

# *FAA* HORIZONS

OFFICIAL EMPLOYEE PUBLICATION OF THE FEDERAL AVIATION AGENCY / NOVEMBER 1966



**ON  
TARGET:  
Improved  
Service  
At  
Reduced  
Costs**



**COVER**

Right on target is the Agency's Cost Reduction Program. Many employees in the Agency are doing their part to achieve greater safety and efficiency while they provide better service to the public at less cost. (See page 3)

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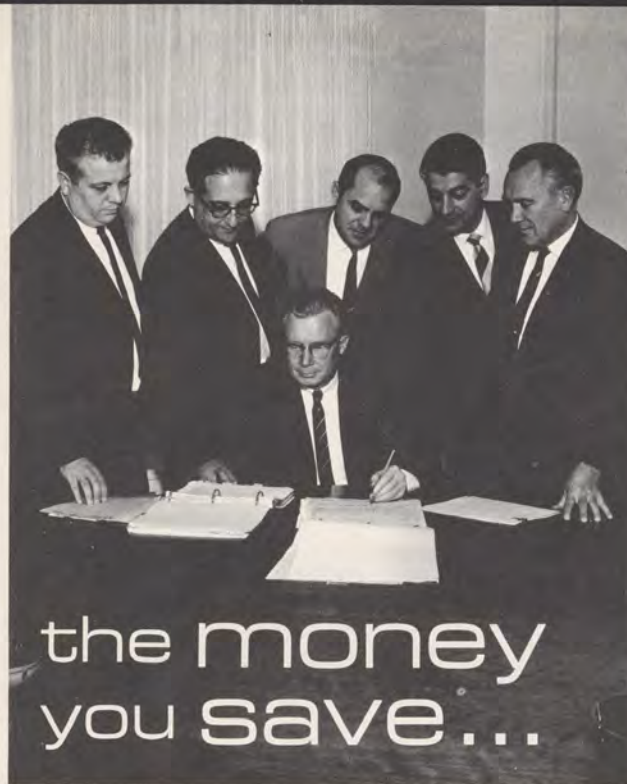
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**Left:** Alan L. Dean (seated), Associate Administrator for Administration, checks cost reduction projects with, from left, Ernest T. Spiekerman, Director of Management Services; John Moundalexis of Management Services; Richard W. Slocum of the Budget Office; J. Meisel and Nicholas Soldo of Management Services. **Below:** Washington Airport Service's Aircraft Requirements Section chief Robert J. Endres explains how he cut runway extension length in half.



What is cost reduction? What is involved in cost reduction programs and who plans them? Are there tangible savings or is it just "paper-shuffling" and juggling of numbers?

Here are a few examples of what it is and how it works:

- Foresight and diligence on the part of two FAA employees will save the Agency and the public together some \$30 million in airport construction.

- Evaluation of a proposed new plan produced an annual recurring salary saving of \$2.8 million plus a one-time saving of \$2.5 million through reduction in facilities and equipment.

- Development of a shorter, more comprehensive training course resulted in a saving of over \$56,000 for a Region. If employed Agency-wide, it would save more than \$550,000.

These are a few of the projects initiated to aid the President in his "War on Waste." They have been or will be incorporated into

the Agency's Cost Reduction Program along with many other money-saving projects.

In one of these cost reduction accomplishments, Washington Airports Service's Aircraft Requirements Section chief Robert J. Endres and Major Brian Landergan, a civil engineer on assignment to the FAA from the Air Force, spent nine months developing improved runway extension standards. Although the ideal runway had been thought to be level, most runways are built with some slope because of the cost of leveling. Endres and Landergan, through analysis of jet aircraft operational requirements, were able to cut in half the former FAA formula for computing additional length to compensate for gradient.

Some 250 airports will need runway extensions by 1970. The formula change will reduce the lengthening by an average of 300 feet per airport. At an average cost of \$400 per lineal foot of runway, the savings will amount to some \$30 million, half of which the communities involved would

have had to absorb.

Systems Maintenance Programs Division chief W. Harry Hill and Management Services' Management Engineering Branch chief John Moundalexis led an intensive study of the feasibility of eliminating non-essential air traffic, air navigation and communication facilities and services. As a result of the efforts of many individuals in the Agency, over 7,000 individual facilities were analyzed. Each was checked to determine whether it was possible to eliminate or co-locate them with other essential facilities to cut the cost of maintenance.

The decision to eliminate 261 facilities and co-locate or convert an additional 104 will result in a one-time saving of \$2.5 million plus annual recurring savings of \$2.8 million.

J. W. Skolaut, Defense Readiness Officer for the Southwest Region in Fort Worth, cut 40 hours from a regional radiological program training course and saved the Region \$56,732. By devising one 16 hour

course to replace two similar courses totaling 56 hours, and spearheading a number of other projects related to the defense readiness program, he cut training costs from \$362 per employee to \$96. If the program is adopted Agency-wide, the savings for 1967 will probably exceed \$550,000.

Through these individual efforts, along with many others, the Agency expects to save some \$40 million in 1967. It has already targeted an additional \$22 million in savings for 1968. Doing a better job for less has always been a prime aim of the Agency. But, as Administrator McKee told the Director of the Bureau of the Budget on submitting a report of savings achieved in fiscal year 1966, "one of our greatest problems is to maintain the proper balance between reducing costs and providing the necessary services to assure aviation safety. We believe that this has been effectively accomplished to date."

There will be many continuing opportunities for further savings without detriment to essential services and they need to be fully exploited.

Some of the plans on the books for 1967 and 1968 are:

- Reorganization and modernization of the Alaskan Region's flight service system. This includes reducing the number of flight service stations and combined station/towers from 33 to 14, switching 16 part-time flight service stations to remote communication outlets during low activity hours and setting up 3 part-time flight service facilities. Expected savings of \$56,700 for 1967 will increase to about \$461,500 in 1968.

- The Aeronautical Center bought automatic data processing equipment during fiscal 1966 rather than leasing the equipment. This will save \$355,000 annually.

What happens to all these millions of dollars that have been so painstakingly saved? Some of them are applied toward reducing the FAA's budget, some are put into vital, high-priority programs and the rest are returned to the Treasury. Last year, for example, cost cutting programs allowed the Agency to return approximately \$12 million in unused operations funds to the Treasury.

The cost reduction program or "War on Waste" involves every individual in the Agency. A file clerk's contribution can be



Flight data aides at the New York Air Route Traffic Control Center, Eastern Region, are responsible for performing valuable services in automatic data processing at reduced manpower costs. The aides perform the duties formerly done by assistant controllers.

as significant as the division chief's. Each plays an equally vital role through his efforts to cut costs by eliminating non-essentials, improving procedures and increasing productivity.

There are two ways in which an employee can submit a money-saving proposal: through the Employee Suggestion Program and, if he thinks it may be a constructive cost reduction proposal, he can submit it to his supervisor. If his proposal is adopted, the Agency not only saves money but the employee earns money. The benefits are the same whether the proposal is submitted as an employee suggestion or as a cost reduction project. If the supervisor sends the proposal in through the cost reduction channel and it is adopted, he then re-submits it under the Employee Suggestion Program and the employee is entitled to an award.

Another cost cutting program is the Unsatisfactory Condition Report or UCR, which point up needs where savings can result even if the employee is unable to suggest a specific solution. The UCR provides a simple and direct means for all

Agency employees to advise management of unsatisfactory conditions. And, since the program's inception over a year ago, there have resulted many constructive changes which have saved the Agency thousands of dollars.

Supervisory personnel, for activities under their jurisdiction, are required to identify areas in which they think savings can be achieved and plan specific action to verify and accomplish them. These are the planned cost reduction projects, and they may originate with the supervisor or may include employee suggestions.

The objectives of these programs are the same—cost reducing through elimination of work that isn't absolutely necessary, improving work methods and applying lower cost alternatives wherever possible.

Cost reduction is *not* sought by attempting to overload employees. Real savings come from eliminating unessential programs or practices, simplifying methods, improving equipment, sharpening skills and better employment of manpower. In most cases better working conditions and more job



Above: Albert R. Puccerella (center) of the Eastern Region's Staffing Validation Team makes a work sampling observation at New York IFSS. Below: The Aeronautical Center replaces electrical accounting machines with upgraded equipment at lower costs.



satisfaction have been by-products of cost reduction efforts.

The cost reduction program's saving of \$57.3 million for fiscal year 1966 was a high point in the program. The savings are 177 per cent of the original goal of \$32.2 million for the year. Efforts that helped boost the total included:

- A 15.1 per cent increase in air traffic controller productivity over the previous year. This means that if the 1965 level of controller productivity had been maintained, a total of 2,781 additional controllers would have been required to handle the 1966 workload, costing the taxpayer an additional \$31.3 million. The increase in productivity was due in part to equipment changes, in part to the high level of controller skill and in part to the better match between controller work schedules and traffic.

- Consolidation of FAA communications lines with those of the Department of Defense. The grouping of lines into so-called "TELPAKs" reduces the per mile costs which decrease as the size of the cables for the TELPAKs or grouping of lines increase. This saved the Agency another \$2 million.

- Deleting or modifying certain facilities and equipment resulted in an additional \$2.7 million saving. Some of these savings were achieved by using surplus communications equipment rather than buying new equipment, using single rather than dual stand-by equipment at some air navigation facilities and improving existing air traffic control towers rather than building new ones.

