

Florida Flyer

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New large aircraft are introduced into the commercial airline fleet



Photograph by Richard Ramey

A view of St. George Island Airport looking southeast toward the Gulf of Mexico.

St. George Island Airport

by Bernadette Halloran

St. George Island Airport (F47) is located within a gated community on St. George Island, a barrier island five miles off the northern Gulf Coast of Florida, approximately six air miles from Apalachicola Regional Airport (KAAF) in the historic fishing village of Apalachicola, Florida. Instrument approaches, fuel, and lights are not available at St. George Island Airport but are available at Apalachicola Regional Airport with its three 5,000-foot runways.

St. George Island is accessed from the mainland over a 4.1-mile continuous span bridge.

St George Island and the cities of Apalachicola, Eastpoint, and Carrabelle are popular tourist destinations for those who wish to see old Florida in Franklin County, often referred to as the Forgotten Coast because of its off-the-beaten-path yet picturesque location. It is a location especially popular with sport fishermen.

The single runway airport was constructed in 1981 by the original developer of the St. George Plantation. It is a 3,339-foot paved, privately owned, public-use landing strip with a tie-down

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“It has been my honor and privilege to work with such a dedicated collegial group of professionals.”

MANAGER'S CORNER

by William J. Ashbaker, P.E.

Yes, it's true. I am retiring. And, it's about time!

It is traditional for a soon-to-be retiree to reminisce about accomplishments during his term in office. However, I find it difficult. Not due to a lack of accomplishments, but who is really responsible? Have Florida's aviation accomplishments over the last decade been my accomplishments or those of Florida's airport directors and staffs, the Florida Airports Council and the Aviation Office and FDOT district staffs? All I did was clear the way for the people who really do the work.

The people who really did the work accomplished a lot over the last few years. Recently, I responded to a questionnaire for the U.S. General Accounting Office (GAO) related to the practice and effectiveness of statewide and regional system planning. It became apparent very quickly that the GAO's questions were out of sync with what we do in Florida. Their questions were geared to the “average” state where the statewide aviation system plan is little more than an inventory of airport facilities.

Twenty-five years ago, we put the Continuing Florida Aviation Systems Planning Process (CFASPP) in place. This interactive series of forums brings airport managers, local government representatives, consultants, and FDOT people together in thirty meetings a year at various locations around the state. Not only do the regional committees that make up the CFASPP discuss issues and make recommendations to the department, they also share common challenges and best practices. Airport managers liked it and continue to support it. The CFASPP became the basis of our statewide aviation system planning process. This ongoing dialog has developed a collegial aviation community in Florida that does not exist in any other state. This dialog has helped shape a supportive environment in the Florida Airports Council . . . the best airport association in the nation. And, the benefits are tangible. Before CFASPP, the Florida airport grant program was funded erratically from year to year in a range of \$2.0 million to \$7.7 million with no growth trend. After CFASPP was initiated, the program experienced a 17 percent average annual growth to a high of \$216 million this year.

Our Internet-based airport financial management system is another example of our airports, the Federal Aviation Administration, and our department district offices working together to make Florida a national leader. The Joint Automated Capital Improvement Program (JACIP) is a three-way federal-state-local partnership that enables strategic capital funding decisions. It has been invaluable for supporting increased funding for Florida's airports. Florida is the only state with a funding support system like JACIP. Several states are now trying to develop something similar.

So, all of the credit goes to Florida's airport managers, the FAA Orlando Airports District Office staff, the department's district aviation staffs, and my Tallahassee Aviation Office staff. It has been my honor and privilege to work with such a dedicated collegial group of professionals. Thank you. You are the ones responsible for Florida's aviation accomplishments.

Beware of Ethanol in Ultralights

by Jeff Gilkey

The following article was published in the Winter 2009 issue of Fly New Mexico!, a publication of the New Mexico Department of Transportation Aviation Division.

Ifly an N-numbered ultralight which burns auto gas. In my small circle of 20 ultralight flying friends, I know of four engine outs this summer caused by vapor lock or a blocked fuel filter. None of the pilots was seriously injured, but in one incident the aircraft was destroyed. In each of these cases, the pilot inadvertently bought ethanol-blended gasoline from a gas station that “never had ethanol before.”

Many of us use auto gas or “mogas,” as recommended by the engine manufacturer, instead of 100LL in our aircraft

engines. . . . Nationwide thousands, and statewide in New Mexico hundreds of ultralight, experimental, and light-sport aircraft have engines designed to run on unleaded auto gas.

