

**DEPARTMENT OF COMMERCE
PERSONNEL MANAGEMENT
DEMONSTRATION PROJECT
EVALUATION
YEAR TWO REPORT**



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EXECUTIVE SUMMARY

This report presents Booz·Allen & Hamilton's assessment of Year Two of the Department of Commerce Personnel Management Demonstration Project. This Executive Summary provides an overview of the purpose of the Demonstration Project, the status of implementing the personnel innovations, and recommendations for actions needed to continue operating the Demonstration Project so that it successfully meets its objectives.

1. This report provides an assessment of Year Two of the Department of Commerce's (DoC's) five-year Personnel Management Demonstration Project, which is designed to test and evaluate a series of alternative personnel practices.

The DoC Personnel Management Demonstration Project (hereafter referred to as the Demonstration Project) was initiated in March 1998 to determine whether alternative personnel practices are more successful in helping to achieve agency goals than traditional personnel practices. Based on the success of these interventions during the five-year Demonstration Project, it will be determined whether any or all of the interventions can be implemented elsewhere within DoC as well as government-wide.

The Office of Personnel Management (OPM) clearly defines processes for evaluating federally-funded Demonstration Projects. Following OPM guidelines, formal assessment reports are submitted by the evaluators at specified time intervals over the course of a demonstration project. As the evaluator of the DoC's Demonstration Project, Booz·Allen and Hamilton submitted an Implementation Year Report that assessed the initial implementation and operation of the Demonstration Project through the first twelve months of the project. This report represents our assessment of Year Two of the Demonstration Project. It is designed to serve as a mid-course check on the actions taken related to Demonstration Project interventions.

2. The Year Two report focuses exclusively on analyses of objective data. Where appropriate, comparisons are made between the Demonstration and Comparison Groups and across time from Year One to Year Two.

By design, the Year Two Report relies solely on objective personnel data, specifically data pertaining to performance, compensation, and demographics for the time period April 1999 to March 2000 for both the Demonstration Group and the Comparison Group. For this report, Booz·Allen conducted a series of analyses of these objective data in order to identify the state of the personnel interventions during the second year of the Demonstration Project.

Wherever possible, comparisons were drawn between the Demonstration and Comparison Groups as a means of assessing the degree to which the interventions appear to be having an impact on Demonstration Group participants relative to the experiences of the Comparison Group participants. Similarly, where feasible, analyses were conducted to show the trends that are occurring across time in regards to the impact of the interventions. Given that only

two data points are available in Year Two (Year One and Year Two), these trend analyses will be more informative in future years when additional data points can be added.

3. Analyses of the Demonstration Project's Year Two data revealed progress in the use of recruitment and retention interventions, continuing institutionalization of a pay-for-performance system, and the absence of differential treatment based on race, gender, or veteran status.

The Year Two data analyses focused specifically on the recruitment interventions, retention interventions, individual performance, and support for EEO and diversity. Overall, the data findings suggest that there has been progress in regards to the use of and success of some of the interventions available under the Demonstration Project. In subsequent years, it is expected that interventions will be used more fully and that additional analyses can be performed to determine the success of the interventions.

3.1 The Demonstration Project experienced increased use of some of the recruitment interventions in Year Two, though some are still not fully utilized.

During Year One, many of the hiring interventions available as part of the Demonstration Project were only minimally utilized. During Year Two, DoC appeared to be making greater use of the hiring interventions. For example:

- The proportion of candidates brought in through agency-based staffing versus merit assignment was slightly higher for the Demonstration Group compared to the Comparison Group, and higher in Year Two than in Year One.
- However, the acceptance rate for candidates brought in through agency-based staffing was lower for the Demonstration Group (79%) than the Comparison Group (87%).
- Managers in the Demonstration Group used a wider range of salaries for new hires, compared to managers in the Comparison Group.
- Recruitment payments were used more frequently in Year Two than Year One (seven candidates received recruitment payments compared to three in the previous year); however, overall, use of recruitment payments as a hiring incentive remains limited.

3.2 In Year Two, the Demonstration Group experienced higher turnover than the Comparison Group did; however, several of the retention interventions do appear to be having positive outcomes.

The series of retention interventions available to the Demonstration Project have the potential to motivate and retain high performing employees. Although several of these initiatives have been implemented, their effectiveness is still unclear. The Demonstration Group experienced a higher turnover rate than did the Comparison Group, and desirable differences in turnover

based upon performance level were not apparent (i.e., high performers turned over at the same rate as other level performers).

Several initiatives were associated with outcomes that were in the expected direction: performance-based pay increases were higher for those who remained in the organization compared with those who left, turnover was lower among supervisors receiving supervisory performance pay, and Demonstration Group participants received higher pay increases upon promotion than did their counterparts in the Comparison Group.

3.3 The objective data indicate that there continues to be a positive link between pay and performance in Year Two of the Demonstration Project.

Consistent with Year One of the Demonstration Project, Year Two objective data indicate that, to a certain degree, financial rewards are tied to performance. Once again, statistics reveal a positive relationship between job performance (measured through performance appraisal rating scores) and both pay increases ($r = .52, p < .01$; Year One data resulted in $r = .54, p < .001$) and performance bonuses ($r = .41, p < .01$; Year One data resulted in $r = .46, p < .001$). These findings for Year One and Year Two are very similar, suggesting that the performance-pay increase link has been sustained in the Demonstration Project.

3.4 The Demonstration Project interventions continue to reflect a system in which there is no evidence of unfair treatment based on race, gender, and veteran status.

As in Year One, the objective data indicate that the Demonstration Project's pay for performance system had no differential effect based on race, gender, or veteran status. Pay interventions appear to be more closely linked to performance level than to demographics. Moreover, as was found in Year One, in Year Two similar patterns emerge in the Demonstration Group versus the Comparison Group as to how members of different protected classes fare in terms of average performance-based pay increases or bonuses.

In Year Two, the Demonstration Group has attracted a slightly higher proportion of women, minorities, and veterans than are currently represented in its population. These data suggest that the Demonstration Project interventions are not detracting from the DoC's ability to diversify its employee population.

4. DoC needs to take additional actions to more fully use the personnel interventions and to ensure that accurate data are maintained so that interventions can be effectively evaluated.

The recommendations resulting from the Year Two analyses focus on refining the implementation of certain interventions and on ensuring data quality.

4.1 Several of the personnel interventions could be more fully utilized or clarified.

While the Demonstration Project provides DoC with the opportunity to test a series of personnel interventions and assess their effectiveness, certain interventions (such as recruitment payments, retention payments, and the 3-year probationary period for research and development positions) have not yet been fully utilized. DoC is encouraged to increase the usage of these interventions if their effectiveness is to be assessed under this Demonstration Project.

There continues to be mixed or limited findings regarding the supervisory performance pay intervention. Greater clarity is needed regarding the intended objectives of this initiative as well as the data that need to be maintained in order to assess its effectiveness.

4.2 Careful attention needs to be paid to data management to ensure the quality of data and data analyses.

Because the analyses for the Year Two Report relied solely on objective data, the accessibility to and quality of data were paramount to the success of the evaluation. Although the Demonstration Project has been successful in managing a complex database with a large quantity of data, improvements could be made in the management of data. Doing so could help to ensure data quality and make data analysis processes more efficient.

1. INTRODUCTION

This chapter presents a brief background on the Department of Commerce's (DoC's) Personnel Management Demonstration Project as well as the purpose and structure of this report.

1.1. DoC is currently conducting a five-year Demonstration Project to test and evaluate a series of alternative personnel practices and to determine their applicability elsewhere.

DoC initiated a Personnel Management Demonstration Project (hereafter referred to as the Demonstration Project) in March 1998 as a means of testing and evaluating a series of personnel interventions. This effort was undertaken to determine whether alternative personnel practices are more successful in helping to achieve agency goals than traditional personnel practices. Based on the success of these interventions during the five-year Demonstration Project, it will be determined whether any or all of the interventions can be implemented elsewhere within DoC as well as government-wide.

