DEPARTMENT OF COMMERCE
PERSONNEL MANAGEMENT DEMONSTRATION PROJECT EVALUATION

SUMMATIVE YEAR REPORT

McLean, VA
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FINAL REPORT

Booz | Allen | Hamilton

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

This report presents Booz Allen Hamilton Inc.'s (Booz Allen) assessment of the Summative Year (i.e., Year Five) of the Department of Commerce Personnel Management Demonstration Project. This Executive Summary provides a summary of the purpose of the Demonstration Project, the status of the personnel innovations after five years, and recommendations for future actions.

ES.1. The Department of Commerce has completed the initial five-year Demonstration Project, designed to test and evaluate a series of alternative personnel practices and to determine the generalizability of these interventions to other organizations.

The Department of Commerce (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. It was scheduled to last for five years (March 2003)[1]. 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 beneficially implemented elsewhere within DoC as well as government-wide.

The Demonstration Project was designed to apply some of the human resource interventions from an earlier DoC Demonstration Project at the National Institute of Standards and Technology (NIST). The NIST Project achieved highly successful results and, at its conclusion, the interventions were made permanent. The current project seeks to build on the success of the NIST Project and determine whether or not these interventions can be successfully implemented within DoC to a wider range of occupational areas and within organizations with different missions.

ES.1.1. The general objectives of this Demonstration Project emphasize the development of a higher performing workforce, as well as greater efficiency and flexibility of personnel processes.

This Demonstration Project is designed to foster improved organizational and individual performance. This is to be done by recognizing high quality performance and recruiting and retaining high performers. The stated project objectives are:

[1] *The Demonstration Project has since been extended for an additional five years.*

- Increased quality of new hires
- Improved fit between position requirements and individual qualifications
- Greater likelihood of getting a highly qualified candidate
- Increased recruitment and retention of high performing employees
- Improved individual and/or organizational performance
- More effective human resources management
- More efficient human resources management
- Increased delegation of authority and accountability to managers
- Better human resources systems to facilitate organizational mission and excellence
- Continued support for goals in recruiting, rewarding, and retaining minorities, women, and veterans
- Continued provision of opportunities for a diverse work force
- Maximization of the contributions of all employees.

ES.1.2. As the evaluators of the Demonstration Project, Booz Allen conducted the Year Five evaluation to determine the impact of the interventions in Year Five and over the five-year period.

The Office of Personnel Management (OPM) clearly defines processes for evaluating Demonstration Projects. Following OPM guidelines, evaluators submit formal assessment reports at specified time intervals over the course of a Demonstration Project. As the evaluator of the DoC's Demonstration Project, Booz Allen Hamilton Inc. (Booz Allen) submitted an Implementation Year Report and Operational Year Report that assessed the implementation and operation of the Demonstration Project during Year One and Year Three, respectively. In addition, Booz Allen submitted reports in Year Two and Year Four that were designed to serve as mid-course checks.

Multiple data collection methods were used to gather the information needed for Booz Allen's assessment of the effectiveness of the Demonstration Project interventions. These methods included interviews with key program staff and managers, focus groups, a survey, a review of objective data obtained from the National Finance Center (NFC) Payroll/ Personnel System and the Demonstration Project's Performance Payout System (PPS), a review of human resources (HR) summary data, site historian logs, and cost data.

The purpose of the Year Five evaluation was to assess the Demonstration Project's fifth year of operation, March 2002 to March 2003 and to consider the impact of the interventions over the five-year period. Table ES-1 shows the OPM research questions and answers based on the data collected during Year Five.

Table ES-1. Answers to OPM Research Questions

OPM Research Questions	Answers	Where To Locate Additional Information
1. Did the project accomplish the intended purpose and goals? If not, why not?	Over its five years, the Demonstration Project met its purpose and goals. Many of the interventions showed evidence of success, if not initially, further into the life of the Demonstration Project. For example, some success has been shown in the ability to link pay and performance, to retain high performers, to turn over low performers, and to use more flexible entry salaries to attract candidates.	Introduction Chapter 4 – Findings and Conclusions
2. Was the project implemented and operated appropriately and accurately?	The Demonstration Project was implemented and operated appropriately, as evidenced by its success over the five-year timeframe. Sufficient leadership and oversight by the Boards and project team to lead and operate the Demonstration Project on a regular basis. In addition, technological and other resources were dedicated to the Demonstration Project.	Chapter 4 – Findings and Conclusions
3. What was the cost of the project?	The primary costs associated with the Demonstration Project are implementation, evaluation, administration, and operational costs, with implementation costs representing the largest segment. Our cost analysis produced an overall cost of just under $5M over the course of the five years.	Chapter 5 – Cost Analysis
4. What was the impact on veterans and other EEO groups?	Across all five years of the Demonstration Project, objective and subjective data indicate that the Demonstration Project has not had a negative impact based on race, gender, or veteran status. Survey and focus group findings provide employee opinions that the Demonstration Project interventions have not impacted how these groups are treated, compensated, recruited, or retained. Objective data also provide evidence that the pay-for-performance system did not reward participants differently based on race, gender, or veteran status; rather, increases appear to be linked to performance scores.	Section 4.11 – Findings on the Interventions and Race, Gender, and Veteran Status Appendix D-1 – Analyses of the Linkage between Pay and Performance
5. Were Merit Systems Principles adhered to and Prohibited Personnel Practices avoided?	Survey and focus group results indicate that there have been no changes in either adherence to Merit System Principles or avoidance of Prohibited Personnel Practices with the implementation of the Demonstration Project.	Section 4.10 – Findings on the Merit System Principles and Prohibited Personnel Practices

OPM Research Questions	Answers	Where To Locate Additional Information
6. Can the project or portions thereof be generalized to other agencies or government-wide?	Based on the findings over the five years, it appears that the Demonstration Project has had successes that may have broader potential and appeal elsewhere in DoC or in the Federal Government. Although it took several years (which is typical for this type of organizational change), Demonstration Project favorability ratings are up to levels comparable to other Demonstration Projects. DoC's decision to extend and expand the Demonstration Project clearly demonstrates the vision that these interventions can be effective in different contexts. One indication that it is reasonable to test these interventions more broadly is that the interventions were effective across career paths and across participating organizations during the initial five years. One relevant issue to applying the interventions elsewhere, however, is that some of the interventions were no longer unique by the end of the five years. In a sense, these interventions (e.g., recruitment payments, retention payments) were already generalized elsewhere. Future decisions about what could be applied elsewhere should clearly be made with consideration for the unique benefits the intervention may bring beyond that which is already offered under the traditional system.	Chapter 4 – Findings and Conclusions

ES.2. At the conclusion of the five years, evidence exists that a number of the interventions are having the desired effects.

Results of the Year Five assessment show success with a number of the interventions, such as pay-for-performance, flexible entry salaries, and more flexible pay increase upon promotion. The findings also identified some interventions that could benefit from design revisions (e.g., supervisory performance pay) and/or better data tracking (e.g., three-year probationary period for scientists and engineers) in order to more fully assess their impact on Demonstration Group participants.

ES.2.1. Survey results continue to show that the Demonstration Project has not had a negative impact on employee satisfaction and satisfaction with the Demonstration Project itself has improved over time.

Over time, an increasing percentage of the Demonstration Group participants felt favorably about the Demonstration Project, with 57 percent currently favorable. This 57 percent favorability level is on track for achieving a Demonstration Project favorability benchmark set by previous Demonstration Projects, such as China Lake and NIST, which tended to achieve (and level out at) favorability ratings of 66-70 percent after five or six years. Supervisors continue to be somewhat more favorable than are non-supervisors. Not surprisingly, the Comparison Group participants' favorability ratings have not reached the same levels, though an increasing percentage of participants gained a favorable perception over time.

ES.2.2. Demonstration Group participants continue to view greater potential for career progression than do the Comparison Group participants.

For Demonstration Group participants in the Demonstration Project, comparable occupations that could be treated similarly for classification, pay, and other purposes were aggregated into career paths. The change to career paths, along with broadbands and Departmental broadband standards, were expected to simplify, speed up, and improve the quality of classification.

While survey data continue to suggest that Demonstration Group participants feel more positively about their potential for career progression under the Demonstration Project, focus group data indicate employee concerns still remain about career pathing and its impact on career progression.

ES.2.3. The new web-based Automated Classification System has impacted perceptions about classification procedures.

Under the Demonstration Project, DoC delegated classification authority down to the line managers, giving them the authority to classify positions. Delegated classification authority, in itself, seems to be effective in allowing managers greater involvement in the classification process. However, concerns have been raised about the new web-based Automated Classification System (known as ACS), which may be affecting supervisory employees' general perceptions about having responsibility for certain classification procedures.

ES.2.4. Understanding and acceptance of the new performance appraisal system has improved over time.

As part of the Demonstration Project, DoC implemented a new performance appraisal system. Initially, Demonstration Group participants seemed to struggle with understanding and accepting the new process. In Year Three, data suggested that Demonstration Group participants became more educated about how the new performance appraisal system worked and became more accepting of it. In Year Five, data suggest that Demonstration Group participants continue to grow more comfortable with the performance appraisal process and system and its employment. Although progress continues to be made with the new system, data suggest that there are still opportunities for improvement, particularly in the area of performance-based feedback.

ES.2.5. The pay for performance system continues to exhibit a positive link between pay and performance.

A series of interventions were implemented during the Demonstration Project to improve the relationship between high performance and financial reward. These interventions include performance-based pay increases, performance bonuses, more flexible pay increases upon promotion, and supervisory performance pay. Year Five analyses highlight the following:

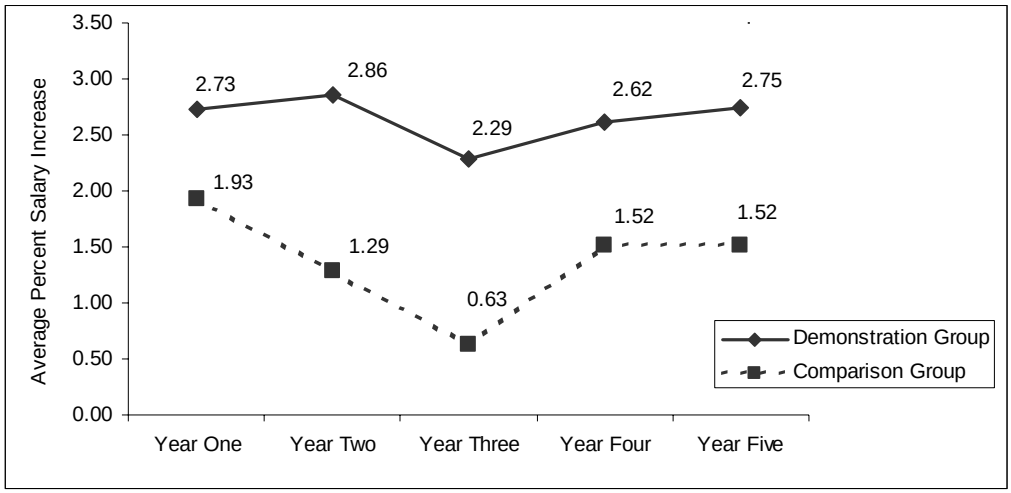
- Demonstration Group participants received larger average performance-based pay increases than did Comparison Group participants (2.75 percent of salary[2] versus 1.52 percent of salary)
- Consistent with Year Four, among Demonstration Group participants, those in the ZA[3] career path received the highest average performance-based pay increases and those in the ZS career path received the lowest
- Demonstration Group participants received smaller performance-based bonuses/awards than did Comparison Group participants (1.77 percent versus 2.01 percent); however, if the analyses also take into account non performance-driven awards for the Demonstration Group (since they are counted in the Comparison Group), the Demonstration Group's average is 2.22 percent (higher than the Comparison's Group 2.01 percent)
- Average performance scores steadily increased from 82.0 in Year One to 86.5 in Year Five
- In Year Five, a regression analysis shows that performance score has a stronger impact on pay than many other factors (including pay band, interval, promotion, supervisory status, length of service, race, gender, veteran status, and age)
- The flexible pay upon promotion intervention continues to be successful
- As in previous years, the supervisory performance pay intervention continued to reward supervisors who had reached the top of their pay bands though not necessarily the highest performing supervisors.

Figure ES-1 displays trends for average performance-based pay increases over Years One through Five of the Demonstration Project. This figure shows that Demonstration Group participants have consistently received higher average increases than the Comparison Group participants. Figure ES-2 displays trends for average bonuses/awards over Years One through Five of the Demonstration Project. This figure shows that Demonstration Group participants have consistently received similarly sized average bonuses over the years. To note, in Year Five, the bonus/award analysis was performed twice: 1) we first performed the analysis as it has been performed in Years One-Four, so as to maintain consistency, have comparable trend data, and be as true as possible to the concept of performance-driven bonuses/awards (i.e., not including them in the Demonstration Group calculations); and 2) we then analyzed the bonus data for the Demonstration Group again, taking into account "Special Act" awards and Other Awards. This analysis presents the overall picture of the bonuses/awards received by Demonstration Group participants and allows inclusion of "Special Act" awards and Other Awards, given that these are being accounted for in the Comparison Group calculation. Both of these data points are represented in Figure ES-2.

[2] *Unless stated otherwise, references in this document to "percent of salary" or "pay increase percentage" pertain to performance-based pay increases from the beginning to the end of Year Five; this concept is not intended to be synonymous with the "percent of percent" concept often discussed in the context of the Demonstration Project.*

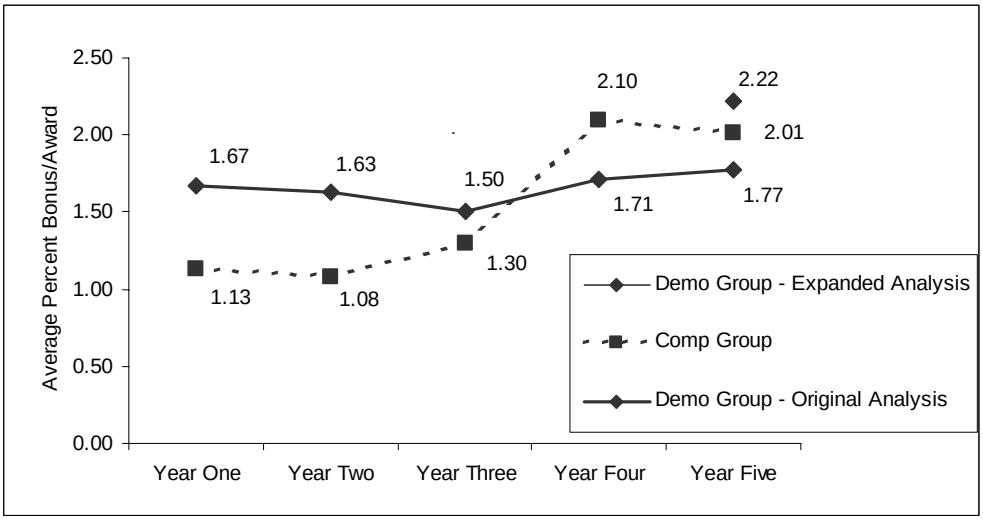
[3] *Under the Demonstration Project, Demonstration Group occupations are grouped into four broad career paths: ZP – Scientific and Engineering, ZT – Scientific and Engineering Technician, ZA –Administrative, and ZS – Support.*

Figure ES-1. Trend Analysis of Average Percent Salary Increases



Note: The Comparison Group Year Two data point was revised in Year Three to reflect a correction in the formula used to calculate average percent salary increase.

Figure ES-2. Trend Analysis of Average Bonus/Award Percentages



Note: In Year Five, the analysis of bonus/award data was addressed in two separate ways for the Demonstration Group. The original analysis was based solely on performance-based bonuses, consistent with previous years. The expanded analysis was based on all bonuses/awards received by Demonstration Group participants and allows inclusion of "Special Act" awards and Other Awards, given that these were accounted for in the Comparison Group calculation.

E.S.2.6. The three-year probationary period for scientists and engineers continues to be used but assessing its utility remains difficult.

The three-year probationary period for scientists and engineers intervention was designed to allow supervisors the ability to make permanent hiring decisions for research and development (R&D) positions based on employees' demonstrated capabilities in the full R&D cycle. This intervention provides these supervisors with the ability to terminate poor performing employees any time during the three-year period rather than being limited to the

typical one-year probationary period. In Year Five, employees were both hired under and released from the three-year probationary period. However, whether this movement of individuals out of the probationary period represents positive implementation of the intervention (by virtue of making appropriate decisions for those under probation) or under-use of the intervention is unclear due to limitations in the analyses that can be performed given the way that probation-related data are tracked.

E.S.2.7. While many of the recruitment and staffing interventions under the Demonstration Project are no longer unique, those that are have been beneficial.

The recruitment and staffing interventions are intended to attract high quality candidates and speed up the recruiting and examining process. In Year Five, evaluation of some of these interventions showed stability or progress:

- Hired 223 new hires
- Used a wider range of starting salaries than the Comparison Group
- Took advantage of greater flexibility to re-negotiate starting salaries
- Expedited the classification process.

Given the limitations on assessing the quality of applicants, a new analysis was performed in Year Five to, as a proxy, examine whether new hires to the Demonstration Project outperform those who were hired prior to the Demonstration Project's initiation. The results of this analysis showed that the average performance score for new hires across the five years of the Demonstration Project was 87.1, which was slightly higher than the average performance score for Year Five, minus these individuals, of 86.4. This difference is slight but in the desired direction and is worthy of being tracked in the future.

E.S.2.8. Many of the retention interventions are having the desired effect as employee motivators; two exceptions are retention payments and supervisory performance pay.

The series of retention interventions are designed to provide managers with tools to motivate and retain high performing employees. It appears that many of the interventions are having the desired effect. Objective data analyses show that turnover is greater among lower performers and that managers are taking advantage of being able to offer flexible pay increases upon promotion. Subjective data analyses show that Demonstration Group participants perceive that the interventions have been motivating and improved retention efforts. There are only two areas that have been less successful. One is retention payments, which have not been used but which are also no longer a unique option under the Demonstration Project. The other is supervisory performance pay, which has not proven to be a retention tool for supervisors.

ES.2.9. The impact of the Demonstration Project on organizational performance is difficult to parse out.

Given the challenges of measuring organizational performance in a Demonstration Project that includes only parts of organizations, proxies were identified to serve as indirect measures of the Demonstration Project's organizational performance. Examination of these proxy measures (i.e., individual performance levels, perceived quality of the workforce) suggests that there have not yet been clear indicators of enhanced organizational performance.

ES.2.10. The Demonstration Project's interventions have not impacted DoC's adherence to the Merit System Principles or avoidance of the Prohibited Personnel Practices.

Implementing the Demonstration Project's personnel interventions has not impacted the organization's adherence to the nine Merit System Principles and avoidance of the 12 Prohibited Personnel Practices. Booz Allen's findings in Year Five provide additional support that the administration of the Demonstration Project continues to be in line with these personnel guidelines.

E.S.2.11. 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.

Consistent with previous years, analyses suggest that the Demonstration Project has not been detrimental to the recruitment, compensation, or retention of minorities, women, or veterans. In Year Five, the proportion of minority, women, and veteran new hires to the Demonstration Group was nearly consistent with their representation in the employee population overall.

As occurred in previous years, data also 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. Rather, differences in performance-based pay increases and bonuses between groups (e.g., males and females) appear to be linked to performance scores.

In Year Five, turnover rates in the Demonstration Group were the same for minority and non-minority employees; among high performers, there was lower turnover among minorities, which may indicate that the Demonstration Project is having some success in retaining high performing minority participants.

ES.3. Recommendations are offered to help focus the Demonstration Project as it moves into the extension and expansion phase.

The Year Five findings suggest that the Demonstration Project is operating effectively and has experienced success with a number of the interventions such as the ability to link pay and performance, retention of high performers, turnover of low performers, and use of more flexible entry salaries to attract candidates. A series of recommendations are offered to focus DoC on areas that need more attention as it moves into the extension and expansion phase.

E.S.3.1. DoC should monitor users' experiences with the web-based Automated Classification System.

The web-based Automated Classification System experienced some challenges during its implementation, which was reflected in survey and focus group responses. While this is to be expected with any new IT system, DoC should closely monitor users' experiences and perceptions to track whether issues persist and to continue to be timely in responding to system issues. This is particularly important given that perceptions about the IT system can cloud managers' perceptions about the intervention overall and potentially lose the benefits of delegated classification authority. As designed, delegated classification authority offers managers more control over classifying the work they supervise, which can lead to more appropriate hires, and is therefore an important component of the Demonstration Project.

E.S.3.2. Formal efforts should be undertaken to address the issue of performance-based feedback.

One surprising finding when looking over the five years of the Demonstration Project was that there was virtually no change in employees' perceptions about the amount of performance-based feedback that they receive. This is surprising given that the Demonstration Project instituted a new performance appraisal system, which presumably would put greater emphasis on performance evaluations and regular supervisor-employee interactions.

It is feasible that low levels of performance-based feedback perceived by employees are due to discomfort or lack of knowledge on supervisors' parts about how to give feedback. A remedy for this is to build and deliver a training program, self-learning CD ROM, or other delivery mechanism on techniques for giving feedback. This type of program could be either an off-the-shelf or customized product; either way it should be very practically oriented so that supervisors feel they have the tools and skills to perform this important activity. In addition, employees should be educated that the onus is also on them to seek out feedback – that both supervisors and employees play a role in the feedback process.

E.S.3.3. DoC should re-conceptualize the supervisory performance pay intervention.

Based on the original objectives of the Demonstration Project, the supervisory performance pay intervention was expected to motivate supervisors to higher levels of performance and impact their retention. However, as designed, it is enacted for those supervisors who have reached the top of their pay bands, rather than as a reward for high performing supervisors. Therefore, it is not necessarily effective as a motivational tool.

DoC should consider alternative ways of structuring an intervention to motivate supervisory performance. The first step should be to go back to the basics to reevaluate what the objective should be. It may be to reward supervisors for effectively performing their supervisory responsibilities (beyond their technical responsibilities) and/or a means for rewarding supervisors for sustained high-quality performance. The criteria for earning supervisory performance pay should be clearly communicated so that it can serve as an

ultimate goal to attract high-performing employees with supervisory potential to join the supervisory ranks. This type of intervention will be particularly important given the projected losses (governmentwide) of leaders as the federal workforce ages. Creative incentives and retention tools may help to prolong the employment of high performing supervisors, thus benefiting the organization, as well as to build the next generation of leaders.

E.S.3.4. Consider whether to continue the three-year probationary period for scientists and engineers intervention and, if so, develop better data tracking methods.

The three-year probationary period for scientists and engineers intervention was designed to enable supervisors to make permanent hiring decisions for research and development (R&D) positions based on employees' demonstrated capabilities in the full R&D cycle. This intervention provides these supervisors with the ability to terminate poor performing employees any time during the three-year period rather than being limited to the typical one-year probationary period.

Given that this intervention is limited to certain employees and given the rate of hiring over the past five years, this intervention has only been applied to a small number of employees (ranging from 8 to 22 new hires each year). The current data tracking methods also make it difficult to determine the utility of this intervention. For example, current data tracking methods document the number of new hires under the probationary period and the number of departures but good data do not exist, for example, on how many employees stay under probation for one, two, or three years and why decisions were made to release them. DoC should determine whether this intervention is worthy of continuing and, if so, develop a plan for tracking what and why decisions are made about employees under the probationary period so that its effectiveness can be better assessed.

E.S.3.5. Establish a methodology for assessing the quality of new hires.

In preparation for the Demonstration Project's additional five years, a renewed effort should be made to establish a methodology for assessing the quality of new hires so that the Demonstration Project can better determine if it has met the objective to improve the quality of new hires. It is particularly challenging to identify and enact perfect measures, given that quality can be defined in numerous ways. DoC should invest time in researching potential criteria, making decisions on data to be collected, and imposing methods to track the data. By doing so, it will be possible to determine which recruitment strategies are most successful in drawing the best and the brightest to the organization. Furthermore, it will permit tracking whether an influx of high-performing new hires, combined with turnover of low performers, helps to improve aggregate organizational performance. It is our understanding that efforts are underway to address this issue, and that this issue will receive increased attention as the Demonstration Project moves into the next five years.

E.S.3.6. Continue with plans to perform analyses at a finer level of detail so as to discern the impact of subsets of the organization.

The first five years of the Demonstration Project have shown some clear successes for some of the interventions. Moving into the next five years, DoC should continue with its plans to explore whether different subgroups within the Demonstration Project (e.g., different career paths, different EEO groups) have different experiences and the potential root causes for these differences. By doing so, a finer level of analysis and more comprehensive results will be able to inform the generalizability of the interventions elsewhere within DoC or the government.

E.S.3.7. DoC should strive to make the most out of the extension and expansion of the Demonstration Project.

At the time this report was written, the decision had already been made to extend the Demonstration Project for an additional five years. Based on our Year Five evaluation, as well as our analysis of progress over the initial five years of the Demonstration Project, we believe that extending the Demonstration Project is a wise decision. While the success of different interventions has varied, there has been reasonable success overall to suggest that it would be beneficial to continue with these personnel practices as well as to apply these practices to additional groups. The extension and expansion will have a number of benefits from an evaluation perspective, such as being able to 1) evaluate the long-term efforts of interventions, 2) place greater emphasis on certain interventions that are particularly important or require more attention, and 3) perform more detailed analyses to get a more comprehensive picture of how these interventions can benefit varied subsets within the organization.

* * * * *

DoC has been successful in implementing and operating the Personnel Management Demonstration Project. Evidence exists that a number of the interventions have achieved the desired results and could therefore be considered for implementation elsewhere within DoC or government-wide.

The full report provides more detailed information about the Demonstration Project and the results of the summative year.

1. INTRODUCTION

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

1.1. The Department of Commerce has completed the initial five-year Demonstration Project, designed to test and evaluate a series of alternative personnel practices and to determine the generalizability of these interventions to other organizations.

The Department of Commerce (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. It was scheduled to last for five years (March 2003)[4]. 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 beneficially implemented elsewhere within DoC as well as government-wide.

The Demonstration Project was designed to apply some of the human resource interventions from an earlier DoC Demonstration Project at the National Institute of Standards and Technology (NIST). The NIST Project achieved highly successful results and, at its conclusion, the interventions were made permanent. The current project seeks to build on the success of the NIST Project and determine whether or not these interventions can be successfully implemented within DoC to a wider range of occupational areas and within organizations with different missions.

The Office of Personnel Management's (OPM) *Demonstration Projects Evaluation Handbook* (Batten, Goehrig, and Jorgenson) clearly defines processes for evaluating Demonstration Projects. Following OPM guidelines, evaluators submit formal assessment reports at specified time intervals over the course of a Demonstration Project. As the evaluator of the DoC's Demonstration Project, Booz Allen Hamilton Inc. (Booz Allen) submitted an Implementation Year Report and Operational Year Report that assessed the implementation and operation of the Demonstration Project during Year One and Year Three, respectively. In addition, Booz Allen submitted reports in Year Two and Year Four that were designed to serve as mid-course checks.

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

This Summative Year Report (hereafter referred to as the Year Five Report) assesses the Demonstration Project's fifth year of operation, March 2002 to March 2003. The intended audience for this report is DoC managers who may benefit from keeping abreast of the

[4] *The Demonstration Project has since been extended for an additional five years.*

current state of the Demonstration Project and who may be interested in tracking trends as the personnel interventions take effect. DoC can also use the report to provide an update to OPM on the impact the Demonstration Project is having on ensuring protection for or adherence to equal employment opportunity, veterans, Merit Systems Principles, and Prohibited Personnel Practices. Interwoven throughout this report, Booz Allen presents:

- A brief review of the Demonstration Project
- An analysis of both objective data and perceptual/attitudinal data on the fifth performance year
- Trend data across performance years, where appropriate
- An assessment of the impact of the Demonstration Project on mission and organizational outcomes
- An assessment of the impact of the Demonstration Project on equal employment opportunity, veterans, Merit System Principles, and Prohibited Personnel Practices
- An assessment of the costs associated with operating the Demonstration Project
- Organizational context based on site historian accounts of critical events occurring during Year Five
- Conclusions on the efficacy of the personnel interventions and the Demonstration Project
- Recommendations for improving the personnel interventions and the Demonstration Project overall.

1.3. The structure of this report parallels the Year One, Year Two, Year Three, and Year Four Reports; it evaluates each personnel intervention and recommends actions for continued operation.

This Year Five Report represents the fifth in a series of five reports that Booz Allen has prepared assessing the Demonstration Project. Each report builds on data and findings from previous reports, thereby permitting trend analyses over the course of the five years. To facilitate cross-comparisons of reports by those who are reading the reports annually, this and subsequent reports will follow a similar structure. This report contains the following chapters.

Chapter 2 of this report, titled "DoC Demonstration Project and its Evaluation," begins with a brief description of the Demonstration Project, including the objectives guiding the project, the organizations and types of employees included, and the project interventions. The second half of Chapter 2 describes the Demonstration Project evaluation. The research questions relevant to the project are covered, followed by a discussion of the project evaluation phases.

Chapter 3, "Data Collection and Analyses," contains descriptive and methodological information on the data collection procedures used during the project evaluation. This chapter covers the use of interviews, focus groups, a survey, objective personnel data, summary human resources (HR) data, site historian logs, and cost data.

Chapter 4, "Findings and Conclusions," focuses on the major interventions that are being tested during the Demonstration Project. Each section is dedicated to a set of interventions. Each conclusion is explained and then followed by findings that are supported by interview themes, focus group themes, survey results, objective data, and/or summary HR data. Data are presented in table format, when appropriate, to facilitate understanding.

Chapter 5, "Cost Analysis," details the costs associated with implementing and operating the Demonstration Project over the five years.

Chapter 6, "Answers to Research Questions," gives explicit answers to each research question from both the OPM Demonstration Projects' Evaluation Handbook and the DoC Demonstration Project Evaluation Model. The questions and our responses are presented in table form.

Chapter 7, "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.

A series of appendices accompany this report, providing various reference and citation data, including results from the survey and objective data analyses.

Booz Allen wrote this report and the conclusions stated within represent our professional expertise and judgment based on the evidence collected as part of the evaluation.

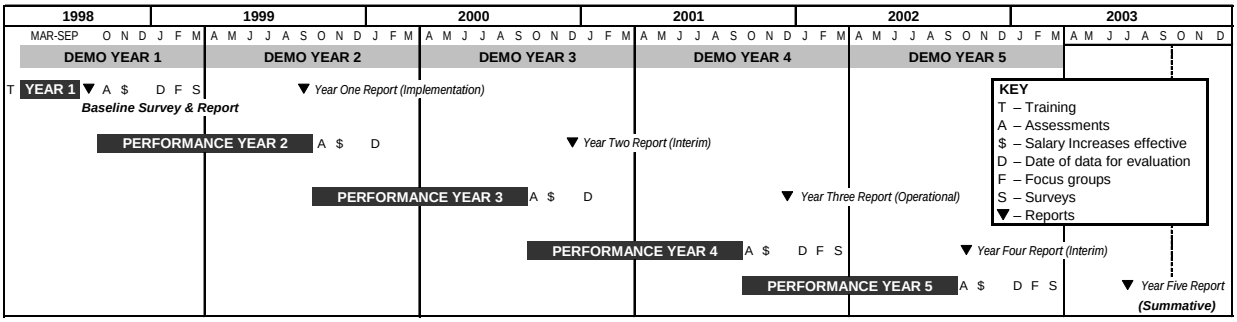
2. DoC DEMONSTRATION PROJECT AND ITS EVALUATION

This chapter, presented with only minor revisions from the Year One and Year Three Reports, presents background information concerning the Demonstration Project, including its objectives, scope, and evaluation.

2.1. The Demonstration Project is being conducted to test the effects of innovative human resources practices in different organizations with a variety of occupational groups.

The current DoC Personnel Management Demonstration Project was implemented on March 29, 1998, and is scheduled to last five years (March 2003)[5] as shown in Figure 1. It was designed to apply several of the human resource interventions from an earlier DoC Demonstration Project at the National Institute of Standards and Technology (NIST). The NIST Project achieved highly successful results and, at its conclusion, the interventions were made permanent. The current project seeks to build on the success of the NIST Project and determine whether or not these interventions can be successfully implemented within DoC to a wider range of occupational areas and within organizations with different missions. With a few revisions, the interventions that comprise the current Demonstration Project are similar to the interventions made permanent at NIST. Included as part of this Demonstration Project are simplified recruiting, classification, and examining processes, as well as a shift to a pay-for-performance system within a pay-banding framework.

Figure 1. DoC Personnel Management Demonstration Project Timeline



2.2. The general objectives of this Demonstration Project emphasize the development of a higher performing workforce, as well as greater efficiency and flexibility of personnel processes.

This Demonstration Project is designed to foster improved organizational and individual performance. This is to be done by recognizing high quality performance and recruiting and retaining high performers. The stated project objectives are:

[5] *The Demonstration Project has since been extended by OPM until 2008 for evaluation purposes.*

- Increased quality of new hires
- Improved fit between position requirements and individual qualifications
- Greater likelihood of getting a highly qualified candidate
- Increased recruitment and retention of high performing employees
- Improved individual and/or organizational performance
- More effective human resources management
- More efficient human resources management
- Increased delegation of authority and accountability to managers
- Better human resources systems to facilitate organizational mission and excellence
- Continued support for goals in recruiting, rewarding, and retaining minorities, women, and veterans
- Continued provision of opportunities for a diverse work force
- Maximization of the contributions of all employees.

2.3. DoC organizations with a wide range of missions and occupations are included in the current Demonstration Project.

The current Demonstration Project is designed to include other organizations within DoC where the personnel interventions adopted at NIST might prove successful. DoC selected seven DoC organizations, with a range of missions and occupational groups, to participate in the current Demonstration Project. Some of these organizations (collectively referred to as the Demonstration Group) received the new personnel interventions. In an effort to determine whether Demonstration Project changes were actually effective, the results obtained from the Demonstration Group are compared with those results from a Comparison Group.

2.3.1. The Demonstration Group consists of seven organizations encompassing occupations in business, management, economics, computer science, statistics, physical science, and natural science.

Table 2-1 presents the organizations participating in the Demonstration Group, along with a statement of mission for each. Table 2-2 shows the major locations and occupations of the employees affected by the Demonstration Project's interventions.

Table 2-1. Participating Demonstration Group Organizations and Their Missions

Organization	Mission
Technology Administration (TA)	TA works to maximize technology's contribution to America's economic growth.
• Office of the Under Secretary	The Office of the Under Secretary is responsible for the management of TA agencies.
• Office of Technology Policy (OTP)	OTP is the only office in the federal government with the explicit mission of developing and advocating national policies that use technology to build America's economic strength.
Economics and Statistics Administration (ESA)	Much of the statistical, economic, and demographic information collected by the federal government is made available to the public through the bureaus and offices of ESA.
• Bureau of Economic Analysis (BEA)	BEA is the nation's accountant, integrating and interpreting a tremendous volume of data to draw a complete and consistent picture of the U.S. economy. BEA's economic accounts—national, regional, and international—provide information on such key issues as economic growth, regional development, and the nation's position in the world economy.
National Telecommunications and Information Administration (NTIA)	NTIA is the Executive Branch's principal voice on domestic and international telecommunications and information technology issues. NTIA works to spur innovation, encourage competition, help create jobs, and provide consumers with more choices and better quality telecommunications products and services at lower prices. In fulfilling this responsibility, NTIA is providing greater access for all Americans, championing greater foreign market access, and creating new opportunities with technology.
• Institute for Telecommunication Sciences (ITS)	ITS is the chief research and engineering arm of NTIA. ITS supports such NTIA telecommunications objectives as promotion of advanced telecommunications and information infrastructure development in the U.S., enhancement of domestic competitiveness, improvement of foreign trade opportunities for U.S. telecommunications firms, and facilitation of more efficient and effective use of the radio spectrum.
National Oceanic and Atmospheric Administration (NOAA)	NOAA's mission is to describe and predict changes in the earth's environment and to conserve and manage wisely the nation's coastal and marine resources.
• Units of the Office of Oceanic and Atmospheric Research (OAR)	OAR, the primary research arm of NOAA, conducts and directs research in atmospheric, coastal, marine, and space sciences through its own laboratories and programs, and through networks of university-based programs.
• Units of the National Environmental Satellite, Data, and Information Service (NESDIS)	NESDIS operates NOAA's satellites and ground facilities; collects, processes and distributes remotely sensed data; conducts studies, plans new systems, and carries out the engineering required to develop and implement new or modified satellite systems; carries out research and development on satellite products and services; provides ocean data management and services to researchers and other users; and acquires, stores, and disseminates worldwide data related to solid earth geophysics, solar terrestrial physics, and marine geology and geophysics.
• Units of the National Marine Fisheries Service (NMFS)	NMFS administers NOAA's programs, which support the domestic and international conservation and management of living marine resources. NMFS provides services and products to support domestic and international fisheries management operations, fisheries development, trade and industry assistance activities, law enforcement, protected species and habitat conservation operations, and the scientific and technical aspects of NOAA's marine fisheries program.

Table 2-2. Major Locations and Occupations in the Demonstration Group

Organization	Major Location(s)	Major Occupations
TA		
• Office of the Under Secretary • Office of Technology Policy (OTP)	Washington, DC	General Administration, Management Analyst, and Technology Policy Analyst
ESA		
• Bureau of Economic Analysis (BEA)	Washington, DC	Economist, Accountant, Financial Administrator, Computer Specialist, Statistician, and Statistical Assistant
NTIA		
• Institute for Telecommunication Sciences (ITS)	Boulder, CO	Electronics Engineer, Mathematician, Computer Scientist, and Engineering Technician
NOAA		
• Office of Oceanic and Atmospheric Research (OAR)	Silver Spring, MD Boulder, CO Miami, FL	Meteorologist, Physical Scientist, Physicist, Electronics Engineer, Computer Specialist, Electronics Technician, Physical Science Technician, and Mathematician
• National Environmental Satellite, Data, and Information Service (NESDIS)	Suitland, MD Silver Spring, MD Asheville, NC Boulder, CO Camp Springs, MD	Physical Scientist, Meteorologist, Computer Specialist, Oceanographer, Physical Science Technician, Electronics Engineer, Engineering Technician, Geophysicist, and Mathematician
• National Marine Fisheries Service (NMFS)	Gloucester, MA Long Beach, CA Juneau, AK Silver Spring, MD Seattle, WA	Fish Biologist, Fish Administrator, Biologist, Microbiologist, Biology Technician, Chemist, Oceanographer, Wildlife Biologist, Computer Specialist, and General Business Specialist

2.3.2. The Comparison Group consists of four organizations that are reasonably similar to the organizations in the Demonstration Group.