Auto gas is rarely available at the airport, so we fill up a gas can at the local gas station and haul it to the hangar to fuel up the airplane. Some of our engines prefer premium unleaded, others prefer regular unleaded, but none of them can tolerate ethanol-blended fuel.

Before this year, it was easy enough to find ethanol-free gasoline for our aircraft engines. . . . Things are different now. On December 19, 2007, the Energy Independence and Security Act of 2007

became law, which required the use of 15 billion gallons of grain/corn based ethanol (renewable fuel) by 2015. As of today, there are no federal EPA oxygenate requirements for ethanol-blended gasoline. New Mexico does not currently mandate ethanol blending although the mandatory incentives and penalties of the Energy Independence and Security Act make blending beneficial to the distributors.

What should you do?

1. Check your gas for ethanol every time you buy, even if there is no ethanol sticker on the gas pump. Ethanol testers can be bought from EAA or Petersen Aviation.
2. If you can't buy ethanol-free gasoline, switch to 100LL fuel for now.
3. This is a national problem, but it must be addressed at the state level and requires a local grass roots approach. Contact your local flying organization, EAA, AOPA, NMPA, USUA, and offer to help them find a solution. . . .

Ethanol-free premium auto gas

A solution that has been implemented in Montana and Missouri is to have the state mandate that premium auto gas be ethanol-free. Premium auto gas is widely available throughout the country, but only accounts for 12 percent of fuel sales.

This is not just an aviation fuel problem. Marine engines, snowmobiles, jet skis, classic cars, and lawnmowers have similar problems with ethanol-blended fuels. The consequences for them are a stalled engine. For us, it's an aircraft falling out of the sky. ♦

Jeff Gilkey is vice president of the Albuquerque Ultralight Association; see his web site at www.jeffsflightlog.com.

Does Florida mandate blending ethanol with gasoline?

“There is no requirement at this time,” says Richard Kimsey, Environmental Administrator for the Florida Department of Agriculture and Consumer Services. “It's a business decision made by fuel suppliers and retailers, at this time.” Kimsey adds that beginning December 31, 2010, Florida will require 9–10 percent ethanol in all gasoline, unless sold or distributed for purposes exempted under Section 526.203(3), Florida Statutes. The exemptions include fuel used in aircraft, fuel sold for use in boats and similar watercraft, fuel sold for use in collector vehicles, fuel for a railroad locomotive, and several more exemptions. The complete list of exemptions in Section 526.203(3) of the Florida Statutes is available at www.leg.state.fl.us/Statutes.

What's wrong with ethanol-blended gas in my airplane?

For starters, ethanol-blended gasoline is not authorized for use in aircraft per the Federal Aviation Administration Special Airworthiness Information Bulletin (SAIB) number CE-07-06, dated October 27, 2006.

Here are some of the reasons why:

- Ethanol increases volatility of the fuel, leading to vapor lock.
- Ethanol is not compatible with rubber seals and other aircraft fuel system components.
- Ethanol tends to develop “phase separation” as the aircraft climbs whereby the resulting water (that was held by the ethanol) can overwhelm fuel filters/sediment bowls.

For a detailed discussion of the issues of ethanol-blended gasoline, see the EAA web site at www.eaa.org/autofuel or the Petersen Aviation site at www.autofuelstc.com.

The Florida Fish and Wildlife Conservation Commission

The aviation program of the Florida Fish and Wildlife Conservation Commission (FWC) provides a major role in law enforcement operations, search-and-rescue missions, natural disaster response, and ecosystem management for the state of Florida.

All 13 of FWC's field pilots are sworn law enforcement officers with the ability to enforce all the laws of the state. When flying missions, the field pilots frequently work with multiple law enforcement officers on the ground or water directing them to violations. This increases the efficiency of the boat officers by not having them patrol large areas with no boating activity. In effect the aircraft act as "force multipliers" gaining the most effective use of scarce assets. Two FWC administrators in Tallahassee are also experienced pilots who fly missions in addition to directing the budget, training, and other duties.

FWC has 13 patrol aircraft, including fixed wing and rotary wing, and one special-purpose aircraft, a heavy-lift UH-1H for response during natural disasters and special law enforcement details. FWC uses their patrol aircraft, stationed throughout the state, for all of their "normal patrol" activities including law enforcement, search and rescue, and wildlife management assistance.