The Office of Personnel Management (OPM) clearly defines processes for evaluating federally-funded Demonstration Projects. Following OPM guidelines, formal assessment reports are submitted by the evaluators at specified time intervals over the course of a demonstration project. As the evaluator of the DoC's Demonstration Project, Booz·Allen and Hamilton submitted an Implementation Year Report that assessed the initial implementation and operation of the Demonstration Project through the first twelve months of the project.

1.2. This report provides an assessment of Year Two of the DoC Personnel Management Demonstration Project.

This report is designed to serve as a mid-course check on the actions taken related to Demonstration Project interventions. While it is still too early in the Demonstration Project to assess its impact on organizational performance, the pay-for-performance actions taken during the second operating year (April 1999-March 2000) can be presented. The intended audience for this report is DoC managers who may benefit from keeping abreast of the current state of the Demonstration Project and who may be interested in beginning to track trends as the personnel interventions take effect. DoC can use the report to provide an update to OPM on the impact the Demonstration Project is having on equal employment opportunity, veterans, Merit Systems Principles, and Prohibited Personnel Practices.

This update report is limited to objective data on performance ratings and salary and bonus actions, along with data on hiring actions. As planned, it does not include the subjective data sources (e.g., survey, focus groups) that were used to prepare the Implementation Report.

In this report, we:

- Present results of the second performance year (performance ratings, pay-for-performance increases, and bonuses)
- Present usage of recruitment and retention payments
- Analyze results by protected class
- Compare Demonstration and Comparison Group results, where appropriate
- Compare first and second year performance results, where informative.

1.3. The structure of this report parallels the Implementation Year Report; it presents each personnel intervention and then recommends actions for continued operation.

This Year Two Report represents the second in a series of five that Booz·Allen will prepare assessing the Demonstration Project (in future years Booz·Allen will be submitting another update report, an Interim Report, and a Summative Report). Subsequent reports will build on data and findings from previous reports and will permit trend analyses over the course of the five years. To facilitate cross-comparisons of reports by the regular reader, this and subsequent reports will follow a similar structure. This report contains the following chapters.

Chapter 2, “Data Collection and Analyses,” contains information on the objective data used in this assessment and the analyses conducted.

Chapter 3, “Findings and Conclusions,” focuses on the major interventions that are being tested during the Demonstration Project. One section is dedicated to each set of interventions. Each conclusion is explained and then followed by “Findings” statements, which are supported by the objective data. Data are often presented in table format to facilitate understanding.

Chapter 4, “Recommendations,” contains recommendations for the interventions, as appropriate. We also provide general recommendations that may not pertain to a specific intervention, but address organizational issues that affect the Demonstration Project.

The Appendix accompanying this report contains statistical analyses of the linkage between pay and performance.

2. DATA COLLECTION AND ANALYSES

This chapter presents information on the data that were collected for the Year Two Report. We also address the types of analyses and statistics that were employed in order to address the overarching research questions.

2.1. We used objective personnel data to measure the impact of the Demonstration Project's interventions.

For the Year Two Report, Booz·Allen collected and analyzed objective data contained in NFC's Payroll/ Personnel System and the Demonstration Project's Performance Payout System (PPS).¹ We collected personnel data pertaining to performance, compensation, and demographics for the time period April 1999 to March 2000 for both the Demonstration Group and the Comparison Group². Table 2-1 shows the objective data elements that were included in the analyses. For some records, the data file did not contain complete information (e.g., supervisory status was not indicated). For each individual analysis, we included only those records where the relevant data were complete; therefore the number of cases is different in different analyses. In addition to the data contained within the databases, we also obtained data from the participating organizations on the use of agency-based staffing, merit assignment, and time taken to fill vacant positions.

In addition, we collected some data from DoC that we have not presented in this report, but will in future reports. For example, DoC provided the number of classification actions and average amount of time needed to classify a position. Since the Demonstration Project's research questions will be answered at the end of the five year demonstration, we wanted to ensure that we captured relevant data each year, even though it would be used only in future reports.

¹ The majority of the analyses that appear in this report are based on the 2,740 records of current Demonstration Group participants for whom matches between the Central Personnel Data File and the PPS data set were achieved. A small number of records (about 3%) could not be matched. A list of these records has been provided to DoC to be researched and any data management issues addressed.

² The organizations participating in the **Demonstration Group** are: the Technology Administration's Office of the Under Secretary and Office of Technology Policy; the Economics and Statistics Administration's Bureau of Economic Analysis; the National Telecommunications and Information Administration's Institute for Telecommunication Sciences; and units of the National Oceanic and Atmospheric Administration's Office of Oceanic and Atmospheric Research, National Environmental Satellite, Data, and Information Service, and National Marine Fisheries Service. The organizations participating in the **Comparison Group** are: the National Oceanic and Atmospheric Administration's Office of Oceanic and Atmospheric Research and Environmental Research Laboratories, National Environmental Satellite, Data, and Information Service, and National Marine Fisheries Service, as well Headquarters of the Economics and Statistics Administration.

Table 2-1. Objective Data Elements

Objective Data Elements	
<ul style="list-style-type: none"> • Social Security Number • Gender • Race • Birth date • Veteran status • Education • Organization/Unit • Occupational series • Hire date (starting date with DoC unit) • Date entered Demonstration Project (Demonstration Group) • Career path (equivalent for Comparison Group) • Pay band (equivalent for Comparison Group) • Interval (equivalent for Comparison Group) • Supervisory status (supervisory employee/ non-supervisory employee) • Base pay/Salary as of 11/30/99 (Demonstration Group) • Base pay/Salary as of 4/1/00 (Comparison Group) • Eligibility for performance rating in Year Two (Demonstration Group) 	<ul style="list-style-type: none"> • Performance appraisal score (rating) • Performance-based pay increase (Demonstration Group) • Step increase (Comparison Group) • Quality step increase (Comparison Group) • Increase for promotion to grade within band (Comparison Group) • Performance bonus date (month and year) • Performance bonus amount • Retention payment amount • Recruitment payment amount • Eligible for 3-year probation • Probation begin date • Probation end date • Promotion during Year Two • Promotion date • Pay band after promotion (equivalent for Comparison Group) • Interval after promotion (equivalent for Comparison Group) • Salary increase at promotion • Salary after promotion • Switched paths during Year Two

For this report, the objective dataset was used most often to generate descriptive data, such as frequencies and crosstabulations. These data provide aggregate profiles of the individuals in the Demonstration and Comparison Groups. For the Demonstration Group, the objective data also indicate the proportion of employees who received “eligible” performance scores and the proportion who received pay for performance increases and performance bonuses. For these data, correlation analysis was used to draw a statistical link between elements of the Demonstration Project and performance outcomes.

It should be noted that the analyses of pay for performance use the performance-based pay increases; pay increases associated with the Annual Comparability Increase (ACI) and increases in locality pay are in addition to the performance-based increase.

2.2. Both descriptive and inferential statistics were used to analyze the Demonstration Project's objective data.

The data that appear in this report include both descriptive and inferential statistics. Descriptive data are used to present facts about performance ratings, pay increases, and bonuses. These statistics include frequencies, crosstabulations, means, medians, and correlations. Inferential statistics are used to test differences in mean pay increases and bonuses across different groups of employees, such as high and low performing employees. Inferential statistics are also used to test differences in mean performance payouts to members of protected classes (minorities, females, and veterans). The specific inferential statistics used are ANOVA (analysis of variance—used to test differences in means) and

ANCOVA (analysis of covariance—used to test differences in means while controlling for other factors). See the Appendix for a full description of the ANCOVA process and results as they relate to protected classes.

2.3. Comparisons were drawn between the Demonstration Group and the Comparison Group in order to examine the impact of the Demonstration Project's interventions.

Many of the analyses in this report compare personnel data from the Demonstration Group to personnel data from the Comparison Group. Table 2-2 indicates the number of participants in each group and provides basic demographic data, such as gender, race, supervisory status, career path, etc.³ These demographic data illustrate the general similarity in the demographic characteristics of participants in the Demonstration and Comparison Groups, which is important for establishing the validity of the Comparison Group used in this evaluation. While participants are very similar in terms of gender, race/ethnicity, and supervisory status, they are less similar in terms of career path and pay band. This will be addressed in the report in any cases where this difference between the Demonstration and Comparison Groups impacts how findings are interpreted.