- Reduction of the Washington Headquarters staff by over 200 positions and about \$2.5 million in salaries. This was done through reorganization, elimination of marginal work and increased productivity. The reduction was accomplished without a reduction in force.

During fiscal year 1966, the Agency would have had to spend \$129.5 million more than it did to perform the work accomplished if we had not changed our productivity and efficiency since 1958. Since we could not have obtained so large an increase in our funding, our skill in getting more out of our resources has allowed us to move ahead with programs which could not otherwise have been launched or sustained. We have therefore achieved more safety and efficiency and provided better service with proportionately smaller resources.

So, not only can each individual help the Agency to achieve its goals, but he can also help himself. Remember, that you are also a taxpayer and the dollar you save may be your own.



There was a large turnout at the Air Traffic Control Association's convention in Hollywood-by-the-Sea, Fla. Among those attending were from left: Donald Innes, Ralph Grayson, Administrator William McKee, Paul Boatman, James Rogers, Clifford Burton, Marty Hanson and Bill Leverett.



Master Sergeant Billy Karr of the Vance AFB Mobile RAPCON in Enid, Okla., won ATCA's Contoller of the Year award.



Administrator McKee had high praise for the controllers and also brought them a message of commendation from President Johnson for "the trust placed in you by all of us who travel by air."

## atca Convenes CONTROLLERS RECEIVE PRAISE

"... You have demonstrated the finest public service," said Administrator McKee as he spoke to 500 air traffic controllers at the 11th Annual Convention of the Air Traffic Control Association in Hollywood-by-the-Sea, Fla., recently.

"I get letters from all over the United States, practically every day, from people that have no reason to write in, except they just want to express their appreciation... It makes me feel real proud."

One of these heart warming letters, the Administrator said, was a letter from "one individual who flies all the time and is going to be doing a lot more." The letter, which the Administrator read to the ATCA group, was from the White House. It read:

"Dear General McKee: I would be grateful if you delivered the following message to the Air Traffic Control Association at a convention in Florida: 'As a frequent user of the airways, I know firsthand the fine work you are doing. Your skill is accepted as a matter of course in the cabin of Air Force One. Millions of Americans take to the air routinely and without second thoughts, as a result of your dedication to duty. This is the best testimony that can be given to the trust placed in you by all of us who travel by air. Your ability to control air traffic with safety and dispatch enables us to anticipate with confidence, the technological developments which are destined to revolutionize the future of flight in all of its forms. I congratulate you and send you my best wishes for a rewarding convention. Sincerely, Lyndon B. Johnson.'"

The President's letter and the Administrator's personal commendations capped a review by General McKee of the Agency's activities over the past year and a probe into present and future problems. Observing the convention's theme, "Accepting the Challenges Ahead," General McKee called for the assistance of all members of the aviation

community to join in "an over-all effort" to meet and solve the problems facing aviation. To ATCA members, he said, "I think you can help as a group, as an association and as individuals..."

Two major problem areas were cited by General McKee. "Unless airport congestion is solved," he said, "the growth of civil aviation in this country is going to be seriously impaired."

Continuing, General McKee said, "The other problem confronting us, which we are attacking vigorously, is the question of noise. We have to get at it at the source, which is with the engine manufacturers and the airplane manufacturers. Also, we need to get at the problem with the local communities, with zoning, with protecting the areas around airports..."

ACTA President Ralph Grayson of the Memphis, Tenn., ARTCC said this year's meeting was a tremendous success. Attendance by foreign controllers from Austria, Canada, England, Grand Bahama, Greece, Israel, Norway, Sweden, Switzerland and Venezuela surpassed all previous years.

Looking forward to next year's ATCA convention at St. Paul, the association pledged the Administrator its full support and cooperation in an effort to combat the problems facing the Agency and the aviation community. ✨

Archie League (right), Air Traffic Service Director, presents ATCA Facility of the Year award to San Francisco Tower chief Don Muncy.



During the ATCA convention a number of controllers and facilities were singled out for ATCA honors. These included:

Master Sergeant Billy J. Karr, chief controller, Vance AFB Mobile RAPCON, Enid, Okla., won ATCA's Controller of the Year award for his outstanding work in planning and developing air traffic control procedures for Vance and for special training flights operating in positive control airspace.

Controller of the year runner-up honors went to Mathew M. Calendar Jr., radar controller at the Baltimore-Friendship Control Tower. On Nov. 7, 1965, Calendar, while working in the TRACON room, demonstrated exemplary skill and cool-headedness in the spectacular save of a lost single-engine aircraft. The pilot, transmitting on an emergency frequency, reported one fuel tank empty and the other indicating empty. While the engine sputtered and suddenly stopped four miles from the airport, Calendar quickly located the plane by using direction finding equipment. He calmly led the pilot, his wife and two children to a safe landing at the airport.

Second runner-up award went to Joseph W. Martin, radar controller at Minneapolis ARTCC. Martin also was instrumental in saving a lost pilot. Winning honorable mention were Emil Weaver, Atlantic City Tower crew chief; J. A. Bushy, supervisor, and J. B. Morrison, controller, Charleston, S.C., Tower and S/Sgt. Thomas G. Lipps, Columbus AFB RAPCON.

San Francisco Tower was named ATCA Facility of the Year "for outstanding performance and dedicated service under severe handicaps for extended periods of time." Though handicapped by extensive-airport construction which required runway closings for various periods of time, controllers at the San Francisco Tower, through effective teamwork, were able to handle a volume of traffic which exceeded the previous fiscal year by more than 13 per cent.

Runner-up Facility of the Year honors went to the Los Angeles ARTCC for pioneering work in establishing a Mach 3 sector, developing radar procedures for supersonic flights and solving unusual problems associated with the extensive missile activity at nearby Vandenberg AFB.

Knoxville, Tenn., Tower was awarded second runner-up recognition while Eifel RAPCON, Spangdahlem AB, Germany; Burbank, Calif., Tower, and Salt Lake City ARTCC were given honorable mention as Facilities of the Year.

## ON WATCH ATOP

# Semaphore Hill

Semaphore Hill in the Canal Zone is one of the four joint-use FAA/USAF long range radar sites run by the Southern Region.

Gene Crabtree, an airway facilities technician on Semaphore Hill, displays a "baby" boa constrictor he found near the site.



Deep in the heart of the Canal Zone the midnight tour or "dead man's watch" is beginning for an FAA electronics maintenance technician on Semaphore Hill.

As the hour approaches, an airway facilities technician begins his 20-mile automobile trip from the west Pacific terminus of the Panama Canal zone (in the Southern Region) to the joint-use FAA/USAF long-range radar site, one of four in the Region. This "big radar eye" is located on the continental divide in the Panamanian rain forest.

On the final portion of the trip to the facility atop Semaphore Hill, the damp, steaming smells of the tropical jungle which surround and shroud the car like the darkness become evident. The headlight beams cut only a faint ribbon of light through the swirling mists and rain torrents. He travels at a maximum speed of about five miles per hour. Anything faster could mean a spinout on slick mud and a dropoff into the jungle.

On he goes, winding and climbing 800 feet, driving more than a mile in one-way semi-circles before he reaches the top. With a sigh of relief he arrives at his destination. The rain has stopped, but he is surrounded by low-hanging clouds, drifting past in ghostly, black patterns.

He doesn't dare open his door until he looks over the ground outside for deadly reptiles. A quick nip into his leg by the lethal *fer-de-lance* or the hostile bushmaster could be fatal.

The technician's eyes follow the flashlight beam. All looks clear. He switches off the light and makes a dash for the radar tower. As another violent rush of rain roars and pounds against the fiberglass dome of the 90-foot structure, the relief shouts to the man on duty, "Everything okay?" "Okay," he replies, as he smiles and hurries out of sight down the steps.

The other man is gone but the technician hears the unmistakable dit-dit-da of Morse code. His head spins around, looking for the source. Of course, the high-voltage transformers! There is a Navy Low Frequency CW station three miles away and the transformers are picking up the code.

Cautiously, he begins to check out the equipment. A disabling shock out here alone and he would be in trouble. Or a slip of the foot on the catwalk or a bite administered by a jungle spider. It would be several hours before the next relief was due.

He learned long ago that this job isn't all screwdrivers, oscilloscopes, ohmmeters and resistors. There comes with it an instinctive awareness and certain knowledge of the ways of the jungle.

Does this sound like fiction or an overactive imagination? Ask the eight men who stand watch at Semaphore Hill. Supervisory airway facility technician James Harris, and technicians Gene Crabtree, Carl Millet, Paul Golden, John Bean, Marvin Flynn, Edward Jones and Ralph Moulton will vouch for the fact that Semaphore Hill is sometimes beyond description.

But they will quickly add that there are also compensations. When daylight comes and the white cumulus clouds glide above and below, you can look out one door and see Balboa 20 miles away and, beyond it, the picturesque Thatcher Ferry Bridge "spanning the Americas."

Through another door there is an aerial view of the ships of all nations transiting the Canal and of the quaint, narrow-gauge Panama Railroad winding alongside. Magnificent tropical birds dart from tree to tree, kaleidoscopes of color, their throaty cries mysteriously rhythmic and ceaseless. Iguana, "honey bear," sloths, monkeys, anteaters, and the dread panther, leopard and jaguar roam the jungle beneath you.

