



# National Wildlife Refuge System

## Strategic Workforce Planning Report



**June 13, 2008**

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## **I. Introduction**

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The mission of the Refuge 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. The Refuge System comprises 97 million acres, protected within 548 national wildlife refuges, and thousands of small prairie wetlands and other special management areas. There are wildlife refuges in every state, and at least one within an hour's drive of every major American city. Under the management of fish and wildlife professionals, the Refuge System has become the world's premier network of wildlife habitats.

The potential and promise of the Refuge System lies within its 3,000 plus dedicated employees. Therefore, it is imperative that the workforce is structured and deployed in an effective and efficient manner so as to meet the Refuge System's strategic goals. Periodic business forecasting should be conducted to identify workforce changes and enable leadership to anticipate changes to human capital that require action to ensure program performance. Functional analyses also help to ensure that the Refuge System is appropriately structured to allow for the right mix and distribution of the workforce to best support the mission. Based on a number of workforce planning efforts, managers have identified several workforce challenges relating to staffing, training and career development, leadership development, succession planning, and retention. Many of these challenges are noted in the 1999 Refuge System strategic document, *Fulfilling the Promise*.

The purpose of this report is to describe the current and future workforce challenges and workforce development efforts underway by the Refuge System to address these challenges, including a summary of:

- External and internal factors affecting workforce planning;
- Workforce observations, data, and analyses;
- Workforce management tools;
- Workforce development activities; and
- Recommended next steps.

## **II. External and Internal Factors Affecting Workforce Planning**

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This section describes a variety of external and internal factors that affect workforce planning within the Refuge System

### **External Factors**

There are a variety of external factors affecting the shape of the future workforce of the Refuge System. Below is a summary of some of the most important ones:

#### **Trend Toward Performance, Accountability and Strategic Workforce Planning**

For the past 15 years there has been an increased focus on developing effective workforce planning tools and accountability mechanisms. While the details of some of these programs are expected to vary with changes in leadership, the direction of the overall trend toward reporting and accountability is expected to remain.

In 1993, Congress enacted the Government Performance and Results Act (GPRA). For the first time, federal agencies were mandated to become specifically results-oriented. Under GPRA, Federal agencies are required to develop long-term Strategic Plans defining general goals and objectives for their programs, develop Annual Performance Plans specifying measurable performance goals for all program activities in their budgets, and publish an Annual Performance Report showing actual results compared to each annual performance goal.

Starting in 2002, The Office of Management and Budget (OMB) began to evaluate all federal programs using a detailed questionnaire-driven methodology called the Program Assessment Rating Tool (PART). The PART is a diagnostic tool designed to analyze program operations and management. Once the review is completed, programs are given one of five ratings as follows: Effective, Moderately Effective, Adequate, Ineffective, or Results Not Demonstrated. The Refuge System has recently been through its second PART review and in that review it improved its rating from Results Not Demonstrated to Adequate.

Complimentary to the emphasis on performance accountability has been the emphasis on workforce management, which aims to strategically manage a program's workforce so that it can best deliver performance results. The President's Management Agenda (PMA) - the current Administration's strategy for improving the management of the Federal government - includes an initiative, termed the Strategic Management of Human Capital which calls for agencies to use "...strategic workforce planning and flexible tools to recruit, retain, and reward employees and develop a high-performing workforce."

Federal agencies have always been compelled to do the most with staff and dollar resources they are given. The Refuge System's recent experience with Regional Workforce Planning clearly illustrates the challenge of carrying out essential functions in a time of declining budgets: over the past three years the Refuge System eliminated more than 300 permanent full-time positions in order to free up dollars for management capability. A funding increase of approximately \$36 million in 2008 restored sufficient levels of management capability at all refuges. However,

continued inflation, combined with flat budgets, could compel the Refuge System to again eliminate positions to ensure sufficient management capability funding. Such downsizing exercises bring into sharp focus the value of strategically managing a workforce to ensure people with the right skills are in the right position at the right time.

### **Ecological Stresses Requiring Continual Monitoring and Increased Specialization**

The Refuge System must find ways to manage environmental challenges such as global climate change, water for resource needs, invasive species, and biotechnology. The July 2007 *Report and Action Plan of the Future Challenges Project National Synthesis Team* identifies these as the four key challenges facing the Service in the context of large-scale landscape change. Responding to the large-scale implications of climate change, competition for water, and invasive species requires the Refuge System to employ innovative resource and management strategies.

The following sections provide a high level overview of these critical challenges and their implications for the Refuge System and its workforce.

#### **Climate Change**

Human activities are exacerbating or accelerating global climate change. The Intergovernmental Panel on Climate Change (IPCC) predicts a 3-4°C increase in temperature during the 21<sup>st</sup> century over most of North America, and climate change is expected to continue long past the 21<sup>st</sup> century. Climate change is resulting in widespread, large-scale transitioning of ecosystem composition, structure, and functioning which has implications for refuge purposes and Refuge System policies.

One of the primary proposed mitigation strategies for climate change is carbon sequestration. The Refuge System sequesters a substantial amount of carbon, and has the opportunity to contribute further to carbon sequestration through habitat protection, management and restoration. However, the skill sets needed to manage the Refuge System in the context of climate change are not commonly available in the current workforce.

#### **Water Quantity and Quality**

Competition for available water is also becoming an increasingly critical issue with regard to maintaining healthy habitats for fish and wildlife. Increasing competition and conflicts over water will result in increased litigation, and the Refuge System will not be immune to challenges over its water allocation and use. Refuges that currently have adequate water supplies could face future shortages if there is insufficient water to cover their existing water rights.

Water quality is also a concern, both in terms of clean water for wildlife and the quality of water entering and leaving refuges. As States identify impaired waters, refuges may be faced with altering management operations to comply with water quality standards. This may adversely affect Refuge purpose(s) and the Refuge System mission. As a result, the Refuge System will need additional expertise in the diverse field of water resource protection.

## Invasive Species

The Refuge System must respond to the increasing presence of invasive species. Refuge lands now host over 2.3 million acres of invasive plants and 4,423 invasive animal populations. Other than habitat loss and human exploitation, invasion by non-native organisms may be the chief cause of decline in global biodiversity and this trend is expected to continue. As additional refuge lands are opened to oil and gas development, the accompanying road building and maintenance activities will provide pathways for invasive species to enter previously protected lands.

The current and potential future costs to the Refuge System are significant. In fiscal year 2006, the Refuge System spent \$9.6 million in base funding to fight invasive plant and animal populations. This was far less than what was actually needed. At the conclusion of FY 2007, there were \$166 million of unfunded invasive species projects recorded in the RONS database. The Refuge System's priority on managing invasive species should inform the development of current and future Service budget initiatives, including the identification of key workforce competencies, staffing (including additional Strike Teams), and the technology and technical capabilities needed to address the unique challenges presented by invasive species.

## Conservation Biology and Landscape-Level Conservation

The confluence of global environmental and ecological changes is stressing natural systems and posing a growing challenge to conservation of Service Trust resources. Refuges are increasingly threatened from pressures from "beyond the borders."

Meeting the Refuge System and Service missions in the face of these many challenges will require managing in the face of uncertainty. A dynamic approach to conservation biology involving informed risk taking, grounded by the best available scientific information, will be required. Working closely in partnership within the Service and with sister agencies, States, academia, organizations and private landowners will be critical. The Service's Strategic Habitat Conservation approach has great application to meeting this challenge. For these reasons, the Refuge Systems workforce of the future must have increased skills in applying conservation biology and developing partnerships.

Strategic growth of the Refuge System is an important landscape-level conservation delivery tool for the Service and increasingly critical to ensure achievement of refuge purposes and the Refuge System mission. In the face of climate change, strategic growth of the Refuge System will need to incorporate consideration of factors which increase the resilience of natural systems, facilitate adaptation to a changing climate, and take advantage of an interest in sequestering carbon. The downturn in funding for land acquisition has resulted in reduced staffs and realty functions in most regions. Should this funding trend be reversed, the Refuge System must be poised to implement a strategic approach to growth.

## Demographic Changes and Shifting Societal Values

Changes in the demographics of U.S. and wildlife user groups, in tandem with urbanization are shifting the public's focus on wildlife recreation away from traditional hunting and fishing activities. Historically, the traditional refuge user was an angler or hunter – but that is changing.

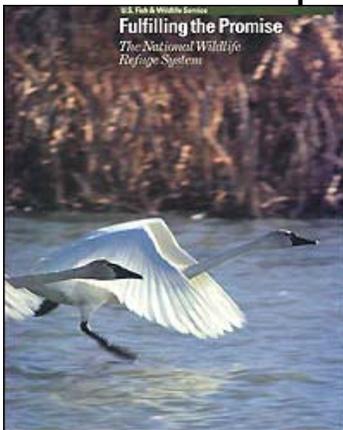
According to U.S. Census population projections, Hispanic and African-American populations are growing at increasingly rapid rates within the U.S. population. In 2001, one out of eight Americans was Hispanic. In 2030, it is projected that almost one out of five Americans will be Hispanic. Today, one out of eight Americans are of African-American descent, a ratio that will continue to 2030. According to the *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, these groups participate at lower rates in traditional hunting and fishing activities. In addition, across the U.S. population, the overall number of people hunting and fishing are declining, while the number of people participating in wildlife observation, in particular bird watching, is significantly increasing.

As a result of these changes in society, constituency, and recreational programs, the Refuge System will be challenged to keep pace with their audience in order to maintain its relevance in society. Without addressing these changes, refuge visitation may diminish, potentially resulting in less support and fewer volunteers. Refuges will need to keep current with changing technology, better understand and engage with the surrounding communities, and be creative in connecting people to refuge resources in ways that are still compatible and appropriate with refuge purposes.

## Internal Factors

Factors internal to the Refuge System that effect workforce planning include challenges pertaining to staffing, training, career development, leadership development, succession planning, and retention. The Refuge System began working on these challenges in the late 1990's as a number of these challenges were highlighted in the 1999 strategic document, *Fulfilling the Promise*, as shown in Figure 1.