³ *In order to compare the two groups, career path and pay band equivalents are provided for the Comparison Group participants.*

Table 2-2. Demographic Characteristics of Demonstration and Comparison Group Participants

	Demonstration Group Participants	Comparison Group Participants
OVERALL	2,740	1,928
GENDER		
Male	1651 (60%)	1186 (62%)
Female	1089 (40%)	742 (39%)
RACE/ETHNICITY		
White	2220 (81%)	1696 (88%)
Black	313 (11%)	90 (5%)
Asian	118 (4%)	93 (5%)
Native American	9 (.3%)	7 (.4%)
Hispanic	80 (3%)	42 (2%)
SUPERVISORY STATUS*		
Non-Supervisory Employee	2404 (91%)	1779 (92%)
Supervisory Employee	239 (9%)	149 (8%)
CAREER PATH** <i>(equivalent)</i>		
ZP	1630 (63%)	1250 (65%)
ZT	180 (7%)	309 (16%)
ZA	450 (17%)	184 (10%)
ZS	362 (14%)	182 (9%)
PAY BAND** <i>(equivalent)</i>		
I	41 (1%)	77 (4%)
II	310 (11%)	460 (24%)
III	886 (35%)	733 (38%)
IV	1136 (43%)	560 (29%)
V	249 (10%)	95 (5%)

* Supervisory status was missing for 97 Demonstration Group participants

** Path and Band were missing for 118 Demonstration Group participants and 3 Comparison Group participants

2.4. Analyses were also conducted comparing Year Two data with Year One data, to begin tracking the impact of the interventions over time.

Where possible, we conducted analyses that compare personnel data in the Demonstration and Comparison Groups from Year Two with Year One data. These analyses begin to show the trends that are occurring across time in regards to how the interventions are impacting the Demonstration Project. Given that only two data points are available in Year Two, these trend analyses will be more informative in future years when additional data points can be added.

3. FINDINGS AND CONCLUSIONS

This chapter presents Booz·Allen's conclusions concerning the results that DoC has achieved after two years of implementing its Personnel Management Demonstration Project. In this report, each conclusion is supported by findings from the objective data obtained from DoC.

3.1. DoC is now making greater use of the hiring interventions available as part of the Demonstration Project, such as agency-based staffing, flexible starting salaries, and recruitment payments.

During Year One of the Demonstration Project, many of the hiring interventions were only minimally utilized. During Year Two, some of these hiring interventions were used to a greater extent, such as agency-based staffing, flexible starting salaries, and recruitment payments. However, these interventions are still limited in use, thereby restricting the analyses that can be performed to determine their effectiveness. As the Demonstration Project continues to utilize these interventions, more information can be gathered to examine the degree to which these interventions enhance the ability to attract, recruit, and select high performing individuals.

3.1.1. The proportion of candidates brought in through agency-based staffing versus merit assignment was slightly higher for the Demonstration Group compared to the Comparison Group.

Based on data provided by the participating organizations on the use of various methods for hiring, the Demonstration Group used agency-based staffing for 239 candidates and merit assignment for 228 candidates, indicating a slightly higher use of agency-based staffing. In contrast, the Comparison Group used agency-based staffing for 55 candidates and merit assignment for 66 candidates, suggesting a slightly lower use of agency-based staffing.

This finding suggests an increased awareness of agency-based staffing as a recruiting intervention. During Year One, supervisory employees reported having little knowledge of the use of agency-based staffing as an recruiting intervention. In contrast, during Year Two, participating organizations reported using this method of hiring for a substantial number of their candidates.

3.1.2. However, the Demonstration Group is not experiencing the same of rate of success with agency-based staffing as is the Comparison Group.

Although the Demonstration Group's use of agency-based staffing versus merit assignment is proportionately greater than the Comparison Group's, the Demonstration Group is having less success with this method of hiring. The Demonstration Group experienced a 79% success rate (number of initial acceptances as a percentage of the number of initial offers extended), whereas the Comparison Group experienced an 87% success rate. Among the Demonstration Group's participating organizations, success rates ranged from 68% for NESDIS to 100% for TA (excluding ITS, which had no new hires). These success rates will

be tracked over the life of the Demonstration Project to identify whether there are improvements over time.

3.1.3. The Demonstration Project has not yet used Direct Examination as a hiring intervention.

There are two Direct Examination authorities under the Demonstration Project: one is for critical shortage occupations and the other is for critical shortage highly qualified candidates. To date, no critical shortage occupations have been identified under the Demonstration Project.

3.1.4. Managers in the Demonstration Group used a wider range of salaries for new hires, compared to managers in the Comparison Group.

Managers in the Demonstration Group used a wider range of salaries for new hires than in the Comparison Group. Starting salaries were compared by separating new hires by path and by band (or their equivalents for Comparison Group members). Out of 14 possible comparisons in starting salaries (categories in which both the Demonstration and Comparison Groups had new hires), the range of salaries was wider in the Demonstration Group in 9 of them (64%). In addition, where the Demonstration Group salary range was wider, the difference with the Comparison Group tended to be larger than cases where the Comparison Group had a wider salary range. These points are illustrated in Table 3-1. The wider ranges in starting salaries appear in bold. It should be noted that locality pay differentials have not been accounted for in calculating these ranges, though they contribute to the size of the ranges in starting salaries.

Table 3-1. Comparisons of Starting Salary Ranges Among New Hires in the Demonstration and Comparison Groups

	Demonstration Group		Comparison Group	
	Number of New Hires*	Size of Range of Starting Salaries	Number of New Hires	Size of Range of Starting Salaries
ZA				
Band 1	1	\$0	1	\$0
Band 2	16	\$16492	2	\$1817
Band 3	8	\$23000	2	\$12894
Band 4	7	\$18171	6	\$16401
Band 5	2	\$10754	0	\$0
ZP				
Band 1	2	\$7372	5	\$5902
Band 2	24	\$20059	56	\$12214
Band 3	37	\$25927	31	\$22351
Band 4	31	\$31657	10	\$35752
Band 5	5	\$21505	0	\$0
ZS				
Band 1	10	\$6513	3	\$4008
Band 2	13	\$5106	5	\$23938
Band 3	10	\$10656	11	\$11695
Band 4	6	\$10585	4	\$2592
Band 5	3	\$6278	0	\$0
ZT				
Band 1	11	\$8814	25	\$6983
Band 2	2	\$7526	32	\$9704
Band 3	2	\$8063	3	\$9849
Band 4	2	\$5858	0	\$0
Band 5	0	\$0	0	\$0

* The number of cases used in this analysis is based on the number of new hires for whom starting salary, career path, and pay band data were available (i.e., 192 out of 313 new hires)

3.1.5. During Year Two, the Demonstration Project did not use the intervention that provides a 3-year probationary period program for scientists and engineers hired into research and development positions.

During Year Two, the Demonstration Project organizations reported that no scientists and engineers were hired into research and development positions under the new, extended (3-year) probationary period intervention. Since this intervention is not being used, its effectiveness cannot be evaluated.

3.1.6. In the Demonstration Group, it appears that managers are using recruitment payments as a tool to attract employees, but to a very limited extent.

In Year One, three new hires to the Demonstration Group received recruitment payments. In Year Two, seven new hires received such an incentive (with an average recruitment payment of \$3,000). Although this shows improvement from Year One to Year Two, the use of recruitment payments as a hiring incentive remains infrequent. With so few new hires

having received such payments to date (and some not eligible for a performance rating in Year Two), it is premature to determine the degree to which recruitment payments serve as an effective tool for attracting employees.

3.2. The impact of retention interventions remains unclear. While several interventions appear to be associated with positive outcomes, it also is evident that the Demonstration Group experienced a higher turnover rate than did the Comparison Group.