The technicians' vigil at Semaphore carries pride with it as well as a rewarding mystery and beauty found only in the tropics. He knows the "big radar eye" on Semaphore Hill which he has been tending is reaching out over the Atlantic and Pacific to Colombia and Costa Rica, serving the defense mission of Latin America and the vital Panama Canal. The sleek, swift wings of 38 airlines streak through the skies in this vast area, carrying their precious human cargo with greater safety because of him.



**Above:** Honolulu controller Robert Albers checks wind direction and velocity. **Right:** Controllers Thomas Smith (left) and Albers use a pick-up truck as an operational base.



The almost perpendicular cliffs that isolate Kalaupapa peninsula provide a dramatic backdrop for the incoming aircraft.

## Hundreds Airlifted to Leper Colony for Centennial

A leper colony doesn't often have many visitors. But the isolated settlement of Kalaupapa on the island of Molokai in Hawaii was recently visited by more than 300 people who arrived via a mammoth airlift.

The occasion was the 100th anniversary observance of the Siloama Church, the first house of worship built for the leper patients.

Since the island is only accessible by air, the FAA was asked to lend a helping hand. Controllers Robert Albers of the Honolulu Tower and Thomas Smith of the Maui Combined Station/Tower manned two portable generator-powered trans-receivers on the back of a truck to assist with the airlift.

In what is believed to be the largest single airlift operation undertaken to date by any of Hawaii's air taxi enterprises, over 212 landings and takeoffs were made during an eight hour period by general aviation-type aircraft.

The settlement, one of only two established in the United States for leprosy (Hansen's Disease) victims, is located on a low lying 12-square-mile peninsula, isolated from the mainland of Molokai Island by a sheer 3,000 foot cliff.

Also assisting in the advisory service were General Aviation Branch chief John Vaughan and supervisory inspector George Reece of the Honolulu GADO.

Vaughan, who praised the entire operation, said, "despite the record traffic and gusty wind conditions, the controllers did a professional job."

## Colony for Centennial



Guests from Honolulu arrive at Kalaupapa for the 100th anniversary of Siloama Church.



**Left:** Siloama Church is the first built for the leper patients. **Above:** George Reece (left) and John Vaughan of Honolulu worked on the airlift.

# they can be HELPED and HELPFUL

Stanley watched the silver plates methodically released from their long trays. In perfect precision, they met the envelopes moving along the conveyor belt.

Names and addresses. Names and addresses. Automatically and repetitively they were imprinted onto thousands of envelopes by an impersonal machine.

Suddenly, the machine missed a beat. The imprints were peculiarly angled. Quickly, a self-confident young technician named Kenny shut down the machine. With the practiced dexterity of experience, he diagnosed the trouble and reached into a nearby tool box for the right instrument. Stanley watched Kenny's deft fingers rearranging the maze of screws and levers with fascination.

Within minutes, the machine was operating perfectly again. Names and addresses. Names and addresses. Thousands of envelopes. One after another.

The rhythm and movement of men and machines in the FAA printing plant held him spellbound. Its operation, one of the largest in the Federal Government, contrasted sharply with his own sheltered workshop.

Stanley is mentally retarded. Less than 10 or 15 years ago, the Stanleys of the world were neglected. Today, Stanley is a full-time FAA employee, operating an addressograph machine and performing other jobs for which he is qualified.

Like Stanley, the competent printing plant technician named Kenny is also mentally retarded. He, too, has realized his simple dreams through an FAA job. So have 30 other retardates now employed by the Agency. Through a pioneering program initiated by the Office of Headquarters Operations that opens jobs to mentally retarded, but occupationally qualified, people, 32 men and women serving the FAA have been restored to social usefulness and economic independence.

Since January 1964, when the Federal Government announced its intention to show what can be done to make fuller use of the nation's mentally retarded, the FAA has taken advantage of the program to help solve some of its own personnel problems. From the very onset, FAA took a lead in hiring mental retardates because it proved to be good business.

The Washington Headquarters Operations Office saw an early opportunity to place retardates in suitable jobs. Its Publishing and Graphics Division, largely a mechanical operation, has a few jobs that are low-paying, boring and tedious. These somewhat menial tasks are the proving ground for more complicated and responsible positions. So while they are vital, they often are vacant and hard to fill.



Frank Gerardi of the Headquarters Printing Plant (right) checks the work of two young retardates. Since the pioneer program began two years ago, the FAA has not lost any of its 32 retardates.



The FAA's mentally retarded develop speed quickly once they learn what is required in operating and repairing addressograph machines.

FAA called on Help for Retarded Children, Inc., one of the nation's oldest—began in 1950, to give an idea of the infant field of mental rehabilitation—retardation centers. Here a small group of professional psychologists, sociologists and dedicated social workers provide educational and vocational training to the feeble-minded.

It takes little imagination to consider what FAA's Office of Headquarters Operations was up against in blazing the Agency's trail in the unprecedented program. Many arguments militated against hiring the retarded: with its heavy program responsibilities, FAA had neither the time nor the resources to indulge in strictly humanitarian endeavors—hiring the mentally retarded is time-consuming. FAA personnel were not therapeutically oriented and would have to learn how to deal with their retarded associates. Most pertinent, perhaps, was the fact that FAA had no specific jobs that corresponded to the type of training offered at Help, Inc.

The last problem was reconciled by elementary logic. If the retarded had learned how to perform other routine tasks, why couldn't they learn to stack envelopes, use simple machines and accomplish other uncomplicated chores? Any new employee, for most practical purposes, must receive on-the-job training.

As for the administrative difficulties of bringing the retarded aboard, the Agency established a highly individualized placement and classification service. Personnel specialists were sent to Help, Inc., when any candidate was being considered for an FAA job. Observing the retardate in his own workshop, the hiring experts saved time and were able to work out position descriptions and any other required appointment procedures more easily.

The first retardates proved so successful that two years later they received grade promotions. Another Headquarters Operations division, the Office Services Division, hired three additional retardates to distribute mail. Then the Bureau of National Capital Airports hired eight to work at Washington National and Dulles International airports. Stanley, the most-recently hired, brought the Headquarters total to 15. Throughout the Agency, an additional 17 mentally retarded persons have been added to the rolls. The Aeronautical Center in Oklahoma City has given jobs to 11, Southwest has three, and the Central, Alaskan and Eastern Regions each have one retardate on their payrolls. Proof of the program's success has been the fact that the Agency has not had to release nor has it lost any of the retardates it has hired.

Not that there haven't been problems. Some have been generated by the retardates' own inherent mental deficiencies. They often get confused by too many instructions at once. They cannot communicate their problems well. When given a more complicated function, they learn it—and then forget how to perform their previous job.

But these difficulties pale in contrast to the benefits they have contributed. Once they learn what is required of them, they develop speed quickly. Because their work requires their fullest concentration and attention, they are not distracted. Above all, they can stick to the most menial tasks without getting bored or restless. They have been given a chance to prove themselves, and they know it. And they have.

In giving its retarded employees every conceivable opportunity for advancement, FAA has more than realized a return on its investment. "The Retarded Can Be Helped" is a national slogan to which FAA gives action, not lip service. But Stanley and his 31 fellow retardates go one step further. They have proved a more pertinent maxim: the retarded also can be helpful.

# That Plastic Bag May Save Your Life

Placing your head in a plastic bag has never been considered an effective means of increasing longevity. But human factors specialist Ernest McFadden is doing just that.

McFadden, who works on survival equipment in the Protection and Survival Laboratory at the Civil Aeromedical Institute in Oklahoma City, has developed a plastic bag designed to provide protection for passengers trapped in a smoke-filled, burning plane.


It is no ordinary plastic bag. It is made of a newly developed plastic that can withstand temperatures of 1,600 degrees and will not burn but chars away at the high temperatures.

McFadden began work on his lifesaving headgear primarily because of two aircraft accidents in the past year that took lives of persons who had escaped injury during the actual crash. The main cause of death in these accidents was the inability of the passengers to escape the smoke-filled cabin. He felt that if a person were to be provided with a supply of air (not oxygen which would support combustion) in this type of accident he would be able to reach the escape doors and hatches before being overcome.

This is where the plastic bag comes in. The passenger dons the hood, pulls a string attached to the air mixture mechanism and receives a rush of air which flushes out any smoke or fumes which might have been trapped in the hood as it was being put on. The bag would then mete out perhaps 10 or more minutes of life-giving air while the passenger is evacuating the cabin.

The headgear would also protect the head from burns. Normal clothing offers some protection to the passenger for other areas of the body.

The experimental bag is made of copper-colored plastic of a type only recently developed. Final models will have a reflective coating on the top and bottom to help reflect the heat.

And, McFadden firmly believes his own handiwork. To prove his contention that the bag works, he often demonstrates it for visitors to the Institute. This is done by placing his hood-covered head in a 1,200 degree flame. Yes, he is still on duty in the lab, and continuing his experiments on the project. 



Scientists at the Civil Aeromedical Institute are constantly studying a variety of jet-age medical problems which affect aviation. Their job is to provide safer flight for both crew members and passengers.

