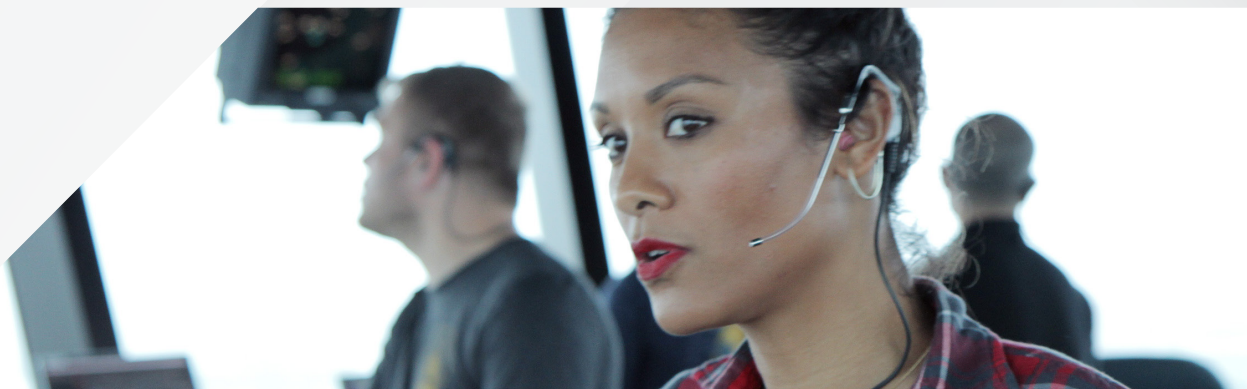




Federal Aviation
Administration

THE AIR TRAFFIC CONTROLLER WORKFORCE PLAN

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Section 221 of Public Law 108-176 (amended by Public Law 117-103) requires the FAA Administrator to transmit a report to the Senate Committee on Commerce, Science and Transportation and the House of Representatives Committee on Transportation and Infrastructure that describes the overall air traffic controller workforce plan.

The Federal Aviation Administration (FAA) is an operating administration of the Department of Transportation (DOT). The DOT's mission is *'To deliver the world's leading transportation system, serving the American people and economy through the safe, efficient, sustainable, and equitable movement of people and goods.'* FAA conducts its business consistent with the DOT's Strategic Plan which includes safety and equity as strategic goals. In serving the public, the FAA strives to live up to DOT's key values of excellence, trust, fairness, empathy, and imagination.

The FAA issued the first comprehensive controller workforce plan in December 2004. This Fiscal Year (FY) 2023 report is the FAA's eighteenth annual update to the controller workforce plan. In previous years, the Appendix included staffing ranges based on agency staffing standards for all of the FAA's air traffic control facilities as well as actual onboard controllers. This year, instead of staffing ranges, the Appendix includes agency staffing standard numbers, staffing targets from the Air Traffic Organization (ATO) Collaborative Resource Workgroup (CRWG) efforts and actual onboard controllers as of September 24, 2022.

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Executive Summary

Safety is the top priority of the Federal Aviation Administration (FAA) as it manages America's National Airspace System (NAS). The FAA's mission is to provide the safest, most efficient aerospace system in the world and encourage global aerospace excellence. The NAS is the common network of U.S. airspace — air navigation facilities, equipment and services; airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures; technical information; staffing resources and material.

Thanks to the expertise of people and the support of technology, tens of thousands of aircraft are guided safely and expeditiously every day through the NAS to their destinations.

While safety is the top priority of the FAA as it manages the NAS, efficiency is also an important priority for the FAA.

IMPACT OF CORONAVIRUS DISEASE 2019 (COVID-19)

The COVID-19 pandemic has had substantial impact on the aviation industry and the FAA. At the onset of the pandemic, in order to protect employees and help ensure continuity of operations, certain activities were eliminated or significantly reduced at our air traffic control facilities. On-the-job training of developmental air traffic controllers was significantly reduced. This has resulted in delayed certification for most existing developmental controllers. In addition, to maintain employee safety in our facilities, the FY 2021 hiring target was reduced from 910 to 500. As traffic levels are now nearing full recovery, the FAA has increased the FY 2023 hiring target to 1,500 to also restore the training pipeline to near full capacity. Throughout the entire pandemic, the FAA has taken all necessary steps to continue to operate the NAS with minimal disruption and at minimal risk to our air traffic control professionals. As always, the FAA will continue to assess the aviation industry and make future adjustments to plans as warranted. This plan reflects impacts of the pandemic on controller hiring plans given current projections of recovery.

WORKLOAD & TRAFFIC

An important part of managing the NAS involves actively aligning controller resources with demand. The FAA "staffs to traffic," matching the number of air traffic controllers at its facilities with traffic volume and workload. The FAA's staffing needs are dynamic due to the dynamic nature of the workload and traffic volume.

For the purposes of this plan, air traffic includes aircraft that are controlled, separated and managed by FAA air traffic controllers. This includes commercial passenger and cargo aircraft, as well as general aviation and military aircraft. Due to the COVID-19 pandemic, air traffic volume dropped precipitously beginning in late March 2020. The traffic began to increase in 2021 and many locations have returned to and in some cases exceeded Pre COVID-19 numbers. However, system-wide traffic is still below 2019. The FAA incorporates location-specific traffic counts and forecasts in its staffing standards process to account for air traffic volume projections at individual facilities.

Also, Unmanned Aircraft Systems (UAS) are changing the way we see the future of flight. Keeping pace with the technological advances in this growing industry presents unique challenges and innovative opportunities for the FAA and the aviation community. The FAA is taking an incremental approach to safe UAS integration. The impact of UAS on air traffic control will continue to evolve as the FAA pursues its vision for fully integrating unmanned systems into the NAS.

HEADCOUNT

At individual facilities, the current Actual on Board (AOB) number may exceed the facility's staffing target. This is because many facilities' current AOB numbers (all controllers at the facility) include developmental controllers in training to offset expected future attrition. While the FAA strives to keep Certified Professional Controllers (CPCs) and Certified Professional Controllers in Training (CPC-ITs) aligned with these targets, individual facilities can exceed them due to advance hiring. The FAA hires and staffs facilities so that trainees, once fully certified, are prepared to take over responsibilities when senior controllers leave.

At the end of FY 2022, the Staffing Standard target Controller headcount was 12,062. FAA Controller staffing consisted of 10,578 Certified Professional Controllers (CPCs), 943 Certified Professional Controllers In-Training (CPC-ITs), 1,897 Developmental Controllers, and 275 ATC Academy students for a total Controller headcount of 13,693. The FY 2023 Collaborative Resource Workgroup (CRWG) developed an independent facility level target headcount of 14,633 which includes an additional 298 staffing for Watch Supervision. More information on the CRWG is included in the hiring section in chapter 3. End of FY 2022 staffing levels for each FAA facility are in the Appendix.

RETIREMENTS

The long-anticipated wave of controller retirements peaked more than a decade ago, in 2007, at 828 retirements. Over the past five years, the FAA has averaged 361 controller retirements per year. Due to the shifting demographics of the workforce, controller retirements are expected to continue to decline for the next three years to a new average of 258 per year through 2032. In the last five years, 1,804 controllers have retired. Cumulative retirement eligibility has also fallen. More than 10,000 controllers were hired after the 1981 strike, and at the end of FY 2022 only 5 controllers remain from those who were hired before 1984. By the end of FY 2023, fewer than 500 controllers will be eligible to retire, which is the lowest number since the 2005 Controller Workforce Plan.

This clearly demonstrates that the controller retirement wave that peaked more than a decade ago is over.



The FAA's goal is to ensure that it has the flexibility to match the number of controllers at each facility with traffic volume and workload. Staffing to traffic is one of the ways we manage America's NAS.

Over the past five years, the FAA has hired over **5,200** new air traffic controllers.



The FAA carefully tracks actual retirements and projects losses to ensure its recruitment and training keep pace.

HIRING

Over the past five years, the FAA has hired over 5,200 new air traffic controllers. In FY 2022, we exceeded our target with 1,026 controller hires versus a plan of 1,020 with sustained COVID-19 challenges. This was the seventh consecutive year that FAA met its hiring goal. The anticipated number of new controller hires in FY 2023 is 1,500.

Despite ongoing COVID-19 pandemic challenges, the FAA continued to recruit and hire, utilizing virtual onboarding as well as virtual training. This consisted of new hires beginning their employment from their current residence and completing the Air Traffic Basics training virtually. After Basics training was completed, they reported to the FAA Academy in Oklahoma City for the next portion of their training.

The FAA is fully committed to the tenets of Diversity, Equity, Inclusion and Accessibility (DEIA) as outlined in the agency's Diversity and Inclusion Strategic Plan 2021-2025. These principles are supported by focusing and increasing outreach and recruitment to underrepresented communities through intern programs, outreach to colleges, universities, and community organizations and partnerships with other federal agencies. In addition to technical training, the agency's Office of Civil Rights will ensure continued development and delivery of training to employees and managers that support DEIA principles. The FAA has an active workgroup examining DEIA issues and barriers in controller recruitment, training, promotion, and retention. Future workforce plans will reflect the group's findings.

During FY 2023, the FAA will continue to recruit and hire air traffic control specialists to meet its staffing requirements.



TRAINING

In July 2019, the FAA implemented the National Training Initiative (NTI), providing minimum training hours per week for all trainees. Since implementation of the NTI, the FAA made significant increases in the certification of trainees to CPCs. NTI was temporarily paused as a result of COVID-19 for several months and training was significantly impacted. NTI was relaunched in August of 2021 and we are already seeing gains in our CPC staffing with the increased focus on meeting training minimums. We must carefully manage the process to ensure that our trainees are hired into locations with need and progress in a timely manner to become CPCs. NTI is critical to our continued efforts to build a stable trainee pipeline and develop our workforce.

Ongoing hiring and training initiatives, as well as simulator use, are helping the FAA meet its goals. While the FAA is managing today's air traffic, we must also integrate new technologies into air traffic operations. From state-of-the-art simulators to satellite technology, air traffic is evolving into a more automated system. The FAA is working diligently to ensure well-trained controllers continue to uphold the highest safety standards as we plan for the future.

FUTURE STAFFING TARGETS

There are currently significant, ongoing discussions within FAA regarding future staffing targets that will drive subsequent Controller Workforce Plans. A reconstituted Collaborative Resource Workgroup (CRWG) made up of representatives from ATO and the National Air Traffic Controllers Association (NATCA) worked collaboratively to determine the number of CPCs needed to meet facility operational, statutory, and contractual requirements, including resources to develop, evaluate, and implement processes and/or initiatives affecting the NAS.

For the charts and figures presented in this plan, we present future hiring plans based on staffing standards. The hiring targets for 2023 and 2024 are already agreed to at 1,500 and 1,800 new hires, respectively. The FAA will be able to take lessons learned from the increases in 2023 and 2024 to the hiring targets to determine what is necessary to further support increased hiring capacity and develop a plan to further increase hiring targets.

A background discussion of the CRWG is presented in Chapter 3 and a long-term cost comparison of staffing to the higher (+21% or 2,571) CPCs CRWG target is presented in Chapter 8.

Ch.1 Introduction

STAFFING

Air traffic controller workload and traffic volume are dynamic, and so are the FAA's staffing needs. A primary factor affecting controller workload is the demand created by air traffic operations, encompassing both commercial and non-commercial activity. Commercial activity includes air carrier and commuter/air taxi traffic. Non-commercial activity includes general aviation and military traffic.

Adequate numbers of controllers must be available to cover the peaks in traffic caused by weather and daily, weekly or seasonal variations, so we continue to “staff to traffic.” Although the FAA generally staffs to traffic counts, it is not a one-to-one relationship.

Safety rules and operating hours require watch schedules that establish staffing during low-volume periods or in facilities with low traffic counts. This practice gives us the flexibility throughout each day to match the number of controllers at each facility with traffic volume and workload.

Figure 1.1 shows historical traffic trends since FY 1997 with projections from FY 2023 to FY 2032. Air traffic was severely impacted by the Covid-19 pandemic and air traffic volume is not expected to return to peak levels in the near term.

FIGURE 1.1 TRAFFIC TRENDS

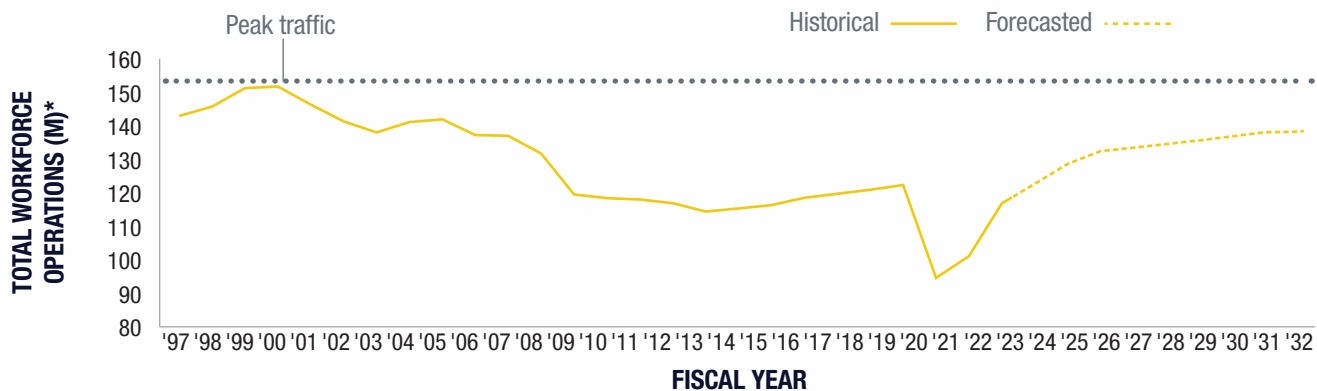
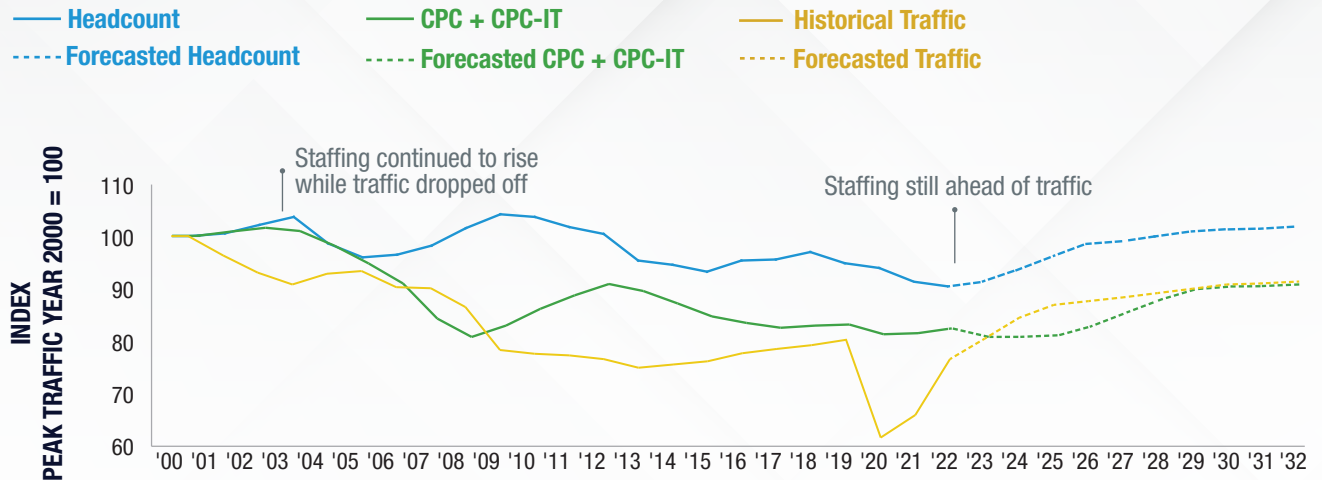


Figure 1.2 shows system-wide controller staffing and traffic, indexed from FY 2000 and projected through FY 2032. Indexing is a widely used technique that compares the change over time of two or more data series (in this case, total controller headcount, CPC plus CPC-IT and traffic). The data series are set equal to each other (or indexed) at a particular point in time (in this case, FY 2000, a high mark for traffic) and measured relative to that index point in each successive year. This way we know how much growth or decline has occurred compared with the base value.

Staffing to traffic not only applies on a daily basis, but also means that we staff to satisfy expected needs two to three years in advance. We do this to ensure sufficient training time for new hires. Despite the decline in air traffic shown in Figure 1.2, this process requires us to anticipate controller attrition so that we plan and hire new controllers in advance of need. This is one reason that staffing remains ahead of traffic. The gap between the blue line (Headcount) and the green line (CPC and CPC-IT staffing) is the advance hire trainee pipeline and is projected to continue to narrow through 2025. The headcount and CPC+CPC-IT lines converge due to reduced retirements and other losses. The FAA periodically validates its staffing models to check for fundamental changes in the nature of the air traffic control job.

FIGURE 1.2 SYSTEM WIDE TRAFFIC AND TOTAL CONTROLLER TRENDS



The FAA will update its staffing models when there are significant changes in air traffic controller workload. Future workload shifts could be driven by new entrants such as increased UAS activity and increases in commercial space launch activity, but they have not had much impact on controller workload yet.

NEW ENTRANTS

In December 2015, the FAA began registration of all UAS. Initially UAS operated on a limited basis in the NAS and mainly supported public operations, such as military and border security operations. In recent years, UAS operations have significantly increased in number, technical complexity and application. The list of uses has rapidly expanded to encompass a broad range of activities, including aerial photography, surveying, communications and broadcast, as well as hobby and recreation.

In 2017, the FAA launched a prototype version of the Low Altitude Authorization and Notification Capability (LAANC). It provides UAS with access to controlled airspace near airports through near real-time processing of authorization requests. LAANC is a collaboration in which FAA supplies the source data and technical requirements, and industry builds mobile applications for commercial drone operators to plan their flights and access controlled airspace.





The Remote Identification (Remote ID) of Unmanned Aircraft Final Rule is the next incremental step towards further integration of Unmanned Aircraft Systems (UAS) in the NAS. In its most basic form, remote identification can be described as a “digital license plate” for drones. Remote ID is necessary to address aviation safety and security issues regarding drone operations in the NAS, and is an essential building block toward safely allowing more complex UAS operations.

In December 2019, the FAA issued a notice of proposed rulemaking regarding remote identification of UAS. This new regulation would continue the safe integration of drones into the nation’s airspace by requiring them to be identifiable remotely. In the 60-day comment period following publication, the FAA received over 53,000 comments. We reviewed all of the comments and considered them when writing the final rule, which was published in the Federal Register on January 15, 2021.

As policy and technology updates allow widespread use of UAS for commercial applications, the impact on air traffic controller (ATC) workload will be incorporated into our models and forecasts. Oversight of UAS is aided by the FAA’s compliance program, which is designed to help identify and correct potential hazards before they result in an incident or accident.

Commercial space launch activity is also growing in the United States. There continues to be strong investment in startup space ventures. The level of activity from air traffic controllers to coordinate airspace closures to support launch and re-entry will likely grow in areas of the country where commercial space activity is concentrated. The FAA will continue to monitor controller workload associated with commercial space activities and adjust our models and forecasts accordingly.

MEETING THE CHALLENGE

The FAA's hiring plan is designed to phase in new hires as needed over time. To do so, the FAA plans its hiring vacancy announcement strategy to provide a sufficient pipeline to meet the hiring need. The hiring process is prolonged from announcement to onboarding, as it includes various screening activities (e.g., medical, security, aptitude). The primary goal of the FAA's hiring pipeline strategy is to ensure the pipeline of in-process candidates is sufficient to replace controllers who retire or leave due to other sources of attrition.

