CONTROLLER STAFFING: OBSERVATIONS ON FAA'S 10-YEAR STRATEGY FOR THE AIR TRAFFIC CONTROLLER WORKFORCE

Federal Aviation Administration
Report Number: AV-2005-060
Date Issued: May 26, 2005

U.S. Department of Transportation
Office of the Secretary
of Transportation
Office of Inspector General

Memorandum

Subject: <u>ACTION</u>: Report on Controller Staffing: Observations on FAA's 10-Year Strategy for the Air Traffic Controller Workforce AV-2005-060

Date: May 26, 2005

From: David A. Dobbs
Assistant Inspector General
for Aviation and Special Program Audits

Reply to Attn. of: JA-10

To: Federal Aviation Administrator

This report provides the results of our review of the Federal Aviation Administration's (FAA) initiatives to address air traffic control staffing issues. Our objective was to evaluate actions taken or planned by FAA to address key staffing issues within the controller workforce to ensure the safe, efficient, and cost-effective operation of the National Airspace System in light of expected increases in controller attrition. We conducted the review between September 2004 and May 2005, which included visiting more than 30 air traffic control facilities. Exhibit A contains details on the scope and methodology we used in conducting this review. Exhibit B lists the facilities visited during the audit.

BACKGROUND

Attrition in FAA's air traffic controller workforce is expected to rise sharply over the next 10 years, as controllers hired after the 1981 Professional Air Traffic Controllers Organization strike become eligible for retirement. An air traffic controller is eligible to retire under special retirement provisions at age 50 with 20 years of active service as a controller or at any age with 25 years of active service. Air traffic controllers are also subject to mandatory retirement at age 56, although controllers may apply annually for a waiver of mandatory retirement until age 61. Waivers are determined on a case-by-case basis. FAA currently estimates that over 11,000 controllers (or about 75 percent of its controller workforce) could leave the Agency between fiscal year (FY) 2005 and FY 2014.

In light of air traffic controller staffing concerns, as part of FAA's 4-year reauthorization in 2003, Congress required FAA to submit a report by December 2004 addressing the Agency's plan to ensure adequate staffing within the air traffic controller workforce. FAA submitted its controller workforce plan in December 2004 entitled, "A Plan for the Future: The Federal Aviation Administration's 10-Year Strategy for the Air Traffic Control Workforce." This workforce plan details FAA's strategy for managing the hiring of approximately 12,500 new controllers to replace those expected to leave over the next 10 years. Figure 1 shows the magnitude of the projected losses by year, along with the planned number of new hires by year that FAA must recruit.

Figure 1. Estimated Losses Versus Planned Hires
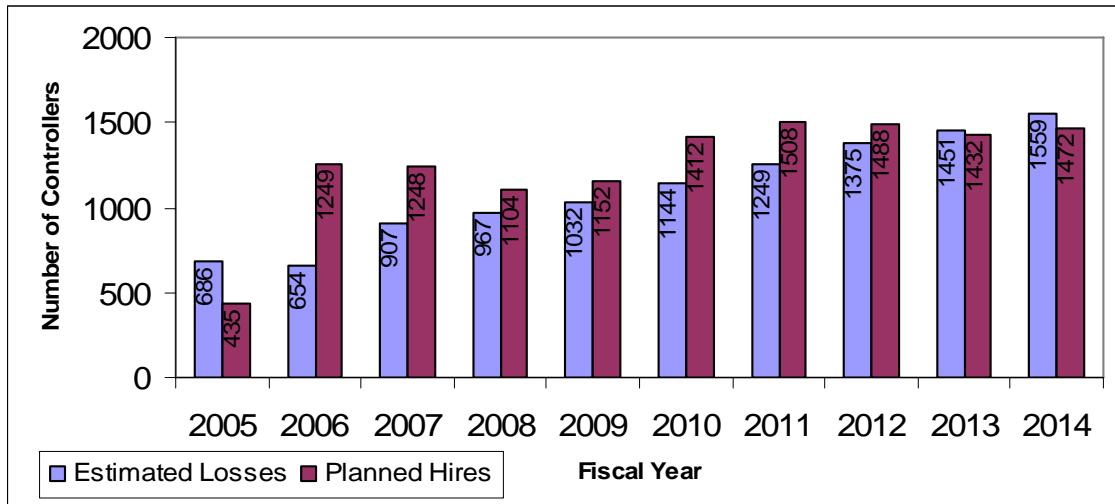
Source: FAA

RESULTS IN BRIEF

FAA's controller workforce plan for addressing the expected surge in controller attrition over the next decade establishes the first milestone in what will be a series of future annual reports to Congress. In our opinion, the plan is a good first step in that it clearly lays out the magnitude of the issue and establishes planned actions for meeting the challenge. However, future reports to Congress will require greater detail in terms of FAA's strategy for executing key elements of the plan, the total costs associated with the plan, and the Agency's progress in meeting established milestones. That information is necessary to ensure that Congress, the Department, and the Office of Management and Budget have a complete and accurate picture of the ongoing 10-year plan and the resources required.

In our opinion, there are four issues that need to be specifically addressed in the next report to Congress, which is due at the beginning of the FY 2007 Appropriations cycle.

- **Staffing by Location: FAA's Workforce Plan Does Not Address Staffing Needs by Location.** FAA's hiring plan is aggregated at the national level only and contains no information on when and where new controllers will be placed. Planning by location is critical because FAA has over 300 terminal and en route air traffic control facilities that have significant differences in their size, complexity, and volume of air traffic. For example, the control tower at Ann Arbor, Michigan, conducted about 64,000 operations in FY 2004. In comparison, the control tower at Chicago O'Hare conducted over 1,700,000 operations during the same time frame.