In order to separate the impacts of the interventions from other influences, DoC identified four organizations to be included in the Demonstration Project as a Comparison Group. The Comparison Group organizations did not receive the interventions implemented in the Demonstration Group and were chosen because of their similarity to the organizations in the Demonstration Group. The purpose of the Comparison Group is to serve as a point of comparison when analyzing the impact of interventions on the Demonstration Group. If differences are seen between Demonstration and Comparison Groups, then the assumption that the interventions have made an impact can be made more confidently. Table 2-3 presents the Comparison Group organizations, along with their major locations and major occupations.

Table 2-3. Major Locations and Occupations in the Comparison Group

Organization	Major Location(s)	Major Occupation(s)
ESA		
• Headquarters	Washington, DC	General Administration
NOAA		
• Office of Oceanic and Atmospheric Research (OAR)	Ann Arbor, MI Princeton, NJ Seattle, WA	Meteorologist (primary). Physical Scientist, Physicist, Electronics Engineer, Computer Specialist, Electronics Technician, Physical Science Technician, and Mathematician
• National Environmental Satellite, Data, and Information Service (NESDIS)	Wallops Island, VA	Physical Scientist, Meteorologist, Computer Specialist, Oceanographer, Physical Science Technician, Electronics Engineer, Engineering Technician, Geophysicist, and Mathematician
• National Marine Fisheries Service (NMFS)	Woods Hole, MA Miami, FL Seattle, WA La Jolla, CA	Fish Biologist, Biologist, Microbiologist, and Biology Technician (primary). Chemist, Oceanographer, Wildlife Biologist, Computer Specialist, and General Business Specialist

2.4. The Demonstration Project encompasses nearly 5,000 employees in both the Demonstration and Comparison Groups.

All positions that would be classified as General Schedule (GS) or General Manager (GM) positions are covered under the Demonstration Project. Positions that are classified as Senior Executive Service (SES) or Federal Wage System (FWS) are not covered.

Table 2-4 indicates the number of participants in each group, in Year Five, and provides basic demographic data, such as career path, and pay band, race/ethnicity, veteran status, gender, and supervisory status.[6] As this table shows, there were a total of 3,072 Demonstration Group participants and 1,811 Comparison Group participants. These demographic data illustrate the general similarity in the demographic characteristics of

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

participants in the Demonstration and Comparison Groups, which is important for establishing the validity of the Comparison Group used in this evaluation. There are some minor differences between the two groups; these will be addressed in the report in any cases where the differences between the Demonstration and Comparison Groups impact how findings are interpreted.

Table 2-4. Characteristics of Demonstration Project Participants by Agency/Comparison Group

	DEMONSTRATION GROUP										COMPARISON GROUP	
	TA		ESA/BEA		NTIA/ITS		NOAA (OAR, NESDIS, NMFS)		TOTAL			
	#	%	#	%	#	%	#	%	#	%	#	%
# Participants	41	1%	450	15%	76	3%	2,505	82%	3,072	100%	1,811	100%
Career Path (or the equivalent)												
ZA	33	81%	82	19%	5	7%	429	18%	549	19%	176	10%
ZP	1	2%	313	72%	51	70%	1,496	62%	1,861	63%	1,312	72%
ZS	7	17%	30	7%	5	7%	319	13%	361	12%	146	8%
ZT	-	-	10	2%	12	16%	172	7%	194	7%	177	10%
Pay Band (or the equivalent)												
1	1	2%	4	1%	8	11%	48	2%	61	2%	26	1%
2	3	7%	67	15%	8	11%	285	12%	363	12%	338	19%
3	9	22%	178	41%	19	26%	759	31%	965	33%	781	43%
4	13	32%	155	36%	29	40%	1,070	44%	1,267	43%	562	31%
5	15	37%	31	7%	9	12%	254	11%	309	10%	104	6%
Race												
American Indian	-	-	-	-	-	-	13	1%	13	1%	8	<1%
Asian	5	12%	33	7%	4	5%	97	4%	139	5%	108	6%
Black	9	22%	116	26%	-	-	253	10%	378	12%	77	4%
Hispanic	1	2%	12	3%	2	3%	75	3%	90	3%	46	3%
White	26	63%	289	64%	70	92%	2,067	83%	2,452	80%	1,572	87%
Veteran												
Yes	2	5%	41	9%	10	13%	357	14%	410	13%	215	12%
No	39	95%	409	91%	66	87%	2,148	86%	2,662	87%	1,596	88%
Gender												
Male	13	32%	241	54%	60	79%	1,492	60%	1,806	59%	1,158	64%
Female	28	68%	209	46%	16	21%	1,013	40%	1,266	41%	653	36%
Supervisor												
Yes	4	10%	46	11%	1	1%	225	9%	276	9%	158	9%
No	37	90%	390	89%	72	99%	2,204	91%	2,703	91%	1,653	91%

Source: These figures are based upon the objective data provided by DoC (as of March 31, 2003) and represent the composition of the Demonstration Project during Year Five.

Note: Percentages may not add to 100 due to rounding

2.5. A broad range of interventions has been implemented under the Demonstration Project.

The interventions implemented in the Demonstration Group focus on classification, pay, recruitment, retention, and an expanded probationary period. The fifteen interventions, listed below, are described in the following sections. Appendix A-1 displays the *Federal Register* notice on the Demonstration Project and its interventions (and Appendix A-2 displays the modified *Federal Register* notice).

1. Career paths
2. Pay bands (Broadbanding), in conjunction with flexible entry salaries
3. Performance-based pay increases (pay-for-performance)
4. Supervisory performance pay
5. More flexible pay increase upon promotion
6. Performance bonuses
7. Direct examination[7]
8. Agency based staffing[8]
9. More flexible paid advertising
10. Local authority for recruitment payments
11. Local authority for retention payments
12. Automated broadband classification system
13. Delegated classification authority to managers
14. Delegated pay authority to managers
15. Three-year probationary period for scientists and engineers (ZP employees performing research and development (R&D) activities).

2.5.1. Four career paths have been established that group occupations according to similar career patterns.

Under the Demonstration Project, Demonstration Group occupations have been grouped into four broad career paths. Each career path consists of occupations that have similar career patterns and therefore can be treated similarly for classification, pay, and other personnel purposes. In contrast, under the GS system, occupations are grouped by similarities in content. The career paths developed for the Demonstration Group are:

- **Scientific and Engineering (ZP)**. Consisting of professional technical positions in the physical, engineering, biological, mathematical, computer, and social science occupations; and student trainee positions in these fields.

- **Scientific and Engineering Technician (ZT)**. Consisting of positions that support scientific and engineering activities through the use of skills in electrical, mechanical, physical science, biological, mathematical, and computer fields; and student trainee positions in these fields.

- **Administrative (ZA)**. Consisting of positions in such fields as finance, procurement, personnel, program and management analysis, public information, and librarianship; and student trainee positions in these fields.

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[7] *DoC intentionally chose to use the term "Direct examination" to parallel the term used in the NIST Demonstration Project, upon which the DoC Demonstration Project is based. This recruitment method is now available to all agencies through examining authority delegated by OPM.*

[8] *DoC intentionally chose to use the term "Agency based staffing" to parallel the term used in the NIST Demonstration Project, upon which the DoC Demonstration Project is based. This recruitment method is now available to all agencies through examining authority delegated by OPM.*

- **Support (ZS)**. Consisting of positions that provide administrative support, through the use of clerical, typing, secretarial, assistant, and other similar skills; and student trainee positions in these fields.

The career paths are intended to make classification simpler, more understandable, and easier to automate.

2.5.2. Pay bands are composed of one or more GS grades and allow for flexibility in pay setting.

The change from the GS system to pay bands (broadbanding) is one of the major Demonstration Project interventions. The pay bands were created by collapsing the traditional GS salary grades (including locality rates) into five broad groups with much larger ranges (i.e., pay bands)[9]. Figure 2 shows the four career paths, their corresponding pay bands, and GS system equivalents. The maximum rate of a pay band is equivalent to step 10 of the highest GS grade used to create that band. Each career path collapses GS grades into bands differently; therefore, the band ranges differ by career path. Only the ZP and ZA career paths have pay bands that correspond to the full spectrum of GS grades. One to six GS grades are consolidated into any given pay band, depending on the career path and level of the band.

Figure 2. Career Paths and Bands for Demonstration Group Participants

CAREER PATHS	BANDS														
Scientific and Engineering (ZP)	I						II				III		IV		V
Scientific and Engineering Technician (ZT)	I				II				III		IV		V		
Administrative (ZA)	I						II				III		IV		V
Support (ZS)	I		II		III		IV		V						
GS Grades	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Source: Federal Register Notice: Personnel Management Demonstration Project; Alternative Personnel Management System for the U.S. Department of Commerce (December 24, 1997).

[9] *The way in which the pay bands were constructed for the Commerce Personnel Management Demonstration Project was based on advice from the Office of Personnel Management and was guided by twenty years of research on Demonstration Projects.*

Pay bands are intended to add flexibility in pay setting for attracting job candidates and rewarding high performing employees. Pay bands were also put in place to provide larger, more flexible classification ranges, aiding in the delegation of classification and pay authority to line managers. Pay bands are also meant to facilitate the provision of performance incentives for employees, in that they give employees the opportunity to receive raises more quickly.

Together, career paths and pay bands are intended to simplify classification and accelerate pay progression, as well as facilitate pay-for-performance.

2.5.3. Pay-for-performance is a system meant to link pay increases directly to performance, resulting in a more competitively paid, higher quality workforce.

Another major intervention is the establishment of a pay-for-performance system. Pay-for-performance links pay raises directly to job performance. Under the Demonstration Project, three components were subsumed by pay-for-performance. The first component is an annual adjustment to basic pay, which includes an annual general increase and a locality pay increase approved by Congress and the President. The second component is an annual performance-based pay increase. Bonuses constitute the third component. Funds that were applied to within-grade increases, quality step increases, and promotions (i.e., a higher pay band in the same career path or a pay band in another career path in combination with any increase in the employee's salary) are now being applied to performance-based pay increases. In contrast to the GS system, there is no one-to-three year waiting period between pay increases, and the pay increase amounts are potentially higher.

Pay-for-performance is meant to govern employee progression through the pay bands. Pay-for-performance is, of course, meant to tie pay raises to performance, in contrast to the GS system, which ties pay raises mostly to tenure. Its goal is to give higher pay raises to those whose performance is high. Because of the flexibility that the bands allow, the performance-based pay raises can be, in theory, substantial. The pay-for-performance system, along with the pay bands, is meant to improve performance and retain high quality employees.

At the onset, DoC created a web-based Performance Payout System (PPS) to manage the performance data. As of Year Five, there have been many improvements to the PPS, such as software enhancements, improved reporting, and changes regarding password access as a result of the changes to the DoC password policy. Site historians report that DOC staff, along with contractors, has been making significant strides in improving the software and reports.

Implementation of the pay-for-performance system also included the implementation of a new performance appraisal system. It is important to note that NOAA units outside of the Demonstration Group have also adopted a new performance appraisal system, independent of the Demonstration Project. Table 2-5 outlines some of the major differences between the traditional, the new NOAA, and the Demonstration Project performance appraisal systems.

Table 2-5. Performance Appraisal Systems

TRADITIONAL SYSTEM[10] (Comparison Group)	NEW NOAA SYSTEM[11] (Comparison Group)	DEMO PROJECT SYSTEM (Demonstration Group)
• Individual performance plans	• Individual performance plans	• Individual performance plans
• Performance improvement plans	• Performance improvement plans	• Performance improvement plans
• 500-point system	• Two-tier system	• 100-point, two-tier system
• Critical and non-critical elements included	• Critical elements included; non-critical elements not included	• Critical elements included; non-critical elements not included

Each employee in the Demonstration Project has an individual performance plan that is composed of several critical performance elements. Under this performance appraisal system, all of the performance elements are critical; if an employee gets an unsatisfactory rating on one element, there is no performance score and that person is deemed "unsatisfactory." Employees who are deemed unsatisfactory are not eligible for pay-for-performance increases, bonuses, or annual adjustments to basic pay. These employees must be put on a performance improvement plan and given a chance to improve before a final rating is put on record. Demonstration Group participants who are not performing unsatisfactorily on any of the performance elements are rated using the 100-point scoring system. Supervisors report scores to the Pay Pool Manager who, during the first two years of the Demonstration Project, put the scores in rank order for all employees in the pay pool for administration of salary actions. Because many employees felt that the assignment of numerical rankings created a competitive environment, DoC has since eliminated the individual rankings and now arrays the data in score order to maintain the linkage between scores and pay actions without assigning a numerical rank.

In Year Three, an additional factor that may have impacted pay, but is not directly linked to performance, was a government-wide special pay rate for information technology (IT) workers. This action took effect on the first pay period that began on or after January 1, 2001, and applied to IT professionals in certain occupations at grades 5, 7, 9, 11, and 12. In addition to increasing the pay of IT workers in the Demonstration Project, this event may have positively impacted the recruitment and retention of IT workers in the Demonstration Project and elsewhere in the government. No new special pay rates were implemented in Year Five.

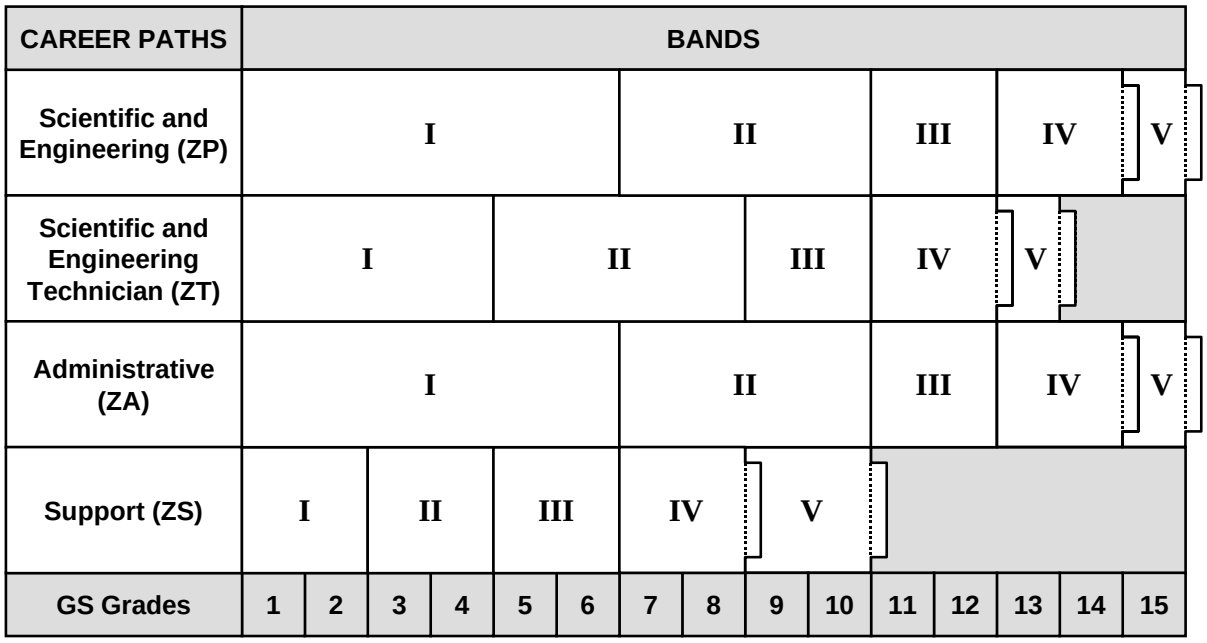
10 *Note that ESA-HQ, which operated under the traditional system defined here for the majority of the Demonstration Project years, converted to a two-level ("Meets Or Exceeds" or "Does Not Meet Expectations") performance appraisal system in October 2002.*

11 *New at approximately the start of the Demonstration Project.*

2.5.4. Supervisory performance pay is meant to help retain supervisors by giving them higher pay potential for high supervisory performance.

Supervisors in all career paths are eligible for supervisory performance pay when their salaries reach the maximum for their pay band. In each pay band that includes supervisory positions, there is a corresponding supervisory band (as shown in Figure 3). The supervisory bands have the same minimum levels as do the non-supervisory bands. The only difference is that the supervisory bands extend up to 6 percent above the maximum point of the corresponding non-supervisory band. The amount that a supervisor is paid above the maximum rate of his/her pay band constitutes supervisory performance pay. The range constituting supervisory performance pay (up to 6 percent above the maximum) can be reached only through pay-for-performance increases gained through the regular performance appraisal process. Supervisory performance pay is meant to give the ability to raise the pay of high performing supervisors to more competitive levels, thus improving retention.

Figure 3. Pay Bands for Supervisory Employees



2.5.5. Flexible pay increases upon promotion are intended to allow supervisors to tie pay to employee performance and to substantially reward excellent performance.

One intervention related to pay bands (broadbanding) and pay-for-performance is flexible pay increases upon promotion (a promotion is movement from one pay band to another). High performing employees now have the potential to receive substantial pay increases when they are promoted. Because of the less restricting nature of pay bands, an employee's salary, upon promotion, can be set anywhere within a band (with a minimum 6 percent increase) without being restricted by the small steps characteristic of the GS system. This intervention is meant to encourage the retention of high performers by making their salaries more competitive with the private sector.

2.5.6. Performance bonuses are payments meant to reward and encourage employee performance and improve retention.

Performance bonuses are cash awards given following a performance appraisal cycle, in conjunction with performance pay decisions. Pay Pool Managers can award a bonus to any employee with an "eligible" performance rating (i.e., individuals who have a satisfactory, or better, rating on all performance elements). Pay Pool Managers make decisions based on supervisor recommendations and the amount in the bonus pool. The maximum bonus amount that can be given is $10,000 (greater amounts can be granted with the Departmental Personnel Management Board's approval). Bonuses are meant to reward high performers, increasing their retention. Bonuses are also meant to act as a performance incentive to the workforce.

Performance bonuses can also be awarded to DoC employees who entered the Demonstration Project too late to receive a performance rating, but who have received a DoC performance rating of record within the previous 13 months. In these situations, bonuses can be used to remove the disincentive of not receiving a pay increase. Performance bonuses can also be used as a tool to reward high performing employees who are pay capped.

2.5.7. For certain positions, direct examination allows DoC to hire candidates directly without using the OPM job register, thereby decreasing time to hire.

Direct examination is a recruitment intervention for shortage categories that allows selecting officials to directly recruit and hire candidates who present specific credentials to fill an open announcement, without having to use the OPM job register[12]. While selecting officials can directly recruit for candidates, they are also required to compete these candidates with applicants who have applied through the Applicant Supply Bulletin (i.e., public notices for direct examination occupations) and applicants whose applications are stored in the operating unit Applicant Supply File (which contains direct-hire occupations and applicants). Furthermore, veteran preference rules apply to these direct examination procedures.

The Demonstration Project incorporates two direct examination authorities. The first authority is direct examination for critical shortage occupations, which is used for occupations requiring skills in short supply. These include occupations for which there is a special rate under the General Schedule (GS) system and some occupations at band three and above in the ZP career path. To date, no critical shortage occupations have been identified under the Demonstration Project.

The second authority is direct examination for critical shortages of highly qualified candidates, which is used for positions where there is a shortage of highly qualified candidates. An example of a critical shortage highly qualified candidate is a person qualified for band one or two of the ZP career path who has:

[12] *Direct examination is similar to the currently available direct-hire authority, which "provides agencies the authority to appoint candidates directly to jobs for which OPM determines that there is a severe shortage of candidates or a critical hiring need" (Federal Register notice, 6/15/04).*

- A bachelor's degree and at least a 2.9 GPA in a job-related major, or
- A master's degree in a job related field.

2.5.8. Agency based staffing, which can be used for positions not covered by direct examination, gives DoC the ability to certify its own candidates; this is expected to decrease time to hire.

Agency based staffing, another recruitment intervention, is used to fill vacancies not covered by direct examination. At a minimum, positions eligible for agency based staffing are advertised through OPM's automated employment information system. Agency based staffing gives DoC the ability to examine and certify its own candidates instead of having OPM certify them. It allows DoC to create its own candidate registers, and to rate and rank the candidates independent of OPM. Agency based staffing, in conjunction with flexible paid advertising, was meant to be used to help hiring officials focus on more relevant recruiting sources and to accelerate the hiring process.

Agency based staffing was a unique intervention when initially implemented in the NIST Demonstration Project. However, since January 1996, all federal government agencies have been granted delegated examination authority by OPM, which is a similar recruitment tool. Delegated examination authority provides agencies with the authority to conduct competitive examinations for positions in the competitive service (except for administrative law judge positions).

2.5.9. Flexible paid advertising allows DoC to use more specialized advertising sources to attract highly qualified candidates.

Flexible paid advertising is an intervention that allows DoC to utilize paid advertising sources as a first step in recruiting, without having to utilize unpaid sources first. Hiring officials can now use a wider scope of advertising sources, as well as concentrate on more specialized sources. More flexible paid advertising is meant to allow hiring officials to make greater use of alternative recruitment sources.

2.5.10. Local authority for recruitment payments allows DoC to grant payments for the purpose of recruiting high quality candidates.

Local authority for recruitment payments allows operating units to independently grant recruitment payments in an amount not to exceed the greater of $10,000 or 25 percent of base pay. Payments are based on market factors such as salary comparability, turnover rate, salary offer issues, relocation issues, programmatic urgency, special qualifications, shortage categories, or scarcity of positions. All scientific, engineering, and hard-to-fill positions are eligible. The main purpose for the recruitment payment is to increase the quality of the workforce by attracting high quality performers.

The current Demonstration Project modeled many of the features of the NIST Demonstration Project, which began in 1988, and thereby adopted "local authority for recruitment payments" as an intervention. However, under 5 U.S.C. 5753 recruitment bonuses are now also available elsewhere in the federal government. Under this authority, recruitment

bonuses may be paid in a lump-sum of up to 25 percent of an employee's base pay, with a service agreement of varying time requirements.

2.5.11. Local authority for retention payments allows DoC to grant payments for the purpose of retaining high quality candidates.

Similar to local authority for recruitment payments, local authority for retention payments allows operating units to grant retention payments not to exceed the greater of $10,000 or 25 percent of base pay. These payments also are based on market factors. All scientific, engineering, and hard-to-fill positions are eligible. The main purpose for the retention payments is to increase the quality of the workforce by retaining high quality performers who are retiring or are leaving for a position in private industry.

The Federal Employees Pay Comparability Act of 1990 (FEPCA) allows retention payments up to 25 percent of an employee's base pay. Similar to the recruitment payment intervention, while the current Demonstration Project modeled this intervention after the NIST Demonstration Project, retention payments are also now available elsewhere in the federal government under 5 U.S.C. 5754.

2.5.12. The classification system was automated to make the classification process easier to use and more efficient.

Under the Demonstration Project, the classification system has been automated. Position descriptions can be created, accessed, classified, and altered electronically. A DOS-based software program was originally built for these purposes. Beginning in Year Three, efforts were initiated to transition to a web-based system to make the process far more user-friendly. Specifically, supervisors can use the system to:

- Create a new position description
- Create a new position description based on another
- Delete a position description
- Edit an unofficial position description
- Print a position description
- Review a position description
- Run queries
- Delete, edit, print, or view a position description by action number
- Export a position description
- Maintain the position description system.

The purpose of the automation is to make the classification system easier to use and more expedient. Automation of the system is also meant to minimize the resources needed for operation and to minimize the classification decisions that need to be made.

2.5.13. Delegated classification authority places classification responsibility with the managers.

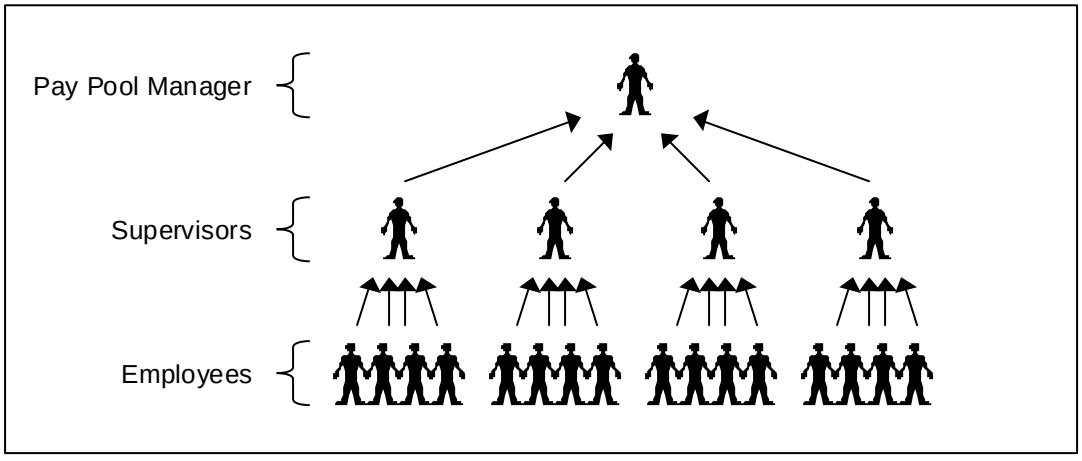
Under the Demonstration Project, DoC delegated classification authority down to the line managers, giving them the authority to classify positions. Each operating unit's Operating Personnel Management Board (OPMB) has the responsibility for overseeing the delegation of classification authority. Human resources personnel have the responsibility to monitor and review classification decisions. Delegated classification authority is meant to give managers more control over classifying the work they supervise. Managers must understand their operating unit's mission and the work they supervise to be effective classifiers.

2.5.14. Delegated pay authority allows line managers to direct and administer pay functions.

Delegated pay authority gives line managers (i.e., supervisors) the authority to direct and administer pay procedures. Under the GS system, federal employees receive increases in salary in accordance with their grade and step. Under the Demonstration Project, supervisors evaluate the performance of their subordinates and communicate their recommendations to the Pay Pool Manager. Supervisors may also make recommendations for performance-based pay increases and/or bonuses. The Pay Pool Manager, however, makes the final decisions regarding the dollar amounts for both performance-based pay increases and bonuses.

The purpose of delegated pay authority is to improve the effectiveness of human resources management by having line managers more involved as managers of the human resources in their units. Managers have a first hand view of employee performance and therefore can make the most effective pay recommendations. Line managers' involvement is increased significantly under the Demonstration Project because they now have responsibility and authority for managing pay and making pay decisions. Figure 4 displays the delegated pay authority relationship within the Demonstration Group. These newly delegated authorities are subject to oversight by the Operating Personnel Management Boards at the local level, and by the Departmental Personnel Management Board, which ensures adherence to Departmental policy and procedures.

Figure 4. Pay Authority Relationship



2.5.15. The three-year probationary period gives managers more of an opportunity to observe ZP employees performing R&D duties for the full R&D cycle.

Under the three-year probationary period intervention, employees in the scientific and engineering (ZP) career path who perform R&D work are subject to a three-year probationary period. (Other employees within the Demonstration Project serve the same one-year probationary period as employees throughout the government.) Managers have the authority to end the three-year probationary period of an R&D subordinate at any time after a year. Near the end of the first year of probation, a manager decides whether to 1) change the employee to non-probationary status, 2) remove the employee, or 3) keep the employee on probationary status. If the employee remains on probationary status, then the manager must choose between these three options near the end of the second year. If the employee remains on probation into the third year, then the manager must make a final decision on whether to remove or keep the employee.

2.6. A valid evaluation of the Demonstration Project is critical in determining whether to continue the tested interventions and whether to make them a part of other government organizations.

OPM requires that every Demonstration Project be rigorously evaluated by an independent evaluator. The purpose of the DoC Demonstration Project evaluation is to determine if the Demonstration Project's objectives were met. The evaluation's purpose is also to determine what, if any, mid-course revisions should be made to the Demonstration Project implementation, and whether the project interventions can be applied in other federal government organizations. The Demonstration Project evaluation is driven by a number of research questions.

2.6.1. The research questions for the Demonstration Project were derived from both the OPM Demonstration Projects Evaluation Handbook and the DoC Demonstration Project objectives.

Evaluation of the Demonstration Project interventions seeks ultimately to answer several research questions. The OPM Demonstration Projects Evaluation Handbook (Batten, Goehrig, and Jorgenson, 1998) states that the research questions that must be answered will differ from project to project. However, six general research questions (presented in Table 2-6) must be answered for every Demonstration Project.

Table 2-6. Research Questions from OPM Demonstration Project Handbook

OPM Research Questions	Timing of Answer
1) Did the project accomplish the intended purpose and goals? If not, why not?	Years 3 & 5
2) Was the project implemented and operated appropriately and accurately?	All years
3) What was the cost of the project?	Year 5
4) What was the impact on veterans and other EEO groups?	All years
5) Were Merit Systems Principles adhered to and Prohibited Personnel Practices avoided?	All years
6) Can the project or portions thereof be generalized to other agencies or government-wide?	Year 5

In addition, research questions are based on six objectives specific to the DoC Demonstration Project. These objectives stem from major concerns within DoC in regards to hiring restrictions, a complex job classification system, and poor tools for rewarding and motivating employees (*Federal Register* notice, December 1997; displayed in Appendix A-1). The Demonstration Project was implemented to address these types of issues. Accordingly, the evaluation also seeks to address the six additional research questions specified in Table 2-7.

Table 2-7. Research Questions Related to DoC Demonstration Project Objectives

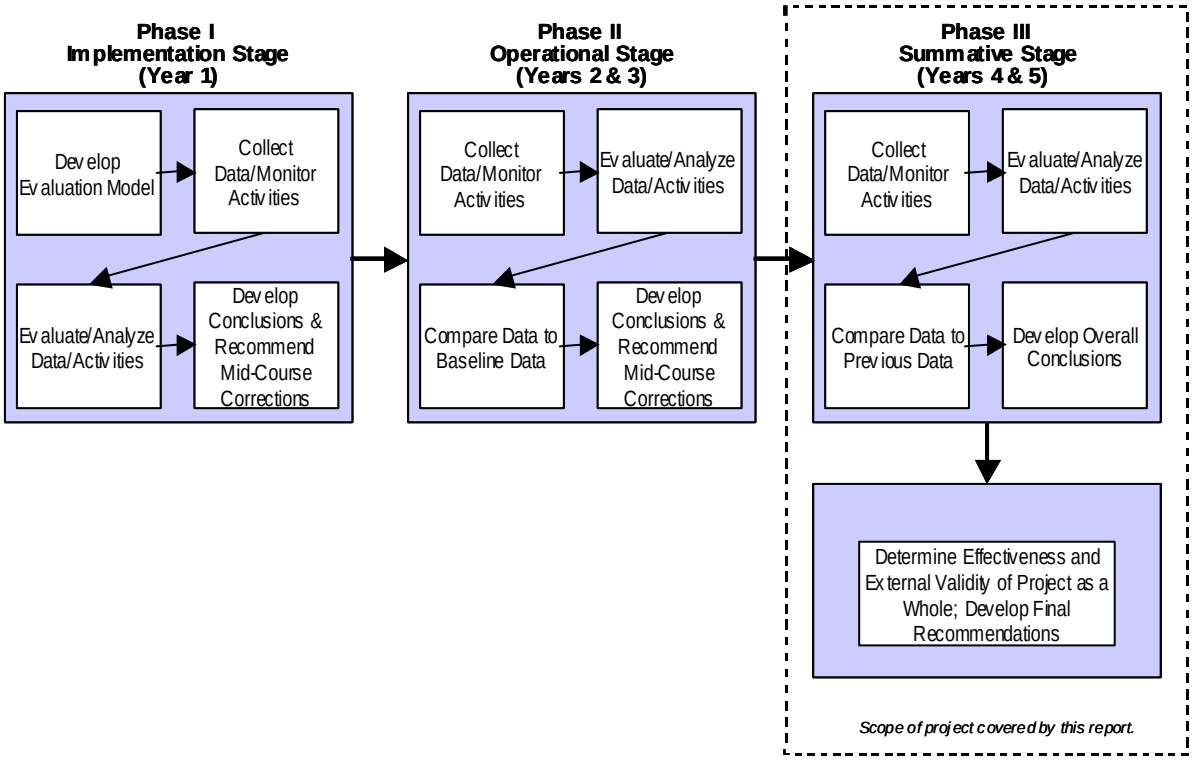
DoC-Specific Research Questions	Timing of Answer
1) Has the quality of new hires increased; has there been an improved fit between position requirements and individual qualifications; has there been a greater likelihood of getting a highly qualified candidate?	Years 3 & 5
2) Has retention of good performers increased?	Years 3 & 5
3) Has individual and organizational performance improved?	Years 3 & 5
4) Is Human Resources management more effective?	Years 3 & 5
5) Is Human Resources management more efficient?	Years 3 & 5
6) Is there improved support for EEO/diversity goals in recruiting, rewarding, paying, and retaining minorities; are opportunities for a diverse workforce being provided; are the contributions of all employees being maximized?	All Years

The 12 research questions above were tracked during all three phases of the Demonstration Project evaluation and are the ultimate questions to be answered by this summative evaluation. Chapter 5 of this report provides a high-level summary addressing these questions based on data available after five years of operation (which are presented throughout Chapter 4).

2.6.2. The Demonstration Project evaluation is being conducted in three phases and compares a Demonstration Group to a Comparison Group, across time.

A non-equivalent comparison group, quasi-experimental, research design is being used to evaluate the Demonstration Project. Quasi-experimental design is used when it is not possible to control for all variables, or when it is not possible or practical to randomly assign subjects to equivalent groups. The non-equivalent comparison group design seeks to control for confounding variables by tracking a Comparison Group that is reasonably similar (though not necessarily identical) to the experimental (Demonstration) group. The DoC Demonstration Project evaluation is being conducted in three phases, shown in Figure 5, and will compare the Demonstration Group to the Comparison Group across time.

Figure 5. DoC Demonstration Project Evaluation Model



In general, the three phases of the evaluation will focus on project implementation and project effectiveness, but to different degrees. The evaluation will also serve to produce mid-course correction recommendations as the project progresses. The three phases differ slightly in their focus but were designed to complement each other. An evaluation report was produced at the end of each of the three phases.

This Summative Year Report presents the opportunity to compare data across the life of the Demonstration Project. This report presents data on the state of the Demonstration Project in Year Five and also, importantly, provides trend analyses to examine changes that occurred over time.

3. DATA COLLECTION AND ANALYSES

Multiple data collection methods were used to gather the information needed for Booz Allen's assessment of the effectiveness of the Demonstration Project interventions. These methods included interviews with key program staff and managers, focus groups, a survey, a review of objective data obtained from the National Finance Center (NFC) Payroll/ Personnel System and the Demonstration Project's Performance Payout System (PPS), a review of human resources (HR) summary data, site historian logs, and cost data. Each data collection method is described in detail below.

3.1. Booz Allen conducted 17 interviews with staff in the DoC organizations participating in the Demonstration Group to determine their perceptions of the project.

Booz Allen conducted individual, face-to-face interviews with senior managers and human resources staff from agencies operating under the Demonstration Project's personnel interventions. Interviewees were selected based on the relevance of their roles and/or positions to the Demonstration Project. The intent of the interviews was to acquire more detailed information about processes and procedures than can be gained from documentation. Furthermore, Booz Allen was interested in obtaining the perspectives of employees who are in some way involved with administering and/or monitoring the Demonstration Project interventions.

Interviews were conducted using a structured interview format, with questions tailored to the individual's area of expertise. The responses to the interview questions were then analyzed to identify themes, trends, and discrepancies. (See Appendix B-1 for the interview protocol; a summary of the interview results has been provided to DoC under separate cover.) In total, 17 interviews were conducted (see Table 3-1).

Table 3-1. Interviews Conducted

Interviewees	Number
Directors and Administrative Officers	3
Pay Pool Managers	5
Rating Officials	4
Human Resources and EEO Staff	5

3.2. A total of 21 focus groups were conducted with employees from the Demonstration and Comparison Groups to help assess the Demonstration Project's impact.

Focus groups were conducted to obtain in-depth perceptual data from employees in the Demonstration and Comparison Groups. Several key purposes drove our decision to use focus groups as a source of data. Focus groups:

- Provide a means of capturing rich, qualitative data on employee perspectives of the Demonstration Project
- Trigger ideas or research questions that can then be analyzed with our survey or objective data
- Convey to Demonstration Project participants our interest in hearing their opinions.

Booz Allen-trained facilitators used four structured focus group protocols to guide the focus group sessions. Separate protocols were used for Demonstration and Comparison Groups, and for non-supervisor and supervisor groups. Prior to presenting the focus group questions for discussion, Booz Allen facilitators provided introductory information including the purpose of the session, how individuals were selected to participate, and how focus group responses would be used. Table 3-2 lists the topics that were covered by the focus group protocols.

Table 3-2. Focus Group Topics

• Performance Management	• Employee Retention
• Career Progression	• Quality of the Workforce
• Classification	• Organizational Excellence and Workforce Diversity
• Hiring/Recruitment	• Minority/Gender Issues
• Employee Turnover	

Prior to recruiting participants, Booz Allen worked with DoC to identify locations in which the focus groups and interviews would be held. Site visit locations were determined by considering a number of criteria:

- Balance of Comparison and Demonstration Group participants
- Inclusion of all participating organizations
- Inclusion of some locations not visited as part of the Year One evaluation
- Input from the Project Team members
- Budget constraints.

The majority of the focus groups (17 out of 21) were structured as supervisory or non-supervisory groups; there was also one all-female group and three all-minority groups. The latter groups allowed Booz Allen to assess whether certain categories of employees felt

differentially impacted by the Demonstration Project interventions. The breakdown of the 21 focus groups is presented in Table 3-3.