Annual retirements are dropping and remain well below those experienced in 2007, when the long-anticipated wave of retirements peaked. Retirements are expected to fall for the next three years and remain at relatively low levels for the next decade.

Hiring, however, is just one challenge. Other challenges involve controller placement, controller training and controller scheduling. It is important that newly hired and transferring controllers are properly placed in the facilities where they are needed. Once they are placed, they need to be effectively and efficiently trained, and assigned to efficient work schedules.

To address these challenges, the FAA:

- Revamped its placement process for ATC trainees, allowing increased flexibility at the FAA Academy and improved efficiency in both hiring and initial training of air traffic controllers.
- Introduced a collaborative and centralized process to balance the controller ranks by revamping the employee requests (ERR process) for reassignments, matching employee requests with the agency's needs and establishing a national release policy aimed at expediting requests into facilities with the greatest staffing needs.
- Collaboratively developed with NATCA a NTI, focused on each trainee obtaining a target number of training hours each week, and closely monitoring the progress of each individual.

Effective and efficient training, as well as properly placing new and transferring controllers, are two important factors in the FAA's success.



Systematically placing air traffic controllers where we need them, as well as ensuring the knowledge transfer required to maintain a safe NAS, is the focus of this plan.

Ch.2 Facilities & Services



America's NAS is a network of people, procedures and equipment. Pilots, controllers, technicians, engineers, inspectors and supervisors work together to make sure millions of passengers move through the airspace safely every day.

As of October 1, 2022, more than 13,600 federal air traffic controllers in airport traffic control towers, Terminal Radar Approach Controls (TRACONs) and air route traffic control centers guided pilots through the system. More than 1,400 civilian contract controllers and over 10,800 military controllers also provide air traffic services for the NAS.

These controllers provide air navigation services to aircraft in 5.3 million square miles of domestic airspace, in addition to 24.1 million square miles of international oceanic airspace delegated to the United States by the International Civil Aviation Organization.

TERMINAL AND EN ROUTE AIR TRAFFIC SERVICES

Controller teams in airport towers and TRACONs watch over aircraft traveling through their Terminal airspace. Their main responsibility is to organize the flow of aircraft into and out of airports. Relying on visual observation, radar and satellite navigation, they closely monitor each aircraft to ensure safe distances among all aircraft and to guide pilots during takeoff and landing. In addition, controllers keep pilots informed about changes in weather conditions.

Once airborne, aircraft quickly depart the Terminal airspace surrounding the airport. At this point, controllers in the radar approach control notify En Route controllers, who take charge in the vast airspace between airports. There are 21 of these centers around the country. Each En Route center is assigned a block of airspace containing many defined routes. Aircraft fly along these designated routes to reach their destinations.

En Route controllers use surveillance methods to maintain a safe distance between aircraft. En Route controllers also provide weather advisory and traffic information to aircraft under their control. As aircraft near their destinations, En Route controllers transition them to the Terminal environment, where Terminal controllers guide them to a safe landing.

FAA AIR TRAFFIC CONTROL FACILITIES

As of October 1, 2022, the FAA operated 313 air traffic control facilities. Table 2.1 lists the type and number of these FAA facilities. More than one type of facility may be co-located in the same building.

TABLE 2.1 TYPES AND NUMBER OF FAA AIR TRAFFIC CONTROL FACILITIES

NAME	NUMBER OF FACILITIES	DESCRIPTION
Tower	142	An ATC tower that provides traffic advisories, spacing sequencing and separation services to visual flight rules (VFR) and instrument flight rules (IFR) aircraft operating in the vicinity of the airport, using a combination of satellite, radar and visual observations.
Approach Control*	25	An ATC facility that provides approach and departure services to IFR and VFR aircraft arriving or departing an airport and to aircraft transiting the terminal airspace using satellite, radar and/or non-radar separation. Several Approach Control facilities are broken down into separate areas of operation. *These facilities are also known as Terminal Radar Approach Control or TRACON
Tower and Approach Control	121	An ATC facility divided into two separate functional areas, tower and approach and departure control, that provides services to IFR and VFR aircraft, including aircraft traffic advisories, spacing sequencing and separation services to aircraft operating in the vicinity of the airport, arriving or departing an airport, and transiting the terminal airspace using satellite, radar and/or non-radar separation.
Combined Control Facility	4	An ATC facility that provides approach control services for one or more airports, as well as En Route ATC (center control) for a large area of airspace. Some may provide tower services along with approach control and en route services. Also includes Combined Center/Radar Approach (CERAP) facilities.
Air Route Traffic Control Center En Route	21	An ATC facility that provides service to aircraft operating on IFR flight plans within controlled airspace and principally during the En Route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to VFR aircraft. All En Route facilities are broken down into separate areas of operation.

313 Total Facilities



Ch.3 Staffing Requirements

The FAA issued the first comprehensive controller workforce plan in December 2004. “A Plan for the Future: 10-Year Strategy for the Air Traffic Control Workforce” detailed the resources needed to keep the controller workforce sufficiently staffed. This report is updated each year to reflect changes in traffic forecasts, retirements and other factors.

FAA considers many facility-specific factors when determining staffing requirements. They include traffic volumes based on FAA forecasts and hours of operation, as well as individualized forecasts of controller retirements and other non-retirement losses. In addition, staffing at each location can be affected by unique facility requirements such as temporary airport runway construction, seasonal activity and the number of controllers currently in training. Staffing numbers will vary as the requirements of the location dictate.

The FAA also tracks a number of indicators as part of its continuous staffing review. Some of these indicators are overtime, average time on position per shift, leave usage and the number of trainees. Time on position is defined as the amount of cumulative time controllers spend while “plugged in” to their position controlling live traffic. When not on position, controllers are on periodic breaks, in training or performing other assigned duties.

In FY 2022, the system average for overtime was 5.6 percent, an increase from the FY 2019 level of 4.6 percent. Cumulative average time on position per 8-hour shift was 4 hours and 3 minutes, up 2 minutes from FY 2019.



FIGURE 3.1 PROJECTED CONTROLLER TRENDS

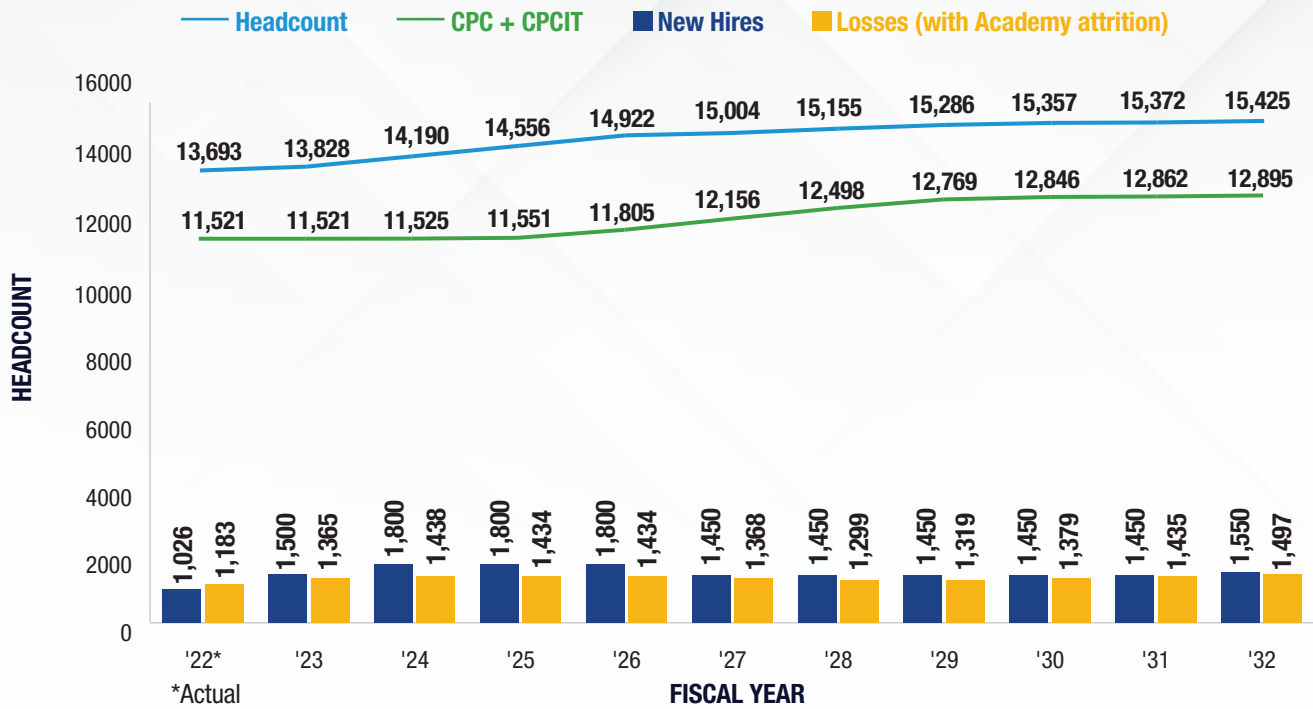


Figure 3.1 shows the expected end-of-year total headcount (blue line), CPC + CPC-IT headcount (green line), and new hires and losses (blue and gold bars) by year through FY 2032.

Figures for FY 2022 represent actual end-of-year headcount, losses and hires. Losses include retirements, promotions and transfers, resignations, removals, deaths, developmental attrition, and Academy attrition. Due to higher than planned FY 2022 attrition, FAA ended with 237 controllers below the planned headcount.

New controllers are typically hired two to three years in advance of expected attrition to allow for sufficient training time. The total expected end-of-year headcount number shown in Figure 3.1 reflects this projected advanced hiring.

AIR TRAFFIC STAFFING

Air traffic facilities staff open positions with a combination of certified controllers and developmentals, and has always done so to ensure that position qualified controllers gain experience (minimum 10%) using their newly certified skills. While staffing positions with developmental controllers in positions they have completed certification for provides valuable experience, assigning these roles too frequently delays overall progress towards full CPC status as they are unable to learn and achieve certification for other required skills. Because traffic and other factors are dynamic at these facilities, the FAA produces facility-level controller staffing targets. These targets are calculated from the staffing standards to ensure that there are enough controllers to cover operating positions every day of the year. Ensuring that we have enough controllers is not only important on a daily basis but also means that we staff to satisfy expected needs two to three years in advance. We do this to ensure sufficient training time for new hires. The uptick caused by hiring two to three years ahead of time is one reason that staffing remains ahead of traffic.

The FAA hires and staffs facilities so that trainees once certified are prepared to take over responsibilities when senior controllers retire or others transfer to other positions or facilities.



THE FAA USES MANY METRICS TO MANAGE ITS FACILITIES

**TIME ON
POSITION**

**PRODUCTIVE
TIME**

**STAFFING
TARGETS**

TRAINEES

OVERTIME

RETIREMENTS

**FIELD
INPUT**

TRAFFIC

**SIMULATORS &
INSTRUCTORS**

Staffing standard targets for controllers are published for each facility in the appendix of this report. In many facilities, the current AOB number may vary from these targets. This is because the CWP reports out on all trainees and certified professional controllers regardless of the positions they are able to work. Current AOB numbers (all controllers at the facility) include significant numbers of developmental controllers in training to offset expected future attrition. Individual facilities can be above the targets due to advance hiring.

Facilities may also vary from the targets based upon facility-specific training and attrition forecasts.

Over the next 10 years, the total number of controllers will steadily increase, as the number of new hires is expected to exceed controller attrition by an average of approximately 90 per year. In the future, the vast majority of controllers will be CPCs and CPC-ITs, and more facilities will align with the targets.

FIGURE 3.2 CPC STAFFING

FAA RANGE FOR SETTING CPC STAFFING TARGETS

- Airspace safety is FAA’s primary mission and all of these staffing levels are safe.
- FAA would reduce traffic volumes before compromising safety in any way.

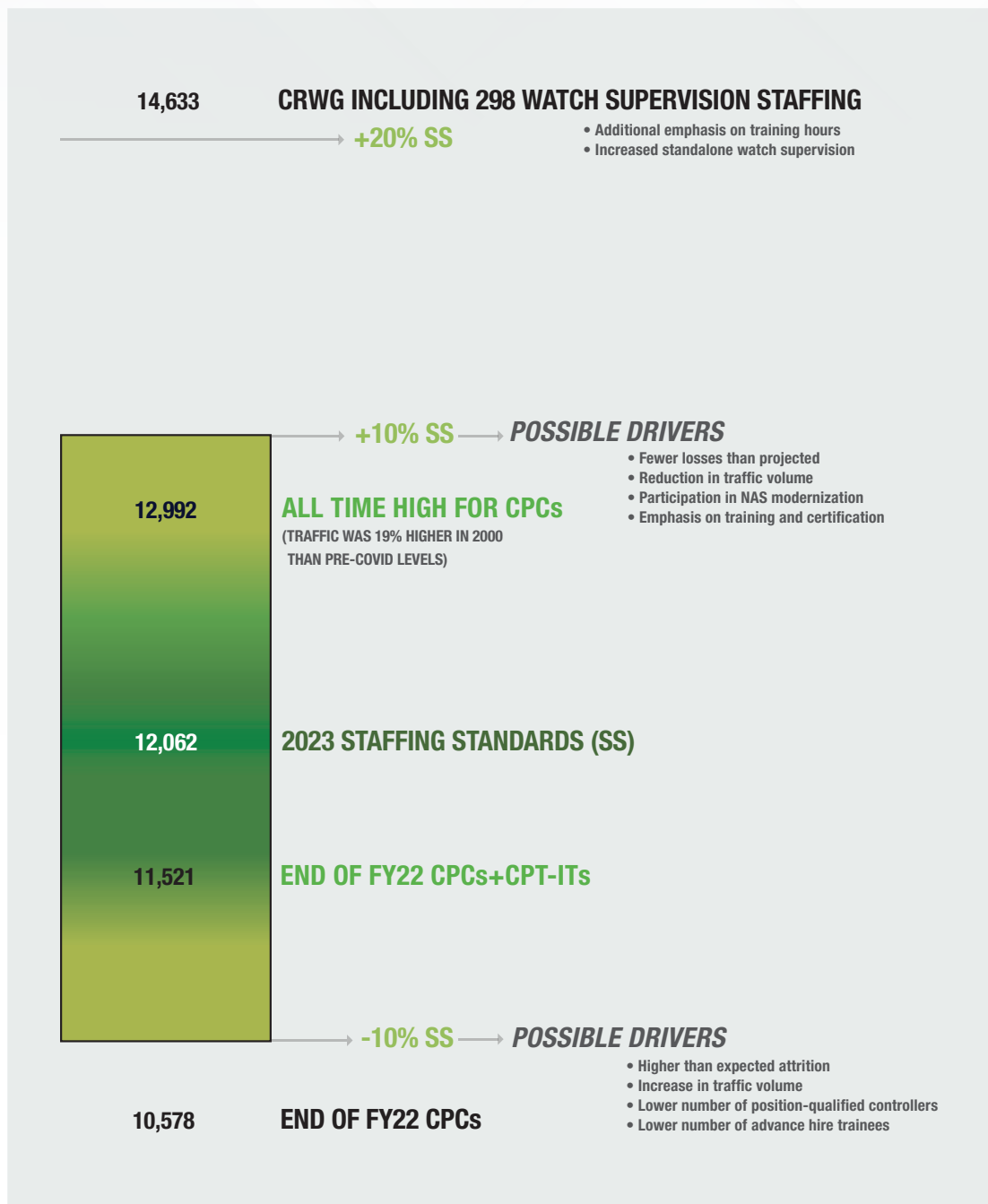
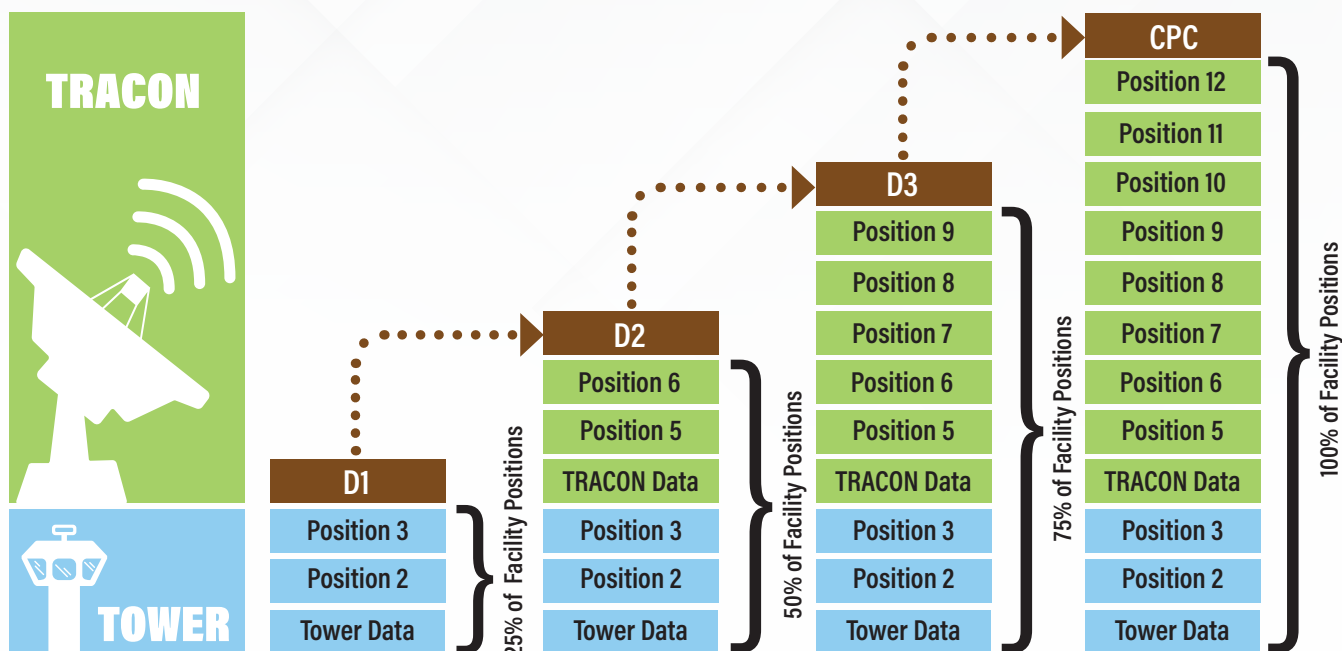


Figure 3.3 depicts an example of a large Tower and Approach Control facility. To be CPCs in these types of facilities, controllers must be checked out on all positions in both the tower and the TRACON.

FIGURE 3.3 EXAMPLE OF CONTROLLER TRAINING PROGRESSION

Training Progression To Certified Professional Controller



Trainees achieve “D1” status (and the corresponding increase in pay) after being checked out on several positions. The levels of responsibility (and pay) gradually increase as the trainees progress through training. Once developmental controllers are checked out at the D1 level, they can work several positions in the tower independently and without training supervision (Clearance Delivery, Ground Control and Local Control). Once checked out on the final tower position, developmental controllers would be tower-certified and able to work any position in the tower cab independently and without supervision. They would still not be a “D2” however, as there are also several positions in the TRACON to be checked out on (Arrival Data, Departure Data, Final Vector 1 and Final Vector 2). A controller in Figure 3.3 must be certified on all positions in the tower and TRACON to become a CPC.

The levels of responsibility continue to increase as one progresses toward CPC status, but trainees can and do independently control traffic much earlier in the training process. Historically, the FAA has used these position-qualified controllers to staff operations and free up CPCs for more complex positions, as well as to conduct training. Having the majority of the workforce certified as CPCs makes the job of scheduling much easier at the facility. CPCs can cover all positions in their assigned area, whereas position-qualified developmentals require the manager to track who is qualified to work which positions independently.

