



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington, D.C. 20240



In Reply Refer To:
FWS/ANRS/ITM/025923

JUN 14 2006

Memorandum

To: Deputy Assistant Secretary, Business Management and Wildland Fire
From: Deputy Director *Michael S. Jones*
Subject: FWS Asset Management Plan

As part of our comprehensive strategy to improve asset management by implementing the DOI Asset Management Plan, the Service is submitting the attached Service Asset Management Plan. The plan was developed using the DOI template for bureau asset management plans and identifies standardized business practices used Service-wide in asset management. In addition, specific sections provide additional information for the National Wildlife Refuge System, National Fish Hatchery System, National Conservation Training Center, and the Service's vehicle fleet. Service employees from Refuges, Fisheries, Engineering, Business Management Operations and the NCTC contributed to the plan and all Regional Offices commented on the plan.

The plan identifies areas where we can improve our asset management program, specifically in the areas of developing planned or projected operations and maintenance (O&M), preventive maintenance (PM) and component renewal (CR) costs. These are identified as growth areas for the Service. We think that working in conjunction with the Department and other bureaus to develop estimating tools for O&M, PM, and CR costs that can be integrated into the Single Platform Maximo application is the best strategy to ensure consistent application of these costs among all bureaus.

We are aware that bureau asset management plans are being closely monitored by both the Department and the Office of Management and Budget. We expect that as you review our asset management plan as well as plans from other bureaus, that additional revisions of the plan may be required to improve and standardize the scope and contents of the plans. The Service is willing and able to address Department recommendations on making improvements to the plan and requests your feedback in that regard. Also, our experience in preparing the bureau asset management plan is raising questions with us on the most appropriate strategy for preparing step down plans. Because the Service wants to encourage consistency and standardization in asset management across Service programs, a single asset management plan for the Service seems to convey this message. Program rather than site level asset business plans can best identify situations where asset management strategies should vary, such as the differences between the missions of the National Wildlife Refuge System, the National Fish Hatchery System or the National Conservation Training Center.

As we finalize the bureau wide asset management plans, we would encourage a lessons-learned discussion by the Asset Management Team to include a discussion of how and when site specific

asset business plans should be prepared. This would help ensure that site specific asset business plans add value to the asset management planning process.

Questions about the asset management plan may be directed to Martin Brockman, Facility Coordinator, at 703-358-2385, with the National Wildlife Refuge System, or Pamela Richardson, 703-358-2053, with the National Fish Hatchery System.

Attachment

U.S. Fish and Wildlife Service

Asset Management Plan

June 7, 2006

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U.S. Fish and Wildlife Service Asset Management Plan

1. Service Mission, Organization Structure and Support

The Service's mission is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

The Service manages the 96-million-acre National Wildlife Refuge System (NWRS), which encompasses 545 National Wildlife Refuges (NWRs), thousands of small wetlands, and other special management areas. It also operates 69 National Fish Hatcheries, 64 fishery resource offices, and 81 ecological services field stations. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Assistance program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

The Service has the privilege of being the primary agency responsible for the protection, conservation, and renewal of these resources for this and future generations. We accept this responsibility and challenge with optimism and resolve to pass along to future generations of stewards a fish and wildlife resource heritage that is stronger than when it was entrusted to us.

The Service employs approximately 10,000 permanent and temporary staff and is supported by citizens volunteering approximately 1.4 million hours. Although the Service is headquartered in Washington, D.C., over 90% of the workforce is located in communities across the nation at over 700 field stations supported by seven regional offices. The Service continues to focus on building and maintaining relationships with a broad array of stakeholders, including the states, tribes, community groups, and other organizations due to our involvement at the community level.

Most field stations are small offices with few staff. Many are located in small towns or remote places to ensure proximity to the resources they manage. Over 67% of field stations (451 locations) have less than 10 people assigned. This is a factor in asset management because many of our field stations utilize small facilities. The service owns 434 office buildings with a median size of 2,240 square feet, and owns only 15 office buildings over 10,000 square feet. The chart below provides additional specifics

Staff size	Number of field offices	% of total	Staff size	Number of field offices	% of total
1-3	169	25.26%	21-30	40	5.98%
4-7	190	28.40%	31-40	14	2.09%
8-10	92	13.75%	41-70	16	2.39%
11-15	85	12.71%	71+	4	0.60%
16-20	59	8.82%			

1.1 Organization

As shown in the accompanying organization chart, (appendix 1) the Directorate of the Service is comprised of the Director, two Deputy Directors, and 11 Assistant Directors, all located in Washington, D.C. There are seven Regional Directors and one Manager of Operations, located throughout the U.S. The Service headquarters offices are located in Washington, D.C. and Arlington, Virginia, with field units in Denver, Colorado, and Shepherdstown, West Virginia.

Regional Offices are located throughout the U.S. and are summarized below

- Region 1, located in Portland, Oregon, serves California, Hawaii, Idaho, Nevada, Oregon, and Washington, as well as the Trust Territories of the Pacific. (Region 1 also includes the California/Nevada Operations Office.)
- Region 2, located in Albuquerque, New Mexico, serves Arizona, New Mexico, Oklahoma, and Texas.
- Region 3, located in Ft. Snelling, Minnesota, serves Indiana, Illinois, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.
- Region 4, located in Atlanta, Georgia, serves Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee, as well as Puerto Rico and the Virgin Islands.
- Region 5, located in Hadley, Massachusetts, serves Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, Vermont, West Virginia, and the District of Columbia.
- Region 6, located in Denver, Colorado, serves Kansas, Montana, North Dakota, South Dakota, Nebraska, Colorado, Utah, and Wyoming.
- Region 7, located in Anchorage, Alaska serves the entire state of Alaska.

The Service's Director has direct line authority over Service headquarters and the seven regional offices. Assistant Directors provide policy, program management, and administrative support to the Director. Regional Directors guide policy and program implementation through their field structures, and coordinate activities with Service partners.

Because of the Service mission, facilities are widely distributed throughout all 50 states, and the Atlantic and Pacific territories. Asset management and decision making activities are generally undertaken at the local and Regional Office levels while the Washington headquarters staff in the NWRS, NFHS, Division of Engineering (DEN) and Division of Contracting and Facilities Management (CFM) provide Service-wide policy, information systems management and reporting, and facility program oversight relating to condition assessments, quarters and lease management.

2. Bureau Strategic Goals and Linkage to DOI Goals, Mission and Policies.

The Department of the Interior's (DOI) Strategic Plan organizes the Department's goals and Department-level performance measures into five mission areas: Resource Protection, Resource Use, Recreation, Serving Communities and Management Excellence. The Service's Operational Plan directly aligns all program's long-term and annual performance goals and measures with these mission areas. The Service is entrusted with the protection, conservation, and recovery of threatened and endangered species, migratory birds, some marine mammals, inter-jurisdictional and other fisheries, their habitats, and stewardship of the NWRS. As such, the Service will significantly contribute to the successful achievement of the DOI's mission goals.

More specifically, the Service supports the following DOI end outcome goals:

Resource Protection: Improve the health of watersheds, landscapes, and marine resources; sustain biological communities; and protect cultural and natural heritage resources.

Resource Use: Manage resources to promote responsible use and sustain a dynamic economy. Although Resource Use is only tangentially applicable to the activities performed by the Service and the DOI Strategic Plan does not contain an applicable performance measure, the Service does contribute through a collaborative environmental consultation effort. In addition The Service supports compatible economic uses lands in the National Wildlife Refuge System, such as haying and grazing, when the use contributes to accomplishing the purposes of the Refuge and the mission of the Refuge System.

Recreation: Provide for a quality recreation experience, including access, enjoyment of natural and cultural resources on DOI managed, and partnered lands and waters.

Serving Communities: Protect lives and property and improve fire management.

Management Excellence: Manage the Department to be highly skilled, accountable, modern, functionally integrated, citizen-centered, and results-oriented.

The Operational Plan is the cornerstone of the Service's performance and accountability infrastructure that will generate comprehensive and meaningful performance information. Instrumental in translating broad organizational goals is their linkage to tactical field operations through identification of local-level program measures. Local program measures cascade downward to direct program field operations and results can then be rolled up and aligned with the Service's strategies and goals. This performance infrastructure can help maximize performance by linking the results the Service hopes to achieve to the program approaches and resources that are necessary to achieve those results. Consequently, the Service is better positioned to deliver economical, efficient, and effective programs that can help address the challenges facing natural resource management.

A copy of the Operational Plan can be found at: <http://www.fws.gov/planning/abc/>. This Service website also has a link to the DOI Strategic Plan, which is: http://www.doi.gov/gpra/strat_plan_fv2003_2008.pdf

The Asset Management Plan's priorities are directly linked to the Service's Operational Plan goals and measures.

3. Asset Inventory, Condition and Valuation

Asset Category	Measure	Unit	Total Current Replacement Value	Average Condition Index	Average Utilization	Total O&M Cost (3)
Owned buildings(1)	16,932,828.48 21,900.02	Sq. Ft. Lane Miles	\$2,118,611,523.85	87.5	2.11	\$28,405,836.87
Linear Assets (2)			\$8,258,433,850.85	88.72	n/a	\$7,428,762.30
Bridges	136,358.42	Sq. Yd.	\$181,811,743.73	87.04	n/a	\$469,601.76
All other structures (3)	31,353 assets	(3)	\$6,841,478,988.06	91.56	n/a	\$29,898,982.55
Non Steward ship land	14,197.1936	Acres	n/a	n/a	n/a	110,992.52
Totals			\$17,478,845,970			\$68,609,216.00

(1) Subset of owned buildings where utilization data is required 1,944 assets have total utilization score of 4105

(2) 5303 assets

(3) Asset measures on other structures varies widely

Asset condition is measured using two different measures, facility condition index or FCI and Condition Index or CI, both of which compare the ratio of deferred maintenance to current replacement value.

FCI has been in Use in the Service since 1999 and is calculated using the following equation. $\text{Deferred Maintenance} / \text{Current Replacement Value}$. The calculation results in a value between 0 and 1. The smaller the number, the better the condition the asset is in. FCI is used to report asset condition for GPRA in the Service's Strategic plan and Annual Operations Plan.

CI is calculated for submission to the Federal Real Property Profile (FRPP). The equation is as follows $1 - (\text{Deferred Maintenance} / \text{Current Replacement Value}) * 100 = \text{CI}$. This calculation results in a number between 0 and 100 where 100 represents an asset in perfect condition (no deferred maintenance) and a 0 represents an asset in the worst condition possible, where the deferred maintenance is equal to or exceeds the current replacement value of the asset. CI is used to report asset condition to the FRPP.

3.1 Leased Asset Inventory

The Service has 339 General Services Administration (GSA) and 137 non-GSA leases as of March 2006. These are tracked each month in reports sent out to Regional and Washington personnel. The reports show the total leases, square foot and cost changes, adjustments and pending space requests. GSA leases for 2,243,933 square feet at \$48,068,777 per year are mostly for office space, with the rest for storage space and parking including security costs from the Department of Homeland Security (DHS). Non-GSA leases cover 886,748 square feet at \$3,252,520 per year. They tend to be small, short-term and include more esoteric types like housing, antennas, airplane hangars, boat docks, and cold storage; as well as office, storage and parking.

3.2 Annual and comprehensive condition assessments.

Annual condition assessments are conducted each year on all buildings and structures having a Current Replacement Value (CRV) greater than or equal to \$5,000. The annual condition assessment coincides with real property inventory updates which are typically conducted during

June, July and August. It is important to conduct the annual condition assessment at a time when the asset is fully visible and accessible. Comprehensive condition assessments (CCA) are conducted once every 5 years on all buildings and structures having a CRV greater than or equal to \$50,000. In addition, the National Fish Hatchery System conducts CCA's on all mission critical water management assets.

3.3 Frequency of updating inventory, percent of assets with FRPP data.

Update of Service owned inventory is continuous as assets are acquired or disposed of, and is governed by the Services' Property, Plant & Equipment Manual.

<https://intranet.fws.gov/region9/engineering/PPEMARCH05/index.htm> (This document is accessible only to Service employees but copies are available by request.)

All assets in the Service Real Property Inventory had all data required by the Federal Real Property Profile (FRPP). No waivers for exceptions were required. Leasing data is updated monthly from GSA, DHS and Regional data. All leases are part of the FRPP submission.

3.4 Frequency for updating the Current Replacement Value (CRV).

The total CRV of assets in the inventory (as last reported in the FRPP, November 2005) is \$17,478,775,485. CRV is updated in a two-step process. Step 1 is used to develop a replacement value; Step 2 is used to keep that value current.

3.4.1 Step 1 CRV for Non-Heritage Assets.

This occurs during the comprehensive condition assessment process. CRV is determined by trained personnel using one of the following three methods.

- Method 1: For recently constructed assets that still meet code requirements and have not undergone expansion or improvement to their original configuration, CRV will be a calculation involving an inflation adjustment to the acquisition cost of the asset. One example of the method of adding an inflation adjustment to the acquisition cost is to use the Construction Cost Indexes from the Engineering News Record (ENR-CCI) as an inflation adjustment. How ENR builds the Index: 200 hours of common labor at the 20-city average of common labor rates, plus 2,500 pounds of standard structural steel shapes at the mill price prior to 1996 and the fabricated 20-city price from 1996, plus 1.128 tons of Portland cement at the 20-city price, plus 1,088 board-ft of 2 x 4 lumber at the 20-city price. The ENR-CCI allows adjustment to previous years costs data by factors which are specifically determined based on construction material and labor costs which are averaged nationwide.
- Method 2: For recently constructed assets that still meet code requirements and have not undergone expansion or improvement to their original configuration, but where actual acquisition cost is not available, CRV may be determined by performing a calculation involving an inflation adjustment to the recorded cost of a recently acquired asset with an identical asset type or (similar asset), comparable size, quality and capacity, in the same geographical location. For example, if a station recently replaced a single family home

used for quarters by constructing new housing or purchasing manufactured housing, the inflation adjusted cost per square foot of the most recently constructed quarters could be used to determine CRV for other housing units at that same station. The same process could be applied to other common assets such as warehouse or garage space, water wells, fencing, comfort stations, docks and piers, boardwalks etc.

- Method 3: In the absence of acquisition cost data, or when the acquisition cost of the building does not reflect current code requirements, a cost estimate or cost model shall be developed to replace the asset at existing size and functional capability using reference cost databases such as R.S. Means. The estimate or model shall consider the building construction type, user and use categories, quality level, buildings systems and or subsystems/ components/ units, locality costs and local experience. The estimate must include costs of materials, labor, design, project management and administrative costs. Because accurate, valid cost estimating is complicated, agencies must provide required training to allow cost estimating tools to be used properly, or deploy simple to use cost estimating tools. When agencies are restricting development of cost estimates to architecture, engineering or facility management professionals, a range of tools are available. The Service is currently using cost estimating resources ranging from books from R.S. Means, Computerized tools such as RS Means Cost works or Timberline, both of which employ R.S. Means databases of both single items and assemblies made up of required building components to develop cost estimates. These methods require construction or repair estimating knowledge normally only possessed by maintenance and construction professionals.

3.4.2 Step 1 CRV for Heritage Assets

Heritage Assets have an intrinsic value beyond the basic cost of their replacement that distinguishes them from non-heritage assets. Heritage assets are also generally expected to be preserved indefinitely. In most cases, the treatment of significant heritage assets is governed by Historic Preservation programs, either through federal law, such as the National Historic Preservation Act (NHPA) and the Archaeological Resources Protection Act (ARPA).