Law enforcement

FWC's law enforcement flights vary greatly depending on the season of the year and the area of the state. Some types of fishing violations tend to occur more often in particular parts of the state. For instance, FWC officers look for lobster trap robbing violations in the Keys, rock shrimp fishing violations along the Oculina Bank on Florida's east coast, and violations of the net ban law in north-west Florida in the fall of the year during the mullet run. Offshore shrimp "nursery exclusion zones" in northeast



Photographs courtesy of FWC

FWC UH-1H (Huey) deploying Special Operations Group team in a tactical training exercise.

Florida and the Keys are often patrolled from the air for commercial fishing violations. Also in the Florida Keys, the laws limiting harvesting of the Florida lobster are strictly enforced from the air. Curtailment of illegal trap robbing is a major focus in the Keys, and the twin engine aircraft stationed in Marathon is a primary deterrent.

In the spring, FWC officers look for fields that are illegally baited for turkey. During the winter, pilots fly more often at night using night vision goggles to look for hunters who are illegally using spotlights to hunt deer. In Florida, hunters cannot have both a spotlight and a gun in a vehicle for night hunting. Night vision goggles greatly aid the pilot's ability to see at night by enhancing the ambient light from the moon, stars, or ground lights.

In the Miami area, FWC enforces manatee protection zones from the air. Boaters in the protection zones must maintain slow idle speeds to avoid

collisions with manatees because speeding boats cause serious injury and death to manatees in Florida every year.

Technology

A microwave transmitter unit installed on several FWC aircraft enables the pilot to downlink video information from the aircraft to officers on the ground or water. The technology allows officers on the ground to see the same view, on a portable receiver screen, that the pilot is seeing—a fishing or hunting violation, for example. The pilot can record the information as a video on a hard drive or thumb drive for later viewing. This recorded information is useful if the case goes to court because the recording includes the precise location as latitude and longitude, as well as the time and date of the violation.

Although several FWC aircraft are equipped with infrared technology, two of the aircraft have special state-of-the-art infrared technology called forward-

Right: FWC's waterborne response teams in training. FWC transports teams on a UH1 and deploys them to various areas around the state for training.

Below: U.S. Coast Guard Airstation Clearwater HH60J conducting hoist operations with FWC offshore vessel "Guardian."



looking infrared, or FLIR. FLIR is a thermal imaging system that detects differences in temperature on both land and water and subsequently develops a picture on a screen in the cockpit. FWC aircraft primarily use FLIR when searching for missing people.

The FLIR unit has a daylight camera that FWC uses to photograph illegal hunting or fishing situations. The camera is also helpful in documenting the severity of flooded areas after hurricanes. This information is used to decide the priority in sending assistance to citizens in need. The camera contains a global positioning system (GPS) output that records the position where the photograph is taken. This GPS feature is especially helpful when an FWC pilot records illegal activity while miles offshore out of sight of land.

FWC also uses their helicopters to assist wildlife biologists with wildfire and ecosystem management with an aerial ignition device machine that is used to start prescribed burning of woodland areas. This program greatly reduces the severity of wildfires in wildlife management areas.

Search and rescue

On many search-and-rescue operations, FWC aircraft work in coordination

with U.S. Coast Guard aircraft as directed by the Rescue Coordination Center. Currently, only Coast Guard helicopters have the capability to hoist persons from sinking vessels. FWC also responds to calls from its regional dispatch and from sheriff's offices when hunters or hikers are reported missing.

Although law enforcement and search-and-rescue operations are a large part of the work, FWC's aviation program serves the citizens of Florida in other ways. After a hurricane or other natural disaster, FWC pilots deliver supplies, assess damage, and provide assistance as needed. FWC also responds to mutual assistance calls from other states. Following Hurricane Katrina, FWC was first to provide assistance to the hard-hit area of Biloxi, Mississippi.

Through an agreement with Miami-Dade Fire Rescue Headquarters, FWC can be called upon to transport snake-venom antidote from the Miami-Dade Fire Rescue Venom Response Unit to other parts of the state.

For more information about the Florida Fish and Wildlife Conservation Commission, see www.myfwc.com. ♦

About FWC

The Florida Fish and Wildlife Conservation Commission protects and manages more than 575 species of wildlife, 200 native species of freshwater fish, and 500 native species of saltwater fish. And FWC has the difficult task of balancing these species' needs with the needs of more than 18 million residents and the millions of visitors who share the land and water with Florida's wildlife. FWC patrols more than 74,000 square miles of the state's land and waters and has responsibility with several federal agencies over the zone that is 200 nautical miles out from Florida's coastline.