Table 3-3. Focus Groups Conducted

Demonstration Group supervisory groups	5
Demonstration Group non-supervisory groups	7
Demonstration Group all-female group	1
Demonstration Group all-minority group	3
Comparison Group supervisory group	3
Comparison Group non-supervisory groups	2

Once the locations and composition of the focus groups were established, employees were randomly selected to participate. Lists of alternates were drawn and used in those cases where a selected individual could not attend.

Focus groups were conducted during the Summer of 2003[13]. The data from the focus groups were organized and analyzed to identify trends, themes, and discrepancies. (Appendix B-2 contains the focus group protocols; a complete summary of focus group results has been provided to DoC under separate cover. Appendix B-3 lists the focus group sites by location, focus group type, and organization).

3.3. A survey of Demonstration and Comparison Group participants provided a key data source for our assessment.

The survey garnered opinions from Demonstration Group and Comparison Group participants on a wide range of human resources issues and practices relevant to the Demonstration Project. The survey included all of the items from the Operational Year Survey (administered during Year Three) and the Implementation Year Survey (administered during Year One), with several exceptions:

One item was deleted, as this practice is no longer used:

- *It is important for me to know where I rank among my co-workers. (item 31)*

The survey included three new items to add clarity to the data:

- *If you were hired since March 2001, when were you hired? (item 56) [this item was intended to distinguish between those hired in Year Four versus Year Five]*
- *In the past two years, have you hired employees under the three-year probation period for ZP employees performing research and development work? (item 143)*
- *I have the necessary flexibility to terminate ZP employees performing research and development work who are covered by the three-year probation period. (item 144)*

[13] *Interviews and focus groups were conducted slightly after the completion of Year Five due to contractual delays for the Year Five evaluation.*

The wording of one item was changed to reflect the new method of survey administration:

- *I liked being able to take this survey electronically on the Internet rather than as a paper survey. (item 122)*

All other survey items were retained from the original survey without modification to wording or order to allow for comparisons over time. This consistency helps ensure that any differences that may appear are attributable to changes in opinion or perception rather than a change in the survey instrument.

A key change in Year Five was that the survey was converted from paper to electronic format. Booz Allen hosted the survey on one of its servers, and distributed an email message with a hot link to the web site to all Demonstration Project participants (i.e., Demonstration Group participants and Comparison Group participants). Employees were asked to complete the survey within two weeks of receiving the email message. A reminder email was sent midway through the administration period. Booz Allen analyzed the survey data and only reported out survey results in the aggregate. (See Appendix C for survey materials.)

One advantage of survey data is that they provide information on employee attitudes and opinions that can be generalized to all Demonstration Group and Comparison Group participants. This generalization is possible due to the large number of surveys returned by each group. In total, 2,038 Demonstration Project participants returned the Summative Year Survey (Year Five), for an overall (across both groups) response rate of 43 percent. This response rate is an improvement over all previous survey administrations as shown in Table 3-4. This increase in the response rate is likely attributable to the conversion to a web-based administration method.

Table 3-4. Survey Response Rates

		Demonstration Group		Comparison Group	
	Total Respondents	**Participants**	**Respondents**	**Participants**	**Respondents**
Summative Year *	2,038	2,914	1,261 (43%)	1,805	777 (43%)
Operational Year	1,721	2,781	1,112 (40%)	1,808	609 (34%)
Implementation Year	1,438	2,697	935 (35%)	1,707	503 (29%)
Baseline Year[14]	1,536	2,649	1,024 (39%)	1,633	512 (31%)

** The total number of participants reported here for the Summative Year survey reflects the numbers reported by the participating organizations at the time of survey administration. Therefore, these numbers vary from the total number of participants in the objective data files provided to Booz Allen for Year Five analyses. (Demonstration Group: 2,914 versus 3,072 participants; Comparison Group: 1,805 versus 1,811 participants)*

[14] *A firm other than Booz Allen administered the Baseline Survey prior to the start of the Demonstration Project.*

3.3.1. Demonstration Group and Comparison Group survey respondents were reasonably similar.

The strength of the survey data is also determined based on the degree to which the survey respondents are reasonably similar to the overall populations of Demonstration Project employees that they represent. Table 3-5 illustrates the similarity in the demographic characteristics (e.g., gender, race/ethnicity) of survey respondents in the Demonstration and Comparison Groups. The table confirms the basic similarity in the demographic profiles of the Demonstration and Comparison Groups, which is important for establishing the validity of the Comparison Group used in this evaluation.

One demographic characteristic on which the numbers diverge is supervisory status. This difference likely reflects a difference in how supervisors were defined on the survey versus in the objective data file. The survey allowed respondents to self-report on one of four options: non-supervisory worker, team leader, first-line supervisor (give performance appraisals), and manager (you supervise at least 1 supervisor). All but the first category were treated as supervisors for the survey data analysis. In contrast, the objective data file contains only two options – supervisor or non-supervisor. While this difference is noted, it is not expected to have an impact on the analyses or the results, particularly because most analyses examine supervisors and non-supervisors separately.

Table 3-5. Comparison of Survey Respondents to All Participants

	Demonstration Group		Comparison Group	
	Participants	**Respondents**	**Participants**	**Respondents**
OVERALL	**3,072**	**1,261 (41%)**	**1,811**	**777 (43%)**
GENDER				
Male	1,806 (59%)	709 (57%)	1,158 (64%)	454 (59%)
Female	1,266 (41%)	536 (43%)	653 (36%)	311 (41%)
RACE/ETHNICITY				
Caucasian	2,452 (80%)	1,024 (82%)	1,572 (87%)	653 (87%)
African-American	378 (12%)	110 (9%)	77 (4%)	26 (3%)
Asian or Pacific Islander	139 (5%)	52 (4%)	108 (6%)	53 (7%)
Native American	13 (1%)	12 (1%)	8 (<1%)	5 (1%)
Hispanic	90 (3%)	*NA*	46 (3%)	*NA*
Other	*NA*	44 (4%)	*NA*	18 (2%)
HISPANIC ORIGIN				
Hispanic origin	*NA*	46 (4%)	*NA*	28 (4%)
Non-Hispanic origin	*NA*	1,139 (96%)	*NA*	687 (96%)
SUPERVISORY STATUS				
Non-Supervisory Employee	2,703 (91%)	897 (71%)	1,653 (91%)	585 (75%)
Supervisory Employee	276 (9%)	364 (29%)	158 (9%)	192 (25%)
PAY GRADE – GS & GM SCHEDULE				
1			1 (<1%)	5 (1%)
2			2 (<1%)	1 (1%)
3			3 (<1%)	3 (1%)
4			20 (1%)	7 (1%)
5			35 (2%)	15 (2%)
6			55 (3%)	26 (4%)
7			153 (8%)	63 (9%)
8			34 (2%)	16 (2%)
9			220 (12%)	77 (11%)
10			13 (1%)	8 (1%)
11			376 (21%)	125 (17%)
12			364 (20%)	152 (21%)
13			274 (15%)	107 (15%)
14			169 (9%)	62 (9%)
15			92 (5%)	55 (8%)

Table 3-5. Comparison of Survey Respondents to All Participants (continued)

	Demonstration Group		Comparison Group	
	Participants	Respondents	Participants	Respondents
ZP	1,861 (63%)	810 (65%)		
ZT	194 (7%)	57 (5%)		
ZA	549 (19%)	267 (22%)		
ZS	361 (12%)	110 (9%)		
PAY BAND				
I	61 (2%)	8 (1%)		
II	363 (12%)	152 (12%)		
III	965 (33%)	440 (36%)		
IV	1,267 (43%)	515 (42%)		
V	309 (10%)	114 (9%)		

Notes:

. For some demographic items on the survey (e.g., gender), not all respondents provided a response. Percentages are based on the number of respondents who provided responses.

2. NA = Not available. Race/ethnicity data were captured differently in the survey and the objective data file. In the survey, Hispanic was not included as an option in the race/ethnicity question; rather it was a separate yes/no question. In the objective data file, Hispanic was an option in the race/ethnicity question. In addition, no "other" option was offered. Please note that race/ethnicity will be captured differently in Years Six-Ten and in line with current EEOC thinking about categories.

3.3.2. Survey results are presented throughout the report, highlighting between group and across time findings.

In the "Findings and Conclusions" section, Year Five survey data are presented in table format to facilitate understanding. These tables show the percentage breakdown of responses from Demonstration and Comparison Group survey respondents, with a column indicating whether there is a statistically significant difference in their responses. In addition, responses of supervisory and non-supervisory employees are reported separately where there are statistically significant differences between them.

Technological difficulties resulted in the loss of data for six survey items (15, 39, 142, 143, 144, and 145). However, we found that this did not have an impact on the ability to draw conclusions from the survey data overall.

For the preliminary data analyses, Booz Allen generated cross-tabulations and performed statistical tests (e.g., t-tests) to determine whether differences between groups (Demonstration Group versus Comparison Group, supervisors versus non-supervisors) were statistically different. This information is presented in table format throughout the report.

For selected survey items, Booz Allen performed trend analyses, which are displayed as line charts in the appropriate sections of the "Findings and Conclusions." The items that are presented in this fashion are the same items for which trend analyses were performed in Year Three.

3.4. Booz Allen used objective personnel data to measure the impact of the Demonstration Project's interventions.

Objective data analyses played a major role in the assessment. Whereas interview, focus group, and survey data provided a wealth of information about perceptions, we relied on the objective data analyses for more factual information. To maintain consistency, nearly the same data elements and data analyses were used as in past years.

3.4.1. Personnel data, including performance, compensation, and demographic data, were collected.

For the Year Five Report, Booz Allen collected and analyzed objective data contained in a datafile presented to us by DoC, which relied upon data from NFC's Payroll/ Personnel System. The personnel data pertained to performance, compensation, and demographics for the time period April 2002 to March 2003 for both the Demonstration Group and the Comparison Group. Table 3-6 shows the objective data elements that were included in the analyses.

Table 3-6. Objective Data Elements

Objective Data Elements	
• Social Security Number	• Performance-based bonus date
• Gender	• Step increase (Comparison Group)
• Race	• Quality step increase (Comparison Group)
• Birth date	• Increase for promotion to grade within band (Comparison Group)
• Veteran status	• Performance bonus date (month and year)
• Education	• Performance bonus amount
• Organization/Unit	• Retention payment amount
• Occupational series	• Retention allowance date
• Hire date (starting date with DoC unit)	• Recruitment payment amount
• Hire code	• Recruitment payment date
• Date entered Demonstration Project (Demonstration Group)	• Eligibility for 3-year probation
• Career path (equivalent for Comparison Group)	• Probation begin date
• Pay band (equivalent for Comparison Group)	• Probation end date
• Interval (equivalent for Comparison Group)	• Hire probation
• Supervisory status (supervisory employee/ non-supervisory employee)	• Promotion during Year Five
• Base pay/Salary as of 11/30/02 (Demonstration Group)	• Promotion date
• Base pay/Salary as of 3/31/03 (Comparison Group)	• Pay band after promotion (equivalent for Comparison Group)
• Bonus, other	• Interval after promotion (equivalent for Comparison Group)
• Bonus, other date	• Reemployed
• Bonus, special	• Salary increase
• Bonus, special date	• Salary increase at promotion
• Eligibility for performance rating in Year Five (Demonstration Group)	• Salary after promotion
• Performance appraisal score	• Separation date
• Performance-based pay increase (Demonstration Group)	• Type separation
• Performance-based bonus	• Separation salary
	• Special bonus
	• Special bonus date
	• Switched career paths during Year Five

3.4.2. In the Demonstration Group, analyses that relied on performance rating data were based on the data of 2,723 participants.

Objective data analyses that rely on performance rating data were performed on the number of Demonstration Group participants who were eligible for a performance rating and for whom sufficient data were available; in Year Five, this number was 2,723. 2,723 of the 3,072 Demonstration Group participants received performance ratings of "E," eligible, and also received performance scores of 40 or greater. This number is sufficiently large to provide for robust analyses.

Employees typically receive performance ratings of either "E" for eligible or "U" for unsatisfactory. Performance rating ineligibility refers to people who were recently hired (for whom an "N" rating was designated), employees on performance improvement plans (for whom a "P" rating was designated), employees who separated from the Demonstration Project during the performance year, and individuals in employment categories not eligible to be rated (e.g., students).

There were four categories of individuals who were not included in these analyses. One, individuals who received performance ratings of "E," for eligible, but were coded as having a performance score of 0 (two cases). Two, individuals who were ineligible to receive a performance rating (and were coded as having a performance score of 0) (335 cases, all of whom received "N" ratings). Three, individuals who were ineligible to receive a performance rating (and for whom performance score data were missing) (one case, who received a "N" rating). And four, individuals for whom performance rating data (i.e., eligibility versus ineligibility) were missing (11 cases). Table 3-7 summarizes this information.

Table 3-7. Demonstration Group Participants in the Database

Eligible rating; performance scores of 40 or above	Included	2,723
Eligible rating; coded as a 0 performance score	Excluded	2
Ineligible rating; coded as a 0 performance score	Excluded	335*
Ineligible rating; no performance score	Excluded	1
No eligibility rating; coded as a 0 performance score	Excluded	11
Total		3,072

Note: 182 of the 335 are new hires

3.4.3. In the Comparison Group, analyses that relied on performance rating data were based on the data of 1,589 participants.

In Year Five, 1,589 of the 1,811 Comparison Group participants were eligible for a performance rating. The remainder were ineligible for performance ratings for a variety of reasons: recent promotion, new hire, student/faculty/co-op status, on a performance improvement plan, or left prior to receiving a performance rating. Table 3-8 shows a breakdown of the Comparison Group participants. Note that of the 1,589 who were eligible, 33 were excluded due to missing data.

Table 3-8. Comparison Group Participants in the Database

Eligibility Code			
0	Eligible	Included	1,556
0	Eligible, but missing data (e.g. salary increase, award, or both)	Excluded	33
1	Ineligible – recently promoted	Excluded	46
2	Ineligible – new hire	Excluded	133
3	Ineligible – student/faculty/co-op status	Excluded	1
4	Ineligible – on a performance improvement plan	Excluded	0
5	Ineligible – left prior to receiving rating	Excluded	42
	Total		1,811

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

Descriptive and inferential statistics were used to analyze the objective personnel data. Descriptive statistics (e.g., frequencies, cross-tabulations, and means) were used to present information about performance scores, pay increases, and bonuses. Inferential statistics (e.g., t-tests, correlations, regression analyses) were used to test the statistical significance of relationships (e.g., between performance scores and pay increases). Inferential statistics were also used to test differences in mean performance payouts to members of protected classes (minorities, females, and veterans). The specific inferential statistics used were 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). Appendix D-1 presents a full description of the ANCOVA process and results as they relate to protected classes.

3.5. Booz Allen collected HR summary data from the participating organizations as an additional means of tracking and analyzing data on the use of the Demonstration Project interventions.

Booz Allen collected summary level HR data from the participating organizations as an additional source of information regarding the use of the Demonstration Project interventions. Each participating organization in the Demonstration Group and the Comparison Group was asked to submit data pertaining to classification actions, performance rating grievances, and hiring methods used.

3.6. Booz Allen collected site historian logs, which provide context for the experiences and perceptions of Demonstration Project participants.

Site historians were designated in all the Demonstration Group and Comparison Group organizations. The site historians provided information on events that occurred during the specified timeframe (April 1, 2002 to March 31, 2003) that may have impacted the interventions implemented under the Demonstration Project. Appendix E provides a summary of the information reported by site historians during Year Five.

When performing analyses, we considered how the information conveyed in the site historian logs may impact findings. For example, site historian logs provided information on: 1) the transformation of ESA Headquarters from a 5-point to a 2-point performance appraisal system, 2) the challenges faced in implementing the web-based Automated Classification System and the resultant impact on hiring, and 3) successes in improving the Performance Payout System.

3.7. Booz Allen collected cost data to determine the extent of the costs of operating the Demonstration Project.

In Year Five, Booz Allen collected cost data to address the OPM research question, "What was the cost of the project?" We requested data from DoC on the costs associated with implementing, evaluating, and operating the Demonstration Project. Given that DoC had recently provided cost information to the Government Accounting Office for a report on Demonstration Projects, these data were readily available and provided to Booz Allen. Booz Allen also reviewed information in the December 1997 *Federal Register* notice (displayed in Appendix A-1) in regards to budget discipline.

4. FINDINGS AND CONCLUSIONS

This chapter presents Booz Allen's findings and conclusions regarding the major interventions that are being tested during the Demonstration Project. Each section is dedicated to a set of interventions. Each conclusion is explained and then followed by findings that are supported by interview themes, focus group themes, survey results, objective data analyses, and/or summary HR data analyses.

4.1. Survey results continue to show that the Demonstration Project has not had a negative impact on employee satisfaction and satisfaction with the Demonstration Project itself has improved over time.

A series of survey items evaluated the impact of the Demonstration Project on employee satisfaction. Overall, the Year Five findings were consistent with Year One and the Year Three in that: one) there were few differences between Demonstration Group and Comparison Group participants' perceptions of their work environment, and two) supervisory employees had more positive opinions about their work environment than did non-supervisory employees. Moreover, trend analyses across the years showed stability for certain survey items (e.g., satisfaction with the work environment, job satisfaction) and positive upward trends for other survey items (e.g., favorability toward the Demonstration Project, ability to attract high quality candidates). The findings below detail how the Demonstration Project has had an impact on employee perceptions of their work satisfaction.

4.1.1. Demonstration Group and Comparison Group participants perceive their work environment similarly; however, supervisory employees and non-supervisory employees' perceptions often differ.

As displayed in Table 4-1, there are few differences in perceptions of the work environment between Demonstration Group and Comparison Group participants. The two groups responded similarly on questions that pertained to supervisor trust, job satisfaction, person-job fit, attraction of high quality candidates, and fairness in job competition. This is consistent with the Year One and Year Three survey results and seems to indicate that the Demonstration Project has had little impact on either satisfiers or dissatisfiers in the work environment. Given that the Demonstration Project interventions are designed to improve job performance, and not necessarily job satisfaction, this is not a problematic finding.

Consistent with Year Three survey results, the two groups differed on only two survey items; in each case, Demonstration Group participants responded more positively than Comparison Group participants. Fewer Demonstration Group participants believe that employees lose out when changes are made in the organization, a finding that is not surprising given that these individuals have experienced and benefited from the Demonstration Project, which, in itself, is an organizational change. The second survey item on which they differed pertained to favorability with the Demonstration Project, where 57 percent of Demonstration Group participants (compared with only 35 percent of Comparison Group participants) expressed favorability.

The results also show that, consistent with Year One and Year Three, supervisors and non-supervisors responded differently to nearly all of these survey items. In every case, supervisors responded more positively than non-supervisors, a finding that is consistent within both the Demonstration Group and the Comparison Group.

Table 4-1. Survey Results – Employee Opinions of the Work Environment[15]

		Demo. Group			Comp. Group			Demo. vs. Comp. [16]
		Total	(N)	(S)	Total	(N)	(S)	
114. I have trust and confidence in my supervisor.	*Disagree*	20%	21%	16%	15%	*No significant difference*		*No significant difference*
	Neither disagree nor agree	16%	17%	14%	17%			
	Agree	64%	62%	70%	68%			
115. In general, I am satisfied with my job.	*Disagree*	13%	14%	10%	10%	11%	7%	*No significant difference*
	Neither disagree nor agree	16%	17%	13%	15%	17%	11%	
	Agree	71%	69%	77%	75%	72%	82%	
116. My job is a good match for my skills and training.	*Disagree*	13%	15%	9%	11%	14%	4%	*No significant difference*
	Neither disagree nor agree	10%	12%	7%	10%	12%	5%	
	Agree	76%	73%	84%	78%	74%	91%	
119. Competition for jobs here is fair and open.	*Disagree*	18%	19%	16%	17%	20%	10%	*No significant difference*
	Neither disagree nor agree	31%	35%	20%	30%	34%	21%	
	Agree	51%	46%	64%	52%	47%	69%	
120. When changes are made at my organization, the employees usually lose out in the end.	*Disagree*	34%	31%	43%	29%	23%	47%	*Significant difference*
	Neither disagree nor agree	41%	44%	35%	46%	51%	31%	
	Agree	24%	25%	22%	25%	26%	22%	
121. I am in favor of the Demonstration Project.	*Disagree*	20%	21%	17%	25%	26%	20%	*Significant difference*
	Neither disagree nor agree	23%	25%	16%	40%	44%	31%	
	Agree	57%	53%	67%	35%	30%	50%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

4.1.2. Over time, Demonstration Group participants' satisfaction with their work environment and jobs has remained stable.

As displayed in Table 4-2, satisfaction with the work environment remained high (over three-quarters of respondents reported that they are satisfied) and relatively constant over the years among the Demonstration Group participants and among the Comparison Group participants, with the Comparison Group participants reporting slightly higher levels of satisfaction. The trend data for non-supervisory employees mirrors the results overall. However, the results for supervisory employees varies with Demonstration Group supervisory employees remaining relatively stable in their perceptions and with Comparison Group supervisory employees showing higher levels of satisfaction with the work environment (except for a downtrend in Year Three which brought satisfaction levels in line with the Demonstration Group participants).

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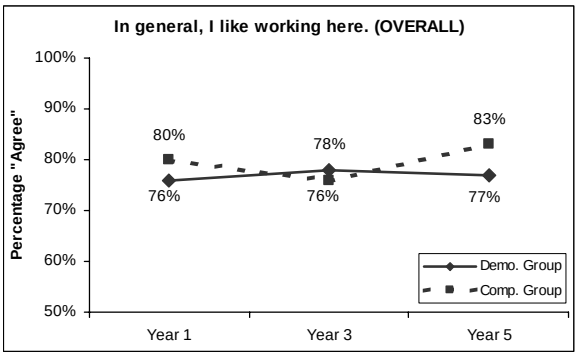
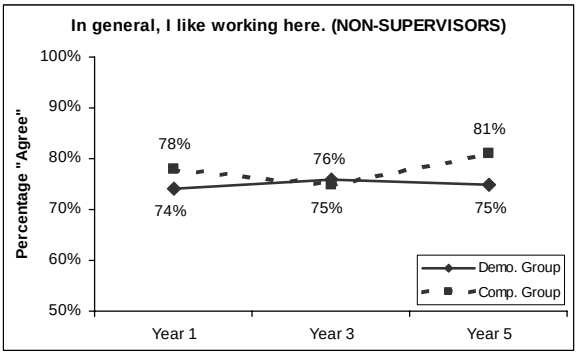
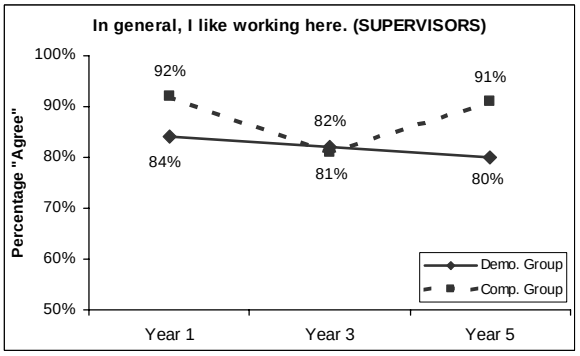
15 *In this table and those that follow, non-supervisory (N) and supervisory (S) percentages are shown only when differences in the distribution of responses between these two groups were found to be statistically significant at the $p<.05$ level. (This means that, with 95 percent confidence, these differences are real and not due to chance.)*

16 *In this table and those that follow, this column reports whether there was a statistically significant difference between the total responses of the Demonstration Group and the total responses of the Comparison Group. The customary $p \leq 05$ level was used to test for a statistically significant difference. "Sig. Diff." indicates that we can be reasonably certain that a difference exists between the two groups.*

Table 4-2. Change Over Time – Employee Satisfaction with the Work Environment[17]







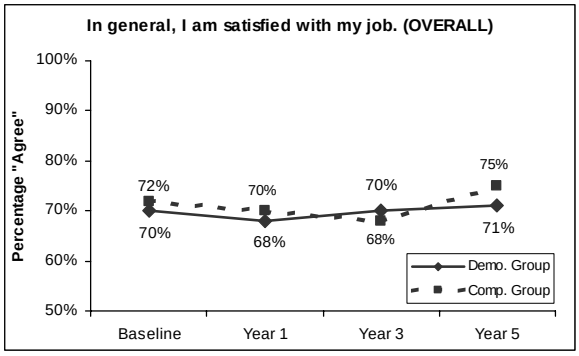
		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
117. In general, I like working here.		**YEAR FIVE**					
	Disagree	9%	10%	8%	6%	7%	3%
	Neither disagree nor agree	14%	15%	13%	11%	12%	6%
	Agree	77%	75%	80%	83%	81%	91%
		YEAR THREE					
	Disagree	10%	10%	8%	11%	12%	11%
	Neither disagree nor agree	13%	13%	10%	13%	13%	9%
	Agree	78%	76%	82%	76%	75%	81%
		YEAR ONE					
	Disagree	10%	11%	7%	10%	11%	4%
	Neither disagree nor agree	14%	15%	9%	10%	12%	4%
	Agree	76%	74%	84%	80%	78%	92%
		BASELINE					
	Disagree	9%			8%		
	Neither disagree nor agree	14%	NA		14%	NA	
	Agree	77%			79%		

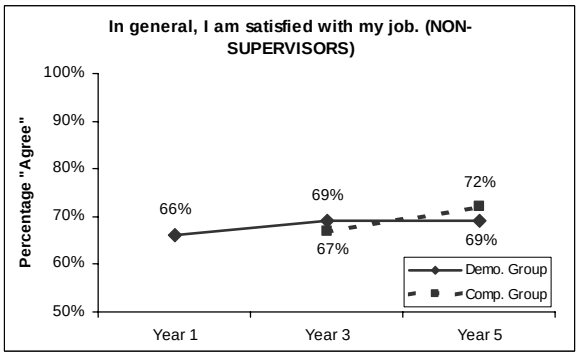
(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

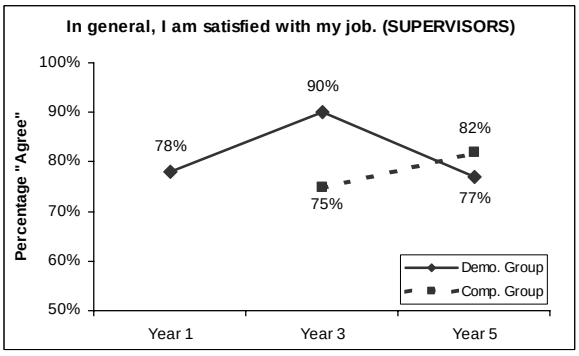
[17] *In this table and those that follow in which we present data across years, every effort has been make to ensure consistency in data reporting. Minor inconsistencies may have occurred as a result of standard data management and cleaning procedures; however, we do not believe that any changes have had a meaningful impact on the results presented.*

As displayed in Table 4-3, job satisfaction has also remained relatively constant over the years among the Demonstration Group participants and among the Comparison Group participants. Moreover, job satisfaction levels were reasonably similar between the two groups. Examining the trend data among non-supervisory employees alone and among supervisory employees alone show similar patterns, with the exception of a spike in job satisfaction among Demonstration Group supervisory employees in Year Three.

Table 4-3. Change Over Time – Job Satisfaction







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
115. In general, I am satisfied with my job.		**YEAR FIVE**					
	Disagree	13%	14%	10%	10%	11%	7%
	Neither disagree nor agree	16%	17%	13%	15%	17%	11%
	Agree	71%	69%	77%	75%	72%	82%
		YEAR THREE					
	Disagree	15%	16%	6%	19%	20%	16%
	Neither disagree nor agree	15%	15%	5%	13%	14%	10%
	Agree	70%	69%	90%	68%	67%	75%
		YEAR ONE					
	Disagree	18%	19%	10%	17%		
	Neither disagree nor agree	14%	15%	12%	13%	NA	
	Agree	68%	66%	78%	70%		
		BASELINE					
	Disagree	15%			15%		
	Neither disagree nor agree	15%	NA		13%	NA	
	Agree	70%			72%		

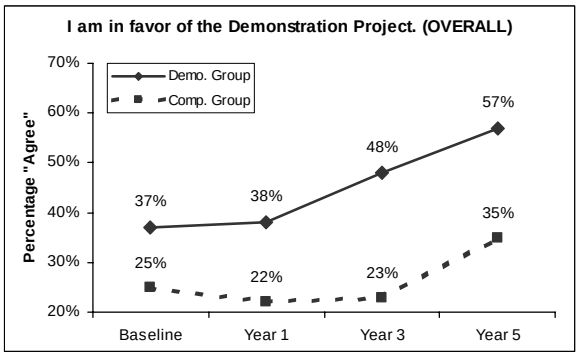
(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor; Year One data were not available broken out by supervisor and non-supervisor for the Comparison Group
Percentages may not add to 100 due to rounding

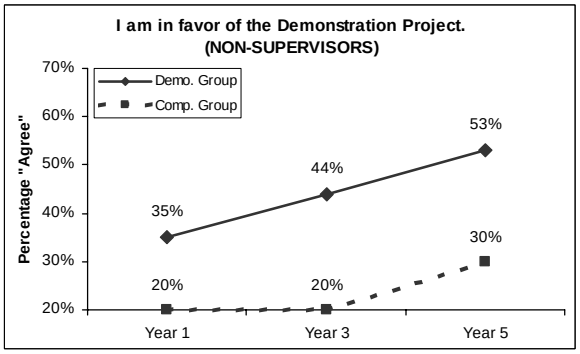
4.1.3. The current favorability level in the Demonstration Group is on par with other Demonstration Projects.

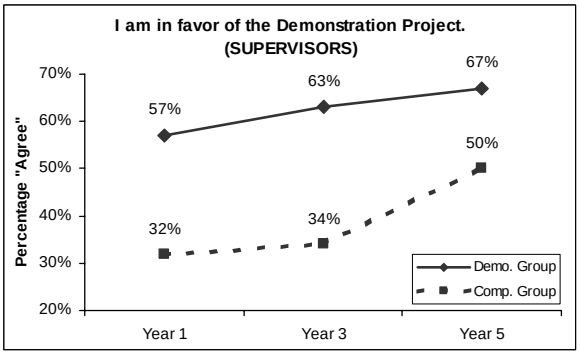
As displayed in Table 4-4, over time, an increasing percentage of the Demonstration Group participants felt favorably about the Demonstration Project, with 57 percent currently favorable. This 57 percent favorability level is on track for achieving a Demonstration Project favorability benchmark set by previous Demonstration Projects, such as China Lake and NIST, which tended to achieve (and level out at) favorability ratings of 66-70 percent after five or six years[18]. Supervisors continue to be somewhat more favorable than are non-supervisors. Not surprisingly, the Comparison Group participants' favorability ratings have not reached the same levels, though an increasing percentage of participants gained a favorable perception over time.

[18] *Source: DoD S&T Reinvention, Laboratory Demonstration Project, Summative Evaluation 2002, page xiii.*

Table 4-4. Change Over Time – Favorability Toward the Demonstration Project







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
121. I am in favor of the Demonstration Project.	*Disagree*	20%	21%	17%	25%	26%	20%
	Neither disagree nor agree	23%	25%	16%	40%	44%	31%
	Agree	57%	53%	67%	35%	30%	50%
		YEAR THREE					
	Disagree	29%	30%	23%	24%	24%	25%
	Neither disagree nor agree	24%	26%	14%	53%	56%	42%
	Agree	48%	44%	63%	23%	20%	34%
		YEAR ONE					
	Disagree	32%	34%	18%	17%	16%	20%
	Neither disagree nor agree	30%	31%	25%	61%	63%	47%
	Agree	38%	35%	57%	22%	20%	32%
		BASELINE					
	Disagree	26%			13%		
	Neither disagree nor agree	37%	NA		63%	NA	
	Agree	37%			25%		

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

4.2. Demonstration Group participants continue to view greater potential for career progression than do the Comparison Group participants.

For Demonstration Group participants in the Demonstration Project, comparable occupations that could be treated similarly for classification, pay, and other purposes were aggregated into career paths. The change to career paths, along with broadbands and Departmental broadband standards, were expected to simplify, speed up, and improve the quality of classification.

While survey data continue to suggest that Demonstration Group participants feel more positively about their potential for career progression under the Demonstration Project, focus group data indicate employee concerns still remain about career pathing and its impact on career progression.

As presented in Table 4-5, survey results indicate differences between the Demonstration Group and Comparison Group respondents' outlooks regarding career progression. Demonstration Group respondents were generally more favorable about their likelihood for career advancement than were Comparison Group respondents. For example, a higher percentage of Demonstration Group respondents perceived that their current job classification system has enhanced their career progression. In contrast, Comparison Group participants were more likely to express that the current job classification system has limited their career advancement.

Table 4-5. Survey Results – Career Progression/Career Paths

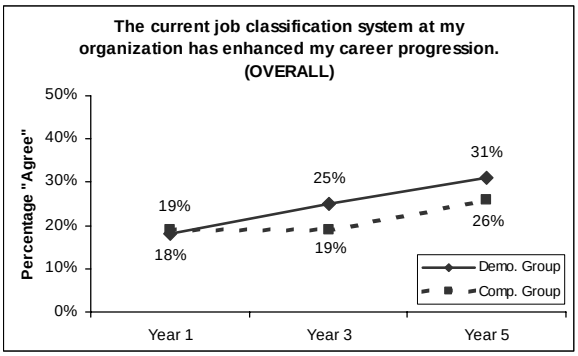
			Demo. Group			Comp. Group			Demo. vs. Comp.
			Total	(N)	(S)	Total	(N)	(S)	
23.	The current job classification system at my organization has limited my career progression.	*Disagree*	49%	44%	61%	42%	38%	53%	*Significant difference*
		Neither disagree nor agree	23%	24%	21%	26%	29%	17%	
		Agree	28%	32%	18%	33%	34%	29%	
24.	The current job classification system at my organization has enhanced my career progression.	*Disagree*	28%	31%	21%	32%	*No significant difference*		*Significant difference*
		Neither disagree nor agree	41%	41%	41%	41%			
		Agree	31%	28%	38%	26%			
25.	I am satisfied with my chances of getting a promotion.	*Disagree*	38%	42%	28%	43%	45%	39%	*No significant difference*
		Neither disagree nor agree	24%	24%	24%	21%	23%	17%	
		Agree	38%	34%	49%	35%	33%	45%	

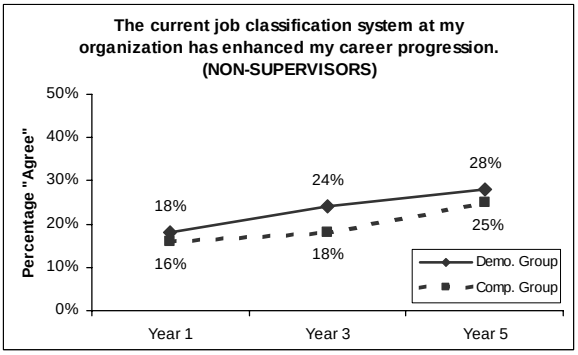
(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

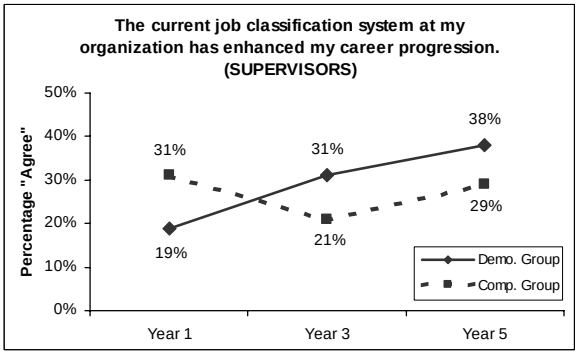
4.2.1. Demonstration Group participants' perceptions of the impact of the job classification system on their career progression have continued to improve over time.

A comparison of survey data from Year One to Year Three to Year Five indicates a continuing positive trend in Demonstration Group participants' perceptions (both non-supervisory and supervisory employees) about the favorable impact of the classification system on their career progression. Additionally, Comparison Group participants' perceptions (both non-supervisory and supervisory employees) continue to indicate an upward trend as well. Year One survey results indicated that Demonstration Group and Comparison Group respondents felt similarly about the impact of the classification system on their career enhancement (see Table 4-6). In Year Three survey results produced a different response pattern in that Demonstration Group respondents' perceptions improved while Comparison Group respondents remained stable. Year Five survey data indicated that Demonstration Group respondents continued to respond more favorably on the impact of the classification system on their career advancement than did Comparison Group respondents. Most striking was the reverse in the perceptions of Comparison Group supervisory employees. In Year Three, Comparison Group supervisory employees' responses indicated a declining outlook of the current classification on their career progression. Yet, in Year Five, Comparison Group supervisory employees indicated a more positive opinion of the classification systems enhancement on career progression. This difference may suggest that Comparison Group supervisors no longer feel the constraints of the traditional job classification system on their career progression to the same degree as they were perceived in Year Three.

Table 4-6. Change Over Time – Impact of Classification System on Career Progression







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
24. The current job classification system at my organization has enhanced my career progression.	*Disagree*	28%	31%	21%	32%	35%	25%
	Neither disagree nor agree	41%	41%	41%	41%	40%	46%
	Agree	31%	28%	38%	26%	25%	29%
		YEAR THREE					
	Disagree	30%	32%	20%	41%	42%	38%
	Neither disagree nor agree	45%	45%	50%	41%	40%	41%
	Agree	25%	24%	31%	19%	18%	21%
		YEAR ONE					
	Disagree	35%	36%	28%	42%	44%	30%
	Neither disagree nor agree	47%	45%	53%	39%	40%	38%
	Agree	18%	18%	19%	19%	16%	31%

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

4.2.2. Demonstration Group focus group participants reported mixed feelings on whether or not career paths have had a positive impact on their ability to advance in their careers.