Figure 1. "Promises" Recommendations



### Recommendations from "Promises" Relevant to Workforce Planning

- WH11** - Ensure an interdisciplinary staff of specialists (p. 29)
- WH12** - Address inadequate and inconsistent biological staffing (p. 30)
- WH13** - Develop a program to address career and professional needs of biologists (p. 30)
- P3** - Provide each refuge with public use staff with the skills and abilities needed to efficiently and effectively meet the needs of the public and fulfill the System mission (p. 49)
- L1** - Make leadership development the priority of the System and Service (p. 70)
- L2** - Establish a systematic recruitment, training, and mentoring program (p. 73)
- L3** - Enhance retention and formalize career pathways to develop leadership at all levels (p. 75)
- L4** - Actively promote opportunities and environment for career-long education and development (p. 76)
- L5** - Ensure that the System produces a cadre of leaders for senior Service leadership (p. 78)
- L6** - Recognize the importance of appropriate field experience for senior System leadership (p. 78)
- L10** - Develop and maintain consistent organizational structures across regions in support of refuges (p. 83)

## **Retirements and Succession Management**

Retirements and other attrition over the next five years will result in the loss of valuable institutional knowledge, management expertise, and leadership capability. The Refuge System needs to continue to take advantage of leadership and development opportunities so that future leaders are identified and equipped with the skills necessary to fill future retirement vacancies.

The Refuge System, together with the Service, must manage issues related to succession management, leadership development, and preservation of institutional knowledge. Leadership has been identified as a major focus of the Service's workforce planning efforts over the next five to ten years. The Service's commitment to leadership development is demonstrated by its continuing support of the *Stepping Up to Leadership* program, *Advanced Leadership Development Program*, and the *Emerging Leaders* program, as well as its participation in other broader programs such as the *National Conservation Leadership Institute*.

With limited budgets, it is even more important that the Service maintains its ability to retain existing staff and focuses on leadership development to facilitate recruitment into managerial ranks. According to the report entitled *Additions to the Refuges Professional Biologist Workforce October 1, 2001 – March 31, 2004*, 59 percent of Professional Biologist (400 series) accessions in the Refuge System came from within the Service, underscoring the importance of retaining existing employees.

## **Workforce Development**

As described in the previous section, many external factors are causing the environment that refuges operate in to change. In order to succeed at its mission, it is important that the Refuge System workforce has the diversity and skills necessary to adapt to these changes.

The changing demographics of the U.S population require the Refuge System to be more strategic in managing its workforce to meet future challenges, such as expanding the cultural diversity of its employees to better represent the nation's populace. An analysis of *Additions to the Refuges Professional Biologist Workforce October 1, 2001 – March 31, 2004* demonstrates that minorities are largely underrepresented in the biologist workforce, and accessions are largely home grown. Of the 36 minority additions to the Refuge System's Professional Biologist workforce, 75 percent came from within the Service. The majority (65 percent) of these 20 minority additions were converted from Student Career Experience Program (SCEP) appointments. While the current SCEP has improved diversity, as an intake mechanism, it cannot keep pace with the rate of change in the country's demographics.

The Refuge System needs to ensure that its employees possess the right competencies to address new conservation challenges in the next decade. According to the *February 2008 Refuge Chiefs Meeting Future Focus Sessions*, external threats from climate change and its related issues – declining water quantity/quality and invasive species - will require a new and/or stronger suite of skills. Below are some of the skills that the Refuge System will need to promote and enhance:

- Skill in collaboration and coalition building to coordinate across programs and with outside agencies (e.g., USGS, NASA, NOAA), including knowledge and understanding of the legalities and business implications of formal partnerships.
- Ability to manage “citizen scientists” to enhance the capacity to monitor the climatic and ecological variables that help ascertain the effects of climate change on refuge ecosystems and species.
- Expertise in Environmental education, climate change, and related issues. By educating the community about the threats of climate change and the actions the refuge and the community are taking to overcome them, the Refuge System will develop more informed, supportive communities and partnerships.
- Knowledge of carbon sequestration and credit trading, including the ability to translate land use and acquisition into carbon credits.
- Knowledge of predictive modeling to forecast the effects of climate change on refuge ecosystems and species.
- Ability to consistently use GIS across the Refuge System, so that refuges will be better able to determine the effects of climate change and management actions.
- Knowledge of hydrology and water resources protection.
- Knowledge of facility and asset management. More expertise is needed to safely and efficiently manage Refuge’s \$20 billion portfolio of facilities and equipment.

### III. Workforce Planning Process, Analysis and Solutions

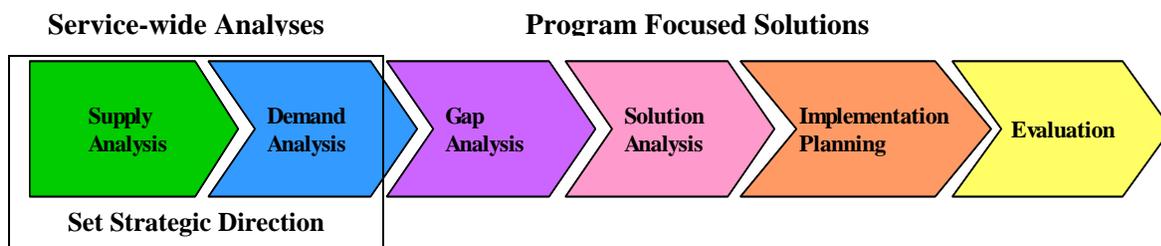
In an environment of limited resources, the Refuge System has been proactive in exploring and implementing creative strategies for assessing, deploying, and managing the workforce. This section describes the current Refuge System workforce planning process, organizational structure solutions that are being considered, and workforce management tools, such as position descriptions and staffing models, which are being implemented.

#### Refuge System Workforce Planning Process

In 2002, the Service conducted its first official phase of workforce planning, using the process shown in Figure 2 to perform an extensive analysis of the Service’s workforce down to the program level. Comprehensive demographic and skills information was collected in Program Profiles for eight major program areas. This information served as a starting point for discussion and analysis at the Service’s three-day Workforce Management Conference held in Washington, D.C. in May 2002.

Refuge System leaders analyzed the information in the Program Profile and discussed the future demands facing the Refuge System workforce. Through these discussions, they identified the critical workforce gaps and issues facing each of the programs. Over the next two months, a team of program experts and human resource specialists worked collaboratively to develop solutions. The results of their efforts were a combination of near-term and long-term solutions that were intended to provide the Refuge System with the human resource infrastructure required to effectively manage the workforce. Several programs, including Refuges, have begun to implement these solutions.

Figure 2. Workforce Planning Process



In early 2004, the Refuge System engaged in a solutions-oriented workforce planning process. At the outset of the process, the Refuge System was planning for a “Conservation in Action Summit” where the future of the Refuge System would be discussed. As a companion research piece for this Summit, a white paper was developed to describe the outlook for the wildlife management profession.

The Refuge System size, combined with the significant accomplishments by the Leadership Development Council, as well as its many broad occupational and functional groups demanded an initial scoping report that would set the tone and lay the foundation for the most efficient workforce planning approach. (See **Appendix A** for Scoping Report, *Refuge Scoping Effort: Review of Issues and Future Directions*). The scoping task involved numerous interviews, document collection and review, and a recommendation for the most effective workforce

planning approach for the Refuge System. With the approval of the scoping report and its associated workforce planning approach, work began in earnest on the workforce planning process for the Refuge System.

The workforce planning process followed by the Refuge System included the following three components:

- A **functional analysis** of the work that should be done by Refuge System in the future;
- A **structural component** to ensure that the work was organized most efficiently and to identify and quantify workload; and
- A **people component** that translates the structural component into workforce management tools such as position descriptions, training and development profiles, and career pathways.

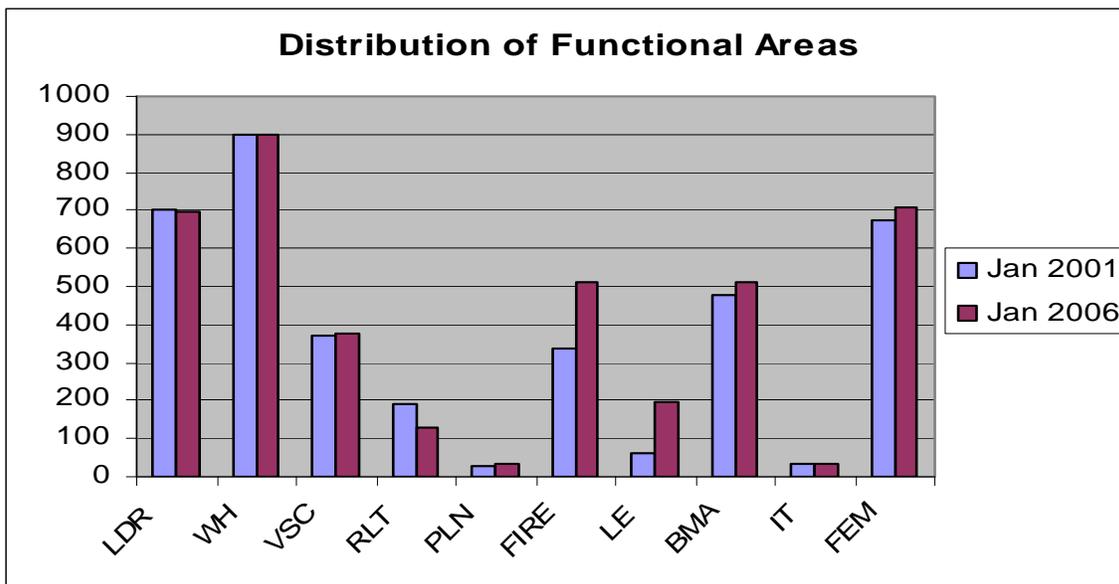
The following is a description of the analysis and findings resulting from the work within these components over the past four years.

### Functional Analysis

The Refuge System has been developing a detailed, functionally-based picture of the Refuge System which examines requirements five years into the future, as shown in Figure 3. At the Leadership Development Council (LDC) meeting in Fergus Falls, MN in 2004, the group developed a comprehensive list of functions, tasks, and activities that are needed to operate the Refuge System.

Ten distinct functional areas in the Refuge System were identified, which together with leadership and management, account for all of the work done within the Refuge System, both at the operational level and the infrastructure level.

