holds the authority of reviewing and approving the USGS Exhibit 54 before it is sent to DOI.	AD of AEI	Early June
13	Informs FMB of errors in the Exhibit 54 and corrects them together	If the AD of AEI finds an error in the Exhibit 54 or an issue during their meeting with FMB and the Chief of OMS, they inform FMB and they correct the error together.	AD of AEI	Early June
14	Signs and approves the Exhibit 54	After each issue identified is resolved, the AD of AEI signs and approves the Exhibit 54.	AD of AEI	Early June
15	Submits the Exhibit 54 to DOI	FMB submits the signed and approved the Exhibit 54 to DOI.	FMB	Early June
16	Reviews USGS submittal of the Exhibit 54	DOI reviews the USGS submittal of the Exhibit 54.	DOI	Mid to late June
17	Discusses issues with FMB	If DOI finds issues or inaccuracies in the USGS submittal of the Exhibit 54, DOI discusses it with FMB.	DOI	Mid to late June
18	Approves the Exhibit 54 funding	If DOI is unable to find any issues or inaccuracies with the USGS submittal of the Exhibit 54, DOI approves the document.	DOI	Mid to late June
19	Reviews issues identified by DOI	FMB assesses the magnitude of the issues identified by DOI.	FMB	Mid to late June
20	Corrects the issue and resubmits the Exhibit 54 to DOI	If the issues are minimal, FMB corrects the issues and resubmits the Exhibit 54 directly to DOI.	FMB	Mid to late June
21	Corrects the issue and reexamines with the AD of AEI	If the issues are large, FMB corrects the issues and reexamines the Budget Justification with the AD of AEI.	FMB	Mid to late June

Figure 9.83. O&M and Rent Budget Process Step Descriptions

Appendix N. Current O&M and Rent Workbook Preparation and Allocation Process

Figure 9.84 provides the O&M and rent allocation process flow chart outlining the current process.

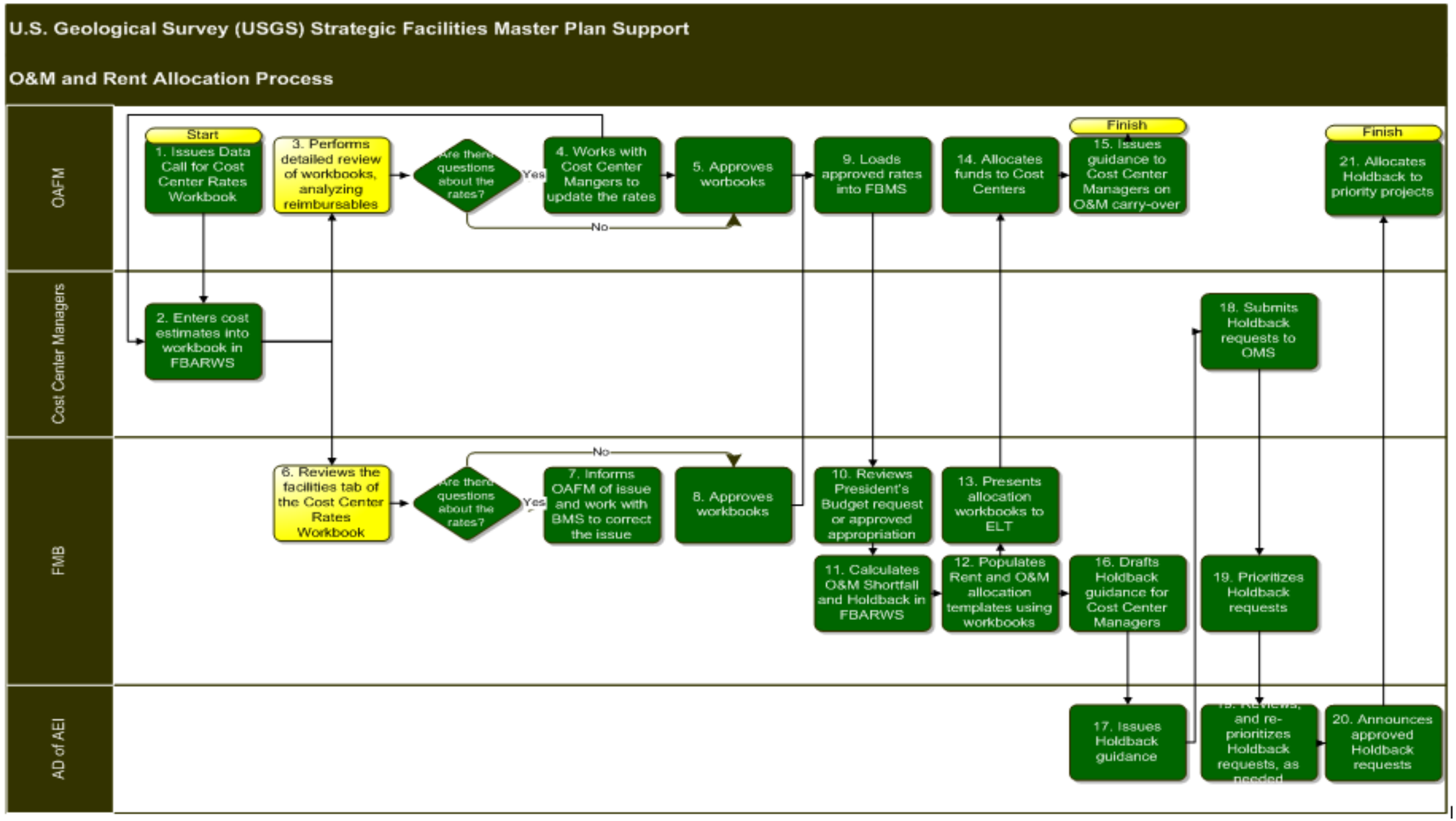

Figure 9.84. O&M and Rent Workbook Preparation and Allocation Process

Figure 9.85 provides the actions, responsible party, and timing for each step in the scoring process.

Process Step Descriptions:

	Steps	Actions	Responsible Party	Timing
1	Issues Data Call for Cost Center Rates Workbook	OAFM sends out a data call to Cost Center Managers to collect Cost Center Rates Workbooks. Cost Center Rates Workbooks include several tabs including a tab for appropriated funds, facilities costs, reimbursable costs, etc.	OAFM	Mid May
2	Enters cost estimates into workbook in FBARWS	The third week of May, the "rates workbook" module in FBARWS opens. Cost Center Managers enter their estimates into FBARWS at that time. The Facilities tab is prepopulated with the estimates provided during the FBARWS open period from March to May.	Cost Center Managers	Mid May to mid July (eight week period)
3	Performs detailed review of workbooks, analyzing reimbursables	OAFM performs a detailed review of the Cost Center Rates Workbooks as they come in. Fiscal Services, a sub-division of OAFM, reviews the reimbursable rates of the cost centers over the past three years.	OAFM	Mid May to mid August
4	Works with Cost Center Managers to update the rates	If OAFM has questions about the rates provided in the workbooks, OAFM will work with Cost Center Managers to identify the correct rates. OAFM will then enter those updated rates into FBARWS.	OAFM	Mid May to mid August
5	Approves workbooks	If OAFM is satisfied with the Cost Center Rates Workbooks, they approve them.	OAFM	Mid May to mid August
6	Reviews the facilities tab of the Cost Center Rates Workbook	After the "rates workbook" module closes in FBARWS, FMB reviews the facilities tab of the Cost Center Rates Workbook for major cost centers.	FMB	Mid July to mid August
7	Informs OAFM of issue and works with BMS to correct the issue	If FMB discovers an issue with the facilities tab of the workbook, they inform OAFM of the issue and work with the respective BMS office to correct the issue.	FMB	Mid July to mid August
8	Approves workbooks	Once issues are resolved, FMB approves the Cost Center Rates Workbooks.	FMB	Mid July to mid August
9	Loads approved rates into FBMS	OAFM loads the approved reimbursable rates into FBMS.	OAFM	End of August