Ch.3 Staffing Requirements




Trainees include both developmental controllers and CPCs-ITs. A CPC-IT is a controller who moves to another area within a facility or to a new facility and must be trained to the qualifications of that new environment. CPC-ITs are different from developmentals in that developmentals have never been fully checked out and certified as CPCs anywhere.

AIR TRAFFIC STAFFING STANDARDS OVERVIEW

The FAA has used air traffic staffing standards to help determine controller staffing levels since the 1970s, and they are periodically updated to reflect changes in workload, equipment and procedures.

FAA facilities are currently identified and managed as either Terminal facilities where airport traffic control services are provided, including the immediate airspace around an airport, or En Route facilities where high-altitude separation services are provided using computer systems and surveillance technologies. Terminal facilities are further designated as tower cabs or TRACONS. These Terminal facilities may be co-located in the same building, but because of differences in workload, their staffing requirements are modeled separately. Figure 3.4 provides an overview of FAA facilities and air traffic control positions.

FIGURE 3.4 AIR TRAFFIC CONTROL POSITION AND FACILITY OVERVIEW



PREFLIGHT + TAKEOFF	DEPARTURE	EN ROUTE	DESCENT APPROACH	LANDING + POST FLIGHT
AIRPORT TRAFFIC CONTROL TOWER	TERMINAL RADAR APPROACH CONTROL	AIR ROUTE TRAFFIC CONTROL CENTER	TERMINAL RADAR APPROACH CONTROL	AIRPORT TRAFFIC CONTROL TOWER
<p>Ground Controller Issues approval for push back from gate and issues taxi instructions and clearances.</p> <p>Local Controller Issues takeoff clearances, maintains prescribed separation between departure aircraft, provides departure aircraft with latest weather/field conditions.</p> <p>Clearance Delivery Issues IFR and VFR flight plan clearance.</p> <p>Flight Data Receives and relays weather information and Notices to Airmen.</p>	<p>Departure Controller Assigns headings and altitudes to departure aircraft. Hands off aircraft to the En Route radar controller.</p> <p>Flight Data-Radar Issues IFR flight plan clearances to aircraft at satellite airports, coordinates releases of satellite departures.</p>	<p>Radar Controller Ensures the safe separation and orderly flow of aircraft through En Route center airspace (includes oceanic airspace).</p> <p>Radar Associate Assists the radar controller</p> <p>Radar Associate (Flight Data) Supports the En Route radar controller by handling flight data.</p>	<p>Arrival Controller Assigns headings and altitudes to arrival aircraft on final approach course.</p>	<p>Local Controller Issues landing clearances, maintains prescribed separation between arrivals, provides arrival aircraft with latest weather/field conditions.</p> <p>Ground Controller Issues taxi instructions to guide aircraft to the gate.</p>

Ch.3 Staffing Requirements

The dynamic nature of air traffic controller workload coupled with traffic volume and facility staffing needs are all taken into account during the development of FAA staffing models and standards.

All FAA staffing standard models incorporate similar elements:

- Controller activity data is collected and processed, commensurate with the type of work being performed in the facilities.
- Models are developed that relate controller workload to air traffic activity. These requirements are entered into a scheduling algorithm.
- The modeled workload/traffic activity relationship is forecast for the 90th percentile (or 37th busiest) day for future years for each facility. Staffing based on the demands for the 90th percentile day assures that there are adequate numbers of controllers to meet traffic demands throughout the year.
- An Availability Factor (AF) is applied for off-position activities such as leave, training and additional supporting activities that must be accomplished off the control floor.

All staffing standard models go through similar development processes. Some components of the model-development phase vary as a function of the work being performed by the controllers. For example, a crew-based approach was used to model tower staffing requirements because the number and type of positions in a tower cab vary considerably as traffic changes, compared with those of a single sector in a TRACON or En Route center. All staffing models reflect the dynamic nature of staffing and traffic. Controller staffing requirements can vary throughout the day and throughout the year.

UPDATES TO STAFFING STANDARDS AVAILABILITY FACTOR

The AF is an important part of the FAA's staffing standards models. It accounts for time controllers can't cover traffic demand at their assigned facility either due to 1) they are not at the facility due to scheduled regular day off (RDO), leave, offsite training, offsite workgroup activities, etc, or 2) while at the facility, they are unable to perform a typical day's on-position work due to special projects, substantial (often group) training activities, local union activities, etc.

The FAA has used an AF multiplier of 1.76 for over thirty years. The AF is applied to the daily staffing requirement on the facility's 37th busiest traffic day to determine overall facility staffing levels required (staffing standards). We periodically review the AF to look for trends in leave usage and other duties. In 2022, the AF was changed to 1.82.

Elements exist that could have caused the AF to move either direction. The 2015 National Academy of Science's Transportation Research Board (TRB) study pointed out that the current AF calculation methodology may be overly conservative and they recommended that 'for each task that makes controllers unavailable to work a position (both 'outside the gate' and 'inside the gate' tasks) an assessment should be made of whether those items may be done during controller 'available' time, during daily off peak periods, and/or during slow seasonal periods. This conclusion was based on methodology used to determine AF which generally involved summing up all relevant unavailable hours across the entire controller workforce for an entire year, determining average per controller full-time-equivalent (FTE) and applying that on the 37th busiest day. The TRB felt that facility managers have the ability to put reasonable limitations on leave, training, and other off-position duties on their facilities busiest traffic days. On the other hand, data showed over the years controllers were spending more time on leave (largely but not entirely driven by a new paid parental leave benefit), workgroups and collaborative activities, and training.

As a result of the 2022 study, the AF was increased to 1.82. Hiring and staffing plans presented in this document reflect the revised AF.

The United States has **5.3 Million** Square Miles of Domestic Airspace

FAACTOID

TOWER CAB OVERVIEW

Air traffic controllers working in tower cabs manage traffic within a radius of a few miles of the airport. They instruct pilots during taxiing, takeoff and landing, and they grant clearance for aircraft to fly. Tower controllers ensure that aircraft maintain minimum separation distances between landing and departing aircraft; transfer control of aircraft to Tower, TRACON or En Route center controllers when the aircraft leave their airspace; and receive control of aircraft for flights coming into their airspace.

- There are a variety of positions in the tower cab, such as Local Control, Ground Control, Flight Data, and Coordinator. Depending on the airport layout and/or size of the tower cabs (some airports have more than one tower), there can be more than one of the same types of position on duty.
- As traffic, workload and complexity increase, more or different positions are opened; as traffic, workload and complexity decrease, positions are closed or combined with other positions. In practice, minimum staffing levels may be determined by hours of operation and work rules.

Important factors that surfaced during the tower staffing model development included the availability, accessibility and increased reliability of traffic data and controller-on-position reporting systems. The FAA is now able to analyze much larger quantities of tower data at a level of granularity previously unattainable. Staffing data and traffic volumes are collected for every facility. The workload portion of the tower cab staffing models were updated in early 2008. The revised tower cab staffing models were developed using regression analysis as the primary method for modeling the relationship between staffing and workload drivers. The models relate observed, on-position controllers to the type and amount of traffic they actually handle. Regression analysis allows us to relate modeled controller staffing requirements with traffic activity and then use this relationship to predict future staffing requirements (standards) based on traffic projections. Plans to update the workload portion of the tower staffing models in FY 2020 were deferred due to traffic levels and facility visitor restrictions put in place as a result of the COVID-19 pandemic.



TRACON OVERVIEW

Air traffic controllers working in TRACONs typically manage traffic within a 40-mile radius of the primary airport; however, this radius varies by facility. They instruct departing and arriving flights, and they grant clearance for aircraft to fly through the TRACON's airspace. TRACON controllers ensure that aircraft maintain minimum separation distances between landing and departing aircraft, transfer control of aircraft to tower or En Route center controllers when the aircraft leave their airspace, and receive control of aircraft for flights coming into their airspace.

- TRACON airspace is divided into sectors that often provide services to multiple airports. Consolidated or large TRACONs in major metropolitan areas provide service to several primary airports. Their airspace is divided into areas of specialization, each of which contains groups of sectors.
- Controllers are assigned to various positions such as Radar, Final Vector and Departure Data to work traffic within each sector. These positions may be combined or de-combined based on changes in air traffic operations.
- As traffic, workload and complexity increase, the sectors may be subdivided (de-combined) and additional positions opened, or the sector sizes can be maintained with an additional controller assigned to an assistant position within the same sector.
- Similarly, when traffic, workload and complexity decline, the additional positions can be closed or the sectors recombined. In practice, minimum staffing levels may be determined by hours of operation and work rules.

Like the tower analysis, the FAA is able to analyze much larger quantities of TRACON data at a level of granularity previously unattainable. Important factors surfaced during the TRACON staffing model review, including the availability, accessibility and increased reliability of traffic data and controller-on-position reporting systems. Staffing data and traffic volumes were collected for every facility.

The TRACON staffing models were updated in early 2009. These revised TRACON models were developed using regression analysis as the primary method for modeling the relationship between staffing and workload drivers. The models relate observed, on-position controllers to the type and amount of traffic they actually handle. Regression allows us to relate modeled controller staffing requirements with traffic activity and then use this relationship to predict future staffing requirements (standards) based on traffic projections. The FAA intended to update the workload portion of the TRACON staffing models after those for the tower model were completed. Both efforts were deferred in FY 2020 due to traffic levels and facility visitor restrictions put in place as a result of the COVID-19 pandemic.

EN ROUTE OVERVIEW

Air traffic controllers assigned to En Route centers guide aircraft flying outside of Terminal airspace. They also provide approach control services to small airports around the country where no Terminal service is provided. As aircraft fly across the country, pilots talk to controllers in successive En Route centers.

- En Route center airspace is divided into smaller, more manageable blocks of airspace called areas and sectors.
- Areas are distinct and rarely change based on changes in traffic. Within those areas, sectors may be combined or de-combined based on changes in air traffic operations.
- Controllers are assigned to positions within the sectors (e.g., Radar, Radar Associate, Tracker). As traffic increases, sectors can be decombined and additional positions opened, or the sector sizes can be maintained but additional controllers added to assistant positions within the sectors.
- Similarly, when traffic declines, the additional positions can be closed or the sectors recombined. In practice, minimum staffing levels may be determined by hours of operation and work rules.

The FAA's Federally Funded Research and Development Center (FFRDC), the Center for Advanced Aviation System Development (CAASD), which is managed by MITRE developed a model to generate data needed for the FAA's En Route staffing models. Like the tower and TRACON standards models, this approach incorporated actual traffic and more facility-specific data.

The modeling approach reflects the dynamic nature of the traffic characteristics in a sector. It estimates the number of controllers, in teams of one to three people, necessary to work the traffic for that sector in 15-minute intervals. Differences in traffic characteristics in a sector could require different numbers of controllers to handle the same volume of traffic. For example, at one time most traffic might be cruising through a sector toward another location requiring minimal controller intervention. At another time, traffic might be climbing and descending through the same sector, a more complex scenario requiring more controllers. The same modeling techniques were applied uniformly to all sectors, providing results based on a common methodology across the country.

Ch.3 Staffing Requirements



During FY 2013 and FY 2014, MITRE collaborated with the FAA and NATCA to conduct an evaluation of the En Route on-position staffing model at the request of the National Academy of Sciences to validate its core assumptions and parameters via empirical data collection. The evaluation, completed in the field and in a controlled laboratory setting, established values for model parameters, identified additional controller tasks for coverage by the model, and informed other enhancements to the model. In FY 2015, these updates were made and the on-position staffing model was recalibrated. The evaluation results were shared with the FAA, NATCA and the National Academy of Sciences. In FY 2016, the evaluation results were incorporated into the on-position staffing model.

STAFFING STANDARDS SUMMARY

The FAA's staffing standard models incorporate output provided by the Tower, TRACON and En Route workload models, which is run through a shift-scheduling algorithm. Next, the availability factor is applied to cover other time not worked. Lastly, traffic forecasts are applied to provide the annual staffing standards that are incorporated into the staffing estimates presented in this plan for each facility.

AIR TRAFFIC CONTROLLER SCHEDULING

FAA facilities use a variety of methods to address demand of scheduled and non-scheduled air traffic activity. One example would be Watch Staffing (WS) which is the minimum ATC staff necessary to operate a given facility based on its hours of operation in the presence of zero traffic. In the context of FAA controller staffing models, WS represents a floor value below which final modeled staffing for a facility is not allowed to fall. The practice often results in the use of less efficient schedules but provides staffing to cover the changes for seasons, holidays, special events, etc.

Most large, professional, shift-based workforces utilize centralized schedule policies and systems. They generally use software-based scheduling programs to develop more efficient schedules. For example, commercial air carriers use commercially available software to schedule flight and ground crews. Similar systems are also in use by air navigation service providers worldwide, like Nav Canada and Airservices (Australia).

The FAA developed the Operational Planning and Scheduling tool (OPAS) to support local schedule and annual leave negotiations. Our implementation of OPAS was based on a commercial off the shelf product. This COTS product was in use at many entities with large workforces, including other air navigation service providers.

OPAS capabilities incorporated a fully functioning planning tool, including day-to-day scheduling. System-wide implementation was negotiated as part of the 2016 air traffic controller collective bargaining agreement. To date, OPAS has been implemented at the 34 largest facilities, primarily to support local scheduling and leave planning negotiations.

The FAA will use OPAS in the near-term to analyze efficiency of negotiated and actual schedules created by field facilities. Going forward the FAA will continue the review of software-based scheduling systems to aid in annual schedule and leave planning activities. We are currently running an unrestricted competition for a scheduling system to see how much the market has moved (in capabilities) and if our existing vendor is providing the most cost-effective solution.

COLLABORATIVE RESOURCE WORKGROUP (CRWG) OVERVIEW

The Collaborative Resource Workgroup (CRWG), made up of participants from the Air Traffic Organization (ATO), worked collaboratively with the National Air Traffic Controllers Association (NATCA) to conduct facility by facility surveys to support validation of or changes to facility CRWG certified professional controller (CPC) staffing targets. These CRWG targets were first rolled out in 2015 as a means to help ATO make distribution decisions for air traffic controllers - such as placements of ATC Academy graduates into facilities and as a key input to transfer request decision-making. This CRWG effort included further recommended changes to the controller availability factor (AF) as well. The MITRE corporation served as a third party entity and supported ATO and NATCA in the validation of the model focused on CPC staffing to meet facility operational, contractual and statutory requirements.

Late calendar year 2022, surveys were sent out to all 313 facilities for the local subject matter experts to review and identify actual positions/sectors necessary to be staffed to manage the traffic demand for each 30 minute period during the identified 90th percentile (or 37th busiest) day. They were asked to provide this input based on pre-COVID traffic levels as traffic is still recovering to pre-COVID levels in most markets. ATO and NATCA jointly conducted validation efforts of these surveys utilizing other available data such as historical position utilization data, schedule data and overtime usage data.

Concurrently, the CRWG met to identify non-operational duties and other obligations such as leave to be used for any further recommended changes to the controller availability factor. As part of this process, FAA orders, collective bargaining agreements and other reference material were relied upon in the development of the availability factor. MITRE assisted with these activities as well.

The methodology was documented throughout this process to support a transparent and repeatable process when evaluating the CRWG facility staffing targets.



Air navigation service providers “in other countries including Australia, Canada and Germany have replaced their legacy scheduling tools with sophisticated software capable of incorporating all constraints while generating efficient controller schedules.”
– National Academy of Sciences

IMPACT OF AVAILABILITY FACTOR ASSUMPTIONS ON CPC STAFFING TARGETS

Collaboration between AJT and NATCA in early 2023 resulted in the CRWG's assessment of the number of controllers required to meet on-position 'operational demands' as well as a revised availability factor to account for leave and other non-operational demands. While the overall baseline CRWG CPC target was nearly 2,300 greater than FAA's staffing standards targets, nearly all of the total difference is explained simply by the much higher availability factor (2.14) developed by CRWG than the FY 2023 revised staffing standards availability factor (1.82). This indicates that although the models may use different assumptions to arrive at the target, CRWG and the Agency's staffing standards models reasonably agree on the total amount of on-position workload as well as how many daily CPC shifts are required to cover it.

The largest driver of difference in availability factor is the treatment of 'Other Duties'. CRWG's position is that additional staffing is required for all non-operational duties regardless of when and where they are performed. The Agency's staffing standard model's position and data from the controller timekeeping system (CRU) agree that the majority of the other duties (excepting items such as offsite training, national workgroups, etc.) can and are being done by controllers during what otherwise would be 'available time' during their typical shifts. Further, some of the non-operational duties can be performed on less busy days, while others may be constrained by time available or group requirements.

The parties are in agreement on staffing and hiring levels for the next four years, and are continuing to collaborate to better understand differences in how the availability factor is applied and calculated and to determine additional adjustments needed to the staffing standards availability factor. In the interim, the FY 2023 staffing standard availability factor of 1.82 is an incremental increase towards the FY 2023 CRWG availability factor of 2.14. Annual reviews and incremental adjustments will continue as needed.



CH. 4 Losses

In total, the FAA expects to lose over 1,300 controllers due to retirements, promotions and other losses during FY 2023. Other losses include transfers, resignations, removals, deaths, developmental attrition and academy attrition. The FAA hires and staffs facilities so that trainees, once fully certified, are prepared to take over responsibilities when senior controllers leave.

CONTROLLER LOSS SUMMARY

Figure 4.1 shows the total estimated number of controllers that will be lost, by category, over the 10-year period FY 2023 through FY 2032.