Figure3. Distribution of Functional Areas



The **operational** functions represent the core activities of the Refuge System that are carried out primarily at the field level, including:

- Wildlife and Habitat Management (WH)
- Visitor and Community Services (VSC)
- Facilities and Equipment Management (FEM)
- Fire (FIRE)
- Refuge Law Enforcement (LE)

The scope of these operational functions spans the entire system, and while they are primarily associated with delivering the mission at the ground level, some of these activities are completed at higher levels, up to the organizational Headquarters level.

In addition to the operational functions, the LDC identified five infrastructure functions that are typically delivered from a single location to a number of other locations. The **infrastructure** functions are:

- Planning (PLN)
- Realty (RLT)
- Business Management and Administration (BMA)
- Information Technology (IT)
- Communications (COM)

Like the operational functions, these functions are delivered at all levels of the Refuge System, from the field to headquarters.

These ten functions cut across the different organizational layers in the System (field, regional office, headquarters), and the functions themselves do not carry implications about exactly who does the work (e.g., Refuge System employee, partner, other Service program). The functions reveal considerable variation in terms of scope of the activity. For example, there is hands-on, ground level work in the refuge field stations such as greeting visitors and training volunteers under the “visitor services” function. On the other hand, a refuge complex office provides “visitor services” functions to a number of different field stations and their work may include developing outreach plans and planning and designing facilities. The nature of the differences in scope will vary depending on the specific functional area; however, the scope is generally divided into four areas:

- Delivery (delivery of tactical, hands-on, ground level work)
- Support (specialized support, coordination, strategic management of issues and resources)
- Guidance (interpretation and stepping down of policies and standards, assuring consistency)
- Direction (setting policy and strategic direction, coordinating national efforts, setting standards)

Related to these differences in functional scope is the issue of leadership and management. While not a “function” like the operational and infrastructure functions mentioned above, leadership and management are necessarily required at all levels of the Refuge System. The extent of leadership and management competency needed varies by organizational level as well, similar to the differences in functional scope. Specifically, there are three different categories of leadership and management that are implemented at the different levels within the Refuge System including: tactical supervision, strategic management, and system leadership. While tactical management refers to the day-to-day, operational aspects of leadership (e.g., the actual supervision of people and work); strategic management refers to an increasingly complex level of leadership that focuses on thinking across organizational boundaries about future directions. System leadership refers to the strategic management of the Refuge System at the highest level (e.g., Regional and Headquarters levels).

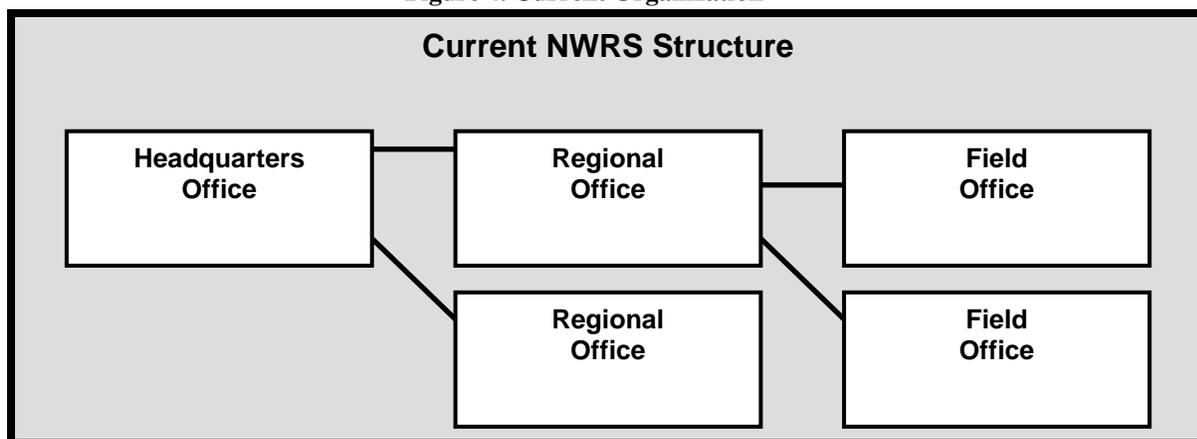
An important conclusion drawn from the functional analysis was that the Refuge System has evolved in recent years from one managed primarily by generalists to a system that requires the distributed use of functional specialists. Each of the functions represents an area of specialty that is needed in various locations and at various organizational levels within the Refuge System. In the past, the Refuge System could manage relatively small local teams composed primarily of generalists with a small number of specialists. Currently, the Refuge System does not have the resources to provide the number of specialists now needed at each field station, so the organizational structure should be modified to facilitate the sharing of specialized expertise.

### **Organizational Structure Solutions**

Organizational structure is a critical component of the Refuge System’s solutions-oriented workforce planning approach. With 548 national wildlife refuges and 37 Wetland Management Districts, the Refuge System necessarily has a broad geographic dispersion of its more than 3,000 employees. A primary long-term organizational structure solution the Refuge System is exploring is the development of larger, field-based structures that facilitate both the consolidation and sharing of services across field stations, as well as the appropriate distribution of operational and management functions from the Regional Offices to the field.

As shown in Figure 4, the Refuge System has historically been organized around three distinct levels: Field Offices, Regional Offices, and the Headquarters Office. The overwhelming majority of the workforce in the Refuge System, and the cultural emphasis organizationally, has always been at the field level. The refuge properties represent the land base of the agency, and the individual refuges have traditionally been the primary unit of analysis when making workforce decisions. The Regional Office has contained mostly staff support, and supervisory and line authority positions. This structure has served the Refuge System well for many years; however, the evolution to functional specialties, along with efficiency considerations, has caused the Refuge System to move toward a structure more flexible to workforce and resource considerations.

Figure 4. Current Organization



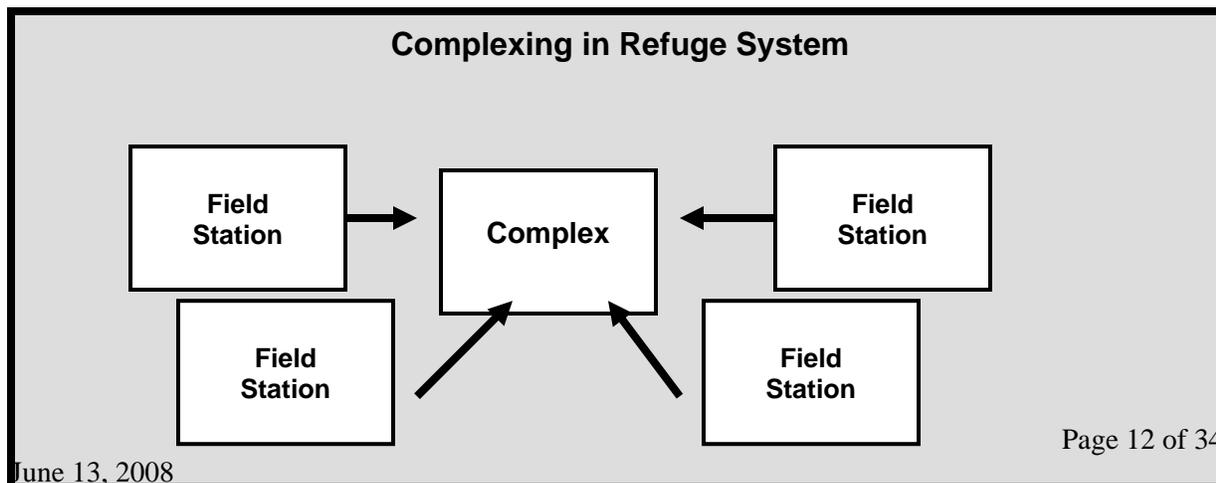
As part of the Refuge System’s long-term workforce planning efforts, organizational structure solutions are being explored that will allow the greatest efficiency and effectiveness. Ideally, a structure will be established which meets all of the functional specialty needs of the Refuge System while also clarifying and enhancing career pathways among those specialty tracks, as well as the supervisory/management track. The Refuge System requires a structure that provides an adequate balance of the competing needs for both decentralization (getting staff closer to the resource where the work needs to be done) and centralization (gaining efficiency by consolidating similar work into a smaller number of locations).

In fact, for several years the Refuge System has been moving in this direction. In periods of declining resources, every Region has been exploring and implementing creative efficiency strategies for managing and deploying its workforce. While the details of the various strategies vary from Region to Region, some important themes have emerged and will guide the Refuge System workforce planning efforts into the future. These themes include: complexing field stations, establishing zone resources, and other forms of resource sharing.

### Complexing Refuges

As shown in Figure 5, the term ‘complexing’ refers to situations where a number of field stations that were previously managed under multiple Refuge Managers/Project Leaders were combined into a single management structure, with a single project leader and staff also located on a single centralized refuge property. Complexing has traditionally been used in order to meet budgetary constraints, but other criteria for complexing decisions include: administrative efficiencies, span of control issues, and resource management.

Figure 5. Complexing Refuges



Decisions to complex multiple refuges under one office generally deliver two benefits to the refuges involved. First, the consolidation of operations provides beneficial savings in terms of office space, salary, benefits, training, and travel costs. However, it also establishes an economy of scale that allows all refuges involved to gain access to specialists, in areas such as information technology, wetlands management, or environmental education. The tradeoff is that staff persons who were previously located on a refuge, and had daily contact with that land base, may now be somewhat removed if they are located in a more distant, central office.