	Steps	Actions	Responsible Party	Timing
10	Reviews President's Budget request or approved appropriation	If the approved appropriation is issued in September, before the start of the FY, FMB reviews the approved appropriation. If the government is in a continuing resolution (CR) FMB reviews the President's Budget Request submitted the previous April.	FMB	September
11	Calculates O&M Shortfall and Holdback in FBARWS	FMB calculates the O&M Shortfall and Holdback in FBARWS, using the approved appropriation. If the approved appropriation is not prepared, and the government is in a CR, FMB prepares a draft shortfall and holdback calculation to be updated once the approved appropriation is known.	FMB	September
12	Populates rent and O&M allocation templates using workbooks	The "allocation" module in FBARWS automatically populates the rent and O&M allocation templates using the Cost Center Rates Workbooks.	FMB	September
13	Presents allocation workbooks to ELT	If the government is not in a CR and has an approved appropriation, FMB presents the allocation to the ELT.	FMB	September
14	Allocates funds to cost centers	OAFM allocates funds to cost centers. Cost centers have two years to use their appropriations.	OAFM	October
15	Issues guidance to Cost Center Managers on O&M carry-over	OAFM then issues guidance to Cost Center Managers on O&M Carry Over.	OAFM	October
16	Drafts Holdback guidance for Cost Center Managers	FMB drafts holdback guidance for Cost Center Managers a quarter after funds are appropriated and allocated.	FMB	March
17	Issues Holdback guidance	The AD of AEI sends the holdback guidance to REx, ADs, Science Center Directors, and SMOs to send to their Cost Center Managers.	AD of AEI	March
18	Submits Holdback requests to OMS	Cost Center Managers submit their Holdback requests to OMS within two weeks of receiving the Holdback guidance.	Cost Center Managers	April
19	Prioritizes Holdback requests	OMS forwards holdback requests to FMB. FMB prioritizes the Holdback requests and provides recommendations to the AD of AEI within two weeks of receiving the requests.	FMB	Mid April
20	Reviews, and reprioritizes Holdback requests, as needed	The AD of AEI reviews FMB's recommendations and reprioritizes the requests as needed.	AD of AEI	Late April

	Steps	Actions	Responsible Party	Timing
21	Announces approved Holdback requests	The AD of AEI informs the REx, ADs, Science Center Directors, and SMOs of the approved Holdback requests. The AD of AEI then submits the approved requests to OAFM to allocate funding	AD of AEI	Early May
22	Allocates Holdback to priority projects	OAFM allocates the holdback funds to priority projects.	OAFM	May

Figure 9.85. O&M and Rent Workbook Preparation and Allocation Process Step Descriptions

Appendix O. Current DMCI Process

Figure 9.86 provides the DMCI scoring, budgeting, and funding process flow chart outlining the current DMCI process.

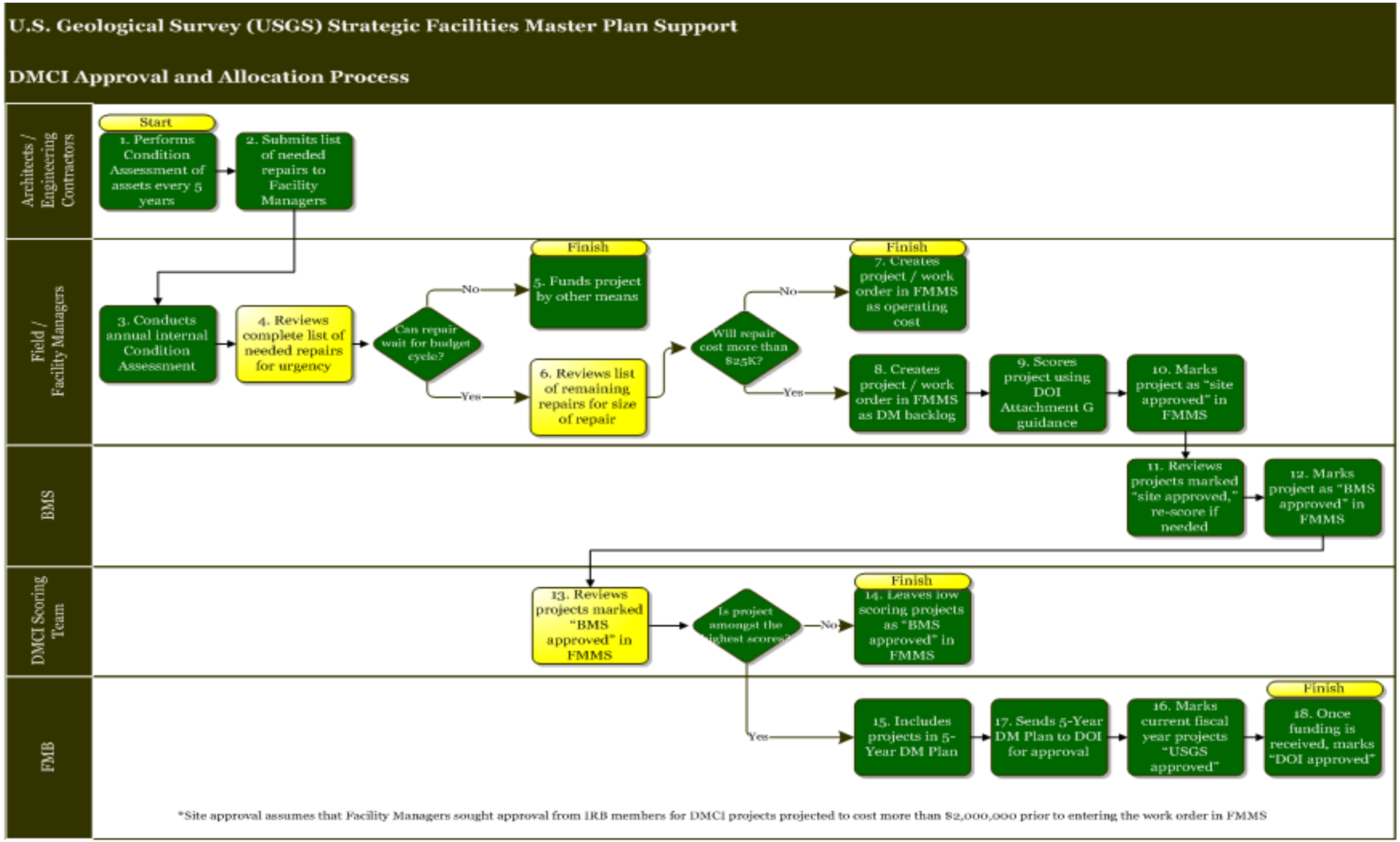

Figure 9.86. DMCI Process

Figure 9.87 provides the actions, responsible party, and timing for each step in the scoring process.