FIGURE 4.1 CONTROLLER LOSS SUMMARY

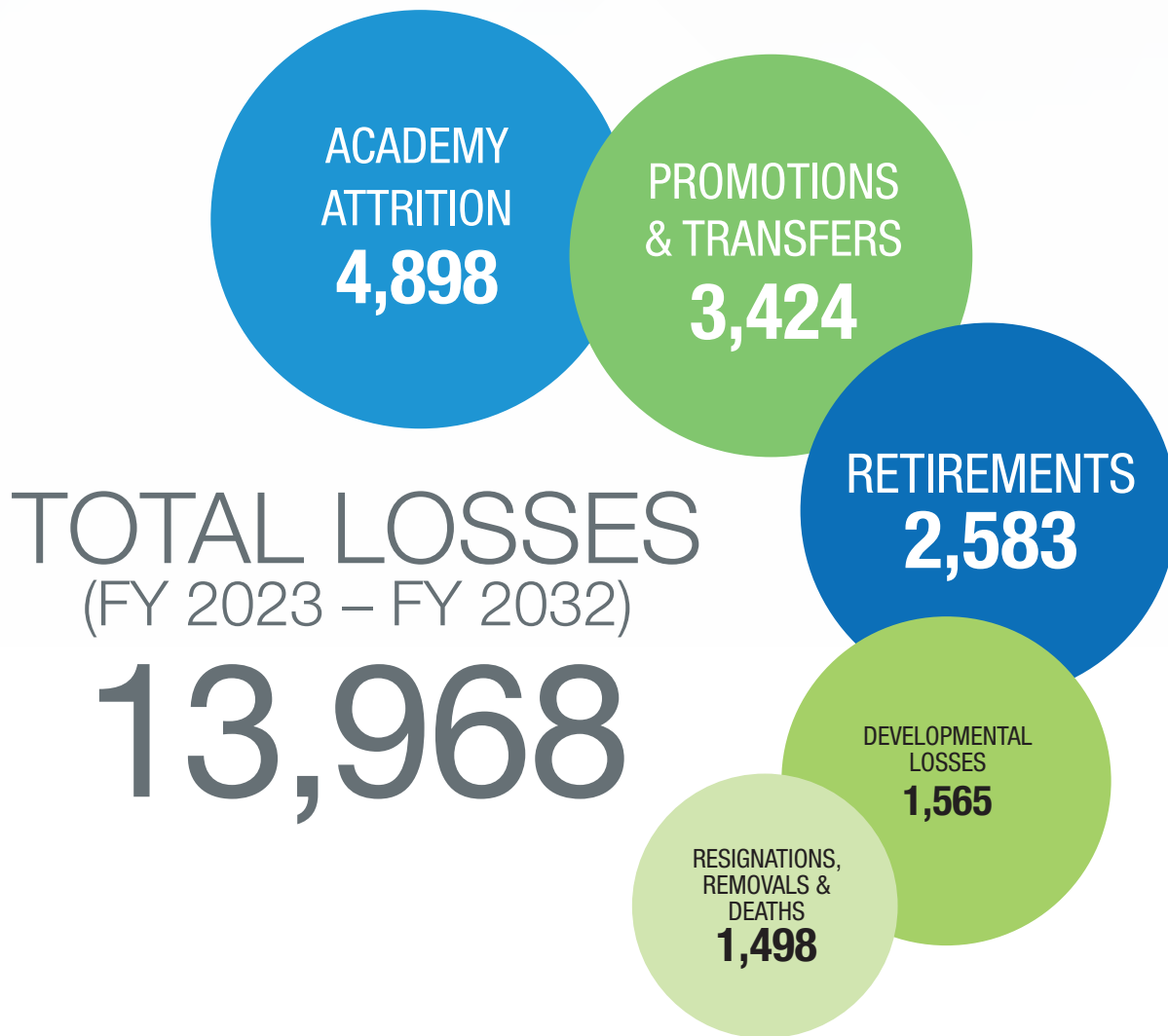
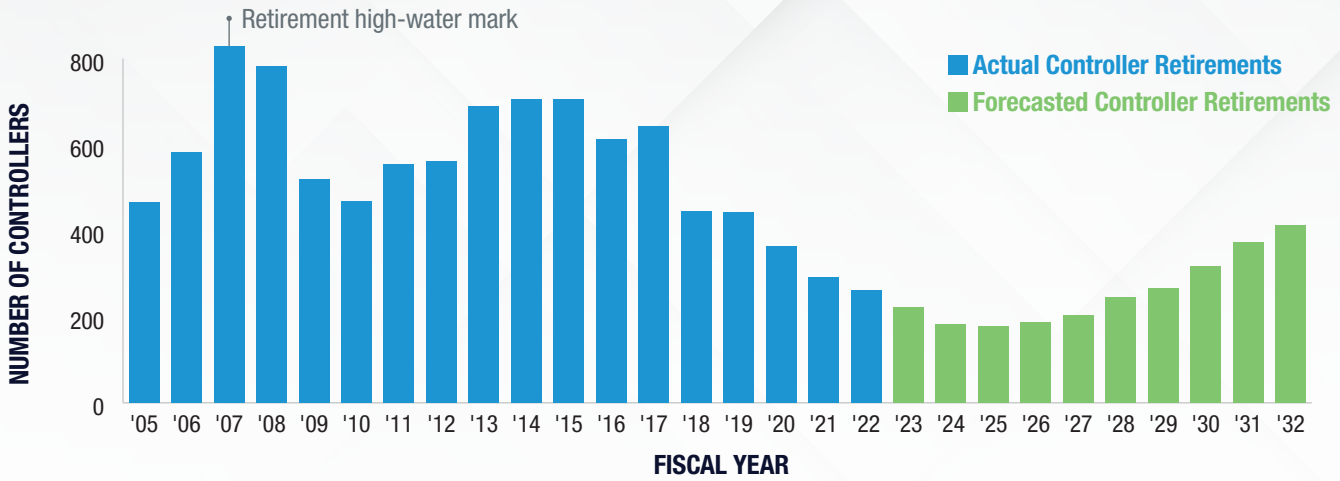


FIGURE 4.1A ACTUAL CONTROLLER RETIREMENTS



ACTUAL CONTROLLER RETIREMENTS

FY 2007 was the peak year for controller retirements from those hired in the early 1980s. The long-anticipated retirement wave has passed. Annual retirements decreased for a few years then increased during FY 2010 to FY 2015, but still below the 2007 peak, and are declining through FY 2025. In the last five years, 1,804 controllers have retired, and we expect an additional 971 controllers will retire in the next five years. FY 2022 retirements were lower than projected and future retirements are expected to fall and remain at relatively low levels over the next decade.

CUMULATIVE RETIREMENT ELIGIBILITY

The figure below shows historical and forecasted controller retirement eligibility from FY 2005 to FY 2032. Each bar shows the net number of controllers in the entire controller workforce eligible to retire for each year shown. Because controllers can spend more than one year as eligible before they retire, the same individual controllers may be counted in multiple years. The forecast shows a significant decline in the net number of controllers eligible to retire from the peak in FY 2012 to FY 2025. At the end of FY 2022, only five controllers remain from those who were hired before 1984. At the end of FY 2022, fewer than 515 controllers were eligible to retire, which is the lowest number since the first Controller Workforce Plan in 2005.

This clearly demonstrates that the controller retirement wave is over.

FIGURE 4.1B CUMULATIVE RETIREMENT ELIGIBILITY

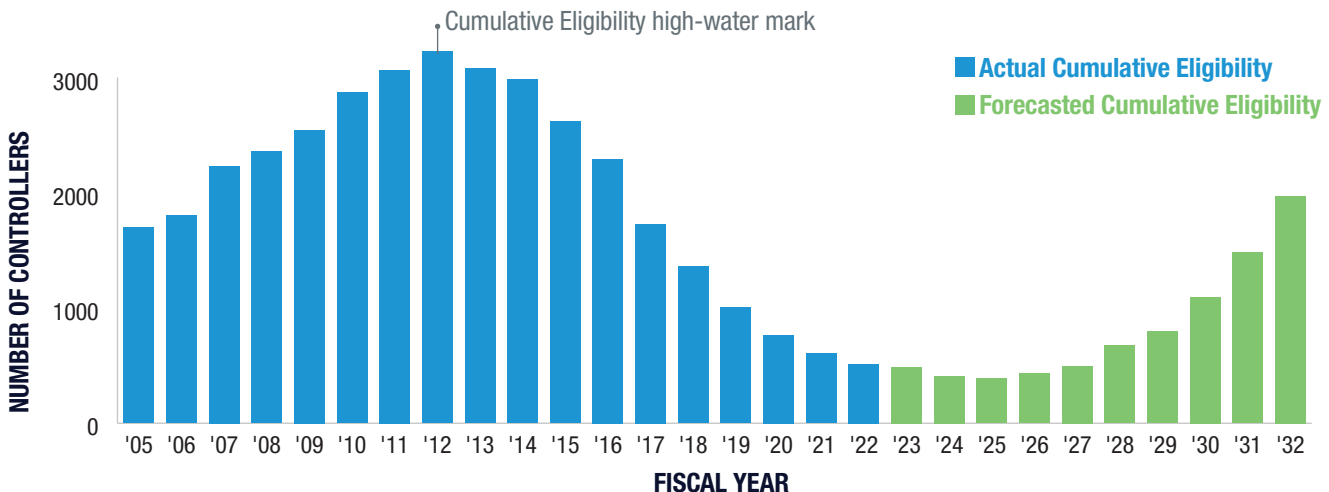
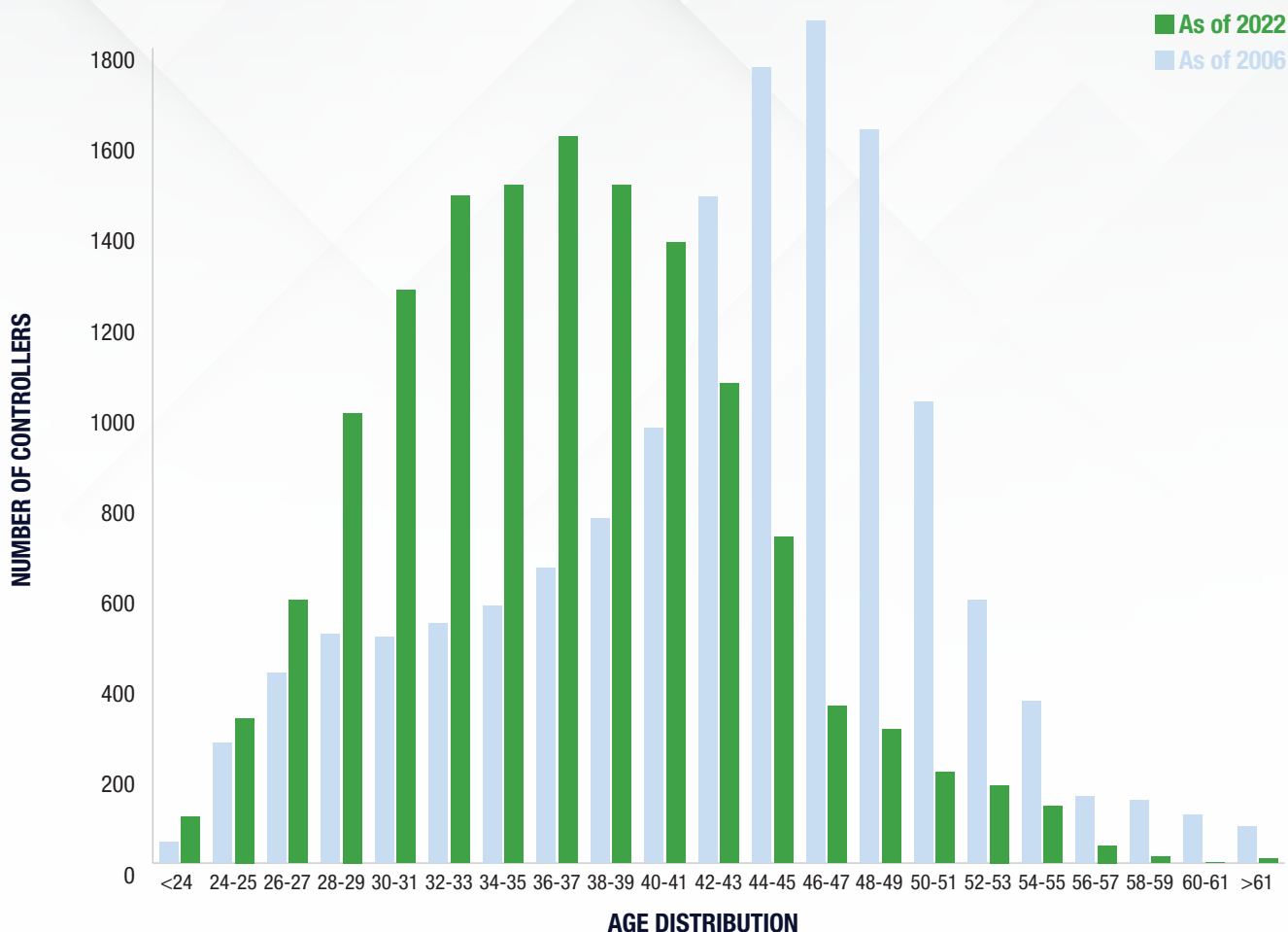


FIGURE 4.2 CONTROLLER WORKFORCE AGE DISTRIBUTION AS OF SEPTEMBER 24, 2022



CONTROLLER WORKFORCE AGE DISTRIBUTION

The FAA hired a substantial number of controllers in the years immediately following the 1981 strike. This concentrated hiring wave meant a large portion of the controller workforce would reach retirement age in roughly the same time period. In September 2006, the blue shaded age distribution peak on the right side of Figure 4.2 was almost 1,900 controllers. Today, the magnitude of that remaining peak is down to 347 controllers because the majority of the controllers hired shortly after the 1981 strike have already retired and been replaced. As Figure 4.2 shows, the current FAA controller workforce is substantially younger on average than it was in 2006. This was driven by relatively high levels of hiring within the last several years.

The FAA’s hiring plan is designed to phase in new hires as needed. Figure 4.2 shows that the majority of the FAA controller workforce has been hired in the last 10-15 years and are ages 26-43. There is a relatively small number of controllers approaching mandatory retirement at age 56 over the next few years.

The FAA’s hiring plan is designed to phase in new hires as needed.

FIGURE 4.3 RETIREMENT ELIGIBILITY



CONTROLLER RETIREMENT ELIGIBILITY

In addition to normal civil service retirement criteria, controllers can become eligible under special retirement criteria for air traffic controllers (age 50 with 20 years of “good time” service or any age with 25 years of “good time” service). “Good time” is defined as service in a covered position in Public Law 92-297. Under Public Law 92-297, air traffic controllers are usually required to retire at age 56.

After computing eligibility dates using all criteria, the FAA assigns the earliest of the dates as the eligibility date. Eligibility dates are then aggregated into classes based on the fiscal year in which eligibility occurs.

Figure 4.3 shows the number of controllers who are currently retirement-eligible as of September 24, 2022 and those projected to become retirement-eligible each fiscal year for the next 10 fiscal years. FAA projections show that an additional 193 controllers will become eligible to retire in FY 2023. The number of retirement-eligible controllers has been in decline in recent years from the peak and should continue to decline for the next few years.

The intent of advanced hiring is to ensure, we have sufficient new hires in place to replace controllers currently eligible to retire when they do retire. The FAA strives to minimize retirement, hiring and training spikes through the process of examining trends and proactively planning years in advance of expected activity.

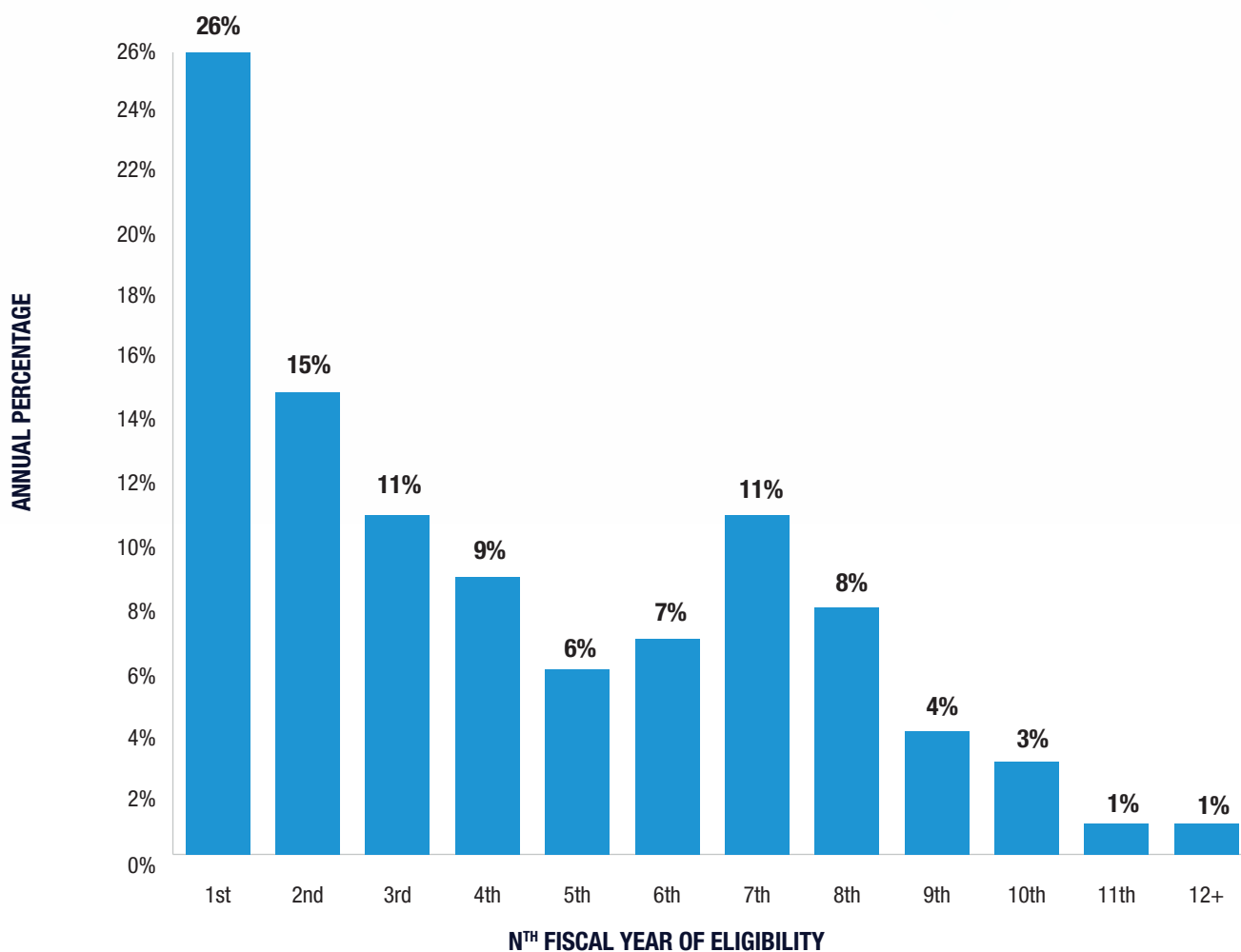
CONTROLLER RETIREMENT PATTERN

History shows that not all controllers retire when they first become eligible. Recent data shows that 26 percent of controllers who first became eligible actually retired that year. The FAA has observed that many controllers delay retirement until they get closer to the mandatory retirement age of 56. Because most controllers are retirement-eligible at the age of 50, they typically reach mandatory retirement age in their seventh year of eligibility.

These trends are seen in Figure 4.4 below, which shows fewer controllers are retiring earlier in their eligibility and are waiting until closer to their mandatory retirement age.

Despite the increased likelihood of delayed retirement, the majority of controllers still leave the controller workforce prior to reaching the mandatory age.