According to the *Response to Congressional Directive on Refuge Complexing (May 2, 2008)*, a number of key factors contribute to the success of complexing including, having a manageable number of total units within a complex; complexing units that share a similar purpose; the absence of political boundaries (e.g., State, county, or congressional); the existence of dependable forms of communication, especially two-way radios and internet; a maximum travel time between units of approximately one to two hours; and a manager who considers the complex as a whole, with no affinity for a particular individual unit. In order to achieve operational efficiency, proposed complexes must provide one or more of the following elements:

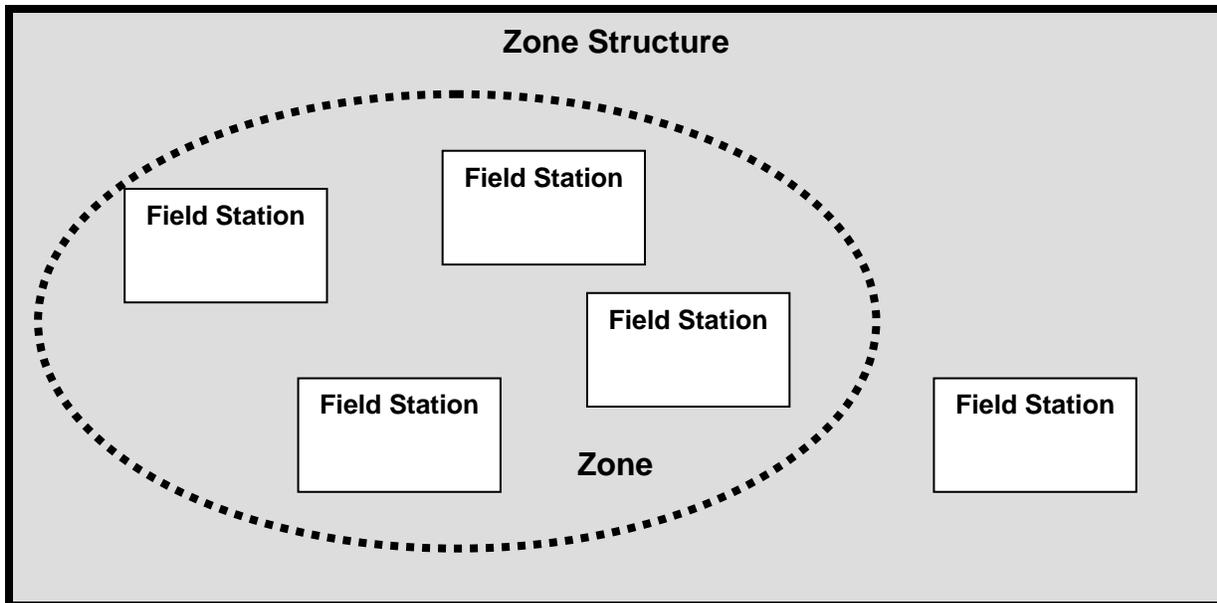
- Efficiency – Complexing field stations based on cost-saving benefits, compatible proximity to parent stations, and centrally efficient administrative functions.
- Span-of-Control – Limiting the size of proposed refuge complexes to manageable units in order to functionally administer and manage the day-to-day operations of satellite refuge field crews, resources, and management decisions.
- Similarity – Complexing refuges with similar habitats and habitat management practices.

Regions that have engaged in complexing over the last few years have noted specifically where it resulted in the reduction of total staff needed to manage the refuges in question. Many noted the number and pay grade level of positions that were saved after the complexing was complete (often at the Refuge Manager level). Region 5, for instance, noted that since 2001 it has created eleven complexes, which allowed them to eliminate eight Refuge Manager positions. Region 1 has established a handful of super-complexes, where existing refuge complexes were complexed together in an effort to gain additional efficiencies in office space, salaries, training, and travel costs of high level management and administrative positions. In many cases, complexing has been used when new refuges were added to the system, because there were not enough resources to staff the new refuges. The Refuge System should analyze the costs and benefit of complexing and develop guidelines on when and how to implement complexing.

### **Establishing Zone Resources**

After complexing, the most popular efficiency strategy explored in recent years has been the use of zones, where staff in a single location provide services to a number of different locations within a single zone, as shown in Figure 6. Zones are not limited by complex boundaries, and the shared responsibility does not create any new reporting relationships or different management structures (as is the case with complexing).

Figure 6. Zone Structure



Fire and Law Enforcement, in most regions, are already using a zone approach, and most regions are either already employing or are exploring zones in other functions. Region 5 has had zone biologists (GS-13 level) for many years and is exploring the possibility of expanding existing specialist positions into zone specialists (e.g., coastal salt marsh specialist, invasive species specialist, seabird biologist, etc.). Region 4 is establishing zones to deploy facility/asset managers across the region.

Region 3 has considered making zones among field stations that are within a 150-mile radius that have similar species or habitat management issues. Project Leaders could then work with supervisors to identify operating rules for how staff resources would be shared. Region 5 also specified that zones should not change the management structure. That is, zone positions should be supervised by the station manager on which they are located, and specific business rules should guide the utilization of these positions. Region 5 also developed detailed recommendations for metrics that could be used in determining the usefulness and structure of zone systems.

Zones were also suggested for business operations functions, and it was acknowledged that the criteria for managing these kinds of zones might be different than for the core operational functions. Region 5 has considered a "Senior Business Management" position to cover multiple refuges in a business management zone. Region 6 is using zones in the business management function, where it is consolidating contracting, financial management, and payroll operations into single "Business Units" that serve multiple refuges. Additionally, other regions have expressed interest in establishing service centers for business operations functions.

## **Other Examples of Resource Sharing**

Many other examples exist where resource sharing allows individual refuges to access specialized expertise. For example, many regions use Maintenance Action Teams (MATs) whereby teams of maintenance professionals gather to complete a large maintenance or construction project. A primary benefit of the MATs is that each member of the team brings a particular specialty (e.g., electrical, carpentry, dragline operation, etc.) to the project.

Invasive Species Strike Teams are another example of sharing specialized resources. The Strike Teams normally cover all or half of a region, as they work to monitor and control the worst invasive species in the area. As experts in the methods of monitoring and control, the Strike Team members can deliver these services more efficiently than generalist refuge staff members. Other examples of resource sharing in the Refuge System include positions such as contract warrant officers, information technology specialists, realty specialists, planning specialists, and regional archaeologists.

Some of these positions are shared across multiple field stations, and in other cases, they are regional positions that have been located to the field to be closer to the work. In some cases, this resource sharing cuts across program or agency boundaries. Several regions co-locate services with other Service programs (e.g., Ecological Services, Federal Aid) in order to reduce funding spent on space costs or to co-locate biological specialties. Some regions have partnerships with other Federal agencies or state agencies in order to more efficiently accomplish work. Additionally, some regions are exploring the option of contracting out certain services to reduce the number of permanent positions at multiple field stations.

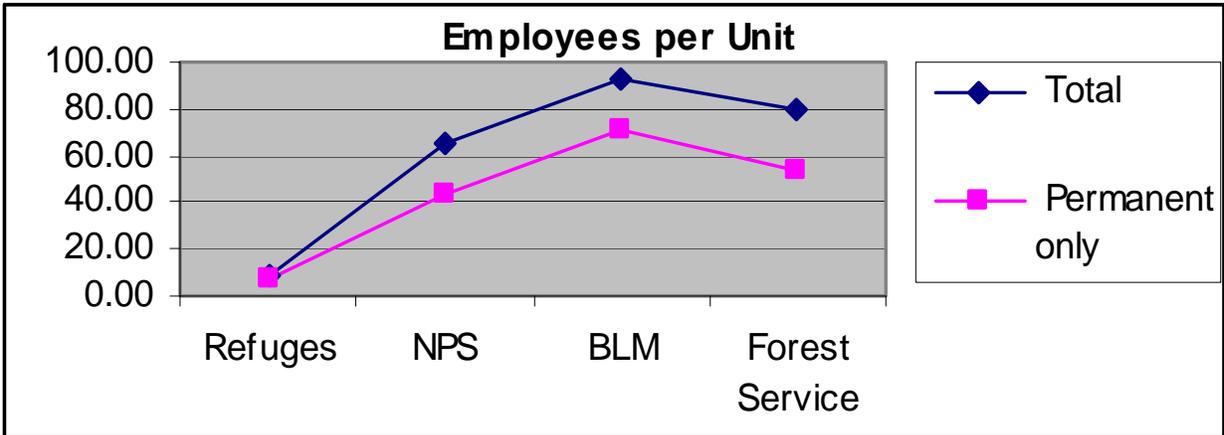
## **External Benchmarking Analysis**

In June 2005 the Refuge System conducted an informal external benchmarking study with several peer agencies to examine staffing practices. The agencies studied include: Bureau of Land Management (BLM), National Park Service (NPS), and the U.S. Forest Service (USFS). See **Appendix B** for the detailed External Benchmarking Analysis.

Based on a high level analysis, the Refuge System staff is smaller than the other land management bureaus. The BLM has a workforce of 13,052, NPS has 25,534 employees, and USFS employs 47,482 employees. In comparison, the Refuge System manages approximately 100 million acres with about 4,400 employees. A direct comparison to total workforce size is not applicable, as the other bureaus have some functional responsibilities beyond managing their land base. It is obvious however, that the other land management bureaus have significantly larger workforces.

Further analysis showed that the Refuge System has a much smaller average staff size per field unit than other bureaus. Figure 7 shows that the Refuge System deploys an average of 6.53 employees to each location. Other land management bureaus deploy significantly more: the NPS has 43.05 per unit, BLM has 71.59 per unit, and USFS has 53.44 per unit.

Figure 7. Field Unit Staff Size

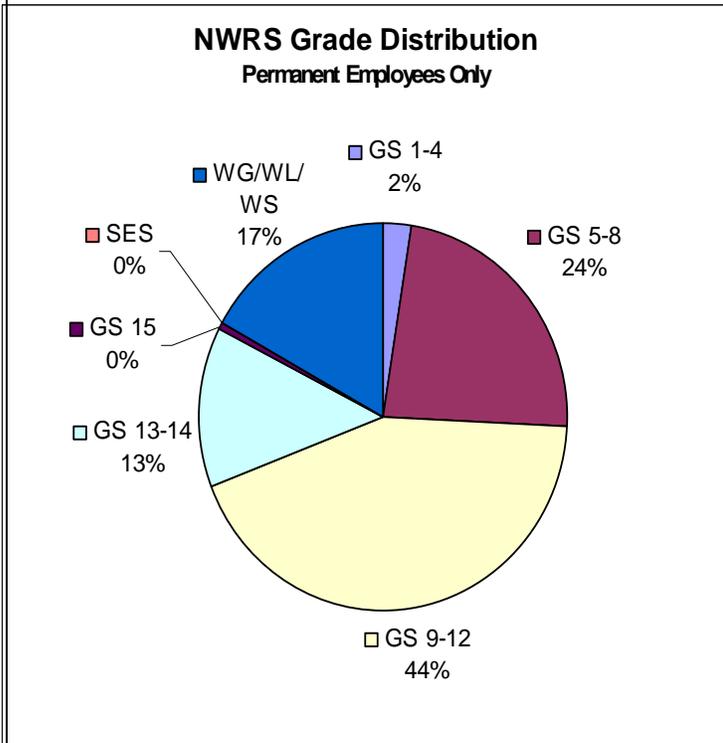


The small average size of refuge field station staffs makes it difficult to provide the degree of specialization that the functional analysis of refuge work indicates is needed. Other land management bureaus have a much larger average staff size per unit, which facilitates the ability to have specialists to deliver the mission. By deploying more staff to fewer locations, the Refuge System may be able to increase the use of specialists that can serve multiple locations and deploy smaller generalist teams for on-site field presence when required.