Process Step Descriptions:

	Steps	Actions	Responsible Party	Timing
1	Performs condition assessment of assets every five years	USGS contracts an independent A&E firm to analyze 20% of its assets each year.	A&E firm	January - August
2	Submits list of needed repairs to Facility Managers	The A&E firm submits a list of deficiencies to the respective Facility Managers.	A&E firm	January - August
3	Conducts annual internal condition assessment	In addition to the condition assessment performed by the A&E firm every five years, Facility Managers, or BMS offices where a Facility Manager is not in place, must perform an annual condition assessment on their facilities.	Field/Facility Managers	Year round
4	Reviews complete list of needed repairs for urgency	Facility Managers examine the complete list of needed repairs to assess the urgency of the repair.	Field/Facility Managers	Year round
5	Funds project by other means	If Facility Managers examined the repair and found it to be urgent, meaning it cannot wait for the budget cycle, the Facility Managers must examine the type of issue and fund it by other means.	Field/Facility Managers	Year round
6	Reviews list of remaining repairs for size of repair	If Facility Managers examined the repair and found that it can wait for the next budget cycle, they now much examine the size of the repair.	Field/Facility Managers	Year round
7	Creates project/work order in FMMS as operating cost	If the repair is estimated to cost less than $25,000, Facility Managers create the work order in FMMS as part of annual operating costs.	Field/Facility Managers	Year round
8	Creates project/work order in FMMS as DM backlog	If the repair is estimated to cost more than $25,000, Facility Managers create the work order in FMMS as DM backlog, under the "DMFP" code, for the Five Year DMCI Plan.	Field/Facility Managers	Year round
9	Scores project using DOI Attachment G guidance	Facility Managers score DMFP projects using DOI's *Attachment G* guidance. *Attachment G* outlines the ranking criteria and their weights.	Field/Facility Managers	Year round
10	Marks project as “site approved” in FMMS	Once the project is scored, Facility Managers mark the project "site approved" in FMMS.	Field/Facility Managers	Year round

	Steps	Actions	Responsible Party	Timing
11	Reviews projects marked “site approved,” rescores if needed	Review projects marked "site approved" to examine the accuracy, readability, and completeness of the PDS and assess if the Facility provided a reasonable score. If needed, rescore the project.	BMS	Until mid May
12	Marks project as “BMS approved” in FMMS	Upon completion of review, mark project "BMS approved" in FMMS.	BMS	Until mid May
13	Reviews projects marked “BMS approved” in FMMS	The DMCI Scoring Team consisting of FMB staff and one representative from each BMS office convene to review projects marked "BMS approved" in FMMS. The DMCI Scoring Team normalizes project scores, by assessing that Facility Managers scored their projects in a similar manner. Additionally, the DMCI Scoring Team ranks projects by score and assesses if any changes need to occur to the project scores or language in the PDS.	DMCI Scoring Team	Late May
14	Leaves low scoring projects as “BMS approved” in FMMS	Projects that do not rank high enough to include in the 5-year DMCI Plan are left as "BMS approved" in FMMS, and evaluated again the following year.	DMCI Scoring Team	Late May
15	Includes projects in 5-Year DMCI Plan	Projects that rank the highest are included in the 5-year DMCI Plan in order of their score. FMB sends the 5-year DMCI plan to BMS offices and large Cost Center Managers for their review.	FMB	Late May
16	Sends 5-Year DMCI Plan to DOI for approval	FMB sends the finalized 5-Year DMCI Plan to DOI for approval.	FMB	June
17	Marks current fiscal year projects “USGS approved”	Projects included in the plan for the current fiscal year are marked "USGS approved."	FMB	June
18	Once funding is received, marks “DOI approved”	Once FMB receives funding for the projects, FMB marks those projects that received funding "DOI approved."	FMB	Dependent on DOI.

Figure 9.87. DMCI Process Step Descriptions

Appendix P. Budget Initiatives Approval and Funding Process

Figure 9.88 provides the Budget Initiatives process flow chart outlining the current process.

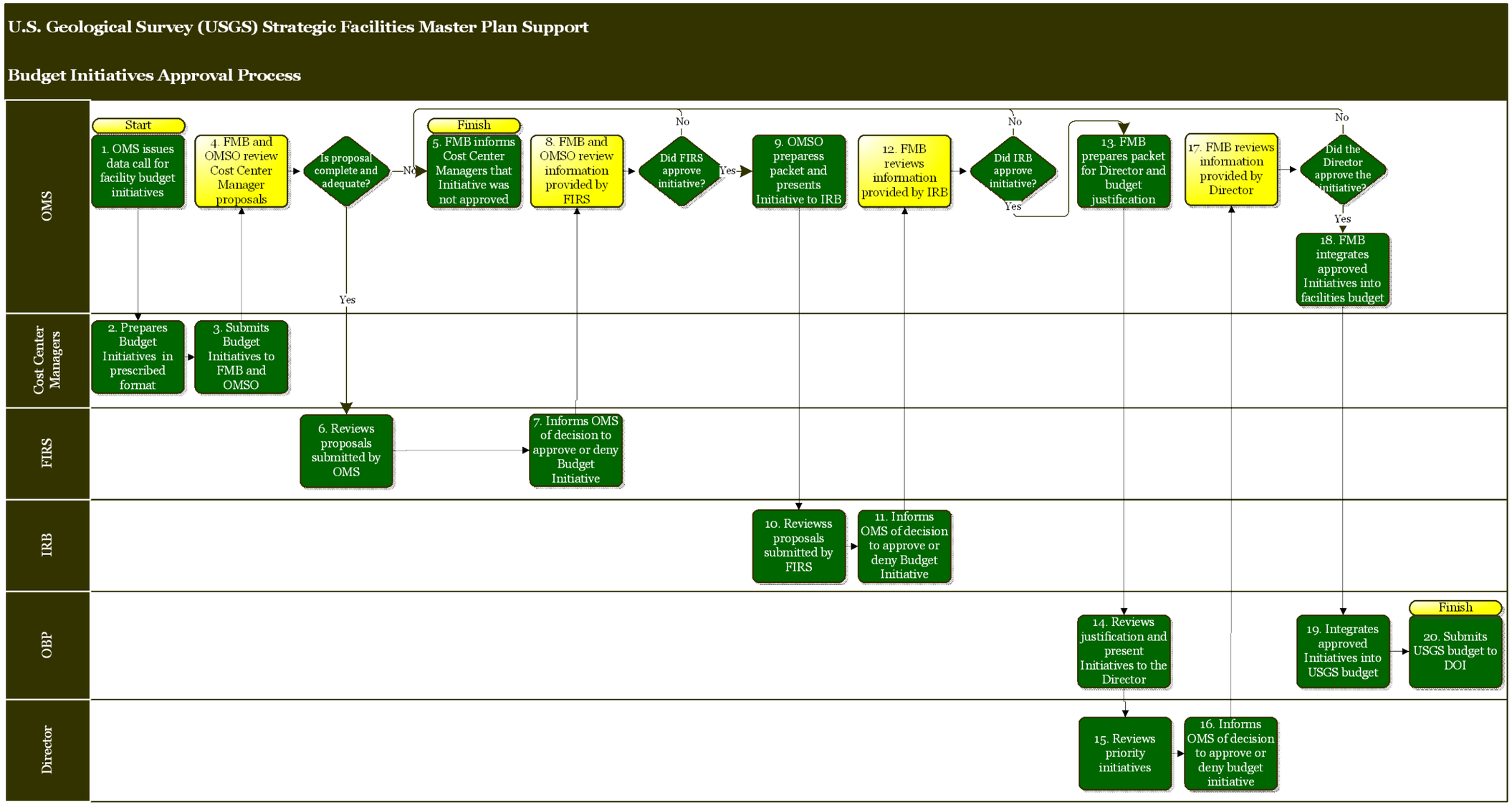

Figure 9.88. Budget Initiatives Process

Figure 9.89 provides the actions, responsible party, and timing for each step in the scoring process.