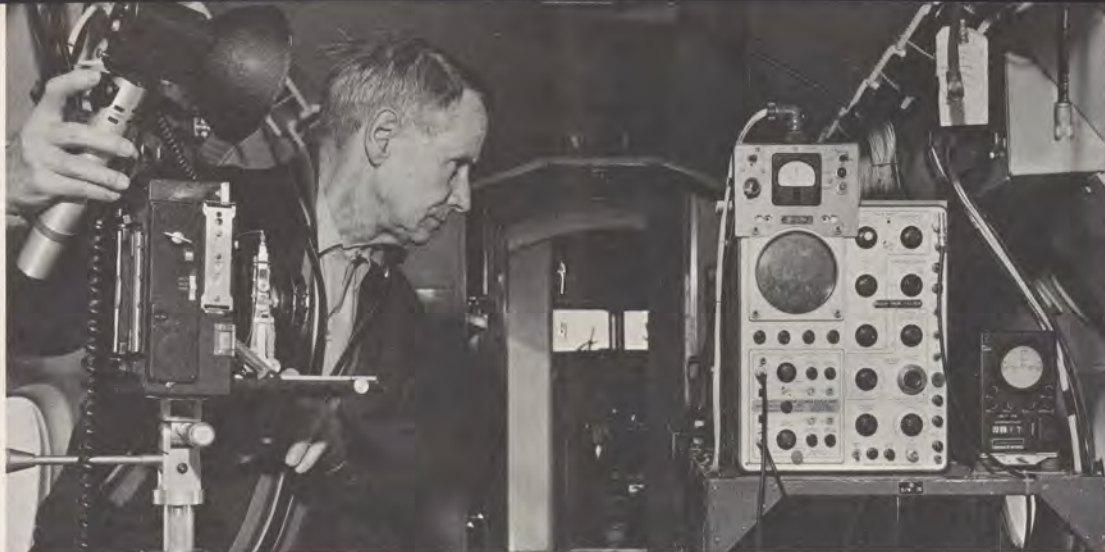


Human factors specialist Ernest McFadden demonstrates a plastic bag which may provide protection to passengers in aircraft crashes.

# Worth a thousand words



Photographer Nelson Amey takes a look at a strip of 35 mm film as it comes out of the automatic film processing machine.



A photograph is worth a thousand words to photographer Kelso Taylor who documents a test of equipment aboard an aircraft.

FAA's National Aviation Facilities Experimental Center in Atlantic City has a little publicized but uniquely specialized and versatile arm—its Photographic Section.

Here the routine is the out-of-the-ordinary. A photographer leaving the lab may be traveling only the short distance to the Director's office to cover an employee award ceremony. Or, he may be going across the country to document a complex test and evaluation project.

A day's work might include positioning cameras in the interior of the fuselage of a surplus C-97 that is to be burned during a fire-crash rescue test. The only catch is the film has to be in condition to be viewed. Not only was that accomplished during a recent series of tests, but the cameras from the fuselage are still operating.

Another proof of the resourcefulness and versatility of the Photographic Section was demonstrated recently when a NAFEC research team installed an airborne navigation unit in an environmental test chamber where the temperature was varied between  $-15$  and  $+170$  degrees to determine the unit's operational accuracy under such conditions. When the test chamber's window frosted and the unit could not be observed, the photo-instrumentation unit installed a camera to record the tests on film under these conditions.

Section chief Ralph Bellinger, in explaining their work, said: "NAFEC is a pretty complex place. Many of our activities involve complicated aviation research and development projects, others are strictly routine. We're in business to satisfy all of the Center's photographic requirements, complicated or otherwise. Good equipment and the talented people assigned to my Section keep the varied photographic assignments in the area of 'a day's work.'"

To do the complex job, the Photographic Section is divided into three functional areas—motion picture, photo-instrumentation and still photography.

The largest of these units is photo-instrumentation which is also probably the most unique. It is headed by Marvin Tyndall and is composed of six scientific photographers. Tyndall relates that, "Apart from our knowledge of photographic techniques, we have to know a good deal about electro-mechanical techniques."

This unit must adapt and modify photo equipment which means that they are often called upon to design special camera mounts and photo equipment protective containers.

James McGrail said, "The primary mission of the photo-instrumentation unit is to provide support for projects that require photographic data

for use in post-project evaluations. We collect this data on the ground and in the air."

Bernard Blum added, "Most of this work requires such opposites as time-lapse and high-speed pulse-operated photography. More simply, we have to record events that cover extended periods of time, as well as events that take place in a fraction of a second, and cannot normally be seen by the human eye."

Other members of this highly specialized unit are Nelson Amey, John Bradley and Aaron Grumet.

The motion picture unit is a one-man operation run by motion picture production specialist Ernest Reid whose work includes documentation for qualitative analysis and technical film reports. "Much of this is routine but I do have my moments," he says. "Getting a pilot's view of approach and runway lighting patterns during a night time evaluation flight gets a little touchy sometimes and, until just recently, we had problems trying to get suitable coverage of air traffic control radar displays featuring alphanumeric (letters and numbers)."

As aptly put by unit leader Joseph Cox, "The members of the still photography unit are anything but still."

At the time of the remark, unit members Harold Flath and Robert Michael were in California covering a helicopter project and Kelso Taylor was covering an employee award ceremony in the Director's office. Cox had just recently returned from photographing communications antenna arrays in Pennsylvania.

Actually, about the only people you can generally find in the Photographic Section are secretary Carol Wagner and still unit member Vincent Cimadori, who operates the giant graphic arts camera in the laboratory.

According to Cox, "The still photography unit provides quality photos for use in technical reports and manuals, black and white or color slides for briefings and technical presentations, photo enlargements to support special project requirements and aerial photos that 'spot' specific locations or provide oblique views of equipment, facilities and such.

"The precision, or graphic arts unit, provides photo-copying services, precise reproductions of maps such as are used in the Air Traffic Control simulator systems, half-tone negatives of charts and graphs, and precise duplications for the printing of electronic circuits."

Even after seeing, sometimes it is hard to believe the variety of photos that come out of NAFEC's Photographic Section each day. Gadgetry, plus a lot of skill and talent, combine to serve, document and record advances in safety and the progress of aviation experiments.



A battery of NAFEC photographers recorded a series of fire tests which studied the effects of various fire fighting equipment on the extinguishing of a burning surplus C-97 aircraft.

## TWO IF BY SEA

Swimming in an icy, Alaskan lake may not sound like a great sport, but it is a vital life-saving part of the training of the Alaskan Region's Flight Standards crews.

The crews have to be experts at water survival in an area that is bordered on three sides by water. The Alaskan coast line is longer than the entire coastal region within the continental limits of the United States. Also, the seas are dotted with small islands, and island hopping and flying over long water routes are a regular routine for the crews.

On the Aleutian chain of islands which jut out into the Bering Sea, the FAA maintains navigational aids for the jets that fly to the Orient from Europe and the United States. Low frequency beacons, vortices, surveillance radars and instrument landing systems at these island stations have to be checked each 60 days.

Every three years the Coast Guard, based at Kodiak Island, holds a rigorous water survival refresher course. Recently, Air Support Branch chief Jack Jefford arranged with Coast Guard Lt. Cmdr. John Hancock Jr. to conduct the course for 19 pilots and crew members from the Regional Office.

The first day of the course included classes in the use of survival equipment and lectures and films on ditching procedures. The second day, the class participated in actual water training at Jewel Lake near the Anchorage International Airport.

The students were instructed to jump into the near-freezing lake, inflate their life vests and swim for rafts that were floating in the middle of the lake. These inflatable rafts are capable of holding 10 men and have a canopy which, when erected, completely encloses and protects the occupants.

The next training assignment was to climb into the raft without overturning it, erect the protective canopy, sponge the bottom dry and begin operating the emergency equipment stored on board.

Participation in this rigorous two-day water survival course prepares FAA crews for any emergency at sea, and although they do not expect to have to ditch at sea, it's better to be safe than sorry.



Coast Guard's John Winegar treads water as he watches FAA pilots Donald Christianson and Richard Pastro begin to set off emergency flares.

Getting briefed by Chief Winegar on the use of survival equipment are, from left: pilot Donald Christianson, GADO inspector Frank Kellogg, pilot Don Hood, and Jack Jefford, chief of the Air Support Branch.



Right: Willis Troy (right) briefs a pilot at the Fullerton FSS Satellite during experimental period. Below: James Arbanas provides "on-the-spot" assistance at the Hawthorne station.



## Test 'Satellites'

Troy said that as more pilots became aware of the FSS satellite, the more it was used. On one Sunday alone, Troy conducted more than 80 briefings in an eight-hour period.

James R. Arbanas who manned the Hawthorne FSS satellite said pilot briefings increased steadily over the test period, indicating a great deal of word-of-mouth advertising on the part of local pilots.

"We are encouraging all of our student pilots to use the service," said William Hurthe, instructor at Mutual Air Service, Hawthorne Airport. "The telephone briefer cannot sense the indecision and bewilderment many students encounter. An FSS specialist like Arbanas, however, can determine immediately when a student pilot doesn't understand some segment of the briefing and can clarify this on the spot."