  Without accurate facility-level planning, FAA runs the risk of placing too many or too few controllers at key locations and could waste a one-time opportunity to address longstanding concerns about controller staffing imbalances. Given the significant expenditures that will be required to hire and train 12,500 new controllers over the next 10 years, this issue needs to be a top priority for the Agency. In recent testimony before the House Appropriations Subcommittee, the Administrator committed to completing those plans by the end of this year.

  As part of its facility-level planning, FAA will also need to consider other factors that can have a significant impact on staffing, including the use of overtime, compensatory time, and credit hours. Each of those factors influences the number of full-time controller positions required. For example, using overtime judiciously instead of hiring additional controllers can be advantageous for meeting operational needs during special circumstances. As part of the workforce plan, FAA plans to examine how to make better use of overtime to reduce the number of controllers needed at each location. In FY 2004, air traffic facilities used over 529,000 hours of overtime or the annual equivalent of 255 full-time controller positions.

  We agree that judicious use of factors such as overtime can be advantageous for meeting staffing needs. However, in our prior work we found numerous agreements (both local and national) between FAA and the National Air Traffic Controllers Association (NATCA) covering work rules, such as shift scheduling, overtime usage, time-off awards, compensatory time, and credit hours, that had significant repercussions in terms of staffing.

  Addressing national and local work rules that can affect staffing will be a critical issue for FAA in the pending negotiations with NATCA over a new

collective bargaining agreement. The existing collective bargaining agreement expired in September 2003 but was extended by the union and FAA for an additional 2 years. The extension is now due to expire in September 2005. As part of those negotiations, FAA will need to identify and take appropriate corrective actions to address any work rules that have the potential to affect controller staffing.

- **Training: FAA's Plan Focuses on Reducing On-The-Job Training Time for New Controllers While Significantly Increasing the Percentage of Developmental Controllers in the Workforce.** A key component of FAA's workforce plan focuses on reducing the average time new or developmental controllers spend in on-the-job training (OJT) at their assigned locations. Currently OJT takes an average of 2 to 5 years. FAA plans to reduce that time to 2 to 3 years—a goal that appears achievable. However, FAA is planning to reduce the average time developmental controllers spend in OJT while at the same time significantly increasing the number of developmental controllers in the workforce. FAA plans to increase the percentage of developmental controllers to over 30 percent of the total workforce beginning in FY 2007, which would be the highest percentage of developmental controllers in recent years. Currently, only about 15 percent of the workforce are developmental controllers, and over half of those are certified controllers who transferred to a new facility and only have to learn the airspace of their new location. The increase in the percentage of developmental controllers is a concern because it means there will be fewer certified controllers within the workforce to control air traffic and to provide OJT.

  The planned increase of developmental controllers underscores the need for the Agency to have facility-level plans for hiring and training controllers. Facility-level details are needed so that managers can begin planning *now* on how to handle the logistics of a significantly increased percentage of developmental controllers within their workforces. FAA will also need to continually monitor the training results from individual facilities to ensure the increased percentage of developmental controllers does not adversely impact the overall efficiency or safety of operations of the National Airspace System.

- **Costs: FAA Does Not Identify the Total Costs Associated With Implementing the Plan.** FAA has not identified the annual and total costs for hiring and training the number of new controllers it says it needs over the next 10 years. FAA has also not identified the offsetting savings it will realize from attrition. FAA submitted some of the cost details of the controller staffing plan in its FY 2006 Budget Submission. For example, FAA requested $24.9 million to hire and train a net increase of 595 new controllers in FY 2006 but provides

no details for FY 2007 and beyond when the costs of the staffing plan may increase significantly as hiring increases.

FAA needs to develop detailed cost estimates before the next submission of its controller staffing plan so that Congress, the Department, and the Office of Management and Budget have a clear understanding of the costs associated with the plan. These estimates should identify the annual and total net costs of hiring new controllers, as well as estimates for items such as training, new equipment, and travel. These estimates should also be updated annually to reflect the Agency's progress in meeting the requirements of the plan, as well as any changes made to the plan.

- **Controller Productivity: FAA's Plan Assumes the Agency Will Be Able To Reduce Staffing by 10 Percent Through Increased Controller Productivity, but Many Initiatives Are in the Earliest Stages of Planning.** FAA's plan assumes achieving numerous staffing reductions through productivity gains. For example, FAA plans to decrease the use of sick leave by 8 percent and evaluate the use of part-time controllers and split shifts. The intent of these initiatives is to improve productivity by making more controllers available for controlling traffic.

  FAA anticipates that these initiatives will allow the Agency to reduce controller staffing by about 10 percent over the next 5 years, relative to the existing staffing standards. Many of these initiatives, however, are in the earliest planning stages and have no anticipated implementation dates. Furthermore, some initiatives (such as the use of split shifts and limiting the use of controllers on workgroups) may require successful union negotiations.

  Implementing these initiatives is an ambitious operational undertaking and will require continuous monitoring on the part of FAA to determine if the desired outcomes are being achieved. To ensure the initiatives are achieving the desired results, FAA must establish baseline metrics for the initiatives, then update the workforce plan annually to reflect the actual progress made in achieving each initiative and ultimately in achieving the goal to reduce controller staffing by 10 percent.

SUMMARY OF RECOMMENDATIONS

Our recommendations focus on the specific actions FAA needs to take to ensure that its stakeholders have a complete and accurate picture of the ongoing 10-year strategy for the controller workforce and the resources that will be required. Our recommendations to FAA include:

- Developing accurate facility staffing standards and hiring plans that identify where and when new air traffic controllers will be placed (that information should then be provided to facility managers so they begin planning on how to handle the increased number of developmental controllers within their workforces);

- Identifying and taking corrective actions to address any work rules that have the potential to adversely affect controller staffing;

- Developing detailed cost estimates of the annual and total costs associated with the plan; and

- Establishing metrics for all initiatives included in the plan and annually evaluating the actual progress made in achieving a 10 percent staffing reduction.