Process Step Descriptions:

	Steps	Actions	Responsible Party	Timing
1	OMS issues data call for facility Budget Initiatives	OMS issues the data call for facility Budget Initiatives.	OMS	August
2	Prepares facility initiatives in prescribed format	Cost Center Managers prepare their initiatives in the prescribed format.	Cost Center Managers	September
3	Submits facility Budget Initiatives to FMB and OMSO	Cost Center Managers submit their initiatives to FMB and OMSO for their review.	Cost Center Managers	September
4	FMB and OMSO review Cost Center Manager proposals	FMB and OMSO review the Cost Center Manager proposals.	OMS	October
5	FMB informs Cost Center Managers that initiative was not approved	FMB informs Cost Center Managers of the initiatives they cannot approve.	FMB	October
6	Reviews proposals submitted by OMS	FMB submits the approved initiatives to FIRS for their review. FIRS review the proposals and decide to approve or deny the initiatives.	FIRS	November
7	Informs OMS of decision to approve or deny Budget Initiative	FIRS inform FMB of the decision to approve or deny the initiatives.	FIRS	November
8	FMB reviews information provided by FIRS	FMB reviews the information provided by FIRS, and informs Cost Center Managers if their initiatives are not approved.	FMB	December
9	OMSO prepares packet and present initiative to IRB	FMB prepares a packet on the FIRS approved initiatives, and presents them to the IRB.	OMSO	January
10	Reviews proposals submitted by FIRS	The IRB reviews the proposals, and approves or denies them.	IRB	January
11	Informs OMS of decision to approve or deny Budget Initiative	The IRB informs FMB of the decision to approve or deny the initiatives.	IRB	January
12	FMB reviews information provided by IRB	FMB reviews the information provided by the IRB, and informs Cost Center Managers if their initiatives are not approved.	FMB	January

	Steps	Actions	Responsible Party	Timing
13	FMB prepares packet for Director and budget justification	FMB prepares a packet for the Director on the IRB approved initiatives, and prepares a budget justification. FMB submits the packet and justification to OBP.	FMB	February
14	Reviews justification and present initiatives to the Director	OBP reviews the justification and presents the initiatives to the Director.	OBP	February
15	Reviews priority initiatives	The Director reviews the priority initiatives and approves or denies them.	Director	March
16	Informs OMS of decision to approve or deny Budget Initiative	The Director informs OMS of the decision to approve or deny the Budget Initiatives.	Director	March
17	FMB reviews information provided by Director	FMB reviews the information provided by the Director, and informs the Cost Center Managers if the initiative was not approved.	FMB	March
18	FMB integrates approved initiatives into facilities budget	FMB works with OBP to integrate the approved initiative into the facilities budget justification, also known as the green book	FMB	April
19	Integrates approved initiatives into USGS budget	OBP integrates the approved initiative into the overall USGS budget justification.	OBP	April
20	Submits USGS budget to DOI	OBP submits the "over target" budget request to DOI with the USGS budget.	OBP	April

Figure 9.89. Budget Initiatives Process Step Descriptions

Appendix Q. State of Facilities Report Template

The following is a template that can be used for future iterations of the State of Facilities Report. This template includes an introduction section stating the purpose, format, and use of the report. The template also includes a Survey-wide snapshot with a portfolio-wide analysis of metrics by area, and an individual section for each area presenting data outliers that may be potential data quality issues.

Introduction

Purpose: The State of Facilities Report (Report) provides a quarterly performance summary of the Survey's assets.

Format: This Report provides a Survey-wide snapshot of the results of performance metrics at each area. The Report then provides an individual section of potential data outliers for each Regional Executive (REx), national responsibility, or mission area.

Use: Areas should evaluate the data provided in their respective sections and make necessary changes in Financial and Business Management System (FBMS) for financial and operational data, and Lotus Notes for personnel data. If the data presented is correct, areas should work to continually improve upon the performance of data outliers.

Criteria: The Survey used the metrics and Survey defined "outlier threshold" to assess outliers.

	Outlier Threshold*	
Metric	**Minimum**	**Maximum**
Value over Gross Square Footage (GSF)	$50	$400
Costs per SF (GSF or RSF)	$1	$20
Cost over Value	0.001	0.2
Condition Index	50%	--
Deferred Maintenance (DM) backlog over GSF	--	$80
Utilization Rate (Office SF over Personnel)	100	300
Cost per Person	$1,000	$10,000

*Note, as data quality improves, these ranges may become more tightly defined.

Legal Interest: In addition to being defined by area, the Survey also defines assets according to their legal interest. Direct leased, owned, General Services Administration (GSA) provided, and otherwise managed assets may need to be assessed separately based on size, party responsible for maintenance, and available data. This report uses the following acronyms when referring to an asset's legal interest:

Legal Interest	Acronym
Cooperative Agreement	Z
Direct Leased	L
GSA Provided	X
Other Agency Provided	Y
Owned	G
State Government Owned	S

REx, National Responsibility, and Mission Area Acronyms: This report makes use of the acronyms provided below in tables and charts representing the areas.

Type of Area	Area	Acronym
REx area	Alaska Area	WA
	Midwest Area	EM
	Northeast Area	EN
	Northwest Area	WN
	Pacific Southwest Area	WS
	Rocky Mountain Area	CM
	South Central Area	CS
	Southeast Area	ES
National responsibility	Administration and Enterprise Information (AEI)	HA
	Director's Office	HD
	Human Capital	HU
Mission area	Climate and Land-Use Change	HC
	Core Science Systems	HI
	Ecosystems	HE
	Energy and Minerals and Environmental Health	HM
	Natural Hazards, Risk, and Resilience Assessment	HH
	Water	HW

Survey-wide Snapshot

The user should insert the applicable information into the place holders highlighted in yellow.

Size

The Survey's portfolio is comprised of over (insert number which is the total number of assets from Buildings Report plus the total number of assets from the Land Report) buildings, structures, and land assets. The figures below provide a representation of the total size of the Survey's portfolio by legal interest in terms of acreage, GSF, and RSF. RSF is the unit of measure for GSA provided space.

(Insert acreage, GSF, and RSF by legal interest tables and graphs from the Size Worksheet of the State of Facilities Workbook; Begins at cell B9 of the Size Worksheet)

The figure below provides a representation of the total size of the Survey's portfolio by area in terms of acreage, GSF, and RSF.

(Insert the sum of acreage, GSF, and RSF summary table from the Size Worksheet of the State of Facilities Workbook; Begins at cell B66 of the Size Worksheet)

The figure below illustrates the Survey's SF by its three main usage types: office, lab, and warehouse.