The series of retention interventions available to the Demonstration Project have the potential to motivate and retain high performing employees. Although several of these initiatives have been implemented, their effectiveness is still unclear. The Demonstration Group experienced a higher turnover rate than did the Comparison Group, and there were no apparent differences in turnover based upon performance level (i.e., high performers turned over at the same rate as other level performers).

Several initiatives were associated with positive outcomes: performance-based pay increases were higher for those who remained in the organization compared with those who left, turnover was lower among supervisors receiving supervisory performance pay, and Demonstration Group participants received higher pay increases upon promotion than did their counterparts in the Comparison Group.

3.2.1. Turnover is somewhat higher in the Demonstration Group than in the Comparison Group; however, turnover remained constant in the Demonstration Group from Year One to Year Two.

During Year Two, turnover was somewhat higher in the Demonstration Group (13%) than in the Comparison Group (10%). The turnover rate was calculated as the number of employees who retired, resigned, terminated, or otherwise separated from their agency divided by the total number of Demonstration or Comparison Group participants. Table 3-2 displays these results.

Table 3-2. Turnover Rates by Group

GROUP	TURNOVER RATE
Demonstration Group	13%
Comparison Group	10%

Turnover appears to be somewhat higher in the Demonstration Group than in the Comparison Group. However, the absence of baseline turnover data does not allow us to determine whether these turnover rates are related to Demonstration interventions or are consistent with turnover rates prior to the Demonstration Project. This 13% turnover rate was the same in Year 1 for the Demonstration Group.

3.2.2. In the Demonstration Group, employees with the lower performance ratings had the highest turnover.

One goal of the Demonstration Project is to retain higher performing employees. Ultimately, it is hoped that lower performing employees will account for a relatively greater share of employees who leave the organization than higher performing employees. During Year Two, the turnover rate among all Demonstration Group participants for whom performance ratings were available was 10% (this figure is lower than the 13% because some employees left DoC prior to receiving a Year 2 performance rating).

Dividing these separated employees into groups of performance ratings shows turnover rates were similar (9-11%) across these groups, except for those who received 50-59 points (Table 3-3).

Table 3-3. Demonstration Group Turnover Rates by Level of Performance

PERFORMANCE RATING	NUMBER OF EMPLOYEES*	TURNOVER RATE
All Ratings	2275	10%
90-100	748	10%
80-89	923	9%
70-79	468	11%
60-69	105	9%
50-59	34	18%
40-49	1	0%

** Participants with Valid Performance Ratings in Year 2.*

It is encouraging to see that turnover was high among some of the lowest performers, those scoring between 50-59 points (18%).

Under the pay for performance system, better performers receive higher percentage pay increases. Conversely, lower performers are more likely to receive a low increase or none at all. Table 3-4 shows that there was a consistent inverse relationship between performance score category and the proportion of employees who received no salary increase. The lack of a salary increase should encourage low performers to leave the organization, particularly over time. Similarly, Table 3-5 shows a consistent inverse relationship between performance score category and average performance-based pay increase percentages.

Table 3-4. Performance Category and Demonstration Group Participants Receiving No Performance-Based Pay Increases

PERFORMANCE CATEGORY	NUMBER OF EMPLOYEES	NUMBER OF EMPLOYEES WITH NO SALARY INCREASE	PERCENT RECEIVING NO SALARY INCREASE
90-100	748	34	5%
80-89	923	61	7%
70-79	468	51	11%
60-69	105	48	46%
50-59	34	21	62%
40-49	1	1	100%

Table 3-5. Performance Category and Performance-Based Pay Increases

PERFORMANCE CATEGORY	NUMBER OF EMPLOYEES	AVERAGE PAY INCREASE PERCENT
90-100	748	3.9%
80-89	923	2.9%
70-79	468	1.7%
60-69	105	0.9%
50-59	34	0.5%
40-49	1	0.0%

3.2.3. Among Demonstration Group participants, performance-based pay increases for individuals who left the organization tended to be lower than those of individuals who remained. There was no difference in bonus levels or total awards (performance-based pay increase plus bonus).

Average pay increases among leavers (2.6%) were lower than for stayers (2.9%). However, this is not conclusive evidence that the Demonstration Project’s retention interventions are having an impact on turnover. As discussed in the preceding section, in Year Two the distribution of high, medium, and low performers among stayers and leavers was similar. Given this, although the average pay increase among leavers was lower, the turnover data do not show that this is due to low performers leaving in higher proportions. In the future, if participants leaving the organization are lower performers and receive lower average pay increases, this would confirm that DoC’s retention interventions are being effective.

While there was a difference in average pay increases between leavers and stayers, this difference did not appear for average bonus awards. This may reflect the fact that there is less of a direct relationship between bonuses and performance ratings, since managers have more discretion in determining the relative size of bonuses. Average pay increases, bonuses, and total awards (increases and bonuses) expressed as a percent of salary appear in Table 3-6. Dollar figures for average pay increases and bonuses appear in Table 3-7.

Table 3-6. Average Increases, Bonuses, and Total Awards as a Percent of Salary

Type of Award	Average Award (as a % of salary)
Pay Increase*	
Stayers	2.9%
Leavers	2.6%
Bonus	
Stayers	1.6%
Leavers	1.7%
Total Awards	
Stayers	4.5%
Leavers	4.3%

* Difference was statistically significant at the P≤.05 level.

Table 3-7. Average Increases and Bonuses (in Dollars)

Type of Award	Average Award
Pay Increase*	
Stayers	\$1626
Leavers	\$1410
Bonus	
Stayers	\$934
Leavers	\$946

* Difference was statistically significant at the P≤.01 level.

3.2.4. In the Demonstration Group, retention payments have not been used as a tool to retain employees in critical skill areas.

As in Year One of the Demonstration Project, during Year Two no employees received retention payments. Retention payments are an intervention that has been proposed as a tool for retaining high performing employees, especially those with expertise in critical skill areas. However, until this intervention is utilized, it is not possible to assess the effectiveness of these payments as a retention tool.

3.2.5. Within the Demonstration Group, the supervisory performance pay intervention continued to be used at a similar rate in Year Two as in Year One.

The supervisory performance pay intervention is intended to facilitate paying supervisors at more competitive levels, thus improving retention. During Year Two, 44 supervisors received salary increases that placed them above the maximum of pay for the pay band and into the pay interval designated as supervisory performance pay. This is similar to the number of supervisors who received supervisory performance pay in Year One (49).

3.2.6. Turnover was lower among Demonstration Group supervisors who received supervisory performance pay compared to those who did not.

In general, turnover among supervisors was similar to all Demonstration Group participants, at 13%. This was higher than the turnover rates for both Comparison Group supervisors and all Comparison Group participants. The turnover rate for Demonstration Group supervisors was the same in Year 1 (13%).

However, turnover was lower among Demonstration Group supervisors who received supervisory performance pay compared with all other Demonstration Group supervisors. This suggests that the Demonstration Group was more successful in retaining its most senior and highest paid supervisors than other supervisors (see Table 3-8). Among these supervisors receiving supervisory performance pay, turnover was similar to that of supervisors in the Comparison Group (7% for both). Turnover among supervisors receiving supervisory performance pay was similar in Year 1 (6%) as in Year 2 (7%).

Table 3-8. Turnover Among Supervisors

Group	Overall Number	Turnover Rate *
Demonstration Group*		
All Employees	2740	13%
All Supervisors	218	13%
Supervisors Receiving Supervisory Performance Pay	44	7%
Comparison Group *		
All Employees	1928	10%
Supervisors Only	149	7%

* Number of employees who left divided by the total number of employees

3.2.7. Employees in the Demonstration Group received higher median pay increases upon promotion than did employees in the Comparison Group, suggesting that Demonstration Group managers may be using greater flexibility in setting pay.

In Year Two, median pay increases upon promotion were slightly higher in the Demonstration Group (\$5,146) than in the Comparison Group (\$4,354). These comparisons were based on only those employees whose promotion moved them to a higher pay band (or, in the case of the Comparison Group, the equivalent of a higher pay band).