Los Angeles Area Air Traffic Branch supervisors who have developed the Regional satellites said the cost of the new satellite service was unusually low. The average cost per flight service rendered elsewhere in the Western Region during the past year has been determined to be \$1.33. At Fullerton, the average cost was found to be only 40 cents; and at Hawthorne, 34 cents.

The workload at the parent Los Angeles FSS decreased only slightly during the tests but the new person-to-person service indicated a large pilot response. The use of the person-to-person briefing and filing facilities was double previous telephone requests for service.

Following completion of the test projects, a complete evaluation of the program will be made in the Western Region.

(Editor's Note: A similar program of part-time flight service stations in Palmer, Dillingham and Haines, Alaska, was announced in an article "Wall to Wall Service" in the September 1966 issue of FAA HORIZONS.)

Reaction from West Coast area pilots on the Western Region's experimental "satellite" pilot briefing and flight plan handling facilities has been most enthusiastic, reports have indicated.

Three metropolitan airfields, Hawthorne, Fullerton and Santa Monica, which do not normally have person-to-person flight service stations (except the normal direct phone line to the Los Angeles FSS), were selected for the person-to-person briefing tests.

Hawthorne and Fullerton FSS satellites functioned during a test period which began in July, and Santa Monica's test period started in September.

In each case, one FSS specialist from the parent Los Angeles FSS, was assigned to the satellite and was available for person-to-person pilot briefings and to accept flight plans. Each satellite was manned during the busiest hours, from 8 a.m. to 4 p.m. (During other hours, the phone line direct to the Los Angeles FSS was still available for pilot briefing and to file flight plans.)

To provide greater service to the flying public at these small satellite stations, each station was equipped with a briefing desk, planning charts, a NOTAM display and two teletypes, one for weather sequence reports and the other a direct link to the parent Los Angeles FSS which was used to transmit flight plans.

At Fullerton Municipal Airport, FSS specialist Willis M.

## VIRGINIA COUPLE PRAISES DULLES; FAA LAUDS THEIR GOOD NEIGHBORS

Betty and Lawrence Arnel think their neighbors are the most exciting anyone could have. The Arnels have a farm next door to Washington's Dulles International Airport.

The feeling is mutual. Controllers at Dulles think the Arnels are the best friends any airport ever had.

Of the Arnels, Lester Woodahl, FAA watch supervisor in the Dulles Tower, says: "Their only complaint is that we don't send enough aircraft over their farm for them to observe."

The Arnels are inveterate plane watchers. Mrs. Arnel even has three receiving sets in her kitchen that she tunes to frequencies used by traffic controllers and pilots of arriving and departing aircraft.

The controllers became aware of the friendly couple in November 1963 when the Arnels sent them an anniversary card a year after Dulles was opened.

In return, the traffic controllers sent the Arnels an invitation to visit the



Dulles' friendly neighbors visit the airport frequently. Recently, Lawrence Arnel (center), a model plane buff, and his wife, Betty, visited Dulles and displayed a replica he made of an FAA flight inspection DC-3. The model, built 1/24th scale, took 450 hours to build.

tower. They were delighted. Now they visit the tower two or three times a month.

The Arnels became interested in Dulles when it was still in the early stages of construction.

"We're glad it was built here," said Mrs. Arnel. "This area was dead and

uninteresting before the airport was built."

Mr. Arnel agrees: "About the only excitement we had before the airport was built was when somebody's barn burned down."

They keep close watch over Dulles, looking out over it first thing in the morning and taking a glance out over the runways before retiring.

One night recently, Mrs. Arnel looked out her kitchen window and noticed some obstruction lights on the tower were out. She alerted the controllers by telephone.

The tower log for that watch period includes the notation: "Tower lights reported out by Mrs. Arnel. Replaced by electrician."

Mr. Arnel is also a model airplane buff and has built a replica of an FAA DC-3. The Agency provided him with the color scheme used on official DC-3 flight inspection aircraft and sent him two Agency seals.

## FAA Radio Hams Aid Injured Mountain Climber

The Seattle Air Route Traffic Control Center's Amateur Radio Club Station WA7CJP recently assisted an injured climber marooned on an 8,500-foot Cascade Mountain peak, Leavenworth, Wash.

The FAA "ham" station called an ambulance and alerted hospital officials on a phone patch. The station also notified relatives in Seattle and aided members of the mountain rescue team.

The FAA station worked with John Adams, W7GZN ham operator from Yakima, who drove his radio equipped car to a point near the rescue operation.

The injured man, a Boeing employee, was rescued from the mountain by a McChord AFB helicopter.

Seattle ARTCC crew chief Joseph Hope and controller Rudolph Tollerud arranged for the rescue helicopter.

## Congressman Commends FAAers For Sandusky Air Fair Work

Congressman Charles A. Mosher of Ohio's 13th District recently lauded FAA personnel involved in the Sandusky, Ohio, Air Fair in a letter to Cleveland Area Manager Ralph Link.

"I could see," Mosher said, "that extremely competent people were participating in this highly entertaining venture. Airport personnel had high praise for the FAA, particularly the control tower personnel who handled the landings and takeoffs. I certainly want to add my praise to theirs."

Rep. Mosher concluded, "It is extremely gratifying to see one of our Federal agencies cooperating so well in a program bringing pleasure, knowledge and safety to a great number of people."

## Beirut Cited by Magazine

The Europe, Africa and Middle East Region's Beirut office was singled out for high praise recently by Middle East Airlines.

In its publication, "Cedarwings," the airline commended the Beirut staff whose work makes "flying in and out of Beirut easier and safer for all airlines operating in the area."

The article also described the activities of the FAA in the Mid-East as well as throughout the world. It concluded by saying, "It is difficult to see what civil aviation would have done without the FAA. Certainly it would not have progressed so rapidly nor reached its present, very high, standards of safety."

## Wins AOPA Award



Birmingham Tower's air traffic control specialist Samuel Blair received the Aircraft Owners and Pilot Association's annual award for "... performing the most outstanding service to general aviation during 1965."

## New Chicago Area Office



Chicago's new area office was opened recently. On hand were, from left, John Tighe, William Boucher, James Carl and Robert Gale of the Kansas City Area Office, and Chicago area manager Kirby Brannon and Denzel Begley, chief, Chicago Airway Facilities Branch. Signs described branches in the new Chicago Area offices.

## LOW ON GAS, B-52 SAFELY VECTORED TO TANKER

With a crew of six aboard, the B-52 was returning home. The eight jet bomber—one of a fleet of B-52s that have been conducting regular raids on Viet Cong positions — was based at Anderson Air Force Base on Guam.

But with weather over the island extremely poor, the bomber twice missed its final approach. At low altitudes, the B-52 burns fuel at a tremendous rate. The pilot radioed he did not have enough fuel to make another attempt safely. The Air Force ordered an Okinawa-bound KC-135 to turn back to refuel the bomber.

For FAA's Radar Controller Lowell Blanton—stationed at FAA's combined ARTCC/Radar Approach facility (CER-AP) on Guam — time and weather worked against him as he monitored the

two aircraft closely. It was up to him to find a weather opening for the rendezvous before the bomber ran out of fuel. But at the same time, other craft in his sector—including another B-52/KC-135 refueling mission—were competing for his attention.

Unruffled, Blanton kept the other planes safely separated and found a weather opening for the rendezvous. He vectored the two craft into position. At the moment of tie-up, the B-52 had six minutes of fuel left.

Blanton's speed and professionalism—which averted a tragic incident—did not go unnoticed. For saving the lives of the crew and its \$8 million craft, Blanton earned a letter of commendation and words of praise from Guam Area Manager George Harris.

## Equal Opportunity Program Outlined in New Order

The Agency's Equal Opportunity Program is outlined in Order 1000.8A dated June 15, 1966. It prescribes the Agency's policy and assigns the responsibilities to assure equal opportunity in all official actions regardless of race, color, creed, sex or national origin.

### Positive Program Stressed

The order stresses the need for a continued positive program to promote and encourage equal opportunity. It encompasses all matters concerning FAA employment, services rendered to the public, performance of contractors and subcontractors under FAA direct and FAA assisted contracts, operations of Federally-assisted airports and other programs involving FAA assistance, participation or endorsement.

The President's program of equality of opportunity for all also has directed that recreation organizations which practice

discrimination cannot be sponsored by Government agencies and cannot use an agency's name or facilities. Agency employees are barred from official participation in events sponsored by organizations practicing discrimination when their participation could in any way be interpreted as Agency cooperation.

### Compliance Employee Responsibility

The order makes it clear that compliance with these policies is the responsibility of every agency employee. It states that "Every FAA employee and representative shall perform all official actions in full accordance with the letter and the spirit of the Constitution, and applicable laws and regulations and policies in such a manner as to assure equality of opportunity and avoid even the appearance of discrimination because of race, color, creed, sex or national origin."

## Aeronautical Center Personnel Star in Agency Film

Several Aeronautical Center employees will appear in the forthcoming movie, "Why An Airplane Flies," being produced by the Office of General Aviation Affairs. Several scenes were shot at the Aeronautical Center and at Wiley Post Airport in Oklahoma City.

FAAers in the classroom scene were LaVaughn Harris, Barbara Neuwander, Carol Prewitt, Ray Bailey, Lew

Cadogan, Riley Hardimon, Jerry Lipscomb and Paul Yost.

The FAA Academy's smoke tunnel which was also in the film was explained by J. B. McCollough, aerospace engineer and designer of the tunnel.