A complete set of our recommendations can be found on page 14.

MANAGEMENT COMMENTS

On April 27, 2005, we provided a draft copy of this report to officials from FAA's Air Traffic Organization for their review and oral comments. In general, they agreed with the facts as presented in our report and concurred with our recommendations.

ACTIONS REQUIRED

In accordance with Department of Transportation Order 8000.1C, we would appreciate receiving your formal written comments on this report within 30 calendar days. If you concur with the findings and recommendations, please indicate the specific actions taken or planned and the target dates for action. If you do not concur, please provide an explanation of your position. We welcome any alternative courses of action that could resolve these issues.

We appreciate the cooperation and assistance provided by you and your staff during our review. If you have any questions or need further information, contact me at (202) 366-0500 or Dan Raville, Program Director, at (202) 366-1405.

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cc: FAA Deputy Administrator
    FAA Chief of Staff
    Anthony Williams, ABU-100

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FAA's Workforce Plan Does Not Address Controller Staffing at the Facility Level

FAA's plan focuses on controller staffing only at the national level and does not provide details about where new controllers will be placed. For example, in FY 2006, FAA is planning to hire 1,249 new controllers[1] at a cost of $24.9 million. While this projection provides FAA with a hiring requirement for budgeting purposes, it does not detail specifically where and when these new controllers will be needed. FAA currently has over 300 terminal and en route air traffic control facilities located throughout the continental United States, Alaska, Hawaii, Guam, and other locations.

There are significant differences in these facilities, ranging from the complexity of the airspace they control to the volume of air traffic they handle. For example, the control tower at Ann Arbor, Michigan, conducted about 64,000 operations in FY 2004. In comparison, the control tower at Chicago O'Hare conducted over 1,700,000 operations during the same time frame.

There are also significant differences between terminal facilities and en route centers. Terminal facilities control air traffic in the immediate airspace around airports, both by visual sighting, as in many control towers, and by radar coverage at Terminal Radar Approach Controls (TRACONs). En route centers control air traffic and are responsible for separating aircraft flying at higher altitudes and airspeeds across the country.

The wide differences between FAA's facilities require differences in the knowledge, skills, and abilities of controllers and underscore the need for FAA to detail where new controllers will be needed. Many facilities, such as Chicago O'Hare, are critical to the efficient operations of the entire National Airspace System. However, determining where new controllers will be placed is problematic for the Agency because the current staffing standards used by FAA are not accurate at the facility level.

FAA's Staffing Standards Are Not Accurate at the Facility Level

FAA has used staffing standard models to determine controller staffing levels since the 1970s and they are the basis for the current workforce plan. Those staffing standards are generally accurate at a "macro" level because the models were designed to generate national estimates, but they are not accurate at the

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[1] The 1,249 new controllers will result in a net increase of 595 controllers after expected attrition of 654.

facility level. In fact, in 1997, the National Academy of Sciences completed a review of FAA's staffing standards and concluded:

> The committee does not believe that the current staffing standards can be used to provide highly accurate estimates of staffing requirements for individual [air traffic control] facilities.

At the facilities we visited, we compared FAA's current staffing standards with the actual number of controllers assigned at those locations. We found that the staffing standards were often not an accurate picture of the needs of a facility. For example, the New York TRACON has always been considered a "hard-to-staff" location. However, according to FAA's staffing standards, the TRACON is actually *overstaffed* by 55 controllers.

As shown in Table 1, the New York TRACON had more controllers than the staffing standard required while the Oakland Center was understaffed according to the staffing standards. In spite of this, the New York TRACON spent four times as much in overtime costs in FY 2004 to meet its operational needs.

Table 1. Staffing Standard Versus Actual on Board (AOB)

Facility	FY 2004 Staffing Standard	AOB as of Dec 20, 2004	Difference	FY 2004 Overtime Costs
New York TRACON	177	232	+55	$4.4 million
Oakland Center	344	226	-118	$1.1 million

FAA's Current Staffing Standards Do Not Include a Number of Key Factors

We also found that the current staffing standards do not consider a number of significant factors when determining the staffing levels for a facility. At the facilities visited, we asked the air traffic managers and the facility union representatives what should be considered when establishing staffing levels for a facility. Some of the responses we received were:

- Airspace complexity is not considered in the staffing standards. The airspace complexities vary significantly between facilities, based on local airports, traffic patterns, and numerous other factors.

- Runway configurations are not included in the mathematical models. For example, air traffic control operations at Chicago O'Hare International Airport, with its numerous intersecting runways, differs greatly from the operations at Dallas/Ft. Worth International Airport, which has parallel runways.

- Staffing standards are established based on the number of fully certified controllers required to safely operate the air traffic volume. They do not take into consideration that facilities very seldom have all fully certified controllers.

Most Facilities We Visited Did Not Use Staffing Standards as the Basis for Determining Staffing Needs

During interviews with air traffic managers and NATCA union representatives at the facilities we visited, we were informed that rather than using the staffing standard as a guide to staff their facilities, many facility managers and union representatives currently negotiate the facility staffing levels. When comparing these negotiated staffing levels to the staffing standards, we found that at 26 of the 30 facilities we visited, the negotiated levels were higher. Table 2 shows the comparison of staffing standards to negotiated staffing level at both the 30 facilities we visited and at all the FAA air traffic control facilities.

Table 2. Staffing Standard Versus Negotiated Staffing Levels

Facilities	FY 2004 Staffing Standard	FY 2003 Negotiated Staffing Level	Difference
30 Facilities Visited	2,748	3,029	281
All Air Traffic Facilities	15,136	15,703	567

When we asked facility managers and union representatives what staffing the facility was authorized, nearly all of them responded with the negotiated staffing

number. In fact, several of the managers we spoke with did not know what the staffing standard was for their facility. The existence of two "authorized" numbers for each facility can compound existing confusion over facility staffing. For example:

- The New York TRACON has recently received much publicity concerning staffing levels at the facility. According to the controllers, the facility is severely understaffed because it only has 228 controllers when its staffing requirement (negotiated between FAA managers and local union officials) calls for 270 controllers. Neither FAA nor the union refers to the staffing standard, which calls for only 177 controllers.