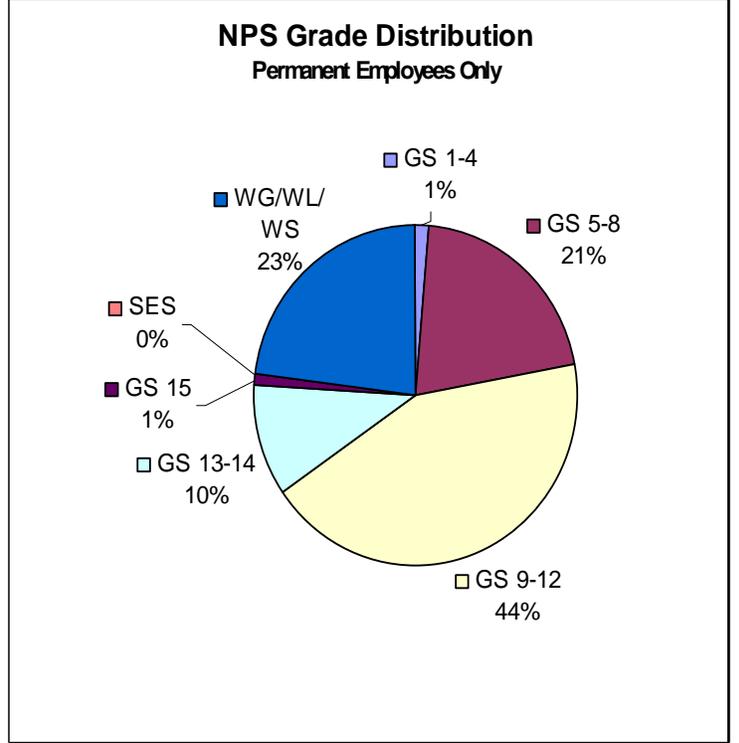
There are a few other observations that may provide insights as to how the Refuge System has chosen to deploy its existing workforce. As a ratio of permanent to non-permanent staff, the Refuge System employs the fewest non-permanent employees (1 non-permanent employee for every 4.49 permanent staff). BLM has a ratio of 1 to 3.41 (permanent to non-permanent staff), USFS has a ratio of 1 to 2.08, and NPS has a ratio of 1 to 1.89.

As shown in Figures 8a – 8d, the Refuge System uses a higher percentage of wage grade employees than BLM or USFS, but less than NPS. It appears that the Refuge System makes less use of seasonal employees than other bureaus. Additionally, the Refuge System has far fewer GS-15 and SES positions than the other land management bureaus. Since the benchmarking results are very high level, the Refuge System may want to conduct a more rigorous analysis of the staffing practices at other land management bureaus.

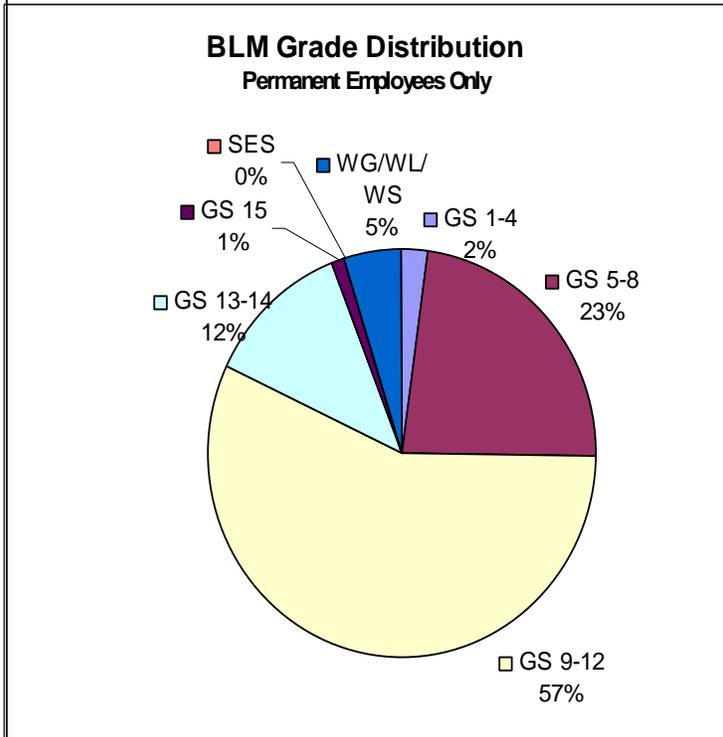
**Figure 8a. Refuge System**



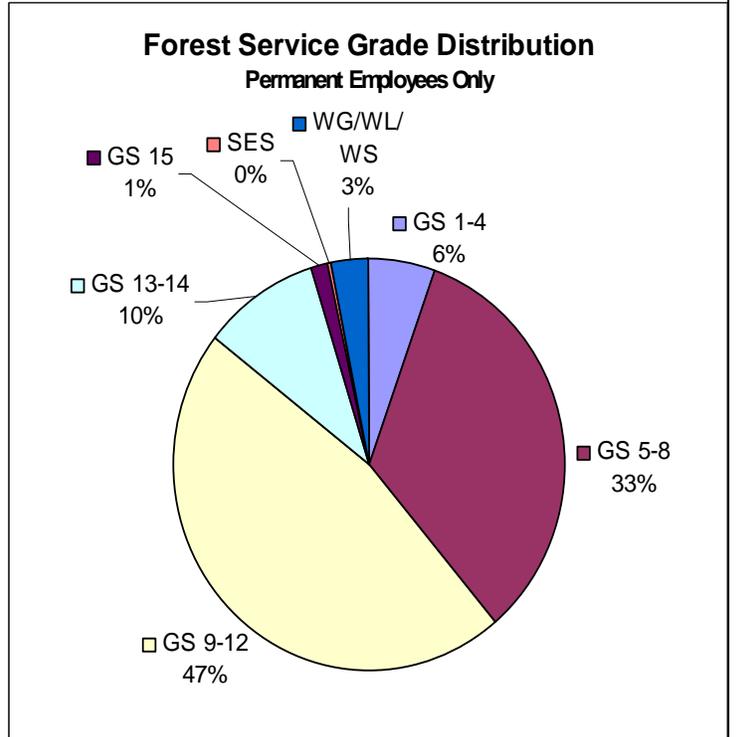
**Figure 8b. National Park Service**



**Figure 8c. Bureau of Land Management**



**Figure 8d. Forest Service**

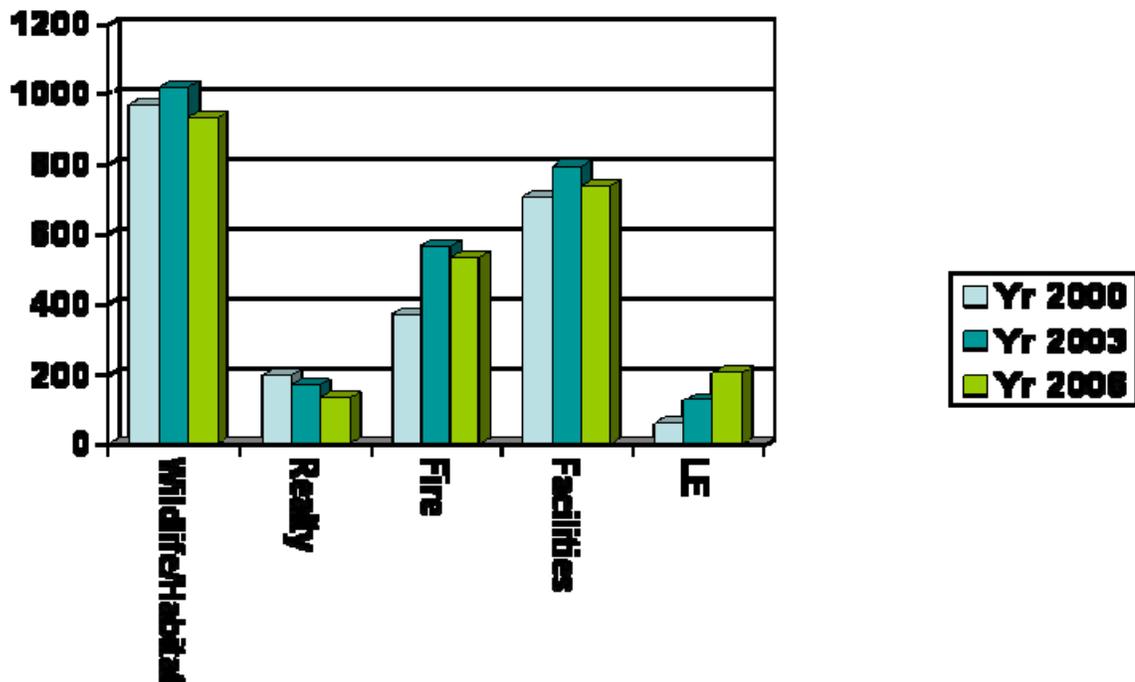


## Workforce Profile Analysis

In order to enhance workforce planning efforts underway, the Refuge System created workforce profiles in July 2006 (see **Appendix C**). The data was examined from multiple perspectives: for the Refuge System overall, by function, by region, and by grade level. Analysis by function was completed by grouping occupational series under each of the ten functional areas (see Appendix C, section: Workforce Data by Functional Areas, for a list of the occupational series included in each functional area). The data set includes both static and transactional data for September 2000 through May 2006.