FIGURE 4.4 PERCENT OF CONTROLLERS RETIRING IN THE NTH FISCAL YEAR OF THEIR ELIGIBILITY



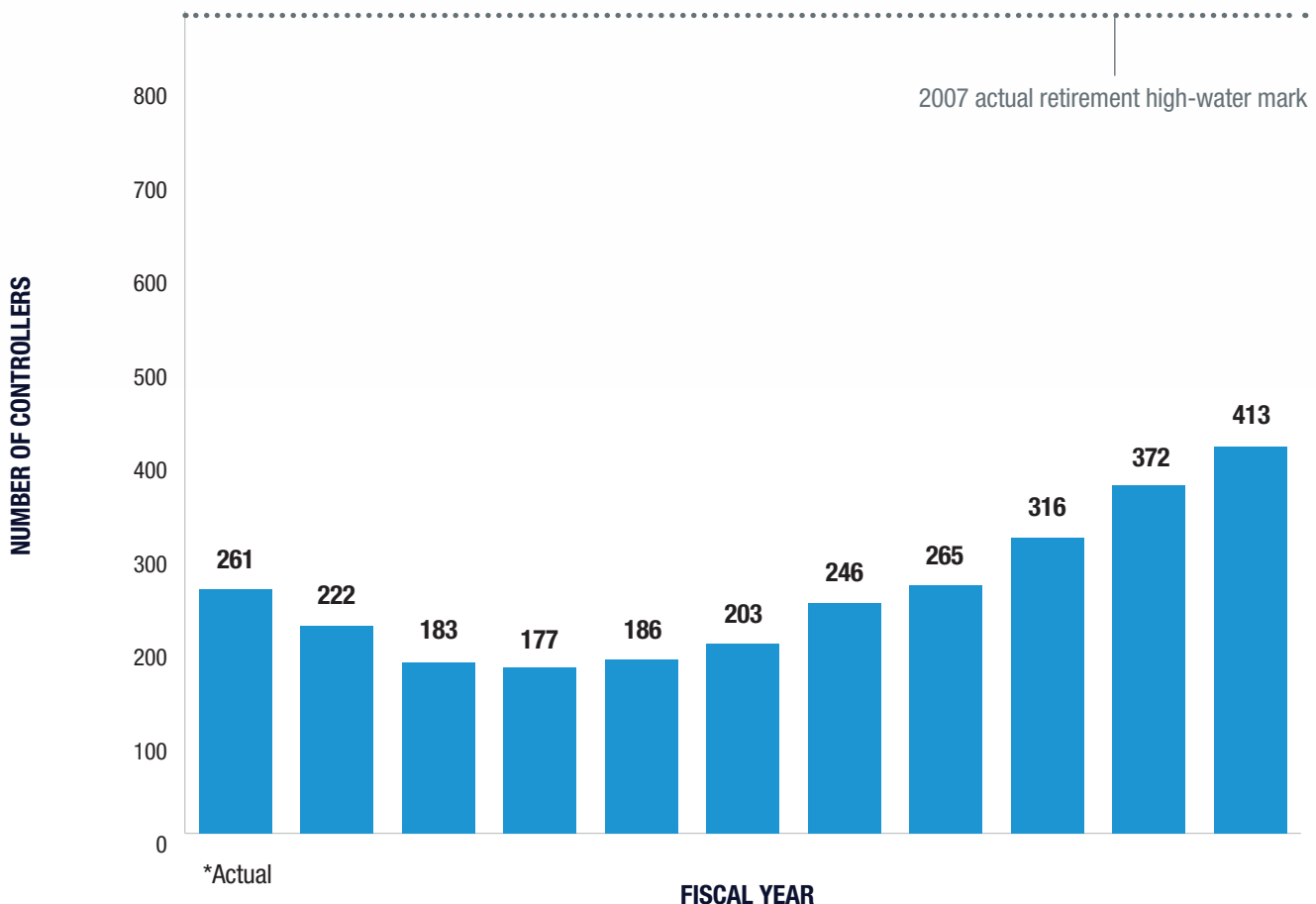
FY 2007 was the high-water mark for controller retirements.

Annual retirements are expected to continue to decline for the next several years.

CONTROLLER LOSSES DUE TO RETIREMENTS

For the current plan, the FAA incorporated FY 2020 through FY 2022 retirement data into the retirement histogram used for future retirements. As in prior years, the FAA projected future retirements by analyzing both the eligibility criteria of the workforce (Figure 4.3) and the pattern of retirement based on eligibility (Figure 4.4).

FIGURE 4.5 RETIREMENT PROJECTION



CONTROLLER LOSSES DUE TO RESIGNATIONS, REMOVALS AND DEATHS

Estimated controller losses due to resignations, removals (excluding developmental attrition) and deaths are based on historical rates and shown in Table 4.2.

TABLE 4.2 CONTROLLER LOSSES DUE TO RESIGNATIONS, REMOVALS AND DEATHS

Fiscal Year	2022 (actual)	2023	2024	2025	2026	2027	2028	2029	2031	2031	2032
Number of Controllers	173	141	145	147	148	149	151	152	154	155	156

DEVELOPMENTAL ATTRITION

Developmental attrition occurs when a controller fails to certify at a facility. They may be removed from service. The FAA averaged 91 developmental losses annually over the past five years. However, based on the increased hiring projections over the next several years, the number of developmental losses will increase proportionally. As a result, we are projecting an average of 160 annual developmental losses over the next five years.

TABLE 4.3 DEVELOPMENTAL ATTRITION

Fiscal Year	2022 (actual)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Number of Controllers	107	126	139	171	178	185	164	154	148	150	150

ACADEMY ATTRITION

Academy attrition occurs when new hires are not successful at the FAA Academy training program and leave the Agency. These estimates are based on both historical rates and projections, and are shown in Table 4.4. Based on the increased hiring projections over the next several years, the number of Academy losses will increase proportionally. The FAA will continue to monitor Academy failure rates moving forward for the impact of these changes and adjust future projections accordingly.

TABLE 4.4 ACADEMY ATTRITION

Fiscal Year	2022 (actual)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Number of Controllers	250	455	556	539	575	486	444	458	462	456	467

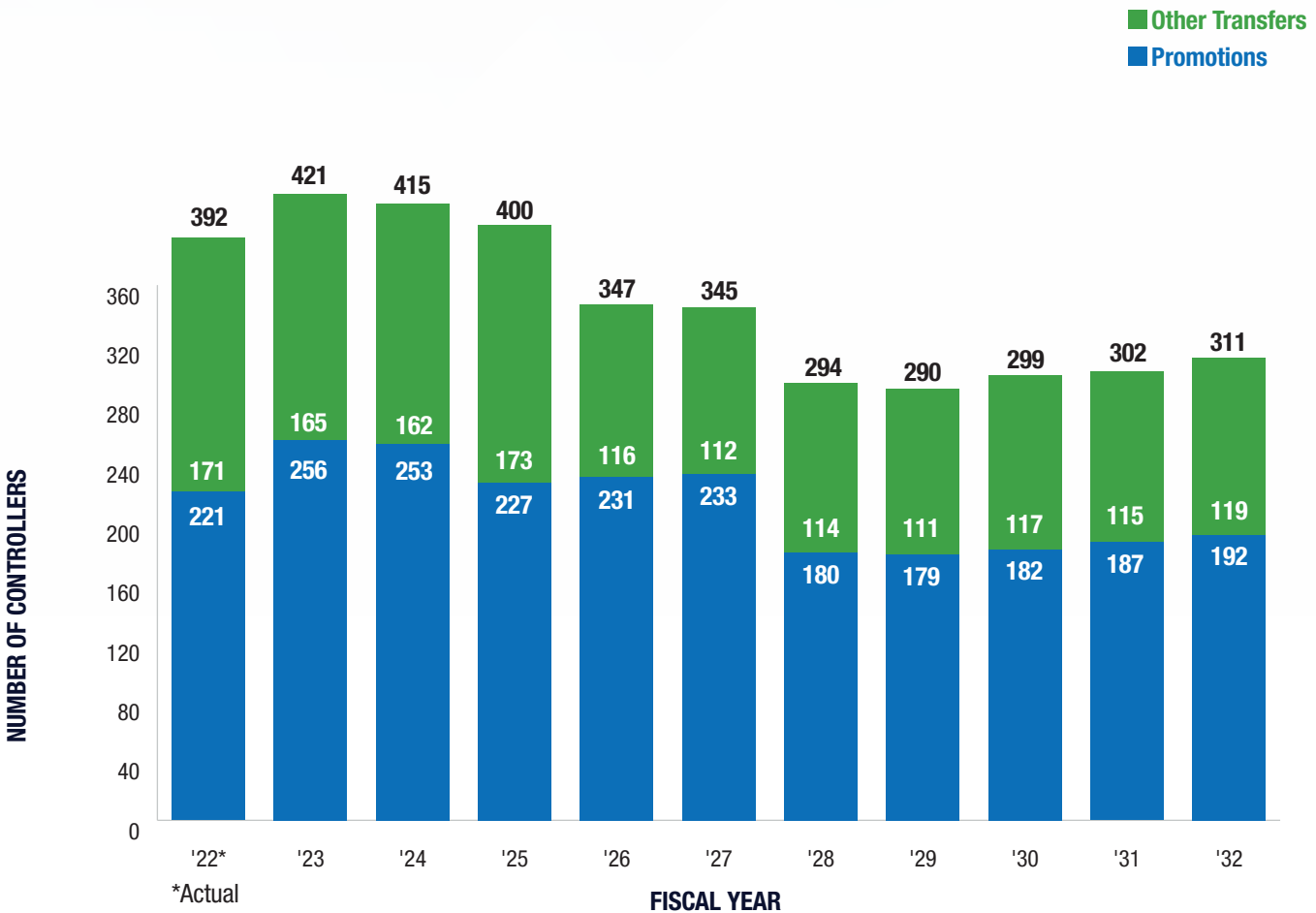
The FAA is currently evaluating developmental and Academy attrition and has an active workgroup examining DEIA issues and barriers in controller recruitment, training, promotion, and retention. Future workforce plans will reflect the group’s findings.

CONTROLLER LOSSES DUE TO PROMOTIONS AND OTHER TRANSFERS

This section presents FAA estimates of controller losses due to internal transfers to other positions (staff support specialists, traffic management coordinators, etc.) and controller losses due to promotions to operations supervisor (OS) or other air traffic management/supervisory positions.

Over the past five years, we've observed an average of 211 net promotions each year from CPC to supervisory positions. The majority of these promotions replace retiring supervisors. As a category, Other/Transfers/Promotions was abnormally high in 2021 and 2022 due to higher than expected attrition from the air traffic management workforce. In addition, ATO plans to increase the air traffic management and support workforce (including Operations Supervisors, Staff Support Specialists, and Traffic Management Coordinators) by approximately 550 positions over the next 3-5 years. This increase is primarily designed to offset the decline in these staffing levels over the past 10 years. These positions will be filled from the current controller ranks and, in turn, will require an increase in controller hiring to ensure staffing sufficiency.

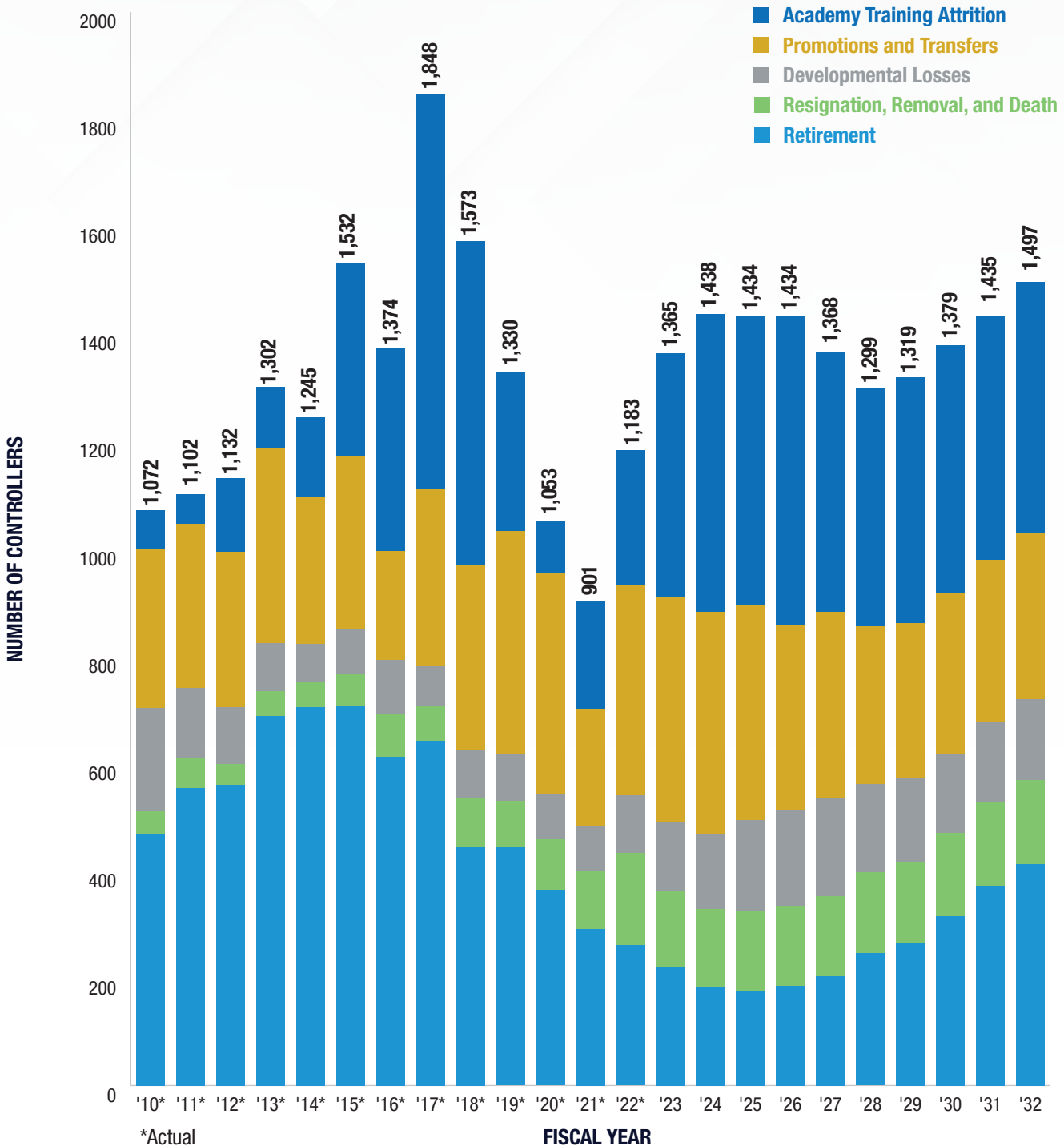
FIGURE 4.6 CONTROLLER LOSSES DUE TO PROMOTIONS AND OTHER TRANSFERS



TOTAL CONTROLLER LOSSES

The FAA projects a total loss of 13,968 controllers over the next 10 years. Should losses outpace projections for FY 2023, the FAA will hire additional controllers as needed to ensure sufficient controllers are available in the future to handle the anticipated workload.

FIGURE 4.7 TOTAL CONTROLLER LOSSES





Ch.5 Hiring Plan



The FAA safely operates and maintains the NAS through the combined expertise of its people, the support of technology and the application of standardized procedures. Every day tens of thousands of aircraft are guided safely and expeditiously through the NAS to their destinations. FAA leaders understand that to continue this record of excellence requires maximizing the talent from all segments of society. The FAA recognizes the value of allowing contributions from many communities, identities, races, ethnicities, backgrounds, abilities, cultures, and beliefs. This can only be achieved in a workplace that recognizes, appreciates, and uses the talents and skills of employees of all backgrounds.

Deploying a well-trained and well-staffed air traffic control workforce plays an essential role in fulfilling this responsibility. The FAA's current hiring plan has been designed to phase in new hires as needed. To staff the right number of people in the right places at the right time, the FAA develops annual hiring plans that are responsive to changes in traffic and in the controller workforce.

The FAA hires new developmental controllers in advance of its staffing needs to ensure ample training time and to offset future attrition, including retirements, promotions, etc. Proper execution of the hiring plan, while flexibly adapting to the dynamic nature of traffic and attrition, is critical to the plan's success. If the new developmentals are not placed correctly or if CPCs are not transferred from other facilities, shortages could occur at individual facilities that may affect schedules, increase overtime usage or require the use of more developmentals on position. Staffing is and will continue to be monitored at all facilities throughout the year. The FAA will continue to modify the hiring plan at the facility level should adjustments become necessary due to changes in traffic volume, retirements or other attrition.

The FAA continues to be able to attract large numbers of qualified controller candidates. Through a revised two-track controller hiring process, and management of staffing distribution, the FAA will attract and recruit a sufficient number of applicants to achieve this hiring plan.

Ch. 5 Hiring Plan



CONTROLLER HIRING PROFILE

The controller hiring profile is shown in Figure 5.1. The FAA hired 1026 controllers compared to the 1020 planned controller hires for FY 2022.

Although we met our hiring goal in FY 2020, FY 2021 and FY 2022, we are experiencing the continued impact of the COVID-19 pandemic. Hiring and planning continues with the increased goal of 1500 new hires for FY 2023 and an average hiring goal of over 1,500 controllers for several years. The number of controllers projected to be hired through FY 2032 is 15,700.

FIGURE 5.1 CONTROLLER HIRING PROFILE

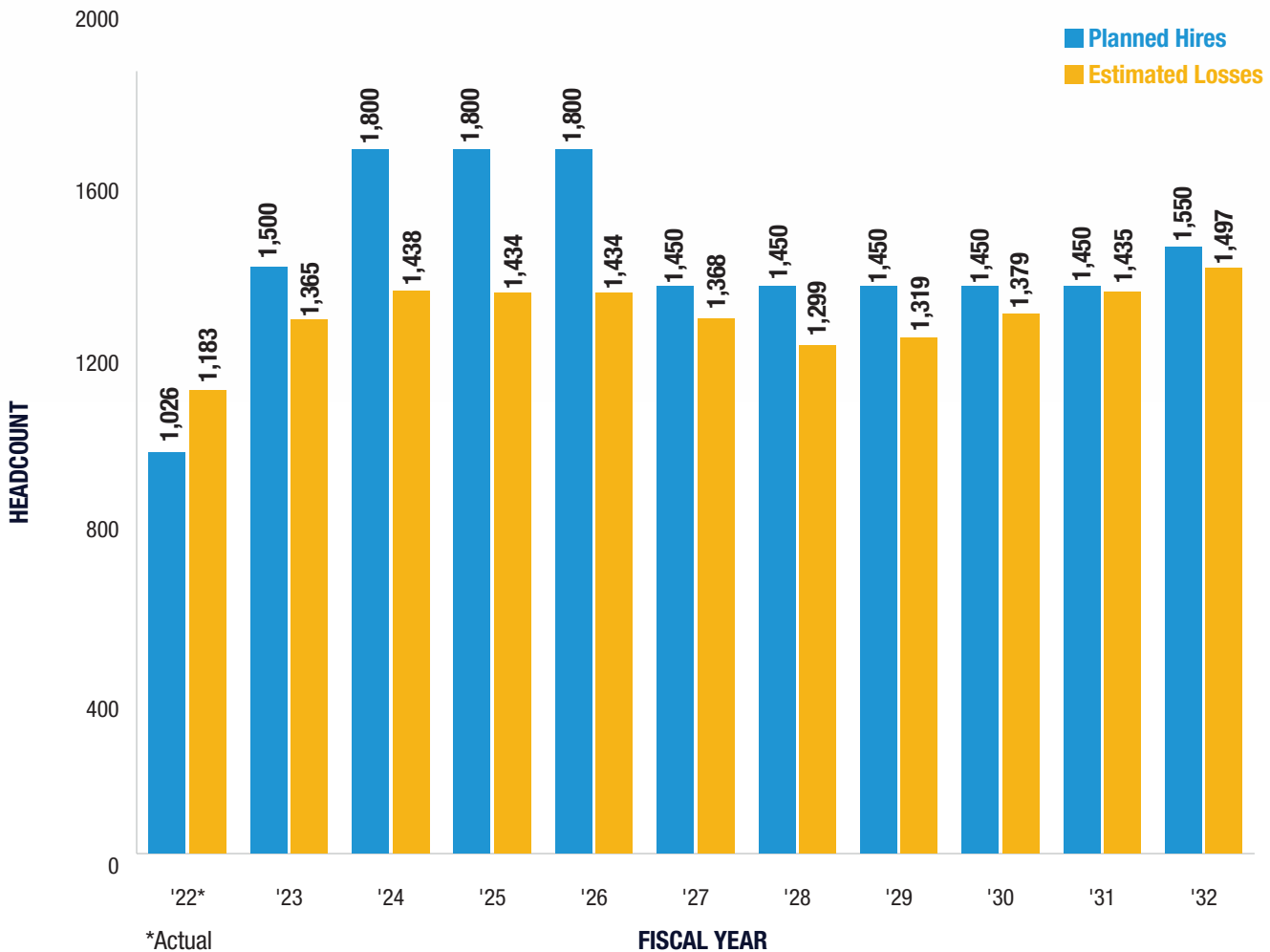
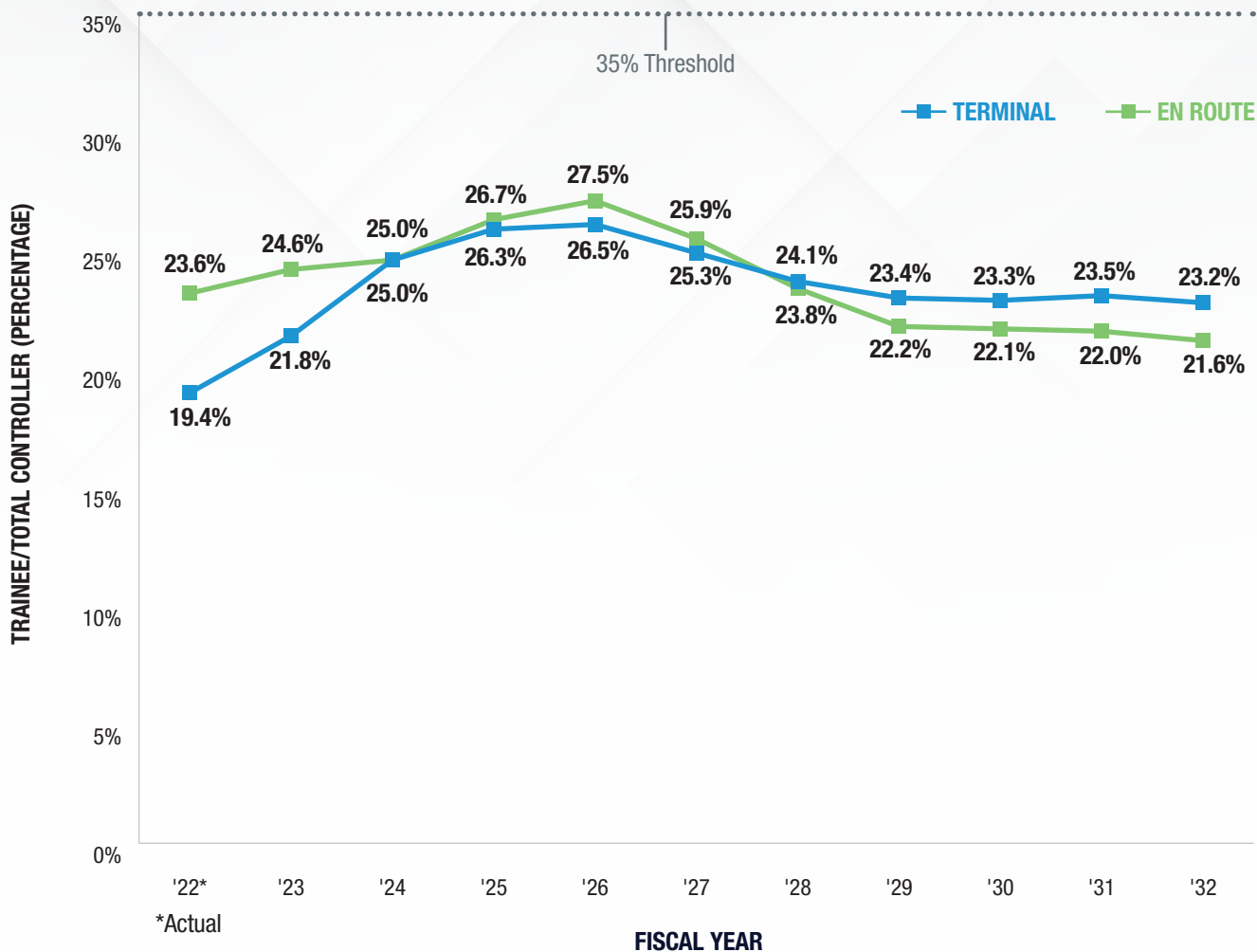