(Insert the SF type pie chart from the Size Worksheet of the State of Facilities Workbook; Begins at cell K97 of the Size Worksheet)

The figure below provides a breakdown of the Survey's office SF, lab SF, and warehouse SF by area.

(Insert the sum of office, lab, and warehouse SF summary table from the Size Worksheet of the State of Facilities Workbook; Begins at cell B114 of the Size Worksheet)

Value

The Survey's portfolio -- including buildings, structures, and land assets -- is valued at (insert dollar amount from cell C17 of the Value Worksheet). The figures below provide a breakdown of the value of assets by legal interest. Note, this analysis does not include GSA provided space as the Survey is not required to report a value on its GSA provided assets.

(Insert value per GSF table [by legal interest] and value by legal interest pie chart from the Value Worksheet of the State of Facilities Workbook; Begins at cell E9 of the Value Worksheet)

The figure illustrates the value per GSF of non-GSA provided buildings at each of the areas with owned, direct leased, and GSA provided buildings.

(Insert value per GSF table [by area] and value per GSF column chart from the Value Worksheet of the State of Facilities Workbook; Begins at cell E26 of the Value Worksheet)

Costs per SF

The Survey spent (insert dollar amount from cell B37 of the Cost per SF Worksheet) in operating and lease costs since the beginning of (insert fiscal year)**.** The figure below provides a breakdown of the year-to-date (YTD) cost per GSF at each of the areas. This analysis does not include GSA provided space which uses RSF as its unit of measure.

(Insert cost per GSF table [by area] from the Cost per SF Worksheet of the State of Facilities Workbook; Begins at cell B45 of the Cost per SF Worksheet)

The figure below provides a breakdown of the YTD cost per RSF at each of the areas. This analysis evaluates the costs incurred at the Survey's GSA provided space.

(Insert cost per RSF table [by area] from the Cost per SF Worksheet of the State of Facilities Workbook; Begins at cell B69 of the Cost per SF Worksheet)

The figure below shows the cost per GSF and RSF for each area.

(Insert cost per SF summary table from the Cost per SF Worksheet of the State of Facilities Workbook; Begins at cell G73 of the Cost per SF Worksheet)

Costs per Value

This analysis provides information on how much is spent (as a percent of asset value) each year to operate the asset. For the purpose of this report, the cost per value is evaluating how much of the value of an asset the Survey spent in the first (number of months since the start of the FY) months of the FY, since the cost data starts at the beginning of the fiscal year, or (insert first date of FY). The figure below provides the total cost per value at each of the areas.

(Insert cost per value table [by area] from the Cost per Value Worksheet of the State of Facilities Workbook; Begins at cell B27 of the Cost per Value Worksheet)

Condition Index

This analysis provides information on the condition of the assets as a measure of the DM backlog per the value (i.e., 1 - (DM backlog/Value))*100). The calculation of this metric does not include GS- provided space as GSA is responsible for the DM backlog at the majority of those facilities. The figure below provides the overall condition index of assets at each of the areas.

(Insert condition index [by area] table from the Condition Index Worksheet of the State of Facilities Workbook; Begins at cell B27 of the Condition Index Worksheet)

The figure below illustrates the condition index of assets at each of the areas.

(Insert condition index [by area] column chart from the Condition Index Worksheet of

the State of Facilities Workbook; Begins at cell I31 of the Condition Index Worksheet)

DM Backlog per GSF

This analysis provides information on the condition of assets as a measure of DM backlog per GSF. The calculation of this metric does not include GSA provided space as GSA is responsible for the DM backlog at the majority of those facilities. The figure below provides the DM backlog per GSF at each of the areas with a backlog.

(Insert DM backlog per GSF [by area] table from the DM Backlog per GSF Worksheet of the State of Facilities Workbook; Begins at cell B27 of the DM Backlog per GSF Worksheet)

The figure below illustrates the DM backlog per GSF at each of the areas with a backlog.

(Insert DM backlog per GSF [by area] column chart from DM Backlog per GSF Worksheet of the State of Facilities Workbook; Begins at cell J31 of the DM Backlog per GSF Worksheet)

Utilization Rate

This analysis provides information on the condition of assets as a measure of DM backlog per GSF. The calculation of this metric does not include GSA provided space as GSA is responsible for the DM backlog at the majority of those facilities. The figure below provides the overall utilization rate at each area.

(Insert utilization rate [by area] table from the Utilization Rate Worksheet of the State of Facilities Workbook; Begins at cell B27 of the Utilization Rate Worksheet)

The figure below illustrates the overall utilization rate at each area.

(Insert utilization rate [by area] column chart from the Utilization Rate Worksheet of the State of Facilities Workbook; Begins at cell I31 of the Utilization Rate Worksheet)

Cost per Person

This analysis provides information on the total cost per person since the start of FY2012. Cost data is derived from FBMS, while personnel data is derived from Lotus Notes. The figure below shows the overall cost per person at each of the areas.

(Insert cost per person [by area] table from the Cost per Person Worksheet of the State of Facilities Workbook; Begins at cell B27 of the Cost per Person Worksheet)

The figure below illustrates the overall cost per person at each of the areas.

(Insert cost per person [by area] column chart from the Cost per Person Worksheet of the State of Facilities Workbook; Begins at cell I32 of the Cost per Person Worksheet)

(Type of Area) Area: (Insert Area Name) – Prepare tab for each area

This report provides a list of potential data anomalies for each metric, using the criteria defined in the introduction section. Staff at each area should evaluate anomalies against their data, and update the information in FBMS or Lotus Notes, as needed.

Value per GSF

This section identifies assets with a value per GSF less than $50 or greater than $400. The figure below shows assets with a value per GSF less than $50.

(Insert value per GSF less than $50/GSF table for the area from the Value Worksheet of the State of Facilities Workbook; Begins at cell B55 of the Value Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a value per GSF less than $50.")

The figure below shows assets with a value per GSF greater than $400.

(Insert value per GSF greater than $400/GSF table for the area from the Value Worksheet of the State of Facilities Workbook; Begins at cell B427 of the Value Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a value per GSF greater than $400.")

Costs per SF

This section identifies assets with an YTD cost per SF less than $1 or greater than $20. The figure below shows assets with an YTD cost per SF less than $1.

(Insert cost per SF less than $1/SF table for the area from the Cost per SF Worksheet of the State of Facilities Workbook; Begins at cell B114 of the Cost per SF Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a cost per SF less than $1.")

The figure below shows assets with a YTD cost per SF greater than $20.

(Insert cost per SF greater than $20/SF table for the area from the Cost per SF Worksheet of the State of Facilities Workbook; Begins at cell B558 of the Cost per SF Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a cost per SF greater than $20.")

Costs per Value

This section identifies assets with an YTD cost per value less than 0.001 or greater than 0.2. The figure below shows assets with an YTD cost per value less than 0.001.

(Insert cost per value less than .001 table for the area from the Cost per Value Worksheet of the State of Facilities Workbook; Begins at cell B57 of the Cost per Value Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a cost per value less than .001.")

The figure below shows assets with an YTD cost per value greater than 0.2.

(Insert cost per value greater than .02 table for the area from the Cost per Value Worksheet of the State of Facilities Workbook; Begins at cell B528 of the Cost per Value

Worksheet. If no assets are listed in the area's table state, "The [area name] area has no assets with a cost per value greater than .2.")