Higher median pay increases at promotion in the Demonstration Group may be attributable to the greater discretion available to managers. This ability to give higher promotion increases is potentially an important retention tool. Comparisons in future years will help determine whether Demonstration Group managers take greater advantage of this flexibility as they gain experience with the variety of retention tools available to them.

3.3. The pay for performance system continues to exhibit a positive link between pay and performance.

Consistent with Year One of the Demonstration Project, Year Two objective data indicate that, to a certain degree, financial rewards are tied to performance. Both performance-based pay increases and bonuses continue to correlate moderately with performance ratings among Demonstration Group participants. Additionally, the objective data suggest that Demonstration Group participants, consistent with Year One, receive higher average percent salary increases and larger bonus percentages than do their counterparts in the Comparison Group.

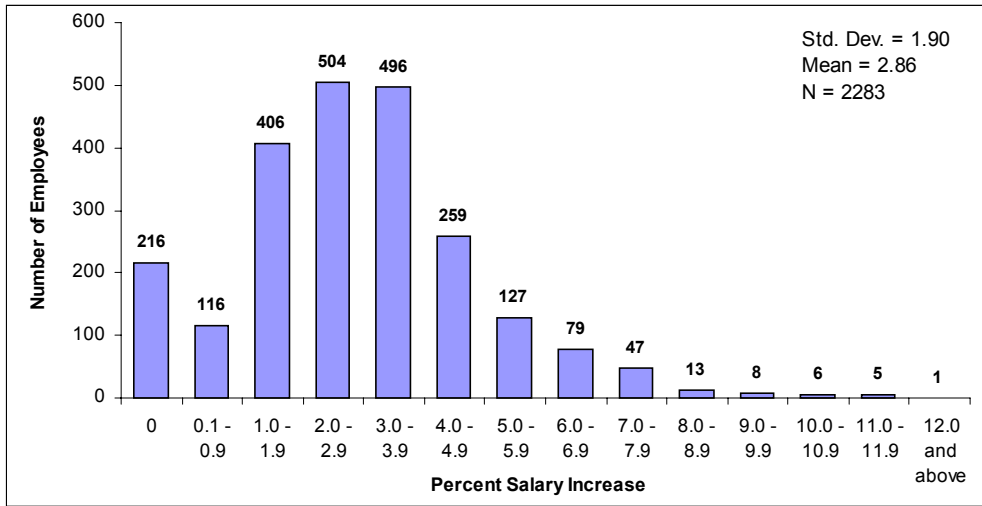
The degree to which recruitment payments or retention payments are associated with higher performance levels cannot yet be determined given the small number of individuals receiving such payments.

3.3.1. On average, Demonstration Group participants received higher salary increases than did Comparison Group participants.

In Year Two, objective data show that Demonstration Group employees received salary increases ranging from 0.0% to 12.6% based on performance. The range of percent salary increases for Demonstration Group employees is shown in Figure 1. There were 412 employees who were either ineligible to receive a performance rating or for whom performance rating data were missing, and therefore were not included in these analyses. (Ineligibility includes people who were hired or promoted within 120 days prior to the end of the performance year, employees on performance improvement plans, and individuals in other employment categories not eligible to be rated (e.g., students).)

Figure 1 indicates that the average increase was 2.9%, that over three-quarters received increases of less than 4%, and that almost 10% did not receive a salary increase even though they received performance ratings. The figure also shows that the percent salary increases given to employees spanned a wide range (0.0-12.6%). The fact that almost 7% of Demonstration Group employees received percent salary increases of 6% or above (together with the finding that percent increases were directly related to performance scores) indicates that DoC managers are taking advantage of their flexibility to award higher percentage increases to higher performing employees. This 7% represents a clear distinction of the relatively higher performing employees; if the percentage were higher, this distinction would be less clear.

Figure 1. Range of Percent Salary Increases for Demonstration Group Employees



During Year Two, 216 employees were eligible to receive a salary increase but were not awarded one. Among middle and high performers who received no salary increase, this is most likely a consequence of their being at the top of their pay band. Among low performers who received no salary increase, this is likely driven by performance levels.

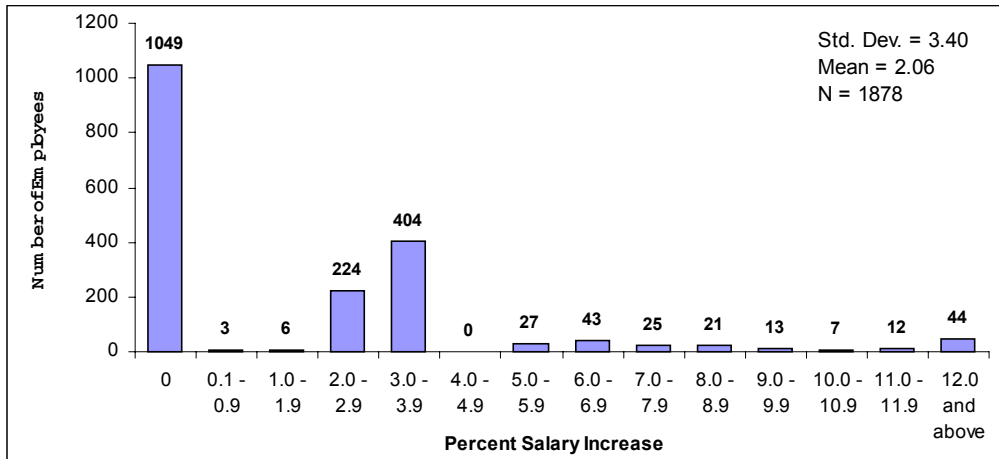
For the Comparison Group, we identified the following categories of increases that would be comparable to the performance-based increases in the Demonstration Group:

- Step increase
- Quality step increase
- Increase due to promotion to a grade within the equivalent pay band in the Demonstration Group.

The distribution of percent salary increases for the Comparison Group is shown in Figure 2. Similar to the Demonstration Group, employees who were recent hires and not eligible for a step increase during this time period were not included in the analysis.

While percent increases in salary in the Comparison Group are not tied to the performance rating system, they are presented in this report to establish a pattern for comparison with percent increases in the Demonstration Group. Additional analyses (such as the time value of money) will be performed for the Operating Year report.

Figure 2. Range of Percent Salary Increases for Comparison Group Employees

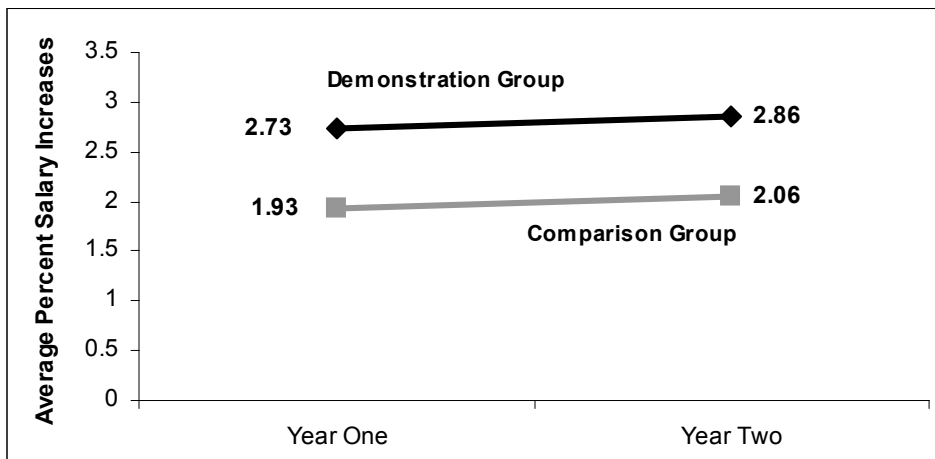


The percent increases ranged from 0.0% to 23.9%. The average percent increase was 2.1%, and over two-thirds received increases of less than 3%.

The fact that 50% of the employees did not receive a salary increase in Year Two (although they received a passing performance rating) is a function of the salary structure where employees at the higher steps of a grade wait two to three years between step increases. This helps explain why more employees in the Demonstration Group received salary increases (81%) than in the Comparison Group (54%) during this time period.