The Florida Fish and Wildlife Conservation Commission:

- **Enforces rules** to protect fish and wildlife and to keep waterways safe for the people who use them.
- **Manages the state's fish and wildlife resources** based on scientific data to conserve some of the most complex and delicate ecosystems in the world along with a wide diversity of species.
- **Communicates with a variety of audiences** to encourage participation, responsible citizenship, and stewardship of the state's natural resources. FWC offers hunter safety training; boating safety classes; birding classes; outdoor recreation classes, including fishing and hunting; and more. FWC also answers thousands of telephone calls and e-mail questions annually on subjects relating to hunting, fishing, wildlife habitat, outdoor recreation, weapons, boating, protected species, and nuisance animal complaints.
- **Helps when natural disasters occur.** FWC law enforcement officers are among the first on the scene because the agency has specialized equipment that can reach remote locations.

New Large Aircraft: A Florida Perspective



Photograph by e*m company / P. Masclet

The A-380 landing.

The following article is from the August 2008 report “Next Generation Aircraft: A Florida Perspective – New Large Aircraft Summary Report,” prepared by Wilbur Smith Associates as an effort of Continuing Florida Aviation Systems Planning Process, sponsored by the Florida Department of Transportation.

The worldwide commercial aviation industry will change in the near future and long-term. This change will be a result of the introduction of New Large Aircraft (NLA) into the commercial airline fleet.

Two companies are manufacturing NLA, The Boeing Company and Airbus S.A.S. Of the four primary types of NLA, two are manufactured by Boeing and two by Airbus. Each of the four primary NLA types also has several variants, the A380, B787, A350 (with three variants for passenger transport), B747-8 and its all-cargo variant B747-8F. These variants are in various phases of design, development, and operation.

How do NLA vary from the current commercial fleet?

Until recently, the largest commercial aircraft serving passenger demand was the Boeing 747-400, and the largest plane devoted exclusively to carrying air

cargo was the Antonov AN 225, a Russian manufactured plane. NLA differ from other large commercial aircraft in several ways:

- NLA are physically larger than other commercial aircraft.
- NLA can fly further than any plane in the existing commercial airline fleet.
- NLA can carry more passengers and more freight than existing commercial aircraft.
- NLA can reduce airspace congestion and increase runway capacity.
- NLA are more fuel efficient and cost effective to operate.
- NLA are more environmentally friendly.
- NLA will be able to capitalize on improvements being made to the nation’s airspace system.

Several of the NLA have an operating flight range exceeding 8,000 nautical miles. This increased flight range provides Florida with new opportunities for non-stop access to other continents. This will reduce the need to connect at other airports and will increase Florida’s international travel demand. Most commercial aircraft now in operation

can carry approximately 250 passengers. While the A380 can carry up to 850 passengers, most A380s are being configured to serve approximately 520 passengers. The B747-8 will be able to carry approximately 460 passengers, the B787 between 220 and 330 passengers, and the A350 between 250 and 350 passengers, depending on the airplane’s configuration. The B747-8F is the only NLA currently in design as an all-cargo aircraft. This plane will be able to carry 40,000 more pounds of cargo than any all-cargo aircraft currently flying.

NLA provide many advantages over current large commercial aircraft used to transport both passengers and cargo. NLA are manufactured using composite materials and their design incorporates the latest in aerodynamics. These features and characteristics make NLA lighter and more fuel efficient while new engine technology enables NLA to save on fuel. A flight on one A380 equals the passenger capacity of more than two B757s; fewer flights on NLA reduce airline operating costs. NLA are more fuel efficient, reducing pollution, and their quieter engines also reduce noise exposure.

The Federal Aviation Administration is in the process of making massive changes to the nation’s airspace system. The nation’s upgraded and revamped airspace system is referred to as “NextGen.” Florida has been selected as a test bed for implementing the FAA’s latest airspace technology. When fully operational, NextGen will increase the operating capacity and efficiency of airports in Florida. Advanced satellite technology used in their navigational systems will enable NLA to take full advantage of the NextGen airspace improvements, with Florida leading the way. Coupled with aircraft technology available on NLA, NextGen airspace improvements will reduce travel times and further augment the ability of aircraft operators to reduce fuel burn. This, in turn, will reduce environmental impacts, carbon emissions, and overall operating costs.

What do Florida airports need to do to prepare for NLA?