Condition Index

This section identifies assets with a condition index less than 50%. The figure below shows assets with a condition index less than 50%**.**

(Insert condition index less than 50% table for the area from the Condition Index Worksheet of the State of Facilities Workbook; Begins at cell B57 of the Condition Index Worksheet. If no assets are listed in the area's table state, "The [area name] area has no assets with a condition index less than 50%")

DM Backlog per GSF

This section identifies assets with a DM backlog per GSF greater than $80. The figure below shows assets with a DM backlog per GSF greater than $80.

(Insert DM backlog per GSF greater than $80/GSF table for the area from the DM Backlog per GSF Worksheet of the State of Facilities Workbook; Begins at cell B57 of the DM Backlog per GSF Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a DM backlog per GSF greater than $80.")

Utilization Rate

This section identifies assets with a utilization rate less than 100 USF per person and greater than 300 office SF per person. Additionally, this section identifies assets with reported personnel in Lotus Notes that do not have an office SF number, and assets with an office SF number that do not have reported personnel. The figure below shows assets with a utilization rate less than 100 office SF per person.

(Insert utilization rate less than 100 office SF per person table for the area from the Utilization Rate Worksheet of the State of Facilities Workbook; Begins at cell B57 of the Utilization Rate Worksheet. If no assets are listed in the area's table state, "The [area name] area has no assets with an office SF per person less than 100.")

The figure below shows assets with a utilization rate greater than 300 office SF per person.

(Insert utilization rate greater than 300 office SF per person table for the area from the Utilization Rate Worksheet of the State of Facilities Workbook; Begins at cell B331 of the Utilization Rate Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with an office SF per person greater than 300.")

The figure below shows assets with reported personnel in Lotus Notes that do not have an office SF number in FBMS. Please verify if office SF data is missing or personnel counts should not be provided.

(Insert missing personnel data table for the area from the Utilization Rate Worksheet of the State of Facilities Workbook; Begins at cell B759 of the Utilization Rate Worksheet. If no assets are listed in the area's table state, "The [area name] area has no assets with an office SF count in FBMS, missing personnel data in Lotus Notes.")

The figure below shows assets with office SF counts in FBMS but no reported personnel in Lotus Notes. Please verify if the office is empty or personnel data should be in Lotus Notes.

(Insert table of personnel coded to a building without a reported office SF count for the area from the Utilization Rate Worksheet of the State of Facilities Workbook; Begins at cell B1221 of the Utilization Rate Worksheet. If no assets are listed in the area's table state, "The [area name] area has no assets with personnel data in Lotus Notes, missing an office SF count in FBMS.")

Cost per Person

This section identifies assets with an YTD cost per person less than $1,000 and greater than $10,000. The figure below shows assets with an YTD cost per person less than $1,000.

(Insert cost per person less than $1,000 table for the area from the Cost per Person Worksheet of the State of Facilities Workbook; Begins at cell B56 of the Cost per Person Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a cost per person less than $1,000.")

The figure below shows assets with an YTD cost per person greater than $10,000.

(Insert cost per person greater than $10,000 table for the area from the Cost per Person Worksheet of the State of Facilities Workbook; Begins at cell B318 of the Cost per Person Worksheet. If no assets are listed in the area's table state "The [area name] area has no assets with a cost per person greater than $10,000.")

Lease Expirations

This section identifies leases expiring in the upcoming 12 months, 12-24 months, and 24-36 months. This section also identifies leases which have already expired. The figure below shows lease expirations in the upcoming 12 months (Provide date range).

(Insert leases expiring in the next 12 months table for the area from the Lease Expirations Worksheet of the State of Facilities Workbook; Begins at cell B9 of the Lease Expirations Worksheet. If no assets are listed in the area's table state "The [area name] area does not have any leases expiring in the next 12 months.")

The figure below shows lease expirations in the next 12-24 months (Provide date range).

(Insert leases expiring in the next 12-24 months table for the area from the Lease Expirations Worksheet of the State of Facilities Workbook; Begins at cell B407 of the Lease Expirations Worksheet. If no assets are listed in the area's table state "The [area name] area does not have any leases expiring in the next 12-24 months.")

The figure below shows leases expiring in the next 24-36 months (Provide date range).

(Insert leases expiring in the next 24-36 months table for the area from the Lease Expirations Worksheet of the State of Facilities Workbook; Begins at cell B719 of the Lease Expirations Worksheet. If no assets are listed in the area's table state "The [area name] area does not have any leases expiring in the next 24-36 months.")

The figure below shows leases which have already expired.

(Insert expired leases table for the area from the Lease Expirations Worksheet of the State of Facilities Workbook; Begins at cell B1027 of the Lease Expirations Worksheet. If no assets are listed in the area's table state "The [area name] area does not have any leases which have already expired.")

The figure below shows leases without an expiration date in FBMS.

(Insert leases without expiration dates table for the area from the Lease Expirations Worksheet of the State of Facilities Workbook; Begins at cell B1318 of the Lease Expirations Worksheet. If no assets are listed in the area's table state "The [area name] area does not have any leases without expiration dates in FBMS.")

Appendix R. Steps for Updating the State of Facilities Workbook

When a report is pulled from FBMS or Lotus Notes, the user must make changes to the format to pull the correct data fields into the Output Master Sheet. This is important as the Output Master Sheet is used to create the performance metric worksheets. This section outlines the process for preparing the Report each quarter.

1. **Clear Input Worksheets**. The user should clear data within worksheets where updated information will be added. **Figure 9.90** illustrates the key used in the input worksheets to assess which fields to update each quarter.

Column Header Color	Definition
	Field contains data directly from FBMS, Lotus Notes, or FMB furnished data sources. The contents of these columns may be cleared each quarter to insert new data.
	Field contains formulas, and is not an FBMS, Lotus Notes, or FMB furnished data set. The user should not adjust the formulas in these fields. The formulas will automatically update when new data is entered into other fields.

Figure 9.90. Input Worksheets Column Header Color

2. **Import New FBMS and FMB Sourced Reports into Input Worksheets.** The user should import the new FBMS and FMB sourced reports into the cleared fields with dark green headers. The user can import the new data by copying the data fields from the input reports, and “paste all” into the cleared fields. These fields are presented in the same order as their original FBMS or other sourced data export. The user should verify that the fields and order of the columns have not changed before importing the new data into the worksheets.
3. **Refresh Pivot Tables based off Input Worksheets.** The workbook has three pivot table worksheets based off the input worksheets: the object measurements pivot worksheet, the contract measurements pivot worksheet, and the personnel data pivot worksheet. The user should select each of the three pivot worksheets and click the "Refresh All" icon in the Excel "Data" menu. Additionally, the user should verify that the formulas created in the pivot table worksheets, based off the pivot tables, are pulled down to encompass each line of data**.**
4. **Perform Data Quality Checks to Help Ensure that New Data is Captured.** As stated in Section 8.5.1 - Static versus Dynamic Fields, the Output Master Sheet contains several static fields. The workbook includes data quality checks to help ensure that new data is captured appropriately. Appendix R - Output Master Sheet Fields describes the checks established inside of the Output Master Sheet. In addition, the input worksheets have several checks described below. The user should assess the results of each of following checks and perform the necessary manual reconciliations described:

a. **Buildings Report.** Column C of the Buildings Report is the business entity/building code. Column D contains a formula to identify if the buildings listed in the worksheet are captured in the Output Master Sheet. Once the new building data is imported into this field, the user should filter for "#N/A"s. These are buildings not captured in the current Output Master Sheet. The user should manually add these buildings to the Output Master Sheet.

b. **Land Report.** Column C of the Land Report is the business entity/land code. Column D contains a formula to identify if the land assets listed in the worksheet are captured in the Output Master Sheet. Once the new land data is imported into this field, the user should filter for "#N/A"s. These are land assets not captured in the current Output Master Sheet. The user should manually add these assets to the Output Master Sheet.

c. **Rental Objects Report.** Column G of the Rental Objects Report is the business entity/building/rental object. Column H contains a formula to identify if the rental objects assets listed in the worksheet are captured in the Output Master Sheet. Once the new rental object data is imported into this field, the user should filter for "#N/A"s. These are rental objects not captured in the current Output Master Sheet. The user should manually add these rental objects to the Output Master Sheet.