In supervisory and non-supervisory employee focus groups, Demonstration Group participants were asked a related question concerning whether career paths have improved their career progression opportunities. Two themes emerged, one theme being that career paths have had no impact on improving their ability to progress in their careers as they would like. The other theme being that career paths have opened up a broader set of job opportunities for employees

4.3. While the delegated classification authority intervention has resulted in greater managerial involvement, reactions to the classification process have been somewhat negatively impacted by the introduction of the new web-based Automated Classification System.

Consistent with Year Three, in Year Five results support the continued use of the delegated classification authority and automated broadband classification system. The delegated classification authority to managers and automated broadband classification system interventions were introduced to streamline and improve the efficiency of the classification process. The delegated classification authority is intended to give managers more control over classifying the work they supervise. The purpose of the automated broadband classification system is to make the classification process easier, more expedient, and minimize the resources needed for classification. Compared to Year Three, Year Five findings indicate that Demonstration Group supervisory employees have a higher level of dissatisfaction with the position classification procedures, which may be attributable to concerns about the user-friendliness of the new web-based Automated Classification System.

4.3.1. The delegated classification authority to managers intervention has accomplished expected results of streamlining and improving the efficiency of the classification process.

Under the Demonstration Project, delegated classification authority was intended to accelerate the classification process by giving line managers the authority to classify positions. Key objectives were to improve the effectiveness of classification decision-making, require fewer resources, and speed up the classification process. Table 4-7 provides key themes that emerged from interviews with Human Resources Directors and Staff concerning classification. Majority opinion indicated that the delegated classification authority has been successful in meeting its objectives of effectiveness, efficiency, and expediency.

Table 4-7. Interview Results – Classification[19]

DEMONSTRATION GROUP
HR Directors and Staff
• The classification system is the same as it was before; there are so many rules that the process takes way too long
• Yes, faster because the customer makes the classification decision
• Absolutely, HR only has to review the decision
• Yes, faster because the broadbands mean that there are fewer promotions, which results in less room for disagreement and negotiation

[19] *In this table and similar tables to follow on interview results or focus group results, the major themes presented represent feedback provided at one or more sessions.*

We also examined data reported by the human resources servicing offices on the average amount of time needed to produce and classify a position and the average amount of time needed to process a classification action. Overall, the Demonstration Group reported slightly faster times for both of these activities. The difference was not more extreme because, over the life of the Demonstration Project, classification processes have changed for the Comparison Group as well. With the advent of PD library, managers in the Comparison Group now classify approximately 80-90 percent of their positions[20]; only 10-20 percent continue to be classified by the human resources servicing office.

4.3.2. Reactions to the web-based classification system continue to be mixed.

Consistent with Year Three findings, in Year Five supervisory employees are using the Automated Classification System but some are experiencing difficulty. As displayed in Table 4-8, supervisory focus group participants have mixed views about the Automated Classification System. In Year Three, concerns were raised about the user-friendliness of the previous DOS-based classification system. Between Year Three and Year Five, DoC implemented a web-based classification system, which intended to improve the functionality of the system and further increase the efficiency of the process. In Year Five, some trepidation still remains about the ease of use of the Automated Classification System, particularly as users adapt to the web-based version.

Table 4-8. Focus Group Results – Classification

DEMONSTRATION GROUP
Supervisory Employees
• Have had problems with new web-based application
• Much improved over the older system
• Is straightforward and easy
• PD library worked; web-based system is unreliable
• Web-based system is easy to use

Site historians also reported that there were some challenges in their organizations with getting the web-based classification system fully implemented. They reported that there were some slowdowns getting the system running due to issues with establishing programming access levels, organizational coding inconsistencies, and time required to ensure compliance with the DoC password policy.

[20] *Source: John Hanson, Personnel Officer, NOAA*

4.3.3. Consistent with Year Three, supervisory employees in the Demonstration Group and Comparison Group have similar perceptions about classification processes.

As displayed in Table 4-9, supervisory employees in both the Demonstration Group and Comparison Group indicated similar responses to survey items such as clarity and accuracy of position descriptions, satisfaction with position classifications, and whether or not approval of position descriptions is an adversarial process. Some of the similarities in responses may also reflect that, as mentioned previously, Comparison Group supervisors have some delegated classification authority in that supervisors are able to choose from readily prepared classified positions in the PD library; however, their human resources offices retain final authority to classify non-PD library positions.

Table 4-9. Survey Results – Classification

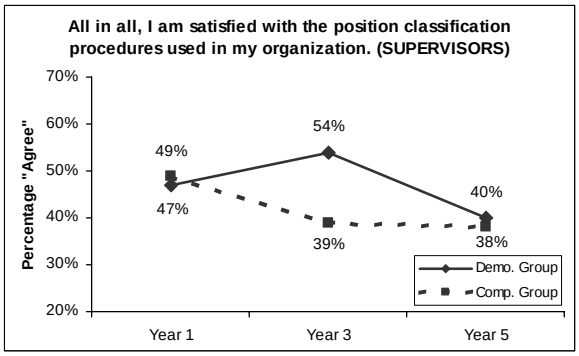
		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
22. The position description for my job is clear and accurate.	*Disagree*	16%	*No significant difference*		16%	*No significant difference*		*No significant difference*
	Neither disagree nor agree	18%			15%			
	Agree	66%			69%			
26. In my organization, jobs are classified fairly and accurately.	*Disagree*	26%	27%	21%	26%	27%	23%	*No significant difference*
	Neither disagree nor agree	34%	37%	24%	35%	39%	24%	
	Agree	41%	35%	55%	39%	34%	53%	
27. All in all, I am satisfied with the position classifications used in my organization.	*Disagree*	26%	27%	22%	29%	29%	26%	*No significant difference*
	Neither disagree nor agree	29%	32%	22%	28%	30%	21%	
	Agree	45%	41%	57%	44%	41%	53%	
127. I have enough authority to influence classification decisions.	*Disagree*			31%			24%	*No significant difference*
	Neither disagree nor agree			27%			25%	
	Agree			42%			52%	
128. Getting a position description approved tends to be an adversarial process.	*Disagree*			38%			45%	*No significant difference*
	Neither disagree nor agree			44%			35%	
	Agree			18%			20%	
129. I have to devote too much time to position classification procedures used in my organization.	*Disagree*			38%			43%	*No significant difference*
	Neither disagree nor agree			45%			38%	
	Agree			17%			18%	
130. It takes too long to get classification decisions made in my organization.	*Disagree*			27%			33%	*No significant difference*
	Neither disagree nor agree			45%			34%	
	Agree			28%			34%	
131. All in all, I am satisfied with the position classification procedures used in my organization.	*Disagree*			20%			23%	*No significant difference*
	Neither disagree nor agree			40%			39%	
	Agree			40%			38%	
154. The current pay system requires few classification decisions.	*Disagree*			9%			18%	*Significant difference*
	Neither disagree nor agree			52%			42%	
	Agree			39%			39%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding
Items 124-155 were addressed of supervisory employees only

4.3.4. In Year Five, satisfaction with classification procedures experienced a drop for Demonstration Group supervisory employees, and to a level comparable to Comparison Group supervisory employees.

From Year One to Year Three, supervisory employees in the Demonstration Group indicated growing satisfaction with their classification procedures. In comparison, supervisory employees in the Comparison Group indicated growing dissatisfaction with classification procedures employed. In Year Five, however, Demonstration Group supervisory employees' satisfaction levels declined sharply from Year Three and to level a comparable to Comparison Group supervisory employees (as displayed in Table 4-10). The change in responses over time may possibly be attributed to the implementation of the web-based Automated Classification System and the learning curve and technical kinks associated with the roll-out of a new system.

Table 4-10. Change Over Time – Satisfaction With Classification Procedures



		Demo. Group (S)	Comp. Group (S)
		YEAR FIVE	
131. All in all, I am satisfied with the position classification procedures used in my organization.	*Disagree*	20%	23%
	Neither disagree nor agree	40%	39%
	Agree	40%	38%
		YEAR THREE	
	Disagree	16%	32%
	Neither disagree nor agree	31%	29%
	Agree	54%	39%
		YEAR ONE	
	Disagree	20%	25%
	Neither disagree nor agree	33%	26%
	Agree	47%	49%

This item was addressed by supervisory employees only
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

4.4. Understanding and acceptance of the new performance appraisal system continues to improve.

DoC implemented a new performance appraisal system as part of the Demonstration Project. Initially, Demonstration Group participants seemed to struggle with understanding and accepting the new process. In Year Three, data suggested that Demonstration Group participants became more educated about how the new performance appraisal system worked and became more accepting of it. In Year Five, data suggest that Demonstration Group participants continue to grow more comfortable with the performance appraisal process. Although progress continues to be made with the process, data suggest that there are still opportunities for improvement, particularly to make the system more user-friendly.

4.4.1. Demonstration Project participants understand the linkage between their jobs and the performance appraisal system.

The majority of Demonstration Group and Comparison Group respondents understand the approach DoC uses to evaluate their performance. Over time, the survey respondents for both the Demonstration Group and Comparison Group have become increasingly similar in the comprehension of their respective performance appraisal systems. As Table 4-11 highlights, in Demonstration Group data from Year Five indicates a growing level of comfort with the new performance appraisal system. In fact, employees from the Demonstration Group understand the Demonstration Project's performance appraisal system just as well as employees from the Comparison Group under the traditional performance appraisal system.

Differences exist between Demonstration Group and Comparison Group survey respondents on three items: deflation of performance ratings, what "good performance" means, and performance evaluation of non-job related factors. These are three items that particularly tap into the context of a pay-for-performance system wherein greater judgments about performance must be made.

Table 4-11. Survey Results – Performance Appraisal System

			Demo. Group			Comp. Group			Demo. vs. Comp.
			Total	(N)	(S)	Total	(N)	(S)	
28.	On my job I know exactly what is expected of me.	*Disagree*	15%	16%	11%	13%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	14%	14%	12%	12%			
		Agree	72%	69%	77%	75%			
29.	My supervisor gives me adequate information on how well I am performing.	*Disagree*	18%	*No significant difference*		16%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	17%			15%			
		Agree	65%			69%			
30.	I understand the performance appraisal system currently being used.	*Disagree*	16%	19%	9%	12%	14%	6%	*No significant difference*
		Neither disagree nor agree	13%	15%	9%	13%	15%	8%	
		Agree	71%	66%	82%	75%	71%	86%	
31.	My supervisor tends to inflate the performance ratings of the employees he/she supervises.	*Disagree*	59%	58%	61%	61%	58%	68%	*No significant difference*
		Neither disagree nor agree	34%	36%	30%	32%	35%	26%	
		Agree	7%	6%	9%	7%	7%	6%	
32.	My supervisor tends to deflate the performance ratings of the employees he/she supervises.	*Disagree*	48%	45%	55%	60%	57%	68%	*Significant difference*
		Neither disagree nor agree	39%	41%	34%	35%	37%	29%	
		Agree	13%	13%	11%	5%	6%	4%	
33.	My performance rating represents a fair and accurate picture of my actual performance.	*Disagree*	20%	*No significant difference*		17%	18%	14%	*No significant difference*
		Neither disagree nor agree	19%			21%	23%	15%	
		Agree	61%			62%	58%	71%	
34.	My performance appraisal takes into account the most important parts of my job.	*Disagree*	15%	17%	10%	12%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	16%	17%	13%	18%			
		Agree	69%	66%	77%	69%			
35.	My supervisor and I agree on what "good performance" on my job means.	*Disagree*	13%	15%	9%	9%	10%	7%	*Significant difference*
		Neither disagree nor agree	20%	20%	21%	19%	20%	14%	
		Agree	66%	65%	70%	72%	70%	80%	
36.	My supervisor evaluates my performance on things not related to my job.	*Disagree*	60%	57%	69%	66%	*No significant difference*		*Significant difference*
		Neither disagree nor agree	23%	25%	18%	24%			
		Agree	17%	18%	13%	10%			

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

4.4.2. Performance-related feedback has not increased under the Demonstration Project.

As demonstrated in Table 4-12, there has been a minimal change in responses from Year One to Year Three to Year Five in perceptions about performance feedback. Although performance related feedback is strongly encouraged under the Demonstration Project and is considered to be a cornerstone of the new performance appraisal system, these survey results suggest that employees are either not getting more feedback (compared to the past and compared to the Comparison Group) or do not perceive it as such.

Table 4-12. Change Over Time – Performance Feedback

			Demo. Group			Comp. Group		
			Total	**(N)**	**(S)**	**Total**	**(N)**	**(S)**
			YEAR FIVE					
37.	How often do you receive feedback from your supervisor that helps you to improve your performance?	*Never*	7%	8%	5%	6%	7%	4%
		Rarely	25%	24%	27%	22%	22%	22%
		Sometimes	41%	42%	38%	43%	42%	46%
		Often	23%	22%	26%	24%	23%	25%
		Always	4%	4%	4%	5%	6%	4%
			YEAR THREE					
		Never	9%	10%	5%	10%	11%	9%
		Rarely	29%	30%	28%	29%	30%	22%
		Sometimes	39%	38%	43%	38%	38%	40%
		Often	21%	21%	22%	21%	20%	25%
		Always	2%	2%	2%	2%	2%	4%
			YEAR ONE					
		Never	7%	8%	4%	10%	10%	7%
		Rarely	32%	32%	29%	30%	31%	25%
		Sometimes	39%	37%	50%	36%	36%	37%
		Often	19%	20%	15%	21%	19%	29%
		Always	3%	3%	3%	3%	3%	3%
			BASELINE					
		Never	10%			8%		
		Rarely	28%			30%		
		Sometimes	41%	NA		36%	NA	
		Often	19%			22%		
		Always	3%			4%		

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

In contrast, when asked about the mechanisms that are in place for providing employees with performance-based feedback, pay pool managers and rating officials referred to mid-year meetings, end-of-year meetings, and ongoing feedback (see Table 4-13). These findings, in combination with the survey findings, suggest that while mechanisms are in place, they are either not used as prescribed or are not used well. As a result, employees do not receive enough feedback that can help them improve their performance.

Table 4-13. Interview Results – Feedback and Input Mechanisms Utilized

DEMONSTRATION GROUP
Pay Pool Managers and Rating Officials
• Through instructions and reminders to Rating Officials to have meetings with their staff • Mid-year and end-of-year meetings • Hold meetings with staff before assessment and after assessment; give performance feedback throughout the year • All hands meetings with division to talk about operating plan, in general; expect Branch Chiefs to have feedbacks sessions with employees based on accomplishments regarding operating plan • Encourage Division Chiefs to be open and honest with staff and encourage staff to submit record of achievement

4.4.3. Pay Pool Managers and Rating Officials have utilized several methods to achieve consistency in performance scores.

As indicated in Table 4-14, Pay Pool Managers and Rating Officials use a variety of approaches to strive for consistency in employee scores. As the table demonstrates, Pay Pool Managers and Rating Officials have initiated formal mechanisms to address the issue of consistency with pay pools and to try to make performance score determinations as fairly as possible. Some Pay Pool Managers have also reached out to the Operating Personnel Management Board (OPMB) to address consistency across pay pools.

Table 4-14. Interview Results – Mechanisms to Avoid Inconsistent Performance Scores

DEMONSTRATION GROUP
Pay Pool Managers and Rating Officials
• Set benchmarks around scores and have one-on-one meetings to gain agreement with Rating Officials • Force Rating Officials to submit an average score or close to some average • Receive a list of staff and their performance scores and look across to ensure appropriateness and reconcile differences with the relevant supervisor to adjust score accordingly • Hold mid-year and end-of-year reviews and other occasional meetings throughout the year • Hold interleaving meetings and discussions with Operating Personnel Management Board to look across all pay pools and adjust accordingly

As displayed in Table 4-15, Demonstration Group and Comparison Group supervisory employees differ in their perceptions about the performance appraisal system. For example, a greater percentage of Demonstration Group supervisory employees believe that the performance appraisal system allows them to distinguish between good and poor performers, which is one indication that the Demonstration Project's performance appraisal system has been effective.

Table 4-15. Survey Results – Performance Appraisal System (Supervisors)

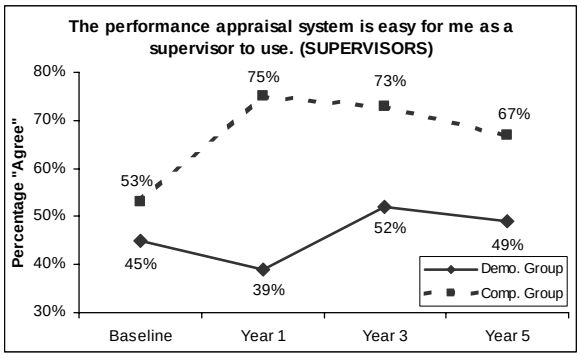
		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
124. The performance appraisal system allows me to identify good and poor performers.	*Disagree*			11%			31%	*Significant difference*
	Neither disagree nor agree			24%			22%	
	Agree			64%			47%	
125. The performance appraisal system is easy for me as a supervisor to use.	*Disagree*			18%			14%	*Significant difference*
	Neither disagree nor agree			33%			19%	
	Agree			49%			67%	
126. I have met with other supervisors and/or our pay pool manager to establish standards to ensure that supervisors are using performance ratings in a consistent manner with one another.	*Disagree*			28%			42%	*Significant difference*
	Neither disagree nor agree			36%			32%	
	Agree			36%			26%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding
These items were addressed of supervisory employees only

4.4.4. Demonstration Group supervisors' perceptions about the ease of use of the performance appraisal system has varied across the years whereas their understanding of the system have increased over time.

Over time, supervisory employees have varied in their opinions about how easy it is to use the performance appraisal system enacted as a part of the Demonstration Project (see Table 4-16). Current levels are comparable to baseline (49 percent compared to 45 percent) and are lower than that of the Comparison Group, which likely reflects the challenges of operating under a more complex system. However, the lack of improvement over time suggests the need for further attention to ensure that the system is as user-friendly as possible and that sufficient education and training are provided.

Table 4-16. Change Over Time – Ease of Use of the Performance Appraisal System

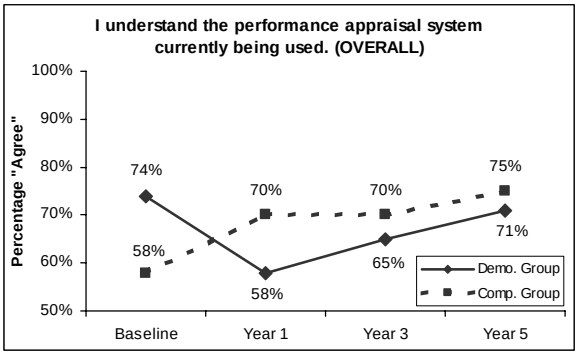


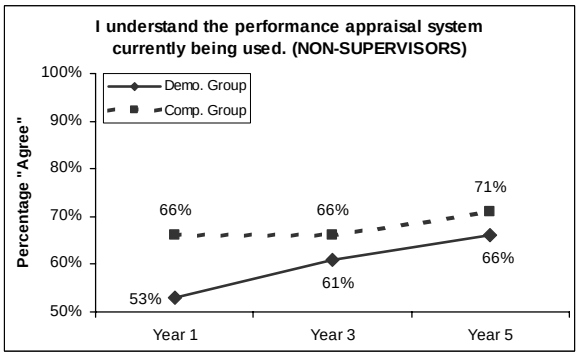
		Demo. Group (S)	Comp. Group (S)
		YEAR FIVE	
125. The performance appraisal system is easy for me as a supervisor to use.	*Disagree*	18%	14%
	Neither disagree nor agree	33%	19%
	Agree	49%	67%
		YEAR THREE	
	Disagree	33%	14%
	Neither disagree nor agree	15%	13%
	Agree	52%	73%
		YEAR ONE	
	Disagree	35%	17%
	Neither disagree nor agree	26%	8%
	Agree	39%	75%
		BASELINE	
	Disagree	33%	22%
	Neither disagree nor agree	22%	24%
	Agree	45%	53%

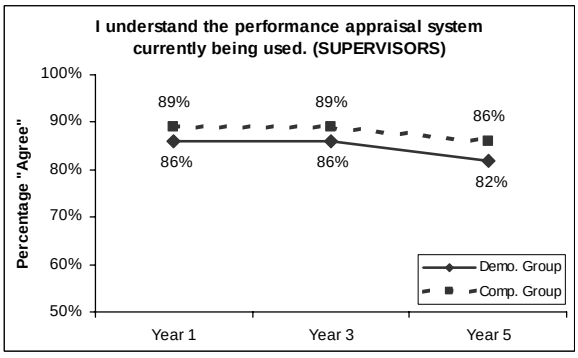
This item was addressed by supervisory employees only
Percentages may not add to 100 due to rounding

In contrast, over time, an increasing percentage of Demonstration Group participants reported that they understand the new performance appraisal system (see Table 4-17). Current levels now nearly match the levels reported in the Comparison Group in regards to understanding of their performance appraisal system. The increase in understanding among the Demonstration Group participants is most noted among non-supervisory employees, which suggests that efforts to educate them have been having a positive effect.

Table 4-17. Change Over Time – Understanding of the Performance Appraisal System







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
30. I understand the performance appraisal system currently being used.				YEAR FIVE			
	Disagree	16%	19%	9%	12%	14%	6%
	Neither disagree nor agree	13%	15%	9%	13%	15%	8%
	Agree	71%	66%	82%	75%	71%	86%
				YEAR THREE			
	Disagree	20%	23%	8%	14%	16%	4%
	Neither disagree nor agree	15%	17%	6%	16%	18%	8%
	Agree	65%	61%	86%	70%	66%	89%
				YEAR ONE			
	Disagree	25%	29%	8%	14%	15%	6%
	Neither disagree nor agree	16%	19%	6%	17%	19%	5%
	Agree	58%	53%	86%	70%	66%	89%
				BASELINE			
	Disagree	11%			21%		
	Neither disagree nor agree	15%	NA		21%	NA	
	Agree	74%			58%		

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

4.5. As occurred in all previous years, the pay-for-performance system continues to exhibit a positive link between pay and performance.

A series of interventions were implemented during the Demonstration Project to improve the relationship between high performance and financial reward. These interventions include performance-based pay increases, performance bonuses, more flexible pay increases upon promotion, and supervisory performance pay.

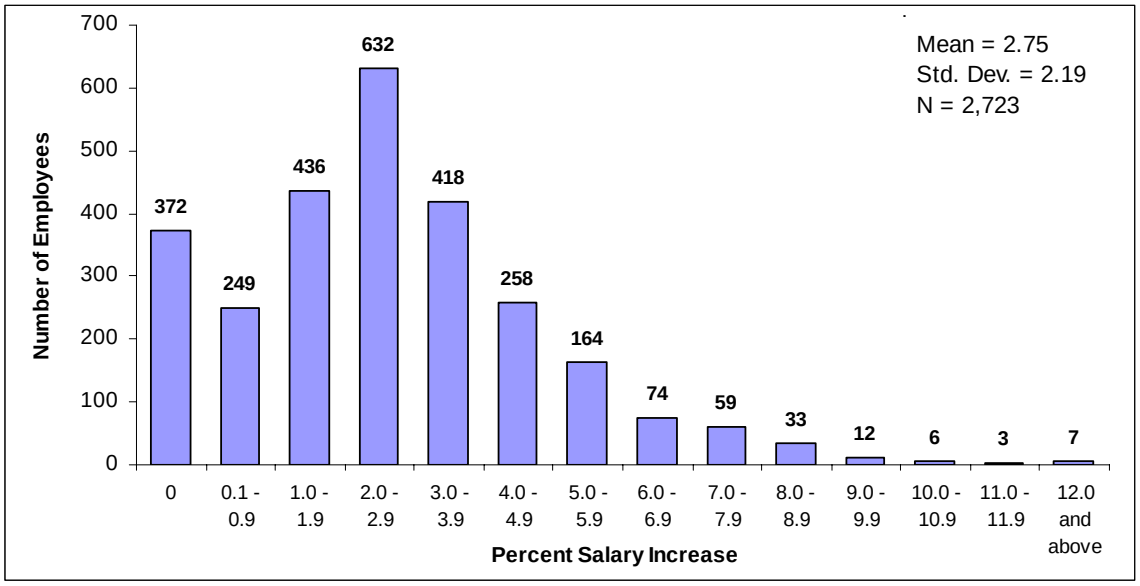
There were many positive results in Year Five. For example, Demonstration Group participants fared better than Comparison Group participants in performance-based pay increases across all five years. Demonstration Group participants also fared better overall, when pay increases and bonuses/awards were combined. The flexible pay increases upon promotion intervention seemed to be working effectively. Perceptions about the pay system (e.g., satisfaction with the pay system) were mixed but showed some improvement from previous years. The one pay-related intervention that has consistently over the years demonstrated less success is supervisory performance pay; however, it has been less effective due to its design than its implementation.

4.5.1. A greater range of performance-based pay increases is evident in the Demonstration Group, compared to the Comparison Group, suggesting an effort to better differentiate levels of performance.

Objective data show that Demonstration Group participants received salary increases based on performance ranging from 0 percent to 15 percent[21], with an average performance-based pay of 2.75 percent (shown in Figure 6).[22] Similar to Years Two, Three, and Four[23], the majority of employees (79 percent) received increases between 0 percent and 4 percent. At the high end, six percent of Demonstration Group participants received percent salary increases of 6 percent or above providing some indication that managers are taking advantage of their flexibility to award higher percentage increases to higher performing employees.

As reflected in this table, 372 of the 2,723 Demonstration Group participants did not receive a salary increase. It is likely that this group includes individuals whose pay had reached their pay band maximum rate (i.e., capped employees).

Figure 6. Range of Percent Salary Increases for Demonstration Group Participants



Note: This analysis is based on the 2,723 of the 3,072 Demonstration Group participants for whom salary data were available.

21 *Unless stated otherwise, references in this document to "percent of salary" or "pay increase percentage" pertain to performance-based pay increases from the beginning to the end of Year Five; this concept is not intended to be synonymous with the "percent of percent" concept often discussed in the context of the Demonstration Project.*

22 *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.*

23 *In this report, data are often compared to Year Two, Year Three, and Year Four. Because only limited objective data were available, comparisons are rarely made to Year One.*

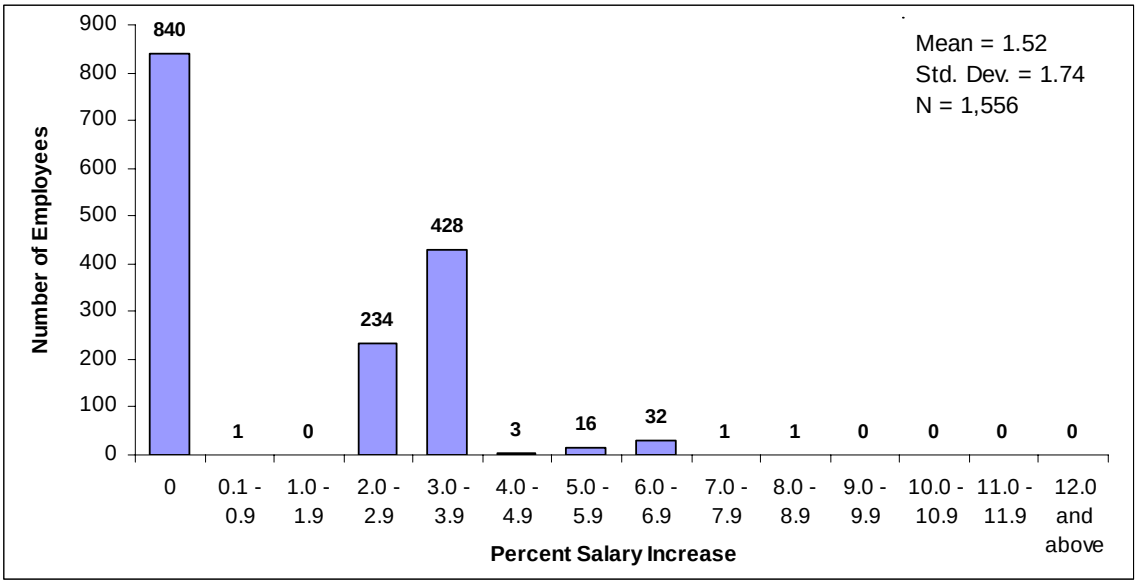
For the Comparison Group, we identified the following categories of increases that would be comparable to the performance-based increases in the Demonstration Group:

- 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 7. 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. The percent increases ranged from 0 percent to 8 percent, a more limited range than what was evident for the Demonstration Group. The average percent increase in the Comparison Group was 1.52 percent.

Fifty-four percent of the Comparison Group participants did not receive a salary increase in Year Five (although they received a passing performance rating), which is likely a function of the GS system wherein employees at the higher steps of a grade wait two to three years between step increases. In comparison, only 14 percent of the Demonstration Group participants did not receive a salary increase in Year Five.

Figure 7. Range of Percent Salary Increases for Comparison Group Participants

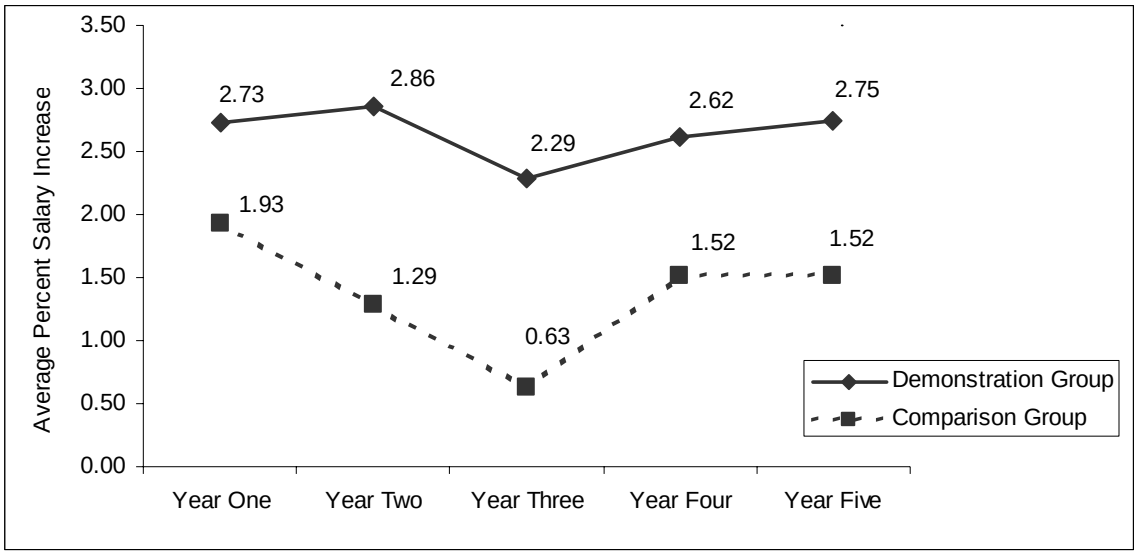


Note: This analysis is based on the 1,556 of the 1,811 Comparison Group participants for whom salary data were available.

4.5.2. Over the life of the Demonstration Project, salary increases have been consistently higher in the Demonstration Group than the Comparison Group.

In Year Five, there was a very small increase in the average percent salary increase for the Demonstration and a very small decrease for the Comparison Group. Figure 8 displays a trend analysis of the average percent salary increases in the Demonstration and Comparison Groups from Year One through Year Five. This figure depicts how Demonstration Group average performance-based pay increases have been consistently higher than Comparison Group average "performance-based" pay increases across all five years of the Demonstration Project.

Figure 8. Trend Analysis of Average Percent Salary Increases



Note: The Comparison Group Year Two data point was revised in Year Three to reflect a correction in the formula used to calculate average percent salary increase.

4.5.3. Whether Demonstration Group participants received, on average, more or less than Comparison Group participants depends on which bonuses and awards are counted.

Demonstration Group bonuses and Comparison Group awards were also compared. The original intent of this analysis was to only include, for the Comparison Group, those awards that are performance-driven and are therefore comparable to the performance-based bonuses used in the Demonstration Group. However, two key issues arose in regards to performing this type of analysis because it became evident that an appropriate "match" may not exist.

One issue is that, in the NOAA portion of the Comparison Group (which comprises 97 percent of the Comparison Group), awards occur throughout the rating period rather than at the end of the rating period. Thus, Comparison Group participants receive awards for service on specific projects or short periods of performance rather than as recognition for sustained superior performance for an entire rating period. These awards have been coded in the NFC system as "Special Act" awards.

In contrast, "Special Act" awards in the Demonstration Group are supposed to be used for extraordinary service for a specific project and are distinctly different from performance bonuses. "Special Act" awards are intended to recognize unusual circumstances in which an employee went above and beyond assigned duties and responsibilities[24]. As a result, in past evaluations, "Special Act" awards were included in the calculations of average award percentages in the Comparison Group but were not included in the calculations of average bonus percentages in the Demonstration Group.

A second issue is that an additional category of cash awards, "Other Awards," has customarily been treated differently in the two groups. This category includes on-the-spot awards, special Bureau specific awards, and cash-in your account awards. Given that these are not considered performance-driven, they have not been included in the calculation of average bonus percentage for Demonstration Group participants; however, they were included in the calculation of average award percentage for Comparison Group participants.

To address these challenges, in Year Five, we address this analysis in two separate ways. As depicted in Table 4-18, we first performed the analysis as it has been performed in Years One-Four, so as to maintain consistency, have comparable trend data, and be as true as possible to the concept of performance-driven bonuses/awards (i.e., not including them in the Demonstration Group calculations). The results of this analysis are used in other analyses in this evaluation (e.g., progression analysis, turnover analysis). We then analyzed the bonus data for the Demonstration Group again, taking into account "Special Act" awards and Other Awards. This analysis presents the overall picture of the bonuses/awards received by Demonstration Group participants and allows inclusion of "Special Act" awards and Other Awards, given that these are being accounted for in the Comparison Group calculation.

Table 4-18. Bonus Percent Analyses

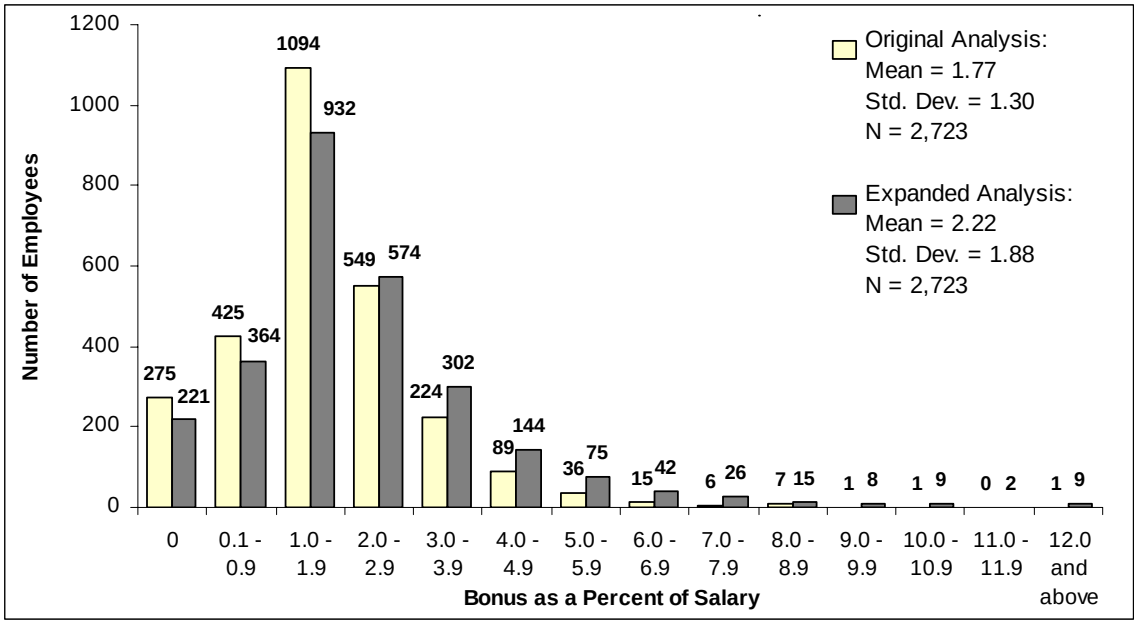
	BONUS ANALYSIS – ORIGINAL		BONUS ANALYSIS – EXPANDED	
	DEMONSTRATION GROUP	COMPARISON GROUP	DEMONSTRATION GROUP	COMPARISON GROUP
Performance Based Bonuses	Included	N/A	Included	N/A
Special Act Awards	Not Included	Included	Included	Included
Other Awards	Not Included	Included	Included	Included

24 Although limited use of Special Act and other cash awards was envisioned, management has continued to value these awards as a form of immediate recognition for special achievements that fall within the scope of assigned duties and responsibilities.

The results of the original bonus analysis show that, in Year Five, 90 percent of Demonstration Group participants received bonuses (i.e., performance-based bonuses). Bonuses ranged from 0.0 to 12.6 percent of salary for employees receiving bonuses, with an average bonus of 1.77 percent. Figure 9 displays these results. These data are based solely on performance-based bonuses.

The results of the expanded bonus analysis show that, in Year Five, 92 percent of Demonstration Group participants received bonuses (i.e., performance-based bonuses, Special Act awards, and/or Other Awards). Bonuses ranged from 0.0 to 21.6 percent of salary for employees receiving bonuses, with an average bonus of 2.22 percent. Figure 9 also displays these results. The results of the expanded bonus analysis show that, had these two award categories been included in the Demonstration Group calculations, the average bonus percentage for the Demonstration Group would increase from 1.77 percent to 2.22 percent.