Figure 3 displays a trend analysis of the average percent salary increases in the Demonstration and Comparison Groups from Year One to Year Two. This figure shows a slight pattern of increasing average percent salary increases in both groups, while the spread between the two groups remains reasonably similar. As more data are collected in subsequent years, these trend analyses will be further developed and examined.

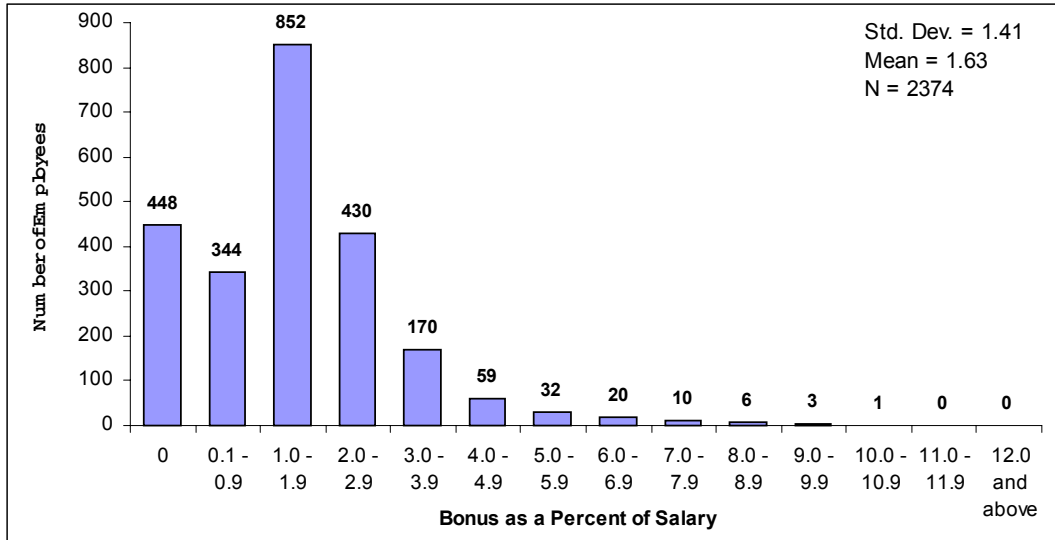
Figure 3. Trend Analysis of Average Percent Salary Increases



3.3.2. A greater number of Demonstration Group participants received bonuses/awards than did Comparison Group participants.

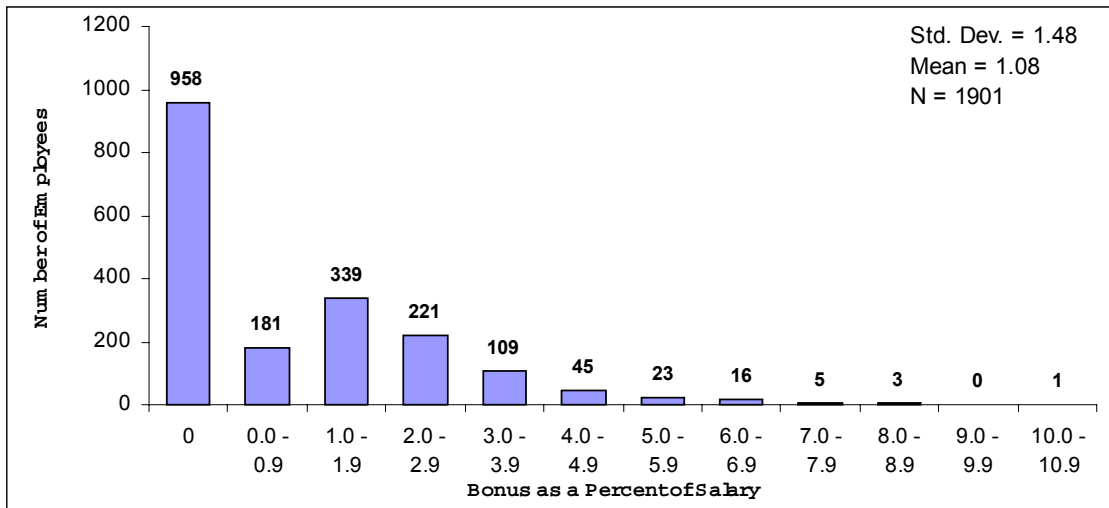
In Year Two, objective data show that, among Demonstration Group participants who received bonuses, most were in the range of 1 to 4%. Figure 4 displays these results.

Figure 4. Range of Bonus Percentages for Demonstration Group Employees



For the Comparison Group, 50% of the employees received performance awards comparable to the bonuses provided under the Demonstration Project. The award percentages ranged from 0.0% to 10.3%, as shown in Figure 5.

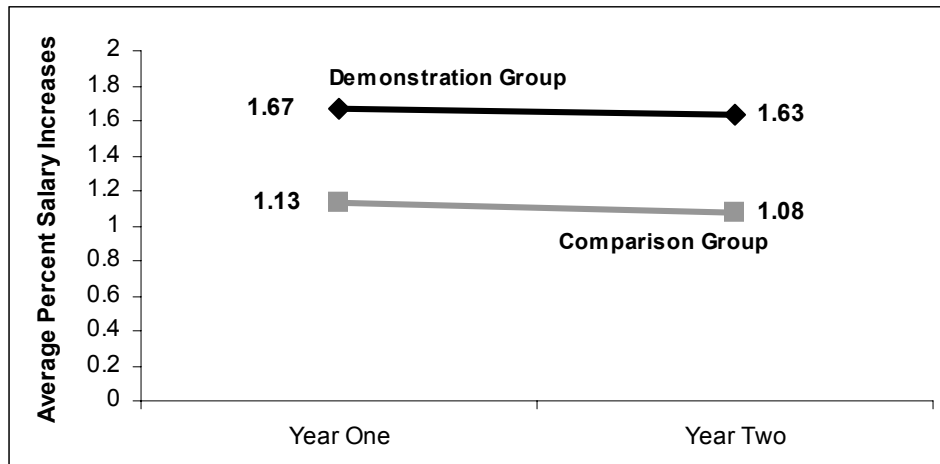
Figure 5. Range of Award Percentages for Comparison Group Employees



As with the salary increases, more employees (81%) in the Demonstration Group received a bonus, whereas only 50% of employees in the Comparison Group received a performance award.

Figure 6 displays a trend analysis of the average bonus/award percentages in the Demonstration and Comparison Groups from Year One to Year Two. This figure shows a very slight pattern of decreasing average bonus/award percentages in both groups, while the spread between the two groups remains reasonably similar. As more data are collected in subsequent years, these trend analyses will be further developed and examined.

Figure 6. Trend Analysis of Average Bonus/Award Percentages



3.3.3. There continues to be a positive link between performance-based pay increases and performance ratings from Year One to Year Two.

As occurred in Year One, objective data indicate that financial rewards were tied to job performance during Year Two. Statistics reveal a positive relationship between job performance (measured through performance appraisal rating scores) and pay increases ($r = .52, p < .01$). See the Appendix for a scatterplot of the data. The correlation is very similar to the correlation between performance and pay increases for Year One ($r = .54, p < .001$), suggesting that the performance—pay increase link has been sustained in the Demonstration Project.

3.3.4. Supervisors receiving supervisory performance pay receive similar performance ratings to other supervisors.

There were 218 supervisors in the Demonstration Group during Year Two. Of these, 44 received supervisory performance pay. Mean scores indicate that there is no meaningful difference in the performance ratings for these two groups. Supervisors receiving supervisory performance pay had an average rating of 89.9, while the average among all other supervisors was 88.9, a difference that was not statistically significant. This finding is not surprising since the criteria for entry into the supervisory performance pay interval of the pay band are not dependent upon sustained superior performance. Instead, the criteria are

being at the top of the regular pay band and receiving a performance rating that warrants an increase above the top of the regular pay band.