5. **Add Sender IDS and WBS Codes.** The user should add their respective Sender IDs and WBS codes found in the Settlement Report, if applicable.

6. **Perform Data Quality Check on the Settlement Report.** The user should then perform data quality checks on the Settlement Report. The user should assess the results of each of following checks and perform the necessary manual reconciliations described:

a. **Sender ID.** Column D of the Settlement Report states the Sender IDs. Column E contains a formula to identify if the senders listed in the worksheet are captured in the Output Master Sheet. The user should filter Column C - "RP Object Type" for BU, PR, and RO; representing building, property, and rental objects, respectively. The user should then filter Column E for "#N/A"s. These are senders not captured in the current Output Master Sheet. The user should manually add the senders with a "valid to period" of "#" (Column L) only after verifying that these rules are still active in FBMS.

b. **Sender ID / WBS Code.** Column H of the Settlement Report states the sender/receiver object ID (WBS code). Column I contains a formula to identify if the sender/receiver object ID listed in the worksheet is captured in the Output Master Sheet. The user should filter Column C - "RP Object Type" for BU, PR, and RO. The user should then filter Column I for "#N/A"s. These are senders not captured in the current Output Master Sheet. The user should manually add the sender/receiver object IDs with a

"valid to period" of "#" (Column L) only after verifying that these rules are still active in FBMS.

7. **Refresh Pivot Tables built off the Output Master Sheet.** Several pivot tables designed to help stakeholders analyze specific performance metrics are built off the Output Master Sheet. The user should select the Output Master Sheet and click the "Refresh All" icon in the Excel "Data" menu. Additionally, the user should verify that the formulas created in the pivot table worksheets are pulled down to encompass each line of data. Finally, in the Lease Expirations worksheet, the user should change the value filter on the "unique ID (sender/WBS code)" for each pivot table quarterly to encompass that quarter's date range. The user may also change any other value filters at this time.

Appendix S. Static versus Dynamic Fields in the State of Facilities Report Workbook Output Master Sheet

As the Report presents information at the cost center level, there may be multiple rental objects or cost centers impacted by one asset. Therefore, the Settlement Report may list one "Sender" (i.e., building, land, rental object) to multiple WBS codes. The Vlookup formula in Excel allows the user to highlight a unique ID in one report and find it in another report. The user can use the formula to return the unique ID or other data field associated with the ID match.

As shown in **Figure 9.91**, if a Sender is listed multiple times in the Output Master Sheet and in the Settlement Report, and the Output Master Sheet has a VLookup built inside of it to allocate the Sender and report to the correlating WBS code. The VLookup will return the WBS code associated with the first instance of the Sender each time.

Output Master Sheet	
Sender	WBS Code
101	VLookup
101	VLookup
101	VLookup

Lookup in Settlement Report

Settlement Report	
Sender	WBS Code
101	200
101	201
101	202

Results of the VLookup

Output Master Sheet	
Sender	WBS Code
101	200
101	200
101	200

Figure 9.91. VLookup in Excel

To address this challenge, the Survey hard coded building, structure, and land asset names and codes, correlating rental objects, and senders and WBS codes listed in the Settlement Report. The Survey assigned unique IDs out of the Sender/WBS code combinations and developed data quality checks in the Output Master Sheet (and their accompanying input worksheets) to direct the user to areas needing manual updates when new data is entered. The other fields in the Output Master Sheet are dynamic fields with formulas to enable the continuous pull of new information from the input worksheets.

Appendix T. State of Facilities Workbook Output Master Sheet Fields

The Output Master Sheet consists of consolidated data information at the asset; cost center; and REx, national responsibility, and mission area level. **Figure 9.92** provides the column descriptions in the Output Master Sheet and the user actions associated with each field.

If a new building or land asset is added to the land or building report, the user will need to manually add data to the "static" fields.

Column	Column Title	Static or Dynamic	Description of Function	User Action to Update Worksheet
A	Building or Land Name	Static	States the building or structure name, provided in the FBMS Buildings or Land Report.	N/A
B	Source Data (Building or Land Report)	Static	Identifies if the Building or Land Name came from the Building or Land Report.	N/A
C	Business Entity	Static	States the business entity provided in the FBMS Building or Land Report.	N/A
D	Building or Land Code	Static	States the building or land code provided in the FBMS Building or Land Report.	N/A
E	Business Entity/Building or Land	Dynamic	States the business entity/building or land code.	N/A
F	Vlookup of Business Entity/Building or Land from Land and Building Reports	Dynamic	When new data is imported into the input worksheets, this field will show the "business entity/building or land code" as stated in Column E, if the land or building still exists. If the building is no longer in the Building or Land Report, this field will return a "#N/A."	If the field returns a "#N/A" the user should remove the business entity/building or land line from the Output Master Sheet.
G	Rental Object	Static	The rental object(s) associated with the asset, if applicable, as provided in the Rental Objects Report. An asset may have multiple rental objects and may settle costs and SF to WBS codes through the rental objects or through the asset directly. If a rental object does not exist for an asset, the field states "0."	N/A
H	Business Entity/Building or Land/Rental Object	Dynamic	States the business entity/building or land code/rental object, if rental objects exist. If a rental object does not exist, the field will state "no rental object."	N/A

Column	Column Title	Static or Dynamic	Description of Function	User Action to Update Worksheet
I	Vlookup of Business Entity/Building or Land/Rental Object from Rental Object Report	Dynamic	When new data is imported into the input worksheets, this field will show the "business entity/building or land code/rental object" as stated in Column H, if the rental object still exists. If the rental object is no longer in the Rental Object Report, this field will return a "#N/A."	If the field returns a "#N/A" the user should remove the rental object from the Output Master Sheet.
J	Sender (as stated in the Settlement Report)	Static	The "sender" as stated in the Settlement Report. For an asset, the sender may be a building, land, or rental object ID. The following provides sender IDs: •"IB" - buildings •"PR" - land •"IM" - assets whose costs are applied through their rental objects Following the IB/PR/IM is 1400, the business entity code, and the building or land code or rental object. Some assets do not have settlement rules in the Settlement Report. Those assets have their respective WBS codes stated in the Building or Land Reports. These assets have a "0" stated in this field.	N/A
K	WBS Code (as stated in the Settlement Report)	Static	States the WBS codes receiving costs, as stated in the Settlement Report. The WBS Code generally begins with "G," a letter, the last two numbers of the FY (i.e., 12 for FY12), and a combination of numbers and letters. For instances where a building or land asset has multiple rental objects but is sending costs through the building or land, and not through the rental object, this field states "N/A." For instances where the Sender in Column J is "0" this field is "#N/A."	N/A
L	Sender/WBS Code (from Settlement Report)	Dynamic	States the sender/WBS code from Columns J and K.	N/A