Figure 9. Range of Bonus Percentages for Demonstration Group Participants

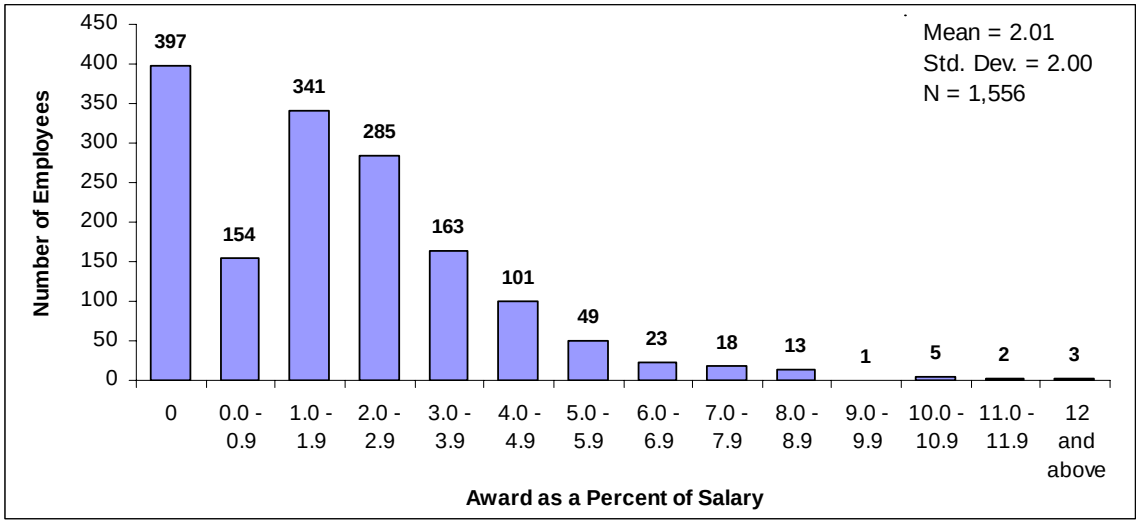


Notes:

1. *Average bonus percentages are based on actions effective in November 2002, as reported in the Year Five data file provided by DoC.*
2. *This analysis is based on the 2,723 of the 3,072 Demonstration Group participants for whom salary data were available.*
3. *In Year Five, the analysis of bonus/award data was addressed in two separate ways for the Demonstration Group. The original analysis was based solely on performance-based bonuses, consistent with previous years. The expanded analysis was based on all bonuses/awards received by Demonstration Group participants and allows inclusion of "Special Act" awards and Other Awards, given that these were accounted for in the Comparison Group calculation.*

The results of the original bonus analysis show that, in Year Five, 74 percent of Comparison Group participants received awards. Among those who received awards, awards ranged from 0.0 percent to 15.8 percent of salary, as shown in Figure 10. (These are also the results for the expanded bonus analysis for the Comparison Group.)

Figure 10. Range of Award Percentages for Comparison Group Participants



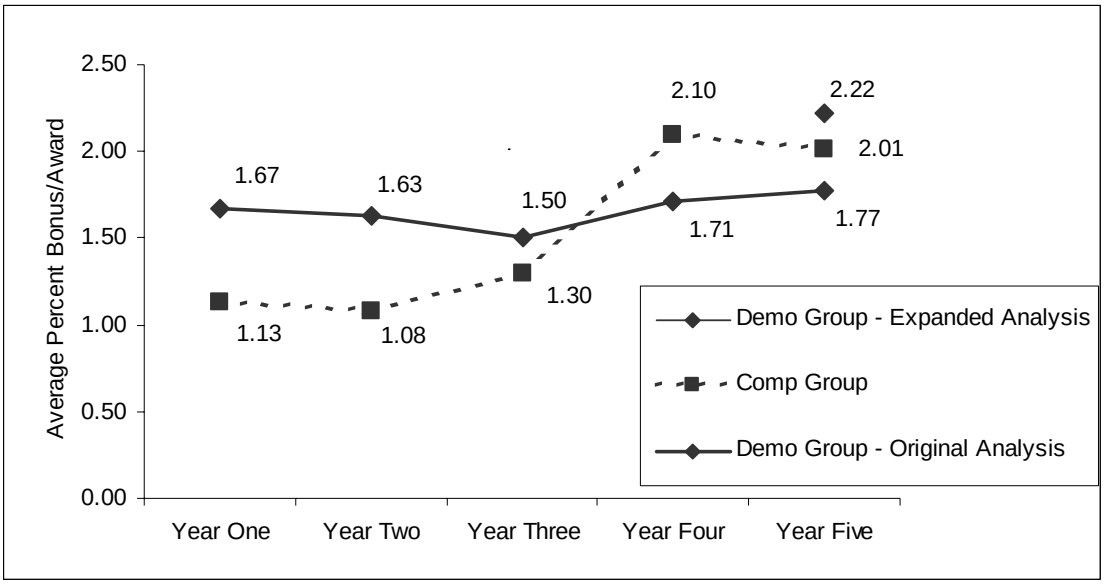
Note: This analysis is based on the 1,555 of the 1,811 Comparison Group participants for whom salary data were available.

4.5.4. Over the life of the Demonstration Project, average bonus percentages have remained relatively constant among the Demonstration Group.

Figure 11 displays a trend analysis of the average bonus/award percentages in the Demonstration and Comparison Groups from Year One to Year Five. Over time, average bonus percentages in the Demonstration Group have remained relatively constant. This finding is not surprising given that the intent of the intervention is to differentiate and appropriately reward strong versus weak performance, not necessarily to increase the amounts distributed for bonuses. Figure 11 also shows the data point (2.22) for the expanded bonus analysis.

Meanwhile, average award percentages in the Comparison Group remained relatively constant over Years One, Two, and Three, and then increased in Year Four to the point where the Comparison Group's average award percentages exceeded the Demonstration Group's average bonus percentages. The average award percentages in the Comparison Group remained similarly high in Year Five.

Figure 11. Trend Analysis of Average Bonus/Award Percentages



4.5.5. Overall, Demonstration Group participants fared better than Comparison Group participants when pay increases and bonuses/awards are combination.

One additional way of examining the impact of a pay-for-performance system is to consider its total impact (pay increases and bonuses) on Demonstration Group participants. As displayed in Table 4-19, Demonstration Group participants received increases and bonuses that were, on average, 4.52 percent of their salary. In comparison, Comparison Group participants received increases and awards that were, on average, 3.53 percent of their salary. Some have speculated that the Comparison Group has sought to increase their award distributions in the past two years so as to be more competitive with the Demonstration Project. These results show that, even if this speculation were true, Comparison Group participants have still not fared as well overall as Demonstration Group participants.

Table 4-19. Comparison of Total Awards in Year Five

	Demonstration Group	Comparison Group
Average Performance-Based Pay Increase in Year Five	2.75%	1.52%
Average Bonus/Award in Year Five	1.77%	2.01%
Average Total Awards (Average Performance-Based Pay Increase Plus Average Bonus/Award Bonus) in Year Five	4.52%	3.53%

4.5.6. For both average performance-based increases and average bonuses, the descending rank order is ZA, ZP, and ZT; ZS were low in the ranks for performance-based pay increases yet high in the ranks for bonuses.

One of the features of the DoC Demonstration Project is to determine whether NIST Demonstration Project interventions can be successfully implemented to a wider range of occupational areas. Therefore, the DoC Demonstration Project was designed to include four career paths: ZP (Scientific and Engineering), ZT (Scientific and Engineering Technician), ZA (Administrative), and ZS (Support). While each of these career paths includes a range of occupations, examining the differences across the career paths provides some indication of the impact of interventions on different occupational groupings.

For example, while the results showed that the average performance-based pay increase across the Demonstration Project was 2.75 percent, results vary within each career path. These results are displayed in Table 4-20. These findings show that the largest average performance-based pay increases were experienced by, in descending order, those in the ZA, ZP, ZS and ZT career paths. This order is nearly consistent with Year Four and the three-year historical pay increase averages obtained prior to the Demonstration Project for individuals in these career paths. One exception in Year Five, however, is that ZS and ZT have reversed order, although the difference between the two is small.

Table 4-20. Average Performance-Based Pay Increase by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE PERFORMANCE-BASED PAY INCREASE
ZP	1,745	2.76%
ZT	165	2.07%
ZA	509	3.29%
ZS	304	2.17%
Overall	2,723	2.75%

Notes:
1. Average pay increase by career path were computed for 2,723 of the 3,072 Demonstration Group participants for whom pay band and salary data were available.
2. Average overall pay increase represents a non-weighted average across the Demonstration Group.

The results showed that the average bonus percentage in the Demonstration Group was 1.77 percent; Table 4-21 displays how the results vary within each career path. These findings show that the largest average bonuses were experienced by, in descending order, those in the ZS, ZA, ZP, and ZT career paths; this is the same order that occurred in Year Four. This order is similar to that found for average performance-based pay increases with one exception: whereas those in the ZS career path received smaller than average performance-based pay increases, they also received larger than average bonuses. This, too, mirrors the pattern found in Year Four. A possible explanation is that bonuses may be more generously awarded in ZS to compensate for smaller performance-based pay increases.

Table 4-21. Average Bonus by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE BONUS
ZP	1,745	1.57%
ZT	165	1.34%
ZA	509	2.05%
ZS	304	2.72%
Overall	2,723	1.77%

Note: Average bonus by career path was computed for 2,723 of the 3,072 Demonstration Group participants for whom pay band and salary data were available. Average overall bonus represents a non-weighted average across the Demonstration Group.

4.5.7. Performance scores have steadily increased over the life of the Demonstration Project.

Employee performance is measured in the Demonstration Group on a weighted 100-point scoring system. These scores are then used as the basis for performance-related decisions for pay and rewards.

Table 4-22 displays the average performance appraisal scores in the Demonstration Group over the past five years. These data show that the average score has steadily increased. As was reported in Year Four, the increase in average performance scores can be interpreted in at least three ways. One, it may suggest that employee performance has improved over the years. Two, it may be a positive result of the Demonstration Project's success in eliminating poor performers, which can improve average employee performance. And three, it may be indicative of score inflation rather than true performance improvement.

Table 4-22. Average Performance Appraisal Scores Across Years

DEMONSTRATION PROJECT YEAR	AVERAGE PERFORMANCE APPRAISAL SCORES
Year One	82.0 points
Year Two	83.4 points
Year Three	84.3 points
Year Four	85.7 points
Year Five	86.5 points

Note: Average performance appraisal scores are the average number of points received under the 100-point system.

We also examined average performance appraisal scores in Year Five by career path. As displayed in Table 4-23, these findings show that the highest performance scores were experienced by, in descending order, those in the ZA, ZP, ZS, and ZT career paths; logically, this order parallels that which was found for average performance-based increases. This order varies only slightly from previous years, in which ZT had higher (Year Three) or tied (Year Four) ratings with ZS.

Table 4-23. Average Year Five Performance Score by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE PERFORMANCE APPRAISAL SCORES
ZP	1,745	86.4 points
ZT	165	84.0 points
ZA	509	88.2 points
ZS	304	84.8 points
Overall	2,723	86.5 points

Notes:

1. *Average performance scores by career path were computed for 2,723 of the 3,072 Demonstration Group participants for whom pay band and performance score data were available.*
2. *Average overall performance score represents a non-weighted average across the Demonstration Group.*

4.5.8. The link between performance and pay remains evident in the Demonstration Group.

The link between performance and pay is fundamental to the Demonstration Project. As in Years One, Two, Three, and Four objective data indicated that financial rewards are tied to job performance during Year Five. In Years One, Two, and Three, Booz Allen used correlation analysis as a broad measure of the relationship between pay and performance score. While this analysis was one of many analyses conducted to better assess the impact of performance on pay, it did not incorporate other factors that could impact pay progression. For this reason, in Years Four and Five Booz Allen conducted a regression analysis[25] to replace the correlation analysis. The results of the regression analysis (presented in Appendix D-1) show that performance score had a stronger impact on performance-based pay increase than any other factor examined.

The results of the regression analysis provide support for a pay and performance link within the Demonstration Project by demonstrating that performance score is a key factor influencing pay. These results also show that the Demonstration Project is operating as intended because the system is designed to ensure a high degree of linkage between pay and performance. In fact, the payout procedures are designed to ensure that no employee receives a relative salary increase that is greater than that which someone with a higher performance score receives.

[25] *Regression analysis is a similar, but more complex, analysis than correlation analysis in that regression analysis also measures the impact of other factors on the key relationship (e.g., the relationship between performance and pay). For this evaluation, a type of regression called "stepwise regression" was conducted using end salary as the dependent variable.*

In addition to the regression analysis, a second analysis was performed to examine the relationship between pay and performance. In theory, under a pay-for-performance system, better performers should receive higher percentage pay increases. Conversely, lower performers are more likely to receive a low increase or none at all.

Table 4-24 shows additional support that this is continuing to happen in the Demonstration Group. In Year Five, for the most part, participants with higher performance scores were more likely to receive pay increases than were those with lower performance scores. One exception is a minor difference between those in the 90-100 and 80-89 performance score category; however, the lower percentage of employees who received pay increases in the 90-100 performance score category could possibly be explained by two contributing factors: one, employees who have reached the top of their pay bands and two, employees who did not receive a pay increase due to having received a promotion or pay adjustment (within band) within the previous 120 days. Clearly, participants with higher performance scores received larger pay increases than those with lower performance scores. This finding is consistent with the tenets of a pay-for-performance system.

Table 4-24. Performance Score Category and Performance-Based Pay Increases Among Demonstration Group Participants

PERFORMANCE SCORE CATEGORY	NUMBER OF EMPLOYEES	PERCENT OF EMPLOYEES RECEIVING PAY INCREASES	AVERAGE PERFORMANCE-BASED PAY INCREASE PERCENTAGE
90-100	1,120	87.0%	3.2%
80-89	1,241	89.5%	2.7%
70-79	295	84.1%	2.0%
60-69	52	32.7%	0.3%
50-59	6	16.7%	0.2%
40-49	9	0.3%	0.0%

Notes:

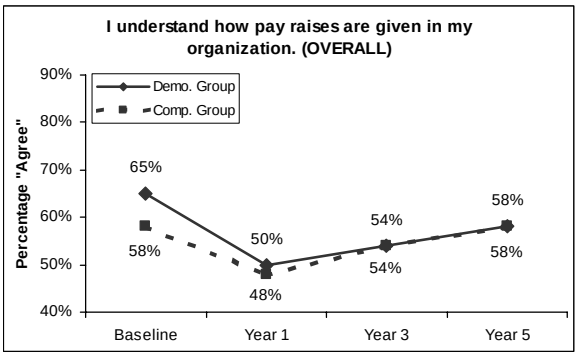
1. *The total number of employees in this analysis is based on the 2,723 employees for whom valid Year Five performance scores were available.*
2. *Some, if not all, of the 13 percent of employees in the highest performance score category, but with no pay increases, may be employees at or near the top of their paybands. Employees who were promoted or received a pay adjustment within 120 days of the end of the rating cycle are eligible to receive a score but are not eligible for a pay increase.*

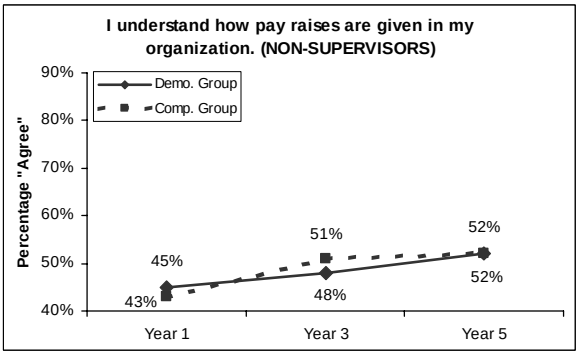
4.5.8.1. Survey data show a moderate level of understanding among Demonstration Group participants about the link between pay and performance.

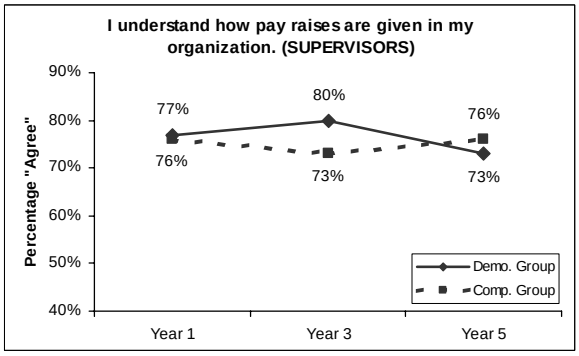
Over the life of the Demonstration Project, there have been improvements in Demonstration Group participants' understanding about how pay increases are given. While the improvements have been slight, they have been in the desired direction. Interestingly, Comparison Group participants also reported increased levels of understanding, even though none of the enacted changes affected them. One explanation may be that participation in the Comparison Group, in itself, heightened their awareness of pay distribution issues.

Across years, and across both the Demonstration Group and Comparison Group, supervisory employees consistently reported greater understanding than did non-supervisory employees. As a result of their increased participation in the determination of pay, supervisors likely have more knowledge about the distribution of pay, and have greater awareness of their role within the process. In addition, supervisors typically are the most accurate source of information regarding employee performance. By implementing a different performance appraisal system and using supervisory ratings to determine pay, DoC has taken a large step toward its goal of a pay-for-performance system. Given their exposure to pay and performance decisions, supervisors are more likely to see this connection than non-supervisory employees, as is demonstrated in the survey data in Table 4-25.

Table 4-25. Change Over Time – Understanding of Pay Raises







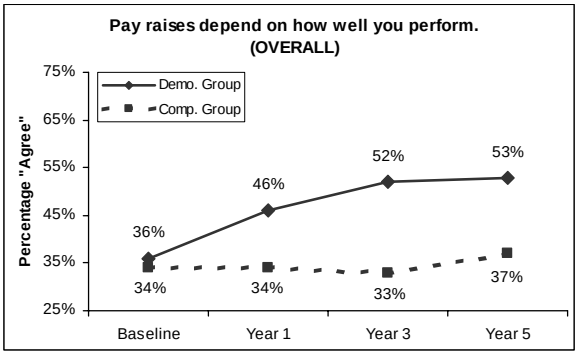
		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
41. I understand how pay raises are given in my organization.	*Disagree*	24%	27%	15%	22%	25%	13%
	Neither disagree nor agree	18%	21%	12%	20%	23%	11%
	Agree	58%	52%	73%	58%	52%	76%
		YEAR THREE					
	Disagree	29%	33%	13%	26%	29%	12%
	Neither disagree nor agree	17%	19%	8%	20%	20%	15%
	Agree	54%	48%	80%	54%	51%	73%
		YEAR ONE					
	Disagree	31%	35%	12%	32%	36%	15%
	Neither disagree nor agree	19%	20%	11%	20%	22%	9%
	Agree	50%	45%	77%	48%	43%	76%
		BASELINE					
	Disagree	18%			26%		
	Neither disagree nor agree	17%	NA		15%	NA	
	Agree	65%			58%		

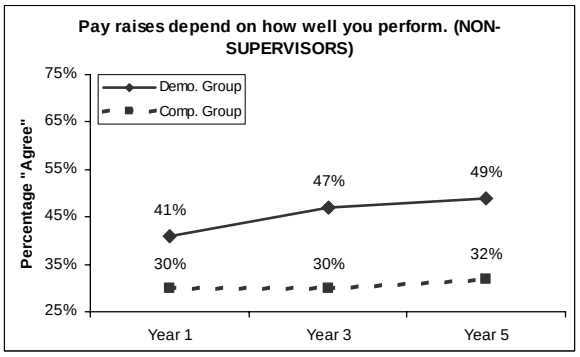
(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

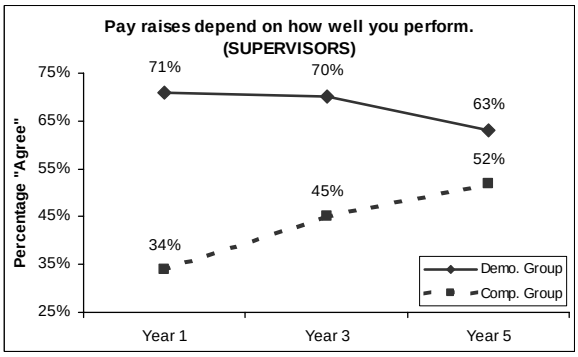
As shown in Table 4-26, Demonstration Group survey respondents recognize the link between pay and performance more so than Comparison Group survey respondents. Demonstration Group participants' perceptions improved over time and then leveled off in Year Five. To note, a declining percentage of Demonstration Group supervisory employees hold this view; while only speculative, it is possible that this drop is affected by supervisors who have faced challenges with allocating pay to employees who have maxed out in their

paybands. In contrast, Comparison Group participants' beliefs have remained stable across time (although Comparison Group supervisory employees have shown a marked increase).

Table 4-26. Change Over Time – Pay and Performance







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
42. Pay raises depend on how well you perform.	*Disagree*	25%	27%	21%	33%	36%	27%
	Neither disagree nor agree	21%	24%	16%	30%	32%	21%
	Agree	53%	49%	63%	37%	32%	52%
		YEAR THREE					
	Disagree	28%	31%	16%	40%	42%	32%
	Neither disagree nor agree	21%	22%	15%	27%	28%	23%
	Agree	52%	47%	70%	33%	30%	45%
		YEAR ONE					
	Disagree	29%	32%	16%	39%	40%	39%
	Neither disagree nor agree	25%	27%	13%	27%	30%	27%
	Agree	46%	41%	71%	34%	30%	34%
		BASELINE					
	Disagree	39%			44%		
	Neither disagree nor agree	26%	NA		22%	NA	
	Agree	36%			34%		

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

4.5.8.2. Focus group data show mixed opinions about the effectiveness of pay-for-performance.

Focus group data revealed that Demonstration Group supervisory employees and non-supervisory employees had varying opinions about the effectiveness of a pay-for-performance system (See Table 4-27). Generally, non-supervisory employees were more apprehensive or indicated that they are not in a position to know how well linked pay and performance are. Supervisory employees were more attuned to the linkages (see Table 4-28).

Table 4-27. Focus Group Results – Linkage Between High Performance and Larger Pay Raises

DEMONSTRATION GROUP	
Non-Supervisory Employees	**Supervisory Employees**
• Not necessarily • Have no way of knowing • Lots of favoritism in some offices	• Yes • Yes – with exception of those who have reached the top of their pay bands • Depends on whether you mean percentage or dollars; lowest intervals have potentially greatest increases, even with relatively lower scores

Table 4-28. Focus Group Results – Importance of Performance Score in Determining Pay Increase

DEMONSTRATION GROUP
Non-Supervisory Employees
• Very important
• Don't really know what others get, so really can not say how important it is
• Scores can change with Pay Pool Managers

4.5.9. The link between performance and pay (as measured by bonuses/awards) remains evident in the Demonstration Group.

As was found for pay increases, objective data indicate that employee bonuses were tied to performance during Year Five. Statistics reveal a positive relationship between job performance (as measured by performance scores) and performance bonuses ($r = .44$, $p < .01$) [26] (Appendix B provides a scatterplot of the data). This correlation[27] is higher or similar to all previous years (Year Four: $r = .37$, $p < .01$; Year Three: $r = .46$, $p < .01$; Year Two: $r = .41$, $p < .01$; and Year One: $r = .46$, $p < .01$, suggesting that the performance–bonus relationship has remained reasonably constant over the course of the Demonstration Project.

[26] *Based on 2,723 of the 3,072 Demonstration Group participants for whom performance score and salary data were available.*

[27] *Correlation is a measure of the linear relationship between two or more variables and can have a value ("r") ranging from –1.00 to +1.00.*

We also examined the relationship between job performance and bonuses in Year Five by career path. As displayed in Table 4-29, the results suggest that the relationship between performance and bonuses is strongest for, in descending order, those in the ZT, ZS, ZP, and ZA career paths.

Table 4-29. Correlation Between Performance Scores and Bonuses by Career Path

CAREER PATH	CORRELATION BETWEEN PERFORMANCE SCORE AND BONUS
ZP	.45
ZT	.56
ZA	.45
ZS	.53

Notes:
1. *All results are significant at the $p \leq .01$ level.*
2. *Correlation by career path was computed for 2,723 of the 3,072 Demonstration Group participants for whom pay band data were available.*

4.5.9.1. Survey data suggest that Demonstration Group participants are mixed regarding the relationship between performance and bonuses/awards.

As shown in Table 4-30, survey data revealed that there was no significant difference between Demonstration Group and Comparison Group respondents regarding how bonuses/awards are granted. Slightly more than half of the respondents reported that they have a good understanding. However, surprisingly, a greater percentage of Comparison Group respondents than Demonstration Group respondents indicated that awards depend on performance. This difference was only slight but is still insightful given that, in theory, awards/bonuses in the Demonstration Project should be distributed on a performance basis. This finding, combined with other indicators in the objective data analysis, suggests that awards/bonuses are distributed for reasons other than performance (e.g., compensating for a small performance-based increase due to being at or near the top of the pay band).

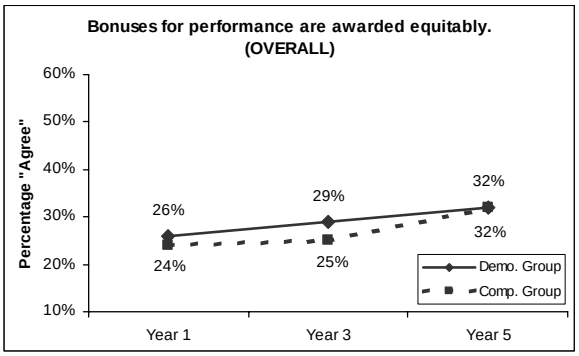
Table 4-30. Survey Results – Performance and Awards

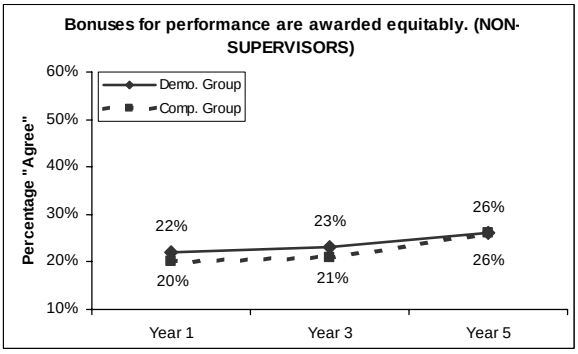
			Demo. Group			Comp. Group			Demo. vs. Comp.
			Total	(N)	(S)	Total	(N)	(S)	
43.	I understand how awards are given in my organization.	*Disagree*	26%	30%	17%	25%	29%	13%	*No significant difference*
		Neither disagree nor agree	21%	23%	17%	22%	25%	12%	
		Agree	52%	47%	66%	53%	46%	75%	
44.	Cash awards depend on how well you perform.	*Disagree*	25%	27%	20%	20%	22%	16%	*Significant difference*
		Neither disagree nor agree	26%	29%	19%	27%	32%	14%	
		Agree	49%	44%	61%	53%	47%	71%	

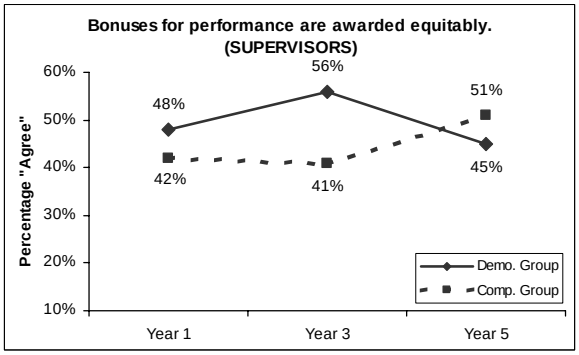
(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

In fact, only one-third of Demonstration Group (or Comparison Group) respondents perceived that bonuses/awards are equitably distributed. Over time, perceptions on this topic have increased very slightly (see Table 4-31) but have not significantly exceeded that which is found in the Comparison Group. Responses differed by non-supervisory and supervisory employees, with the former's perceptions closely mirroring the Comparison Group. However, Demonstration Group supervisory employees' perceptions have varied over the years, and recently experienced a downturn.

Table 4-31. Change Over Time – Equitable Distribution of Bonuses/Awards







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
45. Bonuses for performance are awarded equitably.	*Disagree*	32%	32%	30%	31%	32%	25%
	Neither disagree nor agree	37%	42%	24%	38%	42%	24%
	Agree	32%	26%	45%	32%	26%	51%
		YEAR THREE					
	Disagree	36%	38%	25%	37%	40%	26%
	Neither disagree nor agree	35%	39%	19%	38%	39%	33%
	Agree	29%	23%	56%	25%	21%	41%
		YEAR ONE					
	Disagree	37%	40%	20%	38%	40%	25%
	Neither disagree nor agree	37%	38%	32%	39%	40%	33%
	Agree	26%	22%	48%	24%	20%	42%

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

4.5.9.2. Focus group data suggest mixed reactions regarding the motivational power of bonuses.

In focus groups, there were mixed reactions among Demonstration Group participants about the ability of bonuses to motivate employees to perform better (see Table 4-32). While some participants viewed performance bonuses as motivating, others raised concerns including that they are indistinguishable from pay increases, inappropriate in team settings, and/or are not motivating because motivation comes from within. There was similar skepticism among Comparison Group participants in regards to the motivational power of awards.

Table 4-32. Focus Group Results – Effectiveness of Bonuses for Motivating Employees to Perform Better

DEMONSTRATION GROUP	COMPARISON GROUP
• Yes • No – there is no motivation with bonuses because they come at the same time as your pay increase; sometimes a bonus is indistinguishable from a pay increase • Unclear whether bonuses or pay increases are for doing a good job on day-to-day work or for high visibility projects; unfair if you do not have the opportunity for high visibility projects (especially true for administrative staff) • May not be appropriate in a team setting; not everyone benefits equally • Very useful for employees who have reached the top of their pay bands • Motivation comes from within, regardless of the money	• No • Yes • In last few years, amount of awards has gone up dramatically because the leadership is trying to match what one can get under the Demo Project • Non-monetary awards are seen as more important than monetary awards, particularly among more senior employees • Do not see a relationship between getting an award and a change in employee behavior. The people do the work because it is valuable to them – the award does not change them. May have subtle impact on morale but does not change employee performance

Focus group participants also addressed the perceived fairness in how performance bonuses are distributed (see Table 4-33). Some Demonstration Group and Comparison Group participants indicated that they are not aware of who receives bonuses/awards and therefore cannot make an accurate judgment. Others provided a variety of opinions including that it is challenging to operate a perfect system and that bonuses might be distributed for purposes of rewarding employees who have reached the top of their pay band regardless of performance level.

Table 4-33. Focus Group Results – Fairness in Distribution of Performance Bonuses

DEMONSTRATION GROUP	COMPARISON GROUP
• We have no way of knowing • Yes – performance bonuses are distributed fairly • No – performance bonuses are not distributed fairly • There is no intention to base bonuses on anything other than performance; however, there is no perfect system • Not necessarily. Bonuses are given to poor performers who have reached the top of their pay bands, or are influenced by other factors, such as attendance	• We really do not know who gets awards • No – if there is a fairness issue, the greater issue is between groups than within groups • Definitely other factors play a role • Oftentimes, people think that some groups get more awards than others

4.5.10. To some extent, Demonstration Group participants are satisfied with the pay system; however, there is room for improvement.

As shown in Table 4-34, survey respondents in the Demonstration Group offered mixed responses regarding the degree to which the pay system is fair. While some of these results only garnered support from a limited number of respondents (e.g., only one-third of Demonstration Group respondents reported that differences in pay represent differences in responsibility and job level), these data are a slight improvement from Year Three survey data. Another key difference from Year Three to Year Five is that in Year Five there was a difference between Demonstration Group and Comparison Group respondents in regards to perceptions of the competitiveness of their salaries in the market. A greater percentage of Demonstration Group participants reported that their salaries are competitive than did Comparison Group participants.

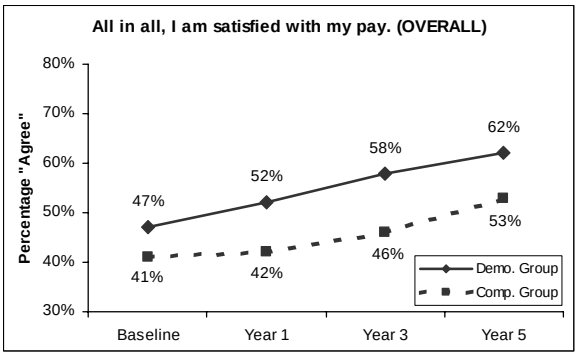
Table 4-34. Survey Results – Fairness of the Pay System

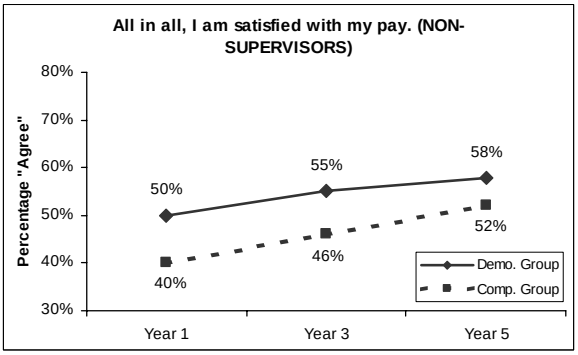
		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
105. Differences in pay at my organization represent real differences in level of responsibility and job difficulty.	*Disagree*	40%	41%	39%	43%	44%	40%	*No significant difference*
	Neither disagree nor agree	27%	30%	21%	23%	26%	14%	
	Agree	33%	30%	41%	35%	31%	46%	
106. My pay is fair considering what other people in my organization are paid.	*Disagree*	29%	30%	24%	32%	33%	28%	*No significant difference*
	Neither disagree nor agree	26%	29%	19%	22%	24%	15%	
	Agree	46%	41%	57%	46%	43%	56%	
107. Pay progression (the way I move up within my grade/band) is fair.	*Disagree*	28%	30%	22%	30%	31%	26%	*No significant difference*
	Neither disagree nor agree	23%	26%	17%	24%	26%	19%	
	Agree	49%	44%	61%	46%	43%	55%	
108. Other employers in this area pay more than the government does for the kind of work I am doing.	*Disagree*	16%	*No significant difference*		13%	*No significant difference*		*Significant difference*
	Neither disagree nor agree	39%			34%			
	Agree	45%			53%			

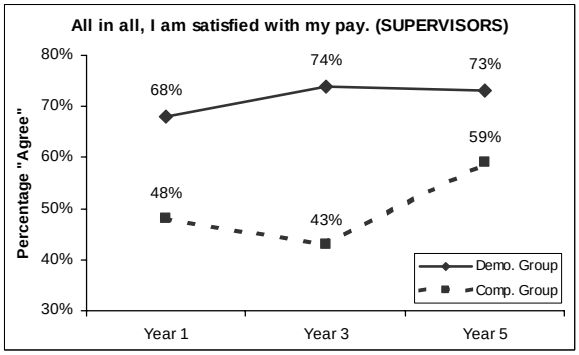
(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

In addition to fairness of pay, Demonstration Group participants indicated greater satisfaction with their pay than did Comparison Group participants (see Table 4-35). This finding has occurred consistently every year the survey was conducted. Satisfaction with pay among Demonstration Group participants has increased fifteen percentage points since the pre-Demonstration Project baseline. Another promising finding is that increases in pay satisfaction over time have occurred among both non-supervisory employees and supervisory employees.

Table 4-35. Change Over Time – Pay Satisfaction





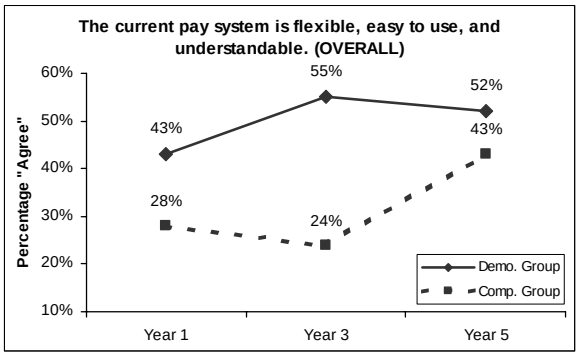


		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
104. All in all, I am satisfied with my pay.		**YEAR FIVE**					
	Disagree	22%	26%	14%	29%	31%	23%
	Neither disagree nor agree	15%	16%	13%	18%	17%	18%
	Agree	62%	58%	73%	53%	52%	59%
		YEAR THREE					
	Disagree	30%	32%	19%	41%	41%	39%
	Neither disagree nor agree	13%	14%	7%	14%	13%	18%
	Agree	58%	55%	74%	46%	46%	43%
		YEAR ONE					
	Disagree	34%	37%	19%	43%	45%	36%
	Neither disagree nor agree	13%	13%	13%	15%	15%	16%
	Agree	52%	50%	68%	42%	40%	48%
		BASELINE					
	Disagree	35%			39%		
	Neither disagree nor agree	18%	NA		21%	NA	
	Agree	47%			41%		

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

As shown in Table 4-36, Demonstration Group supervisory employees' perceptions about the flexibility, ease, and understandability of the pay system improved in Year Three and then leveled off in Year Five, yet still remained higher than Comparison Group supervisory employees. An unexpected finding is the sharp increase among Comparison Group supervisory employees given that the system that they are under has not changed in the past two years.

Table 4-36. Change Over Time – Pay System



		Demo. Group (S)	Comp. Group (S)
		YEAR FIVE	
151. The current pay system is flexible, easy to use, and understandable.	*Disagree*	24%	35%
	Neither disagree nor agree	24%	21%
	Agree	52%	43%
		YEAR THREE	
	Disagree	28%	49%
	Neither disagree nor agree	17%	27%
	Agree	55%	24%
		YEAR ONE	
	Disagree	35%	39%
	Neither disagree nor agree	22%	33%
	Agree	43%	28%

This item was addressed by supervisory employees only
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

4.5.11. Evidence suggests that the flexible pay increase upon promotion intervention has been successful in providing managers with greater latitude.

The flexible pay increase upon promotion intervention provides managers with the flexibility to offer substantial pay increases when employees are promoted. Because of the less restrictive nature of pay bands, an employee's salary, upon promotion, can be set anywhere within a band (with a minimum 6 percent increase). This intervention is intended to reward high performing employees and encourage their retention by making their salaries more competitive with the public and private sectors.

Table 4-37 suggests that this intervention continues, as in past years, to be effectively utilized. By subtracting the smallest promotion amount from the largest promotion amount, we calculated the size of the range of pay increases upon promotion. Thus, the size of the range is used as an indicator of flexibility in granting pay increases upon promotion, such that larger ranges are equated with having greater flexibility.

As was found in previous years, at each level of promotion (e.g., from Band 1 to Band 2), managers in the Demonstration Group used a wider range of pay increases upon promotion than did those in the Comparison Group. For each comparison between the Demonstration Group and the Comparison Group, the wider range in pay increases upon promotion appears in bold.