The scenes at Wiley Post Airport were flight scenes which included Center pilots H. Marshall Claybourn and Clark M. Mauldin.

## DOT A Reality



Administrator William McKee receives a souvenir pen from President Johnson after a White House ceremony last month after the President signed the bill creating a new cabinet-level Department of Transportation (DOT). The department will go into operation after the first of the year. It will be the fifth largest in the Federal government. It includes FAA and some 30 other bureaus and agencies. Its budget will be over \$6 billion.

## It's Time to Read Regulations On Employee Ethical Conduct

FAAers are forbidden to accept any compensation, gift, favor, gratuity or entertainment directly or indirectly from anyone doing business of any kind with the Agency if it might affect, or even give the appearance of affecting the employee's official conduct. This and other employee responsibilities and conduct is spelled out in the FAA's regulations which were distributed as an attachment to Order 3750.3, entitled "FAA Regulations on Employee Responsibilities and Conduct."

The regulation includes information about nonacceptance of gifts, entertainment and favors; outside employment and other activities; etc.

Copies of the order were distributed to each employee shortly after its publication in March. A copy is given to each new employee when he is hired. Those desiring a copy should ask their supervisor to obtain one through normal supply channels.

Violations of this regulation must be reported promptly to the Compliance and Security office having jurisdiction in the area where the employee works. Failure to report a violation is a serious infraction of Agency policy and could result in disciplinary action.

## retirements

When **Henry Wilson**, air traffic control operations representative at the Miami ARTCC retires this month, he leaves behind a 50-year aviation career, 25 of them in the CAA/FAA.

He began his aviation career in 1916 when he joined the then Royal Flying Corps in Canada. In 1941 he joined the CAA as an assistant controller at the Boston Center.

A 20-year CAA/FAA veteran, **Willis Perkins** (below, right), supervisory electronics technician, Honolulu Area Office, receives his Retirement certificate from Region Director Phillip M. Swatek.



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## WYOMING YOUTHS HEAR ABOUT AVIATION CAREERS



Jack Dalton, chief of the Worland, Wyo., FSS, gives boys from the Wyoming Industrial Institute data on communications and procedures. The Agency has taken a leading role in the Wyoming State project to assist youths who are interested in careers in aviation. The program is supported by federal, state and local agencies.

More than 20 youngsters at the Wyoming Industrial Institute are learning about productive careers in a unique aviation education program supported by federal, state and local agencies.

Working with officials of the State Aeronautics Commission and the State Superintendent of Public Instruction, the six-man staff of the Worland, Wyo., Flight Service Station has a leading role in the program.

Larry Kretsinger, Wyoming Safety and Enforcement Officer, said the FAA has been invaluable in assuring success of the effort.

Kretsinger, who launched the program to aid air-minded youngsters, commended Jack Dalton, FSS chief, and his

staff for their strong support.

The youths will tour the Worland FSS. Then, once a week, the youths will attend classes in model plane building, radio navigation, preflight planning and meteorology. A ground school was established for the teenage youngsters.

"One of the boys is so enthusiastic he wants to work for his private pilot's license," Dalton said.

Assisting Dalton are Howard Carver, Bud Naylor, George Cantrell, Cal Skiles and Gerald DeCroo.

B. D. Kuchel, Institute superintendent, praised FAA participation in the program and said the aviation orientation is "a big step toward a lifetime career for these boys."

## National Park Service-FAA Survey Airport Sites

A three-day air, ground and water survey to map out six potential aircraft sites in the Glen Canyon Recreation Area straddling the Utah-Arizona border was carried out recently by FAA and the National Park Service officials.

Vaughn M. Clayton, Salt Lake City Area Manager, conducted the survey with Gustav Muehlenhaupt, Glen Canyon Recreation Area Superintendent, after Muehlenhaupt appealed to the Agency for assistance in locating possible airport sites in the isolated area. Also in the survey party were Utah State Aeronautics Director Bobbie V. Walker and two members of Clayton's staff: Arthur E. Romaine, Flight Standards Branch, and Paul A. Larson, Airports Branch.

Waters backing up behind the newly-constructed 580-foot-high Glen Canyon Dam across the Colorado near Page, Ariz., created a lake 186-miles long and opened a two-state recreational area administered by the National Park Service. At present the area lacks both airports and adequate roads.

The five-man party, travelling by car, boat and a slow-flying single-engine Wren 460 made a reconnaissance along 1,900 miles of shoreline.

Data provided on the reconnaissance is now being utilized by the Park Service to locate sites for new airports. Initially only two of the 10 projected lakeside recreational airports will be built. Four others will be constructed later to serve as recreational air gateways.

## David Thomas Cited for Distinguished Service

Deputy Administrator David D. Thomas was recently named one of five 1966 winners of the Rockefeller Public Service Awards for Outstanding Achievement in the Federal Career Service.

The award, which carries a cash grant of \$10,000, was announced by President Robert F. Goheen of Princeton University, the institution which administers the awards program. The program was established by John D. Rockefeller III to focus attention on the distinguished performance of "the unstung heroes" of national public life.

President Goheen, in naming the award recipients, said they "demonstrate to all government employees and to the public at large the high caliber of people working at the upper levels of Federal government . . . It is our hope . . . that promising men and women already in the public service, as well as new recruits to the career service, will realize that these honors . . . reflect a growing appreciation of the value of the Federal career service as a whole."

Thomas' job as Number Two man in the Agency is his avocation and pastime as well as his life work. Thus, he feels exceptionally grateful to receive the Rockefeller Award, the highest privately sustained national honor for Federal career officials.

He has been a pilot for 30 years and active in air traffic control for more than a quarter of a century. He has spent 28 of his 34 years in aviation with the FAA and its predecessor organizations, having been acting chief of the Civil Aeronautics Administration Planning Staff, Deputy Director of its Office of Federal Airways, Director of the Office of Air Traffic Control and the first man to head the Air Traffic Service when the FAA was formed in 1958. He was selected as Deputy Administrator of FAA by President Johnson in July, 1965.

Thomas usually pilots himself on his trips, "and when I fly commercially, I usually sit in the cockpit," he says with a grin. "I've always been a buff about aviation and it has been a privilege to see the industry grow. It will grow even more rapidly in the next five years, with the new commercial transports now on the boards. I foresee a doubling of domestic passengers in that time. For every 1,000 passengers



David Thomas, a veteran pilot, gets ready for a flight in a T-33.

now using our airports, there will be 2,000 in 1971. For every 1,000 aircraft operations today, there will be 1,600 in 1971 and more than 2,000 in 1975."

Thomas was born in New Castle, Texas, son of the late David Dismukes Thomas, a railroad administrative employee, and Mrs. Lena Wisdom Thomas of Livingston, Tenn., a former schoolteacher. He attended the School of Mechanical Engineering at the University of Tennessee, Knoxville, and the School of Business Administration, George Washington University, Washington, D.C.

He is a member of the Institute of Aerospace Sciences, the Air Traffic Control Association and a deacon in the Church of Christ, Falls Church, Va. Among his previous honors are the President's Award for Distinguished Federal Civilian Service and the Laura Taber Barbour Award for Air Safety.

He will receive his Rockefeller Award at luncheon ceremonies next month in Washington, D.C.

## Deputy Administrator Thanks Employees for Making Award Possible

Many of you have phoned, written, wired and said "Congratulations." I appreciate your good wishes and I am deeply honored for having been named to receive a Rockefeller Public Service Award. However, we all know I am the recipient of honors for your excellent work. I want to say "thanks" to all of you for making the FAA a top-notch public service agency and for your actions which made it possible for the FAA to be honored. The Administrator has stressed our role to serve the public and to protect the safety of the public. You have fulfilled this role time and time again as a part of your daily routine.

You made the receipt of the Award possible in countless thousands of ways. Certainly, there were spectacular and glamorous actions: a flight service specialist saves a plane load of people; a radar controller soothes a frightened, disoriented pilot and talks him into a successful landing; a maintenance technician plows through snow drifts at night to restore service; a flight inspection crew leads a lost aircraft down safely through the overcast; and so on ad infinitum. However, the routine, the common-place, and the non-glamorous are the sinews that make the FAA great. The courteous, helpful secretary who answers the phone;

the research engineer who develops a better device; the auditor who suggests an improvement; the contracting officer who knows how to get the best buy; the inspector who gives a "thumbs down" to a marginal pilot or gives sage, friendly advice to a youngster; the aerospace engineer who refuses to certificate the doubtful; the messenger who speeds the mail; the airport engineer who helps a city do better airport planning; all of these, and more, make the Agency a vibrant, respected part of America.

Therefore, to all FAA employees, I say "thank you" and "well done!"

(Signed) D. D. Thomas,

## your health

The sniffing, sneezing and coughing season is upon us again, resulting in a lot of misery plus time lost on the job.

At the root of the problem is the ordinary cold which is the most common of all human illnesses. Although there is no known cure for it, the best remedy is prevention. Here are a few suggestions that may help:

- Avoid people with colds as much as possible or keep your distance when they begin to cough or sneeze.
- Don't use a towel or glass that has been used by a person with a cold.
- Avoid wet feet, fatigue and chilling, and eat well-balanced meals. In other words, keep your general health as good as possible.