For these assets, a CRV based on standard industry construction costs will not accurately reflect the cost of replacing the asset using historically accurate construction and renovation techniques. While it is unlikely that a heritage asset could be replaced using new construction techniques, renovation of heritage assets does occur frequently and the use of a replacement in kind CRV estimate—one that captures the costs associated with using historically accurate construction techniques and materials—allows for recognition of the increased costs associated with historically accurate construction techniques. Recognition of these costs, in both the numerator and denominator of the FCI, is necessary to ensure that the calculated FCI for heritage assets is accurate and reflective of their unique intrinsic value.

3.4.3 Step 2 (all assets)

This occurs annually when updating the Service Real Property Inventory. It is used to keep replacement value data current. All RPI records contain a base replacement value (determined

during the Comprehensive Condition Assessment process described above) and a base year (year the replacement value was determined). In order to keep that base replacement value up to date to the current year, the base replacement value is multiplied by a factor based on ENR-CCI data. This keeps all replacement values accurate to the current year.

3.5 Average age ranges and Condition Index values for major asset categories.

3.5.1 Service Owned Assets

		FY 2005 # of Constructed Assets As reported in the FRPP	Average Age	Average Condition Index 100= excellent 0= bad
	Buildings			
3510	Office	434	33.48	82.06
3523	Schools	44	33.93	86.95
3529	Other Institutional Uses	161	27.08	81.15
3530	Family Housing	1,259	44.86	84.22
3531	Dorms/Barracks	143	30.84	82.88
3541	Warehouses	2,923	39.27	90.50
3550	Industrial	502	31.95	89.53
3560	Service	440	30.59	81.45
3572	Communication Sys	29	28.92	89.68
3573	Navigation & Traffic Aids	17	98.75	95.82
3574	Labs	180	27.43	96.41
3580	All Other	1,009	30.49	87.41
	Total Buildings	7,141	36.98	
	Structures			
4012	Airfield Pavements	22	44.23	87.27
4013	Harbors & Ports	778	23.21	90.45
4016	Reclamation & Irrigation	11,912	31.32	92.73
4040	Storage OTB	1,150	19.96	94.53
4050	Industrial OTB	993	41.08	78.63
4066	Parking Structures	3,935	27.77	89.79
4071	Utility Sys	4,120	27.9	93.2
4072	Commo Sys	251	17.92	94.52
4073	Navigation & Traffic Aids OTB	11	24.9	81.81
4075	Recreational OTB	3	64.5	100
4076	Roads & Bridges	6,115	41.94	88.50
4077	Railroads	3	63.5	66.66
4078	Monuments & Memorials	125	62.05	95.28
4080	All Other	8,038	25.45	91.01
4082	Weapons Ranges	10	25.7	90
	Total Structures	37,466	30.9	

3.5.2 Leased Space Trends

GSA leased space peaked in December 2004 at \$49,504,792, and the square footage in May 2005 at 2,430,205. Non-GSA leases decreased from 140 to 137 within the last year, and square feet decreased 24,498, but costs increased. This was due to a variety of factors, such as paying for temporary replacement housing for employees displaced by hurricanes and increases in lease renewal costs.

4. Asset Prioritization

The Asset Priority Index (API) scoring for all Service assets is based on a 100 point system as required by the DOI asset management plan. Two separate scoring criteria categories, **Mission Dependency Rating (MDR) - 80%** and **Asset Substitutability - 20%** are combined in order to attain a final API score. Field station managers must enter a selection for both mission criticality and substitutability to complete the API for each asset record in the real property inventory. Field stations completed assessment of all their assets mission criticality for the first time in July 2005. API is directly correlated with an assets mission dependency rating (required by the FRPP) as seen in the chart below, both API and MDR indicates which asset groups are most important to the Service mission. Assets in the Reclamation & Irrigation category such as levees, dikes, water control structures are considered highest priority (average MDR of 1.16), followed by industrial structures (average MDR of 1.18) and industrial buildings (average MDR of 1.5), which are typically buildings and structures associated with fish production at National Fish Hatcheries.

	FY 2005 # of Constructed Assets (FRPP)	Average API 100= most important 0= least important	Average mission Dependency rating (Range 1-3)	Num assets missio- n critical	Num assets Miss Dependent not Critical	Num Assets not mission dependent
Buildings						
3510 Office	434	74.62	1.6	200	205	29
3523 Schools	44	68.86	1.9	6	36	2
3529 Other Institutional Uses	161	64.96	1.84	46	94	21
3530 Family Housing	1,259	54.21	1.95	308	694	257
3531 Dorms/Barracks	143	56.50	1.9	44	70	29
3541 Warehouses	2,923	52.18	2.01	453	1,980	490
3550 Industrial	502	78.31	1.5	300	152	50
3560 Service	440	71.75	1.73	148	262	30
3572 Communication Sys	29	65.17	1.76	13	10	6
3573 Navigation & Traffic Aids	17	46.47	2.23	1	11	5
3574 Labs	180	42.69	2.08	23	119	38
3580 All Other	1,009	50.34	2.02	149	684	176
Total Buildings	7,141		1.92	1,691	4,317	1,133
Structures						
4012 Airfield Pavements	22	39.09	2.27	5	6	11
4013 Harbors & Ports	778	63.22	1.92	99	33	646
4016 Reclamation & Irrigation	11,912	93.18	1.16	10,057	1,699	156
4040 Storage OTB	1,150	69.61	1.70	433	627	90
4050 Industrial OTB	993	90.86	1.18	851	101	41
4066 Parking Structures	3,935	61.90	1.92	403	3,409	123
4071 Utility Sys	4,120	75.68	1.57	2,120	1,651	349
4072 Communication Systems	251	70.83	1.73	95	130	26
4073 Navigation & Traffic Aids OTB	11	69.54	1.72	4	6	1
4075 Recreational OTB	3	50	2	1	1	1
4076 Roads & Bridges	6,115	74.26	1.67	2,114	3,849	152
4077 Railroads	3	18.33	2.66	0	1	2
4078 Monuments & Memorials	125	19.28	2.6	6	37	82
4080 All Other	8,038	73.98	1.65	3,188	4,470	380
4082 Weapons Ranges	10	49	2.1	1	7	2
Total Structures	37,466		1.52	19,377	16,640	1,449

Highlighted categories are those with highest average API and mission dependency ratings.

5. Bureau Governance / Decision making process for assets

Service Asset management priorities are directly linked to the Service mission and strategic plan goals. As such, asset management decisions are based on input from field station managers, Regional asset management experts and national program managers who are familiar with the resource management impacts that result from asset investment decisions. Asset management information is stored in the Service Asset Maintenance Management System (SAMMS) a tailored version of Maximo. Maximo is an asset based, work order driven, commercial software package used for maintenance management.

5.1 Integration opportunities, resource sharing, and co-location.

Integration of Service offices is extensive. There are over 1,550 organizations identified in the Service, but through substantial use of collocation, there are only 723 places that the Service maintains offices. This is done to save money through consolidation of leases and sharing of resources, improve communication between Service programs, and provide enhanced customer service. For instance, Ecological Services offices are often co-located with NWR or NFH staff. Over 75% of the leased square feet and costs are in offices shared with two or more programs. The others are mostly small law enforcement offices that need to be at border crossings, airports and ports, or in temporary locations. Examples of co-location with other entities include:

- Desert NWR Complex, (NV) is co-located with Bureau of Land Management and Forest Service (USFS),
- Service Staff at Tijuana Slough NWR(CA) are located in California state facilities,
- Susquehenna River Fishery Coordinators Office(PA) is co-located with the State of Pennsylvania,
- Whittlesey Creek NWR (WI) is co-located with the National Park Service(NPS), USFS and Wisconsin state in a USFS building,
- Big Oaks NWR (IN) staff are located in an Army-owned building on the Jefferson Proving Ground,
- Detroit River International Wildlife Refuge staff are located on a U.S. Environmental Protection Agency Research station,
- Corpus Christ (TX) Ecological Services Field office is co-located with US Geological Survey (USGS) staff in a building owned by Texas A&M University.
- The Big Muddy National Fish and Wildlife Refuge (MO) is co-located with USGS staff in a USGS Science center.

5.2 Space Acquisition Strategies

How does the Service determine whether to construct a new asset, lease, or provide a service or function at another location? The Service considers co-location opportunities, cost, mission, availability of space in proximity to mission need, and security requirements. In the event that the project expenditure is greater than \$10 million, an Office of Management and Budget (OMB) exhibit 300 form is prepared. A 300 completes a life-cycle analysis of each project, evaluates a

number of alternatives to development and proposes a most effective business case for the project.

5.2.1 Constructing Assets

Major asset investment decisions which require an OMB exhibit 300 (expenditures greater than \$10 million dollars) are guided by the Capital Planning Investment Control (CPIC) process through the Investment Review Board (IRB). In addition, all projects included in the Construction Appropriation list are reviewed and prioritized by the IRB. Smaller investment decisions are made through preparation of the Service's 5-Year Deferred Maintenance and Capital Improvement Plan with input from the Regional offices and National program headquarters. The IRB also reviews and approves each annual update of the Service's 5-year construction plan to ensure that it includes the Service's highest priority projects, given available funding.

5.2.2 Leasing Assets

A User Pay system was set up at the beginning of Fiscal Year 2005 which allocated each GSA lease by organization and sub-activity code. These allocations are charged back to the occupying program. This has resulted in the cost of GSA leased space peaking in December 2004 at \$49,504,792, and the square footage in May 2005 at 2,430,205. Cost changes for FY 2005 resulting from square foot changes are tracked in a consolidated cumulative spreadsheet. Through a combination of providing timely data and applying cost accounting by charging Programs for their proportion of leased space, managers have the tools and incentive to reduce their space costs. Programs have analyzed this information to make significant ongoing progress in reducing their leased space costs. Pending leased space requests are approved at the Regional and Washington office levels. They are reported in OMB Exhibit 54, the leased space budget. No new requests have been submitted since July 2005, and several previous requests have been withdrawn.

5.3 Multi-year portfolio planning.

How are proposed projects / acquisitions ranked in the plan, what new priorities such as new mission, or programmatic changes that impact resource needs have been identified?

Asset investment decisions involve four types of projects: 1) deferred maintenance, 2) small visitor facility enhancements, 3) larger construction, rehabilitation and capital improvements and 4) refuge public use road projects. Deferred maintenance is funded by the Resource Management appropriation. Visitor facility enhancements are funded by either the Resource Management or the Construction appropriation. Large construction is funded by the Construction appropriation. Road projects are funded via the Surface Transportation Act (23 USC) and is administered by the Federal Lands Highway Division of the Federal Highway Administration in cooperation with the NWRS. Project selection and implementation are handled differently for each project type. The Deferred maintenance and Construction portions of the plan are prioritized using input from Regions, and National program managers. Both plans are prioritized to ensure that scarce resources are invested wisely to ensure that the Service mission and Strategic Plan goals are met. Small visitor facility enhancement projects are

identified in both the deferred maintenance and construction project lists and funded using both resource management and construction appropriation funds.

Refuge public use roads investment needs are identified during the condition assessment process by the Federal Highway Administrations public lands division.

5.3.1 Identifying Deferred Maintenance Projects

Deferred maintenance projects are created using work orders from SAMMS. This process groups existing deferred maintenance needs documented through condition assessments into projects focusing on the rehabilitation or renewal of a single asset.

5.3.2 Prioritizing DM projects

Projects are prioritized according to DOI budget guidance attachment G which considers health and safety factors, resource protection and compliance or other deferred maintenance needs. Projects are scored using a standard algorithm, and all project scores are included in SAMMS. Project selection for the deferred maintenance portion of the plan is managed within each Region. In addition to attachment G, project prioritization guidelines, regions also consider API and the effect on the assets FCI and Service Mission prioritization such as recovery of endangered species, mitigation responsibilities for Federal water activities, or other political issues brought into the formulation of the yearly list.

5.3.3 Identifying Visitor Facility Enhancement (VFE) Projects.

VFE projects are identified by regions using work orders in SAMMS for a restricted set of asset types that are commonly used by visitors such as, boardwalks, kiosks, visitor contact stations etc. The project work orders are generated by the annual and comprehensive condition assessment processes.

5.3.4 Prioritizing Visitor Facility Enhancement Projects

Allocation of funds occurs based on a formula which considers each regions actual visitation, and number of Refuges that are open to visitation. Regions prioritize these projects to improve the visitor's experience.

5.3.5 Prioritizing Public Use Roads Projects

Regions prioritize these projects to serve public users of these roads and to improve the regions road asset condition index.

5.4 Identifying Construction needs.

The Service maintains a consolidated database on the construction needs for the following programs having assets: the NWRs, the NFHS, Migratory Birds (MB), Endangered Species (ES), the National Conservation Training Center (NCTC) and Law Enforcement (LE).

“Construction project” refers only to projects proposed for the Construction appropriation. Construction projects are added to the database based on a number of factors including: political interest, API, DOI Rank, changing programmatic needs, emergencies and asset condition, (e.g. FCI and dam, bridge and seismic cyclical inspection findings).

5.4.1 Preparing the 5-Year Construction Plan.

Every year, as part of the budget process, the Service updates the current Construction Plan by adding a new out-year. Each February the Regions and programs each nominate two or more high priority projects. Washington Office program staff representing the NWRS, NFHS, MB, LE, ES and Engineering review nominations and based on a variety of priority tools, e.g. DOI ranking, asset condition as defined by the FCI, API, mission/programmatic needs and funding targets, and select projects for insertion in the new year of the 5-Year Construction Plan. The Service does not select construction projects based on programmatic or regional targets. Projects are selected based on Service-wide needs, importance and available funding.

5.4.2 Project proposals undergo Capital Planning and Investment Control (CPIC) Review.

The Service’s Construction program is guided by the CPIC process. Major components of CPIC include: the Service IRB that reviews and approves recommended projects, preparation/update of Capital Asset Plans (300s) that provides a life-cycle business case for projects having construction expenditures over \$10 million, and project close-out procedures after construction is completed. CPIC procedures provide guidance on project selection, justification, and project management through design and construction. Updated 300s provide data on changes in individual project’s cost and schedule. Specific CPIC procedures are discussed throughout this Plan.

5.4.3 Bureau Investment Review Board (IRB).

The Bureau IRB reviews and approves all updates to the 5-year Construction Plan and any accompanying Exhibit 300s. The IRB has adopted the following business rules to help guide plan changes and additions:

- The Construction Plan represents the needs for the entire Service and therefore may include projects required by: LE, MB, ES, NFHS and the NWRS. The DEN in its dam, bridge and seismic safety program management role, also makes funding and project selection recommendations relating to these project areas.
- Projects funded and begun in a prior year are funded prior to funding new projects.
- Planning and design funds are typically requested in one year; construction funds the next year. Depending on the size of the construction request and funding targets established by the OMB and DOI, most construction is funded in no more than two fiscal years.
- When feasible, new projects should follow the DOI ranking system which gives priority to projects having a significant health and safety component.
- The Service does not seek additional funding in the President’s request for projects initially funded via Congressional add-on.

- In order to minimize unforeseen changes to the Plan, the Service does not seek additional funding for under-estimated projects. In such cases, funding is secured from other sources or the project scope is reduced to compensate for the estimate error.