Table 4-37. Range of Pay Increases Upon Promotion

Promotion by Band (or equivalent)	Demonstration Group		Comparison Group	
Band after promotion	Employees	Size of Range of Increase Upon Promotion	Employees	Size of Range of Increase Upon Promotion
Band 2	12	**$10,037**	59	$8,761
Band 3	62	**$12,157**	71	$9,637
Band 4	82	**$15,461**	62	$11,524
Band 5	41	**$24,492**	15	$15,218
Average Range		$15,970		$10,357

Notes:

1. *Promotions are reported for those cases in which employees were promoted across bands (or the equivalent in the Comparison Group).*
2. *Size of range was computed by subtracting the smallest promotion amount from the largest promotion amount.*
3. *Average range represents a non-weighted average of all employees in the analysis.*

4.5.12. Within a subset of the Demonstration Project, Demonstration Group high performers increased their income at a faster rate than others in the Demonstration Group and the Comparison Group over five years, demonstrating the link between performance and pay.

To examine more fully the link between performance and pay, we analyzed the salary progression of a subset of the Demonstration Project participants. Specifically, we examined performance-based pay increases and bonuses/awards over five years (increases due to promotions were not included because insufficient data were available from the earlier years). Employees in the ZP career path, pay band 4, and interval 1 (or the Comparison Group equivalent) in Year One were selected for examination because they are the most populous group in the Demonstration Project's ZP career path. We identified these individuals in the Year One datafile and then tracked the same individuals in the Year Two, Three, Four, and Five datafiles to determine their progression.

We selected this one subset to serve as an example and therefore caution the reader about generalizing findings more broadly. However, given that the same decision rules regarding compensation apply across career paths and pay bands, we would expect that similar outcomes would result if a different subset of the Demonstration Project were selected.

Table 4-38 shows that after five years in the Demonstration Project, high performers in the Demonstration Group in this analysis have experienced, on average, a $21,083 increase, based on pay increases and bonuses. This amount exceeds the dollar increase of others in the Demonstration Group (of the same career path, pay band, and interval). This finding supports the hypothesis that higher performance is paying off, both on a year-over-year basis, as well as over the longer term.

Table 4-38. Progression Analysis – Demonstration Group Participants Who Started in ZP Career Path, Pay Band 4, and Interval 1 in Year One

		YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE	AFTER FIVE YEARS
Demonstration Group With Performance Scores of 90-100	Average Performance-Based Pay Increase	$2,757	$2,996	$2,833	$2,949	$2,822	$14,357
	Average Bonus Amount	$1,224	$1,252	$1,343	$1,439	$1,468	$6,726
	TOTAL	$3,981	$4,248	$4,176	$4,388	$4,290	$21,083
Demonstration Group With Performance Scores of 40-89	Average Performance-Based Pay Increase	$1,412	$1,779	$1,674	$1,678	$2,095	6726
	Average Bonus Amount	$768	$813	$953	$1,041	$1,040	$4,615
	TOTAL	$2,180	$2,592	$2,627	$2,719	$3,135	$11,341

Notes:

1. *Demonstration and Comparison Group salary increases are based on valid data for all employees receiving zero or greater salary increases.*
2. *For this analysis, the number of participants in each group in each year ranged from 56 to 154.*
3. *These analyses were done in "then year dollars." We considered normalizing the data to "constant year dollars," but decided that the results would not differ to any significant degree.*
4. *The data reported for Years One, Two, and Three vary slightly from that which was reported in Year Three. This analysis was revised to include only those employees who were in their respective groups for the entire five years and does not include individuals who left and rejoined the organization.*

Similarly, Table 4-39 shows that after five years in the Demonstration Project, Demonstration Group participants in this analysis have experienced greater salary progression compared to their counterparts in the Comparison Group (of the same career path, pay band, and interval). This finding suggests that the Demonstration Project interventions are resulting in greater salary gains for those within the Demonstration Group.

Moreover, the frequency with which participants receive salary increases also affects their progression. Under the GS system, Comparison Group participants do not receive increases every year. Rather, step within grade determines whether they receive increases every year, two years, or three years.[28] In comparison, Demonstration Group participants receive increases every year. This difference in the frequency of increases is accounted for in the analysis because the analysis is based on the average increase in any given year.

Table 4-39. Progression Analysis – Comparison of Demonstration Group and Comparison Group Participants Who Started in ZP Career Path, Pay Band 4, and Interval 1 in Year One (or the equivalent)

		YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE	AFTER FIVE YEARS
Demonstration Group	Average Performance-Based Pay Increase	$1,771	$2,218	$2,129	$2,243	$2,401	$10,762
	Average Bonus Amount	$889	$969	$1,106	$1,218	$1,221	$5,403
	TOTAL	$2,660	$3,187	$3,235	$3,461	$3,622	$16,165
Comparison Group	Average Performance-Based Pay Increase	$1,186	$1,501	$497	$1,127	$1,007	$5,318
	Average Award Amount	$758	$882	$1,017	$1,572	$1,418	$5,647
	TOTAL	$1,944	$2,383	$1,514	$2,699	$2,425	$10,965

Notes:

1. *Demonstration and Comparison Group salary increases are based on valid data for all employees receiving zero or greater salary increases.*
2. *For this analysis, the number of participants in each group in each year ranged from 139 to 237.*
3. *These analyses were done in "then year dollars." We considered normalizing the data to "constant year dollars," but decided that the results would not differ to any significant degree.*
4. *The data reported for Years One, Two, and Three vary slightly from that which was reported in Year Three. This analysis was revised to include only those employees who were in their respective groups for the entire five years and does not include individuals who left and rejoined the organization.*

[28] *Given limitations of the datafiles, we were not able to identify the step of each individual in this analysis and whether each Comparison Group participant did or did not receive an increase in any given year. However, because we tracked the same individuals over the five years, we are able to determine overall outcomes.*

4.5.13. Delegated pay authority continues to provide a method for DoC to establish a link between employee performance and pay.

The rationale behind delegated pay authority is that line managers are in a better position to understand labor market forces and therefore are more effective in making salary decisions. This is in sharp contrast to the traditional GS system in which employee pay increases are a function of the pay table with no input from line managers.

Consistent with Year Three, survey data revealed that Demonstration Group supervisory employees were more likely than Comparison Group supervisory employees to indicate that they have enough authority to determine employee pay (see Table 4-40). Due to the nature of the relationship between supervisory and non-supervisory employees, Demonstration Group supervisory employees who feel that they have greater authority to make pay decisions can make salary recommendations that are more in line with the employee's actual performance. While it is promising to find that a greater percentage of supervisors in the Demonstration Group than Comparison Group believe they have sufficient authority, only approximately one-third of respondents believe so. While speculative, this finding may reflect frustrations (warranted or unwarranted) expressed by Rating Officials when Pay Pool Managers override their pay recommendations.

Table 4-40. Survey Results – Delegated Pay Authority

		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
133. I have enough authority to determine my employees' pay.	*Disagree*			36%			46%	*No significant difference*
	Neither disagree nor agree			27%			27%	
	Agree			37%			27%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding
This item was addressed of supervisory employees only

In Year Five, Demonstration Group respondents and Comparison Group respondents reacted similarly in regards to satisfaction with how management handles pay and confidence that management officials are qualified to make pay decisions (see Table 4-41). Given that the Demonstration Project requires more from supervisors in managing pay due to their roles as Rating Officials making pay recommendations and Pay Pool Managers making pay decisions, this finding suggests the need for strategies to increase managers' abilities in these areas and/or perceptions of their abilities.

Table 4-41. Survey Results – Management of Pay

		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
110. I am satisfied with the way management handles pay.	*Disagree*	33%	34%	28%	29%	30%	25%	*No significant difference*
	Neither disagree nor agree	28%	30%	22%	30%	32%	22%	
	Agree	40%	35%	50%	41%	38%	52%	
111. Management officials are qualified to make pay decisions.	*Disagree*	22%	24%	18%	22%	25%	14%	*No significant difference*
	Neither disagree nor agree	31%	33%	24%	35%	36%	33%	
	Agree	47%	43%	58%	43%	40%	53%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

4.5.14. The supervisory performance pay intervention continued to reward supervisors who had reached the top of their pay bands.

In theory, the supervisory performance pay intervention facilitates paying supervisors at more competitive levels, with an intended outcome of motivating higher performance. As designed, this intervention is used for supervisors who reach the maximum of pay for the pay band and therefore are placed in the pay interval designated as supervisory performance pay. Supervisors receive performance scores along with all other employees in the Demonstration Group and are given pay increases appropriate to the score. Therefore, it is only when the supervisor reaches the top of the pay band that the intervention is enacted. As designed, this intervention rewards the highest paid supervisors (by expanding the pay band maximum by 6 percent) – but does not necessarily reward the highest performing supervisors. For this reason, this intervention may have limited utility as a motivational and/or retention tool for high performers.

An analysis of Year Five data indicated that there were 276 supervisors in the Demonstration Group during Year Five. Of the 262 supervisors who had performance scores, 89 received supervisory performance pay. In comparison, 50, 41, 44, and 49 supervisors received supervisory performance pay in Year Four, Year Three, Year Two, and Year One, respectively. This spike in Year Five may be the result of at least three factors. One, there were a significantly greater number of supervisors in the Demonstration Group in Year Five compared to Year Four (276 compared to 189). Two, over the life of the Demonstration Project, more supervisors have gained in seniority, and hence salary, to put them into the supervisory performance pay intervals. And three, there was a drop in the turnover rate among supervisors (as will be discussed in a later section of this report) from 14 percent in Year Four to 5 percent in Year Five, which means that a greater number of supervisors remained and could potentially move into the supervisory performance pay intervals if warranted by their salaries.

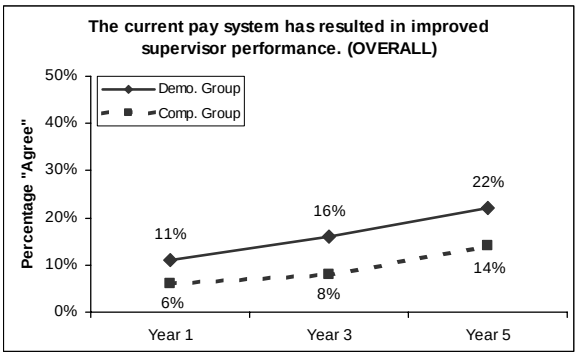
Mean scores indicate that, in Year Five, there is not a meaningful difference in the performance scores between those supervisors who did or did not receive supervisory performance pay: Supervisors receiving supervisory performance pay had an average score of 91.3 (with a range of 70 to 98), while the average among all other supervisors was 90.3 (with a range of 74 to 98). These average scores are reasonable similar (within one percentage point) as Year Four. This finding of no significant difference reflects how 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 score that warrants an increase above the top of the regular pay band.

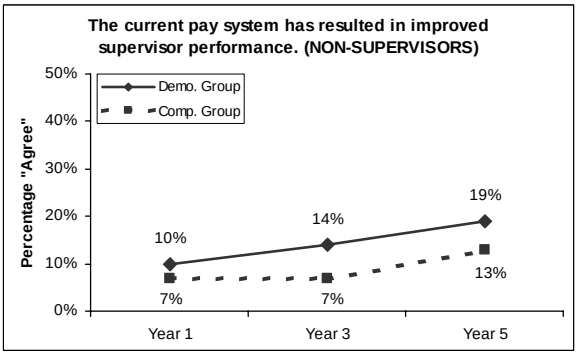
4.5.14.1. A small, but increasing, percentage of Demonstration Group survey respondents believe that the pay system has led to improved supervisory performance, though this is not necessarily attributable to the supervisory performance pay intervention.

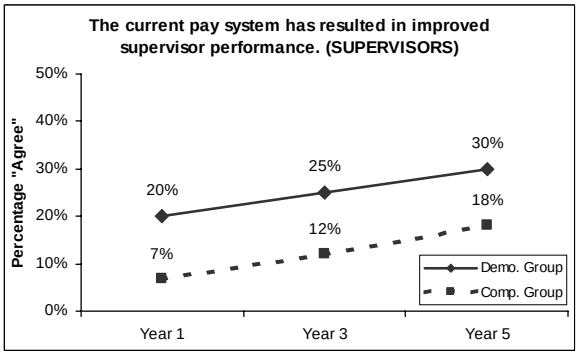
While less than 25 percent of Demonstration Group survey respondents believe that the pay system has led to improved supervisory performance, this concept has gained acceptance over time. Not surprisingly, more supervisory employees than non-supervisory employees hold this view. This trend has been apparent in both the Demonstration Group and the Comparison group. Table 4-42 displays these findings.

However, it is not clear from these data that respondents are attributing increased supervisory performance to the supervisory performance pay intervention. The perception of increased performance could also be due to any number of other reasons for why supervisors may have improved. Given that a similar trend of increasing perceptions about the quality of supervisor performance is occurring in the Comparison Group as well, it seems feasible that the perception of improved performance is attributable to factors beyond the interventions of the Demonstration Project.

Table 4-42. Change Over Time – Improved Supervisor Performance







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
	Disagree	39%	40%	36%	37%	36%	40%
	Neither disagree nor agree	40%	41%	35%	49%	51%	42%
	Agree	22%	19%	30%	14%	13%	18%
		YEAR THREE					
	Disagree	44%	46%	35%	49%	49%	53%
112. The current pay system has resulted in improved supervisor performance.	*Neither disagree nor agree*	40%	40%	39%	43%	44%	36%
	Agree	16%	14%	25%	8%	7%	12%
		YEAR ONE					
	Disagree	47%	49%	39%	44%	42%	53%
	Neither disagree nor agree	42%	42%	42%	50%	52%	40%
	Agree	11%	10%	20%	6%	7%	7%

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

4.5.14.2. Consistent with the survey results, focus group and interview data fail to provide strong evidence that supervisory performance pay motivates supervisors to perform better.

Focus group participants were unclear on what the supervisory performance pay intervention is and its ability to motivate. Interviewees provided mixed results when asked what Demonstration Project interventions encourage supervisors to perform better. There was no clear consensus that supervisory performance pay is a motivator. Table 4-43 and Table 4-44 display these findings.

Table 4-43. Focus Group Results – Supervisory Performance Pay as a Motivator for Supervisors to Perform Better

DEMONSTRATION GROUP
Supervisory Employees
• There is no supervisory pay at multiple sites • Not motivating in itself; people become supervisors because they want to be supervisors; additional monies are fair treatment because of the level of additional responsibility • There is a lack of incentives to take a supervisory job

Table 4-44. Interview Results – Demonstration Project Interventions That Encourage Supervisors to Perform Better

DEMONSTRATION GROUP
Pay Pool Managers and Rating Officials
• The Demonstration Project makes it easier to recruit (classify job, set pay) • For supervisors performing as supervisors, the interventions have not really made a difference. Good supervisors are performing well, and the interventions really will not help bad supervisors. They are bad supervisors for other reasons, e.g., a scientist who does not really want to be a supervisor or someone who lacks appropriate training in managerial skills • Supervisory performance pay intervention has helped a lot

4.6. The three-year probationary period for scientists and engineers continues to be used but assessing its utility remains difficult.

The three-year probationary period for scientists and engineers intervention was designed to allow supervisors the ability to make permanent hiring decisions for research and development (R&D) positions based on employees' demonstrated capabilities in the full R&D cycle. This intervention provides these supervisors with the ability to terminate poor performing employees any time during the three-year period rather than being limited to the typical one-year probationary period. In Year Five, 20 employees were hired under the three-year probationary period. In Years Four, Three, Two, and One, 10, 15, 8, and 22 employees, respectively, were hired under the three-year probationary period.[29]

[29] *The number of employees reported as being hired under the three-year probationary period during Year Two differs slightly from that which was reported in the Year Two report. The number reported here, eight, is considered a more reliable count.*

In Year Five, of those currently under the three-year probation, 2 employees left, both due to resignations. However, as was reported in Year Four, it is unclear whether this movement of individuals out of the probationary period represents positive implementation of the intervention (by virtue of making appropriate decisions for those under probation) or under-use of the intervention is unclear due to limitations in the analyses that can be performed given the way that probation-related data are tracked.

When asked whether they believe that they have the flexibility to terminate ZP employees performing research and development work who are covered by the three-year probation period, focus group respondents (Demonstration Group supervisors) generally reported that the system allows for it and they believe they would be able to do so; however, many respondents indicated that they did not have firsthand experience with this situation.

4.7. While many of the recruitment and staffing interventions under the Demonstration Project are no longer unique, those that are have been beneficial.

The Demonstration Project implemented a number of interventions aimed to attract high quality candidates and to speed up the recruiting and examining process. These interventions include agency based staffing, local authority for recruitment payments, flexible entry salaries, and flexible paid advertising. Overall, these recruitment and staffing interventions are designed to attract highly qualified candidates and get new hires on board faster. Agency based staffing, supported by flexible paid advertising, allows hiring officials to focus on more relevant recruiting sources. Local authority for recruitment payments provides extra incentives for hiring high quality candidates.

It is important to recognize, however, that many of the recruitment and staffing interventions are no longer unique to the Demonstration Project. For example, agency based staffing and merit assignments are recruitment methods that are available elsewhere. Similarly, flexible paid advertising is not unique. Given this reality, we sought to examine whether the interventions appeared to be working effectively in the Demonstration Group and evidence of improvement over time. We also focused on the intervention that is less available elsewhere: flexible entry salaries. The ability to offer flexible entry salaries is a recruiting tool that gives hiring officials greater flexibility to offer starting salaries to highly qualified candidates that are more competitive with public and private industry.

In Year Five, our findings suggest that the Demonstration Project is having success with some of the unique recruitment and staffing interventions. For example, flexible entry salaries and the ability to re-negotiate job offers offer managers the latitude to attract competitive candidates. Moreover, perceptual data suggest that Demonstration Group participants believe that it is reasonable to use these types of interventions, and others, to attract the best candidates.

4.7.1. Based on objective data, employees hired during the Demonstration Project years have slightly outperformed the more tenured employees.

During Year Five, 223 new hires[30] were brought into the Demonstration Group, as identified in the objective datafile. This represents a significant drop from Year Four, in which 344 new hires were brought into the Demonstration Group. This drop may be attributable to many factors including the economy, a "hiring waiver" process in NOAA that impacts hires for positions above the ZA and ZP pay band IV (or any position above a GS-12), and the security clearance process. The Comparison Group also experienced a drop (and likely for the same reasons) from 215 new hires in Year Four to 160 new hires in Year Five.

It also remains difficult to ascertain whether the Demonstration Project has been successful at attracting and hiring more qualified candidates than they otherwise would. In order to examine the relationship between hiring interventions and the ability to attract high quality candidates, DoC would need to capture objective measures about not just the new hires, but on the quality of applicants. Yet, data on applicant pools is not yet captured in such a way to facilitate analyses.

Given the limitations on assessing the quality of applicants, a new analysis was performed in Year Five to, as a proxy, examine whether new hires to the Demonstration Project outperform those who were hired prior to the Demonstration Project's initiation. Positive results would suggest that, on average, new hires are of a higher quality than "tenured" employees; however, the results would not be able to address how the new hires compared to other applicants who applied for the same positions.

To perform this analysis, all Demonstration Group participants who were hired in Years One, Two, Three, and Four were identified. We did not include new hires in Year Five because: one, only a limited number were hired early enough in the performance year to have a performance score, and two, one could argue that new hires experience a learning curve at the beginning of a new job and therefore should be excluded from this type of analysis.

Out of 1,140 new hires[31] in Years One, Two, Three, and Four, our analysis was performed on the 767 who remained in the Demonstration Group in Year Five at the time of performance ratings (and with eligible performance ratings). (286 of the 1,140 had turned over in Years Two, Three, or Four, and 83 of the 1,140 turned over in Year Five prior to receiving a performance rating. The remaining four were ineligible for a Year Five rating for other reasons.) The results show that the average performance score for these new hires across the years was 87.12, which was slightly higher than the average performance score for Year

30 *The number of new hires in the objective datafile differs from the number reported in the recruitment methods section. The reason for this difference is how "new hire" is defined. The objective datafile designates individuals as "new hires" if they were new to the Demonstration Project; they may or may not have been new to DoC. The HR data, which was the source for the numbers in the recruitment methods section, reported 173 through agency based staff and 190 through merit assignment. This suggests that the 223 new hires in the objective datafile are likely the 173 agency based staffing new hires as well as 50 of the merit assignments.*

31 *This total number of new hires (1,140) counts only once any individuals who were hired in, left, and were hired back. Therefore, this number is somewhat lower than a summation of the number of new hires across these four years.*

Five, excluding these individuals (as well as Year Five new hires), of 86.32[32]. This difference is slight but in the desired direction and is worthy of being tracked in the future.

4.7.2. Based on survey data and focus group data, people perceive that the Demonstration Project is attracting high-quality applicants.

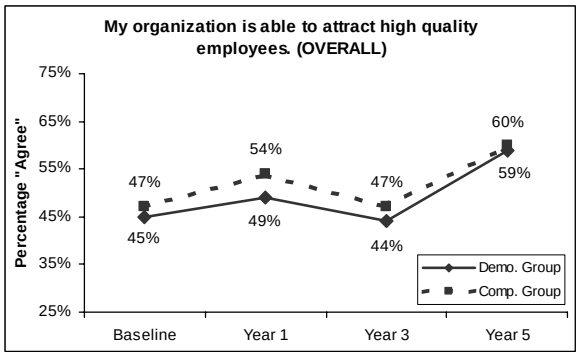
Survey and focus group results show some indication that the Demonstration Project is perceived as attracting high quality candidates. Survey items were posed to respondents overall as well as to employees who have firsthand experience with the hiring process. However, Comparison Group responses were often very similar, suggesting that while the Demonstration Group may be attracting high quality candidates, it is unclear if this is attributable to the Demonstration Project interventions.

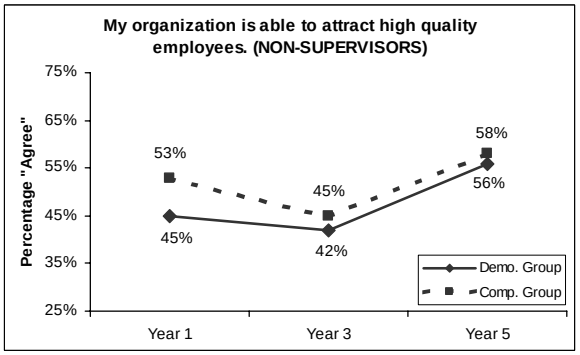
4.7.2.1. General perceptions about the ability to attract high quality employees increased in Year Five, though it is not necessarily attributable to Demonstration Project interventions.

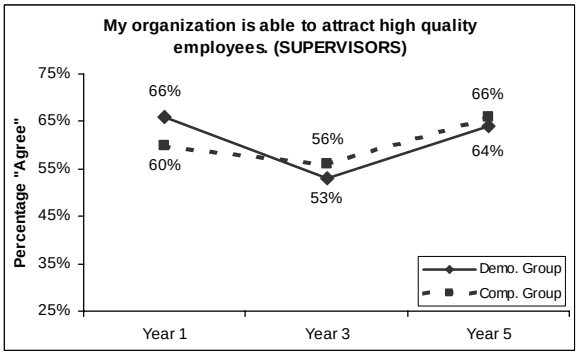
As displayed in Table 4-45, survey respondents' perceptions about the organization's ability to attract high quality employees spiked in Year Five for both the Demonstration Group and the Comparison Group. Examining the data by non-supervisory employees only or by supervisory employees only also shows that the same pattern of perceptions exists for Demonstration Group respondents and Comparison Group respondents. This suggests that the upswing may be due to factors beyond the control of the Demonstration Project interventions and rather to extraneous factors that had an impact across the organization.

[32] *This average performance score for Year Five is slightly lower than that which was previously reported because this number refers to a subset of Year Five participants. More specifically, this average excludes the individuals identified as new hires during Years One, Two, Three, and Four.*

Table 4-45. Change Over Time – Organization's Ability To Attract High Quality Employees







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
	Disagree	15%	16%	14%	14%	14%	15%
	Neither disagree nor agree	26%	27%	22%	26%	28%	19%
	Agree	59%	56%	64%	60%	58%	66%
		YEAR THREE					
	Disagree	26%	28%	20%	22%	23%	16%
	Neither disagree nor agree	30%	30%	27%	32%	32%	29%
	Agree	44%	42%	53%	47%	45%	56%
118.	My organization is able to attract high quality employees.						
		YEAR ONE					
	Disagree	21%	22%	15%	20%	20%	16%
	Neither disagree nor agree	30%	33%	19%	26%	27%	24%
	Agree	49%	45%	66%	54%	53%	60%
		BASELINE					
	Disagree	24%			25%		
	Neither disagree nor agree	31%	NA		28%	NA	
	Agree	45%			47%		

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
NA = Baseline data were not available broken out by supervisor and non-supervisor
Percentages may not add to 100 due to rounding

4.7.2.2. Non-supervisory and supervisory employees personally involved with the recruiting process perceive that those hired are of higher quality.

Unlike the previous survey item that asked survey respondents to think hypothetically about the organization's ability to attract high quality candidates, a series of survey items were addressed to those who have been personally involved in recruiting or hiring of permanent employees from outside of the agency during the past year. Their responses are displayed in Table 4-46. There is no significant difference between the perceptions of Demonstration

Group and Comparison Group respondents. However, there is a difference between perceptions of the quality of new hires versus applicants, and in the desired direction. For example, when asked to focus on a recent hiring effort, only 17 percent of Demonstration Group participants indicated that they perceived the applicants as "outstanding" whereas 30 percent of Demonstration Group participants indicated that the person hired for the position was "outstanding." This finding provides some support that the person hired for the position was perceived to be of higher quality than others in the applicant pool.

Table 4-46. Survey Results – Quality of New Hires

	Demo. Group			Comp. Group			Demo. vs. Comp.
	Total	(N)	(S)	Total	(N)	(S)	
66. What was your assessment of the overall capabilities of all the applicants for that position compared to your workforce?							
Top 1% (world class)	1%			3%			
Top 10% (outstanding)	17%			13%			
Top 25% (very good)	42%	*No Significant Difference*		41%	*No Significant Difference*		*No Sig. Diff.*
Average	37%			38%			
Below average	5%			4%			
Poor	1%			0%			
67. What was your assessment of the overall capabilities of the person hired compared to the rest of your workforce?							
Top 1% (world class)	3%	2%	3%	7%			
Top 10% (outstanding)	30%	21%	40%	40%			
Top 25% (very good)	40%	38%	40%	29%			
Average	15%	21%	12%	16%	*No Significant Difference*		*No Sig. Diff.*
Below average	1%	0%	1%	1%			
Poor	1%	1%	0%	0%			
Too early to tell	5%	9%	3%	2%			
No one was hired	7%	7%	6%	5%			

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

4.7.2.3. Focus group respondents reported improvements in being able to attract high quality candidates.

As displayed in Table 4-47, Demonstration Group focus group participants reported that they have noticed changes in the ability to attract and hire high-quality candidates. Their responses were generally positive, which suggests that the Demonstration Project's recruitment interventions, particularly flexible entry salaries, have been beneficial in the recruiting process.

Table 4-47. Focus Group Results – Perceptions on the Ability to Attract and Hire High Quality Candidates

DEMONSTRATION GROUP	
Non-Supervisory Employees	**Supervisory Employees**
• Yes – able to attract higher quality candidates; this system has more to offer than the GS system • Can compete with other offers because supervisors have more flexibility with starting salaries • Pay bands are less restrictive, which can be an advantage in attracting good candidates • No – not enough money to attract the very best candidates because the government does not offer the best wages • Can persuade candidates because of the nature of work opportunities available (e.g., marine life research at NOAA) • Yes – but this may have more to do with the local economy than anything else • No • Yes – the difference has been for the better	• Yes – can attract good candidates and the Demo Project allows us to offer competitive salaries, but this is only helpful if management allows us to offer higher than average salaries • Yes – have more flexibility to give bonuses or pay moving expenses under the Demo Project than previously • Yes – able to attract higher quality candidates because of pay banding, for example, 13s can become 14s more quickly • Yes – there is lots of flexibility, which did not exist under the GS system • No – do not think there has been a difference

4.7.2.4. Supervisory and non-supervisory employees suggest offering student loan repayments, work/life benefits, and non-cash benefits, among other strategies, to attract high quality candidates.

Demonstration Group focus group participants were asked to think broadly about the types of incentives that may help to attract high quality candidates. They reported that certain incentives, such as student loan repayments, work/life benefits, and non-cash benefits, among others, could be useful. In addition to these strategies, both supervisory and non-supervisory focus group participants suggested several additional strategies that were similar in nature. Table 4-48 provides a summary of the suggested strategies. (It should be noted that several of the suggested strategies, such as student loan repayment, are options that DoC already has available to use.)

Table 4-48. Focus Group Results – Hiring Strategies for High Quality Candidates

DEMONSTRATION GROUP	
Non-Supervisory Employees	**Supervisory Employees**
• Signing bonus • Student loan repayment plan • Flexible hours and flexible work locations • Non-cash benefits, such as time off • Need basic workforce planning to determine which areas need more people • Challenging work and a work environment that is healthy and happy • Domestic partnership benefits to be competitive with the private industry • Rotational program to allow someone to move into other jobs and other divisions • System should be colorblind; qualified candidates should be hired regardless of race, creed, etc. • Non-competitive conversion utilization	• Recruitment payments could be used; however, there may be rules that impact the way this intervention can be employed • Student loan repayment plan

4.7.3. Demonstration Group survey respondents believe that recruitment payments and paying higher starting salaries for high-quality new hires are useful tools for attracting and hiring employees.

Based on survey responses, a majority of the Year Four or Year Five Demonstration Group new hires who received recruitment payments reported that the recruitment payments were instrumental in their accepting the jobs, thus suggesting that the local authority for recruitment payments can be an effective tool for attracting and hiring employees (see Table 4-49). However, it is important to recognize that these are the perceptions of only a few. Based on the objective data file, only four of the 223 (2 percent) new hires in the Demonstration Group during Year Five received a recruitment payment. These payments ranged from $1,000 to $5,000. One potential theory for the low usage of recruitment payments may be that the flexibility to set starting salaries was used more frequently than recruitment payments as a way to attract candidates.

Survey respondents who were hired since March 2001 were asked to comment on the competitiveness of their starting salaries. The results show that the majority of new hires believe they received a salary that was the same or better than they would have received elsewhere. However, no significant differences existed between the responses of the Demonstration Group and Comparison Group respondents, which suggests that while the Demonstration Group new hires felt they were offered competitive salaries, this was not unique to the Demonstration Project.

More Demonstration Group respondents than Comparison Group respondents indicated that they are amenable to paying more to get high quality new hires. Specifically, 61 percent of the Demonstration Group respondents felt that this practice was fair, compared with 53 percent of Comparison Group respondents. In both groups, supervisory employees were more likely to accept this practice than were non-supervisory employees.

Table 4-49. Survey Results – Recruitment Payments and Starting Salaries

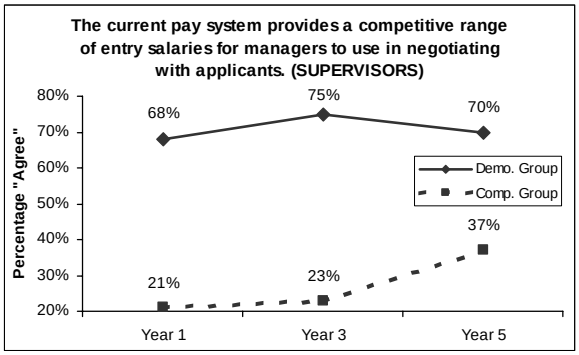
		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
58. My one-time recruitment payment was instrumental in accepting the job.	*Disagree*	23%			14%			
	Neither disagree nor agree	23%	*		14%	*		*
	Agree	54%			72%			
59. How do starting salaries for similar positions at other organizations to which you applied compare with your starting salary at your current organization?								
	Much less than (less than 90% of) my starting salary	6%			8%			
	Somewhat less than (90% to 95% of) my starting salary	16%			21%			
	About the same as my starting salary	32%	*No significant difference*		25%	*No significant difference*		*No significant difference*
	Somewhat more than (5% to 10% higher than) my starting salary	18%			11%			
	Much more than (more than 10% higher than) my starting salary	10%			14%			
	I don't know	19%			20%			
54. Paying a high quality new hire more than other new hires is fair.	*Disagree*	18%	22%	10%	28%	31%	17%	
	Neither disagree nor agree	20%	23%	14%	19%	21%	14%	*Significant difference*
	Agree	61%	56%	76%	53%	48%	68%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding
Item 58 was asked only of respondents who indicated that they were hired since March 2001 and received a recruitment payment
Item 59 was asked only of respondents who indicated that they were hired since March 2001
** The low number of responses to this question precludes testing the statistical significance of this item*

4.7.4. Both survey data and objective data show that Demonstration Group supervisors are taking advantage of their ability to offer more flexible entry salaries.

As shown in Table 4-50, survey data revealed that considerably more Demonstration Group supervisory employees, compared to those in the Comparison Group, believe that the pay system provides for a competitive range of starting salaries. This difference reflects the Demonstration Group supervisory employees' awareness of the flexible entry salaries intervention. While at a much lower agreement level, this perception has gained in strength within the Comparison Group, with the percentage of supervisory employees holding this opinion growing from 23 percent in Year Three to 37 percent in Year Five.

Table 4-50. Change Over Time – Flexible Entry Salaries



		Demo. Group (S)	Comp. Group (S)
		YEAR FIVE	
152. The current pay system provides a competitive range of entry salaries for managers to use in negotiating with applicants.	*Disagree*	10%	37%
	Neither disagree nor agree	20%	26%
	Agree	70%	37%
		YEAR THREE	
	Disagree	12%	51%
	Neither disagree nor agree	13%	27%
	Agree	75%	23%
		YEAR ONE	
	Disagree	7%	62%
	Neither disagree nor agree	25%	17%
	Agree	68%	21%

This item was addressed by supervisory employees only
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

Consistent with previous years, objective data also show that managers in the Demonstration Group used a wider range of salaries for new hires than in the Comparison Group, as displayed in Table 4-51. Starting salaries were compared by sorting new hires by path and by band (or their equivalents for Comparison Group members). Out of 11 possible comparisons in starting salaries (categories in which both the Demonstration and Comparison Groups had at least two new hires), the range of salaries was wider in the Demonstration Group in nine of them (or 82 percent, which is consistent with Year Four when there were 80 percent). For each comparison between the Demonstration Group and the Comparison Group, the wider range in starting salaries appears in bold. It should be noted that the 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 4-51. Comparison 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	N/A
Band 2	5	**$12,500**	5	$8,697
Band 3	13	**$24,478**	6	$23,581
Band 4	0	N/A	0	N/A
Band 5	1	$0	1	N/A
ZP			88	
Band 1	1	$0	3	$1,102
Band 2	35	**$27,836**	23	$14,076
Band 3	12	$28,757	48	**$34,698**
Band 4	12	**$29,742**	14	$23,156
Band 5	1	$0	0	N/A
ZS			14	
Band 1	4	**$4,585**	2	$3,995
Band 2	1	$0	2	$985
Band 3	8	**$10,500**	6	$3,125
Band 4	10	**$14,609**	4	$6,937
Band 5	-	-	-	-
ZT			17	
Band 1	17	**$13,289**	4	$2,283
Band 2	3	$6,080	11	**$8,388**
Band 3	7	**$12,594**	2	$5,941
Band 4	0	N/A	0	N/A
Band 5	0	N/A	0	N/A

Notes:

1. *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., 131 out of 223 new hires in the Demonstration Group and 132 out of 160 new hires in the Comparison Group).*
2. *Size of range of was computed as by subtracting the smallest starting salary from the largest starting salary.*

4.7.5. While recruitment methods are common across the Demonstration Group and the Comparison Group, the ability to re-negotiate job offers gives Demonstration Group managers the ability to obtain competitive candidates.

Based on data provided by the participating organizations on the use of various methods for hiring, the Demonstration Group used agency based staffing for 176 candidates and merit assignment for 194 candidates, indicating a slightly lower use of agency based staffing. In contrast, the Comparison Group used agency based staffing for 143 candidates and merit assignment for 33 candidates, suggesting a significantly higher use of agency based staffing (see Table 4-52).

Additionally, the Comparison Group had a slightly greater level of success with the number of job offers accepted using merit assignment (100 percent success rate) versus agency based staffing (a 97 percent success rate). In contrast, the Demonstration Group had a 98 percent success rate using both agency based staffing and merit assignment.

In the Demonstration Group, 34 candidates brought in through agency based staffing and 28 candidates brought in through merit assignment re-negotiated their job offers. In contrast, only 1 candidate in the Comparison Group re-negotiated a job offer. This demonstrates the greater flexibilities permitted in the hiring process due to the Demonstration Project interventions. In these cases, managers were able to negotiate salaries, thereby increasing their ability to obtain competitive candidates.

The average number of calendar days required to fill a position (from initial posting of vacancy to selection) was reasonably similar for the Demonstration Group (48 days) as the Comparison Group (42 days). The lack of differentiation between the two groups is probably indicative of the fact that the Demonstration Project was not designed to impact recruitment processes overall, with the exception of initial classification activities.

Table 4-52. Agency Data Request Results – Recruitment Methods

	DEMONSTRATION GROUP	COMPARISON GROUP
Agency Based Staffing		
Total number of offers made	176	143
Total number of offers accepted	173	138
Total number of offers re-negotiated (per candidate)	34	0
Acceptance rate (offers accepted/offer made)	98%	97%
Merit Assignment		
Total number of offers made	194	33
Total number of offers accepted	190	33
Total number of offers re-negotiated (per candidate)	28	1
Acceptance rate (offers accepted/offer made)	98%	100%
Time to Fill Positions		
Average number of calendar days required to fill a position (from initial posting of vacancy to selection)	48 days	42 days

4.8. Many of the retention interventions are having the desired effect as employee motivators; two exceptions are retention payments and supervisory performance pay.