FAA is aware of the need for accurate staffing standards at the facility level. In the workforce plan, FAA states that in order to develop more accurate staffing standards, it will begin a reassessment of its air traffic staffing models for terminal and en route operations during FY 2005. The reassessment will also examine whether other criteria are more appropriate for determining staffing at the facility level.

Completing that assessment expeditiously is particularly important for the Agency to address staffing imbalances as it replaces retiring controllers. Various groups have repeatedly expressed concerns that some FAA air traffic facilities are either under- or over-staffed. In 1995, a congressional request for a staffing standard study stated that: "After many years of internal study, the FAA still does not have a complete understanding of how many controllers are required at each of its facilities."

A review conducted by FAA in 1994 indicated that almost 30 percent of the Agency's field facilities had staffing imbalances of greater than 10 percent, compared to the staffing standard. During our audit, we compared staffing standards to actual staffing at all FAA facilities, which showed that over 62 percent of FAA's field facilities have staffing imbalances when compared to the existing staffing standards. However, because FAA's facility staffing standards are inaccurate, determining the *actual* extent of controller staffing imbalances is not possible.

To adequately address these staffing issues for the coming decade, FAA must determine down to the facility level of detail where and when controllers will be needed. To accomplish this, we recommend that FAA begin its reassessment of the current staffing standards as soon as possible, taking into consideration all significant factors, such as airspace complexities and runway configurations, when determining appropriate staffing standards for each facility.

Other Factors Can Affect Staffing

While accurate facility staffing standards are key to FAA's workforce plan, it is important to recognize that there are other components that can have a significant impact on facility staffing. Those include how locations use overtime, compensatory time (comp time), and credit hours. At many locations, we found similar facilities that had substantial differences in their use of overtime, comp time, and credit hours.

For example, the air traffic control towers (ATCT) at Nashville, TN, and Raleigh, NC, are the same type of facility. Figure 2 shows that at the time of our review each facility had nearly the same negotiated staffing levels (46 vs. 48 controllers) and nearly the same number of operations (508,627 vs. 524,074 operations). Both facilities also had a total of 44 controllers on board. However, the Raleigh tower used more than 38 times the number of overtime hours than the Nashville tower (3,224 vs. 83 hours).

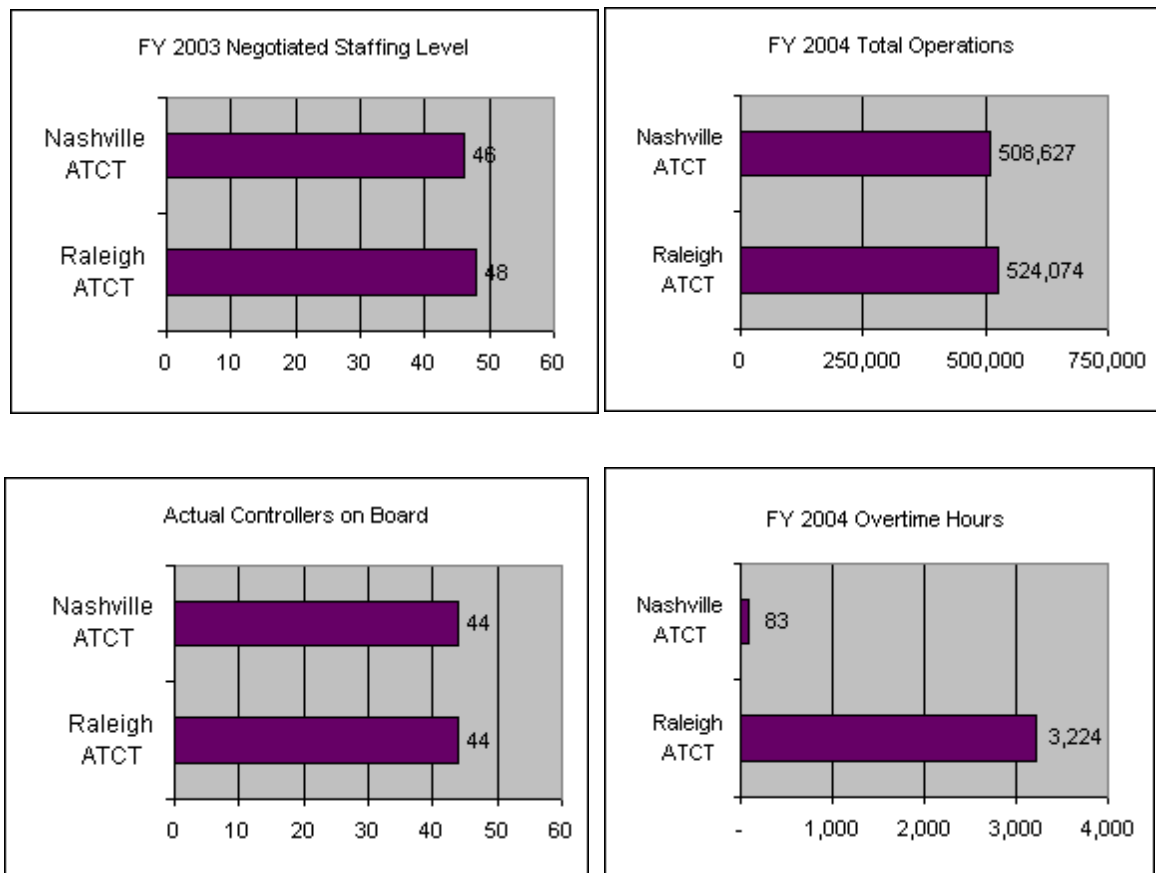## *Figure 2. Comparison of Similar ATCT Facilities*

Figure 3 shows similar results when comparing similar TRACON facilities. The Southern California TRACON and the New York TRACON had a similar number of operations (1,995,100 vs. 1,904,369), negotiated staffing levels (261 vs. 270), and controllers actually on board (243 vs. 232). However, there is a significant difference in the number of overtime hours used at the facilities (18,876 vs. 44,565).