FIGURE 5.2 TRAINEE-TO-TOTAL-CONTROLLER PERCENTAGE



NOTE: The forecast assumes future CPC-IT levels are consistent with FY 2022 levels.

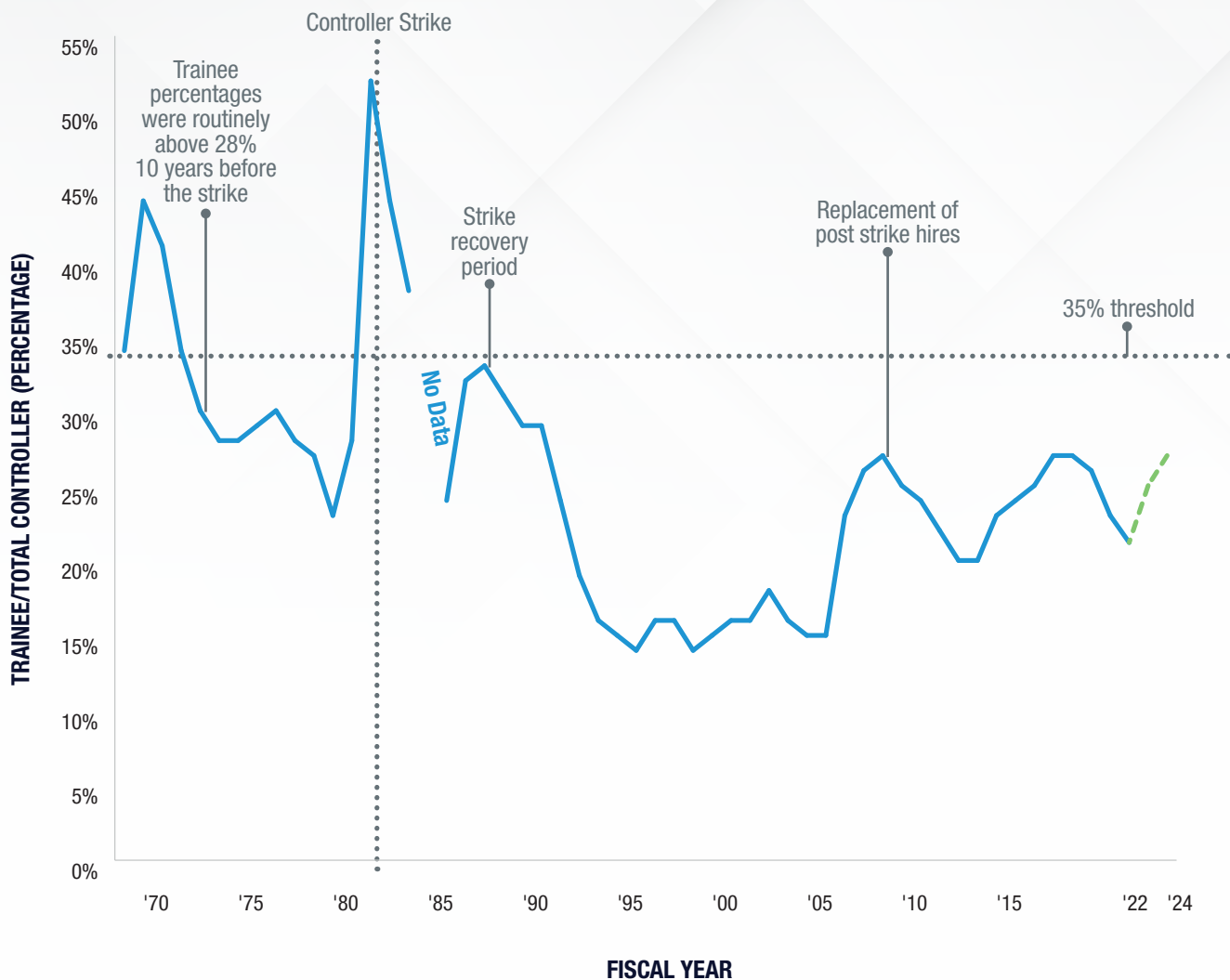
TRAINEE-TO-TOTAL-CONTROLLER PERCENTAGE

The percentage shown is calculated as the sum of CPC-ITs plus developmentals divided by all controllers. While the FAA strives to keep the trainee percentage below 35 percent for both Terminal and En Route controllers, it is not the only metric used by the FAA to measure trainee progress.

Figure 5.2 shows the projected trainee-to-total-controller percentages for En Route and Terminal by year through 2032. The trainee ratios for both Terminal and En Route facilities are expected to increase slightly over the next several years, corresponding to the projected increase in hiring from 2023 through 2026. Trainee ratios are then expected to level off, with Terminal rates slightly above En Route rates due to more transfer activity from lower level to higher level Terminal facilities, increasing the number of CPC-ITs.

Note the trainee percentage for both En Route and Terminal is still well below 35 percent.

FIGURE 5.3 HISTORICAL TRAINEE PERCENTAGE



Before the 1981 strike, the FAA experienced trainee percentages ranging from 23 percent to 44 percent. Following the strike, through the end of the hiring wave in 1992, the trainee percentage ranged from 24 percent to 52 percent. When the post-strike hires became fully certified by the end of the decade, the trainee percentage declined.

As the new controllers hired en masse in the early 1980s achieved full certification, the subsequent need for new hires dropped significantly from 1993 to 2006. This caused trainee percentages to reach unusually low levels. The FAA's current hiring plans return trainee percentages to their historical averages.

By phasing in new hires as needed, the FAA will level out the significant training spikes and troughs experienced over the last 40 years. Figure 5.3 shows historical trainee percentages from 1969 to the present.

The FAA uses metrics (e.g., 35 percent trainee to total controllers) to manage the flow of trainees while accomplishing daily operations. Facilities meter training to coincide with a number of dynamic factors, including technology upgrades, new runway construction and recurrent proficiency training for existing CPCs. Facility training is enabled by many factors. Examples include the use of contract instructors, access to simulators, scheduled overtime, and the seasonality and complexity of operations.

In itself, the actual number of trainees does not indicate the progress of each individual in the training program or the additional utility they provide that can help to supplement other on-the-job training instruction and support operations. A key facility measure of training performance is the measurement of trainee completion time against the goals. The goal ranges from one-and-a-half years at our lower-level Terminal facilities to three years at our En Route facilities.

The FAA is striving to meet these goals by improving training and scheduling processes through increased use of simulators and better tracking of controller training using the FAA's national training database.

The FAA will continue to closely monitor facilities to make sure trainees are progressing through each stage of training while also maintaining the safe and efficient operation of the NAS.





Ch.6 Hiring Process

CONTROLLER HIRING SOURCES

The FAA has two primary categories of controller hiring sources.

- No prior air traffic control specialist (ATCS) experience: These individuals are not required to have prior air traffic control experience and may apply for vacancies announced by the FAA.
- Prior ATCS experience: These individuals have at least 52 weeks of certified air traffic control experience and may apply for vacancies announced by the FAA.

Examples of other FAA controller hiring sources are the Aviation Development Program (ADP) and Retired Military Controller (RMC) Program. The ADP was developed to increase the hiring and retention of people with targeted disabilities (PWTB) for the ATC Occupation. The RMC program is targeted for certified military controllers who are either on terminal (unused) leave pending retirement or who have retired from active duty within the last 5 years.

RECRUITMENT

The FAA continues to attract and recruit high-quality applicants into the controller workforce to meet staffing requirements.

In FY 2014, the FAA instituted an interim change to the air traffic control hiring process. The changes allowed the FAA to more efficiently compare applicants across previous hiring sources to select those candidates most likely to succeed as air traffic control specialists. The new approach included: (1) single vacancy announcement for Collegiate Training Initiative (CTI) and certain veterans and general public applicants; (2) a single set of minimum qualifications/eligibility requirements; (3) a multi-hurdle selection process with increased efficiency; and (4) elimination of the Centralized Selection Panel process and interview.

In January 2015, the FAA modified the interim changes by establishing a two-track announcement process for hiring air traffic control specialists. The first track targeted candidates without operational air traffic control experience.

The second track included an announcement targeting applicants who have at least 52 weeks of certified air traffic control experience in either civilian or military air traffic control facilities. In December 2015, the FAA launched an extended announcement for applicants with previous experience.

In FY 2016, Public Law 114-190 – FAA Extension, Safety and Security Act (FESSA) of 2016 – was enacted. The law established two hiring tracks totaling three distinct hiring pools. It also included requirements to balance the pools and a requirement that allowed no more than a 10 percent variance between pools. The tracks are: Track 1, Pool 1 - CTI and Veterans, Track 1, Pool 2 - General Public, and Track 2 - Previous Experience.

Public Law 116-92, the National Defense Authorization Act of 2020 (NDAA) replaced the Track 1 pool balancing requirements (Pool 1 - CTI graduates/preference eligible veterans & Pool 2 - general public applicants) with a pre-requisite to prioritize Pool 1 applicants, giving preferential consideration by qualification category (Best Qualified, Well Qualified, and Qualified), which is determined by their Air Traffic Skills Assessment result. The NDAA also eliminated the existing 10 percent variance requirement between pools from FESSA. These actions give the FAA better access to the most qualified applicants.

After eligible applicants have completed the required pre-employment Air Traffic Skills Assessment (AT-SA), all candidates who received passing AT-SA results are then referred to the Air Traffic Organization (ATO) for further employment consideration. Once the ATO has completed their review and subsequently made their tentative selections, these are returned to Aviation Careers, Human Resource Management for processing. Aviation Careers notifies selectees and upon acceptance of the tentative offer, they will then be required to attain medical and security clearances. Upon successful completion of clearances, the applicants will then be scheduled for FAA Air Traffic Academy training as FAA needs are identified.

Consistent with the mission statement published in DOT's DEIA Strategic Plan to "Ensure the sustainable integration of DEIA principles and values into all workforce-related programs and activities", the FAA's companion document bolsters these values in its Diversity and Inclusion Strategic Plan 2021-2025. The FAA is fully committed to DEIA principles, seeks to create and maintain a diverse and inclusive workforce, and is focused on increasing its outreach and recruitment to underrepresented communities. The FAA is committed to creating and maintaining a diverse and inclusive workforce and is focused on increasing its outreach and recruitment to underrepresented communities. These efforts include Persons with Disabilities (PWD) and Persons with Targeted Disabilities (PWTD), the Aviation Development Program (ADP), and out-reach to Minority Serving Institutions (MSIs), Hispanic Serving Institutions (HSI) and Historically Black Colleges and Universities (HBCUs). These outreach and recruitment actions will ensure the principles of diversity, equity, inclusion and accessibility apply to its workforce and give the FAA access to more applicants.

In FY 2022, the FAA's Office of Communication introduced a media campaign called "BE ATC." The campaign's goal was to encourage women, minorities, and individuals from underrepresented communities to apply for air traffic control positions. The campaign featured current air traffic controllers and FAA leaders sharing their stories in media interviews and on various social media platforms.

Almost 58,000 applicants responded to FAA's June 2022 vacancy announcement. In FY 2023, the FAA will continue to recruit and hire air traffic control specialists to meet staffing requirements through the use of the two-track announcement process.

The FAA also managed internal outreach to Agency stakeholders including the Employee Associations, Colleges, Universities and CTI Schools, Disability and Veteran audiences, and Congressional offices. Additionally, the FAA is committed to an air traffic controller training environment that supports DEIA principles. The agency's Office of Civil Rights will ensure continued development and delivery of training that supports and reinforces DEIA principles to employees and managers. The FAA has an active workgroup examining DEIA issues and barriers in controller recruitment, training, promotion, and retention. Future workforce plans will reflect the group's findings.



Ch.7 Training

The FAA is still dealing with the impacts from the COVID-19 pandemic on its controller training program. The FAA develops the national training curriculum and learning tools that increase the knowledge of its technical workforce who serve the world's largest, most efficient, and safest NAS – today and for the future.

The cohort of air traffic professionals we hired in FY 2022 are essential in our transition to the Next Generation Air Transportation System. Our controllers are increasingly using real-time information to direct aircraft more efficiently while reducing delays. Capabilities such as Performance Based Navigation and Data Communications increase controller productivity while reducing communication errors. They must also, in coming years, effectively incorporate new entrants such as Unmanned Aircraft Systems (UAS) and commercial space launches into routine operations.

We are meeting the challenge of training both new and experienced controllers by streamlining the training process, refreshing course content, and modernizing our technologies used for learning. The training program, directed by FAA Order 3120.4, Air Traffic Technical Training, is reviewed annually to ensure its technical accuracy. We regularly review performance metrics and work with research centers to identify areas for improvement and innovation to the training program.

IMPACTS FROM THE COVID-19 PANDEMIC

To address the impact of the pandemic on the throughput of classes, the FAA has evaluated and converted several high demand courses. The initial FAA Academy course, Air Traffic Basics, was converted to a 100% virtual format using a combination of web-based lessons and instructor-facilitated individual and class activities. Initial qualification courses for new hires restarted at the FAA Academy in July of 2020 at a reduced capacity. For FY 2023, the schedule has returned to full capacity.

A contingency plan for controllers in the field in certification training, both initial and CPC, was implemented to mitigate skill decay; trainees are using the mobile learning platform tools to engage in online training activities.

Several instructor-led, specialized courses were converted to a virtual delivery format. Previously, a traveling instructor crew was deployed to several remote locations to conduct Terminal Basic Radar Training. This response reduced risks of exposure to COVID-19 to FAA Academy students and controllers in the field.

During FY 2021 and FY 2022, 1,070 newly hired air traffic controllers used FAA provided iPads to take their Air Traffic Basics course from home.

THE TRAINING PROCESS

New hires with no previous air traffic control experience begin their federal career training at the FAA Academy, where they learn foundational aviation knowledge through classroom lectures, team exercises and computer-based instruction, and practice basic air traffic control skills using low-, medium- and high-fidelity simulation devices.



The FAA Academy assists in delivering the foundation for employee development by teaching common, fundamental air traffic control principles and procedures that are used at facilities throughout the country. After successfully completing training at the FAA Academy, developmental controllers are assigned to a field location, where they enter additional, site-specific qualification training and hone their technical abilities in the operational environment. This phase of training begins in the classroom, where students learn facility-specific equipment, rules and procedures. After students master initial learning objectives, the instruction transitions to simulators where learners can apply their knowledge and improve their skills in a hands-on, repetitive and safe environment.

Finally, employees enter the on-the-job training phase working the control position, where their performance is carefully monitored by certified professional controllers who help trainees develop their techniques in a progressively more difficult live-traffic environment.

New hires with previous air traffic experience are selected directly for a field facility and usually begin their federal service in an accelerated training program customized for their prior aviation experience. They are able to bypass certain phases of training, but they are required to meet the same certification standards for each control position as new hires with no previous experience.



The goal of all new employees is to become a certified professional controller, which is when they are finally considered to be at the full-performance level. Once developmental controllers are certified on control positions, they often work independently in those positions under the direction of a supervisor to gain experience and to supplement staffing.

The FAA's recurrent training program is administered every six months as a combination of classroom and computer-based instruction for all operational personnel. It delivers evidence-based topics derived from a number of data sources. As contrasted with annually required refresher training on static topics, recurrent training delivers timely and relevant training based on safety trends and lessons learned from our analysis. Collaboratively developed and delivered to the controller and supervisory workforce, recurrent training ensures that the operational workforce is aware and prepared to mitigate the day-to-day risks associated with controlling traffic in the NAS.

DESIGNING AND DELIVERING EFFECTIVE TRAINING

Experienced instructors, certified professional controllers and contractors provide both classroom and simulation training at the FAA Academy and at many field locations. The FAA ensures everyone who instructs developmental controllers – whether they are federal employees or contractors – has the background and skills needed to train new employees. The FAA utilizes a process for the design, development, delivery and maintenance of its certification and specialized air traffic training courses. The Air Traffic Basics, En Route and Terminal certification training courses are designed to train a younger, diverse and technologically savvy workforce. Advanced technology, modern learning theory, human factors concepts, and professionalism skills are incorporated into our courses. Managers and supervisors receive training on new training approaches. Throughout each phase of the controllers' career, training is available to ensure they have the right skills at the right time.