The series of retention interventions available to the Demonstration Project have the potential to motivate and retain high performing employees. The interventions that were intended to impact retention include the broadband classification system, performance based pay increases, performance-based bonuses, local authority for retention payments, supervisory performance pay, and more flexible pay increase upon promotion. The intent was that these interventions would offer a structure (i.e., broadbanding) and incentive to motivate high performers to stay.

In Year Five, it appears that many of these interventions are having the desired effect. Objective data analyses show that turnover is greater among lower performers and that managers are taking advantage of being able to offer flexible pay increases upon promotion. Subjective data analyses show that Demonstration Group participants perceive that the interventions have been motivating and improved retention efforts. There are only two areas that have been less successful. One is retention payments, which have not been used but which are also no longer a unique option under the Demonstration Project. The other is supervisory performance pay, which has not proven to be a retention tool for supervisors.

4.8.1. The relationship between turnover and performance scores is in the desired direction.

One goal of the Demonstration Project is to retain higher performing employees. Ultimately, it is hoped that lower performing employees will separate at higher rates than will higher performing employees. As displayed in Table 4-53, dividing Demonstration Group participants into performance score groupings shows clear evidence of the desired relationship in Year Five. By looking at the relative turnover rates across different levels of performance, it is clear that turnover is higher among those with lower scores (e.g., 11.1 percent of employees with scores in the 40-49 range turned over) and turnover is lower among those with higher scores (e.g., 1.5 percent of employees with scores in the 90-100 range turned over). For this analysis, turnover was defined as employees who retired, resigned, terminated, or otherwise separated from the Demonstration Project.

Table 4-53. Demonstration Group Turnover Rates by Level of Performance

PERFORMANCE SCORE CATEGORY	NUMBER OF EMPLOYEES	NUMBER OF SEPARATED EMPLOYEES	TURNOVER RATE
90-100	1,120	17	1.5%
80-89	1,241	30	2.4%
70-79	295	9	3.1%
60-69	52	4	7.7%
50-59	6	0	N/A
40-49	9	1	11.1%

Notes:

1. *The total number of employees in this analysis is based on the 2,723 employees for whom valid Year Five performance scores were available.*
2. *Overall, 158 employees separated during Year Five. The total number of separated employees in this analysis is based on 61 of the 158 employees who separated in Year Five for whom valid Year Five performance scores were available.*
3. *The overall turnover rate for the Demonstration Group is 5 percent, which differs from a weighted average of the rates presented in this table. The reason for this difference is that the overall turnover rate is based on the number of employees who separated during Year Five and the total number of employees in the Demonstration Group, regardless of whether performance scores were available.*

4.8.2. Turnover rates in the Demonstration Group and Comparison Group were reasonably similar and considerably lower than in past years.

Comparing Demonstration Group turnover to Comparison Group turnover can also be used as an indicator of the relative success of retention efforts. However, this analysis has its limitations because turnover can only be examined in the aggregate and not by performance levels (due to the fact that the majority of the Comparison Group is on a pass/fail performance rating system). Without information about performance levels, turnover rates can be interpreted in different ways. For example, lower turnover rates can be interpreted as a positive because more employees were retained. However, higher turnover rates can also be interpreted as a positive because they may suggest that lower performers are leaving, resulting in a stronger workforce overall. Given these limitations, we compare turnover between the groups but recognize that conclusions are difficult to draw.

Turnover was calculated as the number of employees who retired, resigned, terminated, or otherwise separated from the Demonstration Project, divided by the total number of Demonstration or Comparison Group participants. During Year Five, turnover was 5 percent in the Demonstration Group and 4 percent in the Comparison Group. Both of these rates represent a significant drop from previous years and very likely reflect labor market conditions including a less than hospitable job market that may have discouraged employees from leaving the safety of employment.

Cumulative turnover rate was calculated as the total number of separations in Years Two, Three, Four, and Five divided by the average number of Demonstration or Comparison Group participants (the average number across Years Two, Three, Four, and Five). (In Year One, data were not available on the number of separations and therefore could not be included in this calculation.) Over Years Two, Three, Four, and Five, there has been a cumulative turnover rate of 49 percent in the Demonstration Group. In comparison, the cumulative turnover rate in the Comparison Group was 40 percent. Table 4-54 displays these results. The higher cumulative turnover rate in the Demonstration Group may be indicative of progress toward eliminating poor performers, given that there has been evidence that poor performers are turning over at higher rates than high performers.

Table 4-54. Turnover Rates by Group

GROUP	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE	CUMULATIVE OVER YEARS TWO, THREE, FOUR, AND FIVE
Demonstration Group	13%	16%	15%	5%	49%
Comparison Group	10%	11%	15%	4%	40%

While the average turnover rate for Year Five across the Demonstration Project was 5 percent, results varied by career path, as displayed in Table 4-55. These results show that turnover is greatest among ZT, which is the career path with the lowest average performance scores. These results also show that turnover is lowest among ZA, which is the career path with the highest average performance score. This finding provides further evidence of an appropriate relationship between turnover and performance levels.

Table 4-55. Average Turnover Rate by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE TURNOVER RATE	AVERAGE PERFORMANCE APPRAISAL SCORES
ZP	1,745	2.3%	86.4 points
ZT	165	3.0%	84.0 points
ZA	509	1.6%	88.2 points
ZS	304	2.3%	84.8 points
Overall	3,072	5.1%	86.5 points

Notes:

1. *Turnover rates by career path were computed for Demonstration Project participants for whom career path data were available. The overall turnover rate represents a non-weighted average across the Demonstration Group.*
2. *Average performance appraisal scores by career path and the overall average performance appraisal score were computed for 2,723 of the 3,072 Demonstration Group participants for whom pay band and performance score data were available; these averages are not limited to the subset of individuals who turned over in Year Five.*

4.8.3. Demonstration Group and Comparison Group focus group participants report low turnover rates.

As displayed in Table 4-56 and Table 4-57, some Demonstration Group and Comparison Group focus group participants reported that turnover is not an issue in their organizations. This finding is consistent with the low turnover rates calculated for Year Five. Other focus group participants identified turnover issues, such as speculation that turnover is greater for those who are more junior, in lower paid positions, and/or support positions. Some non-supervisory focus group participants theorized that junior employees fare better in the GS system, where they move through the lowest steps in a grade quickly. Some supervisory focus group participants reported that they lose some high-performing junior people who benefit from the Demonstration Project and then leave to take other jobs. Some supervisory focus group participants also reported that turnover creates work for managers to re-fill the position and affects customer relationships.

Table 4-56. Focus Group Results – Turnover Within the Work Unit/Organization

DEMONSTRATION GROUP	COMPARISON GROUP
Non-Supervisory Employees • Turnover is not an issue • Turnover is an issue – impacts workload of others • Most junior and lowest paid people tend to leave (though not necessarily low performers) • Degree of turnover depends on the office • More turnover among support staff than scientists	**Non-Supervisory Employees** • Degree of turnover depends on the office • Turnover is not an issue

Table 4-57. Focus Group Results – Turnover Within The Work Unit/Organization

DEMONSTRATION GROUP
Supervisory Employees • Turnover is not an issue • More turnover at lower levels • Turnover is an issue – young people come in because of the Demo Project and benefit from it, but then leave to do other things; this has not affected morale though • Turnover affects manager morale because it creates work for managers to fill position; turnover is also difficult on customers who have relationships with the staff

4.8.4. Individuals who separated had, on average, lower performance-based pay increases, bonuses, and total awards.

In the Demonstration Group in Year Five, there was a clear distinction in pay between those who separated and those who remained when total awards are calculated. Those who remained had, on average, higher performance-based pay increases, bonuses, and total awards (performance-based pay increase plus bonus). (The average for leavers is based on those leavers who left after receiving an appraisal and an increase.) Average performance-based pay increases, bonuses, and total awards, expressed as a percent of salary, appear in Table 4-58. Dollar figures for average performance-based pay increases and bonuses appear in Table 4-59. These findings may be one indication that the Demonstration Project is effectively turning over lower performers (who presumably received lower increases).

Table 4-58. Stayers Versus Leavers: Percent Increases and Bonuses

Type of Award	Average Award (as a Percentage of Salary)
Performance-Based Pay Increase	
Stayers	2.8%
Leavers	2.2%
Bonus	
Stayers	1.8%
Leavers	1.3%
Total Awards (Performance-Based Pay Increase Plus Bonus)	
Stayers	4.6%
Leavers	3.5%

Note: The difference between performance-based pay increases was not statistically significant at the p≤.05 level. The difference between bonuses and the difference between total awards were statistically significant at the p≤.01 level.

Table 4-59. Stayers Versus Leavers: Average Performance-Based Pay Increases and Bonuses

Type of Award	Average Award (in Dollars)
Performance-Based Pay Increase	
Stayers	$1,791
Leavers	$1,233
Bonus	
Stayers	$1,235
Leavers	$843

Note: The difference between performance-based pay increases was not statistically significant at the p≤.05 level. The difference between bonuses was statistically significant at the p≤.05 level.

4.8.5. While retention payments were not used, employees are supportive of their usage.

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. As in all previous years, an analysis of objective data suggests that no Demonstration Group participants received retention payments during Year Five. One explanation is that retention payments are not widely used because of the restrictions on when they can be awarded (i.e., retention payments can only be paid to employees leaving the Federal Government, which occurs infrequently, or for employees who are retiring). Moreover, because retention payments are no longer unique to the Demonstration Project, there may be less incentive to take advantage of this option.

While retention payments were not actually used, Demonstration Group survey respondents believe that giving a retention payment to key employees with critical skills is fair (displayed in Table 4-60). Demonstration Group survey respondents were more supportive of this practice than were Comparison Group survey respondents. In addition, a small percentage in each group believe that current efforts toward retention have produced a high quality, higher performing workforce; this view was expressed more by Demonstration Group respondents than by Comparison Group respondents.

Table 4-60. Survey Results – Retention Payments

			Demo. Group			Comp. Group			Demo. vs. Comp.
			Total	(N)	(S)	Total	(N)	(S)	
51.	Giving a retention payment (extra money to keep an employee with critical skills from leaving) is fair.	*Disagree*	14%	*No significant difference*		16%	15%	17%	*Significant difference*
		Neither disagree nor agree	22%			28%	31%	20%	
		Agree	64%			56%	54%	63%	
46.	Current efforts toward employee retention have produced a higher quality, higher performing workforce.	*Disagree*	33%	34%	31%	33%	*No significant difference*		*Significant difference*
		Neither disagree nor agree	43%	45%	37%	47%			
		Agree	25%	21%	33%	20%			

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

4.8.6. Supervisory performance pay has not improved retention; in fact, those who received supervisory performance pay turned over at a higher rate than any other group.

In theory, the supervisory performance pay intervention facilitates paying high performing supervisors at more competitive levels, thus improving retention. However, because this intervention was designed such that it rewards supervisors who reach the maximum of pay for the pay band, and not necessarily those with the highest levels of performance, its impact as a retention tool for high performers may be limited.

As shown in Table 4-61, in Year Five, turnover among Demonstration Group supervisors (5 percent) was the same as all Demonstration Group participants (5 percent) and slightly higher than Comparison Group supervisors (4 percent). The turnover rate for Demonstration Group supervisors has fluctuated across the years, starting at 13 percent in both Years One and Two, increasing to 18 percent in Year Three, dropping to 14 percent in Year Four, and dropping even more significantly to 5 percent in Year Five. As discussed in regards to turnover

overall, the low turnover rates across the Demonstration Group and Comparison Group, and across employees and supervisors, was likely driven by labor market conditions including a less than hospitable job market.

In Year Five, turnover differed between supervisors who received supervisory performance pay (8 percent) and those who did not (4 percent). This finding is strikingly different from Year Four, in which there was no difference in turnover rates between those who did or did not receive supervisory performance pay; however, it is also important to recognize that this only represents a small number of people (14 in total). Given that the turnover rate for those who did not receive supervisory performance pay mirrors the overall turnover rate, the more unusual finding is the higher turnover rate among those who did receive supervisory performance pay. One theory may be that, given that those who received supervisory performance pay tend to be the more tenured, some of these supervisors may have been ready to retire. In contrast, less tenured supervisors may not be at a career juncture to retire and would have been more affected (i.e., discouraged) by labor market conditions to leave. In fact, objective data provides partial support to this theory: all seven departures among supervisors who received supervisory performance pay were due to retirement; in contrast, departures of other supervisors were for varied reasons including retirement, resignation, termination, and death.

Table 4-61. Turnover Among Supervisors

Group	Total Number	Number Who Separated	Turnover Rate
Demonstration Group			
All Employees*	3,072	158	5%
All Supervisors	276	14	5%
Supervisors Who Did Not Receive Supervisory Performance Pay	*187*	*7*	*4%*
Supervisors Who Did Receive Supervisory Performance Pay	*89*	*7*	*8%*
Comparison Group			
All Employees	1,811	75	4%
All Supervisors	158	6	4%

Notes:
1. *Turnover rate was calculated as the number of individuals who separated divided by the total number of individuals.*
2. *"All Employees" includes supervisory and non-supervisory employees.*

4.8.7. Both Demonstration Group and Comparison Group participants report that they are motivated to stay with the organization because of the work itself, are de-motivated by lack of advancement opportunities, and might be enticed to leave to gain higher pay.

Three separate survey questions tapped retention and turnover drivers. Based on survey findings, the primary driver for Demonstration Group survey respondents for staying in the organization was the work itself, with salary coming in as a close second. When asked why they are most likely to leave, the primary reason was lack of advancement, with salary and lack of competence of management tying as second. Finally, what employees most hope to

gain from taking another job is better pay, followed by more interesting work and career advancement. These findings are displayed in Table 4-62, Table 4-63, and Table 4-64. Looking across the responses to these three questions, it is apparent that pay emerges more often than any other factor as a driver of retention and turnover. This finding may dispel the myth that people are not motivated by money.

For the most part, these findings hold true across Demonstration Group supervisory and non-supervisory respondents. One exception is that the drivers for leaving are somewhat different for supervisors. Supervisory respondents reported that the primary reason they would leave is lack of competence of management, followed by lack of career advancement and the work itself. Salary falls below these other drivers. This distinction suggests that salary is more likely to drive a non-supervisory employee to leave than a supervisory employee, which is not surprising given that supervisors likely earn higher salaries.

Consistent with Year Three, Demonstration Group and Comparison Group survey respondents provided similar rankings for these questions. Also consistent with Year Three, while both groups ranked "the work itself" and "salary" as the top two motivators for staying with the organization, considerably more Demonstration Group than Comparison Group survey respondents named salary as a motivator (57 percent versus 43 percent).

Table 4-62. Survey Results – Factors For Staying With the Organization

		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
77. What are the factors that make you want to stay in your organization? (Rank the 3 most important reasons)	*The work itself*	63%	61%	70%	70%	66%	83%
	Salary	57%	57%	59%	43%	42%	46%
	Job security	34%	34%	32%	40%	43%	31%
	The people I work with	30%	30%	34%	31%	31%	34%
	Location	30%	30%	31%	37%	35%	41%
	Benefits	28%	28%	27%	29%	31%	25%
	Convenient work hours	14%	17%	10%	15%	17%	8%
	The chance for advancement	11%	13%	9%	9%	10%	5%
	The public reputation of this organization	9%	8%	12%	8%	8%	11%
	No other job offers	7%	10%	3%	4%	5%	3%
	Competence of management	5%	5%	5%	4%	5%	4%
	Fair treatment	5%	5%	4%	4%	6%	3%
	Quality of facilities	2%	3%	3%	3%	3%	4%
	Funding	1%	3%	2%	2%	2%	2%

Notes:

1. *For this question, the reported percentages represent the percentage of people, among those who responded to this question, who ranked this factor as one of their three most important. Because respondents were allowed to provide multiple responses, the sum of the percentages exceeds 100 percent.*
2. *Options are presented in descending order, based upon the Demonstration Group Total responses.*

Table 4-63. Survey Results – Factors For Leaving the Organization

		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
78. What are the factors that would make you want to leave? (Rank the 3 most important reasons)	*Lack of career advancement*	45%	47%	41%	43%	46%	32%
	Salary	39%	42%	32%	39%	40%	36%
	Lack of competence of management	39%	37%	45%	34%	34%	37%
	The work itself	34%	33%	35%	33%	31%	42%
	Unfair treatment	26%	27%	23%	25%	27%	18%
	Location	23%	22%	24%	20%	20%	22%
	The people I work with	17%	16%	20%	15%	14%	19%
	Funding	14%	12%	17%	19%	18%	24%
	Job security/Potential RIF	14%	16%	11%	14%	15%	12%
	Benefits	8%	9%	7%	11%	11%	11%
	Quality of facilities	6%	7%	7%	9%	8%	9%
	The public reputation of this organization	6%	6%	8%	5%	6%	6%
	Inconvenient work hours	6%	6%	6%	5%	5%	4%
	Other job offers	2%	3%	3%	4%	4%	5%

Notes:

1. *For this question, the reported percentages represent the percentage of people, among those who responded to this question, who ranked this factor as one of their three most important. Because respondents were allowed to provide multiple responses, the sum of the percentages exceeds 100 percent.*
2. *Options are presented in descending order, based upon the Demonstration Group Total responses.*

Table 4-64. Survey Results – Factors For Taking a New Job Outside the Organization

		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
79. If you were to take a new job outside of this organization, would you do so to gain: (Rank the 3 most important reasons)	*Better pay*	57%	59%	53%	60%	60%	59%
	More interesting work	39%	37%	43%	40%	40%	40%
	Career advancement	38%	41%	31%	38%	41%	31%
	Better geographical location	29%	29%	30%	26%	25%	27%
	Better promotional opportunities	27%	31%	17%	28%	33%	18%
	Better supervisors	18%	19%	18%	14%	15%	11%
	More responsibility	15%	15%	15%	14%	14%	15%
	Reduced administrative and paperwork burdens	14%	10%	24%	13%	8%	29%
	More important program	10%	9%	15%	9%	8%	13%
	Better benefits	9%	10%	7%	14%	14%	13%
	More job security	9%	9%	7%	8%	8%	7%
	Better working conditions	8%	8%	10%	10%	11%	9%
	More convenient work hours	7%	7%	9%	9%	10%	6%
	More congenial colleagues	5%	5%	8%	4%	5%	4%

Notes:

1. *For this question, the reported percentages represent the percentage of people, among those who responded to this question, who ranked this factor as one of their three most important. Because respondents were allowed to provide multiple responses, the sum of the percentages exceeds 100 percent.*
2. *Options are presented in descending order, based upon the Demonstration Group Total responses.*

4.8.8. For the most part, Demonstration Group participants believe that Demonstration Project interventions have improved retention efforts.

More Demonstration Group participants than not believe that the impact of the retention interventions has been positive. During focus groups with Demonstration Group supervisory and non-supervisory employees, both groups of participants stated that the Demonstration Project allows them to be more competitive with the private sector, which has encouraged staff to stay. They also highlighted the flexible pay upon promotion intervention as motivating and noted that the Demonstration Project interventions are particularly salient for high performers. Some, though fewer, focus group participants believe that the Demonstration Project interventions have not had an impact on retention. Overall results were reasonably similar across non-supervisory and supervisory employees. These results are displayed in Table 4-65.

Table 4-65. Focus Group Results – Personnel Changes That Have Helped Retain High Performing Employees

DEMONSTRATION GROUP	
Non-Supervisory Employees	**Supervisory Employees**
• Yes – they are all helpful – allow us to compete with the private sector, have encouraged staff to stay • Yes – flexible pay increases upon promotion is particularly helpful – can motivate newer employees • No – it is the work that keeps people here more so than the personnel changes; the Demonstration Project is not in the minds of management or in the minds of job applicants • Don't know – not aware, do not know about performance-based bonuses as a retention tool because do not know what others are getting	• Yes – they are all helpful – allow us to compete with the private sector, have encouraged staff to stay • Yes – have a positive impact, particularly for top performers, although there are other retention drivers that are stronger • No – they have not made an impact

4.9. The impact of the Demonstration Project on organizational performance is difficult to parse out.

Ideally, evaluating organizational performance helps to answer questions such as whether the organization has improved its ability to meet its mission, hire better people, improve retention, maintain institutional knowledge, and improve individual performance, among others. However, a Demonstration Project is not an organization; it is a different type of entity that cannot easily be measured along these dimensions. Moreover, within the Demonstration Project, an additional measurement challenge presents itself—the Demonstration Group consists of members from a number of different organizations, each with different missions and goals. Furthermore, not all members of these organizations are part of the Demonstration Project (e.g., some NOAA work units are in the Demonstration

Group, some are in the Comparison Group, and some are not involved at all in the Demonstration Project).

We asked DoC managers how they determine their organizations' success. We found no measures that could be applied across the Demonstration Project. In addition, we asked whether they perceived increased organizational performance and their response was that it was difficult to see, and especially to attribute, any changes to the Demonstration Project rather than to other reasons.

We also researched how other Demonstration Projects had evaluated organizational performance. The available information indicates that no direct organizational performance measures have been used. Each study has used implied organizational performance improvements based on proxy measures.

Given these challenges, we identified proxies that could serve as indirect measures of the organizational performance of the Demonstration Project. These proxies are: individual performance levels and perceived quality of the workforce. By examining these measures, it is possible to describe outcomes of the Demonstration Project and their hypothesized affect on organizational outcomes.

4.9.1. Employee performance is viewed as having either improved or stayed the same since the beginning of the Demonstration Project; it has not suffered from implementation of the Demonstration Project.

When asked in focus groups whether individual performance has improved since the Demonstration Project began, most Demonstration Group participants indicated that it had either stayed the same or improved; no participants felt that it had decreased (see Table 4-66). While some participants clarified that improvements in individual performance cannot be attributed to the Demonstration Project alone, the overall responses to this question were more optimistic than that which was provided when this question was last asked in Year Three.

Table 4-66. Focus Group Results – Employee Performance Since the Beginning of the Demonstration Project

DEMONSTRATION GROUP	
Non-Supervisory Employees	**Supervisory Employees**
• Employee performance has stayed the same • Employee performance has improved – Demo Project has had positive effect • Employee performance has improved; however, it is not necessarily attributable to the Demo Project • Employee performance has stayed the same – motivated to perform regardless of whether in the Demo Project	• Employee performance has stayed the same • Employee performance has improved – the Demo Project has allowed them to eliminate some marginal performers; challenged them to do more work with fewer people – "sink or swim"

In interviews, Directors and Administrative Officers were asked to provide their perceptions on whether individual performance has improved (see Table 4-67). These interviewees provided a variety of responses ranging from recognizing that broadbanding can provide an incentive to employees to stating that high performers will perform well regardless of the system that they are within. Still others, similar to some focus group participants, acknowledged that improvements in individual performance cannot be attributed to the Demonstration Project alone.

Table 4-67. Interview Results – Improvements in Individual Performance

DEMONSTRATION GROUP
Directors and Administrative Officers
• Yes – there has been some increased performance, which results from the incentive to work harder; due to broadbanding, have opportunity to make more money without being promoted • Yes – there has been improvements – may be that performance is valued more in the Demo Project or may not be attributable to Demo Project • No – performance is a matter of individual motivation – high performers were always high performers; more progress can be made in improving individual performance

4.9.2. There is no clear evidence that the Demonstration Project has impacted workforce quality; nor has there been evidence that it has been detrimental to workforce quality.

A number of survey items that pertain to adherence to the Merit System Principles also address employee perceptions about the quality of the workforce. As shown in Table 4-68, no items generated significant differences in the responses of Demonstration Group versus Comparison Group respondents. Given that the results of the Demonstration Group are the same as those of the Comparison Group, these results suggest that the Demonstration Project has not had a clear impact on the aspects of workforce quality that are captured by these items.

Table 4-68. Survey Results – Quality of the Workforce

			Demo. Group			Comp. Group			Demo. vs. Comp.
			Total	(N)	(S)	Total	(N)	(S)	
84.	My organization recruits, selects, and advances employees on the basis of merit.	*Disagree*	25%	28%	18%	24%	27%	17%	*No significant difference*
		Neither disagree nor agree	31%	34%	24%	32%	36%	20%	
		Agree	44%	38%	58%	44%	37%	63%	
85.	My organization treats employees fairly and equitably.	*Disagree*	25%	27%	20%	24%	26%	20%	*No significant difference*
		Neither disagree nor agree	26%	29%	19%	26%	29%	17%	
		Agree	49%	44%	61%	50%	45%	63%	
86.	My organization treats applicants fairly and equitably.	*Disagree*	12%	13%	9%	12%	14%	7%	*No significant difference*
		Neither disagree nor agree	40%	45%	28%	39%	44%	25%	
		Agree	48%	41%	64%	48%	42%	67%	
87.	My organization provides equal pay for equal work.	*Disagree*	36%	38%	29%	36%	39%	27%	*No significant difference*
		Neither disagree nor agree	30%	33%	23%	30%	32%	25%	
		Agree	34%	29%	48%	34%	30%	47%	
88.	My organization rewards excellent performance.	*Disagree*	21%	22%	17%	21%	22%	17%	*No significant difference*
		Neither disagree nor agree	25%	29%	15%	26%	29%	18%	
		Agree	54%	49%	68%	53%	49%	65%	
89.	My organization maintains high standards of integrity, conduct, and concern for the public interest.	*Disagree*	13%	14%	11%	12%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	19%	21%	13%	17%			
		Agree	68%	65%	76%	71%			
90.	My organization manages employees efficiently and effectively.	*Disagree*	41%	*No significant difference*		40%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	30%			27%			
		Agree	30%			34%			
91.	My organization retains or separates employees on the basis of their performance.	*Disagree*	39%	37%	44%	40%	38%	47%	*No significant difference*
		Neither disagree nor agree	42%	45%	33%	38%	43%	21%	
		Agree	19%	17%	23%	22%	19%	31%	
92.	My organization educates and trains employees when doing so will result in better organizational or individual performance.	*Disagree*	22%	22%	20%	18%	19%	14%	*No significant difference*
		Neither disagree nor agree	22%	24%	16%	24%	26%	18%	
		Agree	56%	53%	64%	58%	55%	68%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

In interviews, when asked directly whether the Demonstration Project has resulted in improved organizational performance, Directors and Administrative Officers provided responses that do not clearly point to organizational improvement (see Table 4-69). That is, they acknowledged that while organizational improvement may have increased, they cannot be sure improvements are attributable to Demonstration Project interventions.

Table 4-69. Interview Results – Improvements in Organizational Performance

DEMONSTRATION GROUP
Directors and Administrative Officers
• Probably marginal improvement • Nothing that is attributable solely to the Demo Project • Have experienced improvements in organizational performance but may not be attributable to the Demo Project

Demonstration Group focus group participants were asked to recommend strategies for improving the workforce's performance (see Table 4-70). Non-supervisory employees focused their suggestions on better communication, a 360-degree performance feedback system, better managerial training, clearer performance expectations, and taking action against poor performers. Supervisory employees focused on training and provision of incentives such as telecommuting or time off awards.

Table 4-70. Focus Group Results – Strategies for Improving the Workforce's Performance

DEMONSTRATION GROUP	
Non-Supervisory Employees	**Supervisory Employees**
• Better communication; two-way communication; monthly group meetings of supervisor and subordinates • To motivate managers, include a 360 degree feedback system so that employees can provide feedback on their managers • Better managerial/supervisory training (e.g., in performance management) to build skills and to qualify for supervisory differentials • Make use of Individual Development Plans so employees know what is expected of them • Supervisors should take action against poor performance because failure to do so impacts morale	• Allocate a certain amount of money for training and career advancement that cannot be moved elsewhere – determine a certain amount of dollars per person (allocate additional amount for high performers) • Encourage more telecommuting – would make employees happier, although harder for supervisor • Provide opportunities to grow and develop in field • Provide additional incentives such as time off awards or show tickets

4.10. The Demonstration Project's interventions have not impacted DoC's adherence to the Merit System Principles or avoidance of the Prohibited Personnel Practices.

Implementation of the Demonstration Project's personnel interventions has not impacted the organization's adherence to the nine Merit System Principles and avoidance of the 12 Prohibited Personnel Practices. Booz Allen's findings in Year Five provide additional support that the administration of the Demonstration Project continues to be in line with these personnel guidelines.

4.10.1. Survey data suggest that the degree to which DoC follows personnel guidelines has not been impacted by the Demonstration Project's interventions.

As shown in Table 4-71, a series of survey items addressed the degree to which Demonstration Project participants believe that DoC strives for organizational excellence by adhering to personnel guidelines. The data produced no indication that DoC has violated any of the Prohibited Personnel Practices or failed to support any of the Merit System Principles by implementing the Demonstration Project's interventions.

In Year Five, there were no differences at all in the responses from Demonstration and Comparison Group participants, which suggests that the Demonstration Project's interventions have not been detrimental to personnel guidelines. This is an improvement of Years One and Three, in which there were a few questions on which the two groups showed significant differences. Similar to Year Three, however, a few survey items (e.g., items 90, 91, and 87) generated higher percentages of "disagree" responses than other items (among both Demonstration Group and Comparison Group respondents. These items pertain to the degree to which the organization manages employees well, retains or separates employees based on performance, and provides equal pay for equal work. While these three items sparked the greatest concern, the data indicate that perceptions have improved since Year Three (i.e., the percentage of survey respondents who disagree has declined).

Among the Demonstration Group participants, supervisory employees were consistently more favorable than non-supervisory employees about adherence to personnel guidelines. This finding also holds true when comparing supervisory and non-supervisory employees in the Comparison Group.

Table 4-71. Survey Results – Organizational Excellence

			Demo. Group			Comp. Group			Demo. vs. Comp.
			Total	(N)	(S)	Total	(N)	(S)	
84.	My organization recruits, selects, and advances employees on the basis of merit.	*Disagree*	25%	28%	18%	24%	27%	17%	*No significant difference*
		Neither disagree nor agree	31%	34%	24%	32%	36%	20%	
		Agree	44%	38%	58%	44%	37%	63%	
85.	My organization treats employees fairly and equitably.	*Disagree*	25%	27%	20%	24%	26%	20%	*No significant difference*
		Neither disagree nor agree	26%	29%	19%	26%	29%	17%	
		Agree	49%	44%	61%	50%	45%	63%	
86.	My organization treats applicants fairly and equitably.	*Disagree*	12%	13%	9%	12%	14%	7%	*No significant difference*
		Neither disagree nor agree	40%	45%	28%	39%	44%	25%	
		Agree	48%	41%	64%	48%	42%	67%	
87.	My organization provides equal pay for equal work.	*Disagree*	36%	38%	29%	36%	39%	27%	*No significant difference*
		Neither disagree nor agree	30%	33%	23%	30%	32%	25%	
		Agree	34%	29%	48%	34%	30%	47%	
88.	My organization rewards excellent performance.	*Disagree*	21%	22%	17%	21%	22%	17%	*No significant difference*
		Neither disagree nor agree	25%	29%	15%	26%	29%	18%	
		Agree	54%	49%	68%	53%	49%	65%	
89.	My organization maintains high standards of integrity, conduct, and concern for the public interest.	*Disagree*	13%	14%	11%	12%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	19%	21%	13%	17%			
		Agree	68%	65%	76%	71%			
90.	My organization manages employees efficiently and effectively.	*Disagree*	41%	*No significant difference*		40%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	30%			27%			
		Agree	30%			34%			
91.	My organization retains or separates employees on the basis of their performance.	*Disagree*	39%	37%	44%	40%	38%	47%	*No significant difference*
		Neither disagree nor agree	42%	45%	33%	38%	43%	21%	
		Agree	19%	17%	23%	22%	19%	31%	
92.	My organization educates and trains employees when doing so will result in better organizational or individual performance.	*Disagree*	22%	22%	20%	18%	19%	14%	*No significant difference*
		Neither disagree nor agree	22%	24%	16%	24%	26%	18%	
		Agree	56%	53%	64%	58%	55%	68%	
93.	My organization protects employees from improper political influence.	*Disagree*	11%	12%	9%	9%	9%	9%	*No significant difference*
		Neither disagree nor agree	46%	50%	37%	46%	50%	35%	
		Agree	43%	39%	54%	45%	42%	56%	
94.	My organization protects employees against reprisal for the lawful disclosure of information.	*Disagree*	7%	8%	6%	5%	6%	4%	*No significant difference*
		Neither disagree nor agree	60%	64%	50%	60%	63%	50%	
		Agree	33%	28%	45%	35%	31%	46%	
95.	My organization does not discriminate on the basis of race, color, religion, sex, national origin, age, handicapping condition, marital status, or political affiliation.	*Disagree*	12%	13%	9%	8%	9%	6%	*No significant difference*
		Neither disagree nor agree	19%	22%	12%	20%	22%	12%	
		Agree	69%	65%	79%	72%	69%	82%	
96.	My organization does not solicit or consider any personal recommendation or statement not based on personal knowledge or records of performance, ability, aptitude, general qualifications, character, loyalty, or suitability.	*Disagree*	9%	10%	7%	8%	8%	5%	*No significant difference*
		Neither disagree nor agree	47%	52%	34%	46%	52%	28%	
		Agree	44%	37%	59%	46%	40%	67%	
97.	My organization does not coerce employees' political activity.	*Disagree*	2%	2%	0%	2%	*No significant difference*		*No significant difference*
		Neither disagree nor agree	18%	21%	9%	15%			
		Agree	80%	76%	90%	84%			
98.	My organization does not deceive or obstruct any person with respect to such person's right to compete for employment.	*Disagree*	8%	10%	5%	7%	8%	4%	*No significant difference*
		Neither disagree nor agree	22%	26%	11%	23%	27%	13%	
		Agree	70%	64%	83%	69%	65%	83%	

Table 4-69. Survey Results – Organizational Excellence (cont.)

		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
99. My organization does not influence a person to withdraw from competition.	*Disagree*	5%	6%	4%	6%	6%	4%	*No significant difference*
	Neither disagree nor agree	30%	34%	19%	28%	33%	15%	
	Agree	65%	60%	78%	66%	61%	81%	
100. My organization does not grant any preference or advantage not authorized by law, regulation, or rule.	*Disagree*	10%	11%	7%	9%	10%	6%	*No significant difference*
	Neither disagree nor agree	31%	36%	19%	32%	37%	15%	
	Agree	59%	53%	74%	59%	53%	79%	
101. People in my organization do not engage in employing or promoting relatives.	*Disagree*	12%	14%	9%	12%	13%	9%	*No significant difference*
	Neither disagree nor agree	27%	31%	17%	26%	30%	14%	
	Agree	61%	55%	74%	62%	57%	77%	
102. My organization does not retaliate against whistleblowers, whether they are employees or applicants.	*Disagree*	12%	13%	7%	11%	12%	9%	*No significant difference*
	Neither disagree nor agree	54%	57%	45%	51%	54%	42%	
	Agree	35%	29%	48%	37%	33%	49%	
103. My organization does not discriminate based on actions not adversely affecting performance.	*Disagree*	12%	15%	7%	9%	11%	4%	*No significant difference*
	Neither disagree nor agree	41%	45%	31%	43%	48%	27%	
	Agree	47%	41%	62%	48%	41%	69%	

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

4.10.2. Focus group data also suggest that these personnel guidelines are applied in the same manner under the Demonstration Project as they were under the traditional GS system.

As shown in Table 4-72, a question about how the Merit System Principles are upheld under the Demonstration Project, sparked a variety of responses. The most common response was that the Merit System Principles are upheld just as they were under the traditional GS system. A few focus group participants responded with their concerns about particular Merit System Principles; however, they did not clearly attribute their concerns to changes made by the Demonstration Project. Finally, a few focus group participants also acknowledged that the Demonstration Project can make it difficult to uphold the Merit System Principle related to fair pay.

Table 4-72. Focus Group Results – Changes in Adherence to the Merit System Principles

DEMONSTRATION GROUP	COMPARISON GROUP
• No change – the Merit System Principles are still upheld • The Merit System Principles concerning access to training, efficient and effective use of the Federal workforce, and dealing with poor performers are not fully followed • The Demo Project opens up the potential for greater inequality for fair and equitable compensation • The Demo Project uses the Merit System Principles more – especially in regards to recruiting and retaining employees • Don't know	• Yes – the Merit System Principles are upheld • The Merit System Principles concerning equal pay, efficient and effective use of the Federal workforce, and dealing with poor performers are not fully followed

Similarly, the majority of Demonstration Group focus group participants reported that the Demonstration Project has not negatively impacted DoC's ability to avoid the Prohibited Personnel Practices. As shown in Table 4-73, they reported that there has been no change in the ways in which these practices are avoided in the Demonstration Project as compared to under the traditional GS system.

Table 4-73. Focus Group Results – Changes in Avoidance to the Prohibited Personnel Practices

DEMONSTRATION GROUP	COMPARISON GROUP
• No difference in how the Prohibited Personnel Practices are avoided while in the Demo Project • Less clear how to avoid the Prohibited Personnel Practices within the Demo Project so this could introduce the opportunity for someone to manipulate the system • Nepotism occurs here	• No difference in how the Prohibited Personnel Practices are avoided while in the Demo Project • Nepotism occurs here

4.11. 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.

Booz Allen again performed a series of analyses on objective data pertaining to performance, compensation, and demographics of the Demonstration Project participants. Consistent with previous years, these analyses suggest that the Demonstration Project has not been detrimental to the compensation, recruitment, or retention of minorities, women, or veterans.

4.11.1. Survey and focus group findings suggest that the Demonstration Project interventions have not generated evidence of unfair treatment based on race, gender, or veteran status in the areas of compensation, recruitment, or retention.

As in Year One and Year Three, a similar pattern emerged between the Demonstration Group and Comparison Group on a number of survey items that focus on minority issues, including fair treatment, compensation, recruitment, and retention, as displayed in Table 4-74. Overall, the majority of survey respondents reported that DoC does not discriminate against minorities, women, or veterans based on any institutional policy or practice. Some respondents expressed uncertainty with whether recruitment and retention strategies facilitate the hiring and retaining of high quality minorities. And, approximately half of the respondents indicated that minority employees are paid competitively (this was the only item that showed a statistically significant difference between the two groups); however, this finding should be viewed cautiously given that, in focus groups, participants were forthcoming that most employees are not privy to salary information and therefore may not have the basis to make such a judgment. Across these topic areas, supervisory employees in both the Demonstration and Comparison Groups were consistently more positive than were non-supervisory employees. Furthermore, a comparison of the Year Five and Year Three survey data show that there was greater agreement on these survey items in Year Five, which suggests that employee attitudes about the fair treatment, compensation, recruitment, and retention of minorities has improved.