Figure 3. Comparison of Similar TRACON Facilities
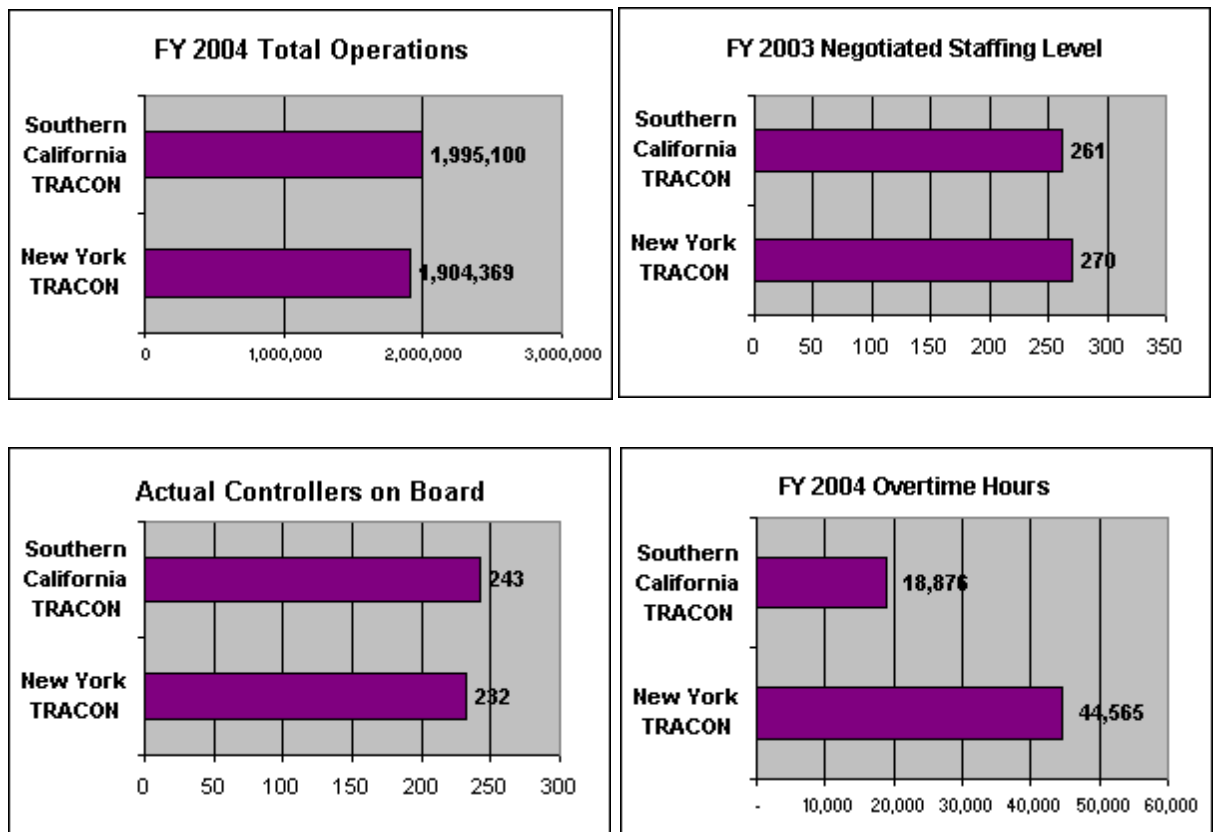
There are many factors affecting overtime, comp time, and credit hours that are unique to a location. Special events (such as sporting events and large conventions), training on new equipment (such as new automated oceanic equipment at several en route centers), and meeting operational needs are all factors affecting overtime, comp time, and credit hours used at a facility. Many times, a facility will use overtime as a "stop-gap" measure to fill a need for more staffing for a special event instead of hiring additional controllers.

We recognize that judicious use of these methods is important in meeting operational needs during special circumstances without increasing the need for additional full-time controllers. However, in our prior work, we also found circumstances where local (and in some cases national) policies and agreements increased overtime, comp time, and credit hour usage significantly—often without sufficient operational reasons. For example, in our audit "FAA's Management of and Controls Over Memorandums of Understanding" (AV-2003-059, September 12, 2003), we found FAA and the controllers' union at the national and local level had entered into numerous memorandums of understanding (MOUs) that had significant operational affects on staffing. For example:

- One MOU for a new free flight tool, the User Request Evaluation Tool, gave each controller two $250 cash awards and a 24-hour time-off award for meeting certain training milestones on the new system. The MOU contained no distinction of awards for individual contributions other than coming to work and attending training. In fact, at 2 locations, 11 controllers received the total cash award and 16 controllers received the 24 hours of time-off even though they were on detail, military leave, medically disqualified, or on workers' compensation leave. At six facilities alone, this MOU resulted in FAA incurring approximately $1.3 million in individual cash awards and 62,500 hours in time off, which is the annual equivalent of approximately 30 full-time positions.

- In December 2001, we issued a report on "Air Traffic Services' Policy of Granting Time Off Work to Settle Grievances and Other Complaints"[2] which found that facility managers routinely granted credit hours and excused absences to settle grievances and other complaints submitted by air traffic controllers. Managers contended that credit hours had no cash value and therefore did not affect the cost of operations. We found that at one facility alone, managers granted 113 bargaining unit members 60 credit hours each to settle grievances (a total of 6,780 or the annual equivalent of 3 full-time controllers).