3.3.5. There is a continued positive link between pay (as measured by bonuses) and performance from Year One to Year Two.

As was found for pay increases, objective data indicate that employee bonuses were tied to performance during Year Two. Statistics reveal a positive relationship between job performance (as measured by performance appraisal rating scores) and performance bonuses ($r = .41, p < .01$). See the Appendix for a scatterplot of the data. This correlation in Year Two is similar to the correlation of $r = .46 (p < .001)$ from Year One, suggesting that the performance—bonus link has been sustained in the Demonstration Project.

3.3.6. There are insufficient data to evaluate whether new hires who received recruitment payments in the Demonstration Group performed better than new hires who did not receive recruitment payments. Similarly, since no retention payments were made during Year Two, their effectiveness in retaining high performers cannot be evaluated.

While seven new employees in the Demonstration Group received recruitment payments, only one of those employees was eligible to be rated during Year Two. As such, there is not enough data available to evaluate the effectiveness of these payments for recruiting higher performing employees. Similarly, insufficient data preclude examining the impact of retention payments on the retention of high performers in the Demonstration Group. As occurred during Year 1, no retention payments were made during Year 2.

If data allow, analyses on the impact of recruitment and retention payments will be performed after the Year Three data are collected.

3.4. The Demonstration Project interventions continue to reflect a system in which there is no evidence of unfair treatment based on race, gender, or veteran status.

As in Year One, no objective data indicate that the Demonstration Project's interventions had a differential effect based on race, gender, or veteran status. Instead, pay interventions appear to be more closely linked to performance level than to demographics. These findings provide some indication that the administration of the Demonstration Project continues to be in line with the nine Merit System Principles and the twelve Prohibited Personnel Practices.

3.4.1. The Demonstration Group has attracted a slightly higher proportion of women, minorities, and veterans than are currently represented in its population.

New hires are an important means for promoting additional opportunities for women, minorities, and veterans within the Demonstration Group. Table 3-9 shows that Year Two new hires to the Demonstration Group are slightly more diverse than the employee population as a whole. These data suggest that the Demonstration Project interventions are not detracting from the DoC's ability to diversify its employee population.

Table 3-9. Diversity of New Hires Compared to the Overall Demonstration Group

Category	New Hires (N=313)*		All Demonstration Group Employees (N=2,740)*	
Minority--Non-Minority	25%	75%	20%	81%
Women--Men	44%	56%	40%	60%
Veteran--Non-Veteran	12%	88%	9%	91%

* May not add to 100% due to rounding

3.4.2. As found in Year One, the Demonstration Group's pay for performance system did not reward participants differently based on race, gender, or veteran status in terms of average performance-based pay increases or bonuses.

Booz·Allen analyzed objective data for Year Two pertaining to the distribution of performance-based pay increase percentages and bonus percentages for all participants in the Demonstration Project. These data were used to establish the links between pay and performance discussed in sections 3.3.2 and 3.3.4 above. When Booz·Allen analyzed the effects of minority status, gender, and veteran status on the link between pay and performance, the results showed equal strength in the link between pay and performance for these groups. This finding is consistent with the finding based on the Year One data. There were virtually no changes from Year One to Year Two in regards to these analyses.

Table 3-10 presents raw data on average performance appraisal scores, raw data on average performance-based pay increases and bonuses, and the adjusted means produced by the ANCOVA analyses (see the Appendix for more a more detailed description of the ANCOVA process and results). The table is broken down by protected class. These data suggest that, in most cases, the performance-pay link is evident within each comparison (i.e., the subgroup with the higher performance rating had a higher average increase while the subgroup with the lower performance rating had a lower average increase).

Table 3-10. Average Performance Appraisal Scores (Raw), Pay Increase Percentages (Raw and Adjusted), and Bonus Percentages (Raw and Adjusted) for the Demonstration Group

	Performance Appraisal Scores	Average Pay Increase Percentage		Average Bonus Percentage	
		Raw	Adjusted	Raw	Adjusted
Minority	82.7 points	2.8%	2.7%	1.5%	1.5%
Non-Minority	83.6 points	2.9%	2.9%	1.6%	1.6%
Female	83.9 points	3.1%	2.7%	1.8%	1.8%
Male	83.1 points	2.7%	2.9%	1.5%	1.5%
Veteran	81.8 points	2.5%	2.8%	1.4%	1.5%
Non-Veteran	83.6 points	2.9%	2.9%	1.6%	1.6%
Total	83.4 points	2.9%	--	1.6%	--

Notes:

1. The average performance appraisal score for each Demonstration Group subgroup is the average number of points received under the 100-point system. Performance data for Demonstration Group employees are based on appraisals conducted in September 1999, and as reported in the Year Two data file provided by DoC. Average increase and bonus percentages are based on actions effective in November 1998, as reported in the Year Two data file provided by DoC.
2. The minority group includes all non-White personnel, specifically Blacks, Hispanics, Asians, and American Indians.
3. Adjusted averages were computed by statistically controlling for performance rating, career path, and length of service.

Overall, these results suggest that the pay for performance system did not reward participants differently based on race, gender, or veteran status in terms of average performance increases or bonuses. These data will continue to be tracked throughout the Demonstration Project to monitor for potential differential impacts at future points in time.

3.4.3. As found in Year One, similar patterns emerge in how members of different protected classes fared in terms of average performance-based pay increases or bonuses in the Demonstration Group versus the Comparison Group.

Booz•Allen examined Comparison Group data on performance appraisal scores, pay increase percentages, and bonus/award percentages to develop baseline data of differences between the Demonstration and Comparison Groups during Year Two. Direct comparisons were not always possible due to the differences inherent in the different systems. Table 3-11 displays the data sources used from each group for purposes of comparison.

Table 3-11. Data from Demonstration and Comparison Groups Used for Comparisons

Demonstration Group	Comparison Group
Scores on a 100-point performance appraisal system	Scores on a 2-level performance appraisal system
Performance Increase	Step Increase Quality Step Increase Promotion Increase (when the promotion was equivalent to transition within a pay band under the Demonstration Project)
Bonus	Performance Awards

A direct comparison between the two groups for performance appraisal scores was not feasible since different performance appraisal systems are used. Demonstration Group participants were evaluated on a 100-point performance appraisal system. There were two performance appraisal systems being used by organizations in the Comparison Group; ESA (with 77 employees in the Comparison Group) used the traditional 5-level performance appraisal system, whereas NOAA (with 1,851 employees in the Comparison Group⁴) used a 2-level performance appraisal system (i.e., pass/fail) that is being studied for effectiveness. Because most of the Comparison Group participants were evaluated on the 2-level system, the scores of the remaining employees in the Comparison Group were converted to the two-level system⁵ for purposes of composing a group average for the entire Comparison Group. Table 3-12 displays the data on performance scores, broken out by protected subgroups.

Table 3-12. Comparison of Performance Appraisal Scores (Raw), Average Pay Increases (Adjusted), and Average Bonuses/Awards (Adjusted)

	Performance Appraisal Scores		Average Pay Increase Percentage		Average Bonus/ Award Percentage	
	Demonstration Group	Comparison Group	Demonstration Group	Comparison Group	Demonstration Group	Comparison Group
Minority	82.7 points	100% Pass; 0% Fail	2.7%	2.5%	1.5%	1.2%
Non-Minority	83.6 points	100% Pass; 0% Fail	2.9%	2.5%	1.6%	1.3%
Female	83.9 points	100% Pass; 0% Fail	2.7%	2.8%	1.8%	1.5%
Male	83.1 points	100% Pass; 0% Fail	2.9%	2.3%	1.5%	1.2%
Veteran	81.8 points	100% Pass; 0% Fail	2.8%	2.3%	1.5%	0.9%
Non-Veteran	83.6 points	100% Pass; 0% Fail	2.9%	2.5%	1.6%	1.3%

Notes:

1. The performance appraisal score presented for the Demonstration Group is the average number of points received under the 100-point system. The numbers presented for the Comparison Group are the percentages of employees who received "Pass" or "Fail" under the 2-level system. Performance data for Demonstration Group employees are based on appraisals conducted in September 1999, and as reported in the Year Two data file provided by DoC. Performance data for Comparison Group employees are based on appraisals occurring between April 1, 1999 and March 31, 2000 and as reported in the Year Two data file provided by DoC.
2. Average pay increase and bonus/award percentages are based on actions occurring during the 1999 performance evaluation cycle that ended 9/30/99 and as reported in the Year Two data file provided by DoC.