There were several key findings from the resulting data analysis seen in Figure 9. The most significant growth in the Refuge System workforce was within the Law Enforcement (143 people or 240 percent), Fire (165 people or 45 percent), and Facilities and Equipment Management (30 people or 4 percent) functions between September 2000 and May 2006. This is not surprising given the emphasis on reducing collateral duty law enforcement officers and increasing the presence of on-site law enforcement officers. The increases in Fire functions are likely the result of the National Fire Plan implementation. The number of permanent employees in Wildlife and Habitat Management (37 people or 4 percent) as well as Realty (63 people or 32 percent) decreased in the past five and one-half years, although there had been moderate growth in other functional areas. The Realty reduction is not surprising given the transfer of appraisal functions to the Department. However, the reduction in Wildlife and Habitat Management is somewhat surprising as this function is a key component of carrying out work on the ground and achieving Refuge System goals. The Refuge System should monitor the growth of these field functions relative to infrastructure functions.

Figure 9. Refuge System Full-time Employees by Functional Areas - May 2000 to September 2005



As shown in Table 1, in the five years between 2001 and 2006, the average grades across all of the functional areas increased. In 2006, the average grade level for the Refuge System was 9.6, versus 9.0 in 2001. This represents a rate of change of 7 percent, compared to the Federal government's rate of change over a similar timeframe of only 2 percent. The Federal government's average grade was 9.9 in 2006.

**Table 1. Overall Grade Distribution**

<b>Grade Distribution</b>				
<b>Grade</b>	<b>Jan-01</b>		<b>Jan-06</b>	
1--4	108	3%	57	2%
5--8	1224	38%	1039	29%
9--11	1000	31%	1340	38%
12--13	792	24%	955	27%
14--15	111	3%	162	5%

\*Includes permanent employees only

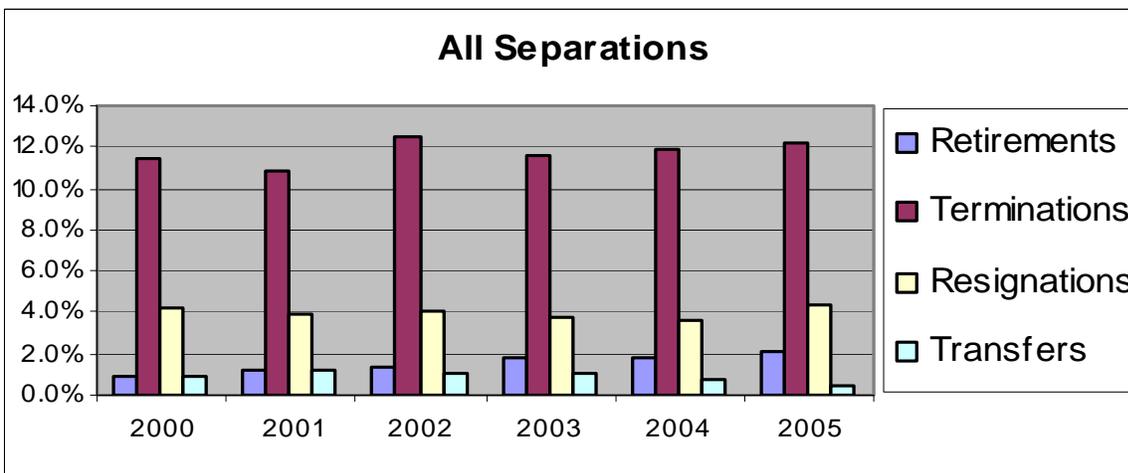
The higher rate of change may represent the Refuge System “catching up” to other agencies to compete for talent. This increasing average grade level had a significant impact on payroll costs. Over this same time period, and using conservative estimates of the General Schedule pay scales, the rate of change in the Refuge System payroll costs from 2001 to 2006 was 28.5 percent. For the same time period, the rate of change in payroll costs for the Federal government was 21.8 percent. The increase in payroll costs and shifts to higher grades represents a lower number of full-time equivalents (FTEs) in proportion to total dollars spent.

Additional analysis of the Refuge System Headquarters workforce conducted in October 2007 indicated an increase in the number of positions devoted to information technology and visitor services and communications. Looking into the future, the Refuge System Headquarters workforce also predicts the emergence of the Equipment and Facilities and Services group, as many regions are establishing dedicated asset/facility manager positions. The Refuge System is making plans to conduct a staffing analysis of maintenance positions on field units to determine if some positions may be more appropriately assigned to asset management.

### **Retirement and Attrition Analysis**

Although managing retirements and employee retention is a significant concern for many Federal agencies, it is not a key issue for the Refuge System. As shown in Figure 10, separations due to retirement are fairly manageable. At just 7 percent in 2004, the Refuge System retirement rates were much lower than the Department of the Interior (13.6 percent) and government-wide rates (14.6 percent). The relatively low Refuge System retirement rates are expected to continue as a trend. However, there are a few functional areas which should be monitored closely. The retirement eligibility rates within Business Management and Administration (8.9 percent in 2005), as well as Facilities and Equipment Management (10.5 percent in 2005) are slightly higher than the Refuge System average (7.3 percent in 2005), which may be cause for proper planning to ensure suitable successors are available. This may also provide an opportunity for workforce reshaping, depending upon the outcome of Service-wide workforce management decisions, such as the consolidation of services.

Figure 10. Separations



Additionally, the retirement eligibility rates within Refuge Leadership (approximately 14 percent in 2005) are high compared to the rest of the Refuge System (7.3 percent in 2005); however, the rate at which employees in these fields actually retire is comparatively low. These trends are shown in Figures 11a and 11b, respectively, below.

Figure 11a. Refuge Retirement

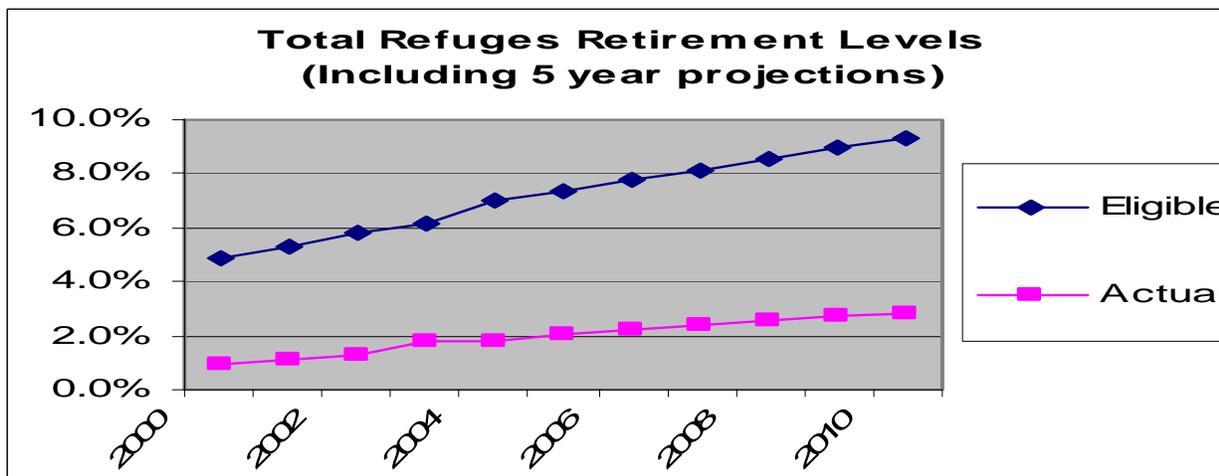


Figure 11b. Leadership Retirement



The attrition rates within most functional areas are on average around 6 percent, which is within the normal range. However, these attrition rates do not take into account employees who transferred from the Refuge System to another Service program. The turnover in Facilities and Equipment Management, Refuge Leadership, and Wildlife and Habitat Management are low. As shown in Table 2 below, the lowest turnover and the area causing the most concern is in Leadership, especially when coupled with the low rate at which employees actually retire.

**Table 2. Leadership Separations**

All Leadership Separations									
	Base #*	Retirements		Terminations		Resignations		Transfers	
2000	481	13	2.7%	2	0.4%	1	0.2%	2	0.4%
2001	486	17	3.5%	1	0.2%	1	0.2%	2	0.4%
2002	500	8	1.6%	5	1.0%	2	0.4%	1	0.2%
2003	531	17	3.2%	2	0.4%	5	0.9%	3	0.6%
2004	545	18	3.3%	3	0.5%	5	0.9%	3	0.5%
2005	532	25	4.7%	4	0.8%	6	1.1%	0	0.0%

\*The base number of employees was extrapolated from the percentage of separations for each year

The Refuge System is likely not experiencing enough departure of staff in leadership roles to create opportunities for the growing numbers of employees who have been promoted behind them. There is the potential for stagnation in the workforce, as those in higher grades are staying longer resulting in a lack of upward movement for those in the middle ranks. The Refuge System needs to identify creative solutions to encourage career movement, identify the leadership skills needed in the future, and focus on developing current employees to take on these roles.

### **Workforce Management Tools**

Tactical workforce management tools can help program managers make immediate budgetary and staffing related decisions. There are a number of workforce management tools that have been developed independent of decisions regarding organizational structure or service delivery. These tools include: staffing models, a cost analysis tool, workforce profiles, and standardized position descriptions. These tools are described more fully below.

#### **Staffing Models**

Staffing models are designed as guides for managers to predict staffing under most circumstances. The Refuge System needed a tool to quantify staffing resource needs aligned with identifiable workload drivers. A staffing model was fashioned around the areas identified in the functional analysis and designed to justify and predict staffing needs. To date, staffing models were developed for each of the identified functional areas, both operational and infrastructure (see **Appendix D**).

Staffing models allow for maximum flexibility to manage refuges' changing conditions and fluctuating workload demands. Therefore, each refuge could be staffed in whatever manner is most logical, and the same would be true for Refuge Complex Headquarters. Each staffing

model contains model deployment patterns which define distinct ranges of staffing that should be associated with various workload levels. These models identify a quantity of FTEs that are needed to perform the work. When applied across the Refuge System, the FTE ranges are intended to cover three different future resource scenarios for the Refuge System: zero growth/reallocation of existing resources, modest growth of five percent or less, and significant growth of 10 percent or more. The lower end of each range tends to represent a zero growth scenario such that the model could be used as a decision tool for reallocating existing staffing between refuges based on similar circumstances. The middle part of each range represents a modest staffing growth of five percent or less. The upper end of the range can be used to predict staffing levels needed if a significant growth of 10 percent or more is realized.