In both instances, FAA agreed with our recommendations and took appropriate corrective actions.

Addressing work rules and local policies that can affect staffing will be a critical issue for FAA in the pending negotiations over a new collective bargaining agreement with NATCA. The existing collective bargaining agreement expired in September 2003 but was extended by the union and FAA for an additional 2 years. The extension is now due to expire in September 2005. As part of those

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[2] OIG Report Number CC-2002-048, December 14, 2001.

negotiations, FAA will need to identify and take corrective actions to address any work rules that have the potential to affect controller staffing.

Key To FAA's Plan Is Reducing Average On-The-Job Training Time for New Controllers While Significantly Increasing the Percentage of Developmental Controllers in the Workforce

OJT for developmental controllers is the longest part of the training process and thus the most expensive. Facility training includes both classroom and simulation training on the airspace of their assigned facility and training on live traffic with a certified professional controller (CPC). Currently, OJT takes an average of 2 to 5 years.

FAA's workforce plan establishes a goal of decreasing the time it takes developmental controllers to become fully certified. FAA's goal is to reduce the current 3 to 5 years it takes to become a fully CPC at an en route center to 3 years and reduce the current 2 to 3 years it takes to certify at a terminal facility to 2 years. According to FAA, the reduction in training time could be realized through increased use of simulation and a greater emphasis on accomplishing OJT at facilities.

Although FAA's goal of certifying controllers at an en route facility in 3 years and a terminal facility in 2 years appears to be realistic, it is important to note that these are national estimates. The length of time it takes to become a certified controller varies by facility. For example, during our recent audit "Opportunities To Improve FAA's Process for Placing and Training Air Traffic Controllers,"[3] we visited 17 facilities and found the overall time required for newly hired controllers to become certified at those locations averaged 3.1 years but in some cases took as long as 7 years.

We found there were many factors that affected the length of OJT at the various facilities, including the hiring source, level of the facility, local training policies, and operational needs of the facility. Unless FAA accumulates site-specific statistics on a national level, FAA has no means to assess the overall OJT process, determine whether training resources can be more efficiently and effectively used, and identify the most efficient and best practices. We recommended that FAA compile these data and establish a baseline to better manage the time and costs associated with the controller OJT process and include these in developing a tracking system for training. FAA concurred with our recommendation and included this as a major initiative in the workforce plan, with an expected completion date of May 2006.

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[3] OIG Report Number AV-2004-060, "Opportunities To Improve FAA's Process for Placing and Training Air Traffic Controllers in Light of Pending Retirements," June 2, 2004.

Although FAA is planning to reduce the average training time it takes to become a certified controller, we have concerns about the Agency's ability to achieve this while at the same time increasing the percentage of developmental controllers in the workforce. Beginning in FY 2007, FAA is planning to increase the percentage of developmental controllers at en route centers to 32 percent of the total workforce. According to FAA, a workforce consisting of up to 35 percent developmental controllers is acceptable. However, that level of developmental controllers would represent the highest percentage of the workforce in recent years.

We found that only about 15 percent of the national controller workforce is currently composed of developmental controllers. And over half of these current developmental controllers are previously certified controllers who transferred to a new facility, already know how to control air traffic, and only have to certify on new airspace. The increase in the percentage of developmental controllers is a concern because it means there will be fewer certified controllers within the workforce to control air traffic and to provide OJT.

Air Traffic managers and NATCA facility representatives we interviewed during this audit indicated that a staffing ratio of up to 25 percent of developmental controllers to CPCs would still allow effective controller training. Because FAA is expecting to increase the percentage of developmental controllers to 32 percent of the workforce as early as FY 2007 in the en route centers, it is vital for FAA to have facility-level plans for hiring and training controllers immediately available so that managers can begin planning how to handle the logistics of training the increased number of developmental controllers. FAA will also need to continually monitor the training results from the individual facilities to ensure the developmental controller rate does not adversely affect the overall efficiency or safety of operations in the National Airspace System.

FAA Has Not Identified the Costs Associated With Implementing the Controller Workforce Plan

FAA's workforce plan does not identify the annual and total costs for hiring, training, and certifying new controllers to meet future requirements. In addition, the workforce plan does not provide line-item cost estimates for many aspects of its plan, including what the Agency expects to spend in additional training, new equipment, and travel costs. Without detailed costs, Congress, the Department, and the Office of Management and Budget will not have a clear understanding of what is needed to fulfill the future air traffic controller requirements as proposed in FAA's workforce plan.

FAA submitted some of the cost details of the workforce plan in its FY 2006 budget submission. For example, FAA requested $24.9 million to hire and train 1,249 controllers (for a net increase of 595 new controllers) in FY 2006. FAA also estimated saving $2 million with the elimination of midnight shifts at 42 air traffic control towers. However, FAA provides no details for FY 2007 and beyond, when hiring projections remain at over 1,000 new controllers per year.

The largest costs associated with the workforce plan will be hiring 12,500 new controllers over the next 10 years. The base salary of a developmental or certified controller depends on where he or she is assigned. Generally, the more complex the airspace and the more operations a facility conducts, the higher the controller's salary. Thus, knowing where a new controller will be placed would assist FAA greatly in determining the overall salary costs for new hires. For example, as shown in Table 3, the annual base salary for a certified controller can range from $64,273 per year at a less complex air traffic control (level 7) facility to $139,630 per year at a more complex (level 12) facility. An important point worth noting is that new controllers will generally have lower base salaries than the retiring controllers they replace since their starting salaries will be at the lower ends of their pay bands. Over time, this could help reduce FAA's average base salary and, in turn, help reduce FAA's operating cost growth.