Once approved, the 5-Year Construction Plan and any new supporting Exhibit 300s are forwarded to the Director for approval and sent to DOI.

5.4.4 What decision tools does the bureau use in the planning and design phase of asset construction/ acquisition?

The Service recognizes that facility planning, design and construction management on more complex construction, rehabilitation, deferred maintenance, force-account repairs and demolition projects must be completed by experienced architects, engineers or other design professionals with documented training and experience. The Service strives to ensure that Service assets are designed, constructed, repaired and maintained to meet or exceed life-safety, environmental, accessibility and other federal facilities design, construction and operational requirements. Facilities design and construction guidance are contained in the Service manual, sections 360 FW1,2,3 and 4.

5.4.5 Qualified Engineering Review and Approval

So as to meet these facility development goals, the Service requires that “non-exempt construction projects” (see definitions below) undergo a mandatory, formal qualified engineering review prior to purchasing materials or soliciting for construction services. Reviews are completed by the Regional Engineer or the Chief, Division of Engineering. Project definitions include:

5.4.5.1 Non-exempt Construction Projects. Non-exempt construction projects include life-safety, environmental, fire protection, building code compliance or structural integrity issues. Final designs for all non-exempt construction projects must undergo a Qualified Engineering Review and Approval prior to procuring construction materials or services. Project types include: buildings; mechanical, electrical and plumbing systems (MEP); dam, bridge and seismic safety projects; environmental projects involving remediation and regulatory compliance (e.g., asbestos and lead based paint); structural design of walls, columns, foundations, abutments and below-grade structures; marine projects such as shoreline protection, access channels and bulkheads; and public roadways and intersections.

5.4.5.2 Exempt Construction Projects. Exempt construction projects **do not** include life-safety, environmental, fire protection, building code compliance or structural integrity issues. Final designs for exempt construction projects do not need to undergo a Qualified Engineering Review and Approval. Examples of exempt construction projects include: low-head water control structures; minor earthwork projects; roofing, siding, window and door replacements; road repaving/repair projects that do not involve substantial change to alignment and drainage; signage; fencing; exterior public-use facilities such as kiosks and trails; pre-fabricated storage sheds; and renovations to building interiors that do not involve structural modification or changes to MEP systems.

5.5 Project Management.

The Regional Engineering Offices (REN) are responsible for managing the planning and design for all non-exempt construction projects. Dam remediation projects are assigned to the Division of Engineering. The REN and Division of Engineering are staffed with facility design experts acquainted with Architectural and Engineering (A/E) and construction contracting procedures, are Contracting Officer's Representatives, and are familiar with the codes and regulations that all federal facilities must meet. Areas of expertise include but are not limited to: project management, facility design, construction, A/E contract management, Americans with Disabilities Act (ADA), sustainability, life safety code and environmental compliance. To aid in delivery of well-designed, construct-able projects, the Service adopted the Project Management Planning system in 2001. Major elements of this system included greater use of A/E consultants, training in A/E contract management and use of the Project Management Plan (PMP). A PMP is required for all Construction and Deferred Maintenance projects valued at greater than \$500,000. It identifies the project team, scope, plan, target cost, and target schedule. This document is reviewed and signed by the Project Team, as well as senior management having a vested interest in the project's outcomes. The PMP is updated throughout the life of the project and re-signed by all parties whenever there is a major project change, (e.g. changes to project scope, cost or schedule).

5.5.1 Value Engineering

All projects having a construction cost of more than \$1 million are value engineered at approximately the 35% design milestone to identify potential design or construction savings. The Division of Engineering maintains records on suggested savings, adopted savings and return on investment for each study. This requirement may be waived for projects contracted via design/ build procedures if project goals are met and the REN and project sponsor carefully document the design modifications and cost savings achieved during design phase. (see 360 FW3, Value Engineering)

5.5.2 CPIC

An updated Exhibit 300 and intermediate quarterly updates are submitted to the Department for all Construction projects valued at greater than \$10M. These CPIC submittals capture key PMP project cost, expenditures and schedule variances.

5.5.3 Use of Standardized Facility Designs

In 2002, the Service developed site adaptable facility designs for: housing, offices, maintenance and storage buildings and comfort stations and in 2003, a design guide for kiosks. Computer aided design and drafting (CADD) design drawings and specifications are available. In 2006, the Service developed the NWRS Standard Facility Conceptual Designs for seven various sized office/visitor center buildings. The focus of this effort is to reduce design costs and help standardize facility design throughout the Service. This suite of building designs is expected to be adopted for the Service and be distributed under a memo from the Director encouraging all new office/visitor centers to use these designs. Site adaptable facility designs and the Kiosk

Design Guide can be accessed by Service employees at <https://intranet.fws.gov/region9/engineering> .

5.5.4 Design/Build Contracts

In recent years, the Service has begun using more design/build contracts. These contracts reduce need for in-house facility design staff and thereby reduce design costs and result in reduced construction cost due to the close collaboration that occurs between those designing and constructing the facility.

5.5.5 How does your bureau manage construction of an asset?

The Service's construction management program is contained in the Service Manual (360 FW 4) and the Construction Inspection Handbook. The Service utilizes Field Inspectors for smaller, less sophisticated construction projects and full-time Construction Inspectors for larger projects. Inspector experience, education and job requirements are laid out in the resources noted above. Information and training materials for field staff assisting as construction inspectors may be found at <https://intranet.fws.gov/region9/engineering/>

5.5.6 Status of Construction Projects

The Division of Engineering assigns distinct project numbers to each funded Construction project. Information on fund status, obligations and expenditures for each project is tracked in real-time (24 hour delay) via the Data-Mart/FFS system. A Status of Engineering Projects report is submitted to Congress twice a year on Construction Appropriation projects. The Division of Engineering maintains records on the government estimate, bid, ongoing fund status and final construction cost for all Construction projects.

5.5.7 Project Evaluation

As part of the CPIC process, after a Construction project is completed, it is evaluated. Evaluation is particularly important for buildings. Users are asked to evaluate the buildings commissioning, comfort, warranty issues, design/construction quality, etc. Findings and lessons-learned are shared throughout the engineering community. Evaluation forms may be found on the Division of Engineering Web page at <https://intranet.fws.gov/region9/engineering/> under the tab "Performance Measures"

6. Database support for asset management.

The Financial and Business Management System (FBMS) and the Service Asset Maintenance Management System (SAMMS) are two important tools that facilitate modern asset management practices. As the FBMS is not functional yet, asset management decision making processes in the Service are supported by the Federal Financial System (FFS), the Real Property Inventory (RPI), the Personal Property Management System (PPMS) the Service's Energy database, and SAMMS. These systems are used for project cost accounting, property inventory and energy consumption reporting requirements including audit compliance and submissions of required reports such as the FRPP.

The FBMS and SAMMS will contribute to asset management by ensuring that uniform information on the asset portfolio is available to guide decision making processes. FBMS primary contribution will be to inventory assets and track actual asset investment on both owned and leased assets for financial accounting purposes as well as providing information for the Federal Real Property Profile (FRPP). SAMMS is used to document a wide range of asset maintenance management information from the asset condition assessment process and its findings such as repair needs, component renewal, and asset replacement recommendations, to preventive maintenance activities and capital improvement requirements. SAMMS documents asset needs using work orders, each of which is related to a specific asset in the inventory. SAMMS also contributes to asset management by tracking annual facility Operations and Maintenance (O&M) costs by asset.

The most important links between FBMS and SAMMS address the transfer of financial information such as funds expended from the FBMS to the SAMMS work orders and passage of asset condition information from SAMMS to FBMS. Another important link between FBMS and SAMMS is that FBMS will include the real property inventory, without which SAMMS cannot function at all.

7. Total Cost of Bureau Asset Management.

7.1 What is required to properly sustain the portfolio over time?

Sustainment costs for assets must include costs to plan, design, construct, operate, maintain, recapitalize and dispose.

7.2 Planning, design and construction costs

These costs are normally considered only when the asset has had a comprehensive condition assessment and the recommended action is replacement. In those cases the costs of planning, design and construction are funded by including a project in the 5 year deferred maintenance and construction plan.

7.3 Projected O&M costs

The Service has only been collecting actual annual O&M cost at the asset level for one year, and O&M cost projections or modeling tools have not yet been developed. The Service believes O&M cost projection modeling should be a DOI wide effort and is willing to participate and contribute to this effort.

7.4 Actual Operations and Maintenance costs.

Asset Class	count	average API	2005 Total O/M costs
Water Management	11,494	93.43	\$9,636,066
Roads	5,833	74.73	\$7,690,769
Trails, signs, fencing, boardwalks/ observation towers, campgrounds	7,622	75.21	\$7,667,294
Office Buildings	369	74.62	\$6,253,788
Visitor Center/ Contact stations	138	64.96	\$4,553,817
Utility Systems/wells	2,845	73.33	\$3,864,406
Single Family Housing	1,018	56.22	\$3,634,203
Storage buildings	2,549	51.67	\$2,777,313
Shop buildings	368	72.77	\$2,668,369
Parking	3,763	62.42	\$2,432,375
Housing-barracks/dorms	137	56.64	\$1,399,689
Environmental Ed Center	40	69	\$1,226,992
Other buildings	901	49.88	\$1,209,459
Laboratories	153	35.59	\$584,752
Docks	764	63.37	\$534,071
Fuel, water grain storage	975	69.47	\$475,568
Telecommunication towers	227	69.89	\$305,492
Pump houses/ well houses	191	64.84	\$222,733
Airstrips	22	39.09	\$122,350

Determining preventive maintenance costs (both planned costs and actual costs) is a growth area for the Service. Implementation of SAMMS allows planning costs and scheduling for preventive maintenance activities and reporting of actual preventive maintenance costs. This change of business practices requires learning on the part of field station managers to use the PM capabilities of SAMMS, as well as a business culture change, to begin doing something they have not done before. Preventive maintenance information in SAMMS is inadequate at this time to determine what average preventive maintenance costs are. The Service will be developing a preventive maintenance cost estimating tool to improve development of PM work order planned costs, which can then be compared with actual PM costs.

7.4.1 How do O&M requirements compare to actual O&M costs in terms of required level of service?

This is an asset management growth area due to absence of information on O&M requirements. The service began collecting actual O&M costs at the asset level for the first time in FY 2005 based on the guidance in the DOI asset management plan. This will continue in 2006 but the information collection techniques have been modified to capture asset O&M costs using work orders in SAMMS. The Service will be working on a model to estimate annual O&M costs for different types of assets. Until this model is developed, we will not be able to perform a reliable comparison of planned O&M costs to actual O&M costs.

7.5 What are the component renewal and replacement costs?

This is an asset management growth area for the Service. The SAMMS database is structured to capture component renewal using work orders identified specifically for that purpose. Identifying component renewal needs in advance was not originally a component of the condition assessment process. It has been identified as a planned output of the condition assessment process for the second round of assessments, starting in FY 2007. Currently this question cannot be answered due to low numbers of component renewal work orders.

7.6 Investment strategies

What investment strategies will be employed to manage the accumulation of deferred maintenance and meet operations and maintenance needs? The Service has three funding sources available to maintain assets, Resource Management Construction, and Refuge Public use roads funds.

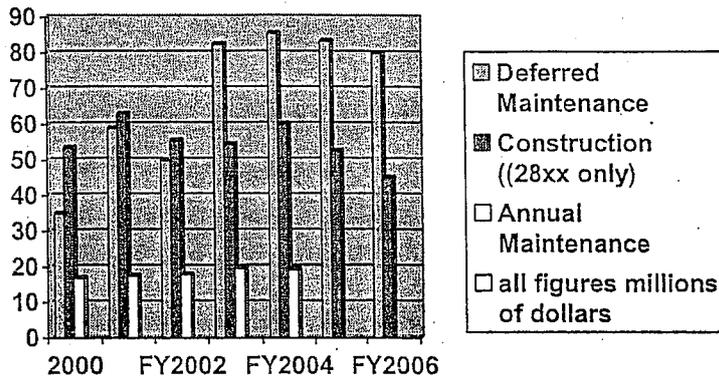
7.6.1 Resource Management Appropriation

7.6.1.1 Annual Maintenance funds. Annual maintenance funds are not project specific rather they are used to perform preventive maintenance, inspections and required repairs during the year they are required. Annual maintenance funds are expended at the discretion of Regional and field station managers. This is to ensure that funds use is prioritized locally on mission critical assets that must be maintained to accomplish the Service's mission. By ensuring that

these types of activities are funded and take place, deferred maintenance on critical assets is reduced or prevented.

7.6.1.2 Deferred Maintenance Funds.

The Service has policy in place to ensure that appropriated funds in the Deferred Maintenance category are used for deferred maintenance projects. This is accomplished by using controls that ensure that each project funded with deferred maintenance includes a maximum of 25% capital improvement.



7.6.1.3 Frequency of and approach to updating deferred maintenance costs.

Deferred maintenance costs are updated during the comprehensive condition assessment process. A written deficiency cost estimate is done and saved as an attached document in SAMMS. Closure of work orders when work is completed is one trigger that updates deferred maintenance costs. Both Comprehensive and Annual condition assessments which result in closure of completed work orders assist in this process.

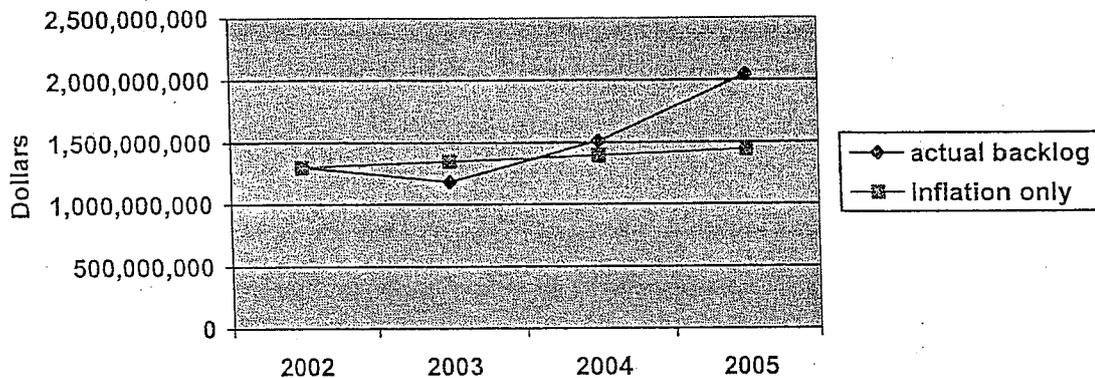
7.6.1.4 Updating of costs in plans.

The Service is working out a methodology to keep DM project costs up-to-date using SAMMS data and Crystal Reports. Accurate cost forecasting is important to ensure that projects are adequately funded for the year that they are planned for. This accuracy helps ensure that projects are accomplished on schedule and with as little variance in projected cost as possible.

7.6.1.5 Three-year deferred maintenance cost trends.

Deferred Maintenance backlog reported in CFO audit (billions of dollars)

Year	DM estimate
2002	1.1-1.5
2003	1.0-1.4
2004	1.3-1.7
2005	1.7-2.3



The Service Deferred maintenance backlog has increased significantly since 2002. Increases are due to:

- Inflation and additional deferred maintenance due to flat or decreasing annual maintenance appropriations.
- Implementing the Service's condition assessment program which has resulted in the addition of new findings.
- Completion of a detailed road inventory by the Federal Highway Administration
- Increased real property asset portfolio as a result of land acquisitions.
- Natural disaster damages, such as hurricanes.
- Increased water discharge treatment standards at National Fish Hatcheries.