The draft staffing model with projected FTE ranges was sent to Refuge Supervisors in each region. Refuge Supervisors were instructed to test the staffing model with a sample set of Refuges by calculating FTE projections based upon the workload measures. Refuge Supervisors reported both the projected FTEs and their actual numbers of FTEs for the refuges sampled. The test application revealed that the modules appeared to work for a majority of the refuges. Across all the modules, Alaska and Hawaii stood out as having different needs than the other areas. The modules were also less effective at predicting staffing needs at extremely large refuges. Refuge Supervisors also provided recommendations for improving the model. Prior to implementing the recommendations, a benchmarking analysis was conducted to compare Refuge System staffing levels to other land management agencies. The staffing model is now being used the basis for a comprehensive analysis of staffing patterns in the Refuge System.

### **Cost Analysis Tool**

The cost analysis tool (see **Appendix E**) helps managers to quickly understand the impact of staffing decisions on program budgets. The tool puts the Refuge System staffing model into practice and assists managers in comparing and contrasting the financial impact of various combinations of workers. The tool allows managers to estimate the costs associated with various staffing scenarios, which is particularly valuable for conducting base budgeting analysis.

The cost analysis tool is one input into Refuge System managers' decision-making process and must be joined with other important considerations such as workload, cost benefit, career development, and Refuge System priorities/strategic direction. The cost analysis tool is intended to aid in performing cost-benefit analyses, but will also weave in other factors as shown in Figure 12 below. The cost analysis tool was designed to build in checks and balances for comparing against the staffing model assumptions. It also displays career distribution levels to compare current distribution percentages versus optimum distribution percentages of entry, mid, and senior level staff.

**Figure 12. Cost Analysis Factors**



This tool is designed to calculate the costs of staffing at the field/Complex, Regional, and National levels; therefore, the tool reflects these four different views. The data for the view of the field/Complex level will be based on field station data aggregated to within their complex grouping. The Regional and National level views will be a view of the staffing costs associated at the Regional and Headquarters Offices, respectively.

### **Standardized Position Descriptions**

The Refuge System is in the process of developing standardized position descriptions for key positions, which will facilitate the lateral movement of employees across offices and Regions and make it easier to identify trends in workforce requirements. The position descriptions are intended to document work currently being performed within the Refuge System and provide further definition to the major job duties and competencies required for positions that exist across the Refuge System. In addition to specifying major job duties, standard position descriptions may also outline supervisory controls, guidelines to be followed, complexity and scope and effect of the work, personal contacts and purpose of contacts, physical demands, and work environment.

Several Career Pathways teams and individual functional areas have developed final or draft standard position descriptions including:

- Conservation Planning – The Conservation Planning Career Pathways Team developed expectations of Service management for professional conservation planners, GIS personnel, and writer/editors, ranging from GS-5 through GS-14.
- Refuge Management – The Refuge Managers Career Pathways Team developed draft standard position descriptions for the wildlife refuge management series (485) ranging from GS-5 through GS-14, including an addendum for pilot duties (e.g., aircraft operation).
- Visitor Services – The Visitor Services Career Pathways Team developed a set of standard positions descriptions for the public use series (Park Ranger – 025) and identified career paths and developmental opportunities for the public use series (i.e., Visitor Services Managers, Visitor Services Specialists, Visitor Services Technician, Environmental Education Specialists, and Visitor Services Intern).
- Wildlife Biology – Draft Standard position descriptions were developed for Wildlife Biologists ranging from GS-5 through GS-12, in career ladders and stand-alone positions.

The Refuge System should continue to standardize position descriptions to both inform future workforce planning efforts and support the development of career advancement structures and career development efforts.

These short-term tactical workforce tools will help lay the groundwork for long-term solutions adopted by the Refuge System.

## **IV. Workforce Development: Recent Activities and Next Steps**

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This section describes the current context of major workforce development issues within the Refuge System and recommends next steps that would make the Refuge System more effective in addressing workforce challenges in the future.

### **Maintaining and Enhancing Effective Organizational Structures**

Structural alignments of programmatic/functional areas between the field, Regional Offices, and the Headquarters Office facilitate good communication, accountability, coordination, and the overall successful accomplishment of work. Misalignments typically lead to communication breakdowns and inefficiencies. Structural inconsistencies present challenges to human resources systems such as staffing models and succession planning. Inconsistencies in grade structures and position descriptions make it difficult to determine whether or not staff is properly allocated relative to priorities and workloads. Currently, there are inconsistencies in grading across the regions. These inconsistencies can stem from differences in organizational structures, and this can have negative impacts on communications, operations, recruitment and morale. Based on the external benchmarking analysis, it also appears that Refuge System grading is somewhat inconsistent with similar land management agencies.

Healthy organizations achieve a balance between maintaining clearly understood organizational structures that facilitate accomplishing work and allowing for innovation with new structures. Innovations are necessary because they help organizations find new efficiencies and adapt to the future. Several structural concepts are being explored in the Refuge System including: complexing, zones, and resource sharing (see pages 11 – 14 of this report). In some cases these concepts are being applied in new and innovative ways, while in other cases, such as complexing nearby refuges or establishing zone law enforcement officers, they are well established practices. The level of innovation within the Refuge System seems healthy, but there appears risk of overly compromising clear organizational structures.

A viable structure should provide not only sufficient structure for accomplishing and effectively coordinating across units, it should also facilitate workforce planning systems. Inconsistencies across offices and regions make it challenging to realize efficiencies with standard position descriptions; universal competencies and training and development profiles; deliberate career maps and career advancement structures; and clarity in the relationship between workload and resources. The Refuge System has worked to establish some of these efficiencies, as illustrated by the career pathways teams within the disciplines of visitor services, biology, refuge management and conservation planning. However, those efficiencies can be sustained and built upon only if clear organizational structures are maintained.

The Refuge System requires a structure that provides an adequate balance of the competing needs for both decentralization (getting staff closer to the resource, where the work needs to be done) and centralization (gaining efficiency by consolidating similar work into a smaller number of locations). At the same time, there is trend towards increasingly specialized functions, for example: refuge law enforcement, fire management, information technology, asset management, conservation biology, etc. In combination, these factors suggest that any long-term

organizational structure solutions for the Refuge System should include an intentional development of larger, field-based structures that facilitate both the consolidation and sharing of services across field stations as well as the appropriate distribution of operational and management functions, many of which are specialized, from the Regional Offices to the field. Such structures should give the Refuge System more flexibility at two levels - the more tactical, ground-level management and supervision level, as well as at the higher-level of strategic management and leadership. Ideally, the structures should not only meet the functional needs of the Refuge System but also clarify and enhance career pathways for all functional areas.

In order to maintain and improve organizational structures and ensure that the benefits of clear structures remain intact, the Refuge System should at a minimum establish a policy on standards for organizational structures. The policy could clarify many things, such as the standards required for maintaining consistent organizational structures between Regional Offices and Headquarters and standard criteria for establishing new or eliminating existing refuge complexes. A related recommendation would be to establish an official definition of the term “Project Leader.”

Finally, the Refuge System should also implement existing national standard position descriptions universally across regions and develop additional standard position descriptions for the remaining primary occupational series. Such an action would provide not only the workforce planning benefits of clarifying organizational structures, and facilitating career pathway advancements, but also eliminate the administrative burden of constantly re-classifying positions.

### **Recognizing Specialization in the Workforce**

The Refuge System should recognize the growth of specialized groups in the workforce. Multidisciplinary work is becoming less common as natural resource management becomes more scientific and expertise more focused. For example, more specialized positions in areas such as law enforcement, fire management, biology, and public use have replaced traditional positions. The Refuge System has at many times identified a need for more specialized scientists in areas such as climate change, hydrology, invasive species, etc. It has also identified a need for expertise in non-science areas such as environmental education, public-use planning, asset management, and business management. Effective strategies for recruiting and deploying these types of specialists should be a fundamental part of the Refuge System’s workforce planning efforts. Models already exist for recruiting specialist employees, such as the program National Marine Fisheries Service uses for recruiting specialists in the field of population dynamics. The Refuge System should also consider establishing topical “communities of practice” so that groups of specialists could share information, collectively analyze successes and failures, and gather occasionally to maintain functional networks. Such communities of practice could also help bridge knowledge gaps that are occurring as high numbers of employees are exiting the workforce through retirement.

## **Maintaining and Enhancing Biological Capacity**

The biological programs of the Service and the Refuge System are fundamental to wildlife conservation on refuges. There is an increasing demand for wildlife dependent recreation on refuges, while at the same time continuing environmental threats seem to be pushing the capacity of the biological programs beyond their limits. In addition, the growing complexity of conservation work is creating demands for new biological expertise on refuges to deal with issues such as climate change, hydrology and invasives. Data indicate that biological staffing on refuges may not be keeping pace with these added responsibilities. For example, the workforce profiles indicated a decrease of 34 positions (4%) within the Wildlife and Habitat Management function between 2001 and 2006. Because biological programs are at the core of the Refuge System's mission this trend should be monitored closely and steps taken to ensure capacity is not lost in this function.

A Career Pathways team was established for biological disciplines; however, the Team operated only to the point of drafting national standard position descriptions. Those positions need to be finalized and implemented System-wide, and the Team should be re-established to complete the additional career pathways products that similar teams have produced. Those products would include universal biological competencies, recommended training, recommended experiential learning opportunities, and other career guides.

## **Focus on Succession Planning and Leadership Development**

### **Developing Future Leaders**

A primary concern of the Refuge System is how to cultivate and develop future leaders. The Refuge System as a whole has relatively low retirement rates, which are expected to continue as a trend. However, the retirement eligibility rates within Refuge Leadership (approximately 14 percent in 2005) were high compared to the rest of Refuges (7.3 percent in 2005), and that pattern is expected to maintain and increase. This pattern is consistent across government and business as the Baby Boomer generation makes its way through the workforce. While leadership development has always been a priority for the Service and the Refuge System, the need for leadership development will only increase in the next few years.