Most of Florida's largest commercial airports already have runway lengths sufficient to meet the needs of NLA. New runways designed to accommodate the A380 and B747-8 should be developed at a width of 200 feet. Existing runway widths of 150 feet and taxiway widths of 75 feet can serve NLA with adequate stabilized shoulders and FAA approval. The A380 has a wingspan almost 50 feet wider than any commercial aircraft now in operation. It has a maximum takeoff weight 250,000 pounds greater than any commercial aircraft now operating, and it has a tail 15 feet higher than any other commercial aircraft. All of these factors must be considered in airport planning and facility development. Special wheel configurations on NLA make them compatible with the existing pavement strength at most commercial airports.

While the overall length of several NLA is similar to existing commercial planes, the B747-8 will be, by more than five feet, the longest commercial plane when it begins operation. The A350 is also slightly longer than the A380. The length of NLA and their more expansive wingspans necessitate more apron space for these planes when they are parked at the terminal or on the air cargo apron.

Airports expecting NLA in both the near and long-term need to monitor changing requirements for NLA. Airports need to stay current on changing firefighting and rescue requirements for NLA. As appropriate, Florida airports also need to update their master plans and airport layout plans to reflect NLA requirements. Research on NLA summarized in this report should be expanded upon by Florida airports as new information becomes available.

Why are NLA important to Florida?

Current industry projections indicate that worldwide, by 2018, an estimated 2,250 NLA will have entered the operating fleet. When the current worldwide fleet of "large" commercial aircraft is considered, almost two percent of that fleet now serves airports

in Florida. Assuming that a number of additional foreign-flag carriers decide to use NLA to fly new non-stop routes to Florida and that most domestic carriers acquire NLA such as the B787 and A350 to serve high volume domestic routes, annual NLA takeoffs and landings at Florida airports could, on the optimistic side, reach between 25,000 and 33,000 by 2018.

For Florida to remain a world leader in aviation, its commercial airports and local, state, and federal funding agencies must take steps to prepare for the arrival and the proliferation of NLA in Florida. Within the next few years, the first NLA will begin connecting Florida to international destinations and growth in NLA serving Florida from that point forward is a certainty. Because of the newness of NLA, how and where these planes will be used to serve Florida will need to be monitored. Airport sponsors, the Florida Department of Transportation, and the Federal Aviation Administration will all need to be prepared to respond, ensuring Florida is ready to accept these industry-changing and exciting new commercial aircraft.

"Next Generation Aircraft: A Florida Perspective – New Large Aircraft Summary Report" provides more details about NLA in Florida. For a copy of the Next Generation Aircraft impact report, contact Andy Keith, Aviation System Manager, FDOT Aviation Office, at (850) 414-4516 or andy.keith@dot.state.fl.us. The report is also available online at www.cfaspp.com/projects.aspx. ♦

What will Florida gain from NLA?

- The ability to fly non-stop to continents around the world;
- New international travelers who will fly to Florida because they no longer need to connect;
- An increasing share of the global economy and air cargo industry;
- Approximately \$400 million in additional economic benefit each year.

Calendar

Please contact event organizers before attending in case of cancellation at the last minute due to weather or other factors.

July 11

Pensacola Beach Air Show featuring the Blue Angels; for more information, see www.visitpensacolabeach.com/what/calendar.asp

August 2–5

40th Annual FAC Conference and Exposition at Loews Miami Beach; for more information, see www.floridairports.org or call the Florida Airports Council at (850) 224-2964

October 3–4

Cocoa Beach Air Show featuring more than three hours of military and civilian performers over the ocean front from noon to 3:00 p.m.; for more information, see www.cityofcocoabeach.com

October 23–25

St. Petersburg Airfest at Albert Whitted Airport in downtown St. Petersburg; aircraft displays, aerobatic performances, concerts, classic car show, military displays, amusement rides; for more information, see www.stpetersburgairfest.com

November 5–7

AOPA Aviation Summit, Tampa Convention Center; activities and displays on the exhibit floor, all the latest aircraft on display at Peter O. Knight Airport (TPF); for more information, see www.aopa.org/summit

For information about CFASPP, see www.cfaspp.com.

St. George Island Airport

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area that was repaved and restriped in early 2008. No aircraft are permanently based at the airport; annual operations average 500.

The airport provides air access to St. George Island only and is used by county emergency services for medical evacuations. A real estate development company has plans for an 18-lot parcel with taxiway access to the airport, but its development schedule is not set.

For more information about St. George Island Airport, click on "Airport Info" at www.stgeorgeplantation.com. ♦

Bernadette Halloran is General Manager of the St. George Plantation Owners Association, Inc. She can be reached at manager@sgpoa.com.



Above and left: An inspection at St. George Island Airport in late 2008.

Florida Flyer

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