7.7 Construction Appropriation

Construction funds are used to repair or replace large, expensive assets where project complexity requires IRB participation and multiple year efforts are the norm. Construction funding is also used to provide core engineering services, the bridge, dam and seismic safety programs, the environmental compliance management program, and aircraft replacement.

7.7.1 Frequency of and approach to updating construction project costs

As part of the annual update of the 5-year construction plan, all construction projects are reviewed and updated. Project scope and construction costs including planning, design, construction management, permits, site development, utilities, facility construction, furniture

fixtures & equipment, and contingencies are validated. Costs for all projects contained in the Plan are price-leveled, using Engineering News Record (ENR-CCI) inflation adjustments, to the mid-point of the current Plan's budget year. In each subsequent year, all projects in the Plan are price leveled to reflect follow-on inflationary increases.

7.8 Refuge public use Roads Funds.

A five year plan for refuge public use roads is prepared to address deferred maintenance and capital improvement needs specifically related to public use roads. Projects are funded by appropriations from the Highway Trust Fund.

7.8.1 Frequency of and approach to updating public use roads project costs.

The Federal Highway Administration conducts condition assessments of public use roads and determines repair and replacement costs every three years. Updated cost estimates are used to prepare white papers for the transportation bill reauthorization. Updated cost information is also included in SAMMS work orders to ensure that five year plan costs remain accurate.

8. Disposition

One critical process which occurs during the annual condition assessment is identification of excess and surplus real property. The responsible project leader should enter "yes" into the "excess" or "vacant" data fields to identify assets which may be candidates for disposal. The Service must dispose of surplus real property in the most economical manner, which is consistent with the best interest of the Government. Prior to the disposition, a determination must be received from the GSA that there is no longer a Federal need or requirement for the excess real property. The *Certificate of Unserviceable Property, DI 103a*, is used to document this determination. After this determination is made, the Service may make the real property available for acquisition by State and local governments and nonprofit institutions, sale by public advertising, negotiated sale, or other disposal method. Except for disposals specifically authorized by special legislation, disposals of real property must be made only under the authority of the *Federal Property and Administrative Services Act of 1949*. The administrator of General Services can evaluate, on a case-by-case basis, the disposal provisions of any other law to determine consistency with the authority conveyed by the Act. Based on a highest and best use analysis, the Service may make surplus real property available to State and local governments and certain nonprofit institutions at up to a 100% public benefit discount. Examples of public benefit purpose are: education, parks and recreation, historic monuments and wildlife conservation. The implementing regulations for these conveyances are found in *41 CFR 102-75*. For real property which has no commercial value or for which the estimated cost of continued care exceeds the estimated proceeds, the Service may abandon, destroy or donate Service owned improvements on real property. The Certificate of Unserviceable Property, DI 103a, must be completed and properly processed. A Service official who is not directly accountable for the property can make a determination. The Service must not abandon or destroy improvements until after it has given public notice of the action. After the appropriate disposal action has been concluded, the property should be removed from the RPI by the Regional Budget & Finance Officer. The date of the disposal action must be included on the record as well as a description of the disposal.

Most disposals are demolition or replacement and most assets have little or no residual value. Many assets are located on government owned land, and that cost to remove asset off Service lands may exceed the asset's value. The Service's real property inventory does not track residual value for accounting purposes. The financial system is the only source of information for determining what receipts are collected from asset disposals.

8.1 What are the opportunities for disposal or engaging a partner to cover O&M responsibilities?

Opportunities for disposal are acted upon when disposal costs are low or when they reduce O&M costs associated with an underutilized or non critical asset. The best opportunities for partnerships to cover O&M costs are occasional concession opportunities which are inherently non-governmental. Most Service owned facilities are located on NWRS/ NFHS land with inherent governmental conservation mission. Uses must be compatible with the purposes for which the refuge was established and the

purpose for which the land was acquired. Economic uses must also contribute to the purposes for which the refuge was established.

9. Environmental, Cultural Resources, Archeological, and Hazardous Materials Compliance

Disposals require compliance with environmental, cultural resources, and environmental laws, regulations, and policies. These include, but are not limited to the National Environmental Policy Act (NEPA); Executive Order 11988 Floodplain Management; Executive Order 11990 Protection of Wetlands; Executive Order 13287 Preserve America; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, and the various other cultural resources acts and executive orders which are in effect at the time of the disposal.

9.1 Historic and mission critical asset which should not be disposed of.

A total of 22,090 of 44,748 assets (49.3%) were identified as "1" (mission critical) in mission dependency data field or are identified as historical assets. Of these 22090, 29 assets are identified as Historical status 1 (National Historic Landmark), 176 assets are identified as Historical status 2 (National Register Listed) and 1,481 assets are identified as Historical status 3 (National Register Eligible).

According to the Draft DOI manual chapter on asset Disposal: All disposal candidates with a historical status of national historic landmark, national register listed, national register eligible or not evaluated, should be evaluated by the bureau/office historic preservation officer against National Historic Preservation Act Section 106 criteria to ensure consideration of potential adverse effects. At a minimum, the following actions shall be taken:

- The bureau/office Historic Preservation Office or designate shall be part of the historic preservation compliance review process. Identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer for consultation.
- Assess adverse effects: if there is no adverse effect, the process proceeds as planned. If potential adverse effects are identified, a process begins to document ways to avoid, minimize, or mitigate the adverse effects. This is a detailed process that is well documented in 36 CFR Part 800 that implements Section 106 of the National Historic Preservation Act.
- Return the asset to the disposition process or proceed with selected alternative, using Section 110 of the Act, which contains specific instructions for disposing of historic properties.

10. Program Management

10.1 How are assets affected by asset condition and programmatic requirements?

Maintenance of leased assets is normally the responsibility of the landlord. If maintenance is inadequate to ensure appropriate asset condition, the space users can be relocated.

There should be a relationship between asset investment, asset FCI and Asset API. The Service's strategic plan goals are designed to ensure that high API assets have FCI measured to ensure that our most important assets are maintained in good condition.

10.2 Allocation of resources to repair, rehabilitate or replace high priority assets.

10.2.1 Construction Appropriation

Construction dollars are allocated based on a combination of FCI, DOI Rank, condition scores for dam, bridge and seismic safety projects, as well as political pressures and programmatic need.

10.2.2 Resource Management Appropriation

- **Annual Maintenance** NWRS Annual maintenance funds are distributed to the regions based on their % of asset replacement value (CRV) and Hatchery maintenance funds are distributed based on each regions % of Hatchery operations.
- **Deferred Maintenance** NWRS Deferred maintenance funding is allocated by each region's percentage of the deferred maintenance backlog. Regional Managers balance complex competing demands of safety, the Service and NWRS mission of resource protection and management, and political factors.

10.2.3 Public use roads

Funds are distributed to regions according to each regions relative need. The relative needs are established from Service inventory data (refuge road mileage, area of parking facilities and bridges, the condition of roads and bridges, the amount of visitation, and traffic safety) Only a small portion of this funding comes to the Service in cash for program management costs, the remaining funds are used by FHWA to do Service projects.

10.3 Performance measure contribution to management and funding decisions.

In accordance with the DOI asset management plan, FCI "before" and FCI "after" is included in our 5 year plan document. Other measures include Mission Dependency (asset Priority Index), utilization and annual O&M costs. These performance measures and inherent improvement upon their baselines is considered by regions when prioritizing and executing projects.

10.3.1 Integration of FRPC performance measures with FBMS and SAMMS.

FCI is already integrated with our facility maintenance management system (SAMMS), as SAMMS is our source for our deferred maintenance backlog, the numerator of FCI. Our calculation of annual O&M costs is planned to come from SAMMS for 2006. This is our first year using work orders in SAMMS to determine each assets annual O&M costs in this manner. Utilization and Mission dependency are currently collected in our real property inventory and this database is scheduled to be replaced by FBMS. We intend to maintain these performance measures in FBMS at that time.

10.4 Ensuring best value for investing in and managing assets.

Scarce resources combined with regional oversight ensure that funds are spent wisely. Regional peer review of five year plan projects ensures their validity. The CPIC process requires an updated Exhibit 300 to be submitted to the Department annually and intermediate updates quarterly for all Construction projects valued at greater than \$10M. These CPIC submittals capture key PMP project cost and schedule variances and are submitted to the Department. In addition, the Service has begun use of site adaptable designs. In 2002, the Service developed site adaptable facility designs for: housing, offices, maintenance and storage buildings and comfort stations and in 2003, a design guide for kiosks. CADD design drawings and specifications are available. Additionally, in 2006, the Service developed standardized building floor plans for seven various-sized office/visitor center buildings. The focus of this effort is to reduce design costs and help standardize facility design throughout the Service.

To ensure best value for leased assets, programs are charged for the proportionate space they occupy in a lease. This helps ensure that only the amount of space that is needed, is leased. Because of this, GSA lease costs have decreased substantially since the user pay cost accounting system was established in FY 2005.

10.5 Determining future use, needs or replacement of assets.

For owned assets, the service considers asset condition, historic preservation requirements where applicable, as well as staff space requirements, the location of the asset and its proximity to the Service mission, its ability to serve visitors and resolution of environmental liability.

For leased assets, pending space requests have been approved at the Regional and Washington office levels. They are reported in OMB Exhibit 54, the leased space budget. No new requests have been submitted since July 2005, and several previous requests have been withdrawn.

10.6 Incorporating asset considerations into general planning processes.

Asset management performance measures are integrated into our budget request. Comprehensive conservation plans for National Wildlife Refuges include asset management issues and considerations.

10.7 Linkage between today's asset investments and the out year operational budget.

Exhibit 54, the leased space budget includes projected lease changes for the next three Fiscal years. Exhibit 300 provides a thorough business case for each construction project with expenditures of over \$10 million and includes, among other topics: alternative methods of development e.g. leasing, how the project will be managed during design and construction; and a life-cycle cost analysis that includes operations, maintenance and disposal costs associated with the project. The Service IRB reviews and approves Exhibit 300s before they are placed in the Service 5-Year Construction Plan. There is no other linkage between proposed construction and out-year O&M requirements, and this represents an asset management growth opportunity.

10.8 5-10 year Operation, maintenance and replacement of the asset portfolio.

The Service will use the Construction, Resource Management and Public use roads Appropriations to the fullest extent of available funding to operate, maintain, and replace its asset portfolio over the next 5 - 10 years. Addressing the backlog of health and safety projects at Service facilities would take significantly more resources than are currently available in five years. The Department's current 5-year deferred maintenance and capital improvement planning system continues to stress human health and safety needs. Within this context and in accordance with funding targets established by the OMB and the Department, the Service is addressing the highest priority critical health and safety needs Service-wide. Also included in the plan are projects to address aircraft safety, critical resource protection, water management, consent decrees, compliance issues, and visitor enhancement projects that directly address the Refuge System's conservation mission in its second century.

10.9 Managing non-federally owned assets that are not part of the DOI-AMP.

Non-Federally owned assets are identified by acquisition type in the real property inventory. These include assets that are leased or Service managed but not service owned. There are 949 assets in these categories (representing 2% of total inventory with total CRV of approximately \$611 million) These assets are included in the FRPP submission and are managed in the same way that Service owned asset investments are.

10.10 FWS strategies for implementing the Asset Management Program and Plan.

Asset management processes in the Service have historically been field station centered. Continued use of SAMMS and the annual and comprehensive condition assessment processes ensure that mission critical needs are reported on by the personnel most familiar with the resource management situation to be addressed.

Strategies to implement the AMP include:

- Use of the API tool by field station managers to prioritize assets based on their contribution to mission is one method of implementing a progressive asset management program
- Determination of planned costs for facility maintenance, operations and preventive maintenance activities

- Provide training to field station staff and involve Regions in development of asset management tools and processes and give feedback to local asset managers in the form of useful reports about performance measures and asset management activities.

10.11 Executive Order 13287 "Preserve America"

Executive Order 13287—"Preserve America" requires Federal agencies to:

- Preserve America's heritage by actively advancing the protection, enhancement, and contemporary use of the historic properties owned by the Federal Government;
- Promote intergovernmental cooperation and partnerships for the preservation and use of historic properties;
- Recognize and manage federal historic properties as assets that can support department and agency missions while contributing to the vitality and economic well-being of the Nation's communities and fostering a broader appreciation for the development of the United States and its underlying values.

The EO directs federal agencies in general to become better stewards of their historic properties. It takes into account all historic properties, including collections, regardless of NRHP status. All of the properties the Service identified in its Preserve America report are also managed by our current cultural resources program. The Service cultural resource program is described in detail in the following document.

http://historicpreservation.fws.gov/preserveAmerica/pdfs/FWS_Protecting_Habitat.pdf

Service heritage assets including National Historic Landmarks and those listed or eligible for the National Register of Historic Places, are important assets to the Service. Their protection and preservation is required by various laws including the National Historic Preservation Act and the Archaeological Resources Protection Act as well as EO 13287 "Preserve America." These statutes are applicable to all Federal agencies regardless of mission and illustrate the importance and intrinsic value of these assets to the Federal government. For the Service in particular, however, these assets represent components, in some cases integral components, of the habitat that many Refuges and Hatcheries are charged with preserving. The Wildlife Refuge System Improvement Act of 1997 draws special attention to this point in its inclusion of cultural resource and heritage asset data for the formulation of Comprehensive Conservation Plans for Refuges. Additionally, heritage assets form an important part of education and/or interpretation programs conducted on Refuges. The Wildlife Refuge System Improvement Act of 1997 mentions the importance of education and interpretation to increasing visitation to Refuges and influencing attitudes about resources. Many of the concepts we seek to educate visitors on can be greatly clarified by using a heritage asset related example. Additionally, the success of so many Refuge programs are tied to partnerships and community involvement and the National Wildlife Refuge System Volunteer and Community Partnerships act of 1998 encourages the use of heritage assets for partnering purposes. Heritage assets are intriguing to many groups for their historical value and can offer a way to begin a dialogue with a partnering organization. Similarly, many Refuges have close ties with Native Americans who definitely place importance on heritage and the preservation of the physical manifestations of history.

The first step to compliance is identifying which assets are subject to EO 13287. To do this, Service Regional Historic Preservation Officers (HPO's) participate in asset management by reviewing the Service RPI, for assets with historical status, especially those multi-use assets, and cross-reference with Regional Historic Preservation data on assets that are or have potential for serving as Preserve America properties. HPO's can include an explanation that notes the status of the asset(s) as a Preserve America property or its potential as one, in a special field in the RPI Database called the "HPO Notes".

10.11.1 Protection, enhancement and contemporary use of historic properties.

HPO's provide consultation on historic preservation requirements and project management assistance when necessary, for maintenance projects affecting historic assets. The Service has engaged the National Park Service as a partner on several occasions in order to ensure that staff with relevant historical knowledge, are available to conduct condition assessments of historic assets. All Preserve America properties are considered Heritage Assets as well. As a Federal agency, Historic preservation efforts begin with adherence to the National Historic Preservation Act. In particular NHPA Section 106 requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. Section 106 requires agencies to identify historic properties, assess adverse affects and resolve adverse affects. Compliance with Section 106 often identifies opportunities to preserve, conserve and use historical assets. Additionally, partnerships that we have with Tribes and Friends groups allows for more work to be done to historic properties that results in better management of historic assets. Most historic assets that are preserved by the Service are used to enhance educational programs. Some examples are below.