Table 3. Certified Professional Controller Pay Band

CPC Pay Band	ATC Level 7	ATC Level 8	ATC Level 9	ATC Level 10	ATC Level 11	ATC Level 12
From	$64,273	$71,021	$78,478	$90,249	$94,985	$99,736
To	$89,982	$99,429	$109,869	$126,349	$132,979	$139,630

*Salaries shown do not include locality pay, overtime, or premium pay. (ATC: Air Traffic Control)

There is also a lack of funding details for other costs within the controller workforce plan. For example, FAA is aggressively pursuing changes to the controller training process. The strategy includes the purchase of new simulators at terminal and en route facilities to be used to enhance OJT and the conversion of air traffic academics to web-based delivery. FAA does not identify the annual or the total program costs of these changes. FAA needs to develop detailed cost estimates before the next submission of its controller staffing plan so that Congress, the Department, and the Office of Management and Budget have a clear understanding of the costs associated with the plan. These estimates should identify the annual and total net costs of hiring new controllers, as well as estimates for items such as training, new equipment, and travel. These estimates

should also be updated annually to reflect the Agency's progress in meeting the requirements of the plan, as well as any changes made to the plan.

FAA's Plan Relies on Numerous Initiatives That Have Not Yet Been Implemented

FAA is relying on a number of initiatives in the workforce plan to improve workplace efficiency. FAA anticipates that over the next 5 years, these initiatives have the potential to yield controller staff savings of about 10 percent, relative to existing staffing standard projections. As Table 4 shows, FAA estimates the initiatives will result in a 3 percent staff savings in FY 2005, 5 percent in FY 2006, 7 percent in FY 2007, 9 percent in FY 2008, and 10 percent each year for FY 2009 through FY 2014.

Table 4. Estimated Staff Savings from FAA Initiatives

Fiscal Year	Existing Staffing Standard Projection	Staffing Target	Estimated Staff Savings
2005	15,300	14,841	3%
2006	15,512	14,736	5%
2007	15,705	14,606	7%
2008	15,918	14,485	9%
2009	16,109	14,498	10%
2010	16,303	14,673	10%
2011	16,509	14,858	10%
2012	16,707	15,036	10%
2013	16,910	15,219	10%
2014	17,098	15,388	10%

FAA's initiatives include efficiencies such as reducing the use of sick leave by 8 percent, ensuring appropriate use of workers' compensation benefits, and increasing scheduling efficiencies. The intent of these initiatives is to make more controllers available for controlling traffic. Many of these initiatives, however, are in the earliest planning stages. Furthermore, some of the initiatives will require successful union negotiations, while others depend on future congressional funding. A sample of these planned initiatives and their estimated implementation dates are listed in Table 5.

Table 5. Examples of FAA's Planned Initiatives

Initiatives	Implementation Date
Update Staffing Standards	FY 2005
Use Overtime in Lieu of Additional Controllers	FY 2005
Limit Official Time for Unions to Negotiated Figures	March 2005
Implement Web-Based Training	December 2005
Reduce Use of Sick Leave	FY 2006
Develop a National Training Database	May 2006
Implement a Labor Distribution Reporting System	June 2005
Reduce Workers' Compensation	FY 2007
Increase Use of Training Simulation	Now to FY 2008
Reduce Hours of Operations at 34 Facilities	Unknown
Evaluate Use of Part-Time Controllers and Split Shifts	Unknown
Reduce New Hire Salaries While at the Academy	March 2005
Collect Baseline Data on Scheduling vs. Traffic	In Progress
Reclassify 12 Air Traffic Control Facilities	In Progress
Limit Controller Participation on Workgroups	Unknown
Make OJT More Efficient at Facilities	Unknown
Increase Scheduling Efficiencies	Unknown
Consolidate Facilities	Unknown
Expand Contract Tower Program	Unknown

FAA has made progress regarding several of the initiatives. For example:

- Reclassifying 12 air traffic controller facilities is intended to lower salary costs. The savings will be realized as new lower-salaried controllers replace the higher-salaried current controllers. As of April 27, 2005, FAA has reclassified 9 of the 12 facilities.

- The FAA workforce plan reported that the Agency expects to change the way new hires are appointed and compensated, no longer paying full salaries while the new hire is attending training at the Academy. On March 25, 2005, FAA issued Policy Bulletin #33, which significantly lowered starting salaries for new controllers while they are attending the Academy.

However, many of these initiatives have unknown implementation dates. Therefore, FAA is not yet able to accurately estimate when the staff savings might

be realized. For example, FAA plans to reduce the time it takes to become a certified controller partially through more efficient OJT at facilities. FAA states that this will lead to a reduction in training costs, provide a more rapid response to facility staffing needs, increase flexibility in controller scheduling, and reduce the stress on training resources. However, FAA does not specify when these savings would be realized.

Some of the initiatives outlined in the FAA workforce plan may need to be negotiated with NATCA. While these negotiations could take place this year as a new collective bargaining agreement is being negotiated, the results of those negotiations are not guaranteed. For instance:

- FAA plans to evaluate the use of part-time controllers and split shifts. In interviews with FAA facility managers and NATCA representatives we found a receptive attitude toward using part-time controllers. However, the union representatives rejected the idea of split shifts.

- FAA also plans on limiting the use of controllers in workgroups. These workgroups are usually formed by MOUs with the union for special projects. Changes to the composition of these workgroups may need to be negotiated with the union.

Finally, many of the FAA initiatives depend on receiving additional congressional funding. For example:

- The training strategy in the controller workforce plan proposes an expanded use of simulation technology to reduce training time at the Academy and in the field facilities. While the FY 2005 omnibus appropriations bill includes $4 million for the procurement of simulators for use at terminal facilities, it is not clear whether this will fulfill FAA's requirements at the terminal facilities because detailed costs are not provided in the workforce plan. Other funding will be needed for simulators at the en route facilities and at the Academy.