If you do catch a cold, the best thing to do is stay in bed. This way you will feel more comfortable and will also avoid spreading it among your friends and co-workers.

If you think you need more than an aspirin and rest, call your doctor.

## -and safety

One of the simplest ways of getting hurt is to pick up, carry or set something down improperly.

These don't sound very hazardous, but often they result in smashed fingers or toes and aching backs. In fact, there probably isn't anyone who hasn't, at one time or another, injured himself either at work or at home trying to carry a heavy object.

There is a right way and a wrong way to pick up any object regardless of its weight.

A few rules which may prevent later aches and pains are:

- Place the feet close to the object. Set them solidly on the floor and slightly apart to achieve good balance and stability.
- Bend the knees outward and lower yourself into a crouching position.
- Bend at the hips and try to keep the back as straight as possible.
- Get a good grip, push up with the legs and swing the back into a vertical position.

When in doubt about your ability to lift or carry anything, call for help.

## FAA DELIVERS PLANES AND PEOPLE TO VIETNAM



To help Vietnam, FAA recently delivered civil aircraft to Air Vietnam. From left, the airline's Mr. Dau; FAA's Jack Hardy, air traffic control representative to AID's Civil Aviation Assistance Group in Saigon; AID's Mr. Johnson; and Aeronautical Center pilot James Brown.

The FAA recently teamed up with segments of several Government agencies and departments to deliver four DC-4s and two DC-3 aircraft to the South Vietnam government.

Originating with the State Department, the effort involved elements of FAA, the Agency for International Development, the Air Force, Navy, the South Vietnam government and the weather services of several foreign governments.

FAA's part in this project was to se-

lect the aircraft, to handle maintenance and to ultimately deliver the planes to Vietnam.

George Harlow, chief of the Aircraft Services Base at the Aeronautical Center in Oklahoma City, was in charge of the DC-3 modifications. The other aircraft were sent to Texas for overhaul.

Flight Evaluation Section chief James Dendy took care of the route planning. The DC-3s followed a northern course through Alaska and Japan, and the DC-4s flew from San Francisco via Honolulu and the Philippines.

According to James Brown, pilot of one of the craft, delivery wasn't the only thing involved in the flight. The planes also transported 18,000 pounds of freight as well as six FAA passengers from Honolulu to Wake Island and five Navy passengers from the Philippines to duty in Vietnam.

Altogether, the flight crews logged 471 hours for the trip. Brown's co-pilot, George Bergmark, Jr., and navigator Willis Gresham said that flight planning was a matter of on-the-spot evaluation because of the active typhoon season.

## Procurement Process Made Easier by FAA's Manual

Publication of revised procurement regulations to help achieve greater efficiency and standardization in the Agency's worldwide procurement operations will be published later this month.

Believed to be one of the most comprehensive procurement documents issued by any Government agency operating under the Federal Property and Administrative Services Act, the new manual, entitled "The Federal Aviation Procurement Manual" (FAPM), codifies all Agency-wide regulations, orders and other documents relative to procurement and establishes uniform operations to govern both headquarters and field procurement activities. The manual has 2,300 pages.

By bringing together in a single source all facets of procurement procedures, policies and techniques, the manual will enable operating officials to conduct transactions with contractors, suppliers and others doing business with FAA more uniformly and expeditiously.

It also provides in-depth guidance to FAA procurement officers in dealing with real estate matters and utilities. So far as is known, these subjects are not covered in the same detail in any other Government procurement manual.

Another unique feature of the manual is the depth of coverage it gives to procurement requirements pertaining to personal property administration, labor relations, equal employment opportunity, construction contracting and small purchases.

Designed in looseleaf format with special self-contained sections for easy pullout, the new manual will provide top management with a ready standard by which to appraise Agency procurement operations. The comprehensive reference also will serve as a basic text for the training of FAA procurement personnel.

A special task force, headed by Samuel Rabinowitz, prepared the manual which will be primarily for the use of Agency personnel. Assisting him on a full-time basis were Wayne Wilson, Owen Birnbaum and George Terris.

Others assisting in the preparation of the manual were Eugene Cooley, Richard Golrick, Dean Anderson, Anne King, Julius Pitrone, Thomas Jones, Louis Saponekoo, James Davis, William Rosano, Clinton Walker, Milton Fabian, Irwin Nevelev, John Casey, Robert Blair, Dorothy Morris, Paul Cornell, Dorcas Glascoe, John Choroszy, Laverne McCain, John Metzler and Irene Bell.

## SAFETY PROJECTS STUDIED BY NAFEC ENGINEERS

At any one time, there are about 300 different projects in progress at the National Aviation Facilities Experimental Center near Atlantic City. The projects include tests or evaluations of various systems of air traffic control, navigation, airports, communications, aircraft safety or weather.

Some of the recent projects included:

- Supersonic transport flights were simulated in the Center's air traffic simulation laboratory covering an area of the North Atlantic extending from 700 miles east of Kennedy International Airport and a domestic area as far west as Chicago. The tests were run to see how the SSTs might affect air traffic.
- Long distance ground-to-air-to-ground digital communications were tested between the Center and the Bermuda area. Future plans for this type of communications equipment envision the use of satellites as relay points.
- Deceleration tests of airplane passenger seats in the horizontal and lateral directions were completed on a catapult at the Philadelphia Naval Base. Three different seats were tested on the catapult.
- Impact tests on the windshield of the new FH-227B, a stretched version of the turbo-prop transport, were run to certify the installation.
- An 8 x 10 foot screen with air traffic projected on it was compared with the more conventional radar "tube" display. Engineers noted controllers' ability to

handle traffic and also measured any fatigue and eyestrain.

Two final reports by Center employees were approved for public distribution. One involved tests of taxiway edge lights, using lamps that are masked so they are visible only from the desired direction and are less distracting. The second report discussed the validity of present techniques used to measure aircraft noise and to predict community response to noise.

Acoustic locator beacons attached to flight data recorders were tested at Key West, Fla., to determine whether accident investigators can locate recorders underwater.

The sink speeds and glide path characteristics of nine different light planes were tested in flight to determine longitudinal handling characteristics.

Operating under Center direction, a contractor deliberately triggered off 17 natural lightning strikes in a three-week period in Tampa Bay area. The tests were conducted to study characteristics of lightning. The same company is attempting to ignite fuel vapors by using an electrical surge generator.

The common digitizer is undergoing testing by Center engineers at Tyndall AFB, Fla. The electronic device digitizes radar information so that it can be sent through telephone lines rather than via microwave links, and also can be processed by computers.

## Northway, Alaska FSS Welcomes Kansas Visitors



Kansas members of the National Homemaker's Association arrived at the Northway FSS by chartered bus. They toured FAA facilities and were taken on a flight.

Thirty-eight members of the National Homemaker's Association have something special to remember from their charter bus trip through Alaska and Canada.

When their busses rolled into Northway, 150 miles from Anchorage, FAA

families from the flight service station put out the red carpet.

Area Manager Darell Bricker took the visitors on a tour of the station and explained the mission of the Agency at Northway. Later they were given 10 minute airplane rides over the area. FAAer Warren Runnerstrom piloted 11 of the trips in a Cessna 150.

To highlight the day, the entire station pitched in to prepare an all-Alaskan dinner that was served in the recreation hall. Delicacies such as roast sheep, baked salmon, king crab, caribou and moose guided the table.

Throwing open their homes, the Northway FAA families provided overnight lodging for the 38 women and their Canadian bus driver. Station chief John Pfeiffer entertained them with a showing of the best of the station's collection of slides.

## tech talk

The rapid growth of air transportation in the United States has brought a demand for improvements in air traffic control.

Steps are already underway for the orderly automation of many air traffic control functions, beginning with the Jacksonville Air Route Traffic Control Center NAS Stage A and the New York Common TRACON room. The principal purpose of these improvements is to provide the controller with necessary tools to reduce his workload and increase his capacity for a given period of time.

### Requirements Study Completed

An integral part of the air traffic control system is air-to-ground communication capability. To make sure that the new system design being implemented is not hindered by antiquated communication support, FAA recently completed a long-look requirements study.

Under Systems Research and Development Service, Communication Development Division program management, the study was conducted by Communication Systems, Inc. It resulted in a report entitled "Future Air-Ground-Air Communication Subsystem Investigation." Its six volumes cover every aspect of the subject, beginning with a detailed computer-derived analysis of existing air and traffic communication. These are taken from normally busy terminal and enroute controller positions in the Eastern Region during selected heavy traffic periods. Post-1972 communication demands were projected, resulting in a phased design and implementation plan, including cost estimates, for 1970-75.

The plan is recommended to be implemented in four phases based on expansion and change of the present system with a digital capability.

Phase I includes greater use of the transponder and a limited one way (ground to air) digital data link, time shared on the same channel with voice. This will serve as ground work for Phase II, employing a separate data link channel, use of a central digital processor and interface with the central NAS computer. Phase III introduces two-way data link, and Phase IV, scheduled to start in 1975, integrates automatic discrete channel switching with wide-band random access and optimum spectrum utilization.

The report is RD-66-16. It is available through regular Agency distribution sources.

Air traffic control specialist O. D. Bruner (left) is congratulated by Miami Area Manager Paul H. Boatman. Bruner won trophies in a local Toastmasters humorous speech contest.