1. Preservation of buildings from the Chesser Island Homestead (Okefenokee Refuge) is incorporated into visitor attractions on the Refuge.
2. Historic cabins at Kenai NWR are used as educational assets as well as used by travelers to the Refuge (they have been renovated and opened to public use).
3. The historic cabin at Mingo NWR has recently been preserved and maintained through assistance from the local Friends Group who sees the cabin as a direct link to their ancestors. They have worked with the Refuge the preserve the cabin
4. Matagorda Island Lighthouse (Aransas NWR) was renovated by a Friends organization with assistance from the Service and the State of Texas. It is now used for tours and educational programs.
5. Rehabilitation of the Jack Longstreet Cabin on Ash Meadows NWR in southwestern Nevada has been completed. The project which was funded by a grant from the Southern Nevada Public Lands Management Act (SNPLMA), revitalized the stone cabin which was originally built in 1896.

10.12 Executive Order 13148 Greening the Government.

How will the Service incorporate planning and management requirements for Executive order 13148 "Greening the Government" through Leadership in Environmental Management, April 21, 2000? This Executive Order mandates environmental management and environmental

compliance programs that emphasize pollution prevention and reduce the use of toxic chemicals. It requires implementation of an Environmental Management System (EMS) for improving environmental performance.

10.12.1 Environmental Management Systems.

In accordance with the Executive Order, the Service employs an EMS to review its facilities. An EMS is a systematic, documented approach that ensures environmental activities are sustainable, well-planned and managed at the field station level. The implementation of EMS requires development of an Environmental Management Plan (EMP), which identifies environmental aspects and impacts to daily operations. The plan includes greening, energy conservation, transportation efficiency, pollution prevention, recycling, and environmental compliance considerations. It is a proactive approach to environmental stewardship. It is a continual cycle of planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its business and environmental goals. The Service's goal is to attain continuous environmental improvement and achieve full compliance with all environmental laws and regulations. As part of the EMS process, the Service conducts environmental compliance audits at Service facilities. Although the frequency of audits varies according to the type and size of the facility, all facilities within a Region must be audited every 5 years or earlier. Findings will be drafted within 30 days after the completion of the formal and informal audits, and upon receipt of the report, the facility has 60 days to develop corrective actions for each of the regulatory, management practice, and required practice findings. The facility will submit a report to the Region 12 months after the finalization of the report detailing the status of corrective actions. Formal follow-ups are required at every 12-month period after the initial audit until all corrective actions are completed. All findings are documented and tracked in the national database. Protocols in the Environmental Auditing Handbook are for management of air emissions, drinking water, hazardous materials, hazardous waste, pesticides, petroleum oils, and lubricants (POL), solid waste, special pollutants, Underground Storage Tanks (USTs), wastewater, and greening.

In addition, no asset management strategy is complete without considering Executive Order 13123, "Greening the Government through Efficient Energy Management" (June 3, 1999). It calls for Federal agencies to improve the energy efficiency of their buildings, promote the use of renewable energy, and reduce greenhouse gas emissions associated with energy use in their buildings, among other energy-related requirements. It also directs the Department of Energy to work with other Federal agencies to develop a variety of guidance, criteria, tools, and other information to assist agencies in implementing the provisions of the Order. Through life-cycle cost-effective energy measures, each agency shall meet goals for greenhouse gases reduction, energy efficiency improvement, renewable energy, petroleum fuel reduction, and water conservation. The Service funds energy efficiency projects primarily through the Resource Management appropriation

10.12.2 "Greening" the Service's asset management program. – Guidance Documents

10.12.2.1 Memorandum of Understanding.

On January 24, 2006, the Deputy Secretary signed the Memorandum of Understanding (MOU) that commits the Department to federal leadership in the design, construction, and operation of High Performance and Sustainable Buildings. In accordance with the Energy Policy Act of 2005, and other Executive Orders, the MOU contains implementation of common strategies for planning, acquiring, designing, building, operating, and maintaining such buildings in an energy efficient and sustainable manner that strives to achieve a balance that will realize high standards of living, wider sharing of life's amenities, maximum attainable reuse and recycling of depletable resources, in an economically viable manner, consistent with Department and Service missions. Use of life cycle concepts, consensus-based standards, and performance measurement and verification methods that utilize good science that lead to sustainable buildings are encouraged.

The Service will incorporate planning and management requirements to follow a common set of established sustainable guiding principles for integrated design, energy performance, water conservation, indoor environmental quality, and materials aimed at helping Federal agencies and organizations:

- Reduce the total ownership cost of facilities;
- Improve energy efficiency and water conservation;
- Provide safe, healthy, and productive built environments; and
- Promote sustainable environmental stewardship.

The guiding principles include:

- (1) Employ integrated design principles, such as integrated planning and design and total building commissioning practices.
- (2) Optimize Energy Performance for energy efficiency to meet energy reduction targets and reduce costs, including measurement and verification.
- (3) Protect and conserve both indoor and outdoor water.
- (4) Enhance indoor environmental quality through proper ventilation and thermal comfort, moisture control, day lighting, use of low-emitting materials, and protection of indoor air quality during construction.
- (5) Reduce the environmental impact of materials, including use of products with high recycled content (both EPA-designated and others), bio-based content for USDA-designated products, recycling and salvage of site-related construction waste, and elimination of the use of ozone depleting compounds during and after construction.

10.12.2.2 Service Policy for Energy Management

Service policy for energy management is being revised to accommodate the requirements of the Energy Policy Act of 2005 and the MOU. However it will focus on acquisition of lower utility costs, use of Demand Side Energy Management Services offered by electric utilities and other energy service providers, energy and water audits for Service facilities, sustainable design of buildings, implementation of cost effective energy and water conservation opportunities,

development of renewable energy sources, fuel switching, use of standby power devices, and energy conservation in vehicles. In addition, it will address electrical load reduction measures during power emergencies.

10.12.2.3 Director's Order No. 144

This Directors Order establishes the policy for "greening" the Service. The Order provides a framework for other decisions that may involve environmental evaluations where no stand-alone order exists, and builds on successful proactive initiatives that have been implemented at Regional Offices and field stations to create a systematic approach to this issue.

10.13 Opportunities for Legislative reforms.

What opportunities for legislative reforms would aide the bureau's asset management program? Are there legislation or administration mandates that create challenges? Legislation direction that would allow the Service to require total environmental cleanup and removal of all un-necessary former military assets from Base Realignment And Closure Commission (BRAC) transfer properties prior to transfer of land to the Service.

The impact on the portfolio or individual asset and suggested remedies and reforms is significant. As a result of transfer of former military lands, over \$150 Million in deferred maintenance has been identified for transferred buildings and structures.

11. Asset Management in the National Wildlife Refuge System

Mission

The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Goals of the National Wildlife Refuge System

- a. To fulfill our statutory duty to achieve refuge purpose(s) and further the System mission.
- b. Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered.
- c. Perpetuate migratory bird, inter-jurisdictional fish, and marine mammal populations.
- d. Conserve a diversity of fish, wildlife, and plants.
- e. Conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems.
- f. To foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

Description of NWRS land holdings and their impact on facility management: The NWRS owns over 96 million acres of lands and waters and is the federal governments third largest land assemblage. The System is widely dispersed geographically and field stations are scattered throughout the U. S. and associated island territories. Lands are devoted to conservation of fish, wildlife, and plants and generally are environmentally sensitive. With a history of waterfowl management figuring prominently in early land acquisition, many land holdings are low lying areas along major rivers or in coastal zones. Management of wetland impoundments occurs at many locations and facility operations and management are considerably influenced by presence of wetlands and susceptibility to hurricane and flood damages. Active management of lands to provide habitats favorable to fish and wildlife also is a major influence on the types of assets needed. This active management of about 3.75 million acres of habitat each year has two impacts on facilities: 1) dikes, levees and associated water control structures are needed to manage wetland impoundments; and 2) a wide array of agricultural and construction equipment is regularly used on refuges resulting in the need for support infrastructure such as maintenance buildings. In addition, wildlife dependent public recreation has a major influence on facility infrastructure needs.

The NWRS as a system of lands is not mature. Land holdings continue to grow as evidenced by the addition of about 2 million acres of land to the NWRS between FY 2000 and FY 2005. Continued land acquisition has resulted in a modest increase in our asset portfolio; however, a larger factor is that many lands that were required throughout our history have never been sufficiently developed to enable effective delivery of the NWRS mission which includes dual components of conserving fish, wildlife, and plants; and providing associated public recreation. There is considerable demand to expand visitor facilities, offices, and logistical support facilities such as maintenance/shop buildings. The Refuge System has focused its funding on taking care of existing facilities and has had only limited facility expansions underway. The strategy for visitor facilities is to keep them modest and to favor small scale facilities such as trails, boardwalks, kiosks, boat ramps, and photo blinds over major facilities such as visitor centers.

Organization Structure:

National – At the bureau wide level, Deputy Director Marshall Jones is the Senior Real Property Officer for the Service. The Assistant Director for the National Wildlife Refuge System serves on the DOI Asset Management Team and has the overall lead for coordinating asset management activities within the various programs within the Fish and Wildlife Service. Within the Refuge System itself, the overall responsibility for managing the Refuge System's portfolio of assets is through the Assistant Director for the National Wildlife Refuge System. Ten staff at the central headquarters office coordinate preparation of all planning, budgeting, and reporting materials and manage the Service Asset and Maintenance Management System, the Fish and Wildlife Service's application of the commercial maintenance management software, MAXIMO™. One of these ten individuals manages the heavy equipment program to include safety training for operators, budgeting, and consolidated purchasing. There is also one national coordinator responsible for all interactions with the Department of Transportation programs. Work is carried out in coordination with the National Fish Hatchery System, Engineering, Contracting, and other Service organizations to assure consistency in approach.

Regional – Within Refuge budgets, about twenty-four positions are dedicated at the Regional level to coordinate overall facility and equipment management efforts. Each of the seven Regional offices has an asset management coordinator, a heavy equipment coordinator, and a condition assessment coordinator. The three largest Regions have a second condition assessment coordinator responsible for completing comprehensive assessments of condition of facility assets greater than \$50,000 in value. In addition, each Region has a Roads Coordinator who is responsible for transportation project planning and implementation.

Field Stations - Refuge System field stations are widely dispersed geographically and staff sizes are small. About 95% of the 582 field units (545 refuges and 37 wetland management districts) contain facility assets that require maintenance; nearly all have need for use of vehicles or other mobile equipment such as construction or agricultural equipment to effectively manage these lands and waters. In addition to owning or managing the lands and waters of the System, the NWRS owns over 40,000 facility assets valued at over \$16 billion and about 14,000 mobile equipment assets valued at \$0.5 billion for a combined facility and equipment infrastructure valued at \$16.5 billion.

Within the overall NWRS workforce, there are about 640 FTEs physically located on field stations whose primary responsibility is to maintain facility and equipment assets. The table below indicates the size of maintenance staffs (expressed as FTEs) at refuge field stations in FY 2006. A total of 55% of NWRS field units have no maintenance staff; at these locations a refuge manager or biologist normally assumes maintenance duties as a collateral duty. A total of 28% of field stations have from 1 to 3 maintenance FTEs and only 15% of field stations have 3 or more maintenance FTEs.

NWRS Field Stations with	No. Field Stations	Percent of Stations
10 to 14 maintenance FTEs	5	0.9%
5 to 8.5 maintenance FTEs	21	3.6%
3 to 4.9 maintenance FTEs	61	10.5%
2 to 2.9 FTEs	75	12.9%
1 to 1.9 FTEs	89	15.3%
.5 FTEs	8	1.4%
Stations with other staff but no maintenance staff	135	23.2%
Stations completely unstaffed	188	32.3%
Total	582	100%

Because of small staff size and diverse responsibilities, Refuge System field station personnel are often generalists that carry out a multiplicity of functions. Responsibilities of maintenance staff vary considerably from location to location and usually include some level of operational activities such as manipulating wildlife habitats, posting boundary signs, controlling invasive species, and assisting with a number of other operational activities. On average, a maintenance worker within the Refuge System devotes only about 60% of their time to true maintenance functions with the remaining 40% of duties being operational in character.

Setting aside the operational functions performed by maintenance staff leaves an effective workforce of about 380 FTEs (60% of 640) to conduct the hands-on maintenance of the NWRS facility and equipment infrastructure. Averaging these FTEs across the entire portfolio of assets would indicate that each individual working full time in a true maintenance function (no operational duties) would need to maintain more than 100 facility assets collectively valued at over \$42 million as well as maintain more than 35 items of equipment collectively valued at over \$1.4 million. Using an average figure such as the preceding may not provide precise insight into the situation at an individual location; however, it does illuminate the fact that the job of maintaining the facility and equipment infrastructure of the NWRS is large and that existing staffing levels are woefully inadequate.

Program Management

NWRS Strategic plan goals and metrics. The metrics listed below help determine whether investments are being made in assets which serve the mission of the NWRS, as well as its visiting public.

- The condition of conservation and biological research facilities, as measured by the FCI.
- The condition of cultural and natural heritage facilities as measured by the FCI

- The condition of recreation assets as measured by the FCI
- The condition of buildings as measured by the FCI
- The condition of other structures (roads, dams, parking areas, bridges, utilities, etc.) as measured by the FCI

Status of NWRS Facility Assets (Sept. 30, 2005)

Maintenance Category (NWRS Strategic Plan)	Deferred Projects		Facility Inventory		FCI 1-(DM/CRV) * 100
	# Projects	DM cost (\$000s)	# Assets	Current Replacement Value (\$000s)	
Conservation/ Water Management Facilities	1,587	264,206	11,973	4,369,651	94
Historic/Heritage Facilities	57	13,956	297	102,363	86
Visitor Facilities	427	23,638	3,151	270,695	92
Buildings	1,461	196,328	5,926	1,692,761	88
Public Roads, Bridges, Parking	2,049	624,990	6,513	5,098,547	88
Administrative Roads, Bridges, Parking	785	172,549	3,060	3,592,887	96
Other Structures	1,010	80,315	9,244	839,360	91
TOTAL	7,376	\$1,375,981	40,164	\$15,966,263	92

The percentage of projects on each asset type in the deferred maintenance five-year plan is a good indicator of the commitment to meeting strategic plan goals. The Service is investing in asset types that directly affect our mission outcome and our strategic plan goals.

Number of projects in 5 year deferred maintenance plan by asset type use				
Asset	Type use	Average API	Number projects	% of plan
Water management facilities	4016	93.18	354	25.52%
Kiosks, observation towers, boardwalks, campgrounds, trails, fencing.	4080	73.98	313	22.57%
Roads	4076	74.26	176	12.69%
Housing	3530	54.21	104	7.50%
Storage buildings	3541	52.18	103	7.43%
Utilities	4071	75.68	77	5.55%
Shops	3560	71.75	45	3.24%
Office space	3510	74.62	43	3.10%
Parking	4066	61.9	41	2.96%
Other buildings	3580	50.34	35	2.52%
Docks	4013	63.22	32	2.31%
Visitor centers/contact stations	3529	64.96	18	1.30%
Storage	4040	69.61	14	1.01%

Asset Inventory, Prioritization, Valuation and Condition.