VIRTUAL TRAINING TECHNOLOGIES

The FAA operates the high-fidelity Tower Simulator System (TSS). The TSS is a complete training solution that provides an interactive, realistic environment for controller training. There are 57 fixed simulators installed at major airports and 50 mobile systems that are deployed to smaller airports with training needs. The TSS is a valuable tool because it allows a controller to practice their decision-making skills in a controlled environment. It also allows the controller to practice emergency procedures and receive immediate feedback of performance. Because controllers practice their safety skills in a simulator, they will be fully prepared for real life emergencies.

The TSS has proven a wise investment. It has reduced the time-to-certification by 27% and increased safety NAS wide. Simulator technology continues to improve, and we plan to continue to integrate it into our training.

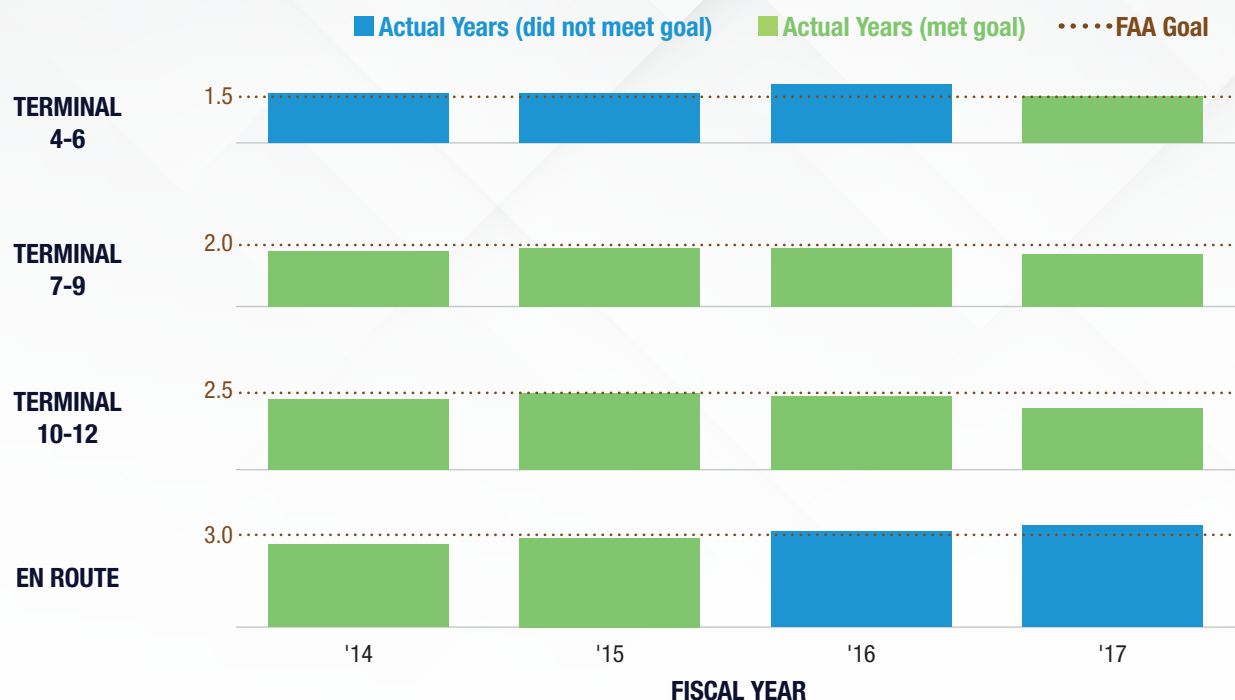
The TSS has also proven valuable in helping controllers mitigate risks to the NAS. In April 2021, Dallas Love Field Airport (DAL) closed RWY 13R/31L to rebuild the runway and associated connector taxiways. Due to the longevity of the parallel runway closure (12 months), the Air Traffic Manager (ATM) understood the operational risks that may have taken place. To meet the challenge, the manager requested comprehensive simulator training on the new runway and taxiway layout. The TSS Program was able to meet these unique requests which enabled ATCs to train on runway occupancy, spacing, and sequencing requirements in a manner that is reflective of the new configurations.

TIME TO CERTIFICATION

In recent years, the FAA has been meeting its overall goals for time to certification and number of controllers certified. Implementation of foundational NextGen platforms, such as ERAM and TAMR, and new training requirements are factors that affect overall time to CPC. Depending on the type of facility, facility level (complexity) and the number of candidates to certify, controllers are expected to complete certification in one-and-a-half to three years. However, impacts from the COVID-19 pandemic on controller training are starting to be reflected in increases in the time to certification in the FY18 hiring class, which was still in training when the COVID-19 pandemic began.

Over 60 percent of those who began training in FY 2014 through FY 2017 successfully completed training at their first facility or a subsequent facility.

TABLE 7.1 YEARS TO CERTIFY (FIRST ASSIGNED FACILITY ONLY)



Completion means that employees achieved CPC status. The remaining members of the hiring classes (40 percent) have been removed from the FAA, resigned or are still in training. Developmental controllers who fail to certify at a facility may be removed from service or reassigned to a less complex facility in accordance with FAA policies and directives.

Table 7.1 shows the FAA’s training targets and average training completion time by facility type for those who began training in FY 2014 through FY 2017. Only those who achieved CPC status at their first facility assignment are included in the average training completion times displayed because incorporation of training times at additional facilities can skew the average. Training data for hiring classes after FY 2017 are not reported here because greater than 10 percent of the students are still in active phases of training, resulting in continuously changing metrics as those students certify or fail. Because of impacts from the COVID-19 pandemic, approximately 17 percent of the FY 2018 hiring class and 35 percent of the FY 2019 hiring class is still actively in training and may not meet the training target times shown above.

INVESTING FOR THE FUTURE

As the FAA transitions to NextGen, the key to providing safe, reliable and efficient air traffic services remains the same: highly skilled, trained and certified professionals. The FAA must maintain curricula to keep pace with the evolving NAS, modernize how it trains employees, incorporate new techniques and technologies for learning, and improve data collection and sharing. Training professionals are part of an FAA team that evaluates how NextGen will change the air traffic work environment and what competencies will be required for the future workforce. The FAA is incorporating what it learns from this evolving and ongoing process into training programs as new systems are implemented. Outcomes-based training aligns NextGen functionality with job tasks so the FAA can make predictions on how training programs will need to change as NextGen evolves.

Ch.8 Funding Status

In addition to direct training costs, the FAA will incur salary and other costs for developmental controllers before they certify. The average compensation cost of a developmental controller in FY 2023 is projected to be \$137,805 including salary and benefits.

Figure 8.1 depicts expected annual compensation costs of developmentals, as well as the expected number of developmentals by year through 2032. As training takes one-and-a-half to three years, the chart depicts a rolling total of hires and costs from the current and previous years.

FIGURE 8.1 ESTIMATED COST OF DEVELOPMENTALS BEFORE CERTIFICATION

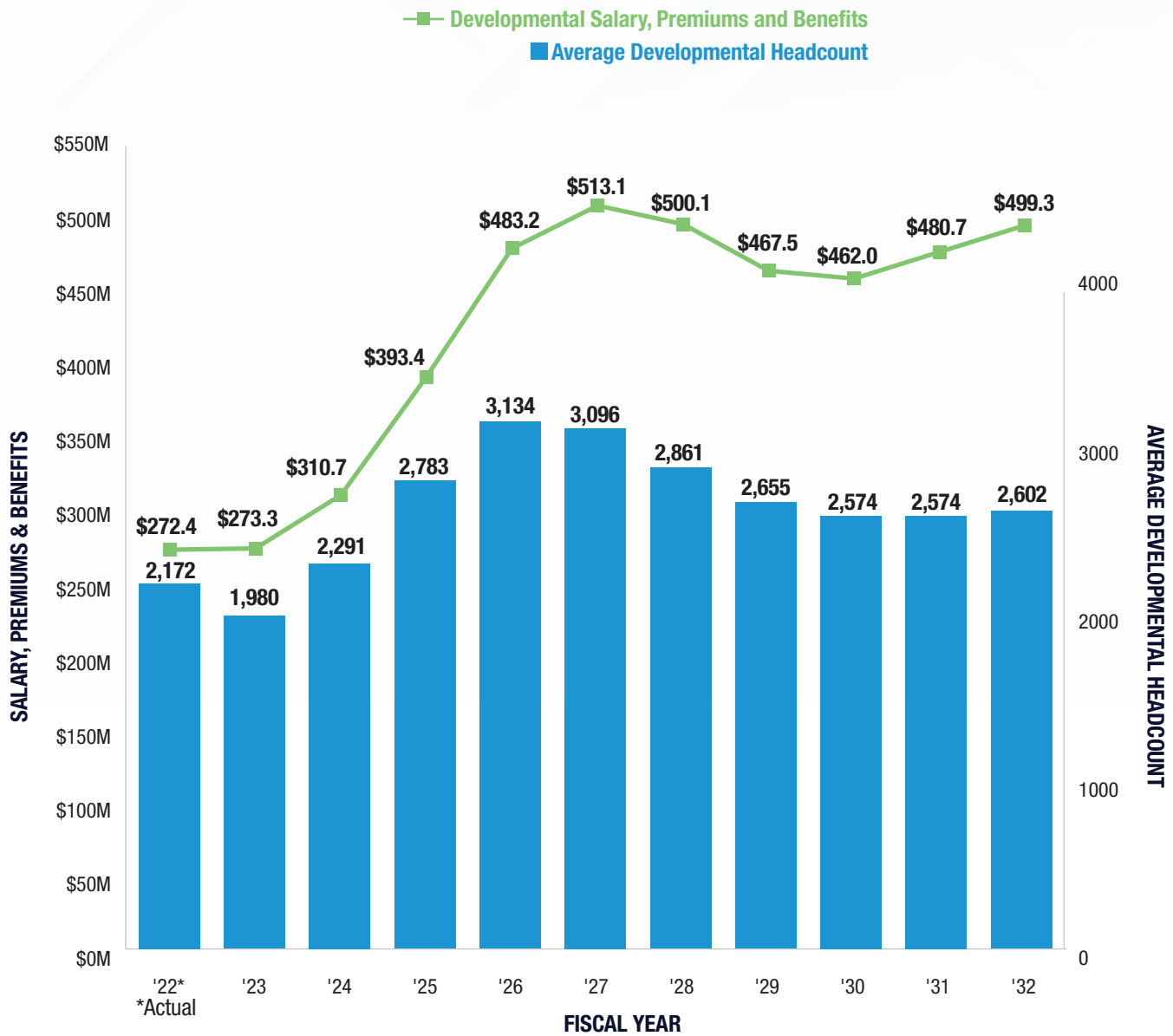
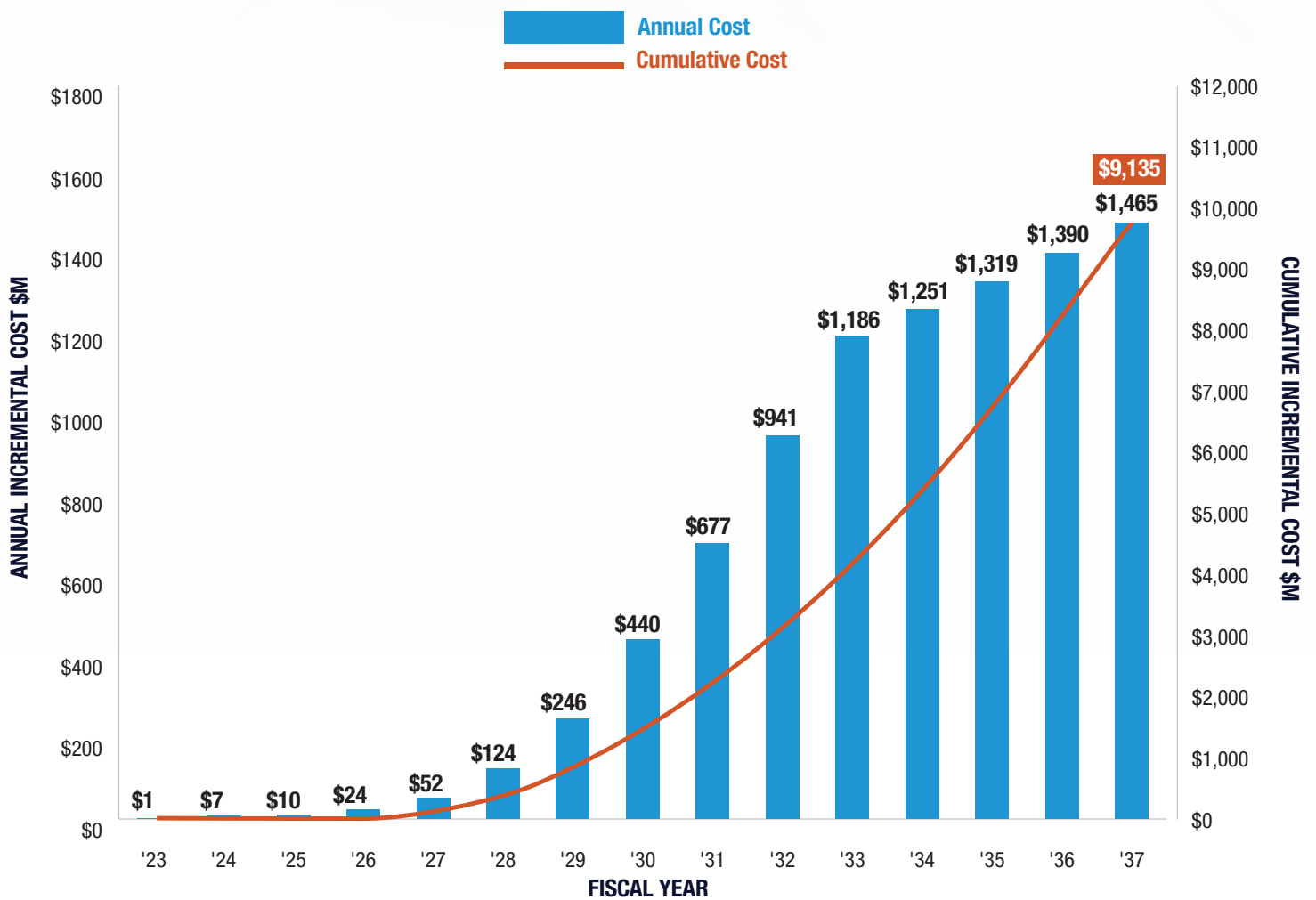


Figure 8.2 below shows the results of modeling the incremental 15 year cost of staffing to the CRWG targets versus the staffing standards. If we assume that the CRWG figures are CPC targets, then, the total estimated incremental cost is \$9.1 billion. This estimate reflects the increase in direct labor costs due to higher staffing that would be required under the proposed CRWG targets. In the near term, the costs are negligible as the hiring plans have been fixed for FY 2023 (1,500) and FY 2024-FY26 (1,800). However, the out year costs grow rapidly, as the CRWG targets would require 2,300 additional CPCs (plus an allowance for watch supervisors), as well as additional trainees in the pipeline and an increase in the management/supervisory staff. There would also likely be additional non-labor costs (not yet quantified) related to training and infrastructure that would result from staffing to the higher CRWG targets.

FIGURE 8.2 POTENTIAL ESTIMATED CRWG COST IMPACT - \$M



Appendix

FACILITY STAFFING TARGETS

The Appendix below presents controller staffing standards and CRWG targets, by facility, for En Route and Terminal air traffic control facilities.

While most of the work is accomplished by CPCs, work is also being performed in facilities by CPC-IT and position-qualified developmental controllers who are proficient, or checked out, in specific sectors or positions and handle work independently. While staffing positions with developmental controllers provides experience on the position they are certified on, when they are relied upon for staffing positions regularly there is a delay in training and the developmental becoming fully certified.

A facility's total staffing levels may vary from the staffing targets because new controllers are typically hired two to three years in advance of expected attrition to allow for sufficient training time. The total expected end-of-year staffing number shown in Figure 3.1 reflects this projected advanced hiring.

Enroute

ID	FACILITY NAME	STAFFING STANDARDS TARGET	Actual on board as of 09/24/22				CRWG TARGET
			CPC	CPC-IT	DEVELOPMENTAL	TOTAL	
ZAB	Albuquerque ARTCC	219	156	5	43	204	234
ZAN	Anchorage ARTCC	92	84	0	21	105	106
ZAU	Chicago ARTCC	283	283	9	59	351	321
ZBW	Boston ARTCC	170	165	8	41	214	207
ZDC	Washington ARTCC	291	253	14	53	320	312
ZDV	Denver ARTCC	290	215	14	22	251	294
ZFW	Fort Worth ARTCC	264	244	10	45	299	295
ZHU	Houston ARTCC	234	235	5	44	284	302
ZID	Indianapolis ARTCC	282	221	16	70	307	298
ZJX	Jacksonville ARTCC	294	203	6	49	258	298
ZKC	Kansas City ARTCC	236	196	6	48	250	241
ZLA	Los Angeles ARTCC	262	186	21	53	260	282
ZLC	Salt Lake City ARTCC	177	122	5	30	157	169
ZMA	Miami ARTCC	258	218	18	44	280	298
ZME	Memphis ARTCC	262	202	6	66	274	288
ZMP	Minneapolis ARTCC	217	205	10	54	269	248
ZNY	New York ARTCC	266	197	8	84	289	321

Enroute

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
ZOA	Oakland ARTCC	228	151	8	97	256	216
ZOB	Cleveland ARTCC	263	260	15	52	327	345
ZSE	Seattle ARTCC	136	135	4	35	174	166
ZSU	San Juan ARTCC	47	37	1	30	68	65
ZTL	Atlanta ARTCC	316	279	32	53	364	343
ZUA	Guam ARTCC	16	15	0	3	18	18
Enroute Total		5,103	4,262	221	1,096	5,579	5,667

Note: Facility numbers do not include new hires at the FAA Academy

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
A11	Anchorage TRACON	22	20	0	2	22	24
A80	Atlanta TRACON	111	77	17	1	95	110
A90	Boston TRACON	74	57	12	0	69	79
ABE	Allentown Tower	22	22	0	9	31	37
ABI	Abilene Tower	18	18	0	3	21	20
ABQ	Albuquerque Tower	19	24	7	3	34	36
ACK	Nantucket Tower	9	8	1	1	10	14
ACT	Waco Tower	17	17	0	4	21	26
ACY	Atlantic City Tower	21	19	1	9	29	26
ADS	Addison Tower	12	8	1	2	11	16
ADW	Andrews Tower	11	12	0	3	15	22
AFW	Alliance Tower	14	16	0	0	16	15
AGC	Allegheny Tower	11	14	1	1	16	21
AGS	Augusta Tower	18	11	0	4	15	21
ALB	Albany Tower	23	24	0	8	32	30
ALO	Waterloo Tower	11	13	0	1	14	23
AMA	Amarillo Tower	14	18	0	7	25	24
ANC	Anchorage Tower	30	20	4	1	25	28
APA	Centennial Tower	23	15	3	3	21	26
APC	Napa Tower	7	8	0	3	11	12
ARB	Ann Arbor Tower	7	8	1	0	9	12
ARR	Aurora Tower	7	9	1	4	14	12
ASE	Aspen Tower	11	13	0	3	16	21
ATL	Atlanta Tower	52	39	5	0	44	52
AUS	Austin Tower	51	35	4	0	39	60
AVL	Asheville Tower	16	15	1	2	18	20