Below left: Cleveland Area Office's Flight Standards Branch chief Harry Bernard presents a commercial operators certificate to John Kunkel of Executive Jet Aviation, Inc. Below right: Henri D'Estout (center) is honored after 25 years CAA/FAA service by Donald E. Pearson, assistant area manager (left) and Roscoe Johnson, area Flight Standards Branch chief.



Right: Meet two of NAFEC's top golfers, each holding trophies they won recently. Center Director Jack Webb (left), and Mike Rainone, an equipment specialist.



Below Right: Deputy Director Jack Hogan (left) and Installations and Materiel Service Director Don King had to go to the hospital to give Gene Mayhall an award.



Below: Napoleon Jemison (left) and Andy Gerdish were among the 67 Western Region Office donors who gave blood recently.

Aviation clerks, Helen Dunlop (left) and Elsie Childs, both of the Helena, Mont., General Aviation District Office, won third place in Montana's third annual Big Sky Powder Puff Derby. Mrs. Childs was the pilot and Mrs. Dunlop was co-pilot in the race.



Jubilant Kathleen Schaefer was presented an award recently by Gilbert Joynt (right), chief advisor, New York International Field Office, as Ted Uebel watched.



Alaskan "short order cooks" James Booth, Procurement Section, and Eugene Struck, architect, turned out a supply of hamburgers and hot dogs at the Civil Air Club's picnic in Anchorage, the first at their new recreational site.



## names & faces

Lloyd McGinnis, air traffic controller, Cleveland Center, won a check for his suggestion which improved computer operation. Center chief George Campbell presented the award.



"Armed" with a commercial pilot's exam, GADO inspector Orville Perley (left) of Anchorage, Alaska, flew 320 miles into the bush country recently to give an examination to Fred Potts, a homesteader and concert cellist who moved to Alaska from Los Angeles.

His idea to use a plastic template of FAA aeronautical symbols was an award winner for Francis Haack of the Albuquerque Center.



Flight Inspector John Kuhar (left) was presented a special award recently by Arthur Beeton, senior FAA representative in the Europe, Africa and Middle East Region's Beirut Office.



Francis Cravel of the Great Falls, Mont., Center was given an award recently by Minneapolis Area Manager Lyle Brown (left) and Central Region Director Edward Marsh (right).



Controller A. T. Petsel of the Cedar Rapids, Iowa, Tower has reason to be proud of his 20-year-old daughter, Barbara. She was named Miss Wool of America.

One of the highest wooden poles on the East Coast is this 112 foot Douglas fir which weighs 9,000 pounds. NAFEC is using it in some VOR communications tests.



ATA Western Regional Manager Charles D. Ewing (left) discusses proposed Alaskan airport facilities improvements with Air Traffic Service Deputy Director William Morgan, Alaskan Deputy Director Col. John Kullman and Seattle Area Manager Robert Blanchard.



Above: Tower chief James Welsh and controllers Don Campbell and Vincent Fabiszewski give CAP cadets a tour of the Lawton, Okla., Tower.



Left: The Albuquerque Center has its own Red Cross first aid instructor. William Adkins (right) displays his skills to controllers Wriley Burnett and Robert Page (in sling).



Above: Aeronautical Center Director W. Lloyd Lane (left) welcomed Donald S. King, Director, Installations and Materiel Service, to the Agency Logistics Discipline Conference.



Deputy Assistant EU Administrator Allen Hulen presents a performance certificate to clerk-stenographer, Artye E. Marx of the Administrative Staff.



Walter Burgin of the Ottumwa, Iowa, Flight Service Station proudly displays one of his radio controlled models. It is a two-engine Navy PBY. Another model he built, a Pitt Special biplane, placed eighth in the 35th Annual Model Airplane Championships recently. The PBY was featured recently on the cover of Model Airplane News.



Ernest Sawada is an electronics technician in the Pacific Region with many money winning ideas. The Agency recently accepted his fourth beneficial suggestion.

## personnel pipeline



### Visit Lockheed SST Research Facility

Three FAA participants in the Air Transportation Systems Specialists program, Bob Paullin, J. Tanner and D. Geoffrion, who are attending the University of California, were among those who visited Lockheed's Burbank facility recently. Shown on the tour are, from left, John Brantley III, Myron Lowe, Paullin, Professor Horonjoff of the U. of California; Gerold Pestalozzi, Tanner and Geoffrion.

### Handicapped Worker Program Praised

The Agency's program to select a "Handicapped Worker of the Year" from each region was singled out for praise by the Civil Service Commission recently. The Agency effort was designed to be part of the "National Employ the Handicapped Week" which was held from October 3 to 7. Regional and Center Directors made selections from their areas and one was later considered for the title of "FAA Handicapped Worker of the Year." In applauding the Agency's program, the CSC pointed out that this national FAA program is unique in the Federal Government. The Commission suggested that other departments and agencies consider the program within their own organizations.

### Little Rock Urban League Hears FAAers

Speaking at a recent meeting of the Little Rock, Ark., Urban League, Agency representatives Don Higgins of the Office of Personnel and Training and Billy Brown of the Southwest Region discussed various aspects of the FAA's Equal Employment Opportunity Program. From left are George Henry, Executive Director, Greater Little Rock Urban League; Don Higgins and Billy Brown. The meeting was part of the Agency's continuing effort to cooperate fully with interested groups to help implement the President's EEO program.



### YOC Summer Workers Visit Dulles

More than 3,400 young people from the President's Youth Opportunity Campaign (YOC) program visited Dulles International Airport during the past summer.

The youths toured the main terminal, took rides in the mobile lounges and visited the International Section. They also had an opportunity to see how the Agency operates the modern, international airport.

### Woman Serves As Duty Officer

Ruth Dennis, who works as a Regional Communications and Duty Officer, Western Region, is a woman with a purpose. Not only is she the only woman in that position in the Agency, but the quality of her work has produced a series of 12 awards. Her most recent award was the Sustained Superior Performance Award. She works at Regional Headquarters in Los Angeles.



A Successful . . .



## SAFETY CAMPAIGN

The Agency's three-week campaign to reduce general aviation accidents over the Labor Day weekend paid off. Fewer plane accidents were reported this year than on each of the past four Labor Day weekends.

The intensive air safety campaign helped to hold the number of accidents to 82 in contrast to 91 in 1963 and 110 in 1964.

"We were most encouraged not only by the success of this joint industry-government campaign but also by the enthusiastic support which we received from industry groups," Administrator McKee said. "The number of accidents dropped substantially even though estimates show that general aviation planes will fly more than 500 million miles farther this year than in 1965 and more than one billion miles farther than in 1962."

The Eastern Region reported its all-out promotion of "Operation SAFE" helped to keep accidents down to 18 this year compared to 30 in 1965. And in the Alaskan Region, Director George M. Gary reports that their campaign resulted in "only two minor accidents which marred an otherwise perfect safety record."

Assisting the Agency in the program were: the Aircraft Owners and Pilots Association, the National Pilots Association, the National Business Aircraft Association, the Aerospace Industries Association, the National Aviation Trades Association, the National Association of State Aviation Officials, the National Safety Council, the International Flying Farmers, the Flying Physicians Association, U.S. Weather Bureau, and many other organizations.



FSS specialist Walter Devery (standing) waits to offer assistance and safety advice to two pilots planning a cross-country flight.



A "Fly Safe" sticker is superimposed over the weather chart being used by Long Island MacArthur FSS chief Louis Harvath.



FSS specialist Sam Yesselman at MacArthur Airport cleans Robert Kenna's windshield for greater vision before he takes off.



These Operation Safe scenes in the Eastern Region were typical of efforts throughout the Agency. Teterboro FSS chief John Lambiase (center) discusses a safety poster with CAP cadet Larry Waelde.

**Sol Espinda, Gabe Ishihara  
and George Makuakane**

"The Casual Hawaiians" are a group of merry music makers almost always present at the Pacific Region's social activities.

Sol Espinda (left) is of Hawaiian, Chinese and Portuguese ancestry. He's supervisory mail clerk in the Administrative Services Division. Gabe Ishihara in the center is file clerk in the Airway Facilities Division. His background is Hawaiian and Japanese. George Makuakane, of Hawaiian and Chinese mixture, is a blueprint machine operator in the Administrative Services Division. The three musicians teamed up 10 years ago and play lilting Hawaiian melodies and popular American tunes. When asked about rock 'n roll,

all shared a mutual view: "None of that jazz music for us." They might not win any friends in Beatlemania, but it's SRO when the trio is billed at Pacific Region social functions—official or private.



## FAAers on the job



**William E. Cress**

Looking up is a characteristic pose for energetic William Cress—pilot, sports car enthusiast, athlete and Western Region engineer extraordinaire. He's perched here on the steps of the newly-constructed Sacramento air traffic control tower which he supervised from the ground up. Construction is both a career and hobby for Bill: during his free time he recently built a three bedroom home for a retired FAAer. Bill enjoys a variety of sports, takes part in the San Francisco Area's intra-mural touch football league, and is an avid attender of sports car rallies. Also he's a member of the American Society of Military Engineers and the American Society of Civil Engineers. What gives Bill so much time for flying, sports hobbies and club activities? One clue is that he's one of the FAA's most eligible bachelors.