Column	Column Title	Static or Dynamic	Description of Function	User Action to Update Worksheet
M	Vlookup of Sender/WBS Code from Settlement Report	Dynamic	When new data is imported into the input worksheets, this field will show the "Sender/WBS code" as stated in Column L, if the sender/WBS code exists. If the sender/WBS code is no longer in the Rental Object Report, this field will return a "#N/A."	If this field returns a "#N/A" the user should verify that the FY has not changed by manually changing the FY stated in the WBS code in Column K to the current year. If the user is unable to locate the updated sender/WBS code, the user should search for the new WBS code the sender uses, if applicable, and update Column K**.**
N	If Sender is a Rental Object….	Dynamic	If the sender, noted in Column J, is a rental object, beginning with "IM", this field creates a rental object ID like the one stated in the Object Measurements Report. If the sender is not a rental object, this field returns a "False." This field is needed for the settlement rule (Column V).	N/A
O	Vlookup to Rental Object ID in Object Measurements Tab	Dynamic	When new data is imported into the input worksheets, this field will show the rental object ID as stated in Column N. Where Column N states "false" this field will show "#N/A."	If this field returns a "#N/A" where a rental object ID exists in Column N, the user should verify if the rental object is still active in FBMS.
P	WBS Code	Dynamic	States the WBS code in Column K for assets with a settlement rule defined in the Settlement Report. Otherwise, pulls the WBS code from the Building or Land Report.	N/A
Q	WBS Code - Shortened Code	Dynamic	Extracts the fifth and sixth digit from the WBS code. These two letters identify the cost center, which reconciles to a REx, national responsibility, or mission area.	N/A
R	Unique ID (Sender/WBS Code) for Pivot Tables	Dynamic	Pulls the sender/WBS code from Column L for assets with a settlement rule defined in the Settlement Report. Otherwise, creates a combination of the sender /WBS code in the same format. This is used to have a unique ID for each line of data for the pivot tables.	N/A
S	Business Entity/Building or Land/Shortened WBS Code	Dynamic	States the business entity/building or land code/shortened WBS code. The data is in the same format as information found in the Personnel Report to accurately allocate personnel to buildings.	N/A

Column	Column Title	Static or Dynamic	Description of Function	User Action to Update Worksheet
T	REx or Mission Area	Dynamic	Uses the shortened WBS code to extract the REx, national responsibility, or mission area from the "Cost Center to Area" Report.	N/A
U	Legal Interest	Dynamic	States the legal interest found in the Building or Land Report.	N/A
V	Settlement Rule	Dynamic	States the settlement rule used to allocate costs, value, DM backlog, SF, and acreage to the WBS codes. • For buildings and land assets without a settlement rule defined in the Settlement Report, this formula assumes a 100% allocation to the WBS code stated in the land or building code. • For building and land assets with a settlement rule in the Settlement Report sending directly through the asset (i.e., not sending through a rental object), this formula takes the settlement percentage stated in the Settlement Report. That settlement percentage is created by taking the equivalence of that unique sender/WBS code and dividing it by the total equivalence or percentage at the building. • For buildings and land assets with a settlement rule sending through rental objects, this formula takes the settlement percentage stated in the Settlement Report and multiplying it by the rental object percentage stated in the Object Measurements pivot table tab of the Input Workbook. The settlement percentage is created by taking the equivalence of that unique sender/WBS code and dividing it by the total equivalence or percentage at the building. The rental object percentage is created by dividing the SF assigned to the rental object by the total SF of rental objects at the asset.	N/A
W	Annual Operating Costs/Lease Costs	Dynamic	Multiplies the year-to-date (YTD) costs incurred by the asset, as stated in the Costs Report by the settlement rule.	N/A
X	DM Backlog	Dynamic	Multiplies the DM backlog at the building, as found in the Buildings Report by the settlement rule. Returns an "N/A" for land assets.	N/A

Column	Column Title	Static or Dynamic	Description of Function	User Action to Update Worksheet
Y	Value	Dynamic	Multiplies the building's value, as stated in the Buildings Report by the settlement rule. Returns an "N/A" for land assets.	N/A
Z	Number of People	Dynamic	Pulls the count of people at the "Business Entity/Building or Land/Shortened WBS Code," as stated in Column S, from the "personnel data" pivot table. Returns an "N/A" for land assets.	N/A
AA	Office SF	Dynamic	Multiplies the office SF, as stated in the object measurements pivot table, by the settlement rule. Returns an "N/A" for land assets.	N/A
AB	Lab SF	Dynamic	Multiplies the lab SF, as stated in the object measurements pivot table, by the settlement rule. Returns an "N/A" for land assets.	N/A
AC	Warehouse SF	Dynamic	Multiplies the warehouse SF, as stated in the object measurements pivot table, by the settlement rule. Returns an "N/A" for land assets.	N/A
AD	GSF	Dynamic	Multiplies the GSF, as stated in the object measurements pivot table, by the settlement rule. Returns an "N/A" for land assets.	N/A
AE	RSF	Dynamic	Multiplies the RSF, as stated in the contract measurements pivot table, by the settlement rule. Returns an "N/A" for land assets.	N/A
AF	Acreage	Dynamic	Multiplies the acreage, as stated in the object measurements pivot table, by the settlement rule. Returns an "N/A" for land assets.	N/A
AG	Lease Expirations	Dynamic	Extracts the lease expiration data from the Contract Measurements Report for direct leases and GSA provided assets. If the asset is not a direct lease or GSA provided asset, the formula returns an "N/A."	N/A
AH	Utilization Rate (Office SF/Personnel)	Dynamic	Divides office SF stated in Column AA by the number of personnel stated in Column Z for buildings. Returns an "N/A" for land assets.	N/A
AI	Value per GSF	Dynamic	Divides the value stated in Column Y by the GSF in Column AD for buildings. Returns an "N/A" for land assets.	N/A
AJ	DM Backlog per GSF	Dynamic	Divides the DM backlog stated in Column X by the GSF in Column AD for buildings. Returns an "N/A" for land assets.	N/A

Column	Column Title	Static or Dynamic	Description of Function	User Action to Update Worksheet
AK	Condition Index	Dynamic	Calculates one minus the DM backlog stated in Column X divided by the value stated in Column Y. Returns an "N/A" for land assets.	N/A
AL	Costs per GSF (or RSF)	Dynamic	Divides the YTD costs incurred stated in Column W by the GSF stated in Column AD (or RSF stated in Column AE for buildings without a GSF). Returns an "N/A" for land assets.	N/A
AM	Cost per Personnel	Dynamic	Divides the YTD costs incurred stated in Column W by the number of personnel stated in Column Z. Returns an "N/A" for land assets.	N/A
AN	Operating Costs per Value	Dynamic	Divides the YTD costs incurred stated in Column W by the value stated in Column Y. Returns an "N/A" for land assets.	N/A

Figure 9.92. Output Master Sheet Columns