The Refuge System's progress with leadership development over the past 10 years has been substantial. As an outcome of the 1999 *Fulfilling the Promise* report, The Leadership Development Council (LDC) was created to address all elements of *Promises* dealing with leadership and staffing. The LDC focused on three key areas: developing a Leadership Development policy chapter in the Service Manual (230 FW 7), establishing Career Pathways Teams, and recruitment and retention. The LDC's work in these areas was multi-faceted and clearly positioned the Refuge System in a much better place in terms of leadership development when compared to other agencies and conservation organizations. However, the crucial period for leadership change in the Refuge System lies in the near future, and additional efforts are needed to help bridge this period.

The Refuge System has an under-utilized tool for leadership development in its Leadership Development Policy Chapter (230 FW 7). This policy chapter outlines the core qualifications and specific competencies needed to serve in leadership positions and instructs employees on how to assess their knowledge, skills, and abilities so that they can more effectively target training and other developmental opportunities to develop leadership competencies. The application of this policy, especially application of the Leadership Effectiveness Checklist to all supervisors would be a substantial first step in improving leadership development.

In addition, the Service currently offers two very well-respected leadership development programs, *Stepping Up to Leadership (SUTL)* and the *Advanced Leadership Development Program (ALDP)*. While dozens of Refuge System employees have participated in both of these programs, Refuge System employees are under represented in these programs when compared to the percent of the Service-wide workforce that the Refuge System represents. This is especially true for the ALDP. The Refuge System should not only actively encourage employees to apply for these programs, it should also implement and track strategies for preparing employees to compete for these programs.

A related pattern exists in the representation of Refuge System employees in the Service Directorate. Very few members of the Directorate have worked on national wildlife refuges despite Refuge System employees constituting more than a third of the Service's workforce. Improving Refuge System representation in the Directorate will require not only increased participation in SUTL and ALDP, but also increased participation in the Department of Interior's Senior Executive Candidate Development Program (SESCDP). As with SUTL and ALDP, the Refuge System should implement and track strategies for preparing employees to compete for SESCO.

Because the majority of senior leaders in the Refuge System come from the 0485 Refuge Manager series, improvements in leadership development can also be accomplished by finalizing the work of the Refuge Managers Career Pathways Team. That Team, chartered in 2007, was tasked with developing three primary products:

- Descriptions of the competencies future refuge managers will need to successfully administer the Refuge System;
- Standard national position descriptions for the refuge manager discipline at all grade levels, ranging from entry to senior level; and
- Recommendations on appropriate training and career development for the refuge manager discipline.

Finalizing all of these products will aid leadership development across the Refuge System.

### **Managing Retention and Attrition Issues**

Recruitment and retention have been issues in a variety of Refuge System disciplines such as refuge management, biological, and visitor services. The LDC worked on several fronts to address recruitment. They piloted the Biological Sciences Intake Program as a recruitment tool for a variety of job series in the Refuge System. This pilot popularized the Environmental

Careers Organization as a tool for recruiting a diverse candidate pool. The LDC also worked to improve the Service's existing Student Cooperative Education Program (SCEP) to make it a more effective recruitment program. Recent changes in the SCEP and other recruitment programs have sought to simplify the recruitment and hiring processes so managers can more easily reach people with the skills and commitment necessary for a refuge career.

One new tool managers have at their disposal to quickly hire highly qualified candidates is the Career Intern Program (CIP). The CIP was established in 2000 as a way to attract exceptional individuals into the Federal service. Under this program, individuals are appointed to a special two-year internship, after which they may be eligible for noncompetitive conversion to a permanent position. The CIP is being used to fill a variety of Refuge System positions, including biological, law enforcement, and wage-grade.

To address retention, the LDC reviewed the effectiveness of the SCEP program to convert participants into career Service employees. They also sponsored a pilot project called the Biological Sciences Development Program (BSDP) which included an extensive Individual Development Plan for new employees in the biological sciences job family (GS-0400) with the goal of setting clear expectations for the employee's personal and professional growth, thereby increasing retention among employees in these positions. Despite these many tools, overall recruitment in the Refuge System has not kept pace with attrition, and this is especially visible in the Wildlife Biologist (0486) and Refuge Manager (0485) series.

Data show that the "Baby Boomer Bulge" is clearly passing through and out of the Refuge System workforce, and while that change allows career development for many employees, it also creates challenges in sustaining a capable workforce and bridging knowledge gaps. A comprehensive succession strategy, that includes a focus on employee retention, could provide many benefits for the Refuge System. Service-wide retention planning efforts have been broad in scope and focused on gathering information on workforce status. Such information aids succession planning by providing high-level data on where employee attrition is likely to occur, but additional steps need to be taken to actually implement strategies for managing attrition. The Refuge System should develop a comprehensive approach that systematically monitors employee attrition and delivers appropriate strategies to retain a capable workforce that possesses mission critical skills and inherits appropriate working knowledge from previous employees. A key element of this approach would be to annually update the workforce profiles.

Through the establishment of several Career Pathways teams including biology, refuge management, conservation planning, and visitor services, national standard position descriptions and competencies have been developed or are underway that will provide clear expectations for employees with specific professional goals. Several Career Pathways teams have developed recommended training and developmental experiences (e.g., on-the-job opportunities, stretch assignments, details) to guide employee development of both technical and supervisory competencies as well as their overall career development. The work of all these teams should be finalized and similar career pathways teams for other functions, like business management, realty, and facility and equipment management, should also be considered for establishment with the charge to develop similar products. Well-articulated roadmaps for all functions within the Refuge System should help bolster retention and career development for all employees.

## Assessing the Effectiveness of Current Workforce Management Tools

As the Refuge System considers all the recommendations in this report related to the strategic management of its workforce, it should also consider the effectiveness of the tactical workforce management tools it now has in place. The staffing models provided with this report have been incorporated into a current staffing analysis that is being conducted by a team of Refuge System staff. The results of that analysis should be current; however, such analyses/models should be run every two to three years to ensure managers have accurate information.

The cost analysis tool provided with this report is designed to assist managers in comparing the financial impact of various combinations of employees and thereby help managers quickly understand the impact of staffing decisions on program budgets. The cost analysis tool should be updated with annual and local information on salaries and benefits to ensure its accuracy.

In order to make valid decisions regarding workforce issues, the Refuge System should update the workforce profiles on an annual basis. This information will enable managers to have valid information on the types and locations of employees in the organization. Currently most of the information in the workforce profiles is mined from the Department's of Interior's Federal Payroll and Personnel System (FPPS). However, FPPS has no convention for tracking vacant positions, and that leads to inaccuracies in profile information. The Refuge System should consider establishing a convention for tracking vacancies in FPPS or establishing its own database of authorized positions which could make workforce information more accurate and accessible. Establishing an internal database of authorized positions could easily be combined with the effort to track refuge base budgets.

The Refuge System also has a current collection of workforce management tools in the form of standard position descriptions, and competency and career guides that are not collectively organized or made available to Refuge System staff in one place. The Refuge System should improve on this by developing a strategy for the distribution and education of staff on how to use these tools across the Refuge System. Establishing clear access to this information would result in better coordination with System-wide workforce management efforts.

## **V. Summary of Recommendations**

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This section summarizes recommended next steps to make the Refuge System more effective in addressing workforce challenges in the future.

### **Maintaining and Enhancing Effective Organizational Structures**

1. The Refuge System should at a minimum establish a policy on standards for organizational structures to clarify standards such as requirements for maintaining consistent organizational structures between Regional Offices and Headquarters and criteria for establishing new or eliminating existing refuge complexes.
2. The Refuge System should establish an official definition of the term “Project Leader.”
3. The Refuge System should implement existing national standard position descriptions universally across regions and develop additional standard position descriptions for the remaining primary occupational series.

### **Recognizing Specialization in the Workforce**

4. The Refuge System should recognize the growth of specialized groups in the workforce by implementing strategies to recruit and deploy specialists.
5. The Refuge System should establish “communities of practice” for specialist groups to facilitate information sharing and development of functional networks, and to help bridge knowledge gaps.

### **Maintaining and Enhancing Biological Capacity**

6. The Refuge System should re-establish the career pathways team for biological disciplines so it can complete the additional career pathways products that similar teams have produced, such as universal biological competencies, recommended training, recommended experiential learning opportunities, and other career guidance.

### **Focus on Succession Planning and Leadership Development**

7. The Refuge System should apply the Leadership Development Policy Chapter (230 FW 7), especially the of the Leadership Effectiveness Checklist, to all supervisors.
8. The Refuge System should implement and track strategies for preparing employees to compete for the Service’s leadership programs, Stepping Up to Leadership (SUTL) and the Advanced Leadership Development Program (ALDP).

9. The Refuge System should implement and track strategies for preparing employees to compete for Department of Interior's Senior Executive Candidate Development Program (SESCDP).
10. The Refuge System should develop a comprehensive approach to succession planning that systematically monitors employee attrition and delivers appropriate strategies to retain a capable workforce that possesses mission critical skills and inherits appropriate working knowledge from previous employees. To provide input to this approach, the Refuge System should update the workforce profiles on an annual basis.
11. The Refuge System should finalize the work of the existing career pathways teams and establish similar career pathways teams for other functions, like business management, realty, and facility and equipment management.

#### **Assessing the Effectiveness of Current Workforce Management Tools**

12. The Refuge System should consider establishing a tracking system for vacancies in Department's of Interior's Federal Payroll and Personnel System (FPPS), or establishing a database of authorized positions to ensure that workforce information is accurate and accessible.
13. The Refuge System should develop a strategy for the distribution to and education of staff on how to use workforce management tools such as standard position descriptions, competency and career guides.

## **VI. List of Appendices**

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- A. Scoping Report: *Refuges Scoping Effort: Review of Issues and Future Directions*, July 12, 2004.
- B. External Benchmarking Analysis, 2005
- C. Workforce Profiles, July 25, 2006
- D. Staffing Models: *Workload Measures and Module Deployment Patterns for the National Wildlife Refuge System*
- E. Cost Analysis Tool

## VII. References

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