The most important asset classes (based on API) for the NWRS are listed in the table below in order of asset priority.

Asset Group	Num Assets	Average API	Total CRV (\$)	Average Condition Index 100= Good 0=Bad
Fish Ladders/screens	43	95	8,231,064	86
Water Mgmt Facilities	11,494	93	4,225,414,929	93
Trails, signs, fencing, boardwalks/ observation towers, campgrounds	7,622	75	809,910,306	91
Roads	5,833	75	8,326,799,716	89
Office Buildings	369	75	233,291,635	83
Shops	368	73	194,742,683	82
Telecommunications towers	227	70	9,682,831	97
Fuel/water/grain storage	975	69	71,512,976	95
Env Ed Centers	40	69	49,705,932	88
Comm Buildings	29	65	3,316,458	90
Visitor Centers /Contact stations	138	64	211,838,032	83

Annual O&M Costs of Assets

Annual O&M costs by asset class are listed below. For the Refuge System, largest O&M costs are related to four categories of assets: 1) those that preserve, create or allow management of habitat, 2) those that provide access for management or visitation purposes, 3) recreation assets, and 4) office buildings. Costs indicated below are constrained by existing budgets and may not represent operation at full capacity.

Type use	count	Sum CRV	Sum OM costs
Water Management	11,494	\$4,225,414,928	\$9,636,066
Roads	5,833	\$8,326,799,715	\$7,690,769
Trails, signs, fencing, boardwalks/ observation towers, campgrounds	7,622	\$809,910,306	\$7,667,294
Office Buildings	369	\$233,291,634	\$6,253,788
Visitor Center/ Contact stations	138	\$211,838,032	\$4,553,817
Utility Systems/wells	2,845	\$279,176,115	\$3,864,406
Single Family Housing	1,018	\$250,708,469	\$3,634,203
Storage buildings	2,549	\$414,713,156	\$2,777,313
Shop buildings	368	\$194,742,682	\$2,668,369
Parking	3,763	\$393,227,840	\$2,432,375
Housing-barracks/dorms	137	\$95,828,626	\$1,399,689

Asset Management Budgets

The Refuge System budget for FY 2006 that is applied to operation and maintenance of facility assets is described in the table below:

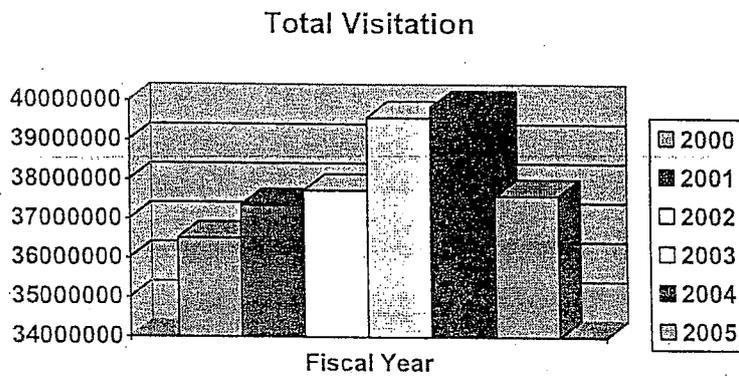
Budget	FY 06 Amount (\$000s)	% of portfolio CRV
Annual O&M*	51,088	0.3%
Deferred Maintenance Projects	44,146	0.3%
Transportation Funds	29,000	0.2%
Construction Projects	8,169	0.1%
Total	132,403	0.9%

* Based on 60% of wage grade workforce plus \$22.986 million for annual maintenance

The NWRS has a line item in its budget called Visitor Facility Enhancements (VFE). The purpose of this appropriation is to direct funds to projects which result in maintenance or construction of assets which directly serve visitors engaged in Wildlife Dependent Recreation on NWR's. The current funding is \$1.0 million; however, this funding is proposed to be discontinued in FY 2007.

Visitation for wildlife dependent recreation is a significant driver for asset O&M needs and costs.

<u>Year</u>	<u>Total Visitation</u>
2000	36,510,587
2001	37,355,968
2002	37,723,491
2003	39,580,020
2004	39,847,108
2005	37,591,435



12. Asset Management at the National Conservation Training Center.

The National Conservation Training Center (NCTC) is government owned by the U.S. Fish and Wildlife Service, located along the Potomac River near Shepherdstown, West Virginia. The property was purchased in 1992 and constructions build-out completed in 1997.

This 532.56 acre, 17 building site (51 real properties) has a total of 433,792 sq. ft. and one of Interior's best examples of "green" building construction.

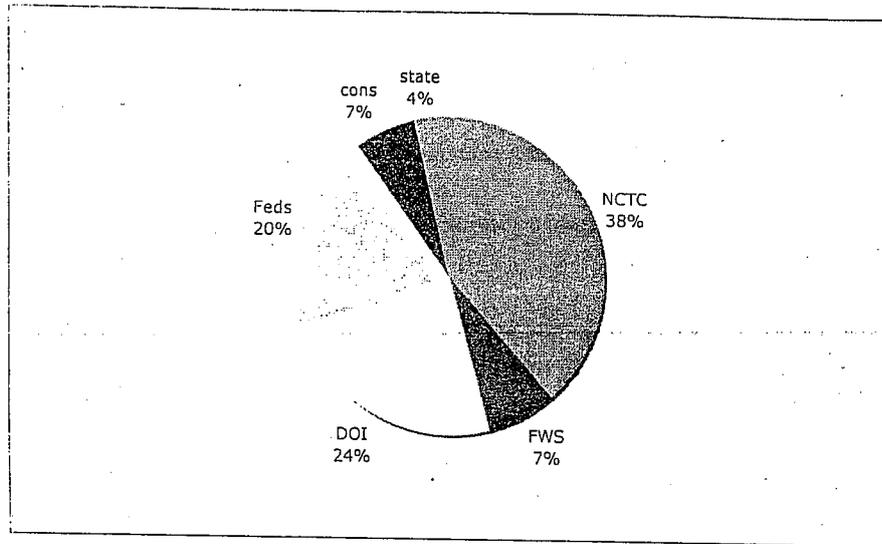
The aesthetic building design fits the scale and character of the adjacent historic farm. The project met a number of other siting goals such as: maximum energy efficiency, increased biodiversity on the site; new meadows; enhanced woodlands (and no net loss of trees); reinforced hedgerows; preserved view corridors, and demonstration farming. The Center uses passive solar energy design, the lowest life-cycle Heating/Ventilation/Air Conditioning system with no chlorofluorocarbons, energy-efficient lighting, "super insulation", use of recycled materials selected for sustainability, and use of materials that would result in no indoor air quality problems.

Archeological surveys and studies protected cultural resources (prehistoric artifacts, Native American encampments, homestead sites from the 18th and 19th centuries, and two cemeteries were found). The popular facility is actively used and has already earned a reputation of providing quality education to a variety of government, business and conservation professionals from over 80 other organizations from a dozen countries. Though it is not FWS's largest holding, it is unique in that it is the Service's first facility dedicated to training.

The NCTC's mission is to conserve fish, wildlife, plants, and their habitats through leadership in: training and developing USFWS employees and the broader conservation community; enhancing education and outreach to engage the public as partners in conservation; fostering collaboration among diverse interests, and preserving and sharing the history of the USFWS and the American conservation legacy.

The NCTC employs approximately 125 Federal employees and 100 contractors to manage the variety of External Affairs program needs such as conservation training, leadership programs, public education and outreach, photography and video production, satellite and other distance learning systems, National historian and curator heritage team, scientific integrity and research library programs, and the plethora of facilities operations and maintenance functions to manage the grounds, buildings, guests, and program goals. Although the NCTC program is established organizationally as a field station and contained within one site specific location, staff continually play a vital National and Departmental role in efforts such as human capital planning or e-government solutions.

The NCTC's four lodge buildings can occupy up to 226 guests per night. The annual average guest nights are 35,000. The majority of usage is on weekdays, but the center is also open on some weekends. The primary occupants are U.S. Fish and Wildlife Service, Department of Interior and DOI bureaus, non-government conservation agencies, and other government agencies. The following graph depicts the occupancy breakout.



To manage the uniqueness of the NCTC program, coordination of the annual budget justifications and submittals are line itemed independently from other Service programs. Until 2001, NCTC did not receive separate maintenance funding. Coupled with inflation, the annual maintenance costs are rising as the center ages and the annual maintenance funding received since 2001 has been a necessity to manage growing corrective repair requirements. The appropriations language also allows for a receipts account to collect conference, room and board, tuition, and video production fees from non-FWS customers where in turn the receipt proceeds help supplement the annual maintenance and capital improvement outlay requirements. This receipts account is a best business practice of how government entities can help offset their own operating and maintenance expenses and the collected fees have been a vital part of NCTC's ability to meet their increasing cost demands.

The Service manages real property assets by categorizing first by program, then region, and finally by field station location. The NCTC is unique in this as they are a separate program and only one location. There is not a requirement to compare or manage across multiple regions and locations for example, on all roads, buildings of historical significance, or deferred maintenance listings. NCTC's maintenance funding is designated to cover the comprehensive list of all buildings, grounds, and structures. The priorities for funding certain maintenance projects are established collectively by the NCTC Chief Facility Engineer and directorate.

Maintenance projects are prioritized by

- 1) safety and urgency (i.e. active flooding of entire floor of a building, site wide power outage),
- 2) mission aligned cost and labor covered within existing maintenance contract (carpentry, HVAC, boilers, waste water),
- 3) total damage scope and costs increased if repair delayed (mortar crumbling in outside stairs, asphalt)
- 4) funding availability and mission priorities (instructional buildings, waste water/water treatment plant, central plant)

The majority of maintenance tasks are completed by the onsite Operations and Maintenance contractor as repairs are needed or at least within the given year funded. However, as years move forward, NCTC is experiencing both an increase in the cost to repair as well as the increased amount of repairs required to maintain the current state of the facility. Work orders are gradually increasing with the age of the facility.

The Operations and Maintenance contractor cost was 1.5 million dollars in fiscal year 2005. With this they employ 22 staff members comprised of project manager, engineer, maintenance scheduler, general maintenance workers, electrician, plumber, carpenter, materials handler/specialist, and HVAC technicians to manage the majority of corrective, emergency, and preventative maintenance projects of the facility. NCTC has self-sustaining capabilities such as generator backup, commons cafeteria with kitchen and several days of food supply, onsite lodging guest rooms, wells, waste water and water treatment plants. In these regards, NCTC is deemed its own community. Maintenance and security personnel are on duty 24 hours a day and every day of the year.

Future O&M costs are derived from two sources. One is the statistical data that can be pulled from the actual Maximo database and the second is the overall maintenance percentage levels against individual asset replacement value. The actual database lists all the real property assets, motor vehicles, and corresponding equipment such as VAV's, elevators, pumps, and boilers. Each of the assets and equipment has their associated preventive maintenance requirements linked in the database. It's under the O&M contractor's responsibility to identify the complete replacement of asset components, equipment inspection and licensing, or the resulting end of the components life cycle each contract year.

The NCTC O&M contractor has been running Maximo since 1998 where the maintenance scheduler inputs, manages, and assigns work orders to the O&M staff, the warehouse specialist manages the large warehouse supply store room and purchase orders, and the project manager and engineer manage the overall labor costs and governmental reporting requirements.

The following table is a synopsis of NCTC's real property assets. The FY05 maintenance costs column totaling \$576,410 is based upon 13,667 actual work orders from FY05. This excludes operating, grounds keeping, capital improvement, construction, utility, inspections, overhead, and project management, etc. costs.

	Asset	Acquire Date	Acquired Cost	Type	Size	Unit	Curr Repl Value	FY05 Maint Costs
1	Commons Dining	1997	10,340,750	35	38,000	Sq. Ft.	13,190,865	73,353
2	Central Plant	1997	12,104,622	40	4,746	Sq. Ft.	13,644,845	45,303
3	Daycare	1997	2,157,333	35	3,958	Sq. Ft.	4,251,977	5,000
4	Entry Auditorium	1997	10,196,722	35	32,223	Sq. Ft.	8,521,577	32,262
5	Aldo Leopold Lodge	1997	7,349,020	35	30,547	Sq. Ft.	9,251,992	37,959
6	Rachel Carson Lodge	1997	7,265,330	35	29,000	Sq. Ft.	8,962,868	39,681
7	Ding Darling Lodge	1999	5,964,005	35	29,000	Sq. Ft.	6,906,000	42,089
8	Murie Lodge	2003	10,151,059	35	34,461	Sq. Ft.	10,600,732	22,801
9	Instructional East	1997	12,978,090	35	60,573	Sq. Ft.	7,629,766	41,499
10	Instructional West	1997	12,035,669	35	48,095	Sq. Ft.	8,181,857	33,628
11	Training Laboratories	1997	10,595,234	35	38,490	Sq. Ft.	5,534,786	30,450
12	Education Outreach	1997	5,179,653	35	9,066	Sq. Ft.	2,891,248	12,011
13	Physical Training	1997	3,124,974	35	20,963	Sq. Ft.	3,369,000	13,697
14	Material Production	1997	5,316,073	35	24,183	Sq. Ft.	5,204,245	20,801
15	Support Services	1997	5,369,042	35	22,998	Sq. Ft.	16,176,959	34,218
16	Water Treatment	1997	1,686,558	40	4,355	Sq. Ft.	1,734,748	13,695
17	Waste Water	1997	2,406,421	40	1,640	Sq. Ft.	694,724	51,331
18	Guard Station	1999	70,130	35	80	Sq. Ft.	92,080	4,051
19	Guard House 3	CWIP	0	35		Sq. Ft.	0	0
20	Recycle Shed	1997	304,534	35	3,096	Sq. Ft.	941,694	100
21	Barn (located on property at time of purchase)	1992		35	2,000	Sq. Ft.	28,775	104
22	Hazardous Materials Storage Building	2000	13,135	35	63	Sq. Ft.	14,727	100
23	Underground Tunnel	1997	1,296,593	40	1	Ea	575,500	2,864
24	Memorial Court Yard	2000	49,250	40	1	Numb	55,219	2,815
25	Fuel Depot	1999	44,834	40	1	Ea	51,604	100
26	Boat Ramp	1997	52,781	40	1	Ea	78,268	100
27	Entry Gate	1997	22,410	40	2	Ea	24,171	5,382
28	Site Trail	1997	371,825	40	26,400	Length	270,485	4,116
29	Wire Perimeter Fence	1997	113,809	40	13500	Ln. Ft.	172,650	100
30	Pedestrian Bridge	1997	700,434	40	330	Ln. Ft.	287,750	200
31	Entry Road	1993	438,610	40	.26	Ln. Mi.	258,975	343

32	Campus Road	1997	630,556	40	.83	Ln Mi	969,035	343
33	Water Treatment Access Road	1997	293,595	40	.68	Ln Mi	195,670	343
34	Red Parking Lot	1997	52,181	40	21,750	Sq. Ft.	103,590	896
35	Blue Parking Lot	1997	82,770	40	34,500	Sq. Ft.	115,100	996
36	Green Parking Lot	1997	32,029	40	13,350	Sq. Ft.	69,060	598
37	Orange Parking Lot	1997	64,013	40	25,200	Sq. Ft.	103,590	896
38	Visitor Parking Lot	1997	33,558	40	3,800	Sq. Ft.	23,020	199
39	Yellow Parking Lot	2000	59300	40	23,868	Sq. Ft.	66,487	575
40	PT Parking Lot	CWIP	0	40	3,690	Sq. Ft.	0	0
41	Blue Parking Lot Extension	2002	87,344	40	6500	Sq. Ft.	93,703	811
42	225,000 Gallon Water Storage Tank	1997	470,941	40	1	Ea	402,850	100
43	Well No. 1 (100gal-min)	1997	131,096	40	1	Ea	115,110	100
44	Well No. 3a (100gal-min)	1998	86,325	40	2	Ea	86,325	100
45	Reed Bed	1997	191,675	40	1	Ea	172,650	0
46	PT Storm Water Management Pond	1997	189,114	40	1	Ea	207,180	0
47	DEO Storm Water Management Pond	1997	273,277	40	1	Ea	230,200	0
48	Aldo Storm Water Management Pond	1997	277,026	40	1	Ea	184,160	300
49	SS Storm Water Management Pond	1997	116,583	40	1	Ea	138,132	0
50	Supplemental Domestic Water Supply (out of service)	1997	10,356	40	1	Ea	10,356	0
51	Waterline to Shepherdstown	CWIP	0	40	450	Ln. Ft.	0	0
			130,780,639				132,886,305	\$576,410

Assessing conditions and replacement values

The NCTC has both full time Federal and Contractor Engineering staff. In this regard, inventorying, valuing, and condition assessments are done on a continual basis. This differs from the many FWS field stations where a Field Maintenance employee coordinates with the Regional Engineering Assessor for a designated site visit to review and compile the field stations assets. Similarly though, NCTC still reports into the Service Asset Maintenance Management System single annual or comprehensive condition assessments records.