Table 4-74. Survey Results – Compensation, Recruitment, and Retention of Minorities

		Demo. Group			Comp. Group			Demo. vs. Comp.
		Total	(N)	(S)	Total	(N)	(S)	
95. My organization does not discriminate on the basis of race, color, religion, sex, national origin, age, handicapping condition, marital status, or political affiliation.	*Disagree*	12%	13%	9%	8%	9%	6%	*No significant difference*
	Neither disagree nor agree	19%	22%	12%	20%	22%	12%	
	Agree	69%	65%	79%	72%	69%	82%	
109. Minority employees get paid at competitive levels in my unit.	*Disagree*	8%	9%	5%	5%	5%	3%	*Significant difference*
	Neither disagree nor agree	43%	50%	27%	37%	43%	21%	
	Agree	49%	41%	67%	58%	52%	76%	
52. Recruitment procedures allow for the opportunity to hire good minority applicants.	*Disagree*	16%	16%	15%	15%	13%	19%	*No significant difference*
	Neither disagree nor agree	49%	53%	38%	47%	51%	37%	
	Agree	35%	30%	46%	38%	36%	45%	
48. Current efforts toward employee retention have enabled managers to retain good minority employees.	*Disagree*	16%	16%	15%	16%	*No significant difference*		*No significant difference*
	Neither disagree nor agree	63%	66%	56%	64%			
	Agree	21%	18%	28%	20%			

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding

These results were further examined, looking within all minority and all non-minority subsets. As shown in Table 4-75, there were no statistically significant differences. Participation in the Demonstration Project has not generated different perceptions within each group.

Table 4-75. Survey Results – Compensation, Recruitment, and Retention of Minorities by Group

		Minority			Non-Minority		
		Demo. Group	Comp. Group	Demo. Vs. Comp	Demo. Group	Comp. Group	Demo. Vs. Comp
95. My organization does not discriminate on the basis of race, color, religion, sex, national origin, age, handicapping condition, marital status, or political affiliation.	*Disagree*	29%	18%	*No significant difference*	8%	6%	*No significant difference*
	Neither disagree nor agree	29%	26%		17%	18%	
	Agree	42%	56%		75%	76%	
109. Minority employees get paid at competitive levels in my unit.	*Disagree*	34%	19%	*No significant difference*	3%	2%	*Significant difference*
	Neither disagree nor agree	40%	39%		43%	37%	
	Agree	27%	42%		53%	61%	
52. Recruitment procedures allow for the opportunity to hire good minority applicants.	*Disagree*	28%	25%	*No significant difference*	14%	12%	*No significant difference*
	Neither disagree nor agree	40%	44%		51%	49%	
	Agree	33%	31%		36%	39%	
48. Current efforts toward employee retention have enabled managers to retain good minority employees.	*Disagree*	38%	24%	*No significant difference*	21%	22%	*No significant difference*
	Neither disagree nor agree	50%	54%		64%	63%	
	Agree	12%	22%		16%	15%	

Percentages may not add to 100 due to rounding

As shown in Table 4-76, focus group data revealed that Demonstration Group participants believe that the Demonstration Project's interventions have not had a negative impact on women, minorities, or veterans or are unaware of any impact. Data from exclusively minority or female focus groups yielded more mixed results on whether the Demonstration Project had or had not had a negative impact. In contrast, Comparison Group participants reported more specific and mixed results regarding the impact of traditional human resources management practices on women, minorities, or veterans.

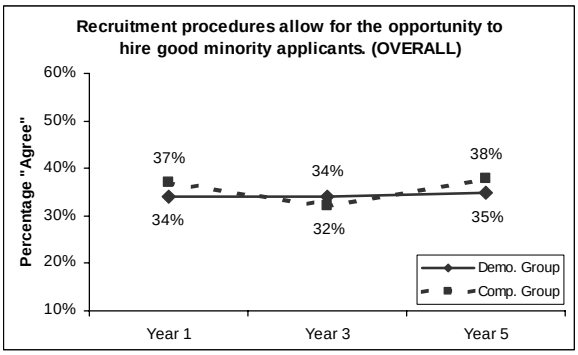
Table 4-76. Focus Group Results – Whether HR Practices Have Had a Negative Impact on Women, Minorities, and Veterans

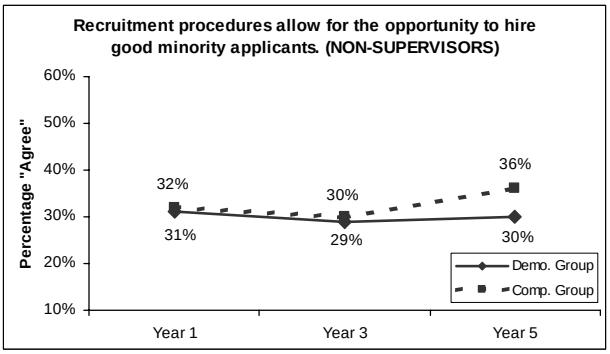
DEMONSTRATION GROUP		COMPARISON GROUP
MIXED COMPOSITION SESSIONS	**ALL-FEMALE/ ALL-MINORITY SESSIONS**	
• No impact, no change • No negative impact due to the Demo Project interventions • Don't know	• No negative impact due to the Demo Project interventions • Yes – has had a negative impact • Hoped the Demo Project would improve minority hiring but it has not	• Negative impact – COOL (i.e., Commerce Opportunities On-line) has a negative impact on minorities and women because these groups may have less access to the web to be able to use COOL – the traditional HR practices are biased against administrative support, which is predominantly female – we have not been successful with minority hiring; in some cases, this results from trying to hire for disciplines that tend to attract few minorities • No negative impact under traditional HR practices

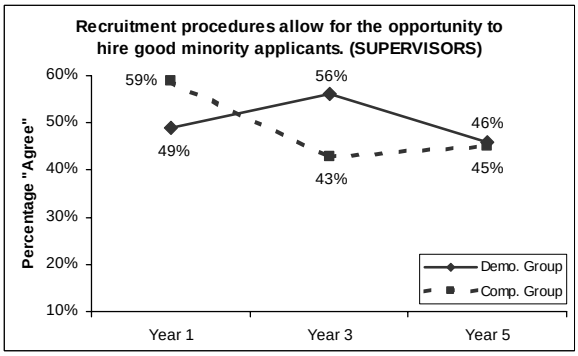
4.11.2. Perceptions about the ability of recruitment procedures to facilitate hiring high quality minority applicants are nearly the same between Demonstration Group and Comparison Group supervisory employees.

As shown in Table 4-77, perceptions about how recruitment procedures facilitate hiring high quality minority applicants have varied across the years. Overall, perceptions have been generally stable, with approximately one-third of respondents (in both the Demonstration Group and the Comparison Group) believing there has been an impact. However, it is more meaningful to evaluate the perceptions of supervisory employees given that they are more likely to be attuned to recruitment activities. Results show that, while there was an increase from Year One to Year Three, there was a drop from Year Three to Year Five. As a result, there is nearly no difference between the perceptions of Demonstration Group and Comparison Group supervisory employees. This likely reflects the fact that there are few differences in regards to how recruitment occurs in the Demonstration Project versus under the traditional system (one exception is the use of flexible entry salaries as a tool for attracting and hiring employees).

Table 4-77. Change Over Time – Recruitment of Minorities







		Demo. Group			Comp. Group		
		Total	(N)	(S)	Total	(N)	(S)
		YEAR FIVE					
52. Recruitment procedures allow for the opportunity to hire good minority applicants.	*Disagree*	16%	16%	15%	15%	13%	19%
	Neither disagree nor agree	49%	53%	38%	47%	51%	37%
	Agree	35%	30%	46%	38%	36%	45%
		YEAR THREE					
	Disagree	16%	17%	13%	18%	18%	21%
	Neither disagree nor agree	50%	54%	31%	49%	52%	35%
	Agree	34%	29%	56%	32%	30%	43%
		YEAR ONE					
	Disagree	15%	15%	16%	19%	19%	22%
	Neither disagree nor agree	51%	54%	35%	44%	49%	19%
	Agree	34%	31%	49%	37%	32%	59%

(N) = Non-Supervisors; (S) = Supervisors; Total = Responses of non-supervisory and supervisory employees combined
Percentages may not add to 100 due to rounding
This item was not on the baseline survey

4.11.3. The Demonstration Project did not negatively impact the hiring of minorities, women, and veterans.

Table 4-78 shows that, in Year Five, the proportion of minority, women, and veteran new hires to the Demonstration Group was nearly consistent with their representation in the employee population overall. This finding suggests that the Demonstration Project interventions are not harming DoC's ability to diversify its employee population. (Importantly, while this analysis demonstrates that there was similar diversity of new hires relative to the Demonstration Group population overall, it cannot address the diversity of the applicant pool from which new hires were drawn and the rates of hire per each group.)

Table 4-78. Diversity of New Hires Compared to the Overall Demonstration Group

Category	New Hires (N=223)	All Demonstration Group participants (N=2,723)
Minority Status		
Minority	22%	20%
Non-Minority	78%	80%
Gender		
Women	40%	41%
Men	60%	59%
Veteran Status		
Veteran	11%	13%
Non-Veteran	89%	87%

Note: The number of new hires reported here is the number of new hires reported in the objective datafile.

4.11.4. As found in all previous years, in Year Five 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.

In Year Five, Booz Allen again analyzed objective data on the distribution of performance-based pay increase percentages and bonus percentages for participants in the Demonstration Project. These data were used to establish the links between pay and performance. When Booz Allen analyzed the effects of minority status, gender, and veteran status on the link between pay and performance, the results also demonstrated the link between pay and performance for these groups. This finding has consistently emerged in all five years of the Demonstration Project.

Table 4-79 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 Appendix D-1 for a more detailed description of the ANCOVA process and results). The table is broken down by protected class. These data show that the performance-pay link is evident within each comparison (i.e., within each comparison, the subgroup with the higher performance score also had a higher average performance-based pay increase and bonus while the subgroup with the lower performance score had a lower average performance-based pay increase and bonus).

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. Rather, differences in performance-based pay increases and bonuses appear to be linked to performance scores.

Table 4-79. Average Performance Appraisal Scores, Pay Increase Percentages (Raw and Adjusted), and Bonus Percentages (Raw and Adjusted) for the Demonstration Group

		Average Performance-Based Pay Increase Percentage		Average Bonus Percentage	
		Raw	Adjusted	Raw	Adjusted
Minority	85.9 points	2.6%	2.5%	1.7%	1.7%
Non-Minority	86.6 points	2.8%	2.8%	1.8%	1.8%
Female	86.8 points	3.1%	2.8%	2.0%	2.0%
Male	86.2 points	2.5%	2.8%	1.6%	1.6%
Veteran	84.9 points	2.3%	2.7%	1.5%	1.6%
Non-Veteran	86.7 points	2.8%	2.8%	1.8%	1.8%

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 2002, and as reported in the Year Five data file provided by DoC. Average performance-based pay increase and bonus percentages are based on actions effective in November 2002, as reported in the Year Five 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 score, career path, and length of service.*
4. *Average performance-based pay increase and bonus percentages were computed for 2,723 of the 3,072 Demonstration Group participants for whom salary data were available. Average performance scores were computed for 2,723 of the 3,072 Demonstration Group participants for whom performance score data were available.*

4.11.5. As found in all previous years, in Year Five similar patterns emerged in how members of different protected classes fared in terms of average performance-based pay increases and bonuses in the Demonstration Group versus the Comparison Group.

Booz Allen also examined Comparison Group data on performance appraisal scores, pay increase percentages, and bonus/award percentages to evaluate differences between the Demonstration and Comparison Groups during Year Five. Direct comparisons were not always possible due to the differences inherent in the different systems. Table 4-80 displays the data sources used from each group for purposes of comparison.

Table 4-80. 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)
Performance-based Bonuses (associated with the Performance Appraisal Cycle)	Awards (not associated with the Performance Appraisal Cycle)

For the first time in Year Five of the Demonstration Project, all of the Comparison Group participants were under a 2-level performance appraisal system. The NOAA portion of the Comparison Group (with 1,756 employees in the Comparison Group) has been using a 2-level performance appraisal system (i.e., pass/fail) throughout the life of the Demonstration Project. As reported by their site historian, ESA (with 55 employees in the Comparison Group) recently switched from a traditional 5-level to a 2-level performance appraisal system ("Meets Or Exceeds" or "Does Not Meet Expectations"). Table 4-81 displays the data on performance scores, broken out by protected subgroups.

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.

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 performance bonuses given in the Demonstration Group.

Hence, in addition to the performance appraisal data, Table 4-81 presents a comparison of the average performance-based pay increase and the average bonus/award (presented as percentages of base salary), broken out by protected subgroups, across the Demonstration and Comparison Groups. After accounting for performance score, 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 performance-based 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 scores), the same was true in the Comparison Group.

Table 4-81. Comparison of Performance Appraisal Scores, Average Performance-Based Pay Increases, and Average Bonuses/Awards Across Groups

	Performance Appraisal Scores		Average Pay Increase Percentage		Average Bonus/ Award Percentage	
	Demonstration Group	Comparison Group	Demonstration Group	Comparison Group	Demonstration Group	Comparison Group
Minority	85.9 points	100% Pass; 0% Fail	2.5%	1.5%	1.7%	1.8%
Non-Minority	86.6 points	100% Pass; 0% Fail	2.8%	1.5%	1.8%	2.0%
Female	86.8 points	100% Pass; 0% Fail	2.8%	1.5%	2.0%	2.3%
Male	86.6 points	100% Pass; 0% Fail	2.8%	1.5%	1.6%	1.9%
Veteran	84.9 points	100% Pass; 0% Fail	2.7%	1.1%	1.6%	1.7%
Non-Veteran	86.7 points	100% Pass; 0% Fail	2.8%	1.6%	1.8%	2.0%

Notes:

1. *The performance appraisal scores 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 2002, and as reported in the Year Five data file provided by DoC. Performance data for Comparison Group employees are based on appraisals occurring between April 1, 2002 and March 31, 2003 and as reported in the Year Five data file provided by DoC.*
2. *Average performance-based pay increase and bonus/award percentages are based on actions occurring during the performance evaluation cycle that ended September 30, 2002 and as reported in the Year Five data file provided by DoC.*
3. *Average performance-based pay increase and bonus percentages for the Demonstration Group are based on averages that were computed by statistically controlling for performance score, career path, and length of service.*
4. *Average performance-based pay increase and bonus percentages were computed for 2.723 of the 3,072 Demonstration Group participants for whom salary and demographic data were available. Average performance scores were computed for 2,723 of the 3,072 Demonstration Group participants for whom performance score and demographic data were available.*
5. *Average performance-based pay increase and bonus percentages were computed for 1,555 of the 1,811 Comparison Group participants for whom data were available on pay increases, bonuses, performance score, career path, and length of service.*

4.11.6. In the Demonstration Group, turnover rates were the same for minority and non-minority employees; among high performers, there was lower turnover among minorities.

In Year Five, turnover in the Demonstration Group was 5 percent. There was no difference in the rate of turnover between minorities and non-minorities, which represents a leveling out from Year Three, in which non-minorities separated at a higher rate, and from Year Four, in which minorities separated at a higher rate. Among high performers (performance scores of 90–100), there was more of a distinction: minorities turned over at a lower rate than did non-minorities, which may indicate that the Demonstration Project is having some success in retaining high performing minority participants. These findings are displayed in Table 4-82.

Table 4-82. Comparison of Turnover Rates in the Demonstration Group Between All Participants and High Performers

	Demonstration Group All Participants			Demonstration Group High Performers		
Group	**Number**	**Number Separated**	**Percent Separated**	**Number**	**Number Separated**	**Percent Separated**
Minority	620	32	5%	197	1	0.5%
Non-Minority	2,452	126	5%	923	16	2.0%
TOTAL	**3,072**	**158**	**5%**	**1,120**	**17**	**1.5%**

4.11.7. Unlike the Demonstration Group, there was a difference in the turnover rates of minorities and non-minorities in the Comparison Group.

While turnover rates were consistent across minorities and non-minorities in the Demonstration Group, there was a more noticeable difference within the Comparison Group. In the Comparison Group, minorities turned over at a lower rate than did non-minorities, though the reason for this is unclear. These results are displayed in Table 4-83.

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 4-83. Comparison of Turnover Rates in the Demonstration and Comparison Groups

	Demonstration Group All Participants			Comparison Group All Participants		
Group	**Number**	**Number Separated**	**Percent Separated**	**Number**	**Number Separated**	**Percent Separated**
Minority	620	32	5%	239	5	2%
Non-Minority	2,452	126	5%	1,572	70	4%
TOTAL	**3,072**	**158**	**5%**	**1,811**	**75**	**4%**

5. COST ANALYSIS

One of OPM's six research questions for Demonstration Projects is "What was the cost of the project?" The intent is to determine the extent of the costs and consider whether the Demonstration Project has been a wise investment of resources. Therefore, this section outlines the costs associated with implementing, evaluating, and operating the Demonstration Project.

5.1. Budget discipline was defined for the Demonstration Project at its onset.

The initial Federal Register Notice, dated December 24, 1997 (see Appendix A-1) defined the budget discipline for the Commerce Demonstration Project. As stated, each operating unit is expected to maintain compensation costs in the Demonstration Project in accordance with data from a 3-year historical pay study, which calculated compensation levels based on annual averages over FY94, FY95, and FY96.

Two types of pay pools were established: performance pay increase pools and bonus pay pools. Unique pay pools were established for each organization and career path. Funds previously allocated for promotions across grades that are now within the same bands, WGIs, and QSIs, were incorporated into the performance pay increase pools. Funds previously allocated to cash awards related to the performance appraisal cycle were incorporated into the performance bonus pools.[33]

At the onset of the Demonstration Project, a decision was needed regarding how to convert staff into the Demonstration Project. After weighing their options, DoC opted to offer a WGI buyout. The WGI buyout represented approximately 2.5 percent of the total payroll costs for the affected groups[34]. This should be perceived by employees and other stakeholders as a fair level of compensation relative to other Demonstration Projects. As points of comparison, NIST's conversion method (buying out only upcoming step increases and paying in a lump sum) represented approximately 1 percent of payroll costs, Pacer Share's conversion method (buying out only upcoming step increases in paying in the form of base pay increases) represented approximately 2 percent of payroll costs, and China Lake's conversion method (buying out step increases and career ladder promotions and paying in the form of base pay increases) represented approximately 2.5 percent of payroll costs.[35]

[33] *Descriptive information in this paragraph was taken directly from the Federal Register Notice.*

[34] *Source: Data submitted for GAO Report's on "Human Capital: Implementing Pay for Performance at Selected Personnel Demonstration Projects" (January 2004).*

[35] *Source: DoD S&T Reinvention, Laboratory Demonstration Project, Summative Evaluation 2002, page 35.*

5.2. The primary costs associated with the Demonstration Project cover implementation, evaluation, and operation.

DoC's OHRM tracks and analyzes Demonstration Project cost expenditures (other than salary costs, which are driven by the funding available in the pay pools), and submits this information to the DPMB for final approval. The DPMB has final responsibility for reviewing and approving these project costs.

Booz Allen examined three cost categories:

- Implementation costs
- Evaluation costs
- Operational costs.

Table 5-1 presents a summary of project costs as of the completion of the first five years of the Demonstration Project. As this table shows, the greatest costs (77 percent of the overall costs) were associated with implementation, that is, those costs associated with initiating the Demonstration Project. The largest component of this is the cost to develop and maintain the IT systems necessary for the Demonstration Project's data management. These IT systems are also crucial to several of the interventions, which allow managers to play a greater role in classification and in payout decisions. Another large cost, though only a one-time cost, was the WGI buyout.

The second greatest cost category was evaluation costs (21 percent of the overall costs). These are the costs associated with hiring an external, third-party to conduct statutorily required evaluation (5 U.S.C. 47) to determine if the Demonstration Project's objectives were met, whether any mid-course revisions should be made to the Demonstration Project implementation, and whether the project interventions can be applied in other federal government organizations.

Finally, the third cost category, operational costs, accounts for 2 percent of the overall costs. These are costs that continue to be incurred over the lifetime of the project, such as training.

Table 5-1. Summary of Demonstration Project Costs

	Pre-Imple-mentation	Demo Year One	Demo Year Two	Demo Year Three	Demo Year Four	Demo Year Five	Total
	Prior to 3/98	*4/98-3/99*	*4/99-3/00*	*4/00-3/01*	*4/01-3/02*	*4/02-3/03*	
Implementation Costs							
IT System Development – PPS and ACS (contractor costs)	---	---	$156,000	$50,000	$122,437	$221,000	$549,437
IT System Maintenance – PPS and ACS (contractor costs)	---	$435,094	$599,500	$286,745	$165,525	$191,000	$1,677,864
Public Hearings	$4,000	---	---	---	---	---	$4,000
Conversion Costs – WGI Buyout	$1,388,025	---	---	---	---	---	$1,388,025
Total	**$1,392,025**	**$435,094**	**$755,500**	**$336,745**	**$287,962**	**$412,000**	**$3,619,326**
Evaluation Costs							
Research Applications, Inc. contract	$44,177	---	---	---	---	---	$44,177
Booz Allen Hamilton contract	---	$266,468	$76,441	$276,930	$84,075	$264,827	$968,741
Total	**$44,177**	**$266,468**	**$76,441**	**$276,930**	**$84,075**	**$264,827**	**$1,012,918**
Operating Costs[2]							
Managers/Supervisors Training	$15,000	$13,000	$12,000	$21,000	$19,000	---	$80,000
Employee Training	$1,000	$500	$1,550	$750	$550	---	$4,350
Union And Employee Representatives Training	$5,000	---	---	---	---	---	$5,000
HR Staff Training	$8,000	$500	$500	$500	$500	---	$10,000
Production and Distribution of Training Videos	$1,000			$500			$1,500
Total	**$30,000**	**$14,000**	**$14,050**	**$22,750**	**$20,050**	**$0**	**$100,850**
Total Costs							
	$1,466,202	**$715,562**	**$845,991**	**$636,425**	**$392,087**	**$676,827**	**$4,733,094**

Notes:

1. *Some of these data were initially obtained from Commerce's submission to GAO on costs incurred in implementing and operating a Demonstration Project. Booz Allen then requested that DoC validate and modify the data points, as necessary; therefore, some discrepancies may exist between these data and the GAO data. Data on Booz Allen's contract values were obtained from Booz Allen contractual records.*

2. *Training costs include training materials, supplies, training rooms, and travel, as applicable. Training costs do not include staff time to train.*

5.3. Additional factors impact salary costs.

Given that the Demonstration Project's intent was to maintain compensation in accordance with data from a 3-year historical pay study, payroll costs (performance-based increases and performance bonuses) were not included in this analysis. However, in a report to the U.S. General Accounting Office on the costs incurred in implementing and operating a Demonstration Project, DoC reported a number of factors that may have contributed to actual salary costs over the life of the Demonstration Project:

- Lifting of step 10 salary caps as a function of pay banding
- Compounding of salary increases given that employees can receive increases every year (rather than every two to three years, as would have impacted some of the employees had they remained in the GS system)
- Increases up to six percent above the pay band maximum for supervisors who qualified for supervisory performance pay
- Higher starting salaries for employees in hard-to-fill positions.

5.4. Across the life of the Demonstration Project, implementation, evaluation, and operational costs total just under 5 million dollars.

Based on these data, the overall cost for the Demonstration Project was nearly $5 million, with 29 percent of this amount covering conversion costs, which is a one-time cost. Another significant cost was IT development and maintenance, which typically would have heavier upfront costs and would be expected to taper down as the Demonstration Project continues.

Every federal Demonstration Project is unique in regards to numerous factors, including the number of employees and organizations involved, conversion methods, duration, and the number and types of interventions. Given this, costs of implementing, evaluating, and operating a Demonstration Project can vary greatly, which makes it difficult, and perhaps inappropriate, to compare this Demonstration Project's costs to others. Therefore, we recommend that DoC continually track its Demonstration Project costs and compare its costs across time to determine whether the allocation of dollars is appropriate and whether the benefits gained from the Demonstration Project justify the costs.

6. ANSWERS TO RESEARCH QUESTIONS

This section presents the overarching results of our assessment of the Demonstration Project. Multiple methods of data collection were used to answer questions on how well the Demonstration Project has been operating over its five years.

As described earlier in this report, the Demonstration Project evaluation is designed to answer research questions identified by OPM as well as DoC. Table 6-1 and Table 6-2 display, for each key research question, a response based on the data collected. Table 6-1 also indicates where, within this report, additional information about each research question has been discussed.

6.1. At the conclusion of the five-year Demonstration Project, responses to OPM's research questions show that the Demonstration Project has operated effectively and has demonstrable evidence of the success of key objectives.

OPM specifies six research questions that should be answered in each evaluation phase of OPM-sponsored Demonstration Projects. These six questions address whether or not the interventions are better than traditional human resources practices. As shown in Table 6-1, the Year Five evaluation indicates that the Demonstration Project has operated effectively and has demonstrable evidence of the success of key objectives.

Table 6-1. Answers to OPM Research Questions

OPM Research Questions	Answers	Where To Locate Additional Information
1. Did the project accomplish the intended purpose and goals? If not, why not?	Over its five years, the Demonstration Project met its purpose and goals. Many of the interventions showed evidence of success, if not initially, further into the life of the Demonstration Project. For example, some success has been shown in the ability to link pay and performance, to retain high performers, to turn over low performers, and to use more flexible entry salaries to attract candidates.	Introduction Chapter 4 – Findings and Conclusions
2. Was the project implemented and operated appropriately and accurately?	The Demonstration Project was implemented and operated appropriately, as evidenced by its success over the five-year timeframe. Sufficient leadership and oversight by the Boards and project team to lead and operate the Demonstration Project on a regular basis. In addition, technological and other resources were dedicated to the Demonstration Project.	Chapter 4 – Findings and Conclusions
3. What was the cost of the project?	The primary costs associated with the Demonstration Project are implementation, evaluation, administration, and operational costs, with implementation costs representing the largest segment. Our cost analysis produced an overall cost of just under $5M over the course of the five years.	Chapter 5 – Cost Analysis

OPM Research Questions	Answers	Where To Locate Additional Information
4. What was the impact on veterans and other EEO groups?	Across all five years of the Demonstration Project, objective and subjective data indicate that the Demonstration Project has not had a negative impact based on race, gender, or veteran status. Survey and focus group findings provide employee opinions that the Demonstration Project interventions have not impacted how these groups are treated, compensated, recruited, or retained. Objective data also provide evidence that the pay-for-performance system did not reward participants differently based on race, gender, or veteran status; rather, increases appear to be linked to performance scores.	Section 4.11 – Findings on the Interventions and Race, Gender, and Veteran Status Appendix D-1 – Analyses of the Linkage between Pay and Performance
5. Were Merit Systems Principles adhered to and Prohibited Personnel Practices avoided?	Survey and focus group results indicate that there have been no changes in either adherence to Merit System Principles or avoidance of Prohibited Personnel Practices with the implementation of the Demonstration Project.	Section 4.10 – Findings on the Merit System Principles and Prohibited Personnel Practices
6. Can the project or portions thereof be generalized to other agencies or government-wide?	Based on the findings over the five years, it appears that the Demonstration Project has had successes that may have broader potential and appeal elsewhere in DoC or in the Federal Government. Although it took several years (which is typical for this type of organizational change), Demonstration Project favorability ratings are up to levels comparable to other Demonstration Projects. DoC's decision to extend and expand the Demonstration Project clearly demonstrates the vision that these interventions can be effective in different contexts. One indication that it is reasonable to test these interventions more broadly is that the interventions were effective across career paths and across participating organizations during the initial five years. One relevant issue to applying the interventions elsewhere, however, is that some of the interventions were no longer unique by the end of the five years. In a sense, these interventions (e.g., recruitment payments, retention payments) were already generalized elsewhere. Future decisions about what could be applied elsewhere should clearly be made with consideration for the unique benefits the intervention may bring beyond that which is already offered under the traditional system.	Chapter 4 – Findings and Conclusions

6.2. The Year Five evaluation provides evidence that DoC has met many of its objectives for the Demonstration Project

DoC also defined a set of research questions to be answered in each evaluation phase of the Demonstration Project that are aligned with the objectives it hopes to achieve. As shown in Table 6-2, the Year Five evaluation indicates that many interventions that are unique to the Demonstration Project have proven successful.

Table 6-2. Answers to Evaluation Model Research Questions

Research Questions From DoC Expanded Evaluation Model	Answers
1. Has the quality of new hires increased? Has there been an improved fit between position requirements and individual qualifications? Has there been a greater likelihood of getting a highly qualified candidate?	While issues have been acknowledged with the challenges of measuring the quality of applicants and new hires, there is some indication that progress is being made in attracting high quality candidates. Based on objective data, employees hired during the Demonstration Project years slightly outperformed the more tenured employees, which suggests that the quality of new hires has increased. In addition, both survey data and objective data show that Demonstration Group supervisors are taking advantage of their ability to exercise flexibility with entry salaries and to re-negotiate job offers, which gives them the tools to attract and obtain competitive candidates.
2. Has retention of good performers increased?	At the end of five years, there is clear evidence that the Demonstration Project has had a positive effect on retaining good performers. Objective data show that lower performing employees separate at higher rates than do higher performing employees. The flexible pay increase upon promotion intervention has also been effective, which contributes to rewarding high performing employees and encouraging their retention by making their salaries more competitive with the public and private sectors. In fact, these successes in retaining high performers have been achieved despite the lack of use of retention payments. One intervention that has been less successful as a retention tool is supervisory performance pay; its lack of success is likely due to how this intervention was designed.
3. Has individual and organizational performance improved?	The pay-for-performance system is clearly contributing to greater differentiation of high and low performers, with provision of greater rewards to the former. Moreover, the system has been an improvement over the traditional system, as evidenced by the fact that Demonstration Group participants fared better than Comparison Group participants in pay increases and bonuses/awards. Demonstration Group supervisors are also taking advantage of their ability to exercise flexibility with pay increases upon promotion, which gives them a tool to motivate high performers. It remains unclear whether the Demonstration Project has noticeably improved organizational performance; this is due to the challenges of measuring organizational performance in the context of the Demonstration Project.
4. Is Human Resources management more effective?	Results suggest that Human Resources management is becoming more effective, as certain activities are delegated to line management. Delegated classification authority has increased the supervisor's role in the classification process, which appears to be working well, although this is no longer necessarily unique to the Demonstration Project. Delegated pay authority continues to be a unique feature of the Demonstration Project and, while it has been a learning experience for supervisors of all levels, seems to be appreciated given the improved Demonstration Project favorability ratings over the five years.

Research Questions From DoC Expanded Evaluation Model	Answers
5. Is Human Resources management more efficient?	The Automated Classification System (ACS) was a critical component in making Human Resources management more efficient. Some evidence speaks for its success; for example, data show that the Demonstration Group was faster than the Comparison Group in regards to classification processing times. Given that some of the challenges in converting the ACS from DOS-based to web-based may have created temporary slowdowns, it is to be expected that greater efficiencies can be gained in the future. Recruiting time has not improved significantly, as evidenced by little differentiation between the Demonstration Group and the Comparison Group in the average number of calendar days required to fill a position. However, the lack of differentiation between the two groups is probably indicative of the fact that the Demonstration Project was not designed to impact recruitment processes overall, but rather with the front-end classification activities.
6. Is there improved support for EEO/diversity goals in recruiting, rewarding, paying, and retaining minorities? Are opportunities for a diverse workforce being provided? Are the contributions of all employees being maximized?	Results indicate that the Demonstration Project interventions have had no negative impact on minorities, women, and veterans. Survey and focus group findings suggest no evidence of unfair treatment based on race, gender, or veteran status in the areas of compensation, recruitment, or retention. Objective data across all five years show that 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. Finally, turnover data show that in Year Five, in the Demonstration Group, there was no difference in turnover rates for minority and non-minority employees, suggesting that minorities are not experiencing greater dissatisfaction.

7. RECOMMENDATIONS

This chapter presents Booz Allen's recommendations for DoC as it concludes the initial five years and now moves into its five-year extension and expansion. These recommendations are intended to enhance aspects of the Demonstration Project based on findings and conclusions drawn from across the survey, focus group, interview, and objective data from the initial five years.

7.1. DoC should monitor users' experiences with the web-based Automated Classification System.

The web-based Automated Classification System experienced some challenges during its implementation, which was reflected in survey and focus group responses. While this is to be expected with any new IT system, DoC should closely monitor users' experiences and perceptions to track whether issues persist and to continue to be timely in responding to system issues. This is particularly important given that perceptions about the IT system can cloud managers' perceptions about the intervention overall and potentially lose the benefits of delegated classification authority. As designed, delegated classification authority offers managers more control over classifying the work they supervise, which can lead to more appropriate hires, and is therefore an important component of the Demonstration Project.

7.2. Formal efforts should be undertaken to address the issue of performance-based feedback.

One surprising finding when looking over the five years of the Demonstration Project was that there was virtually no change in employees' perceptions about the amount of performance-based feedback that they receive. This is surprising given that the Demonstration Project instituted a new performance appraisal system, which presumably would put greater emphasis on performance evaluations and regular supervisor-employee interactions.

It is feasible that low levels of performance-based feedback perceived by employees are due to discomfort or lack of knowledge on supervisors' parts about how to give feedback. A remedy for this is to build and deliver a training program, self-learning CD ROM, or other delivery mechanism on techniques for giving feedback. This type of program could be either an off-the-shelf or customized product; either way it should be very practically oriented so that supervisors feel they have the tools and skills to perform this important activity. In addition, employees should be educated that the onus is also on them to seek out feedback – that both supervisors and employees play a role in the feedback process.

7.3. DoC should re-conceptualize the supervisory performance pay intervention.

Based on the original objectives of the Demonstration Project, the supervisory performance pay intervention was expected to motivate supervisors to higher levels of performance and impact their retention. However, as designed, it is enacted for those supervisors who have

reached the top of their pay bands, rather than as a reward for high performing supervisors. Therefore, it is not necessarily effective as a motivational tool.

DoC should consider alternative ways of structuring an intervention to motivate supervisory performance. The first step should be to go back to the basics to reevaluate what the objective should be. It may be to reward supervisors for effectively performing their supervisory responsibilities (beyond their technical responsibilities) and/or a means for rewarding supervisors for sustained high-quality performance. The criteria for earning supervisory performance pay should be clearly communicated so that it can serve as an ultimate goal to attract high-performing employees with supervisory potential to join the supervisory ranks. This type of intervention will be particularly important given the projected losses (governmentwide) of leaders as the federal workforce ages. Creative incentives and retention tools may help to prolong the employment of high performing supervisors, thus benefiting the organization, as well as to build the next generation of leaders.

7.4. Consider whether to continue the three-year probationary period for scientists and engineers intervention and, if so, develop better data tracking methods.

The three-year probationary period for scientists and engineers intervention was designed to enable supervisors to make permanent hiring decisions for research and development (R&D) positions based on employees' demonstrated capabilities in the full R&D cycle. This intervention provides these supervisors with the ability to terminate poor performing employees any time during the three-year period rather than being limited to the typical one-year probationary period.

Given that this intervention is limited to certain employees and given the rate of hiring over the past five years, this intervention has only been applied to a small number of employees (ranging from 8 to 22 new hires each year). The current data tracking methods also make it difficult to determine the utility of this intervention. For example, current data tracking methods document the number of new hires under the probationary period and the number of departures but good data do not exist, for example, on how many employees stay under probation for one, two, or three years and why decisions were made to release them. DoC should determine whether this intervention is worthy of continuing and, if so, develop a plan for tracking what and why decisions are made about employees under the probationary period so that its effectiveness can be better assessed.

7.5. Establish a methodology for assessing the quality of new hires.

In preparation for the Demonstration Project's additional five years, a renewed effort should be made to establish a methodology for assessing the quality of new hires so that the Demonstration Project can better determine if it has met the objective to improve the quality of new hires. It is particularly challenging to identify and enact perfect measures, given that quality can be defined in numerous ways. DoC should invest time in researching potential criteria, making decisions on data to be collected, and imposing methods to track the data. By doing so, it will be possible to determine which recruitment strategies are most successful

in drawing the best and the brightest to the organization. Furthermore, it will permit tracking whether an influx of high-performing new hires, combined with turnover of low performers, helps to improve aggregate organizational performance. It is our understanding that efforts are underway to address this issue, and that this issue will receive increased attention as the Demonstration Project moves into the next five years.

7.6. Continue with plans to perform analyses at a finer level of detail.

The first five years of the Demonstration Project have shown some clear successes for some of the interventions. Moving into the next five years, DoC should continue with its plans to explore whether different subgroups within the Demonstration Project (e.g., different career paths, different EEO groups) have different experiences and the potential root causes for these differences. By doing so, a finer level of analysis and more comprehensive results will be able to inform the generalizability of the interventions elsewhere within DoC or the government.

7.7. DoC should strive to make the most out of the extension and expansion of the Demonstration Project.

At the time this report was written, the decision had already been made to extend the Demonstration Project for an additional five years. Based on our Year Five evaluation, as well as our analysis of progress over the initial five years of the Demonstration Project, we believe that extending the Demonstration Project is a wise decision. While the success of different interventions has varied, there has been reasonable success overall to suggest that it would be beneficial to continue with these personnel practices as well as to apply these practices to additional groups. The extension and expansion will have a number of benefits from an evaluation perspective, such as being able to 1) evaluate the long-term efforts of interventions, 2) place greater emphasis on certain interventions that are particularly important or require more attention, and 3) perform more detailed analyses to get a more comprehensive picture of how these interventions can benefit varied subsets within the organization.