The actions FAA is planning to take by implementing these initiatives are an ambitious operational undertaking. Only through continued monitoring can FAA determine the final impact of these initiatives. To ensure the initiatives are achieving the desired results, FAA must establish baseline metrics for the initiatives, then update the workforce plan annually to reflect the actual progress in achieving each initiative and ultimately in achieving the goal to reduce controller staffing by 10 percent.

RECOMMENDATIONS

Subsequent reports to Congress will require greater detail in terms of FAA's strategy for executing key elements of the plan, the total costs associated with the plan, and the Agency's progress in meeting established milestones. That information is necessary to ensure that FAA's stakeholders have a complete and accurate picture of the ongoing 10-year plan and the resources required. Therefore, we are recommending that FAA take the following actions prior to the next report to Congress.

1. Develop hiring plans by facility that identify specifically where and when new air traffic controllers will be placed and provide that information to facility managers so they can begin planning on how to handle the logistics of a significantly increased percentage of developmental controllers within their workforces.

2. Initiate the planned assessment of the current staffing standards, taking into consideration all significant factors, such as airspace complexities and runway configurations, when determining appropriate staffing standards for each facility.

3. In conjunction with the upcoming negotiations with NATCA over a new collective bargaining agreement, identify and take corrective actions as appropriate to address any work rules or policies that have the potential to adversely affect facility staffing.

4. Develop detailed cost estimates and offsets for the controller staffing plan that identify the annual and total net costs associated with the plan.

5. Establish baseline metrics for all of the initiatives in the plan and annually evaluate actual progress made in (a) implementing each initiative, and (b) achieving the anticipated staffing reduction of 10 percent.

EXHIBIT A. SCOPE AND METHODOLOGY

The audit was conducted in accordance with <u>Government Auditing Standards</u> prescribed by the Comptroller General of the United States and included such tests as we considered necessary to provide reasonable assurance of detecting abuse or illegal acts. The following scope and methodology was used in conducting this review.

During this audit, we visited FAA Headquarters, the Eastern and Central Terminal Service Areas, the Central En Route Service Area, and air traffic control facilities in those Service Areas. We also interviewed FAA and NATCA officials at all locations visited. Finally, we reviewed and analyzed FAA's "10-Year Strategy for the Air Traffic Control Workforce."

To evaluate actions taken or planned by FAA to address key staffing issues within the controller workforce:

- We interviewed FAA personnel at both the FAA Headquarters and Service Area offices to ascertain the accuracy and applicability of the FAA's staffing standards in identifying controller staffing requirements at both the national level and at the individual air traffic control facility level.

- We discussed facility staffing requirements with FAA and NATCA personnel assigned to all Service Areas and facilities visited.

- We discussed actions planned and taken at the facility level to reduce the cost of operational overtime, to control the earning and use of credit hours, to reduce the use of sick leave, and to more efficiently assign controllers to facility watch schedules in order to better match controllers on duty with daily increases and decreases in air traffic volume.

EXHIBIT B. FACILITIES VISITED

Eastern Terminal Service Area
- Service Area Headquarters
- New York TRACON
- Potomac TRACON
- Dulles ATCT
- Reagan National ATCT
- JFK ATCT
- LaGuardia ATCT
- Islip ATCT
- Teterboro ATCT
- Newark ATCT
- Philadelphia ATCT
- Richmond ATCT
- Patrick Henry Field ATCT
- Norfolk ATCT
- North East Philadelphia ATCT
- Manassas ATCT

Eastern En Route Service Area
- Service Area Headquarters
- Washington Center
- New York Center

Central Terminal Service Area
- Service Area Headquarters
- Chicago TRACON
- DFW TRACON and ATCT
- Chicago O'Hare ATCT
- Midway ATCT
- Rockford ATCT
- Milwaukee ATCT
- DuPage ATCT
- Palwaukee ATCT
- Love Field ATCT
- Addison ATCT

Central En Route Service Area
- Service Area Headquarters
- Ft. Worth Center
- Chicago Center

EXHIBIT C. RELATED OFFICE OF INSPECTOR GENERAL REPORTS (1998 – 2005)

- Next Steps for the Air Traffic Organization, CC-2005-022, April 14, 2005
- FAA's Actions To Address Leave and Overtime Abuse at Five Locations, AV-2004-081, September 9, 2004
- Addressing Controller Attrition: Opportunities and Challenges Facing the Federal Aviation Administration, CC-2004-058, June 15, 2004
- Opportunities To Improve FAA's Process for Placing and Training Air Traffic Controllers in Light of Pending Retirements, AV-2004-060, June 2, 2004
- Using CRU-X To Capture Official Time Spent on Representational Activities, AV-2004-033, February 13, 2004
- FAA's Management of Memorandums of Understanding with the National Air Traffic Controllers Association, AV-2003-059, September 12, 2003
- FAA's Oversight of Workers' Compensation Claims in Air Traffic Services, AV-2003-011, January 17, 2003
- FAA's Air Traffic Services' Policy of Granting Time Off Work To Settle Grievances, CC-2002-048, December 14, 2001
- Automated Flight Service Stations: Significant Benefits Could be Realized by Consolidating AFSS Sites in Conjunction with Deployment of OASIS, AV-2002-064, December 7, 2001
- Compensation Issues Concerning Air Traffic Managers, Supervisors, and Specialists, AV-2001-064, June 15, 2001
- Staffing: Supervisory Reductions Will Require Enhancements in FAA's Controller-in-Charge Policy, AV-1999-020, November 16, 1998
- Personnel Reform: Recent Actions Represent Progress but Further Effort Is Needed To Achieve Comprehensive Change, AV-1998-214, September 30, 1998
- Air Traffic Controller Workforce Labor Agreements, AV-1998-061, January 20, 1998

These reports can be reviewed on the OIG website at http://www.oig.dot.gov.

Exhibit C. Related Office of Inspector General Reports (1998 – 2005)