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
AVP	Wilkes-Barre Tower	22	20	0	1	21	26
AZO	Kalamazoo Tower	39	49	0	9	58	60
BDL	Bradley Tower	11	17	1	2	20	21
BED	Hanscom Tower	12	11	0	2	13	19
BFI	Boeing Tower	16	16	1	3	20	20
BFL	Bakersfield Tower	16	14	0	12	26	26
BGM	Binghamton Tower	13	13	0	3	16	21
BGR	Bangor Tower	20	17	1	5	23	31
BHM	Birmingham Tower	21	25	1	4	30	39
BIL	Billings Tower	19	19	0	5	24	24
BIS	Bismarck Tower	14	9	1	3	13	18
BJC	Broomfield Tower	15	12	0	0	12	16
BNA	Nashville Tower	47	33	3	3	39	41
BOI	Boise Tower	28	23	9	0	32	42
BOS	Boston Tower	31	28	3	1	32	33
BPT	Beaumont Tower	9	10	0	0	10	14
BTR	Baton Rouge Tower	14	14	1	6	21	24
BTV	Burlington Tower	15	22	0	1	23	24
BUF	Buffalo Tower	26	31	1	8	40	41
BUR	Burbank Tower	14	18	0	2	20	24
BWI	Baltimore Tower	18	18	2	2	22	22
C90	Chicago TRACON	93	71	14	1	86	102
CAE	Columbia Tower	22	20	1	3	24	28
CAK	Akron-Canton Tower	11	16	0	1	17	15
CCR	Concord Tower	9	9	0	1	10	14
CDW	Caldwell Tower	10	11	0	1	12	12
CHA	Chatanooga Tower	17	18	3	0	21	24
CHS	Charleston Tower	21	17	0	1	18	29
CID	Cedar Rapids Tower	14	17	0	1	18	23
CKB	Clarksburg Tower	15	13	0	6	19	24
CLE	Cleveland Tower	38	49	5	2	56	53
CLT	Charlotte Tower	86	81	5	0	86	90
CMA	Camarillo Tower	10	10	0	3	13	14
CMH	Columbus Tower	35	37	3	1	41	55
CMI	Champaign Tower	13	15	0	3	18	21
CNO	Chino Tower	10	8	2	2	12	15
COS	Colorado Springs Tower	28	20	5	0	25	27
CPR	Casper Tower	17	9	0	5	14	18

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
CPS	Downtown Tower	9	9	0	1	10	14
CRP	Corpus Christi Tower	30	27	4	4	35	41
CRQ	Palomar Tower	10	10	2	2	14	14
CRW	Charleston Tower	20	17	1	4	22	31
CSG	Columbus Tower	7	8	0	1	9	12
CVG	Cincinnati Tower	35	35	10	1	46	48
D01	Denver TRACON	82	67	16	0	83	93
D10	Dallas - Ft Worth TRACON	103	69	22	0	91	111
D21	Detroit TRACON	40	47	10	1	58	58
DAB	Daytona Beach Tower	52	44	10	0	54	60
DAL	Dallas Love Tower	21	19	4	0	23	26
DAY	Dayton Tower	11	13	0	1	14	16
DCA	Washington National Tower	25	22	3	2	27	30
DEN	Denver Tower	46	29	7	1	37	41
DFW	DFW Tower	52	50	6	0	56	58
DLH	Duluth Tower	17	12	1	7	20	25
DPA	Dupage Tower	12	13	1	4	18	19
DSM	Des Moines Tower	19	19	0	4	23	28
DTW	Detroit Tower	24	32	3	0	35	33
DVT	Deer Valley Tower	16	16	1	1	18	22
DWH	Hooks Tower	9	12	0	3	15	19
ELM	Elmira Tower	13	11	1	4	16	13
ELP	El Paso Tower	20	23	3	5	31	35
EMT	El Monte Tower	7	8	0	2	10	12
ERI	Erie Tower	9	11	0	0	11	12
EUG	Eugene Tower	18	15	0	6	21	28
EVV	Evansville Tower	12	11	0	9	20	23
EWR	Newark Tower	35	31	4	1	36	37
F11	Central Florida TRACON	58	40	6	2	48	60
FAI	Fairbanks Tower	21	14	0	12	26	28
FAR	Fargo Tower	19	16	0	0	16	26
FAT	Fresno Tower	26	21	0	8	29	30
FAY	Fayetteville Tower	23	16	1	10	27	28
FCM	Flying Cloud Tower	9	10	1	0	11	14
FFZ	Falcon Field Tower	16	11	1	1	13	18
FLL	Fort Lauderdale Tower	23	24	3	1	28	26
FLO	Florence Tower	12	12	0	2	14	16
FNT	Flint Tower	9	12	0	1	13	12

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
FPR	St Lucie Tower	9	11	1	0	12	14
FRG	Farmingdale Tower	16	12	0	3	15	13
FSD	Sioux Falls Tower	16	16	0	2	18	22
FSM	Fort Smith Tower	21	30	0	5	35	30
FTW	Meacham Tower	14	15	0	0	15	23
FWA	Fort Wayne Tower	21	18	0	4	22	29
FXE	Fort Lauderdale Executive Tower	16	14	1	3	18	21
GCN	Grand Canyon Tower	7	8	0	1	9	14
GEG	Spokane Tower	30	25	5	5	35	44
GFK	Grand Forks Tower	25	19	1	1	21	30
GGG	Longview Tower	15	20	0	6	26	28
GPT	Gulfport Tower	14	17	0	3	20	22
GRB	Green Bay Tower	17	18	1	1	20	26
GRR	Grand Rapids Tower	11	10	0	1	11	14
GSO	Greensboro Tower	22	19	1	8	28	28
GSP	Greer Tower	18	17	1	8	26	24
GTF	Great Falls Tower	17	13	0	5	18	23
HCF	Honolulu Control Facility	90	66	9	6	81	93
HEF	Manassas Tower	9	11	1	0	12	12
HIO	Hillsboro Tower	10	16	0	0	16	18
HLN	Helena Tower	9	8	0	4	12	16
HOU	Hobby Tower	18	20	0	1	21	22
HPN	Westchester Tower	13	13	0	5	18	22
HSV	Huntsville Tower	14	15	1	1	17	24
HTS	Huntington Tower	18	17	0	3	20	27
HUF	Terre Haute /Hulman Tower	19	16	1	3	20	29
HWD	Hayward Tower	8	8	1	2	11	14
I90	Houston TRACON	83	72	16	0	88	96
IAD	Dulles Tower	24	25	6	1	32	30
IAH	Houston Intercontinental Tower	33	29	5	0	34	39
ICT	Wichita Tower	30	23	9	4	36	40
ILG	Wilmington Tower	9	13	0	1	14	14
ILM	Wilmington Tower	15	14	2	7	23	26
IND	Indianapolis Tower	46	34	6	2	42	45
ISP	Islip Tower	11	16	0	3	19	23
ITO	Hilo Tower	11	12	0	2	14	18
JAN	Jackson Tower	15	14	0	3	17	22
JAX	Jacksonville Tower	42	35	7	8	50	45

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
JCF	Joshua Control Facility	25	16	2	3	21	26
JFK	Kennedy Tower	32	32	5	0	37	33
JNU	Juneau Tower	9	14	0	2	16	19
L30	Las Vegas TRACON	42	32	6	3	41	56
LAF	Lafayette Tower	8	5	0	7	12	12
LAN	Lansing Tower	11	12	0	1	13	15
LAS	Las Vegas Tower	42	31	4	0	35	41
LAX	Los Angeles Tower	42	41	4	0	45	56
LBB	Lubbock Tower	18	15	0	4	19	26
LCH	Lake Charles Tower	16	13	0	5	18	21
LEX	Lexington Tower	23	19	0	6	25	30
LFT	Lafayette Tower	15	16	1	4	21	24
LGA	La Guardia Tower	30	32	6	0	38	37
LGB	Long Beach Tower	19	16	3	0	19	26
LIT	Little Rock Tower	22	22	0	5	27	38
LNK	Lincoln Tower	11	12	0	0	12	12
LOU	Bowman Tower	9	11	0	2	13	14
LVK	Livermore Tower	9	12	0	1	13	14
M03	Memphis TRACON	32	20	1	6	27	41
M98	Minneapolis TRACON	43	44	10	6	60	54
MAF	Midland Tower	15	18	0	4	22	26
MBS	Saginaw Tower	9	9	0	1	10	14
MCI	Kansas City Tower	26	35	2	2	39	40
MCO	Orlando Tower	29	21	2	0	23	35
MDT	Harrisburg Tower	28	23	1	6	30	32
MDW	Midway Tower	19	18	1	1	20	22
MEM	Memphis Tower	21	20	5	1	26	35
MFD	Mansfield Tower	9	8	0	2	10	12
MGM	Montgomery Tower	16	12	3	10	25	24
MHT	Manchester Tower	11	16	0	0	16	16
MIA	Miami Tower	95	62	28	0	90	98
MIC	Crystal Tower	9	10	0	2	12	12
MKC	Downtown Tower	12	15	0	0	15	19
MKE	Milwaukee Tower	35	33	7	0	40	49
MKG	Muskegon Tower	9	8	0	1	9	12
MLI	Quad City Tower	14	15	0	6	21	21
MLU	Monroe Tower	13	13	1	2	16	21
MMU	Morristown Tower	9	10	1	1	12	19

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
MOB	Mobile Tower	20	18	3	2	23	24
MRI	Merrill Tower	12	10	1	2	13	14
MRY	Monterey Tower	9	8	0	2	10	12
MSN	Madison Tower	18	19	0	9	28	30
MSP	Minneapolis Tower	26	31	3	0	34	37
MSY	New Orleans Tower	39	27	6	2	35	39
MWH	Grant County Tower	16	13	0	5	18	21
MYF	Montgomery Tower	17	10	1	2	13	21
MYR	Myrtle Beach Tower	32	19	2	0	21	27
N90	New York TRACON	190	121	19	51	191	226
NCT	Northern California TRACON	157	128	22	0	150	174
NEW	Lakefront Tower	7	11	0	3	14	14
OAK	Oakland Tower	17	16	7	0	23	35
OGG	Maui Tower	11	12	0	1	13	19
OKC	Oklahoma City Tower	31	23	6	6	35	36
OMA	Eppley Tower	11	12	1	2	15	16
ONT	Ontario Tower	11	14	0	7	21	21
ORD	Chicago O'Hare Tower	52	53	13	0	66	73
ORF	Norfolk Tower	29	26	1	3	30	35
ORL	Orlando Executive Tower	9	10	0	2	12	12
P31	Pensacola TRACON	30	34	4	0	38	35
P50	Phoenix TRACON	61	46	10	4	60	58
P80	Portland TRACON	24	22	2	5	29	26
PAE	Paine Tower	10	8	1	1	10	14
PAO	Palo Alto Tower	8	8	0	5	13	14
PBI	Palm Beach Tower	60	42	12	5	59	58
PCT	Potomac TRACON	142	142	19	0	161	173
PDK	DeKalb - Peachtree Tower	13	15	2	0	17	22
PDX	Portland Tower	17	25	1	0	26	26
PHF	Patrick Henry Tower	9	8	0	3	11	14
PHL	Philadelphia Tower	74	61	24	1	86	114
PHX	Phoenix Tower	35	21	7	1	29	35
PIA	Peoria Tower	12	14	0	11	25	15
PIE	St Petersburg Tower	9	11	0	2	13	14
PIT	Pittsburgh Tower	35	36	5	1	42	45
PNE	Northeast Philadelphia Tower	9	10	1	0	11	14
PNS	Pensacola Tower	9	9	0	3	12	14
POC	Brackett Tower	7	8	2	0	10	14

Terminal

Actual on board as of 09/24/22

ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
POU	Poughkeepsie Tower	9	10	1	0	11	12
PRC	Prescott Tower	14	10	3	2	15	18
PSC	Pasco Tower	9	14	1	1	16	17
PSP	Palm Springs Tower	9	11	0	1	12	12
PTK	Pontiac Tower	11	10	0	0	10	15
PUB	Pueblo Tower	13	14	0	0	14	18
PVD	Providence Tower	30	27	2	6	35	37
PWK	Chicago Executive Tower	9	11	0	0	11	14
PWM	Portland Tower	17	23	0	0	23	26
R90	Omaha TRACON	21	18	2	1	21	24
RDG	Reading Tower	18	16	1	4	21	18
RDU	Raleigh-Durham Tower	46	37	5	1	43	43
RFD	Rockford Tower	21	19	0	2	21	32
RHV	Reid-Hillview Tower	9	8	0	4	12	14
RIC	Richmond Tower	11	16	1	0	17	16
RNO	Reno Tower	11	12	1	5	18	21
ROA	Roanoke Tower	20	20	1	5	26	28
ROC	Rochester Tower	22	22	0	8	30	37
ROW	Roswell Tower	11	13	0	3	16	18
RST	Rochester Tower	13	12	0	1	13	23
RSW	Fort Myers Tower	30	29	3	0	32	37
RVS	Riverside Tower	11	13	0	3	16	18
S46	Seattle TRACON	55	34	2	5	41	52
S56	Salt Lake City TRACON	41	37	0	2	39	45
SAN	San Diego Tower	19	20	5	1	26	28
SAT	San Antonio Tower	39	37	6	3	46	56
SAV	Savannah Tower	30	18	5	4	27	32
SBA	Santa Barbara Tower	19	23	0	7	30	30
SBN	South Bend Tower	22	24	0	3	27	30
SCK	Stockton Tower	7	10	0	0	10	12
SCT	Southern California TRACON	206	176	27	0	203	232
SDF	Standiford Tower	39	38	6	2	46	52
SDL	Scottsdale Tower	12	10	0	1	11	16
SEA	Seattle Tower	32	23	2	0	25	33
SEE	Gillespie Tower	9	13	1	2	16	19
SFB	Sanford Tower	13	17	0	0	17	18
SFO	San Francisco Tower	29	23	7	0	30	30
SGF	Springfield Tower	23	27	0	3	30	30

Terminal

Actual on board as of 09/24/22

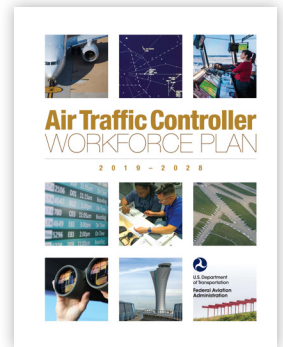
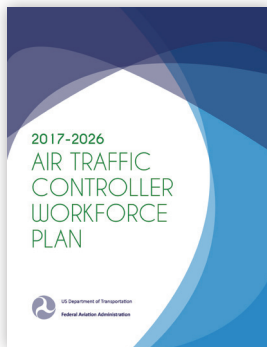
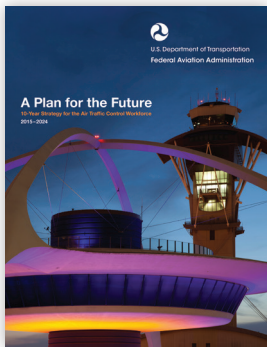
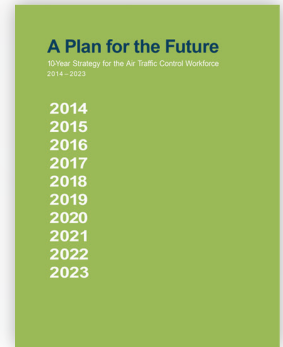
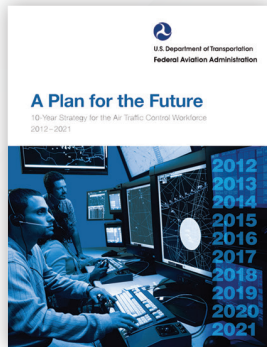
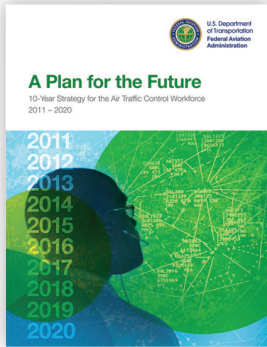
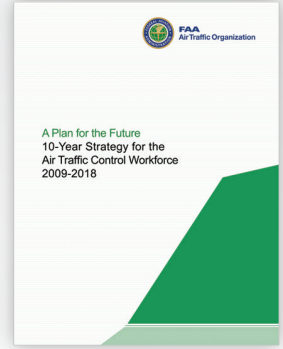
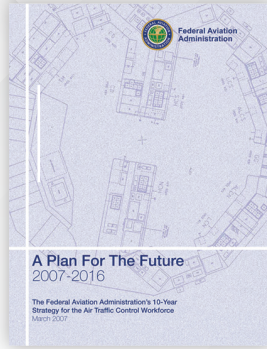
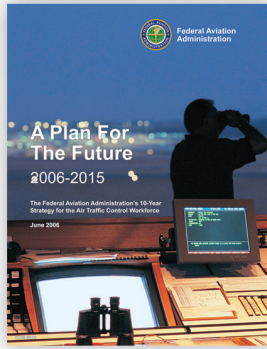
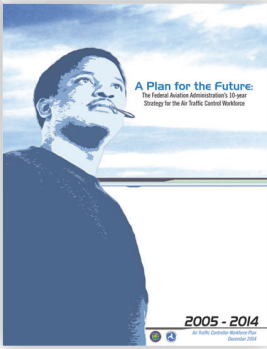
ID	FACILITY NAME	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
SHV	Shreveport Tower	21	21	0	6	27	28
SJC	San Jose Tower	13	13	0	2	15	15
SJU	San Juan Tower	14	16	0	1	17	22
SLC	Salt Lake City Tower	29	29	0	0	29	33
SMF	Sacramento Tower	12	14	1	2	17	16
SMO	Santa Monica Tower	7	12	4	3	19	16
SNA	John Wayne Tower	19	17	5	1	23	26
SPI	Springfield Tower	8	7	0	5	12	12
SRQ	Sarasota Tower	12	14	0	1	15	16
STL	St Louis Tower	14	19	2	0	21	22
STP	St Paul Tower	9	10	1	0	11	14
STS	Sonoma Tower	7	8	0	4	12	14
STT	St Thomas Tower	9	11	0	2	13	14
SUS	Spirit Tower	9	11	0	0	11	14
SUX	Sioux Gateway Tower	12	11	0	4	15	21
SYR	Syracuse Tower	19	19	0	5	24	28
T75	St Louis TRACON	36	24	9	4	37	39
TEB	Teterboro Tower	26	15	3	0	18	22
TLH	Tallahassee Tower	16	14	0	3	17	24
TMB	Tamiami Tower	14	16	1	1	18	22
TOA	Torrance Tower	8	8	1	1	10	14
TOL	Toledo Tower	22	19	1	3	23	25
TPA	Tampa Tower	56	42	10	4	56	67
TRI	Tri-Cities Tower	17	12	2	12	26	24
TUL	Tulsa Tower	24	27	2	3	32	34
TUS	Tucson Tower	12	12	1	7	20	22
TVC	Traverse City Tower	9	8	1	0	9	14
TWF	Twin Falls Tower	9	8	0	2	10	14
TYS	Knoxville Tower	24	24	2	6	32	37
U90	Tucson TRACON	18	15	2	2	19	24
VGT	North Las Vegas Tower	9	10	1	1	12	20
VNY	Van Nuys Tower	20	20	4	2	26	26
VRB	Vero Beach Tower	12	11	0	0	11	13
Y90	Yankee TRACON	21	15	0	3	18	26
YIP	Willow Run Tower	12	16	0	0	16	23
YNG	Youngstown Tower	19	16	0	3	19	25
Terminal Total		6,959	6,316	722	801	7,839	8,966

Note: Facility numbers do not include new hires at the FAA Academy

FAA Totals

Actual on board as of 09/24/22

	STAFFING STANDARDS TARGET	CPC	CPC-IT	DEVELOPMENTAL	TOTAL	CRWG TARGET
En Route Total	5,103	4,262	221	1,096	5,579	5,667
Terminal Total	6,959	6,316	722	801	7,839	8,966
Facility Total	12,062	10,578	943	1,897	13,418	14,633
FAA Academy Students					275	
Total Controller Headcount					13,693	



U.S. Department of Transportation
Federal Aviation Administration

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