Due to the design of the facility, original construction quality, age of materials, and weather wear and tear, the NCTC experiences both some longevity of facility components and some trouble areas that require ongoing maintenance. One example of the longevity offerings is the metal roofs and the metal and brick siding on all the buildings. The materials selected in this design

not only blend well with the Appalachian surroundings, but will last for decades to come. However, an example on the difficult maintenance side is that the facility has a large amount of sidewalks and adjacent steps that are large stone slates. This uneven slate is very appealing, but it's also difficult to shovel and remove ice and snow. Also, the mortar needs constant patching and replacing due to winter frost heaves and the thin underlayment installed during original construction. Under these high maintenance circumstances, the NCTC looks at a viable corrective solution to minimize the recurring corrective requirements. For example, in the slate project, the NCTC will remove the slate and pour a concrete foundation and then place the slate back on top to prevent recurring frost heaves and extend the life-cycle of the slate to its original intent. Although the majority of materials and craftsmanship during original construction are superior, the NCTC has been going through a plethora of corrective projects to provide a more reliable and sustainable facility.

Utility and Other Costs

Since the fall of 2005, the NCTC has the capability to track electrical usage per building asset individually. Prior to this time, electrical usage was tracked in one lump sum monthly. Other utility costs are still tracked in one total amount. The electrical, building fuel and waste utility costs are spread across assets 1 through 17 above and listed below based upon a three year average from fiscal year 2003-2005. In conclusion, since NCTC is a heavy public access facility they have contracted security officers.

Electricity	\$363,667	
Building Fuel	\$309,021	
Waste	\$24,029	
Grounds Keeping	\$238,000	(includes snow removal)
Security	\$428,330	

13. Asset Management in the National Fish Hatchery System

The Service's Fisheries Program has played a vital role in conserving America's fishery resources for over 130 years, and today is a key partner with States, Tribes, Federal agencies, other Service programs, and private interests in a larger effort to conserve fish and other aquatic resources. The Fisheries Program's National Fish Hatchery System (NFHS) is an essential component of this conservation effort. Established in 1871 by Congress through the creation of an U.S. Commissioner of Fish and Fisheries, the National Fish Hatchery System's original purpose was to provide additional domestic food fish to replace declining native fish. Cultured fish were used to replace fish lost from natural (drought, flood, habitat destruction) and/or human (over-harvest, pollution, habitat loss due to development and dam construction) influences, to establish fish populations to meet specific management needs, and to provide for the creation of new and expanded recreational fisheries opportunities.

The role of the NFHS has changed and diversified greatly over the past 30 years as increasing demands are placed upon aquatic systems. In recent years, the Service has maximized the output of its work force by integrating the work of fish hatcheries and fisheries management. This integrated effort has resulted in cohesive, more efficient national restoration programs, such as those for Great Lakes lake trout, Atlantic Coast striped bass, Atlantic salmon, and Pacific salmon. The NFHS consists of 69 National Fish Hatcheries, 7 Technology Centers, 9 Fish Health Centers, 1 Historic National Fish Hatchery and 43 Associated Fish Facilities.

The primary function of National Fish Hatcheries is to propagate aquatic species to fulfill objectives of restoration and recovery plans and fishery management plans. This could include stocking propagated animals in water bodies or providing on-site refugia to preserve an imperiled species or to protect species until more favorable environmental conditions exist. Fish Technology Centers provide science and technology support and guidance to the National Fish Hatchery System and fish culture community. With a focus of applied science toward problem solving and developing new methods, Fish Technology Centers provide leadership in science and technology, especially for restoration and recovery of native species, such as genetics, nutrition and physiology, biostatistics, fish culture technology, and more. Fish Health Centers provide fish health diagnosis and associated aquatic species health management guidance to the NFHS and the aquaculture community as a whole. FHCs are also involved in the National Wild Fish Health Survey, aimed at understanding the distribution of certain pathogens in fish in the wild. The NFHS's Aquatic Animal Drug Approval Partnership Program works to obtain U.S. Food and Drug Administration (FDA) approval for drugs, chemicals, and therapeutants needed in aquaculture and fisheries management programs.

The NFHS's Associated Fish Facilities are Service owned fish hatcheries which are operated and maintained by non-federal entities under Memorandums of Understanding (MOU) or Memorandums of Agreement (MOA). Several of these facilities are previously operated fish hatcheries under the NFHS that have been placed under state operation and maintenance as part of reduced appropriations. However, the majority of these facilities are associated with the Lower Snake River Compensation Plan (LSRCP). The LSRCP fish hatcheries were constructed by the U.S. Army Corps of Engineers and transferred to the Service with the sole intent of these

facilities to be operated and maintained by states in the Pacific Northwest through funding from the LSRCP – a reimbursable program.

Goals of the National Fish Hatchery System

The NFHS is intimately involved in the conservation and protection of aquatic species throughout the United States. The components of the NFHS and the Fish and Wildlife Management Assistance Program work collaboratively to meet the objectives defined in restoration and recovery plans for imperiled aquatic species and fishery management plans. The NFHS, working closely with stakeholders and partners, applies a complement of habitat restoration and resource management strategies to maintain healthy ecosystems that support healthy fisheries. These strategies are focused on achieving the following goals:

- Recover aquatic species listed under the Endangered Species Act
- Restore native aquatic populations
- Mitigate the adverse impacts of Federal water development projects
- Provide fish to benefit Tribes and National Wildlife Refuges
- Providing recreational opportunities in Partnership with state agencies and others.

Description of NFHS land holdings and their impact on facility management

The NFHS is comprised of nearly 22,000 acres of lands and waters, of which 4,000 are administered through agreements, easements and/or leases. The NFHS has land holdings in 34 states that are widely dispersed geographically. Field stations are scattered throughout the continental U.S. Facilities within the NFHS are generally limited to providing area for captive propagation of species and securing a dependable water source. To a lesser degree than the NWRS, lands are devoted to conservation of fish, wildlife, and plants and generally are environmentally sensitive. Fish and wildlife dependent public recreation opportunities exist within field station boundaries; however, lands are generally not managed for such uses as waterfowl management, feed plots, or otherwise providing vast acres of fish and wildlife habitat.

Land holdings associated with field stations actively operated and maintained through NFHS appropriations have generally declined over the last 10-15 years. This decrease coincides with the conveyance of fish hatcheries to states. Within the last ten years, two NFH's have been added to the NFHS – Ouray NFH and Livingston Stone NFH. As part of the Lower Snake River Compensation Plan (LRSCP), several field stations have been added to the NFHS, resulting in a minimal increase in land acres for the NFHS. These field stations are not operated and maintained through Service appropriations. It is anticipated that several additional LSRCP associated land holdings will be transferred to the NFHS from the U.S. Army Corps of Engineers in the next five years. Outside the LSRCP, minimal continued land acquisition is expected, except to further secure water rights through easements and leases and to secure land to obtain and/or protect high water quality and disease free water sources that will enable the NFHS to fulfill its goals.

Organization Structure

National – Deputy Director Marshall Jones is the Senior Real Property Officer for the Service. The Assistant Director for Fisheries and Habitat Conservation has the overall lead for coordinating asset management activities and overall responsibility for managing the NFHS's asset portfolios. Two staff at the central headquarters office coordinates the preparation of all planning, budgeting, and reporting materials, and co-manages the Service Asset and Maintenance Management System (SAMMS), the Fish and Wildlife Service's application of the commercial maintenance management software, MAXIMO™. SAMMS is an adapted asset maintenance management system targeting a complete documentation of annual and deferred maintenance and construction needs and accomplishments for real property and maintenance and replacement needs of mobile equipment. The Fisheries Program's Fish and Wildlife Management Assistance Office is also utilizing SAMMS to document mobile equipment maintenance and replacement needs and accomplishments. One of these two individuals is also a regional Facilities and Maintenance Coordinator (FMC). Work is carried out in coordination with the National Wildlife Refuge System, Engineering, Contracting, and other Service organizations to assure consistency in approach.

Regional – Each of the six Regional offices has a FMC, who is responsible for overall facility and equipment management efforts, including completion of comprehensive condition assessments of facility assets greater than \$50,000 in value, and for all critical water management assets. Other responsibilities include the procurement, management, and completion of contracts for construction and maintenance projects. Their responsibilities start with the 5-Year Planning process for both Construction and Deferred Maintenance through MAXIMO/SAMMS and continue on through tracking of project completion and accomplishment reporting. Budget tracking is part of their process. Knowledge of several processes in budgeting, Federal Acquisition regulations (FAR), and engineering/construction are required of these staff. Other responsibilities such as heavy equipment coordination and transportation planning and implementation are carried out by the Fisheries Program's FMC, working closely with coordinators in the NWRs that have these responsibilities as their core function.

Field Stations – Fisheries field stations are widely dispersed geographically and minimally staffed. All 129 field units (69 Hatcheries, 7 Fish Technology Centers, 9 Fish Health Centers (FHC's), 1 Historic National Fish Hatchery and 43 Associated Fish Facilities) contain facility assets that require maintenance and all have the need for vehicles or other mobile equipment to effectively manage the facilities and critical water management assets. Several components of the NFHS are collocated, reducing facility maintenance needs. Additionally, most of the FHCs are located in lease space. All facilities have mobile equipment maintenance and replacement needs. The NFHS facility assets have a valued of \$1.47 billion and mobile equipment assets valued at \$36 million for a combined facility and equipment infrastructure value of \$1.51 billion. Within the overall NFHS workforce, there are 106 FTEs physically located on field stations whose primary responsibility is to maintain facility and equipment assets. The table below indicates the size of maintenance staffs (expressed as FTEs) at field stations in FY 2006. A total of 36% of NFHS field stations have no maintenance staff. At these locations, a program manager biological technician or biologist normally assumes maintenance duties as a collateral duty. A total of 48% of field stations have 1 or 2 maintenance FTEs and only 15% of field stations have

3 or more maintenance FTEs. FHCs do not have FTEs designated for maintenance activities; however, employees at these field stations perform mobile equipment maintenance and may perform building maintenance, particularly for those FHCs that are collocated.

NFHS Field Stations with	No. Field Stations	Percent of Stations
5 to 8 maintenance FTEs	3	3%
3 to 4 maintenance FTEs	11	13%
2 FTEs	13	15%
1 FTE	28	33%
0 FTEs ¹	31	36%
Total	86	100%

¹Eleven of the field stations with 0 FTEs are collocated with NFHs or FTCs.

Note: Associated Fish Facilities were omitted from this analysis as no Service personnel work on these field stations.

Due to limited staff, Fisheries field station personnel are often generalists that perform multiple functions. Responsibilities of maintenance staff vary considerably from location to location and usually include some level of program functions that are not related to maintenance. Additionally, activities on NFHS field stations are highly seasonable. Thus, there are periods where all field station staff will be largely devoted to aquatic species propagation activities.

Program Management

NFHS Strategic plan goals and metrics provide a tool to evaluate the performance for accomplishing various goals. While understanding the condition and priority of assets within the NFHS is important, it is more critical to appreciate and link the success of operational goals and metrics to those linked to physical assets. Meeting aquatic species production targets defined in recovery plans is directly attributable to the condition of the assets needed to propagate these species. Faulty or unserviceable assets required for culture or refugia limit or prevent the ability to produce healthy aquatic organisms and potentially producing any organisms. Abrupt and/or slight changes in environmental conditions or water loss can negate spawning and culture efforts. The operational performance measures of the NFHS that relate to on-station production and refugia efforts hinge on the condition and functionality of mission critical water management assets at the field station. The metrics listed below help determine whether investments are being made in assets which serve the mission of the NFHS, as well as its visiting public.

The condition of critical water management assets, as measured by the FCI.

The condition of cultural and natural heritage facilities as measured by the FCI

The condition of public use assets as measured by the FCI

The condition of direct support assets as measured by the FCI

Completion of comprehensive condition assessments

The number of NFHS field stations meeting NPDES permits

Status of NFHS Facility Assets (Sept. 30, 2005)

Maintenance Category	Deferred Maintenance	# Assets	CRV	Condition Index
(NFHS Strategic Plan)	(\$000s)		(\$000s)	1-(DM/CRV)*100
Mission Critical Water Management Assets	\$181,832	2,836	\$995,795	82
Direct Support Assets	\$47,394	1,780	\$301,162	84
Public Use Assets	\$8,956	446	\$53,937	83
TOTAL		5,062	\$1,350,895	83

The percentage of projects for each asset type in the deferred maintenance five-year plan is an indicator of the NFHS's commitment to the strategic plan goals. The Service is investing in asset types that directly affect our mission outcome and our strategic plan goals.

Asset	TypeUse	Number of Projects	% of plan 2007-2011
Industrial Non-Buildings (Fish Production Assets)	4060	92	25.41
Industrial Buildings (Fish Production Buildings)	3550	69	19.06
Utility Systems	4071	64	17.69
Water Mgmt Facilities	4016	18	4.97
Roads	4076	17	4.70
Storage Buildings	3541	11	3.04
Parking	4066	9	2.49
Other Buildings	3580	8	2.21
Other non-buildings	4080	8	2.21
Housing	3530	7	1.93
Office Space	3510	6	1.66
Service Buildings	3560	6	1.66
Research and Development Bldgs	3574	5	1.38
Storage Non-buildings	4040	4	1.10
Communication Systems	4072	2	0.55
Docks	4013	1	.28
National Projects		20	5.52
Mobile Equipment		8	2.21
Capital Improvement Projects		7	1.93
		362	100.00

Asset Inventory, Prioritization, Valuation and Condition

The most important asset classes (based on API) for the NFHS are listed in the table below in order of asset priority.