⁴ There was a total of 1,928 participants in the Comparison Group as of March 31, 2000 (77 from ESA and 1,851 from NOAA).

⁵ Scores from the 5-level system were converted to the 2-level system as follows: Levels 1 (unacceptable) and 2 (marginal) were converted to "fail." Levels 3 (fully successful), 4 (level between fully successful and outstanding), and 5 (outstanding) were converted to "pass."

There are some important differences in how employees in the Demonstration and Comparison Groups were evaluated and rewarded. Employees in the Demonstration Group were evaluated based on a pay-for-performance system; hence, their pay increases were based on performance. In contrast, employees in the Comparison Group are under the traditional federal pay system. They received the traditional salary increases including step increases (as appropriate), quality step increases (as awarded), and increases related to promotions. In addition, some employees received performance awards; these award amounts did not affect base salary.

But, for purposes of comparison with the Demonstration Group, the Comparison Group's step increases, quality step increases, and promotions (when those promotions are equivalent to a "within band" increase in pay in the Demonstration Group) were considered comparable to the performance increase given in the Demonstration Group. The Comparison Group's awards were considered comparable to the bonuses given in the Demonstration Group.

Hence, in addition to the performance appraisal data, Table 3-12 also presents a comparison of the average pay increase and the average bonus/award (presented as percentages of base salary), broken out by protected subgroups, across the Demonstration and Comparison Group. After accounting for performance rating, length of service, and career path in the ANCOVA analyses (thus producing adjusted means), these data suggest that similar patterns emerge in how members of protected classes fared in the Demonstration Group and in the Comparison Group in terms of average pay increase percentages and average bonus/award percentages. For example, although veterans received lower pay increase percentages than non-veterans in the Demonstration Group (in line with their lower performance ratings), the same was true in the Comparison Group.

3.4.4. In the Demonstration Group, turnover rates were slightly lower among minority employees than non-minority employees. This was true among high performers, as well.

The turnover rate for the Demonstration Group as a whole was 13% during Year Two. Turnover was somewhat lower among minorities (12%) than non-minorities (14%). This suggests that the Demonstration Group is not having an adverse effect on the retention of minority participants.

Among high performers (performance ratings of 91–100), the results were similar. Turnover was slightly lower among minorities (9%) than non-minorities (10%). This finding suggests that the Demonstration Project is successful in retaining high performing minority participants. These findings are displayed in Table 3-13.

Table 3-13. Turnover in the Demonstration Group, All Participants and High Performers

Group	All Participants			High Performers		
	Number	Number Separated	Percent Separated	Number	Number Separated	Percent Separated
Minority	520	63	12%	113	10	9%
Non-Minority	2,220	301	14%	638	62	10%
TOTAL	2,740	364	13%	751	72	10%

3.4.5. The pattern of turnover rates by minority status was different in the Demonstration Group versus the Comparison Group.

Similar to the Demonstration Group, turnover rates varied by minority/non-minority status in the Comparison Group. Unlike the Demonstration Group's however, turnover among minority participants (14%) was higher than among non-minority participants (9%). This suggests that the Demonstration Group may be doing a better job of retaining minority employees than is the Comparison Group; however, it is advisable to recognize that these differences may be slight and more data may be needed before drawing conclusions. These findings are displayed in Table 3-14.

Due to the lack of performance data in the Comparison Group beyond Pass/Fail ratings, it is not possible to assess how the Comparison Group's retention of high performing minorities compares to its retention of all minority participants.

Table 3-14. Comparison of Turnover Rates in the Demonstration and Comparison Groups

Group	Demonstration Group			Comparison Group		
	Number	Number Separated	Percent Separated	Number	Number Separated	Percent Separated
Minority	520	63	12%	232	32	14%
Non-Minority	2,220	301	14%	1,696	151	9%
TOTAL	2,740	364	13%	1,928	183	10%

4. RECOMMENDATIONS

The DoC Personnel Management Demonstration Project implemented a number of interventions designed to increase the efficiency and effectiveness of recruitment, retention, individual and organizational performance, and support of diversity. This chapter presents Booz·Allen's recommendations for continued implementation and operation to allow testing of the effectiveness of the interventions in achieving DoC's organizational objectives.

4.1. To evaluate the full range of interventions available under the Demonstration Project, DoC may need to undertake efforts to increase use of some of the interventions that are currently under-utilized.

While the Demonstration Project provides DoC with the opportunity to test a series of personnel interventions and assess their effectiveness, certain interventions (such as recruitment payments, retention payments, and the 3-year probationary period) have not yet been fully utilized. DoC needs to determine if these personnel techniques are worth implementing.

For example, DoC could establish some "trigger" criteria that would cause managers to consider providing a retention payment. One "trigger" could be a person who receives a high performance rating, but is at the top of the pay band and will not receive the full warranted percent increase.

To evaluate each intervention, it will need to be implemented in time to collect several years of data on its impact.

4.2. The supervisory performance pay intervention requires further attention.

Supervisory performance pay is meant to provide DoC with the ability to raise the pay of high performing supervisors to more competitive levels, thus improving retention. The implementation of this intervention, however, is such that any supervisor who receives a performance rating that warrants a percent increase above the top of the regular pay band is permitted to move into the pay band interval known as "supervisory performance pay." There is no criterion requiring a high performance rating to enter the supervisory performance pay interval of the pay band.

The Year Two data indicate that the performance ratings of supervisors who received supervisory performance pay were no different than for supervisors who did not. At the same time, supervisors who received supervisory performance pay experienced lower turnover rates than other supervisors. These results combined suggest that DoC is paying supervisors in the supervisory performance pay range higher salaries for an equivalent level of performance, and that these higher paid supervisors turn over at a slower rate than do other supervisors.

While these findings indicate that supervisory performance pay is working effectively as a means of retaining this group of supervisors, it is not encouraging higher performance. We recommend further examination of the supervisory pay performance intervention.

4.3. DoC may want to more closely examine the findings related to turnover and performance levels.

The analyses of the Year Two data revealed that turnover rates were similar across high, medium, and low performers. It would be preferable to find higher turnover rates among low performers and lower turnover rates among high performers. DoC may want to explore the possible causes for the lack of a distinction in turnover rates by performance level, including internal factors (e.g., motivators for remaining with the agency) as well as external factors (e.g., a thriving job market that can attract high performers). Booz·Allen's Year Three evaluation will also explore these issues through interviews and focus groups.

4.4. While the Demonstration Project does not appear to be adversely impacting women, minorities, or veterans, DoC will need to continue to monitor for disparate impacts.

Results from the analysis of the Year Two data continue to indicate no support for the idea that the Demonstration Project is discriminating based on race, gender, or veteran status. These positive findings can encourage DoC to continue its efforts to build and sustain a high-performing workforce. Given that some focus group participants in Year One indicated the possibility of a negative impact present in any personnel system, DoC will want to remain cognizant of its successes in this area and be prepared to share information openly with Demonstration Project participants, as appropriate, to counter any misperceptions.

4.5. Given the complexity and quantity of data involved, the Demonstration Project needs staff dedicated to managing Demonstration Project data.

The Office of Personnel Management's guidance on evaluating Demonstration Projects highlights the importance of accurate, thorough, and appropriate data analyses, which are predicated on the availability of good data. Given the size and scope of the Demonstration Project, there is a business need for DoC to dedicate staff to database management.

The Demonstration Project is currently tracking much of the data that are needed to monitor and evaluate the success of the interventions. However, these data are maintained in two separate databases. A need exists to develop strategies to ensure that data from these two databases are current and consistent. Doing so will enhance the quality and timeliness of future data analyses.