Asset Group	Num Assets	Average API	Total CRV (\$)	Average FCI 100= Good 0=Bad
Fish Production Buildings	206	93	231,838,937	84
Fish Production: Raceways, Ponds, Kettles, Ladders, Screens, Oxygen Systems	949	91	417,802,604	78
Water Control Structures and Pumping Stations	290	91	70,048,467	93
Dams: High Significant Hazard and Low Hazard	11	91	26,601,294	57
Power Generating and Distribution Facilities	163	88	9,070,748	89
Sewage Treatment Facility Plants	44	88	17,988,653	85
Water Distribution Systems	521	86	124,585,632	91
Water Treatment Facilities	127	84	65,436,868	92
Laboratory Buildings	27	84	26,626,660	87
Water Storage Tanks	37	82	2,775,213	93
Wastewater Collection Systems	119	82	10,864,198	95

Annual O&M Costs of Assets

O&M costs for major asset types are listed below. For the NFHS, the largest O&M costs are related to three categories of assets:

Buildings – largely associated with office buildings, fish production buildings, and water management assets – largely linked to utility costs for pumping, distributing and treating water for production purposes and repairs to aged, deteriorated water lines.

Costs indicated below are constrained by existing budgets and may not represent operation at full capacity.

Type use	Number	Sum of CRV	Sum of O&M Costs
Buildings	1234	\$437,259,111	\$5,208,959
Fish Production	949	\$417,802,604	\$2,086,863
Water Management	1,231	\$313,281,989	\$2,013,410
Roads, Bridges, and Parking lots	441	\$152,071,100	\$303,371
Utility, Power Generating Systems, and HVAC Plants	210	\$11,778,518	\$112,705
Dams - Low and High Hazard	11	\$26,601,294	\$11,460
Culverts/Canals	47	\$7,160,479	\$52,102

Asset Management Budgets

The NFHS budget for FY 2006 that is applied to operation and maintenance of facility assets is described in the table below.

Activity	FY 06 Amount (\$000s)	% of portfolio CRV
Annual Maintenance	7,175	0.5%
Deferred Maintenance	8,503	0.6%
Transportation Funds	000	0%
Construction Projects ¹	3,455	0.2%
Total	19,133	1.3%

¹ Omitted \$2M appropriated for Fish Screens projects as this add-on does not specifically target assets owned by the NFHS.

Note: the NFHS Equipment repair and replacement appropriation is - \$1.302M

14. Fleet Asset Management Plan

Asset Management Plan Decision Making Process for Assets:

The Fleet Investment Review Board (FIRB) is comprised of the following members of the Service Directorate - Assistant Directors for National Wildlife Refuge System, Fisheries and Habitat Conservation, Budget, Planning and Human Resources, Endangered Species, Law Enforcement, Migratory Birds, and Business Management and Operations (ABMO). The FIRB has the authority to recommend to the Deputy Director, as the Senior Asset Manager, to approve/disapprove all requests for funding new vehicle replacements and additions to the fleet, whether by purchase, donation, or transfer between Regions or from other agencies. In addition to the FIRB, existing management structures, policies and processes will continue in place. Policies are amended to incorporate criteria to ensure only the right number and types of vehicles are purchased and leased.

Service management will obtain maximum utilization of its vehicles and meets executive and departmental policies, including budgetary cost-containment initiatives. This Plan also contains procedures to comply with public law and to identify industry practices that best serve Regional and field offices in improving the overall effectiveness of the Service fleet management program.

The Deputy Director, as the Service's Senior Asset Management Official, is responsible for managing the Service fleet to attain established goals.

The FIRB establishes goals, reviews and approves all requests for funding for vehicle replacements, and additions to the fleet whether by purchase, donation, or transfer from other agencies. The FIRB also reviews requests to transfer vehicles among Regions and recommends appropriate actions to the Deputy Director. The FIRB recommends to the Deputy Director strategic policies and processes necessary to support effective management of the Service fleet. Processes include planning, investment, acquisition reporting, and analysis.

The Chief Financial Officer provides staff to support the FIRB in the conduct of their business to include reports and status of inventories and acquisitions. The Chief Financial Officer's staff coordinates and attends regular FIRB meetings.

Regional Directors, as senior officials, manage their share of the motor vehicle program to meet the objectives of this Plan.

Assistant Regional Directors for Budget and Administration provide process guidance and support to the respective Regional Director and Assistant Regional Directors, including the establishment of sufficient controls to ensure the integrity of data collected on fleet operations.

Assistant Regional Directors (programs) and Field Managers ensures adherence to Service policies, including critical, accurate inventories of vehicles and reporting on vehicle utilization.

The FIRB Working Group is comprised of senior Service program staff, the Chief, Division of Contracting and Facilities Management and the Chief, Division of Budget (or designee), Refuge Staff, Regional Fleet Manager, and others at the discretion of the FIRB.

The Fleet Asset Management Plan is in compliance with the Department's Asset Management Plan, Fleet Management Strategic Plan, and the Asset Management Scorecard. The Plan also embraces the principles contained in Part 320 of the Service Manual, and Title 41 of the Code of Federal Regulations.

2. Asset Inventory, Condition and Valuation

Fleet Data Summary:

Vehicle Type	Owned Vehicles	Leased Vehicles	Total Fleet	Average Age (years)
Sedans Station Wagons	209	92	301	5
Ambulances	2	0	2	20
Buses	9	4	13	4
Light Duty Trucks 4X2	876	70	946	6
Light Duty Trucks 4X4	2989	211	3200	6
Medium Duty Vehicles	1596	99	1695	20
Heavy Duty Vehicles	1178	6	1184	20
Total	6859	482	7341	11.5

The Service motor vehicle fleet consists of standard passenger vehicles, light, medium and heavy trucks. It includes firefighting, fish transfer tanks, emergency response vehicles and other special purpose vehicles. The estimated annual cost to operate and maintain the fleet is over \$5 million, and the annual fleet replacement budget exceeds \$15 million. The Personal Property Management System (PPMS) is utilized semi-annually to store fleet data. The Regions input fleet data into PPMS to facilitate management decisions concerning the fleet. The Motor Vehicle Fleet 5-Year Plan is a strategic initiative designed to enhance the effectiveness and efficiency of the Service motor vehicle fleet program.

The total inventory still needed and is it still relevant?

Each motor vehicle in the Service's inventory aligns with strategic objectives and managers only acquire the minimum number and size of vehicles that accomplishes the mission in a safe and efficient manner. The motor vehicle inventory is also certified annually by the FIRB to ascertain the asset's relevancy. Each Region identifies vehicles eligible for replacement based on the criteria specified in Appendix 2, 320 FW 2, Vehicle Replacement Standards.

Service policy in Appendix 3, 320 FW 2, Motor Vehicle Repair Table – Single Job; and Appendix 2, 320 FW 2, Vehicle Replacement Standards is used to determine the maximum repair and replacement target for vehicles based on Service policies and the life-cycle costs of vehicles.

Assistant Regional Directors for Budget and Administration, in coordination with Regional Program Assistant Regional Directors review and analyze vehicle miles/hours driven and set program goals for the replacement of vehicles that meet the Service's replacement criteria. The WO CFM compares utilization rates to the annual goals established in Service policy Part 320, Motor Vehicle Management, for each vehicle type. The data is analyzed for consistency and to ensure goals are met for each vehicle type assigned throughout the Service. Utilization rates are provided to Regional Directors for their management.

Vehicle utilization rates that are below 66 percent of the yearly goals are reported to the FIRB semi-annually. Regional Directors provide justification for each vehicle found to be below expected use levels.

Each Region evaluates their need to maintain seasonal vehicles on a year-round basis. Short-term replacements for these vehicles can be from excess vehicles (when practical) from the Region, short-term rentals, and temporary transferred vehicles from within the Region, when economically feasible.

Each Region identifies vehicles eligible for replacement based on the criteria specified in Appendix 2, 320 FW 2, Vehicle Replacement Standards. Vehicles found to be too costly to maintain in the fleet are placed on excess status and sold or transferred to another authorized agency.

3. Asset Prioritization.

The FIRB will reduce the age of the vehicles in the fleet by using replacement criteria listed in 320 FW 2, Appendix 2, and the Regional Directors report their projected annual fleet needs to the FIRB. Vehicle projection and data systems are updated to ensure that a projected listing is prioritized with the vehicles each Region plans to replace.

The Deputy Director oversees a zero-growth moratorium, applicable to new asset purchases and transfer of excess vehicles from other Federal agencies. The Deputy Director enforces Service policy for future approvals of Regional vehicle purchases, transfer of surplus vehicles, and long-term leases with Regional GSA Fleet Centers. A Service-wide vehicle ceiling is set by the Deputy Director. Any requests to exceed ceilings must be supported by a verifiable mission change, and approved by the Deputy Director.

The FIRB Working Group accomplished a Base-Line Study and evaluated the required vehicles to assign to each field office. Data applicable to the mission of each field office is analyzed to determine the number of vehicles that should be assigned for the day-to-day mission requirements at the site.

The Regional Offices evaluate the criteria submitted by the field offices and forward their recommendations for assignment to the FIRB. Regional program managers collect mission data from field offices on use requirements and consolidate vehicle assignments when mission changes occur.

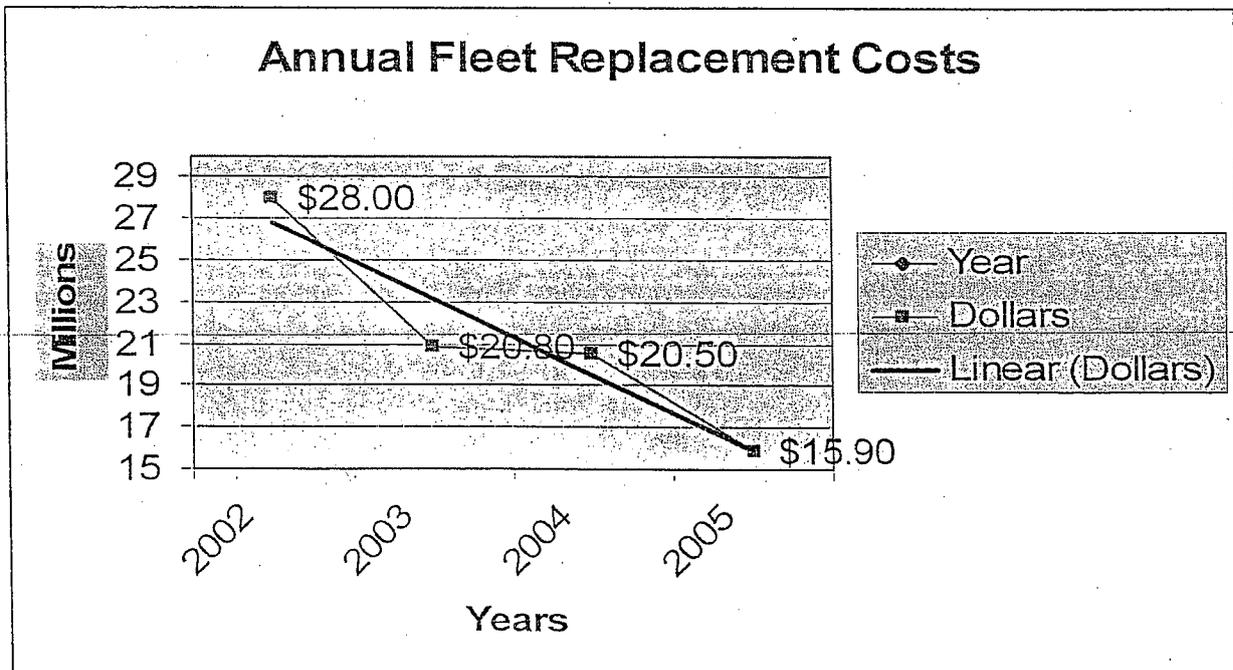
Regions update vehicle data in the Personal Property Management System semi-annually. The ABMO analyzes the types and quantities of vehicles in the Regions, the utilization rates, and the overall age of the fleet. Reports on the cost-per-mile for the general-purpose vehicles, vehicles that are not meeting utilization requirements or other variations from Service policy are provided to the Deputy Director and Regional Directors within 30 days of the close of the quarter.

Vehicles used for law enforcement purposes, including pursuit vehicles, are required to adhere to data collection and agency reporting requirements. Exceptions may be granted by Service policy and Federal Law.

4. Total Cost of Bureau Asset Management:

Multi-year portfolio planning. How are proposed acquisitions ranked in the plan, what new priorities such as new mission, or programmatic changes that impact resource needs have been identified?

The FIRB establishes goals, reviews and approves all requests for funding for vehicle replacements, and additions to the fleet whether by purchase, donation, or transfer from other agencies. The FIRB also reviews requests to transfer vehicles among Regions and recommends appropriate actions to the Deputy Director. The FIRB recommends to the Deputy Director strategic policies and processes necessary to support effective management of the Service fleet. Processes include planning, investment, acquisition reporting, and analysis.



What is the Bureau's strategy and policy regarding disposal of unneeded or low priority assets?

Excess vehicles can be transferred to other bureaus when there are no requirements within the Service. The Service may notify GSA of excess vehicles only when there are no requirements within the Department for excess vehicles. GSA then makes an effort to transfer excess vehicles to other agencies. If transfer of excess vehicles is not possible, GSA may dispose of the vehicles through the GSA donation or sales programs. The Service may dispose of excess vehicles utilizing GSA, commercial markets, or through the exchanged trade-in process. Excess vehicles are not reassigned to organizations awaiting approval for additional vehicle requirements. Regional Offices control excess vehicles pending approval for disposition from the FIRB Working Group. If reassignment to another Regional activity is not required, the vehicle is sold within 60 days (320 FW 7, Section 7.4).

The proceeds from sales go to the program selling the vehicle to be used for replacement vehicles as specified in federal regulations. The Service accounts for sale proceeds in accordance with the general finance and accounting rules applicable to the Federal Government. Except as otherwise directed by law, all proceeds from the sale of personal property under this part is available during the fiscal year in which the property was sold and for one fiscal year thereafter for obligation for the purchase of replacement property. Any sales proceeds not applied to replacement purchases during this time are deposited in the United States Treasury as miscellaneous receipts.

5. Program Management

How does the Service ensure best value for investing in and managing assets?

The FIRB is comprised of the following, the Assistant Directors for National Wildlife Refuge System, Fisheries and Habitat Conservation, Budget, Planning and Human Resources, Endangered Species, Law Enforcement, Migratory Birds, and Business Management and Operations. The FIRB has the authority to recommend to the Deputy Director, as the Service Senior Asset Manager, to approve/disapprove all requests for funding new vehicle replacements and additions to the fleet, whether by purchase, donation, or transfer between Regions or from other agencies. In addition to the FIRB, existing management structures, policies and processes will continue in place. Policies are amended to incorporate criteria to ensure only the right number and types of vehicles are purchased and leased. Additional controls are established as necessary to ensure an appropriate fleet level.

How does the Service determine the future use, needs or replacement of assets?

Each Region identifies vehicles eligible for replacement based on the criteria specified in Appendix 2, 320 FW 2, Vehicle Replacement Standards. Vehicles found to be too costly to maintain in the fleet are placed on excess status and sold or transferred to another authorized agency. The FIRB establishes procedures to reduce the age of the vehicles in the fleet. Using replacement criteria listed in 320 FW 2, Appendix 2, and the Regional Directors will report their

projected annual fleet needs to the FIRB. Vehicle projections and data systems are updated to ensure that a projected listing is prioritized with the vehicles each Region plans to replace.

